TUNED | Trade Union's National and European Delegation

EUPAE | European Public Administration Employers

"Improving work-life balance: opportunities and risks coming from digitalization"

Field Study

With the support of the European Union

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Contents

1. Introduction

The study was conducted by Zoltan Vadkerti, appointed researcher, under the supervision of the EU Social Dialogue Committee for Central Government Administrations (SDC CGA[1]). It is part of an EU-funded project **"Improving work-life balance: opportunities and risks coming from digitalization"** carried out in the context of the SDC CGA, led by Italy's Department for Public Administration on behalf of the employers, EUPAE. It aimed at providing as much information as possible about the impact of digitalization - teleworking, agile work, and other new ways of working - on the improvement of work-life balance, and how it is addressed by social partners. Furthermore, the study aims to use the findings to feed into policy guidelines of DOs and DON'Ts addressed to management and trade union representatives at the national level. The project also included the organisation of three main events: two Focus Group meetings, one organized in Paris on the 14th of March 2019, and the second one in Madrid on the 29th of May 2019 and a Conference in Rome on the 27th of September 2019.

2. The methodology of the research

The methodology of the study combined a set of complementary approaches. First, an academic literature review was carried out on digitalization, work-life balance, employment at central government agencies and their intersection. The research also collected international good practices, as well as research and policy papers published by institutions such as the ILO, the OECD, Eurofound, national governments and think tanks. The desk research also included various policy papers and previous research of social partners, especially the members of the Social Dialogue Committee for Central Government Administrations.

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[1] The Social Dialogue Committee for Central Government Administrations (SDC CGA) has representation from all 28 member states on the employees' side (Trade Unions' National and European administration Delegation – TUNED) through the European Public Service Union (EPSU) and the European Confederation of Independent Trade Unions (CESI), while on the employers' side (European Public Administration Employers – EUPAE) there are 12 full members, Belgium, the Czech Republic, France, Greece, Italy, Lithuania, Luxembourg, Romania, Slovakia, Slovenia, Spain and the United Kingdom, and six observers, Austria, Germany, Hungary, Latvia, Malta and Portugal.

Second, case studies were collected from the members of the SDC CGA and complemented by a number of targeted interviews[2]. Finally, the research also took into account the discussions in two Focus Group meetings of 40 representatives of TUNED and EUPAE.

2.1 The scope of the research

Case studies[3] were collected from the following 12 EU Member States: Denmark, Estonia, Belgium, France, Germany, Romania, Spain, Italy, Netherlands, Ireland, Portugal and Slovenia, via a case study template. The case studies were analysed based on a set of criteria[4], agreed by the project steering group, including amongst others gender equality, the involvement of trade unions and training. For each of the focus countries, the project set out to identify at least one case study provided and approved by both EUPAE and TUNED.

2.2 Definitions of the main concepts

Digitalization is defined as a socio-technical, evolving process that takes place at the individual, organisational, societal and global level (Legner et al, 2017) and across all sectors. It refers to the use of tools converting analogue information into digital information. Digitalization refers to a complex array of technologies, some of which are still at their early stages. Among others, digitalization at the workplace, in its current form, refers to the increased presence and use of connected databases and scheduling tools, as well as new software applications for devices such as computers, tablets or smartphone apps.

In the context of the present research, **work-life balance** refers to a satisfactory state of equilibrium between an individual's work and private life (Eurofound, 2018). Work-life balance arrangements might include measures related to leaves

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[2] List of interviewees can be found in Annex II.

[3] List of analyzed case studies can be found in Annex I.

[4] List of the evaluation criteria can be found in Annex III.

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VS/2017/0370

(maternity, paternity, parental, carers'), flexible working practices (place, time, task), reduced working time, or certain services (childcare, care for dependent person etc.).

From a public policy perspective, work-life balance policies should contribute to the achievement of gender equality by promoting the participation of women in the labour market, making it easier for men to share caring responsibilities on an equal basis with women, and closing gender gaps in earnings and pay. Such policies should take into account demographic changes including the effects of an ageing population.

2.3 Work-life balance and digitalization

Digitalization mainly impacts two aspects of work and therefore the work-life balance of employees, one is working time, and the other is the place of work. These aspects pose challenges to workers' mental health (SDC CGA, 2017) and working conditions. This has been echoed by the collected case studies, as well as in the Focus Group meetings, and are also the two dimensions which are at the heart of discussions and increasingly negotiations by social partners at different levels (EU, national, company, administration or workplace levels). They intersect with a number of other topics which are typically addressed in collective bargaining or consultation process of trade union representatives such as gender equality, training, health and safety and last but not least restructuring.

In a recent European Trade Union Confederation (ETUC) survey, *Digitalisation and workers participation* (2018), gathering more than 1500 responses from private sector trade unionists and company level workers' representatives from 30 countries, the issue that generated the most responses and thus was highlighted as the most important, was working time. In the responses to the survey question regarding the topics that need to be addressed most urgently by collective agreements at sector or cross-sector level, working time and work-life balance is top of the list for 20% of respondents, while around 10% also referred to the right to disconnect and to telework and ICT mobile work.

Clearly, digitalization has put many issues related to working time (back) on the agenda of social dialogue, namely the impact of automatization and rationalisation gains on working time (reduction), organisation of working time, regulation of ICT-related work at home or outside normal working hours, availability, monitoring and documentation of working time, maximum hours, overtime, remuneration, as well as several aspects related to the increasingly blurred boundaries between working and private life. In this context, it is worth highlighting the recently adopted EU Directive on work-life balance for parents and carers which defines 'flexible working arrangements' as "the possibility for workers to adjust their working patterns, including through the use of remote working arrangements, flexible working schedules, or a reduction in working hours".

The Focus Group discussions have also revealed that several new terms are emerging related to digitalization and the new world of work, some of which are still difficult to define. Here are a few terms that are recurrent in the study and need to be described:

Smart Work: Smart working allows workers to organise their working hours in conjunction with their private life, family and caring responsibilities. It is a form of new ways of working based on the use of work flexibility, management by objectives and the identification of the needs of employees, also in the light of the need to reconcile work and life (Gastaldi et al, 2014). In Italy, smart working is used interchangeably with Agile working (lavoro agile) (Eurofound, 2017).

Agile Work: Also refers to a form of new ways of working through which organisations allow their employees to work when, where and how they choose to (Serrador and Pinto, 2015). This term is mainly used in the private sector, especially in software development. However, it is now spilling over into other sectors as well including public administrations.

Teleworking: Also referred to as remote work or work from home, during which the employee is working away from the primary place of work (office), usually at their home (ILO, 2016). In the 2002 (autonomous) EU social partner Agreement it is

defined as "a form of organising and/or performing work, using information technology, in the context of an employment contract/relationship, where work, which could also be performed at the employer's premises, is carried out away from those premises on a regular basis". Teleworking may be an ad-hoc arrangement, a regular agreement on a fixed day/week, or an agreement stipulating up to how many days per week this is possible. Telework is subject to a regulatory framework in most of the EU Member States (COM, 2008).

3. Findings

The literature review showed that so far few studies have focused on the impact of digitalization on the work-life balance of public sector employees. There is a lack of research into the impact of digitalization on jobs, skills and working conditions in the public administrations, the existing ones have all been taken into consideration in the critical literature review.

The lack of available data and information harmonised and comparable on the impact of digitalization on public employees has been reiterated during the Focus Group meetings and was also reflected in the case studies. The consequence of the lack of research into the effects of digitalization on the different dimensions of employment means that the impact of these trends and changes are not fully grasped (EPSU, 2015).

On reviewing the available research literature it became evident that using new technologies can offer both advantages and disadvantages to workers (First Psychology Scotland, 2015). For example, according to the research of Laurette Sylvain (2011) advancements in technology can both help and hinder attempts to provide employees with the support they need in ensuring a healthy work environment. Empirical findings also suggest that the majority of the home-based employees - one of the most common forms of the manifestation of digitalization and flexible working practices - acknowledge both the positive and the negative impacts the smartphone has on work-life balance (Ejidou, 2016), which the paper details in

the following section. As digitalization advances, literature suggests that for most knowledge workers boundaries between work, private and family life are almost non-existent, which could lead to work-life balance challenges (Mccloskey, 2018). In this case, if the work domain takes over the private domain, this might lead to dissatisfaction with the life situation of the individual and vice versa. There is also a scarce number of studies on the different impact of digitalization between women and men workers. Existing studies show important differences that need to be explored further. The ILO study confirms that ICT-enabled mobile work is more common among men in general (54% of men and 36% women), yet there is a higher share of women in home-based telework (57%).

The joint ILO-Eurofound report (2017) on Working Anytime, anywhere also revealed that nearly all of the studies reviewed report both positive and negative effects of teleworking or mobile working on the work-life balance of employees. A similar conclusion was reached by the current study, namely that digitalization impacts work-life balance in both positive and negative ways - sometimes at the same time.

The findings of the study demonstrated that the majority of the solutions identified at central government administrations focus on the provision of teleworking - and not so much on other areas of work-life balance. Teleworking is the most often applied work-life balance measure, that is enabled by digital technologies. Therefore, the above mentioned European Framework Agreement on Telework[5] (ETUC, BusinessEurope, CEEP and UEAPME, 2002) is particularly relevant and the principles upon which it is based remain valid today. It recalls that teleworkers benefit from the same legal protection as employees working at the employer's premises, and also identifies the key areas requiring adaptation or particular attention when people work away from the employer's premises, for instance, data protection, privacy, health and safety, organisation of work, training, etc.

It could be assumed, that as digitalization gradually penetrates even more organisational processes (Neufeind et al, 2018), there may be a broadening of its application towards supporting employees to reconcile work and family and private

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[5] https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=LEGISSUM:c10131&from=EN

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life. As the case studies have revealed, there are some pockets of practices, where this is already the case, for instance in Estonia, where the satellite offices also include a playroom for children, as a type of emergency childcare, or in Spain, where digitalization is linked to gender equality objectives through the Action Plan for Gender Equality for Central Government Employees. Depending on national practices, social partners may respond to these deepening digitalization trends with different tools or measures, ranging from collective agreements (as is the case in Portugal) or other types of negotiated texts (such as the protocol on agile work in Italy) or by initiating or making amendments, jointly or separately, to national legislation, like in Italy, Austria, or France to adapt to the changing nature of work.

Information and data gathered during the research have however distilled a number of common success factors to maximize the positive impact of digitalization on the work-life balance of public sector employees and to limit the harmful or negative impact.

3.1 Mixed impact

Based on insight shared by a number of participating central government administrations and trade union representatives in the project, the study finds that their employees' work-life balance was mainly positively impacted by the introduction of new ICT solutions, such as telework. However, in many public administrations, the introduction of remote or flexible working arrangements wasn't accompanied by rigorous data collection, evaluation of impact assessment, it is early days to have accurate information about the potential impact. Many have only recently started surveying the employees to gather information on these issues.

The analyses of those case studies that had included employee surveys revealed higher levels of commitment and job satisfaction as a result of work-life balance policies supported by digitalization. This does not however exclude employees experiencing overwork, stress or other negative impacts stemming from digitally enabled flexible working.

The findings of a recent study on life in the digital age (OECD, 2019) focusing on digitalization and people's well-being, which was also presented at the first Focus Group meeting, notes that while the overall impact of digital transformation on employee's work-life balance is positive, there is, however, growing evidence on emerging negative impacts. The ILO - Eurofound study (2017) also comes to a similar conclusion, namely that ICT enabled mobile working can have both negative and positive effects on employees, these ambiguous effects can sometimes be felt even by the same individual. In the following section, the study attempts at listing the main findings on the positive and the negative impacts.

3.2 Positive impact

Three of the reviewed case studies (Spain, Ireland and Romania) suggest that digitalization can be particularly important for women as it can facilitate their job (re)entry and improve gender equality. The Irish example from the Revenue Commission confirms that the majority of those using flexible working schemes (including work-sharing, flexitime, shorter working year, career break, special leave and teleworking) are women, at the grades of clerical and executive officer. 75% of the clerical officer grades are female. It is no accident either that the initiatives have helped to increase the representation of women in the workforce, particularly in management positions. In both Spain and Ireland, there is a specific Gender Equality Plan in place to boost the number of women in leadership positions, and work-life balance measures are a key component of achieving these objectives. In both countries, trade unions have been highly involved in the process, in Spain by participating in the technical committee on Gender Equality, which is also measuring progress. As a result, in Ireland, the number of women at the level of Assistant Principal position rose from 26% in 2000 to 37,5% by 2010 - compared with the previous decade, where in the absence of such measures, the number of women rising to these positions only increased by 1%.

Improved work-life balance can also, reportedly, lead to reduced absenteeism and organisational operational costs, confirming findings from the literature review. Results from the Belgian FPS Social Security shows that 91% of teleworkers report experiencing less stress, being more committed and having an improved work-life balance thanks to teleworking. In addition, in the 2011 internal survey, 90% of respondents stated that they perceive their work-life balance positively when teleworking. Employee surveys in Italy, where so far 11% of employees can be considered as smart-workers, indicate that 13% of them gained increasing enthusiasm when back in the office.

This study confirms that work extending technologies have the potential to increase autonomy and flexibility (Stephens, 2007), as was confirmed by the Irish and Italian case studies, as well as was reported following the introduction of Satellite offices in Estonia. It also confirms that digitalization may contribute to an improved level of trust of staff towards their organisation, as it has been measured in Italy at the Office of the Prime Minister, following the introduction of the Smart Working legislation. The most appreciated aspect of surveyed employees was greater time flexibility and organizational autonomy (24%). 21% of smart workers mentioned as a positive impact of Smart Working the reduced travelling cost and time, 17% mentioned having more time for themselves, 14% mentioned greater work efficiency.

The research also reinforces the arguments that new digitalized solutions applied to work-life balance may lead to an increased level of productivity. Employees that are less stressed, well-rested are much more creative and productive, and in addition working from home can potentially also offer a work environment with fewer distractions and lower noise levels than the workplace - if the conditions are met. This was confirmed by the case study on teleworking from Slovenia - through the Ministry of Public Administration reporting a positive impact on productivity. The Directorate General for Administration and Public Employment (Ministry of Finance) of Portugal also reported increased productivity due to digitalization, via teleworking. In addition, enhanced work-life balance has for the effect an increase in employee engagement and motivation, improved quality output and enhanced quality towards

service   users.

One question that needs particular attention in this area is on the time spent by employees when working away from the office, and whether digitalization and remote access to work cause (unpaid) overtime. A 2016 study on the Challenges and Opportunities offered by digitalization for work-life balance, by the German Federal Ministry of Family Affairs, Senior Citizens, Women and Youth, may provide some answers. The respondents of the survey stated that flexible working and teleworking means that they save on average 4,4 hours per week (otherwise spent on commuting), and 80% of the respondents said they use this time to spend it with family. Of the surveyed fathers, 40% said that thanks to working from home for some of their work, they are able to assume caring responsibilities. The second most frequent answer to the question, as to how they spend the extra time they gain from teleworking, was spending it on household chores, half of the respondents pursue their hobbies or other private interests, and only 17% spend additional hours on work - the same that are also using the time for learning and training. 9% of users of digitally supported telework need the additional freed-up time to care for an elderly or dependent relative.

Digitalization can also support employees who are on leave either due to mental health, physical health or disability issues, as well as parental leaves, allowing them to stay up to date with work as much or as little as they prefer and support the return and reintegration of employees following a period of leave of absence.

Existing studies (Deloitte, 2013) also list a number of potential secondary benefits, that may not be the direct result of digitalization itself but stem from the culture change and the new ways of working that are introduced due to the digitalization process. Enhanced collaboration among employees and teams, quicker decision making processes, increased creativity and innovation potential may also be potential benefits and thus opportunities for the organisation to harness for service effectiveness, customer care, reduced waiting times...etc.

3.3 Negative impact

A number of negative aspects to digitalization and work-life balance are listed in the reviewed literature, which was echoed by the participants of the Focus Group meetings. One of the main challenges for employees, as is also confirmed by the joint Eurofound - ILO report (2017), is to maintain a healthy boundary between work and personal (family) life, due to the overlapping of working place digitally-enabled telework. As ILO's Jon Messenger (2016) notes, the boundaries will become increasingly blurred in the future, therefore this negative aspect has to be taken into consideration both by management and social partners.

This finding corresponds to research (Stacey et al, 2018) that presented evidence about digitalization contributing to blurred boundaries between work and private life causing work-life conflict, which can contribute to higher levels of stress, especially for women employees (EWCS, 2015). These findings are however also ambiguous, as employees both appreciate the flexibility to work anytime, any place, but as is shown in a Swedish study (Edenhall, 2011), workers availing of teleworking are also at greater risk of working in their free time. According to the study, what makes a difference is when employers provide clear guidance on remote working that fosters an enabling environment for employees to physically or mentally switch off and to feel trusted and able to speak out if they are struggling.

During one of the Focus Group discussions, also involving the representative of the ILO, the right to switch off (also referred as right to disconnect) was presented as part of the solutions to the growing interference of work in private life. However, the right to disconnect is a very complex and complicated issue to tackle, both from a technological and a work-organisation point of view. According to a 2017 survey (CIPD, 2017) of 2.000 employees across the UK confirms this contradiction, as 40% of the surveyed employees admit to feeling stress and pressure from being able to access their work emails and files when away from the office, but 30% of the employees admit to feeling empowered by having remote access to their workplace, and 53% of employees say it helps them to work flexibly. Due to a number of mediating factors (workplace culture, leadership support, career progression,

workload), which are very difficult to dissect and pinpoint, it seems that employees in the public sector, according to this survey, are having a harder time to disconnect from their work, than employees in the private or those working in the tertiary sector. Those in the public sector are also almost twice as likely to check their work mobile or emails at least 5 times a day outside of working hours (32%), than those in the voluntary (17%) and private sectors (23%). Technology makes it easier for people to connect to work but the technology is not the only answer helping employees to disconnect.

For instance, the French piece of legislation on the right to disconnect for workers, which states that companies with more than 50 employees have to negotiate with the unions the use of digital technologies to ensure respect for workers' rest, holiday periods and personal lives, attempts to offer a solution to this challenge. The obligation is however limited to the private sector. There are also company agreements on the right to disconnect in Germany, even though there is not a specific law in place in that country. In Estonia, according to the Estonian trade union representative of the project, public sector employees cannot access their professional emails during the holidays. The application of the working time directive which provides for a daily rest of 11 hours is also very relevant.

The risk of unpaid overtime, due to remote access to work from home, is another potential negative impact which generated particularly lively debates among Focus Group participants, as well as the challenge to measure and monitor working hours of employees who work remotely or from home. There is a lack of data and evidence on this, and findings of previous research are also ambiguous. According to the ILO study (ILO, Eurofound, 2017) the working hours of employees working remotely, and especially those working from home, are typically longer than for those employees, who always work at the employers' premises. Again, there are a number of factors that come to play in this, for example, the country specific working time patterns, reduced commuting time, working culture and gender roles. The same study also explains, that almost half, 45% of those workers working regularly from home use this flexibility also in order to carry out small errands or do household chores when having a break, rather than sticking to the office time schedule, which only 9% of

teleworkers do. Furthermore, 36% of workers working regularly from home report to adjust their working time by either starting or finishing work earlier or later.

Two of the case studies also specifically noted about digitalization contributing to digital stress and longer working hours and interfering in privacy issues.

Digitalization may also lead to the isolation of teleworkers, as was reported specifically by the Belgian and the Italian (Prime Minister's Office) case studies, based on employee feedback. The above mentioned ILO - Eurofound study (2017) revealed that isolation due to teleworking can have potentially negative effects on occupational health and well-being. According to the Eurofound report, *New forms of employment*, isolation of telework can also lead to lack of access to the informal information sharing that takes place in a fixed place of work (Eurofound, 2015). Teleworkers are more at risk of certain psychological issues associated with feelings of isolation. The joint ILO and Eurofound study (2017) findings, however, show that those teleworkers who work from home only some of the time do not experience the same degree of isolation as those who work exclusively from home.

3.4 Gender dimension

The literature review has drawn attention to the fact, that men and women may be impacted differently by some work-life balance measures (Chung and van der Lippe, 2018). Men benefit more from teleworking arrangements, whereas they would use work flexibility as an opportunity to put in additional hours. Men would therefore use work flexibility options to further their career by working more, whereas women use work-life balance options to combine work and care responsibilities, typically by reducing working hours (part-time), or working from home in an attempt to be more present for children and other relatives and cope with the demands of household chores.

For women with children or other care responsibilities for family members teleworking can present the danger of increasing their work-life conflict and enhance the feeling of stress. Instead, for women, flexible working arrangements, coupled

with accessible and affordable quality childcare arrangements may be the more suitable arrangement. Research has pointed out that work-life balance measures, if not managed in a gender-sensitive way, may even further strengthen the traditional gender roles as dictated by society. In countries with the highest female employment rates, which also boast the most accessible, affordable and quality childcare arrangements, such as Sweden, Denmark, Finland and the Netherlands also have the highest number of women teleworkers (OECD, 2016).

With a view to avoiding gender bias, organisations need to be vigilant and gather gender-segregated data on the use of work-life balance options from part-time use to parental leave take up as well as home and mobile working. From the collected case studies, only a handful provided gender-segregated data on take-up. In the Italian Agile Working pilot project, the participants were 72% of women and 28% of men. In the Czech Republic[6], among the 754 cases for teleworking, 561 users were women and 193 were men. In the Irish case it is lower and predominantly female grades that participate in work-sharing (over 80%). This clearly indicates that women use teleworking as a means to reduce work-life conflict, even if some research suggests that this is not effective.

Context matters also in this case. If there is plenty of high quality, affordable childcare available, then women may also use teleworking as a way to boost productivity and reduce commuting time, and not having to telework out of necessity, to reconcile conflicting care responsibilities.

3.5 Challenges

Both the literature review and the analysis of the submitted case studies have revealed a number of challenges that exist around the recognition of the benefits of digitalization as well as its implementation.

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[6] Czech Republic wasn't in the 12 foreseen countries, however, as a full member of SDC CGA sent two case studies anyway. The relevant information were considered useful to enlighten some aspects of the research deemed important.

As new technologies continue to evolve, the skills that are necessary to benefit from these developments needed to be honed on a continuous basis. This is particularly true for line managers as digitalization requires new competencies from them in the absence of which even the most forward-looking initiatives might fail. As out of the 18 case studies only 7 reports about line manager training, more research would be needed to discover further information whether this tendency is the result of the absence of available resources, varied priorities or the missing information about the importance of this area.

Interestingly, the research has also revealed a number of contradictions, for instance about the take-up of teleworking and other work-life balance arrangements in the different countries. The Irish case study reported that it's mainly senior managers who use remote working . The Focus Group discussions also shed some light on the question of hierarchical levels and use of options to work away from the office. In Portugal, it is mainly professionals with a university degree who use teleworking options. In Spain, in addition to similar findings, managers also have to work outside of the office using their mobile devices, when traveling or participating at external meetings. In Slovenia for holders of public office (ministers, state secretaries) and holders of managerial positions teleworking is not allowed. Additionally, there are also country differences as regards to the access of contract workers employed by public bodies to work flexibility options. In some countries, they are not entitled to working time and place flexibility. In Belgium, for instance, on the contrary, there is no difference between "employees under statute" or "contractuals" regarding access to work-life balance measures.

Another contradiction, as was reported in another German Ministry study (BMAS, 2015) is that employees who are able to work some of the time from home both enjoy a better reconciliation of work and family life, while also reporting a greater work-life conflict. Designing and implementing policies and responses need to take into account the complexity and ambiguity of the issue and the contradictory experience of employees themselves.

Finally, the research revealed that the involvement of trade union representatives in the planning and implementation of the work-life balance initiatives varied greatly from one case study to the other (from no involvement to the creation of a Framework Agreement), which may be a contributing factor to the differing outcomes of the initiatives.

At an institutional level, many of the case studies report that work-life balance policies and agreements are decoupled from the digitalization strategy and processes. It is noted, that when organisations develop these two domains independently from each other, they miss out on the opportunity to achieve better outcomes from better coordinated policies. This can affect especially organisations struggling with staff shortage, as is reported by the Irish case study, as employees are not able to avail of their work-life balance options and rights because of the excessive workload.

The issue of excessive workload due to staff shortage is of great importance to public sector unions. However, the research could not explore the aspect of the impact of budgetary cuts or constraints on staff shortage, workload and the work-life balance of employees in greater detail. The limited related findings in the literature review, having to rely on a small-scale study (Lewis et al., 2016) carried out in the UK civil service, suggest that during the recession, public sector employees were offered a number of alternative solutions, packaged as work-life balance measures, such as increased number of days of teleworking, hot-desking or reduced weekly working hours. In addition, the above mentioned study reports that following redundancies, remaining employees have felt pressure to work harder, which may have led to a corresponding negative impact affecting individual well-being and service delivery.

4. Success factors

The collection of case studies and reviewed international literature has confirmed that in order for digitalization to be successful, and to improve the work-life balance

of employees, without a negative impact on their physical or mental health, there are a number of elements that need to be in place.

The research project has therefore identified 11 success factors, which were validated against international best practice and also by the participants of the 2 Focus Group meetings.

4.1 Mutual Trust

In an organisation where trust is fostered, employees experience psychological safety. Trust is the expectation that others' future actions will be favourable to one's interests; psychological safety refers to a climate in which people are comfortable being (and expressing) themselves (Edmondson, 2004). Both are paramount to organisational success and individual wellbeing. When these conditions are being met in organisations, employees exhibit much more willingness to learn (which is a key condition for digitalization or Agile Work), as well as are more willing to collaborate (which is a key condition for place independent working). The literature reviewed all argue that creating such an organisational climate is one of the most important foundations for pursuing digitalization enabled work-life balance practice that works for employees.

Let's explore, the key components of a trust-based climate within organisations further.

Transparency of decision making within the organisation mitigates the fear of uncertainty, ensures information flow, sets a joint understanding, and gives a clear view about organisational level objectives. Transparency is also fundamental in employees understanding digital processes that operate at a level that they can't see or understand. Inclusion and **participation** provide the opportunity for employees to engage, comment, modify initiatives, also to expect accountability. Participation is also critical in ensuring the success of social dialogue or collective bargaining. **Flexibility** permits a faster, more swift adaptation and reaction. Improved **effectiveness** (time, resources, quality of outputs) fosters collaboration, contributes

to improved service delivery. When employees can rely on each other for getting the work done, especially in co-dependent teams, they tend to trust colleagues more (Ulrike et al, 2018).

All of these elements can be fostered in any work environment. Correcting the behaviours and habits that are counterproductive to the climate of trust and psychological safety should be the role of line managers, team-leaders and senior management.

One of the key requirements for enabling teleworking is management by outcomes, which according to the ILO study (2017) builds on workers' autonomy. Line managers, who can no longer see their staff, can no longer rely on management by presence or time and need to adjust to setting clear goals and realistic deadlines, asking employees what they need to do within a predefined workload which is regularly evaluated and letting go of how they are doing it. Employees on the other hand also need the confirmation, that despite being away from the office physically, they are valued colleagues and team members, whose contribution is important to the team, and are not overlooked in career conversations and their teleworking is not perceived as a negative aspect in their performance conversations. All of this cannot function without a sense of trust and clear rules on teleworking e.g its voluntary nature, clear attribution of employers' responsibility (health and safety, working time, equipment, data and information protection..), limitations of teleworking days per week also with a view to keep social and team cohesion, and equality proofing that teleworking does not impact or favour disproportionately a gender, occupational, age or ethnic group.

In the absence of trust, however, as was reported by some of the participants of the Focus Group meetings, there is the risk that employees feel themselves under pressure and pushed to work in an excessive manner.

4.2 Trade union involvement and collective bargaining

The study has not allowed assessing the extent to which trade unions are involved in the digitalization of central governments, evidence drawn from the private sector indicates that this is increasingly the case (ETUC, 2018) albeit with strong country differences.

The ETUC survey (2018) shows that good practice as regards collective bargaining at sectoral or company level, on the introduction of new technologies are largely concentrated in Northern and Western European countries, as well as in large multinational companies headquartered in Western Europe. Trade unions in Central and Eastern Europe find it very difficult to engage more actively in shaping digital change processes. This stems not only from a lack of internal know-how, resources and capacities but also from that of information and consultation practices. Many survey respondents - company representatives from Central and Eastern Europe in particular, but also respondents from countries such as France, Spain or the UK - reported the absence of any prior information and consultation practices initiated by management in the context of introducing new technologies. Digitalization does not automatically lead to more transparency, better social dialogue and stronger involvement of workers. For this to happen, rules and practices must also be put in place.

According to EPSU, trade unions' involvement in the introduction or increased use of new technologies at the workplace is a key factor in a successful design and implementation. Quality working conditions for employees and quality public services for citizens also depend on the active involvement of employees and their representatives in the design process (EPSU, 2016).

Trade union involvement takes place through different, yet related channels:

- Social dialogue and collective agreements that can cover a broad range of topics that relate to restructuring and digitalization, such as working time, new forms of ICT mobile work, personnel data protection, the right to disconnect, anticipating and mitigating job losses, disproportionate negative effects on women at all levels.
- Worker representation bodies including health and safety bodies.
- Assessing learning and training needs, knowledge sharing and collaboration between training providers and employers.
- Campaigning for legislative changes e.g in France the right to disconnect.
- Creating platforms for the exchange of information, and negative (e.g. Danish case in tax administration) or good practice sharing (e.g in Sweden IT inspectors).
- Participating in advisory councils on innovation, e-government, protection of personal data, and industrial policies and co-drafting new ICT, digitalization and broader policy frameworks.

When introducing or increasing the use of new technologies, culture change programmes or new ways of working, it is crucial to ensure effective involvement of employees, and their trade union representatives. The study found that as digitalization increases user involvement, it becomes more of a process of co-creation and co-operation with employers that generate data, ideas, feedback, evaluations. Participation and cooperation of trade unions are essential, especially when these new arrangements affect the working conditions of public employees. In particular, during the Focus Group discussions, trade unions asked to be involved from the outset of the process so that the impact on working conditions can be fully and better grasped and anticipated.

The process of digitalization requires changes in working environments, work organisation and job content, hence the involvement of employees is essential in these processes in order to protect, motivate workers, minimize risks and maximise opportunities for all workers. This can be reached by the involvement of workers' representatives, collective agreements and by transparent communication as well as information provision about the nature, objectives and potential impact of

digitalization on the future of the organisation, on the skills and training needed and on the organisation of work in the workplace.

4.3 Training

In an organisational digitalization process and transitioning to new ways of working, such as Agile Working, employees not only have to acquire new technical skills, but also a host of other competencies that will allow them to adapt to these changes with confidence.

The notion of Lifelong Learning has never been more relevant than now. The expiry date of skills in the digital age is much shorter, and the capacity to unlearn outdated competences is just as important as being open and ready to learn new skills.

Just as training content, training delivery also has to be updated. As seen in the Belgian case study, the introduction of the NoVo change initiative included the training of "super coaches" who would then provide training to the staff. It also comprised of the constitution of 3 coaching groups: host coaches (supported their colleagues in their first steps in moving to the new offices), clean-desk coaches (helped agents in the new organisation of work) and ICT coaches (helped colleagues in the handling of new equipment, and digitalized tools). As far as coordinators and coaching groups are concerned, the approach of NoVo by "multipliers" concept (the one who is informed then informs his professional network) worked efficiently.

In the Italian case, webinars about the new Smart Working initiative already took place during the pilot phase of the introduction. Once the initiative was mainstreamed to all employees, a new training cycle was launched and further webinar sessions on Smart Working were organised. In addition, employees can access support materials on the intranet, which are regularly updated. Special training has also been provided for managers about the initiative, as they are the ones who have to adapt to the new ways of working by managing by output and not by presence.

In Spain, under the umbrella of the Action Plan on Gender Equality for Central Government employees, digitalization and work-life balance are two key pillars of the implementation. Among the many measures that ministries and associated bodies are putting in place, training is one of the key axes of the programme, by offering brochures, a Conciliation Guide, and the revised Plan itself as awareness raising and information provision. This is also complemented by a method for training courses, aiming to facilitate work-life balance and career development.

In the France case, the '*Charte du Temps*' (Charter of Time) is systematically presented to all new employees of the Treasury Department of the Ministry of Finance, and every opportunity is used to refresh the understanding of employees of this tool, which sets a number of principles for the management of working time and the respect of the work-life balance of employees.

Retraining and reskilling (both staff and managers) is required to minimise the negative impact of digitalization on employees' work-life balance. But the responsibility for acquiring new skills and up-dating old ones have to be shared by everyone, management and employees alike. Employers are responsible to finance and provide access to training during working hours, with the employees responsible to understand their training needs and attend the training. In Portugal, the Decree-Law that defines the training regime in public administration establishes that the public employer should provide to employees and managers the access to training required by their job, which includes the use of ICT tools, as in the case of teleworking.

There is a strong gender dimension to training that needs to be considered when designing and implementing training. Due to high levels of part-time work of women, they may not be able to access training that is offered during working hours (NIACE 2015). Also, due to the unequal distribution of household and childcare between women and men, the former are less available than the latter after regular working hours to follow a training or additional networking or events intended to promote professional development. As some of the technologies deployed in the digitalization process require learning new skills, training providers must be vigilant to propose

these within the regular working time to ensure an equal opportunity of participation for both men and women.

4.4 Pilot testing

There is no blueprint for digitalization and work-life balance in the public sector. As the study has seen in different case studies, there are as many implementation models as there are institutions and countries. Each organisation needs to adapt to existing practices or build new ones from scratch to suit its specifics. The Italian government departments implemented a pilot phase prior to rolling out broadly the Smart working scheme. In Belgium, FPS Social Security started with a soft implementation of the NoVo initiative, which was voluntary at first. In the case of the Spanish example, within the Action Plan on Gender Equality for Central Government employees, they ran pilot projects on teleworking, and each department or institution is responsible for running annual follow-ups to monitor the implementation.

Once work-life balance policies exist on paper, they need to be tested against the real world of traffic, childcare services, home internet use, gender norms of care, skills and organisational culture. Something that may work for one department (because they are an autonomous team) may not work for the department next door (because they may be a codependent team that requires a lot of collaboration). The report cannot stress it enough. There are no one-size-fits-all solutions, central government administrations need to adopt a flexible mindset and test pilot solutions, measure their impact and if needed adjust for a new round of testing.

4.5 Digital readiness

Digitalization is not just about the use or availability of new technologies, but the way in which these developments are combined with investments and the actual skills of employees. Advanced technologies often mean restructuring for central government administration organisations. When public sector organisations, such as libraries, consider a digital transition, it is usually about whether employees have the right skillset to use new technologies, as well as the digital literacy tools to help people

determine whether the online information they access is trustworthy or not (Yoemans, 2016). It is also about resources, adequate infrastructure or the context (external, internal) of the institution.

This is where the concept of digital readiness must be considered by organisations. But, what exactly does this mean? In the context of the study, **digital readiness** was defined as the ability for organisations to integrate new technology and use it effectively. Research (Horrigan, 2014) identifies three core components of digital readiness. These are skills, trust and use. Digital skills are the knowledge and digital literacy necessary for employees to use technology in their role. Trust is based on the people's belief about the ethics and control of data used. The third element of digital readiness is use; and the degree to which employees use digital technologies to carry out their tasks. All these three components are necessary for organisations to embrace digitalization and provide their staff with better work-life balance.

Digital readiness is observed at the level of countries as well that is measured on the basis of one nation's technology infrastructure, technology adoption or business and government investment (Yoo et al, 2018). The available infrastructure is particularly important and has been flagged through this research as one of the key components and enablers of digitalization within the public sector. Indeed, elements such as fixed telephone subscriptions, internet connection or networking services are all crucial enablers of digitalization. The research in some of the focus countries (Italy, Spain) was able to point out that access to some of these basic digital infrastructures is still subject to geographical variation, and rural-urban digital segregation represents a challenge for central government administration employees to benefit from digitalization. If employees are faced with weak connection and they cannot effectively participate in video conferencing or webinars, this creates frustration with the tools and also limits their capacity to avail from the work-life balance possibilities. In the Czech Republic[7], the Ministry of Interior has prepared an e-learning course for the further training of civil servants, which also requires digital skills and infrastructure.

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[7] Czech Republic wasn't in the 12 foreseen countries, however, as a full member of SDC CGA sent two case studies anyway. The relevant information were considered useful to enlighten some aspects of the research deemed important.

4.6 Policies and legal framework

The novelty of some new, digital forms of work does not mean that they evolve in a regulatory or legislative vacuum. There are a number of common EU legal frameworks in place that ensure workers' rights to a healthy and safe working environment, protection of pregnant workers and parents, limitations to working time.

The first step is to examine how these legal provisions intersect with one another and identifying regulatory gaps with a view to establishing an overall, up-to-date regulatory framework on mobile, ICT workers. These policies need to be clear, but also flexible enough to ensure their sustainability. This is also echoed by the findings of the ILO (2017) and the discussion during the Focus Group meetings, that an adequate legal framework is needed, which however allows for sufficient levels of autonomy and flexibility.

In addition, vigilance should be applied in the application of policies. A number of studies (Beauregard et al, 2013; ILO, 2017) found that teleworkers who work exclusively from home experience much higher levels of isolation than those who work from home only some of the time. As mentioned prior, isolation can contribute to a number of mental health issues, and also weakens the social ties and support at the workplace. Policies, therefore, in addition to granting employees the option to work flexibly may also need, in light of these findings, limit the application of workplace flexibility, in the interest of employees. Organisations, therefore, may decide to limit teleworking to 2-3 days per week, as was recommended in the Focus Group meeting by the ILO representative, and is also found in a number of collective agreements as in France, Belgium, Estonia or in the Slovenian teleworking case study.

4.7 Communication

Communication is essential in a number of ways for ensuring the success for both the digital transformation and work-life balance policies for individuals and teams. On

the one hand, it is reported, that those organisations where senior executives regularly communicate with employees across all levels are 8% more likely to achieve transformation success compared to those who don't apply this. This number climbs up to 12.4 percent where senior managers communicate with staff on a continuous basis (McKinsey, 2015).

On the other hand, if the communication practices are not up to date, public servants may experience quite negative effects from teleworking, including greater professional isolation and less organizational commitment on the days that they worked entirely from home (De Vries et al, 2018). The findings of the study show that if there is a more intensive communication between managers and staff, it can reduce the impact of teleworking on professional isolation.

Resistance is part of every transformation process (Solis, 2017). What is seen to work in terms of communication is the clear articulation of digitalization objectives, senior manager's engagement with the digitalization programme, and access to information across all grades. Referring back to the condition of psychological safety, an environment needs to be created, in which employees feel at ease voicing their fears and concerns, as the process of digitalization and adopting new working patterns can cause anxiety and fear in many workers. Unless there is active listening from the part of management and these concerns are addressed, employees can easily disengage from the processes and even sabotage the adoption of the new technologies, tools and ways of working.

Empowering a group of change agents, as seen in the Belgian case study, the most engaged employees in the workplace is also considered a best practice. The research observed that in most of the case studies (Italy, France, Spain, Germany, Czech Republic) communication was reported as an integral part of ensuring the success of the digitalization process.

4.8 Feedback and Evaluation

One of the most challenging aspects of a transformation project is being open to feedback - however it is absolutely crucial. Applied new technologies only unfold their true nature when in use. Sometimes it is simply not the right time for certain policies or certain tools. It is very difficult to get something right on paper, without feedback from the users. Being open and facilitating honest and constructive feedback from employees and service users is key in ensuring sustainable implementation (Kohnke O. 2017). Also, listening to employees, informally and formally, to understand whether a policy is nearing its "sell by date" because it is too rigid or too vague can prevent a lot of conflict and productivity loss.

Next to continuous feedback, the evaluation of digitalization initiatives, and guidance on how to perform such evaluations, are equally important. As it is underlined in this research, digitalization in terms of its impact on employees' work-life balance can take many forms, which makes the evaluation of its impact complicated and challenging. For instance, the intended and unintended impact of digitalization can differ substantially from case to case, and varies according to other key aspects such as sufficient staffing, meaningful tasks, the feeling of being valued among others. While some digitalization tools may directly support employees in achieving a better work-life balance, others may facilitate the exchange of information or focus on capacity building. Thus, evaluations need to be tailored in a way that they capture the real impact of certain digitalization initiatives. Furthermore, the evaluation must be done in a way that it is able to signal and report about future developments that might be not foreseeable at the moment of the assessment.

During the Focus Group meetings, the participants reiterated the importance of evaluation and achievement of the relevant results (organizational, team or individual level). In fact, with digitalization, employees can be evaluated on the basis of the results achieved instead of their presence in the office.

4.9 Culture change

Digitalization not only changes the way of working, but it also accelerates the speed of change that organisations are facing. Both implications lead to three major requirements that have to be tackled to be successful: new skills and competencies, new forms of leadership, and new organizational capabilities. Depending on the degree to which organizations fulfil these requirements they will also evolve their culture towards a 'digital mindset' (Kohnke O., 2017).

The most revealing indicator of an enabling culture for work-life balance is the take-up of the policies (Beauregard 2011). If there are policies in place for teleworking or flexible working, but nobody is using it, or only a very small number of employees, then it is worth trying to understand the reasons behind the low use. If employees feel that a continued presence is an important requirement for career progression or being selected for the most rewarding projects - they won't jeopardize it by teleworking, even if it would improve their work-life balance.

4.10 Line manager's skills, competence

The study also addressed the question of whether line managers and direct supervisors are equipped with the right skills, and whether they received dedicated training to be able to manage a team that applies digital tools for the different work-life balance measures, with sufficient knowledge of labour law. In order for this to work, employees need to have more autonomy, both in the form of problem solving skills and also as a mandate from line managers, to work without intensive continuous supervision. The findings are also complex in this regard, as the geographical separation of work and the workplace makes autonomy more important, yet the diffusion of digital tools makes connectivity even more intensive with even more options to monitor employee behaviour (logging in/out, communication, accessing files, making phone calls…). One of the key concerns of trade unions is the respect for and protection of the privacy of employees in the

work context, which can be harmed by the ongoing remote monitoring that is enabled by digitalization.

Technology, therefore, allows both for centralisation and decentralisation (Gerten et al, 2018). In many cases, the additional pressure on time and skills for line managers, that stems from having to manage and supervise remote employees, is underestimated.

It's not only digital skills that are required from line managers (Hofman, 2018). In addition to the IT skills, the most important competences in the digital era are soft skills such as time and self-management as well as to understand the impact of digitalization in general. Managing the work-life balance needs and alternative working patterns of employees requires the following:

- Empathy to understand the motivation behind an employee requesting alternative working patterns (employers may refuse to agree on remote and flexible working arrangements on the basis of objective reasons, while parental leaves and flextime arrangements for pregnant employees are full rights as stated in the EU Directive 2019/1158). Moreover, it should be adopt a life cycle approach, which takes into consideration the different needs for different age groups, and the competences to manage them.
- Communication skills to be able to conduct sensitive conversations.
- Performance management, understanding what needs to get done at individual and team level and how to deploy team members to achieve the results, crafting jobs to match the skills of team members, as well as ensuring that the work can get done regardless of where or when.
- Coaching skills and attitude to support employees as they learn to adopt the new ways of working and the proper use of the new technologies that support it.

While employers may refuse to agree on remote or flexible working arrangements only based on objective reasons, employers and line managers in particular need to be in compliance with the legislation about the rights of pregnant workers, parents and carers, to request and avail of remote or flexible working arrangements,

maternity, paternity, parental or carers' leave as is stated in the Directive of the European Parliament and of the Council on work-life balance for parents and carers and repealing Council Directive 2010/18/EU.

4.11 Protection of workers' privacy and data

One of the concerns linked to smart working arrangements is the fact that digital tools have the capacity to trace and collect copious amounts of data from workers that can be used to distinguish or trace an individual's identity, either alone or when combined with other personal or identifying information that is linked or linkable to a specific individual. In this regard, the 2002 framework agreement on telework sets out clearly that any kind of monitoring system put in place needs to be proportionate to the objective and introduced in accordance with Directive 90/270 on display screen equipment. Especially if the users are inexperienced, or the full impact of digitalization is not disclosed to employees, it can lead to more negative outcomes. There may be a situation in which employees distrust the digitalization process, because they may feel suspicious of what data is collected about them, or how that data will be used, and therefore refuse to use the technologies. One of the key questions is: what type of data is necessary or useful to improve the working conditions or the quality of output by public sector workers to the benefit of citizens or service users.

Gathering data can be incredibly useful for decision making. For instance, understanding average commuting times for employees can offer a great argument to introduce teleworking, or monitoring customer flux can support the introduction of flexible working hours. But when it comes to monitoring, gathering and analysing individual employee data, this is a grey zone, that has not yet been fully grasped. There are a number of legal provisions in place in the Member States about the right of employers to monitor employee behaviour, which has to be reasonable, and employees need to have been made aware of them, and agree to it. It is important to be aware that privacy compliance under the GDPR, the new EU regulation on data protection, is not just about customer data. Respecting the privacy of employees and

protecting their personal information is equally important. The question of consent of employees to them being monitored by their employer is very complex and goes beyond the remit of this study. As however digitalization inadvertently generates employee data, it is useful to look at the benefits and the drawbacks of using digital tools to monitor employee behaviour.

The **benefits** may include:
- Improved employee health and wellbeing by being able to track sedentary behaviour or distances that have to be covered by certain roles.
- Increased security - monitoring behaviour (e.g. harassing language used in e-mails) and GPS tracking can help identify and reduce sexual harassment of women, identify risk zones.
- More transparency - using digital tools to connect employees, those at the office and those working remotely, increases accountability and trust.

The **drawbacks** may include:
- Increased mistrust and the feeling of being observed, harming psychological safety.
- The increased stress of not being allowed mistakes or slack time.
- Perceived lack of privacy at work - all of these contribute to lower employee engagement and higher turnover.
- Legal issues - some situations may escalate and can only be resolved by legal proceedings.

In terms of work-life balance and digitalization, what the study has learnt from the case of FPS Social Security in Belgium, where performance is linked to actual deliverables and not to working hours, even if a great deal of data about the work performed is gathered and available, employees do not feel that it invades their privacy or causes stress about performance. Digitalization programmes must be always coupled with performance measurement related adjustments so that employees fully understand what is expected of them in terms of deliverables, and what data will allow their supervisor or employer to verify whether these deliverables of objectives have been met.

EPSU's position (2016) is that workers must be informed of what sorts of data their employer can legally have access to, where they will store it, for how long and who it will be shared with. The unions also call for clear guidelines on what rights and restrictions workers have to internet use at work (for example personal email usage) and if and how employers monitor their internet use.

Referring back to the points made earlier in the report, when organisations opt for digital tools to support processes and also work-life balance options for their employees, they need to do this with eyes wide open, understanding and communicating the type of data that will be gathered and what it will be used for and agree on whether this is in the interest of the organisation and the employees, or not.

As the privacy debate is reframed by digital disruption, organisations must look at which direction and to what extent they evolve their information governance strategies and capabilities, and ensure that the mechanisms chosen to balance competing interests are the ones that generate trust and confidence amongst their stakeholders and in the general public.

5. Conclusions and recommendations

In summary, it can be said about the research and findings, that it is the first one to explore the impact of digitalization on the work-life balance of central government administration employees. The results of the investigation tie well with previous studies (ILO and Eurofound 2017; OECD 2019) wherein it confirms that digitalization appears to have an overall positive effect on the work-life balance of central government administration employees, with several risks that are important to consider, and also significant differences based on gender that needs to be further explored.

Furthermore, the research has identified gaps in the literature, mainly because digitalization is not yet an extended practice among countries in the public sector and

therefore, there is a scarce number of studies published on the impact of digitalization on the public employees.

The research has pinpointed as well a lack of harmonised and comparable data among on the impact of digitalization in those public sector bodies where good practices were identified. Joined efforts toward a set of common indicators among the EU-Member States for the collection of disaggregated data by sex and age can greatly contribute to better quality findings in the future.

The research also identified the key success factors that, if implemented, can greatly contribute to improving the work-life balance of employees in the public sector. Both trade unions and employers can maximise the opportunities stemming from the digitalization process and also reduce the potential risks, mainly in terms of impacting the work-life balance of employees, if they recognize them and can respond to them in a coordinated, strategic manner. The right regulatory framework on social dialogue including collective bargaining on the effects of digitalization also needs to be in place and enforced. Mobile working can also be challenging for employee representation, and consensus on how to foster, not undermine the effective involvement of workers' representatives is a key prerequisite.

The differences between how women and men are impacted by digitalization, and the new ways of working, have also been identified in the literature review and this research. Therefore, to ensure that the potential negative impact is addressed and mitigated during the implementation, gender mainstreaming is the basis and transversal strategy to ensure that differences between female and male employees are taken into consideration when implementing any change in an organisation. Furthermore, it is essential in the case of digitalization, and its impact on work-life balance, where social and cultural roles and stereotypes are based on gender, to tackle the multiple facets of gender inequality in areas such as work-life balance, gender pay gap or career opportunities. The age gap is another transversal factor that needs further consideration and analysis when exploring the impact of digitalization among public sector employees, taking into account the specific

dynamics and characteristics related to age in the central government administrations in many countries.

The study also confirmed that similar to other social and work-related phenomena, a more nuanced approach is preferable. Every option bears with it advantages and disadvantages at the same time. For instance, working from home reduces commuting time, office-related distractions, allows employees to combine work and household chores, can potentially help the employees with disabilities to work from home. It also contains potential disadvantages, from feeling isolated, missing out on important work conversations, not having perhaps access to all the work resources needed.

The findings of this study aimed to outline the potential challenges, the associated opportunities and how to create an enabling environment in which employees can take full advantage of the work-life balance opportunities offered by digitalization. Additionally, the research brought to the surface a number of issues that are of key importance to the social partners. These include the aspects of gender equality, data protection, working time, skills and line-managers training, as well as the involvement of employees and trade union representatives in the design, implementation and evaluation of the initiatives.

There is a need for more research and more monitoring of both the solutions, as well as the opportunities and challenges, and how employers in general and public sector employers specifically respond to them. To have better insight in the future into these issues, there needs to be more discipline in organisations to gather data and measure the impact of digitalization on workers' health, experience, time-use and the perceived benefits and disadvantages. Research that attempts to clarify the measurable objectives of the work of employees in the public sector would also be really helpful, as by quantifying output, the effectiveness of teleworking, flexible working, flexi-space and other work-life balance options could be measured against the required objectives and outputs.

As it emerged from the study, central administrations need to adapt their performance and productivity measurement to suit the new forms of work, such as teleworking or Smart Working. Legislation, collective bargaining and social dialogue need to provide workers and administration with a comprehensive framework that can translate strategic objectives into goals and measurement processes that can go beyond the presence in the office or the working time. A balanced approach should allow teleworkers to stay in contact with other employees, be able to access dedicated support in case of problems as they arise and identifying potential productivity problems before they get out of hand.

Based on the findings the research also contributed to the elaboration of a set of Guidelines and DOs and DON'Ts which contain actionable recommendations for HR managers and trade union representatives of central government administrations.

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Annexes

Annex I: List of received case studies

Country	Name of the Central Government Administration Body (submitted Practice)
Austria	Federal Ministry for Civil Service and Sport (Flexibilization of telework)
Belgium	FPS Social Security (NoVo)
Czech Republic	The Ministry of Interior, Section for Civil Service (Home Office)
Czech Republic	The Ministry of Interior, Section for Civil Service (Education and eLearning)
Estonia	State Real Estate Initiative (Remote Workstations)
Estonia	Ministry of Public Administration (Teleworking)
France	Treasury Department of the French Ministry of Finance (Charte du Temps)
Germany	Bundesministerium des Innern, für Bau und Heimat (BMI), [Federal Ministry of the Interior, Building and Community] (Workplace health promotion initiatives)
Germany	Bundesministerium des Innern, für Bau und Heimat (BMI), [Federal Ministry of the Interior, Building and Community], (Pommernallee 4.)
Ireland	Revenue Commissioners (Digitalisation of Tax Collection)
Italy	Prime Minister's Office (Lavoro Agile - Smart Work)
Italy	National Social Services Institute (Lavoro Agile - Smart Work)

Italy	Ministry of Cultural Heritage (Lavoro Agile - Smart Work)
Italy	Ministry of Defence (Lavoro Agile - Smart Work)
Portugal	Ministry of Finance (ATIVA-TE! - ACTIVATE YOU)
Portugal	Ministry of Finance (Teleworking)
Slovenia	Ministry of Public Administration (Teleworking in State Administration)
Spain	Ministry for Territorial Policy and Civil Service (Government of Spain) Directorate for Civil Service (Action Plan on Gender Equality for Central Government Employees)
Romania	National Scientific Research Institute for Labor and Social Protection (Telework for life-work reconciliation in EU: promoting women participation and mobility – WOMEN IN)

Annex II: Interviews

To complement the data collection the research team carried out a number of interviews with key informants: case studies (Belgium, Estonia, Slovenia), trade union representatives (Romania, Estonia, Belgium), fellow researchers (Netherlands, Denmark, United Kingdom, Spain), government institutions (Denmark National Agency of Digitalization, UK Civil Service Job Share Finder).

Annex III: Criteria

The project Steering Group, to identify the case studies from the focus countries, has established the following 9 criteria:

1) Level of participation and involvement of trade unions

2) Transferability of the initiative from one Administration to another

3) Data protection

4) Coverage considering the variety of organisations (Ministries, Agencies, etc.) and different activities within Public Administrations

5) Coverage considering the different types of employment status

6) Coverage considering the different levels of personnel within the Offices (line managers, employees, top management etc.)

7) Coverage by gender

8) Training and earmarking of training resources

9) Effectiveness and impact on work-life balance