IO 1 – National Reports and Surveys

WP5 – Project Report

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Content

1   Introduction

In the STRESS-LESS project, we address the question of how to deal with digital stress in a changed working world, how employees suffer from it and, of course, how we can reduce the negative effects of digital stress.

Our direct target groups are companies, project partners and national stakeholders, especially managing directors, executives, and employers. Indirect target groups are other institutions and organisations working in the sector of corporate health care or on developing apps/tools for digital stress management and prevention.

As part of IO1, all partners involved have produced a Desk Research Report to gain insight into national circumstances and to identify potential stakeholders and implementing partners. The transferability potential is high: Other organisations, working in the field of reducing stress at work and managing and preventing digital stress may use the research results from the national reports. In a next step, we conducted an Online Survey in all partner countries to gain an even deeper insight into the matter of "stress due to digitalisation". The methodology for the Online Surveys can also be applied in other countries to widen the base of comparative results.

In a next step all partners developed a National Adaption Plan, where we summarised the most important results of the Desk Research and the Online Survey for our country, with a special focus on our national needs. This should enable our stakeholders and implementation partners to get a good overview in order to support us in the implementation in the best possible way. As part of the National Adaption Plans, we collected inputs for the Web and App Development to inform IO2, we presented the most important findings for the Blended Learning Solution, to inform IO3 and we summarised first inputs for Training for Company Digital Stress Coaches, to inform IO4.

The National Adaptation Plan serves as an internal document that is constantly being expanded by each project partner to be able to prepare the national implementation measures well in advance and to be able to implement them later together with their stakeholders and implementation partners. The recommendations of all partners are summarised in this Project Report in chapter 4: Suggestions to reduce Digital Stress.

In the current Project Report, all the results that we have collected in the above-mentioned studies are accumulated to make the results achieved so far accessible to a broad public. The focus is on the exchange with the respective national stakeholders and implementation partners, who are given a good overview of the overall situation in the four participating countries. They are encouraged to contribute their own experiences and recommendations at an early stage in order to optimise the subsequent implementation of the project results in the partner countries.

2   National Conditions identified via Desk Research

Right at the beginning of the project, the partner organisations from Germany, Bulgaria, Spain and Austria worked on detailed desk research to get an overview of the initial situation in each country. Full versions of national Desk Research reports are available for download (see section Links & Downloads). In this chapter we present the most important findings:

2.1   Main findings from Germany

The topic of "digital stress" has become extremely popular in Germany during last 5 to 10 years. Initially, there were mainly trade unions and academics who tried to raise awareness regarding this issue and emphasise its importance for personal well-being as well as the economy as a whole. At presence, there is a wide range of foundations, health insurance companies, associations and entrepreneurs dealing with the issue of digital stress. Particularly noteworthy are the Health and Work Initiative (iga) and the Initiative for Mental Health in the Workplace (psyGA). Nevertheless, German SMEs lack the know-how to make profitable use of the potential of digital technologies for themselves, mainly due to ignorance and a lack of awareness of the topic.[1]

Studies with empirical data analyses on digital stress have been conducted in Germany for only a short time. Gimpel et al.[2] conducted a survey of 5,005 German employees showing that German workers use at least eleven different technologies and media on average every week. In addition to the five international known technostress creators defined by Tarafdar[3], techno-uncertainty, -insecurity, -overload, -invasion and -complexity, they further found seven more specific for Germany (invasion of privacy, interruptions, performance control, non-availability, role ambiguity, unreliability, and no sense of achievement). We also refer to the survey from Riedl[4] revealing that the higher the digital stress, the more pronounced are emotional exhaustion, dissatisfaction at work, general workload, and depressive symptoms. Since 2020, the Corona pandemic has accelerated existing developments in Germany. Work-life conflict (especially among younger workers), interpersonal interaction, and poor technical equipment were major issues during the pandemic. However, employees are usually left alone with these concerns. In fact, many employees have been sent into home office and into dealing with digital technologies completely unprepared. Detailed information on how the situation is developing among employees of SMEs is not yet available.

Appropriate countermeasures are still rare, as German legislation and companies are only slowly adapting to the changes in the workplace. Although the German legal system provides for legal protection against mental hazards, it lacks clear legal regulations of

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[1]   see: Leyh, C., & Bley, K. (2016): Digitalisierung: Chance oder Risiko für den deutschen Mittelstand?–Eine Studie ausgewählter Unternehmen. HMD Praxis der Wirtschaftsinformatik, 53(1).

[2]   see: Gimpel, H., Lanzl, J., Regal, C., Urbach, N., Wischniewski, S., Tegtmeier, P., ... & Derra, N. D. (2019): Gesund digital arbeiten?!: Eine Studie zu digitalem Stress in Deutschland.

[3]   see: Tarafdar, M., Tu, Q., Ragu-Nathan, B. S., & Ragu-Nathan, T. S. (2007): The impact of technostress on role stress and productivity. *Journal of management information systems*, *24*(1).

[4]   see: Riedl, R., Fischer, T., Kalischko, T., Reuter, M. (2020): Digitaler Stress – Eine Befragungsstudie im deutschsprachigen Raum.

working hours, occupational safety and data protection when working with digital technologies and in home office. Existing initiatives, apps and education programmes are not tailored to the needs of SMEs and have several gaps regarding the availability, contents, and awareness. The five internationally recognised technostress creators are in part insufficiently addressed. Other identified technostress factors at the national level, in particular performance control, unreliability, and invasion of privacy, are not addressed at all. Due to the low awareness of German SMEs for the negative consequences of digital stress, suitable courses have so far only had a niche existence.

A comprehensive programme for dealing with digital technologies should therefore include all the beforementioned topics. Further suggestions for training content are virtual communication, digital competence and dealing with media, leadership, and conflict management, as well as self- and time management. Trainings should also be flexible enough to be adapted by any organisation. Especially occupational psychologists, accident and health insurers, government agencies, as well as exchange of experience within the company play a central role in the implementation of the respective measures.

In summary, it can be stated that a holistic approach that would really tackle the problem of digital stress and home office does not exist in Germany at any level. This has a particular impact on SMEs, which lack the resources and knowledge to harness the potential of digital technologies. Even though this problem does not only concern Germany, it is of particular importance to raise awareness of this issue among German employees as well as employers. As the issue is already widespread among employees, special attention should be paid to employers to illustrate that lower levels of technostress go along with competitive advantages caused by stronger job performance and employees' loyalty.

Legal Framework for Home Office in Germany

At present, there is no legal entitlement to a home office in Germany, as there is in other countries such as the Netherlands. The question whether working from home is possible for employees is generally decided by the employer. Hence, employees cannot demand that the company allows them to work from home. Due to the Corona pandemic, there was only a temporary regulation until 30 June 2021 to allow employees to work from home in case of office work or comparable activities. A study in 2020 on the Corona pandemic and home office revealed that the way people deal with the changed situation is very individual. For example, people with management responsibilities are more accustomed to digital work, people with children suffer more and people with experience or confidence in dealing with digital technologies and media cope better with the home office situation[5]. However, even without a legal right to perform home office, the requirements of labour law must be complied with.

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[5] see: Gimpel, H., Bayer, S., Lanzl, J., Regal, C., Schäfer, R., & Schoch, M. (2020). Digitale Arbeit während der COVID-19-Pandemie. Eine Studie zu den Auswirkungen der Pandemie auf Arbeit und Stress in Deutschland.

In particular, regulations on occupational health and safety, data protection, and working time regulations play a crucial role here.[6]

- Working Hours Act: the regulations on maximum working hours, rest breaks and rest periods as well as the prohibition of work on Sundays and public holidays shall be adhered to. The employer should therefore ensure compliance with these regulations and enable appropriate time recording.

- Occupational health and safety: the employer must carry out risk assessments and initiate possible occupational health and safety measures. Even though this does not imply a duty to control the home office workplace, it requires a comprehensive questioning of the circumstances, as well as an adequate instruction of the employees.

- Data protection: the employer must ensure appropriate data protection precautions when setting up a home office workplace.

In 2020, the German Labour Minister Hubertus Heil tried to push through a legal right to 2 days of home office per month (which corresponds to 24 days per year) but failed due to the resistance of employers. This law would have forced companies to grant home office to their employees to a limited extent unless there is an urgent operational reason. Moreover, it would have also extended the scope of the statutory accident insurance. The insurance normally covers the journey from home to work. Because this route does not exist in the home office, in future the journey to and from school or nursery will also be insured to ensure better compatibility between family and work.[7] It remains to be seen whether there will be a majority for a comprehensive law regulating home office in the future.

2.2 Main findings from Bulgaria

The Job Demands-Resources Model of Bakker, Demerouti and Verbeke (Bakker, 2004)[8] shows how stress can be caused in the work environment. The model differentiates between job demands and resources, which can be physical, psychological, social, or organisational aspects of the job. While job demands are the required efforts or skills, the resources help achieve the goals. According to the model (Bakker, 2007)[9] occupational stress is a response to imbalance between demands on the individual and the resources he or she has to deal with those demands. There are two ways that digitalisation affects this model:

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6   see: Haufe (2021): Was bei Homeoffice-Regelungen zu beachten ist; online available: https://www.haufe.de/personal/arbeitsrecht/homeoffice-was-beim-arbeiten-von-zuhause-zu-beachten-ist_76_301172.html

7   see: Bund Verlag (2020): Kommt endlich ein Anspruch auf Homeoffice? online available: https://www.bund-verlag.de/aktuelles~Kommt-endlich-ein-Anspruch-auf-Homeoffice-~.html

8   Bakker, A. B. (2004): Using the job demands resources model to predict burnout and performance. Human Resource Management, 43, pp. 83-104

9   Bakker, A. B. (2007): The job demands-resources model: State of the Art. Journal of Managerial Psychology(22), pp. 309-328.

- either by intensifying existing job demands: work-overload and interruptions (Yun, 2012)[10], excessive working hours (Cox, 2015)[11], role ambiguity and job in-security (Knani, 2013)[12];

- or by causing new types of demands: tele pressure (Barber, 2015)[13]; permeability (Leung, 2011)[14]; ICT hassles (Day, 2012)[15]; response expectations, availability, learning, lack of control, employee monitoring and poor communication (Pfaffinger, 2020)[16]; increased amount of information in the digital environment (Cox, 2015)[17].

Stress of digitalisation and digitalisation anxiety also have proven negative effect onto the health and wellbeing of employees. For example, increased digital work has negative effect on work-life balance (Cox, 2015)[18]; digitalisation is associated with high levels of uncertainty (Pfaffinger, 2020)[19], the cortisol released due to stress has negative effect on health; perceived lack of autonomy and pressure from superiors for performance also negatively affects wellbeing (Cox, 2015)[20].

About COVID-19 pandemic effects there is not much local research data for Bulgaria, but we have found the following info: According to a short survey of the National Statistical Institute of Bulgaria[21], in November 2020 18% of the companies that have participated in the survey have stated that they are using distant work (home office) for their employees. According to another research, in April 2020 - 10% of the employees have worked one week from home and one week from the office, while 8% of the employees work 100% from home.

One of the most notable social phenomena of 2020 was that COVID 19 pandemic brought to the surface or at least made more visible a number of new division lines in the Bulgarian society: whether COVID is real or a scam, whether it was artificially created

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[10] Yun, H. K. (2012): A new open door: The smartphone's impact on work-to-life conflict, stress, and resistance. International Journal of Electronic Commerce, 16(4), pp. 121-152.

[11] Cox, A. (2015, 07 15): Scoping study for a foresight on new and emerging occupational safety and health (OSH) risks and challenges; online available: Publications Office of the European Union: https://op.europa.eu/en/publication-detail/-/publication/37e59a3f-08aa-4472-872a-3daf0cc9305d/language-en

[12] Knani, M. (2013): Exploratory study of the impacts of new technology implementation on burnout and presenteeism. International Journal of Business and Management, 8(22), pp. 92-97.

[13] Barber, L. K. (2015): Please respond ASAP: Workplace telepressure and employee recovery. Journal of Occupational Health Psychology, 20(2), pp. 172-189.

[14] Leung, L. (2011): Effects of ICT connectedness, permeability, flexibility, and negative spillovers on burnout and job and family satisfaction. Human Technology: An Interdisciplinary Journal on Humans in ICT Environments, 7(3), pp. 252 (250-267).

[15] Day, A. P. (2012): Perceived information and communication technology (ICT) demands on employee outcomes: The moderating effect of organizational ICT support. Journal of Occupational Health, 17(4), pp. 473-491.

[16] Pfaffinger, K. (2020): Changing Forms of Stress as an Outcome of a Digitalised Work. München: Ludwig-Maximilians-Universität

[17] Ibid p.5.

[18] Ibid p.5.

[19] Ibid p.6.

[20] Ibid p.5.

[21] National Statistical Institute. (2020): NSI.bg; online available: Retrieved 01 11, 2021, from ДЕЙНОСТ И СЪСТОЯНИЕ НА НЕФИНАНСОВИТЕ ПРЕДПРИЯТИЯ В УСЛОВИЯТА НА ИЗВЪНРЕДНО ПОЛОЖЕНИЕ И ПОСЛЕДВАЛАТА ЕПИДЕМИЧНА ОБСТАНОВКА ПРЕЗ НОЕМВРИ 2020 ГОДИНА: https://www.nsi.bg/sites/default/files/files/pressreleases/ACT_NF2020-11_covid.pdf

(ALPHA Research, 2020)[22], whether measures are too little or too much restrictive (Gallup International - Bulgaria)[23], 2020, whether masks should be obligatory or not (ALPHA Research, 2020)[24], about freedom of expression, data protection, human rights and s.o.

In Bulgaria COVID-19 has a significant negative effect on the activities of economic entities and on the economy of the country. 79% of the companies have suffered economical loss, mostly the SMEs (ALPHA Research, 2020)[25].

The Department of Psychology at the Institute for Population and Human Studies at the Bulgarian Academy of Sciences (IPHS-BAS) in March 2020 implemented a study of stress responses and ways of dealing with it in the conditions of spreading coronavirus infection in Bulgaria. Here are some interesting findings from it:

- The most affected by the negative processes are currently active women, from the capital, with a home office mode of work.

- People are more concerned about the economic consequences than the threat of infection with coronavirus.

- The levels of optimism are highest among people working from the office and lowest in people, working fulltime from home. (ИИНЧ-БАН, 2020)[26]

Bulgarian law covers health and safety both regarding the digital workplace and home office. The main legislation in the field of labour and health on the workplace is the following:

The LAW ON HEALTH AND SAFETY OF WORKING CONDITIONS[27] defines a number of risks for human health on the workplace, which have to be evaluated. Among them are some risks, which can be related to digitalisation and/or stress:

- ergonomic organisation of the workplace and fixed position of the body for a long time during the working day
- safety of the equipment
- neuro-psychological pressure - complexity or responsibility of the performed tasks, deadlines, visual tension, need for concentration and decision-making

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[22] ALPHA Research. (2020): НЕГАТИВНА РАВНОСМЕТКА ЗА 2020-ТА ПОД ЗНАКА НА КОВИД-19. ОПТИМИЗЪМ ЗА 2021 В ОЧАКВАНЕ НА ВАКСИНА И ИКОНОМИЧЕСКО ВЪЗСТАНОВЯВАНЕ; online available: Retrieved 01 13, 2021, from https://alpharesearch.bg/post/974-negativna-ravnosmetka-za-2020-ta-pod-znaka-na-kovid-19.html

[23] Gallup International - Bulgaria. (2020): Българите подкрепят отваряне на 21 декември; online available:Retrieved 01 13, 2021, from https://www.gallup-international.bg/44194/bulgarians-support-the-21st-december-easing-of-measures/

[24] ALPHA Research. (2020): НЕГАТИВНА РАВНОСМЕТКА ЗА 2020-ТА ПОД ЗНАКА НА КОВИД-19. ОПТИМИЗЪМ ЗА 2021 В ОЧАКВАНЕ НА ВАКСИНА И ИКОНОМИЧЕСКО ВЪЗСТАНОВЯВАНЕ; online available: Retrieved 01 13, 2021, from https://alpharesearch.bg/post/974-negativna-ravnosmetka-za-2020-ta-pod-znaka-na-kovid-19.html

[25] ALPHA Research. (2020): ОТРАЖЕНИЕ НА КРИЗАТА С КОРОНАВИРУСА ВЪРХУ БЪЛГАРСКИТЕ ГРАЖДАНИ И СТОПАНСКИТЕ СУБЕКТИ. ЧАСТ I; online available: Retrieved 01 13, 2021, from https://alpharesearch.bg/post/967-otrajenie-na-krizata-s-koronavirusa-vurhu-bulgarskite-grajdani-i-stopanskite-subekti.html?lang=bg

[26] ИИНЧ-БАН. (2020, 03 29): Института за изследване на населението и човека на Българската академия на науките; online available: http://www.bas.bg/. Retrieved 01 15, 2021, from http://www.bas.bg/2020/03/29/

[27] ЗАКОН ЗА ЗДРАВОСЛОВНИ И БЕЗОПАСНИ УСЛОВИЯ НА ТРУД. (2017, 12 5): online available: Retrieved from https://lex.bg/laws/ldoc/2134178305

- adequate training of the people for doing the job
- organisational factors that can create stress

Ordinance № 7 of 15.08.2005[28] on the minimum requirements for ensuring healthy and safe working conditions when working with video displays defines the main requirements for employers, regarding the conditions of work with video displays. According to the ordinance the employers have to evaluate the risks and take precautions to guard the employees from problems with: eyesight; muscular-skeletal system and psychological stress.

ORDINANCE № 15 OF 31 MAY 1999 ON THE CONDITIONS, PROCEDURE AND REQUIREMENTS FOR THE DEVELOPMENT AND INTRODUCTION OF PHYSIOLOGICAL REGIMES OF WORK AND REST AT WORK[29] requires employers to develop physiological regimes of work and rest at work, which is seen among others as a means towards alleviating psychological stress.

The conditions and the order for introduction of home and / or remote work are regulated in Chapter Five, Section VIII "a" and "b" of the Labour Code. (КОДЕКС НА ТРУДА, 2020)[30] The conditions and the order for variable working hours are regulated in art. 139, para. 2 and 3 of the Labour Code and in Art. 4a and Art. 6 of the Ordinance on working hours, breaks and vacations. (НАРЕДБА ЗА РАБОТНОТО ВРЕМЕ, ПОЧИВКИТЕ И ОТПУСКИТЕ, 2020)[31]

In the field of education and training there are many short-term trainings, offered by different business training organisations in stress and stress management. The main topics in these trainings are usually:

- Stress and types of stressors;

- Stress in the workplace - nature, sources of occupational stress;

- Strategies for dealing with stress (methods and techniques)

The trainings are not focused on digital stress. They are more general and as such the trainees can use the training content to overcome also digital stress, but more indirectly. There is a definitive lack of specialised tools addressing stress from digitalisation.

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[28] НАРЕДБА № 7 ОТ 15 АВГУСТ 2005 Г. ЗА МИНИМАЛНИТЕ ИЗИСКВАНИЯ ЗА ОСИГУРЯВАНЕ НА ЗДРАВОСЛОВНИ И БЕЗОПАСНИ УСЛОВИЯ НА ТРУД ПРИ РАБОТА С ВИДЕОДИСПЛЕИ. (2005, 08 26): online available: Retrieved from https://www.lex.bg/laws/ldoc/2135509298

[29] НАРЕДБА № 15 ОТ 31 МАЙ 1999 Г. ЗА УСЛОВИЯТА, РЕДА И ИЗИСКВАНИЯТА ЗА РАЗРАБОТВАНЕ И ВЪВЕЖДАНЕ НА ФИЗИОЛОГИЧНИ РЕЖИМИ НА ТРУД И ПОЧИВКА ПО ВРЕМЕ НА РАБОТА. (1999, 06 15); online available:Retrieved from https://www.lex.bg/laws/ldoc/-549687807

[30] КОДЕКС НА ТРУДА. (2020, 12 22); online available: Retrieved from https://www.lex.bg/laws/ldoc/1594373121

[31] НАРЕДБА ЗА РАБОТНОТО ВРЕМЕ, ПОЧИВКИТЕ И ОТПУСКИТЕ. (2020, 06 23); online available: Retrieved from https://www.lex.bg/laws/ldoc/-552858623

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Home office and stress

Regarding to work from home, which has increased due to Covid-19, the research of IPHS-BAS[32] has found the following about the stress related to it:

- The most affected by the negative processes are currently active women, from the capital, with a home office mode of work.

- The levels of optimism are highest among people working from the office and lowest in people, working fulltime from home.

So, an implication about our project would be to address specifically the work-life balance during home office, especially for women with young children at home.

2.3 Main findings from Spain

According to the Instituto Nacional de Seguridad y Salud en el Trabajo[33] (Spain) work related stress or stress on the workplace is one of the main consequences of the exposition to psychosocial risks. Nowadays this is a collective problem not an individual one and it may affect everybody, on all levels of employment and all professions. Work related stress effects the health, physically as well as mentally, but it also impacts work itself, in regard to work absences, revenue and productivity. Stress on the workplace has been present all the time, but, without doubt, there is an increase in regard to its intensity due to the new forms of work organisation and social work relations.

Eurostat data identifies it as the second most frequent health problem among workers after musculoskeletal upheavals. There is also an increase in awareness, at the international level, about the need to act in the face of stress at work.

Statistical data proof that Teleworking has become a major problem and the percentage of Spaniards suffering chronic digital stress as a result of the inability to disconnect from work has increased significantly. Especially in this last year 2020 Spanish employees claiming to live immerse in an "always on" culture in their work went up to 74%. The study "Challenges of Spanish companies in the Covid-19 era" carried out by the Real Instituto Elcano[34] lines out that 94 % of the Spanish companies have implemented telework, 98% of the companies admit that digital transformation is challenging to them, especially in relation to remote work and constant connection and 63% of the companies believe that remote jobs will be created or that there will be a conversion from traditional to remote jobs, due to the crisis.

Due to the crisis telework was increasing, so did the number of articles on these specific challenges and even information on health risks by public authorities. As negative effects of digitalisation stress can be identified on both sides - for the employee him/herself in

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[32] Ibid p.7
[33] Seguridad y Salud en el Trabajo (2021): Estrés laboral; online available: https://www.insst.es/estres-laboral
[34] Real Instituto Elcano (2021): Challenges and opportunities for Spain in times of Covid-19; online available: http://www.realinstitutoelcano.org/wps/portal/rielcano_en/contenido?WCM_GLOBAL_CONTEXT=/elcano/elcano_in/zonas_in/wp01-2021-chislett-challenges-and-opportunities-for-spain-in-times-of-covid-19

form of health issues, but also for the enterprise in form of reduced productivity and in-crease in costs – there is a genuine interest not only from trade unions and the ministry of labour, but also of the economy itself.

The Stress factors are classified in 2 groups

1) Stress due to intense, accelerated and inevitable changes in the way of working (which includes work overload, routine and role conflicts)
2) Stress due to digital resources and personal resources (which includes strategies to introduce ICT of characteristics of the user)

Action fields for STRESS-LESS project regarding main learning gaps

In our opinion the intellectual results of STRESS-LESS project are very much in line with the recommendations for trainings to companies and their employees provided by the Organización International del Trabajo (2020)[35].

Stress is seen as a factor that requires knowledge and skills to be provided through training to ensure that employees are well equipped to work effectively in remote work. Trainings should therefore include the following measures:

- conduct surveys to ensure that the training offered in the form of online training, webinars, workshops, and coaching sessions is based on the actual needs and challenges of the participants.

- prioritise types of training that are most relevant at the time, e.g., leadership, time management and communication skills.

- in terms of leadership training, develop specific leadership skills training in leading remote teams, leading teams through a crisis, effective communication with a re-mote team, coaching and mentoring

- offer training that focuses on social skills and behavioural aspects such as mindful-ness and time management skills.

- provide training for managers, focusing on learning exemplary behaviour, proactive participation and collaborative approaches relevant to strengthening team dynamics.

- integrate open exchanges into training to get input on challenges such as work rhythms, self-care, and healthy habits.

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[35] Organización International del Trabajo (2020): El teletrabajo durante la pandemia de COVID-19 y después de ella; online available: https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_758007.pdf

Legal framework generally and for telework

Corporate health and safety on the workplace in Spain in general are regulated by the Ley de prevención de riesgos laborales (LPRL)[36]. This law includes also several measures to reduce stress on the workplace.

The UGT Union General de Trabajadores is in favour of employers' prevention plans to protect workers and is particularly committed to the prevention of psychosocial risks in the workplace[37].

Already in April 2020 the Instituto Nacional de Seguridad y Salud en el Trabajo /Ministry of Labour and social economy has launched a paper for the "Prevention of psychosocial risks deriving from distance work caused by COVID-19 recommendations for the employer"[38]. This paper includes limits which have to be taken into account and which might be caused by remote work, but also an extensive list of recommendation for the organisation of the work, recommendations for the communication and information of the workers, recommendations for the psychosocial health of the workers and recommendations of psychosocial stress and mental health during the lockdown. Being in general addressed to the employer they include helpful information for him/her, but also specific Tipps on work organisation which might help the employee on how to better cope with requirements and challenges arising from teleworking and possible protection measures.

These regulations were concretised in Spain in September 2020 by an agreement within the framework of the public service to standardise teleworking based on the Royal Decree Law 28/2020 of 22nd of September on distance working, which will regulate teleworking in Spain from 13th of October 2020[39].

The main aspects of these regulations are:

- The rule is aimed at those who telework at least 30% of their working time in a 3-month period.

- Telework is always voluntary for the employee and the employer and must be the result of an agreement, which must also be formulated in writing.

- Telework is also reversible, so that at any time employer and worker can agree to return to work entirely from the company premises.

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[36] Agencia Estatal Boletín Oficial del Estado (2021): Ley de prevención de riesgos laborales (LPRL); online available: https://www.boe.es/buscar/act.php?id=BOE-A-1995-24292

[37] UGT Union General de Trabajadores (2016): Guía de buenas prácticas empresariales en GestióndelEstrésLaboral online available: https://www.ugt.es/sites/default/files/node_gallery/Galera%20Publicaciones/Guia%20Gestion%20Estres%20WEB.pdf

[38] Instituto Nacional de Seguridad y Salud en el Trabajo (2020): Prevención de riesgos psicosociales en situación de trabajo a distancia debida al covid-19. recomendaciones para el empleador; online available: https://www.insst.es/documents/94886/712882/Riesgos+psicosociales+y+trabajo+a+distancia+por+Covid-19.+Recomendaciones+para+el+empleador.pdf/70cb49b6-6e47-49d1-8f3c-29c36e5a0d0f

[39] Agencia Estatal Boletín Oficial del Estado (2020): Royal Decree Law 28/2020; online available: https://www.boe.es/buscar/act.php?id=BOE-A-2020-11043

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- Promote equality, not only between the face-to-face workers and the teleworkers, who are guaranteed the same rights by the law, but also in relation to gender equality.

- The adoption of the costs of teleworking by the company regarding all necessary equipment and tools (Luz Rodríguez Fernández, 2020).

Additionally, since the 13th of October 2020 the Royal Decree Law 28/2020[40] of the 22nd of September regulates standards of teleworking. The main aspects of this new regulation are that teleworking has to be based on a voluntary agreement from both sides, employee and employer, the protection of equal rights of the employee. (Compared to staff working in the office), the reversibility of telework and the adoption of costs for equipment and tools.

2.4   Main findings from Austria

Digital stress is no longer a foreign concept for many people these days. The pandemic that has been going on for over a year now clearly shows that digitalisation, especially the increased use of information and communication technologies (ICT), is having an increasing impact on professional and everyday life and is more and more perceived as "stress". It should not be ignored that digitalisation and ICT create many new possibilities and opportunities in both the professional and private spheres. Nevertheless, employees must be taken into consideration, as for many of them the permanent changes, further developments and new requirements are increasingly perceived as a burden. It is therefore important to find a balance to minimise digital stress factors.

Among the most widespread digital stress factors is the unbalanced work-life balance. For many Austrian employees, it is increasingly difficult to find an adequate balance between private and professional life (Riedl et al.; 2020).[41]

Digital stress not only has a negative impact on the individual themselves, but also on the organisation. By their very nature, these two components are strongly interrelated and have a major impact on organisational success. In the study "Digital Stress" conducted under the direction of Riedl, professor at the University of Applied Sciences Upper Austria, with the participation of the University of Linz and the University of Bonn, important effects of digital stress on both the individual and the organisation were identified. While consequences such as emotional exhaustion, reduced job satisfaction and health problems were found among employees, in organisations it is a matter of a decreasing climate of innovation, increased absenteeism and lower productivity as a result of digital stress. This study involved participants from Austria, Germany, and Switzerland to investigate the phenomenon of digital stress in the workplace. It was found to be similarly distributed in the three countries. According to Riedl[42], the most important stress factors include the disturbed work-life balance, the pressure in everyday work and the lack of

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[40] Royal Decree Law 28/2020, online available: https://www.boe.es/buscar/act.php?id=BOE-A-2020-11043
[41] see: Riedl, R., Fischer, T., Kalischko, T., Reuter, M. (2020): Digitaler Stress – Eine Befragungsstudie im deutschsprachigen Raum
[42] Ibid. Riedl et al; (2020)

usefulness of digital tools. The following categories were rated as less threatening: being replaced by technology, problems with security and violation of privacy. Looking at the severity of the digital consequences in the three countries, it can be stated that emotional exhaustion and work stress are in the middle range, with a tendency towards depression and an overall decrease in health.

Regarding the socio-political aspects and measures in Austria, it should be said that health promotion and prevention were already anchored years ago as a compulsory task of the social health insurance with the aim of promoting the development of health-promoting living spaces and supporting healthy behaviour. An important role is played here by the Fonds Gesundes Österreich (FGÖ)[43], which is the nationwide contact point for health promotion and prevention. It promotes projects and conducts information campaigns in these areas.

In the area of workplace health promotion (WHP), the FGÖ supports projects that meet the quality criteria of the Luxembourg Declaration on WHP in the European Union (1997). With its funding priority 2020, the Fonds Gesundes Österreich contributes to the sustainability of workplace health promotion on the topic of "Working World 4.0: Digitalisation, Health Literacy and Fair Health Opportunities".[44]

Digital stress is a dominant part of our working environment in Austria. The digital transformation is having a major impact, which has a direct influence on the health and satisfaction of employees. In Austria, many companies and universities are already dealing with this issue and trying to counteract the phenomenon through projects and seminars. In most cases, the causes of stress are identified and in further steps, coping strategies are developed in order to be able to better deal with these stress factors.

Some companies in Austria have already recognised the problem and are working on providing their employees with a wide range of stress reduction offers (inhouse training). There are also numerous training providers who offer courses on the topic of 'Dealing with (digital) stress'. However, it should be noted that many of these courses and trainings are very expensive, and many employees cannot afford them, especially in the pandemic situation. The interest in participating in an expensive stress prevention seminar is therefore limited.

The topic of avoiding - or more realistically - reducing digital stress has come to the fore in Austria through the scientific work of Riedl (Riedl et al.,2020)[45]. Due to the ongoing COVID-19 pandemic, the associated lockdowns and changed life circumstances, it is becoming increasingly important to develop measures to counteract the phenomenon of digital stress in (professional) everyday life and thereby regain a necessary degree of freedom. In Austria, we still have a lot of work ahead of us to comprehensively analyse the problem of "digital stress" in order to then take adequate countermeasures.

In Austria, it has been acknowledged that occupational health care plays a crucial role in preparing employees and companies for future challenges, especially in those aspects

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[43] Fonds Gesundes Österreich (FGÖ): Betriebliche Gesundheitsförderungsprojekte; online available: https://fgoe.org/projekte_bgf
[44] Ibid. FGÖ: https://fgoe.org/projekte_bgf
[45] Riedel et al. (2020)

that are changing the central framework conditions for health and work in the course of the discussion around the working world 4.0 - a phase of profound change.[46]

Working from a home office certainly has some advantages, but it also brings with it the danger of no longer being able to separate oneself from work, or only being able to do so with difficulty. Recently, there have been increasing reports in the media about the problems that "isolated" work from home brings with it: social contacts are visibly decreasing, digital demands are constantly increasing, there is also an excessive demand on time, e.g., due to many video conferences. Parents of school-age children also have to deal with additional digital tools and "working mums" are under pressure due to home-schooling. This thesis is reinforced by a very broad study conducted by the University of Vienna under the title "Learning under COVID-19 conditions", in which 85% of surveyed students stated that they were supported by their mothers in home-schooling.[47]

Legal Framework for Home Office in Austria

When it comes to the implementation of important measures at the level of political decision-makers, legislative measures have been implemented only hesitantly in Austria. The topic of home office regulations was given more attention by the start of the COVID-19 pandemic in February 2020, but nevertheless the government and the social partners negotiated for many months to reach a much-criticised agreement. From 1 April 2021, the new legal regulations for working in a home office came into force. The most criticised point about this is that work in home office remains a matter of agreement between employer and employee. The tax law part of the home office package was already passed in the National Council in February 2021 and came into force retroactively as of 1 January 2021, the labour and accident insurance law part as of 1 April 2021. We summarise the most important points from an article published by the Austrian Chamber of Commerce (WKO) here:[48]

- Employee protection: there is no legal change in the scope of the Workers' Protection Act (Arbeitnehmerschutzgesetzes - AschG) or the Labour Inspection Act (Arbeitsinspektionsgesetzes -AIG). In short: in the future, a workplace in the employee's home will still not be inspected according to the standards of an office workplace.

- Accident insurance in the home office: The current Corona regulation (a clarification in the law that activities in the home office are also covered by accident insurance) will become permanent law.

- Work equipment: it is clarified that the employer is obliged to provide the employee with the "necessary digital work equipment". This is understood to mean PC/laptop, telephony (mobile phone) and data connection (internet).

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[46] Antistresszentrum (2021): Hilfe bei Stress und Burnout in Wien; online available: https://www.antistresszentrum.at/

[47] Spiel et al.,(2020), Study by the University of Vienna (2021): Lernen unter COVID-19 Bedingungen; online available: https://lernencovid19.univie.ac.at/ergebnisse/

[48] see Austrian Chamber of Commerce (WKO, 2021): Die künftigen Homeoffice Regelungen; online available: https://www.wko.at/service/arbeitsrecht-sozialrecht/homeoffice-die-kuenftigen-regelungen.html

- Working time: all provisions of the Working Time and Rest Act remain unchanged. The same provisions therefore apply in the home office as in the office workplace.

In companies with a works council, there should be a company agreement for the introduction and regulation of home office. For this purpose, a new legal connecting factor was anchored in the Labour Constitution Act. What is regulated in these home office company agreements? The purpose is to agree on important rules such as: those who use their own digital work equipment (including the internet connection) in the future must receive appropriate compensation for this from the employer. Lump-sum payments by the employer for costs in the home office are tax-free up to 300 euros per year. As before, however, employers should and can also assume other costs incurred (electricity, heating, work furniture). These costs can also be reimbursed in the form of a lump sum (e.g. through a company agreement).[49]

The main problem is that there are many small companies in Austria without a works council and employees therefore often depend on the "goodwill of the employer" with regard to home office regulations and reimbursement of costs.

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[49] see: Österreichischer Gewerkschaftsbund (ÖGB, 2021): Klare Regelungen für Home-Office fixiert; online available: https://www.oegb.at/themen/arbeitsrecht/rechte-und-pflichten-am-arbeitsplatz/klare-regeln-home-fuer-homeoffice-fixiert

3   National Needs discovered via Online Survey

From April to May 2021, a study on the STRESS-LESS project was conducted in the countries of Germany, Bulgaria, Spain and Austria. The aim of this research was to offer new learning methods for improving the competences of employees of small and medium-sized enterprises (SMEs) in relation to working from home or using digital technologies in the workplace, and to support their implementation. The questionnaire was divided into thematic blocks of questions regarding technology use (before, during, and expected after the pandemic), stressors due to the use of information and communications technologies (ICT), stressors due to home office, individual coping behaviours, as well as health outcomes and prevention measures. Please refer to chapter 5 – Glossary, where we provide definitions on the stress factors considered in the project. A total of 182 respondents took part within the survey.

3.1   National Needs of Germany

In general, German employees report the highest degrees of both their overall workplace and home office equipment compared to the other participating countries. Although German subjects rate their knowledge as highest compared to the other countries, it is only average and offers a starting point for improving awareness and how to deal with digital stress. As digital technologies are an integral part of the workplace for German respondents, it is imperative that companies address this issue, especially since a higher intensity of technology use is expected in the future. This can be done at both individual and organisational level to provide opportunities for approaching digital stress in the company.

Concerning stressors due to ICT use, Uncertainty, Invasion, Overload, Interruptions and Performance are the top five rated stressors of German participants. Uncertainty scores highest and deals with the feeling that skills have to be developed regularly due to frequent digital changes. For these reasons, there is a need to help managers and employees to learn and develop their skills in technologies they depend on or are crucial for their work. Invasion scores second and defines the feeling that boundaries between work and private life are increasingly dissolving. Overload scores third and addresses the feeling that workload increases due the use of digital technologies. Due to simplified and faster communication channels and the constant updating of data and news, employees are exposed to continuous changes and new work assignments. Interruption scores fourth and deals with the feeling of frequent interruptions during work. Performance scores fifth and defines the feeling of being monitored through the use of digital technologies. Overall, digital stress is reported lowest in Germany compared to participants of the other countries: 7 of 12 stressors (Complexity, Non-Availability, Role Ambiguity, Unreliability, Invasion of Privacy, Performance, Invasion) are the lowest. However, Uncertainty and Interruptions take 2nd place for Germany, which should be addressed more intensively. At company level, German employees from middle-sized enterprises report relatively higher degrees of digital stress.

Compared to stressors due to ICT use, home office stressors seem to have a lower impact on German participants in general. The most commonly mentioned factor was "can't separate home working and free time", "limited internal communication"

and "limited external communication". The first factor deals with the situation, that employees have the feeling not to satisfactorily delineate working time and free time in the home office. The two others address an insufficient or limited communication with colleagues or superiors (internal) or with customers, cooperation partners etc. (external) due to home office. This can be caused e. g. by poor internet connection or not being able to have face-to-face meetings. However, the equipment in the home office was rated rather high, so that this topic does not present any problems. Therefore, the focus should be firstly on ICT stressors and how to deal with them, as these have a higher need for German subjects. Regarding both digital and home office stressors, German employees appear to particularly struggle with blurring boundaries between work and leisure time induced by both digital technologies and home office work.

Overall, German participants have the best values at health and organisational outcomes compared to the other 3 countries. However, emotional exhaustion can be identified as a relevant topic and consequence of digital stress caused by ICT use and home office work.

German respondents generally cope with digital stress using active functional or cognitive functional coping strategies such as "I thought of a plan of what I could do" and "I looked at things from a more positive side", which are more healthy alternatives than dysfunctional strategies, e. g. ignoring the issue. Their use of strategy was similar for home office stressors and ICT stressors. Nevertheless, German employees also partly report conducting dysfunctional strategies to overcome digital stress.

Regarding implemented and desired prevention measures, German participants are most familiar with workshops as well as manager trainings and prefer them most for future implementation. Other preferred prevention measures by at least 30% are international trainings, health days, risk assessment and web guides. These insights provide starting points for the development of programmes and learning methods in the following work packages.

3.2 National Needs of Bulgaria

The first thing that makes an impression from the STRESS-LESS survey is that Bulgarians have the highest digital and home office stress from all surveyed countries, but they are also least aware of it. If asked if they are stressed, they would say no, or not much, but then on the different stress-factors their perceived stress evaluation is almost inevitably higher. That is why we think that we should include in the project outputs information about stress itself and digital stress in particular, in order to increase the awareness and understanding of the Bulgarian SME staff about digital stress in particular. In addition, it can help to easily attract the target group to participate in the IO3, IO4 activities / dissemination plan.

The main digital stressors for the Bulgarians coincide with the main stress factors of the rest of the countries with one exception: on top of that Bulgarians also have high level of stress from Invasion of Privacy, which is not that high in the rest of the countries. The "Invasion of privacy" stressor, which is the most distinguished country specific result, is

most probably caused by a subjective not objective factor[50].It can be explained with the lack of trust to authorities, which has already been proven in other research reports.

Trust at the workplace is a core prerequisite for security and lack of it inevitably leads to stress. That is why we propose to incorporate the topic of trust at the workplace in the overall training program, but not specifically to treat it as a country specific need. On one hand it will help to address the country specific needs in Bulgaria, but on the other it is applicable to other stressors like: Performance control and Interruptions.

Regarding the home office, Bulgarians again have highest values of stress for most of the researched factors. Like the other countries a lot of stress comes from difficulties to delineate work from family life and to find time to rest and relax. Unlike other countries though, a lot of concern for the Bulgarian participants comes from the internal and external communication. It seems that we are more uncomfortable than the rest of the participants with online communication and that leads to stress, so it should be addressed in our NAP for Bulgaria. We have to point out that the Bulgarians score highest in 8 out of 12 stressors (Invasion of privacy, Unreliability, Uncertainty, Non-availability, Role Ambiguity, Complexity, Invasion, Insecurity), and take the second place for other 2 categories: Overload and No sense of achievement.

3.3   National Needs of Spain

Main stressors seem to be Uncertainty, Performance, Overload and Invasion as well as Interruption.

Spain faces the highest rates in regard to overload and interruptions; Lowest in regard to insecurity and sense of non-achievement; Micro and Small sized organisations are more stressed than medium sized and large organisations again higher.

The topic "internal company communication in the home office is only possible to a limited extent" here Spain has slightly the lowest level of all countries. So, either Spaniards have less problems to communicate on distance or they do not perceive this as such a problem?

Also "It is not possible for me to satisfactorily delineate working time and free time in the home office" seems to be less a problem compared to the other countries. Here Spain has the very lowest value of all. But maybe this is also because of the Spanish lifestyle where anyway there is a bigger overlapping in between both. There is no difference in coping behaviour between technostress and home office. People use much more active functional and cognitive functional coping than dysfunctional coping.

Regarding preferred prevention measures, Spain has the highest levels compared to the other partners for Internal Trainings and Risk Assessment, whilst Health Days which are preferred by Bulgarians or Workshops preferred by Germans and Austrians rate lower.

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[50]   Based on 2 researches by World Happiness Index, powered by Gallup World Poll and The Happiness of the Bulgarian Nation, powered by Bulgarian publishing group MIT Press

Guides and App Guides reach values that show that Spanish employees prefer person-alised solutions.

3.4 National Needs of Austria

Regarding the Digitalisation of the Workplace (including home office equipment) Austrian respondents rate their situation, although in the upper middle range, worse than those respondents in the other three countries. Due to the pandemic, Austria has experienced a digitalisation boost, but obviously there is still a need to catch up and, in any case, awareness rising measures as far as the topic of digital stress is concerned are needed.

As in other countries the "top five stressors" due to ICT use in Austria are: Uncertainty, Performance, Invasion, Overload and Interruptions, similar to the situation in Germany but with slightly higher scores.

Regarding home office stressors is to say, that in Austria the most commonly mentioned factor were "I lack time to relax away from the home office", "I don't like to spend much time at home". Here we have the highest scores of all countries. On the third place comes "It is not possible for me to satisfactorily delineate working time and free time in the home office." Austrian employees appear to particularly struggle with blurring boundaries between work and leisure time induced by both digital technologies and home office work.

Regarding the general state of health Austria is on the third place within the four countries, whereas the differences are not very high. Emotional exhaustion on the other hand, is significantly higher than in all other countries.

Like in all other countries Austrian respondents generally cope with digital stress using active functional or cognitive functional coping strategies such as "I thought of a plan of what I could do" and "I looked at things from a more positive side", which are more healthy alternatives than dysfunctional strategies, e. g. ignoring the issue.

Regarding implemented and desired prevention measures, Austrian respondents – again very similar to German ones - are most familiar with workshops, health days, as well as manager trainings, and internal training and prefer them most for future implementation.

3.5 Key learnings of the survey – all countries

The identification of these key learnings is of importance for the further development of the main products of the project. We summarise the most important aspects of all partners here:

Overall, the survey study revealed some interesting facts regarding stress at the workplace occurring due to ICT use and home office: in all countries, it was found that the participants had only a moderate level of knowledge about digital stress. However, participants in Germany rated themselves plainly higher than participants in Spain. The same applies to managers compared to employees: on average, managers rated their knowledge on digital stress higher than employees.

Furthermore, companies across all four countries appear to generally provide a well-equipped workplace with digital technologies at work and at home. Accordingly, workers also use these technologies frequently. While the perceived overall intensity of the technology use does hardly change over time, the use of some single technologies, e.g., online communication tools, has changed due to COVID circumstances. Besides that, there is only a slight increase expected after the pandemics compared to the two other points in time (before and during the pandemics). At the same time, the number of technologies used by the participants surprisingly decreases during the pandemics. Possible explanations for this observation could be higher levels of home office and the absence of certain technologies such as stationary phones or stationary computers at home.

Concerning stressors due to ICT use, 62% of all participants reported severe stress for at least one stressor. The most important stress factors are Techno-Uncertainty (the feeling that skills have to be developed regularly due to frequent digital changes), Performance Control (the feeling of being monitored through the use of digital technologies), Techno-Overload (the feeling that workload increases due the use of digital technologies), Techno-Invasion (the feeling that boundaries between work and private life are increasingly dissolving) and Interruptions (the feeling of frequent interruptions during work). Techno-Invasion is also a major factor regarding emotional exhaustion: participants who reported a higher invasion score also said they were more emotionally exhausted. At country level, especially participants of Bulgaria stated higher digital stress. In contrast, participants in Germany reported the lowest values. A possible link could be the higher knowledge about digital stress of the German participants and that their awareness enables them to cope better with stress. In all countries, managers tend to be more stressed than employees. Severe factors were Techno-Overload and Techno-Uncertainty.

Concerning stressors due to home office, 38% of all participants reported severe stress for at least one stressor. The most mentioned factors were "can't separate home working and free time" and "no time to relax". Participants who stated higher scores in "no time to relax" also said they were more emotionally exhausted. Regarding gender-specific, women tend to be more stressed than man due to home office. At country level, the results are similar with the ones of stress due ICT use: participants of Bulgaria stated higher stress and participants in Germany reported the lowest values, as well as managers tend to be more stressed than employees in all countries. Especially "no time for private care" appears to be a major stress factor for them.

For individually overcoming stress due ICT use and home office, participants try to cope with similar strategies, i.e., no significant differences can be seen. However, the type of strategy varies. Active-functional coping (e.g., seek out for help/advice) and cognitive-functional coping (e. g. accept the situation) are used more often than dysfunctional coping (e.g., ignoring the problem).

Regarding some health and organisational outcomes of stress participants reported a slightly high general state of health as well as perceived productivity and job satisfaction. However, the reported values of emotional exhaustion were on a challenging level as well which appears to be a serious issue for employees. In this context, participants of Austria stated significantly higher emotional exhaustion than participants in Germany.

At last, the project team asked for implemented and desired prevention measures. In this context, participants reported workshops and health days as both the most existing and demanded ones. Besides that, risk assessments, counselling points and app guides have the strongest increases in future requirements. At country level, participants in Spain stated lower implementation values than the other three countries. Furthermore, preferences over the countries vary as well: participants in Spain especially demand risk assessment and internal training, German participants prefer workshops and manager trainings, Bulgarian participants liked workshops and health days, participants of Austria voted for workshops, manager trainings and health days. The overall future expectations regarding stress at work were reported ambiguously: participants in Spain are more positive and expect that stress due ICT use and home office will reduce after the pandemic. In contrast, participants in Germany are rather pessimistic.

To conclude, the conducted survey study revealed the general importance of stress due to ICT use and within home office. Furthermore, many interesting insights within the topic were found which will provide useful knowledge during the next project steps on the journey to less stress at modern digital workplaces.

4   Suggestions to reduce Digital Stress

While developing the National Adaptation Plans, based on Desk Research and outcomes from the Survey, all partners provided initial suggestions on how to proceed in the project to sustainably reduce stress. In the next chapters, we present these findings and would like to invite all those interested in the topic - especially our stakeholders and implementation partners - to add to our suggestions and share their views with us.

These suggestions refer to different levels or domains of influence: in a first step, we distinguish between those that employees can exercise on their own responsibility (individual level) and those that are the responsibility of management or at least require the approval of the supervisor (organisational level). A clear assignment is nevertheless often difficult, as ideally management directors should ensure clear rules, managers/supervisors, who are often under great pressure themselves, should support their employees to avoid digital stress. This task is probably best performed in a company culture that relies on mutual trust and understanding and a good culture of discussion. It is also recommended that people - at whatever level - are willing to work on themselves to reduce digital stress for themselves and others.

In addition, we also address points that can only be made by policy decision-makers (policy level). For these recommendations, the direct implementation cannot be influenced by the project, but we can still collect the thoughts and share them with our stakeholders.

Since the scope for action at the individual level, organisational level, and policy level often cannot be clearly delineated, we assign our suggestions to those two levels that should ideally work together (individual-organisational level and organisational-policy level) to achieve their respective aims.

4.1 Stressors identified and general recommendations

Depending on the stressor, tips and tricks can already help at the individual level. Some stressors, however, require more far-reaching changes in the organisational structure of the company, such as internal communication rules, the provision of contact persons for technical problems or training for software. Nevertheless, knowledge about the existence of digital stress is the first starting point to create a better working atmosphere. For these reasons, the most relevant ICT stressors should be explained in the new training concepts while the other ICT stressors as well as home office stressors should not be disregarded. Please refer to chapter 5 - Glossary of stress factors in the STRESS-LESS project where we provide definitions of all stress factors due to digital work as well as stress factors due to work in home office considered in our project.

In a first step we have collected general suggestions from all partners to better deal with these stressors:

- There is a need to help managers and employees to learn and develop their skills in technologies they depend on or are crucial for their work. ICT training and contact persons for software problems are more effective so that employees and managers can handle their tasks with the technologies.

- With the help of individual tips, the blurred boundaries between work and private life can be reduced, e.g., by separating work and private devices, consciously switching off work devices at home, consciously not answering work-related messages during holidays and leisure time.

- Due to simplified and faster communication channels and the constant updating of data and news, employees are exposed to continuous changes and new work assignments. Methods on structuring one's own work are particularly helpful, e.g., employees and managers can determine together which work they should focus on first.

- It helps to have fixed times when you are not available to anyone and can work undisturbed. Deactivating push notifications and muting for a few hours also leads to a work environment in which one can work without interruptions from digital technologies.

- Transparent communication on the part of management is particularly necessary to explain whether and to what extent the company's own technologies are used for monitoring. The feeling of being "tracked" can have a negative impact on the perception of stress.

- Trust at the workplace is a core prerequisite for security and lack of it inevitably leads to stress. This topic should be incorporated in the overall training program because it concerns all partners and is related to other stressors like Performance control and Interruptions.

- Awareness rising measures are important: All stressors (see chapter 5) and their consequences should be discussed to create awareness.

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4.2   Specific inputs for the Web and App Development (IO2)

The aim of web and app development is to provide digital training programmes for employees and managers, which they can access flexibly. The first step is to create an awareness of digital stress: How does digital stress arise and how does it affect me personally? In addition, training content will be provided on how to deal with digital stress using concrete practical examples and tips that each learner can try out for themselves. With the help of these practices, employees and managers should be shown ways in which they can actively and consciously adapt and improve their behaviour when dealing with digital technologies in their everyday working lives in order to be less stressed.

Regarding the pandemic situation we collected the following suggestion from partners. The management should

- provide employees with sanitary and institutional recommendations communicated by official sources (e.g., Ministry of health) and communicate the need to follow these recommendations, also when working at home.

- let them know that the situation may have an emotional impact and explain to them that fear and stress is a normal reaction in such situations, and they may manifest in multiple forms as preoccupation, pessimism, constant irritation, bad humour, anxiety, concentration problems, etc. Each person may experience this with different intensity.

- provide employees with proven recommendations on the design of the workplace, lighting, work postures, measures for the prevention of mental fatigue, stress management, sleep habits, physical exercise at home, healthy diets etc.

- The situation of lockdown at home during long periods may create psychological discomfort. Aiming to prevent or to reduce these effects, you can support workers with the specific recommendations, e.g., avoid too much information; to be permanently connected may unnecessarily raise the risk of anxiety; keep only on reliable sources of information; check the information you share or recognise the emotions; keep social contact through the new technologies, speak to close persons if it relieves you, etc.

Overall, the app as well as the web environment is particularly suitable for providing behaviour-based content for, e.g., raising awareness and knowledge regarding the topic of digital stress. Due to the general role of managers, it should be an overall focus to increase their awareness regarding digital stress.

4.3   Specific findings for the Blended Learning Solution (IO3)

The blended learning solution is intended to cover a diverse programme for learners through the combination of online trainings and face-to-face events. According to the survey, many employees mainly prefer workshops and manager trainings, which should become part of the face-to-face Solution to create preferred learning environments. Similar to the Web and App Development (IO2), the aim is to provide employees and managers with a theoretical background on digital stress: How does it arise? What different factors (stressors) exist? What influence does it have on the way we work? In the further course, it will be shown which stress prevention measures exist in principle and how digital stress in particular can be dealt with.

Stressors identified should be addressed at both individual and organisational levels (see explanation in section 4.1.) with the help of individual measures to improve the situation by employees and organisational frameworks and rules to lessen the feeling of blurred boundaries between work and private life. Further content should address different coping strategies, which help employees at individual level and informs managers on organisational level how digital stress can be prevented in the first place.

Individual and organisational level:

- According to the survey and the 5 top stressors, programmes for conscious behavioural as well as environmental (organisational) change should be developed. Content is designed to support the development of skills and self-discipline such as dealing with interruptions, resisting digital "temptations", taking digital breaks for the brain, physical exercises to relieve neck and back pain due to frequent sitting at a desk, breathing exercises to balance the sympathetic and parasympathetic nervous systems, and building confidence with technology use, etc.

- Gimpel et al. (2020)[51] concluded in their study that employees with more experience or confidence in dealing with digital technologies and media cope better with the home office situation, which may also affect the general work situation. Therefore, training at individual level as well as an open communication with the management that it is okay to learn new technologies first and that there will be a constant change can help to tackle this issue.

- Content of a training programme should have to counteract stressors following Riedl et al. (2020)[52]: self-reflection of habits and motives, recognising one's own resources, body analysis and nutrition, and dealing with stress, exhaustion, and burnout. Fostering motivation and trust in teams, success factors in leadership communication at a distance, target setting and performance appraisal in the virtual world of work, digital and analogue interfaces in cooperation and efficient design of online meetings. Measures to overcome technical skill gaps: In order to successfully lead teams in the digital world, not only technical solutions but also social skills are needed to bridge the gap between the analogue and virtual worlds. Mindfulness based stress reduction and other methods that managers as well as employees can use to find coping strategies on individual level.

- We need to include Invasion of Privacy as a topic to address. On individual level we could talk about how to protect our privacy online and how to be less suspicious – more trustful in order to avoid stress. Invasion of Privacy on organisational level we could address in two ways: 1) how to protect the privacy of our employees and 2) how to talk about privacy to our employees, so that they understand that we are taking care of it.

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[51] see: Gimpel et al. (2020)
[52] see Riedl et al. (2020)

Organisational level and policy level:

- All regulations and recommendations found in Spain make clear digital stress is not an individual problem of the employee, who simply needs to better cope with it. Stressors may be identified in the structure of the organisation (way of working, introduction of ICT, role conflicts, change of working, tools and devices) or in the capacities and skills of the employee (digital skills, level of ability to deal with challenges, etc.). Spanish legislations point out a clear responsibility of the employer to prevent possible risks and suggests training for the managers as well as for employees.

- However, remote work also demands more training, collaboration, flexibility and responsibility from employees. It also presents possible risks and challenges such as data protection and security gaps. The permanent digital presence and connectivity also brings consequences such as technostress, continuous working hours, computer fatigue and greater isolation at work. According to the European Framework Agreement on Telework of 2002 and 2009, which served as the basis for the framework agreement of the Royal Decree Law 28/2020 of the 22nd of September on distance working, the workload and performance standards should be equivalent to those of a comparable worker, present at the work premises.

- The research by the Oficina Internacional del Trabajo (2020) which is related to the Ministerio de Trabajo of Spain, shows that remote workers tend to work longer hours than when they are on the employer's premises. Employees who live with children or other dependents at home need to find extra time in their day to get their work done. As the questionnaire results show Spaniards do not perceive this so much as stress, as different parts of life are mixed up anyway, somehow. In my observation the issue is more that it is not perceived as stress as they try to cope somehow with the situation as it is, as unless you have savings or other income you cannot afford to think on alternatives. The awareness only starts when it is obvious that somebody is on its limits.

- Good practice example from Spain: there are working groups who are tasked with updating existing policy documents and identifying information and skills gaps. In addition, they are required to provide training, information provision and communication measures to ensure the participation and mental health of their team members during a period of telework. These measures shall include:

  - training on occupational safety, digital rights, psychosocial, ergonomic and organisational risks

  - digital communication strategies regarding accessibility, deadlines, employer and employees' expectations, the capacity of disconnecting

  - support services for employees with fears and concerns

  - promoting the separation of professional and private commitments through guaranteeing the right to disconnection and to a certain autonomy in the distribution of working time.

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- Invasion of Privacy on policy level: organisations can address on policy level by raising the awareness of authorities that despite of the existing laws in the field, employees do not feel protected.

- Recommendations from the Bulgarian partner: awareness rising on the topic polarisation of opinions and contradictions and conflicts in society and economic uncertainty and its effects on stress level play an important role. Since this is not entirely a digital stress problem, we can address it within the common part of uncertainty, but maybe include some part about critical thinking.

4.4   Specific inputs for Training for Company Digital Stress Coaches (IO4)

The Training for Company Digital Stress Coaches is designed to give companies the opportunity to train internal experts to act as a point of contact for employees and managers regarding digital stress and to help them cope better with digital stress. The programme is composed of two parts: In the first part, potential coaches will be taught theoretical basics about digital stress: How does stress work? How does it influence the way we work? What stress prevention measures are there? How can stress be managed? In the second part, coaching methods are taught: how to find out the individual needs of the person in order to support them in the best possible way and to find effective solutions. Another point is how the developed solutions can be implemented with the company structure and culture.

- In the course of the training, more attention should be paid to the relevant ICT stressors and the home office stressors identified via the survey. With the help of the trainer, it should be worked out why the stressors exist and at what level (individual or organisational) they should be addressed in order to best mitigate the consequences. In this context, special contents for dealing with managers and their crucial role in preventing digital stress should be provided. In doing so, showing the negative impact of digital stress on several health and organisational outcomes represent important facts for creating the necessary awareness. Furthermore, different coping strategies should be pointed out and how they can help to deal with stress, for example to reduce or avoid emotional exhaustion.

- In principle, the contents and recommendations made in the chapter "First findings for the Blended Learning Solution (IO3)" should also be included here. Probably also a risk assessment for employees and managers should be included in the training to be able to evaluate how individuals are doing in dealing with digital stress. Then more suitable solutions can be offered.

- However, the content must be prepared from the perspective of the organisation and the coaches and supplemented by the coaching methods. All partners will provide their concrete inputs later in the project.

When planning the training structure and content it might be useful to distinguish between different levels as already mentioned above. A possible structure to organise content could be based on a differentiation like this:

A) Policy decisions that should be addressed but are difficult to change, e.g., the home office regulations and other provisions of labour law that have an impact on the aims of our project.

B) Operational decisions, guidelines and resolutions given by management regarding stress due digitalisation (technostress). These are easier to resolve than the political ones, yet often require long coordination paths within the company. We should soon start to collect concrete inputs.

C) Decisions that employees can take into their own hands: e.g., clear agreements with their superiors on digital work and home office, demanding regular meetings, training for digital tools that are necessary for the job or taking care of a regular exchange with colleagues and clients themselves, etc.

D) Self-responsible measures provided to both managers and employees to better cope with stress caused by digitalisation on a personal level: e.g., learning strategies to cope better with digital stress: from relaxation methods to mindfulness methods to mediation, etc. The offer should be broad, as people have different needs/interests.

5 Glossary of stress factors in the STRESS-LESS project

Stress factors of digital work

An overview of relevant technostress factors considered in the project can be seen in Figure 1: Stress factors of digital work. The "Top 5 stressors", identified via the STRESS-LESS survey, are coloured dark blue, whereas the other stressors identified are coloured in light blue.

Figure 1: Stress factors of digital work
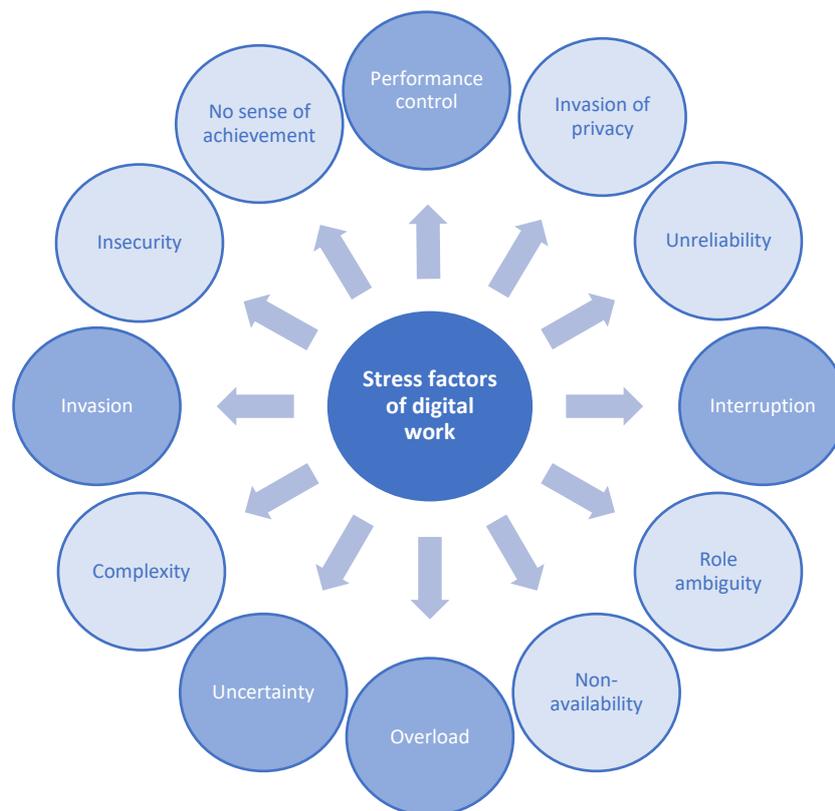
Source: Representation based on Gimpel et al. (2019)

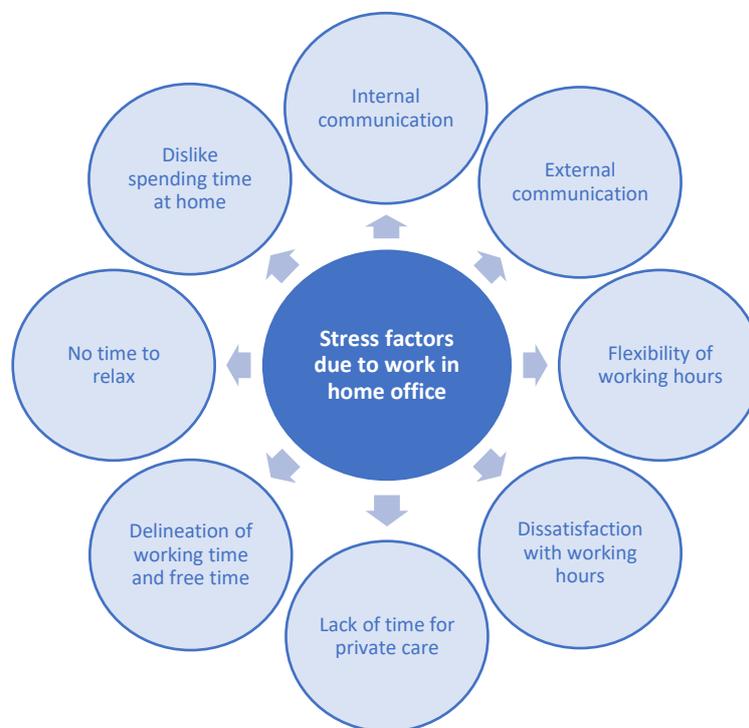| No	Digital Stressor	Definition
1	Complexity	describes the feeling to have inadequate skills in handling job-related digital technologies.
2	Insecurity	describes the fear of losing one's job to other employees with higher skills regarding digital technologies or due to digitalisation.
3	Interruption	deals with the feeling of more frequent interruptions during work due to the use of digital technologies.
4	Invasion	defines the feeling that boundaries between work and private life are increasingly dissolving.
5	Invasion of privacy	deals with the feeling that privacy is violated due to the use of digital technologies.
6	Non-availability	addresses the feeling that needed digital technologies are not available.

7	No sense of achievement	means the feeling of hardly achieving progress or success in work, as these are less perceptible in the use of digital technologies.
8	Overload	addresses the feeling that workload increases due the use of digital technologies.
9	Performance control	defines the feeling that the use of digital technologies will increase performance control and evaluation.
10	Role ambiguity	arises from the feeling that more time has to be invested in solving problems with digital technologies than in actual work activities.
11	Uncertainty	deals with the feeling that skills have to be developed regularly due to frequent digital changes.
12	Unreliability	defines the feeling that the digital technologies and media used are unreliable and do not work as they should.

Source: Gimpel et al. (2019)

Stress factors due to work in home office

Due to the changed way of working during the pandemic, another category of stressors was integrated into the STRESS-LESS survey, which provided information on the stressors people face in the home office.

Figure 2: Stress factors due to work in home office

Source: own representation

No	Home Office Stressor	Definition
1	Internal communication	describes the feeling that the internal communication within the company is only possible to a limited extent.
2	External communication	describes the feeling that the communication with people outside of the own company is only possible to a limited extent.
3	Flexibility of working hours	deals with the perception of fixed working times in home office.
4	Dissatisfaction with working hours	defines the level of dissatisfaction with the own working times in home office.
5	Lack of time for private care	describes the perception of insufficient amount of time for private care (e.g., school-age children)
6	Delineation of working time and free time	addresses the feeling of blurring boundaries between work and private time due to home office.
7	No time to relax	defines the feeling of missing time for relaxation due to home office.
8	Dislike spending time at home	addresses the level of being dissatisfied by spending a large amount of time at home.

6 Links & Downloads

On our website you can download this report and various other information on the STRESS-LESS project. Follow us also on LinkedIn and let's stay in touch!

STRESS-LESS website: www.stress-less-project.eu

LinkedIn: https://www.linkedin.com/showcase/stress-less-project

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