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“Local, Social, Digital” Joint CEMR-EPSU Project Research report October 2024

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Executive Summary

This report summarises **the main research findings** from the joint CEMR-EPSU project “Local, social, digital”, co-financed by the European Commission during 2023-2024. The main aim of the project was to discuss experiences to date, identify the key challenges and mechanisms and tools to use to address the challenges, advantages and the impacts of digital transformation facing the local and regional governments in different countries covered by the CEMR and EPSU membership.

In the context of the project, **supporting research** was carried out by an external expert¹ with the participation of the national CEMR and EPSU affiliates. It consisted firstly of the desk research on national provisions and/or social partners agreements including agreements between European social partners that fall within the scope of the 2020 European Social Partners Autonomous Agreement on Digitalisation. Secondly, interviews with selected relevant social partners CEMR and EPSU affiliates in several countries were conducted, including Estonia, Germany, Sweden, Italy and Belgium. Thirdly, the report integrated the discussions and experiences shared in the project conferences, such as in June 2023 in Cagliari, Italy and February 2024 in Tallinn, Estonia and the two webinars conducted in October 2024. The key findings from the project research are as follows.

Digital transformation is influencing and changing service provision by local and regional governments across Europe. Digitalisation in the local and regional administrations can be perceived (as shown in the project discussions) as a double-edged sword, with opportunities of increased accessibility, flexibility and autonomy, better work-life balance, efficiency and productivity growth. Challenges relate to the working conditions (working hours, risk at invasive surveillance, non-transparent use of tools), occupational safety, health (including mental health), gender equality. Importantly, digitalisation brings new needs for

¹ The report was prepared by independent researcher Inga Pavlovaite. Please quote this report as Pavlovaite, I. 2024. Final research report o digitalisation and local and regional governments. Final report for CEMR EPSU Project “Local, Social, Digital”.

adaptation to digital tools uptake & skills acquisition to address skills and labour shortages in the public administration.

The project work was placed in the context of the EU level developments, such as the 2020 cross-sectoral social partner autonomous agreement on digitalisation, significant investments into digital public administration in the European Social Fund plus, the Recovery and Resilience Facility and the EU's Digital Decade strategic framework.

Digitalisation in the local and regional governments covers a wide range of issues, topics and challenges. These are firstly relating both to the digital services and infrastructure of LRGs providing essential public services to the citizens and communities and LRGs themselves as employers. This includes such core issues in the digitalisation agenda as providing efficient, accessible and secure IT services in local and regional administrations, information security, data protection, the e-government (linking to the EU funding on digitalisation in the public administration) and the concept of smart cities (acknowledging that this concept has different definitions).² At the same time, digitalisation also covers the human / social aspects relating to the workforce of LRGs – such as teleworking, hybrid working, smart working, the right to disconnect, as well as training LRG workers / leaders on digital skills, ensuring respect for human dignity in the surveillance used in the LRGs, and ascertaining the use of AI in LRGs meeting the expectations of citizens and public service mission of LRGs themselves. The experiences relating to these specific issues are summarised in turn below.

The issue of **telework** has been key in developing the LRG response to the digitalisation driven workforce changes in the local and regional administrations. This showed a variety of terms and concepts are used to describe such work performed outside the traditional office based workspace. Also, there is a shared understanding amongst the countries covered in the research that the possibility for telework applies to a certain proportion of LRG sector workers (not all LRG jobs are “teleworkable”). The experiences of CEMR and EPSU members on the setting of rules regarding telework in the LRG sector shows a number of aspects which are important to consider in the collective bargaining process. These include defining the access to telework, working time and disconnection, workplace health and safety, access to training, pay and career advancement. Furthermore, joint social partner activities in the area of telework and broader agenda of digitalisation involved typically the creation of a joint discussion platform (such as committee or a body) to provide a systematic reflection and working process to develop a joint understanding and identification of key issues related to digitalisation, including telework. In several countries, the guidelines on telework by LRG social partners set out useful framework of actions of how to ensure the workers in telework situations can work safely, respecting occupational health and safety rules, including practical checklists and explanations of key rights and obligations for workers and employers. Finally, the project exchanges also highlighted a range of informative local solutions of how the individual municipalities regulate

² The "Smart City" concept encompasses a diverse range of technological and organizational changes implemented by local and regional governments, aimed at enhancing public services through the use of information and communication technologies. A smart city can be described in multiple ways, depending on the perspective and context. From a technological perspective, the foundation of smart cities relies heavily on the integration of the Internet, sensors, digital devices, and the analysis of large data sets. In a more infrastructure-oriented perception, a smart city is marked by its sophisticated infrastructure, environmental initiatives, efficient public transportation, innovative city planning, and the capacity for residents to live and work effectively within the urban area. Alternatively, from a dimension perspective, a smart city includes six key dimensions such as smart economy, smart mobility, smart environment, smart people, smart living, and smart governance. See PSI International. 2019. Digitalization and public services: a labour perspective. [Digitalization and public services: a labour perspective - PSI - The global union federation of workers in public services](#)

the use of teleworking in their workplaces in practice, and how this experience has evolved with the COVID-19 pandemic.

Next, the project discussions and research highlighted a number of main trends and challenges for appropriate level of **digital skills and ensuring employment** in the LRGs. These relate to the digitalization of workflows in the municipalities, the securing of the IT infrastructure, and the development of the workforce in times of a shortage of skilled workers. All these topics are linked by the need for well-trained and motivated LRG staff and the questions of how the LRGs can remain capable of acting in the future. Approaches to supporting digital skills and securing employment in the LRGs have been highlighted in the project exchanges in Austria, Belgium, Germany, Estonia, Denmark and Sweden. They highlight the importance of training and upskilling workers to adapt to digital changes in the LRG sector. From the governance perspective, in Austria, involving social partners like trade unions and works councils is crucial for successful digital transformation in LRGs. Similarly, a joint responsibility of trade unions and employers in the digital upskilling of LRG workforce is emphasised by Swedish LRG social partners. Collective bargaining agreements in Germany emphasize the need for lifelong learning and qualification to enhance digital skills of LRG workers. Securing employment is provided via guarantee to the equivalent job placement and qualification measures. Estonia focuses on providing digital solutions for local government services and addressing the digital divide between urban and rural areas. Sweden emphasizes the importance of security, competence development, and the joint responsibility in digitalization efforts. Also Denmark implements agreements and activities on enhancing digital skills at the local and regional government levels, emphasizing co-influence and co-participation between management and employees.

In the area of **surveillance and respect for human dignity**, project exchanges highlighted that this is an area under development in the LRG sector in several countries, with few practices and officially agreed approaches between the LRG partners emerging.

In the countries covered in the research, few social partners have adopted specific guidelines or policies to address the implications of **Artificial Intelligence (AI) use** in the local and regional governments. The use of AI highlights increasing ethical concerns relating to the quality of work, fundamental human rights and ethical principles. There was a recognition in the project discussions that automated administrative processes can save valuable working time for employees to handle more complex operations. Nevertheless, depending on the country, the public service can also be critical to digitalization and automation. In this context, it is important to reflect on the experiences where a number of CEMR and EPSU members have worked on the policies and approaches to AI.

Digitalisation strategies were developed by CEMR and EPSU members to address the digital agenda. They typically define the common direction and basic standards needed in the digitalisation, identify the digitalisation needs of municipalities, including priority action areas, targets, core principles of successful digitalisation and concrete actions, measures and tasks required in the organisations. Many CEMR and EPSU members also have **specific organisational structures** dealing with digitalisation agenda. Many CEMR and EPSU members also **developed projects, undertook research or organised events** to reflect on how to deal with digitalisation issues. This includes financing of research on the implications of digitalisation in the LRG sector, for employers and workers, producing publications, organising specific events, regular conferences, seminars and workshops to discuss the latest digitalisation related developments and challenges, providing digitalisation-related training to members (covering digital competences and their support in the LRG administrations), organisation of publicity and awareness raising events and activities (such as awards, keynote exchanges).

An important aspect in the LRG digital transformation is related to **the gender dimension and gender considerations**. Equally empowering both women and men workers in LRGs through digital platforms can offer increased access to services, products, knowledge, and flexible work options. While digitalization can empower women, there are risks of reinforcing existing gender disparities. Overall, digitalization in local governments has the potential to revolutionize work organisation and service delivery, but addressing gender dimensions is crucial for ensuring fair outcomes for all LRG workers and all users of their services (i.e. citizens). The COVID-19 pandemic has further emphasised the need for gender-responsive digital policies, also for LRGs. In particular, the pandemic highlighted firstly, the gendered impacts in relation to gender-based violence at the workplace (which increasingly became home-based) and secondly the gendered implications of teleworking for women in terms of negative work-life balance.

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ACRONYMS

AI Artificial Intelligence

CEMR Council of European Municipalities and Regions

EPSU European Public Services Union

EU European Union

GDPR General Data Protection Regulation

HR Human resources

LRG Local and regional governments

OECD Organisation for Economic Cooperation and Development

OSH Occupational health and safety

RRP Recovery and Resilience Plan

1. Introduction

The aim of the 2023-2024 project jointly implemented by CEMR and EPSU “Local, social, digital” is to discuss the important issues facing the local and regional governments in different European countries, exchange experiences to date, identify the key challenges and mechanisms and tools to use to address the challenges, advantages and the impacts of digitalisation. This project aims at strengthening the capacity of national social partners by facilitating the exchange of information and knowledge in the form of good practice examples, technical expertise, and policy planning. The project focuses on the ongoing digital transformation of public administration and services at local level, in line with the targets of the EU 2030 Digital Compass. Particularly in the aftermath of the COVID-19 crisis, local and regional governments have been at the forefront of a radical transition regarding the way public administration is organised and services are provided. This transformation is also impacting the employer-worker relations and the working conditions of the sector. The objective of this project is to allow employers, trade unions, and workers’ representatives to increase their understanding and capacity on a variety of issues related to digitalisation in a way otherwise impossible without European coordination and appropriate funding.

The project supports the work of the Sectoral Social Dialogue Committee on Local and Regional Governments. The Committee’s work programme for LRGs 2020-2022 was covering the digitalisation agenda given the critical importance of this issue to the local and regional government sector across Europe. The committee has already approached the topic of digitalisation in its guidelines on well-being at work adopted on 5 December 2016.

In order to achieve this objectives, relevant research was carried out by an external expert³ with the participation of the national CEMR and EPSU affiliates. It consisted firstly of the desk research on national provisions and/or social partners agreements including agreements between European social partners that fall within the scope of the 2020 European Social Partners Autonomous Agreement on Digitalisation. Secondly, interviews with selected relevant social partners CEMR and EPSU affiliates in several countries were conducted, including Estonia, Germany, Sweden, Italy and Belgium. Thirdly, the report integrates the discussions and experiences shared in the project conferences, in June 2023 in Cagliari, Italy and February 2024 in Tallinn, Estonia and two webinars conducted in October 2024.

2. Setting the scene

Since COVID-19 pandemic the public administrations including at the local and regional levels saw a strong shift of their activities to on-line, including for the delivery of public essential services – hoping in bringing an increased efficiency, accessibility and inclusivity.⁴ The digital shift has been supported at the strategic level. In particular, the EU Digital Decade targets are that 100% of essential public services online by 2030, access to medical records online for all citizens, 80% of citizens with digital ID⁵.

³ The report was prepared by independent researcher Inga Pavlovaite.

⁴ OECD. 2023. More resilient public administrations after COVID-19. OECD Public Governance Policy Papers N°29. Available at [More resilient public administrations after COVID-19 \(europa.eu\)](https://www.oecd.org/eu2023/more-resilient-public-administrations-after-covid-19/)

⁵ [Europe’s digital decade: 2030 targets | European Commission \(europa.eu\)](https://commission.europa.eu/digital-decade/eu-digital-decade-2030-targets_en)

However, the first digital progress report showed a mixed picture as to their achievement across EU27, highlighting a number of challenges in terms of digital skills, infrastructure and digital public services with respect to the digital divide across the territories of the EU.⁶

In terms of the digital divide in skills, approximately 26% of the EU population aged 16–74 years reported having above-basic overall digital skills. However, this underlines a significant urban-rural divide. Specifically, people living in cities tend to have a higher share of above-basic digital skills (33%), while those in towns and suburbs have 24%, and those in rural areas have the lowest proportion at 20%. Still, 46% of Europeans, in particular among older people, do not currently have the basic digital skills, such as the use of digital technologies for everyday tasks and access to services offered online. While the digital skills gap between men and women has decreased in recent years, the digital skills divide is still significant for people who are older, or have received less formal education. Furthermore, in terms of infrastructure, the availability of broadband internet varies across Europe. Some regions have better infrastructure, while others face challenges due to geographical factors or lack of investment.

There are the various EU level strategies and funding instruments relating to the digitalisation in the public administration. The European Social Fund + (ESF+) – the EU’s main instrument for investment in human capital has EUR 5.8 billion (current prices) for upskilling and reskilling, including digital skills.⁷ The Recovery and Resilience Facility is implemented to support reforms and investments for recovery from the COVID-19 crisis, to make economies and societies more resilient to future shocks. It has EUR 47 billion for dedicated support towards the digitalisation of public administration and public services delivery.⁸ As an example, Italy’s RRP has EUR 6 billion dedicated to digitalisation of public administration, and additional around EUR 20 billion for connectivity and digitalisation of businesses.

Digital transformation is influencing and changing service provision by local and regional governments across Europe. There exist examples and evidence of such transition in a number of different sectors and activities under the responsibility of local and regional governments, from public health services, to education, care, and public administration services.⁹ However, a major change also needs appropriate planning and strategies to make the most out of it. For this reason, local and regional governments strive to meet the growing demands and expectations of citizens and businesses as users of their services, while they must also remain attractive workplaces for qualified people.

Digitalisation in the local and regional administrations can be perceived (as shown in the project discussions) as a double-edged sword, with opportunities of increased accessibility, flexibility and autonomy, better work-life balance, efficiency and productivity growth. Challenges relate to the working conditions (working hours, risk at invasive surveillance, non-transparent use of tools), occupational safety, health (including mental health), gender equality. Importantly, digitalisation brings new needs for adaptation to digital tools uptake & skills acquisition to address skills and labour shortages in the public administration.

⁶ European Commission. 2023. 2023 Report on the state of the Digital Decade. | Shaping Europe’s digital future (europa.eu). Available at [2023 Report on the state of the Digital Decade | Shaping Europe’s digital future \(europa.eu\)](https://europa.eu/europa/en/2023-report-on-the-state-of-the-digital-decade-shaping-europes-digital-future)

⁷ See [European Social Fund+ - Performance - European Commission \(europa.eu\)](https://europa.eu/europa/en/european-social-fund-performance)

⁸ See European Commission. 2022. Recovery and Resilience Facility, Thematic analysis Digital Public Services. available at [2_Digital.pdf \(europa.eu\)](https://europa.eu/europa/en/recovery-and-resilience-facility-thematic-analysis-digital-public-services)

⁹ Sabine Kuhlmann & Moritz Heuberger. 2023. Digital transformation going local: implementation, impacts and constraints from a German perspective, *Public Money & Management*, 43:2, 147-155, Available 10.1080/09540962.2021.1939584

Local governments, as users and providers of digital services at the same time, are faced with the need to make the necessary adjustments to the organization of their internal processes and their external communication in order to prepare for new innovations, such as artificial intelligence, and put them to good use in the local environment.¹⁰ This can enable LRGs to identify local solutions to global challenges: providing better access and better use of information and communication technologies, fostering digital innovation and developing new skills. The digitisation of local public administration can help reduce bureaucratic burdens and bring more interoperability, equality and coordination between public sectors, across levels and territories. It can also help to put in place greener and more transparent public administration procedures. However, it will also put pressure on local finances and the EU's Recovery and Resilience Facility can represent a valuable opportunity to invest in the digital local public services.

The transition to e-government requires investments and changes in procedures. LRGs need local public officials who have the knowledge and technical skills to adapt well to the digitisation of services. It is thus fundamental to pursue initiatives to integrate the necessary digital skills already at school age, both for teachers and for pupils, and to enable the participation of all citizens. This can be done in particular through specific EU initiatives to provide financial support and/or share best practices in the field of digitisation within local and regional authorities – for example through the new Digital Europe Programme. The main objective of local and regional governments remains to consult and engage citizens and local businesses in order to identify their needs. This process helps best meet their diverse exigencies, especially in the rapidly changing society, and how technology can allow LRGs delivering improved public services. To this purpose, the implementation of user-centred principles for the design and delivery of digital public services remains a key element. The accessibility, security, availability and usability of services must be guaranteed so that they can be used by all in a non-discriminatory manner. The notion of "intersectionality" is therefore essential to understand how several factors of discrimination can add up and contribute to the empowerment of the most disadvantaged citizens. Digital services must take into account the economic and social barriers that may prevent or hinder access to services by certain groups of citizens.

The challenges and best practices from the education sector can be used to highlight also the challenges faced by LRG social partners.¹¹ The key digitalisation aspects identified related to school infrastructure, digital tools, teachers working arrangements, across different school sectors, such as the radical change in the higher education, administrative tasks and potential savings, teacher training, pedagogies, the use of AI and learning analytics, GDPR challenges. There are a number of ongoing projects and activities, including innovations in education. The joint project Espeed¹² explored how to use and benefit from digital tools in the education sector, to develop a joint understanding on how to address common challenges and harness potential opportunities in the education sector. It has identified good practices in ensuring equal access to digital tools and skills by learners and educators. It also allowed social partners in education at European and national level, education authorities and education trade unions, to pinpoint the difficulties and opportunities regarding digitalisation in education, exchange first-hand knowledge and experiences. The innovation for education project was exploring how the Covid-19 pandemic affected the sector, in a positive and negative way, and what changes will continue and what would be the impacts. Exploring the AI and work with educational technologies companies is also important, to ensure a quality learning experience. Teachers working time and working arrangements are also important, to identify how this is regulated,

¹⁰ See also [Digital transformation of public administration and services. | Knowledge for policy \(europa.eu\)](#)

¹¹ See [ICT in Education - European Trade Union Committee for Education \(csee-etuice.org\)](#)

¹² See [Introduction - European Trade Union Committee for Education \(csee-etuice.org\)](#)

what is the impact of blended learning on working time. The school infrastructure project explores how investments are necessary, what kind of investments are necessary, and how they should be linked to green transition so that buildings are supporting the greening of education.

3. The European social partners' autonomous framework agreement on digitalisation

In 2020, the European social partners signed an autonomous framework agreement on digitalisation.¹³ This expressed the shared commitment of the European cross-sectoral social partners - BusinessEurope, SMEUnited, SGI Europe and the ETUC (and the liaison committee EUROCADRES/ CEC) - to optimise the benefits and deal with the challenges of digitalisation in the world of work. The Agreement covers four major topics:

- digital skills and securing employment;
- modalities of connecting and disconnecting;
- artificial intelligence and guaranteeing the 'human in control' principle; and
- surveillance and respect for human dignity.

The aim is to address these topics through “a joint dynamic circular process, which takes into account the different roles and responsibilities of the different actors and can be tailored to different national, sectoral and/or enterprise situations, industrial relations systems, jobs and different digital technologies/tools”. The second intention of the agreement is to manage the digital transformation by “Highlighting concrete approaches, actions and measures, which employers, workers and their representatives can use, according to their specific needs and circumstances, to tackle topics such as skills, work organisation and working conditions”.

The agreement invites the social partners to address issues relating to connecting and disconnecting, without establishing a right to disconnect.

The European social partners' autonomous framework agreement on digitalisation has provided inspiration to the national level organisations, and follow-up actions in this regard have the potential to benefit their members. The regular annual reports from the Agreement since show how social partners at the national level have taken further action on digitalisation¹⁴.

In 2022, the European social partners in the central administration sector have adopted an agreement on digitalisation.¹⁵ The agreement defines rules on the rights to telework; to disconnect; to training; to health and safety; to the protection of personal data; and to a human in-command and more strategic approach to artificial intelligence. The agreement stipulates that the telework must remain voluntary, reversible and available for workers based on a joint analysis with the unions of tasks and activities and with the necessary support and equipment to work from home. The agreement also calls on national social partners to ensure that additional expenses related to telework are duly compensated in negotiation with the trade unions. The right to disconnect is spelled out in the agreement, which every worker should be informed about before teleworking. A provision of the agreement underlines the workplace dimension of domestic violence. The agreement also provides for a health and safety dimension of digitalisation. It reaffirms the employers' duty to carry out regular health risk

¹³ [EU Social Partners agreement on digitalisation | ETUC](#)

¹⁴ [Framework Agreement on Digitalisation | Etuc resources center](#)

¹⁵ [EU Social Partners adopt new agreement on digitalisation for central government | EPSU](#)

assessments in consultation of trade unions. The risk assessments must include staffing levels amongst others.

In 2021, the European Parliament has called for an EU Directive on the right to disconnect. As of 2024, a proposal for a Directive has not been made.

4. The experiences of CEMR and EPSU affiliates in addressing the digitalisation

Digitalisation in the local and regional governments covers a wide range of issues, topics and challenges. These are firstly relating both to the digital services and infrastructure of LRGs providing essential public services to the citizens and communities and LRGs themselves as employers. This includes such core issues in the digitalisation agenda as providing efficient, accessible and secure IT services in local and regional administrations, information security, data protection, the e-government (linking to EU funding on digitalisation in the public administration) and the concept of smart cities. At the same time, digitalisation also covers the human / social aspects relating to the workforce of LRGs – such as teleworking, hybrid working, smart working, the right to disconnect, as well as training LRG workers / leaders on digital skills, ensuring respect for human dignity in the surveillance used in the LRGs, and ascertaining the use of AI in LRGs meeting the expectations of citizens and public service mission of LRGs themselves.

Exchanging the experiences, practices, challenges and solutions of national CEMR and EPSU members on addressing the digitalisation across the different countries were covered in the project's research. The key experiences and lessons learnt are analysed in turn below, based on the key issues identified in the research:

- Section 4.1: the experiences of LRG social partners in regulating telework, remote work and other forms of non-office based work in the local and regional administrations and the range of public services delivered in the LRG administrations;
- Section 4.2: the initiatives to ensure digital skills and securing employment in the context of digitalising the LRG administrations and services;
- Section 4.3: issues relating to digitalisation and OSH;
- Section 4.4: Measures taken to ensure that surveillance of LRG employees respect human dignity;
- Section 4.5: approaches to regulating the use of AI in the LRGs;
- Section 4.6: digitalisation focussed strategies, structures and actions in the members of CEMR and EPSU;
- Section 4.7: how the digitalisation is affecting the collective bargaining practices amongst the social partners;
- Section 4.8: Digitalisation and the gender dimension in the LRGs.

4.1. The experiences of addressing telework in the local and regional administrations

The issue of telework has been key in developing the LRG response to the digitalisation driven changes in the local and regional administrations. Experiences of how LRG social partners addressed this have been highlighted in Belgium, Denmark, Estonia, Italy, and Norway. Recently concluded collective bargaining agreements in the LRG sector have

included specific provisions on telework in Estonia and Italy (including the right to disconnect) and Denmark.

Across the countries, several trends have been identified.

Firstly, a variety of terms and concepts are used to describe such work performed outside the traditional office based workspace. There are the terms used such as telework, home office, smart work, mobile work in the LRG social partners in several countries covered in the research. In several collective bargaining agreements in Estonia and Italy the concepts have been formally defined jointly by the LRG social partners.

Secondly, there is a shared understanding amongst the countries covered in the research that **the possibility for telework applies to a certain proportion of LRG sector workers (not all LRG jobs are teleworkable)**. Whilst such estimates comparable across the countries are difficult to come by, the consensus in the interviews conducted was that around 20% of LRG sector jobs are “teleworkable” (this proportion would vary from country to country, depending on the range of services provided by LRG administrations). The COVID-19 pandemic has given an immense push of the possibility to telework for many LRG sector office-based workers, but it is acknowledged that many LRG sector jobs are not possible to telework. This means that joint social partner work on regulating telework is important focus but should not dominate the discussions to also address the digitalisation challenges faced by the majority of LRG sector workers whose jobs are not teleworkable.

Thirdly, the setting of rules regarding telework in the LRG sector shows a number of aspects which are important to consider. These include defining the access to telework, working time and disconnection, workplace health and safety, access to training, pay and career advancement.

Below is the analysis of particular country experiences in how LRG social partners have worked on the issue of telework, starting with the collective bargaining agreements in Italy and Estonia, and Denmark. The analysis then covers joint work between social partners on telework in Denmark, Norway and Belgium, guidelines on teleworking developed in Germany and Sweden and the experiences of developing local solutions in Belgium, France, Germany and Estonia.

4.3.1. Collective bargaining agreements on telework

In a number of countries, recently concluded collective bargaining agreements in the LRG sector have included provisions typically on the access to telework, pay and extra allowances, the right to disconnect, access to training and regulation of working conditions.

The most developed recently concluded collective bargaining agreements in the LRG sector have included specific provisions on telework in Estonia and Italy, the latter including the right to disconnect.

The spotlight on Italian collective bargaining practices on digitalisation shows the regulation of the concept of smart work. In Italy the focus on teleworking and the right to disconnect was already emerging before the Covid-19 pandemic. The concept of smart work (“lavoro agile”) in Italy has developed to recognise that such work can contribute to increased productivity, as well as broader societal goals, such as to keep young people in rural territories.

The concept was firstly introduced in the national legislation, also at the urging of the umbrella trade union movement - in the public administration with Law no. 124 of 2015 and, later, with Law no. 81 of 2017. Both laws tried to regulate the organisation of work and workers' access to smart working as well as other forms of remote working, placing the emphasis on

organisational flexibility, the voluntary nature of the parties and the use of technological tools made available and capable of responding to the functional needs of state, regional and local administrations. The concept thus demands new rights and possibilities to contribute more effectively. The unions were also concerned that work performed outside the premises was not always recognised as work. Hence, as an example of the municipality of Milan where a framework was developed in the collective bargaining agreement to recognise the standard working hours and the contact hours which should be no more than the set working hours in the agreement. Such examples of local agreements provided more substance and real-world experience when the national level agreements on smart work were negotiated in Italy.

The concept of smart work as being not tied to a specific workstation, where the workers perform the job in a specific employment context. This also has relevance in the context of green transitions where such new forms of employment can contribute. From this perspective, smart work also signals a paradigm shift in work, away from vertical hierarchical organisations to more flexible, horizontal teamwork working around specified goals. For local and regional administrations, this implies a significant challenge, and Italy is not the only country facing this.

The key development highlighted in Italy was the negotiation of the **National Collective bargaining agreement for the personnel of the local functions sector** for the three-year period 2019-2021. Negotiated by ARAN on the employer side and the confederal trade unions (FP CGIL - CISL FP and UIL PA and FPL), the agreement was officially signed on 16 November 2022, regulating the functions in the organisation of work, professional training and access on a voluntary basis for workers through the stipulation of an individual contract between the parties for new forms and modes of digital remote work - smart working, remote working coworking and satellite centres. Italy thus becomes the first country in the EU to have included smart working and all other forms of digital distance working carried out in the public administration in the national collective labour agreement for the civil service at the LRG levels.

Box 1: Key definitions of smart work – access, contractual rights and obligations, training, pay in Italy collective bargaining agreement for the LRG sector

The agreement, negotiated between the social partners in the LRG sector established the key aspects of the smart work for the LRG sector, as follows.

The definition and general aspects of smart work was established in the agreement, defining the smart work as work *“performed partly inside the entity's premises and partly outside them, without a fixed and predefined workstation, within the limits of the maximum daily and weekly working time” (Art. 63).*

The agreement also established the worker's responsibility in meeting health and safety conditions when performing smart work insofar *“the employee is obliged to ascertain the presence of the conditions that guarantee the existence of the minimum conditions for the protection of the worker's health and safety, as well as the full operativeness of the computer equipment, and to adopt all the precautions and measures necessary and suitable to guarantee the absolute confidentiality of the data and information held by the entity that are processed by the worker”.*

At the same time, **the employees' rights as per usual employment contract conditions** were guaranteed when performing the smart work, in terms of working hours, pay, access to training and career advancement: “the employee retains the same rights and obligations arising from the employment relationship in presence, including the right to a salary no lower than that applied overall to workers performing the same tasks exclusively within the administration, with the clarifications set out in this Title. Staff in agile work are guaranteed the same opportunities with respect to career advancement, economic advancement, performance incentives and training initiatives as those provided for all employees working in the presence of others.”

Importantly, the agreement stipulates that **the access to smart work is voluntary** and consensual and can be established regardless of the employment contract type. At the same time, shift work and work requiring the constant use of non-remote equipment are excluded from the possibility of smart work.

Furthermore, the agreement also established **the need for an individual agreement regulating the smart work**, defining the elements of such agreement being its duration, the modalities for carrying out work outside the usual place of work, with specific indication of the days of work to be carried out on the premises and those to be carried out remotely; its termination, motivated if at the Entity's initiative, which must take place with a term of not less than 30 days except in the cases provided for in Article 19 of Law No. 81/2017; d) hypothesis of justified reason for termination; e) indication of the bands; the worker's rest periods, which in any case must not be shorter than those provided for the worker in presence, and the technical and organisational measures necessary to ensure the worker's disconnection from the technological instruments of work; the procedures for the exercise of the employer's power of direction and control over the service rendered by the worker outside the premises of the entity in compliance with the provisions of Article 4 of Law no. 300/1970 and subsequent amendments; and the worker's commitment to comply with the requirements set out in the health and safety information on agile work received by the administration.

The agreement also **established the right to disconnect and the work bands in performing the smart work:**

"Working in agile mode can be divided into the following time slots:

a) contactability band - in which the employee can be contacted either by telephone, email or other similar means. This time slot may not exceed the average daily working time and is also structured in such a way as to guarantee the employee's work-life balance needs;

b) inoperability band - in which the worker may not perform any work. This band includes the period of 11 consecutive hours of rest to which the worker is entitled, as well as the period of night work between 10 p.m. and 6 a.m. of the following day."

The right to disconnect is defined in the agreement as follows. The employee has the right to disconnection. To this end, without prejudice to the provisions of paragraph 1, letter b), and without prejudice to the activities functional to the objectives assigned, during the hours other than those included in the band referred to in paragraph 1, letter a) (the contactability band), **contact with colleagues or with the manager is not required for the performance of work, the reading of emails, answering phone calls and messages, accessing and connecting to the Entity's information system.**" (Article 66).

Importantly, the agreement also **established the need for training to work** in smart work, *" In order to accompany the process of introducing and consolidating agile working, specific training initiatives are planned within the activities of the training plan for staff using this mode of working. 2. The training referred to in paragraph 1 shall pursue the objective of training staff in the use of communication platforms, including health and safety aspects, and other tools envisaged for working in agile mode as well as disseminating organisational modules that strengthen autonomous working, empowerment, decision-making delegation, collaboration and information sharing."*

Source: National Collective bargaining agreement for the personnel of the local functions sector, Italy 2019-2021.

With the new National Collective Bargaining Agreement, much attention has been paid to the aspect of training dedicated to smart working, which represents an indispensable support tool for the employee who decides to take advantage of this new method of working remotely, ensuring the development of skills not only in terms of hard skills but also soft skills. The latter

will enable the employee to strengthen autonomy in decision-making processes, accountability, collaboration and information sharing within work teams.

Whilst the national level collective bargaining agreement provided the overall framework for the civil service smart work in the LRG sector, local authorities have regulated such working arrangements on the basis of an individual voluntary agreement between the employer and the employee. This is after having recognised the activities that can be carried out in agile mode or other forms of remote working, ensuring in any case that the prevalence of the contractually envisaged activity is carried out on the premises. This allows for combining the overall framework of their respective organisational regulations shared with the social partners and contained in decentralised supplementary agreements, in view of the peculiarities and needs of the highly differentiated work sectors (local police, social services, educational services, demographic services, technical services, etc.) administered in the regions, both in large metropolitan cities and in small municipalities.

In this sense, there have been - among others - significant experiences in the large metropolitan cities of Milan and Rome, within the scope of the autonomy of negotiations of which the parties, while observing the applicable legal provisions and the guidelines established by the National Collective Labour Agreement, have identified some other forms of remote work designed to facilitate the work of employees concentrated on certain satellite centres located near their residences.

The particular arrangements for individual municipality level agreements are described in Box 2.

Box 2: The system of individual municipality level agreements for smart work in Italy

The individual agreement shall be concluded in writing, based on the rules set out in Articles 19 and 21 of Law No. 81/2017 and in harmony with the provisions of the sectoral collective bargaining agreement.

The individual agreement may have a limited duration in time and be linked to a specific project - which is why agile work is included among the assessment parameters in the achievement of the objectives set by performance, both individual and organisational - in which certain contact bands must be expressly provided for, during which the worker can be contacted by telephone and/or email. These bands generally coincide with those of the average daily working time, are structured in such a way as to ensure the worker's work-life balance, and do not preclude the use of hourly leave already provided for by law and by the national collective labour agreements in force. The worker also has the right to disconnection at times other than those included in the contact periods.

The agreement between the parties also regulates:

- the manner in which work performed outside the usual place of work is to be carried out, with specific indication of the work days to be performed in presence and at a distance;
- the method of termination, which must be justified, if exercised by the employer, within a period of not less than 30 days, except in the cases provided for in Article 19 of Law 81 of 2017;
- the worker's rest periods, which may not be shorter than those provided for the performance of the work activity carried out in presence;
- the procedures for exercising the employer's power of direction and control over services performed outside the entity's premises, in compliance with the provisions of Article 4 of Law No. 300/1970;
- the commitment of the worker in smart working to comply with the requirements contained in the information notice on compliance with health and safety regulations, delivered by the employer to the person concerned when signing the agreement;
- either party may terminate the agreement at any time without notice.

The worker who performs the service in smart working mode, without prejudice to contractual institutes that are not compatible with the remote working mode, retains the

same rights and obligations as those of the employment relationship in presence, including the right to an economic treatment not less than that applied overall to workers who perform the same tasks exclusively within the administration.

As of 15 November 2017, an IT platform for the transmission of individual agreements for agile work is available on the portal of the Ministry of Labour and Social Policy. This agreement contains the conditions for the performance of work that takes place away from the place of work, as well as the exercise of managerial power by the employer.

In Estonia, the experiences with digitalisation in the local government context show that the overall Estonian policy on digitalisation is led by the Digital Agenda 2030, including a focus on challenges posed by the AI. The social partners at the cross-sectoral level have an approach of cooperation to manage the world of work, including the digitalisation agenda. The Estonian social partners have developed an action plan on how to implement the European level autonomous agreement on digitalisation. In 2017, the Estonian Employers' Confederation and the Confederation of Estonian Trade Unions signed a framework agreement on teleworking.

In the local government sector, the key focus has been on teleworking. This is overall governed by the 2012 Civil Service Act. In 2018, the LRG sector trade union ROTAL and the Ministry of Finance signed a collective bargaining agreement on teleworking and municipalities have been implementing the telework rules on the individual basis. In 2022, the Ministry has developed a manual on teleworking and respect for the right to disconnect, which provides an overview of how to ensure safe working in the event of remote work. In 2022, the Act on Occupational Health and Safety was clarified by including additional teleworking provisions. It aims to make compliance with occupational health and safety requirements more understandable to the parties in the case of teleworking; to highlight more clearly the obligations of the employer and the employee in ensuring a safe working environment. In the case of teleworking, the current rules foresee that the employee performs their daily duties outside the employer's location in agreement with the employer. A written form should be preferred in cases of such voluntary agreement. A specific place to work remotely or work in different places is agreed upon. The employee is subject to the management and control of the employer.

In terms of teleworking, it was estimated by stakeholders consulted in the project research that around 20% of local government jobs in Estonia were teleworkable, which has increased since the COVID-19 pandemic, and since became part of the normal working routine for many jobs. Teleworking agreements are written contracts in a few specific workplaces, for other workers the terms are discussed individually. In case of telework, the contested areas related to the responsibility for work conditions and workplace safety on employee, since it's impossible for employer to check the physical working conditions of employees' homes, libraries and cafeterias. Overall, the practice of teleworking is widespread amongst the LRG sector jobs which are office based and teleworkable. At the same time, the interviewees in this research highlighted that the culture of teleworking is changing the workplace situation and challenging the culture of municipal workplaces, in terms of work organisation, team interaction, communication and workflows and working together, as well as interacting with the citizens using the LRG services. Municipalities are extremely satisfied with teleworking, especially those situated outside major centers, as it helps address labor shortages. Teleworking is seen as part of the solution, but it also presents challenges in terms of communication and new ways of working. Digital tools are important for jobs that are not teleworkable, and digitalization is a significant agenda item for the LRG social partners.

In Estonia, the right to disconnect is not regulated separately. The requirements for the organisation of working time, including the maximum allowed working time and the minimum

rest period, are set out in the Employment Contracts Act. However, it remains an issue as on a daily basis, 4% of respondents worked in their free time in Estonia, which is twice as much as the EU average – 2% of the respondents.

The option of teleworking is seen as one of the possible ways to attract workers to work in the LRG sector jobs in the context of labour shortages in the country. The telework opportunities make the workplace more flexible and attractive so it could be easier to find new LRG staff also in the situations and conditions where the salaries are not attractive enough (for social workers for example). It is also attractive option for recruiting workers for municipalities outside the major urban centres where in rural areas the shortage of qualified workers is particularly acute.

The LRG sector agreement needs to be placed within the overall industrial relations system in Estonia, where the tradition of collective bargaining would benefit from further strengthening. In this context, the EU directive on the minimum wage and its call to increase the collective bargaining coverage on wage setting is also important to mention (as it specifies that where the collective bargaining coverage rate is, for instance, below a threshold of 80%, member states should establish an action plan to promote collective bargaining, and the action plan should set out a clear timeline and specific measures to progressively increase the rate of collective bargaining coverage).¹⁶ In Estonia, in recent decades, both the share of trade union members in the workforce and, related to this, the coverage of the workforce with collective agreements have decreased strongly. The lack of a tradition of strong collective labour relations can be cited as factors supporting the trend. It means that the social partners co-operation covers only small part of the workforce (trade union members). Less than 6% of organizations have signed a collective agreement, and one third of all employees are covered by collective agreements. In terms of social dialogue in Estonia, collective bargaining coverage rate 19% (as of 2021), the trade union density 6% (2019) and the density of employers' organisations 25% (2019). Thus, the social partners represent only a fraction of the Estonian workforce and companies. There are a number of social partnership structures involved in the setting of the minimum wages and working conditions.

In Sweden, the LRG social partners have discussed the considerations of the social and personal implications of remote work, including the potential for extended weekends and the need for social interaction. The discussion included the need for specific training related to digitalization, teleworking, and the responsibilities of employers when employees work from home. At the same time, there is a shared understanding that remote work is not feasible for a large portion of the LRG sector workforce, such as those in healthcare and disability services. There have been discussions amongst the LRG social partners around the challenges and implications of teleworking and the blurring of boundaries between work and private life. This also included a discussion about the right to disconnect, the use of work phones for private purposes, and the impact on social interactions and psychosocial aspects of teleworking. The conversations also touch on the efficiency and cost-saving benefits of teleworking, as well as the potential drawbacks such as the loss of natural interaction between colleagues. The participants emphasized the need for trade unions to address these issues and consider the impact on different types of workers, including building a team and workplace culture in a remote work environment.

The LRG social partners in Denmark developed their approach to digitalisation in the overall national context of being very open and welcoming new technologies. Both EU and national

¹⁶ Directive (EU) 2022/2041 of the European Parliament and of the Council of 19 October 2022 on adequate minimum wages in the European Union. [Directive - 2022/2041 - EN - EUR-Lex](#)

levels are important in the context of social dialogue in the local and regional government sector:

- EU implementation of the autonomous agreement and/or Directives, where labour market issues implemented via the social partners (Danish model) and sometimes tripartite social dialogue;
- From purely national implementation perspective, there are different agreements for the private & public sectors. Importantly, the public sector divided into the local Government, Regional Government and National Administration.

The social partners in the local and regional government sector are:

- Employers representatives: KL (National Association of Municipalities - in total 98 municipalities) and RLTN (The Regions' Wage and Tariff Board - in total 5 regions).
- Workers representatives are organised into 50 organizations in these sectors. Hence, they are negotiating jointly within the Association of Local Government Employees' Organisation (Forhandlingsfællesskabet), representing approximately 550,000 members.

In this social dialogue context, **the collective agreement on telecommuting and homework** in Denmark is based on the European Social Partners Framework Agreement on Digitalisation from 2002. It has been implemented in Denmark as follows:

- Implemented in 2006 (Private sector),
- Implemented in National Administration (2005)
- Implemented in Regional Government (2009 & 2015)
- Implemented in Local Government (2013 & 2015)

The agreements on teleworking have been signed in connection with the ordinary collective bargaining negotiations which take place every 2-3 years. Denmark does not have a collective agreement on the right to disconnect. The agreements provide a basis for local agreements which in turn provide a framework for local project work to develop concrete solutions and mechanisms.

In **Belgium**, there is a federal-level legislation on the right of social partners to be consulted when a new technology is introduced, as well as the nationwide legislation regulating the conditions for teleworking and establishing the right to disconnect for all workers in the public and private sectors¹⁷. **Specifically in Wallonia**, the regional administration has adopted a decree on teleworking in the regional administration structures.¹⁸ This establishes an increase in the number of days allowed to telework, increases the allowance for teleworking, introduces more flexibility to telework also half-days and reduces the period of waiting before a telework arrangement can be requested by the public service employee.

The interview with the public administration trade union for Wallonia, Belgium highlighted how the digitalization is treated a significant issue for the trade union, especially due to the impact of COVID-19 on remote working and the need for technological resources. Indeed, the union was very supportive of the allocation of a €100 million budget for providing computers for remote work. The trade union has been involved in negotiations and initiatives to support remote working, including providing technological resources. The negotiating rules and guidelines for remote working during the COVID-19 pandemic, the negotiation process was relatively easy due to the special circumstances of the pandemic. The rules include providing

¹⁷ [Télétravail | Service public fédéral Emploi, Travail et Concertation sociale \(belgique.be\); Le télétravail dans la Fonction publique wallonne évolue après les enseignements de la crise sanitaire - Valérie DE BUE \(wallonie.be\)](#)

¹⁸ [Teleworking in the Walloon civil service is evolving after the lessons of the health crisis - Valérie DE BUE \(wallonie.be\)](#)

financial support for workers who are working from home to cover expenses such as electricity and food. The negotiation involved representatives of both employers and workers, and the aim was to ensure that everyone benefited from the guidelines. The negotiation was described as a win-win situation for all parties involved.

Indeed the main contention point in the LRG sector social dialogue is tensions and negotiations about worker flexibility and working hours, with employers wanting more flexibility and workers preferring more regulated working hours. The main controversy between the LRG social partners is about the labour regulations and policies regarding overtime and flexible work arrangements. There is the requirement to pay double for overtime and 3/3 time for working on Sundays. There is an importance of these rules for workers' well-being and the creation of flexi jobs for retired nurses to return to work during the pandemic. From the trade union side, employers are exploiting these flexi job arrangements for all workers, not just retired nurses, leading to potential abuse of the system. There is a broader need to address issues related to pensioners returning to work and potential exploitation of flexible work arrangements.

In **the Netherlands**, the collective bargaining agreement for the local and regional government sector includes an extra home /hybrid work allowance for working from home or hybrid work¹⁹. The Agreement in Principle between Collective Labour Agreement for Municipalities and Cao SGO 2023 has been concluded by the employers VNG and WSGO (Employers' Organisation for Cooperating Municipal Organisations) and the trade unions FNV, CNV and PDO. As one of the key provisions it established that employees who work from home as agreed will receive a compensation of € 3 net per day.

In **Czechia**, the collective bargaining agreement on teleworking in fire and police forces,²⁰ A collective agreement between the Czech Ministry of the Interior and the trade unions of the police and fire services allows workers in specific conditions to perform short-term telework. This means that individuals with caring responsibilities for young children or health problems are able to remain employed when they have problems to work at their regular workplace.

4.3.2. Joint work between LRG social partners on addressing telework and other digitalisation issues

Furthermore, joint social partner activities in the area of telework and broader agenda of digitalisation have been reported in Norway, Denmark, Finland and Spain. They involved typically the creation of a joint discussion platform (such as committee or a body) to provide a systematic reflection and working process to develop a joint understanding and identification of key issues related to digitalisation, including telework.

In **Norway, the LRG social partners Fagforbundet and KS** have developed their national social dialogue experiences with the digitalisation. This is based on the two broad trends, first referring to a great variety of digitalised services provided by local authorities. Second is that the local services include many different professions with a very varied use of digital technologies, where teleworking is possibly for a minority of local government employees. The social partners share an understanding that the digital transition in the local and regional sector will influence everybody's professional life, with technology driving innovation and innovation driving the use of technology, across a range of local and regional services, including healthcare, education, transport and administration. Important to reflect is also the use of AI, as well as the use of digital services for citizens relations and dialogue. Digital transition poses

¹⁹ [One-off allowance December '22 and homework allowance '23 | VNG](#)

²⁰ Eurofound (2020), Regulations to address work–life balance in digital flexible working arrangements, New forms of employment series, Publications Office of the European Union, Luxembourg.

the questions about the optimal ways to realise its benefits, including whether more services should be provided for less resources and / or used for development of quality services.

In this context, in **Norway, the social partners in the LRG sector established a Joint Committee – working group on Telework**. Existing regulations that are relevant to teleworking include the Working Environment Act²¹ and the Home Office Regulations²². The Committee was established as a result of the negotiations on the Collective Agreement in 2022. Its mandate was defined as to clarify the need for common guidelines, specific regulations, or similar measures regarding remote work and address aspects related to insurance, privacy, and the implications of changes in the home office regulations. The report from the Committee will serve as a reference point for further work on the topic, at the discretion of each party. The participating organisations in the Committee are:

- Norwegian Confederation of Trade Unions
- Confederation of Unions for Professionals
- Confederation of Vocational Trade Unions
- The Federation of Norwegian Professional Associations
- The Norwegian Association of Local and Regional Authorities.

The Committee’s work highlighted the following issues of remote work such as its voluntariness, privacy and data protection, equipment, health and safety and insurance.

Table 2: Issues highlighted in the Committee’s work on regulating teleworking (Norway)

Aspect of remote work	Conclusions from the Committee
Voluntariness	The parties agree that - permanent telework must be voluntary for both employee and employer; it is the employers decision....but should be discussed The employee side points out that: in some cases voluntariness is not the case; the employer should make provisions for all employees The employers side points out that: it is the employers prerogative to organize the work, and that the task itself, the individual situation and the over all work environment should be evaluated
Privacy and data protection	- Need awareness to avoid unnecessary surveillance - Employer should discuss the need, design, implementation, and significant changes to control measures in the organization with employee representatives
Equipment	The parties agree that: the employer have responsibility for a working environment in line with current regulations The employee side points out that: not all teleworkers are supplied with all the necessary equipment and costs, and this should be the main principle The employers side points out that: as the employer do not have access to places of teleworking, the employees have a commitment to report on the work environment
Health & Safety	Themes discussed: - Leadership: ensuring contact and dialogue - Awareness of work-life balance - Ensuring a good professional and social work environment - Physical work environment

²¹ [Act relating to the working environment, working hours and employment protection, etc. \(Working Environment Act\) - Lovdata](#)

²² [Regulations on work performed in the employee's home - Lovdata](#)

Insurance	The parties have discussed potential challenges in current regulations on occupational injury insurance. A need for a possible follow up towards the government to conduct a study of the current regulations, or the practising of them, and their implications on telework
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The Committee’s work highlighted the common ground between the social partners. Both parties points to that working from home can be positive, if the character of the tasks are suited; that local dialogue is highly recommended; the need for more research and that future regulations should be developed in cooperation with the parties, with common regulations for all sectors.

In contrast, the differences between the social partners show that the employee side have concrete suggestions for further regulations and common recommendations, in particular the insurance issue. The employers side emphasizes that there is not, at the current time, enough knowledge to develop such recommendations. They will, however, take care to guide the regions and municipalities in the regulations and how to facilitate appropriate solutions for working from home.

Joint social partner activities on digitalisation were found in several other countries, where social partners developed actions together to address the digitalisation implications. This was in Denmark, Finland, and Spain.

This was the case **in Denmark** where joint research and action projects are conducted on the influence of digitalisation on carrying out tasks and for the users and employees in the municipalities and regions. The projects are supporting the existing local practice on developing a constructive, result oriented and well-considered approach to digitalisation and new technologies. They shed light on various aspects of digitisation and new technologies as well as collect and disseminate best practices.

In Finland, there has been **a joint national social partner statement** on principles for successful digitalisation, also signed by social partners in the local and regional government. The 2019 joint statement on principles for successful digitalisation (including AI) highlighted the importance of investing in skills, implementing coherent and fair rules, and ensuring cooperation between all parties. The underlying message is that, if implemented correctly, digitalisation is an opportunity for both employers and employees, as it can increase labour productivity and employee well-being.

In Spain, there is a recent social partner in the local and regional government sector initiative to create a joint social dialogue body to include also digital issues. In 2022, the Spanish Federation of Municipalities and Provinces (FEMP) and the trade unions the Federations of Public Services of UGT and Citizenship Services of CCOO agreed to create a Social Dialogue Table and an Observatory of the Public Service in the Local Administration, to discuss and monitor a number of core issues to social partners. This is also including the digitalisation related challenges in the LRGs.

4.3.3. Guidelines on telework from LRG social partners

This was identified in Germany and Sweden, in Germany with Ver.di LRG specific guidelines on working in the home office²³ and Sweden with joint social partner guidelines on remote working and teleworking²⁴. Thus, the guidelines set out useful framework of actions of how to

²³ [Gute digitale Arbeit | ver.di \(verdi.de\)](https://www.verdi.de/en/verdi/gute-digitale-arbeit)

²⁴ [Distansarbete \(vision.se\)](https://www.vision.se/en/distansarbete)

ensure the workers in telework situations can work safely, respecting occupational health and safety rules, including practical checklists and explanations of key rights and obligations for workers and employers.

In Germany, EPSU member Ver.di specific guidelines on working in the home office²⁵ were developed by the Working Group on Digitalization for members working in the municipalities and includes a range of provisions:

- Guidelines for designing regulatory needs in works agreements,
- Minimum standards,
- References to current occupational health and safety regulations,
- Definitions distinguishing the home office, telework and mobile work,
- A checklist for practical work on site, and
- Space for recording action needs and next steps.

In Sweden, the guidelines on remote working and teleworking²⁶ were developed as joint information from the Swedish Association of Local Authorities and Regions, Sobona - the employers' organization for municipal companies, and the OFR's general municipal sector. This document is aimed at local parties such as HR personnel, managers, union representatives, and safety delegates. Remote work is defined as "a way to organize and/or perform work using information technology within the framework of an employment contract or employment relationship, where work, which can also be performed at the employer's premises, is regularly carried out outside these premises." Working from home or at a location other than the main workplace occasionally is not the same as working remotely according to the European framework agreement. The guidelines also establish that such work is voluntary and requires a written agreement between the employer and employee about the terms and conditions that will apply to remote work. The agreement can, for example, include details about the extent of remote work, presence and availability, how the employer will equip the home, and regulations on how the agreement can be terminated. The employer has a responsibility to ensure that the remote work location is functional and ergonomic and meets the requirements for a good work environment from a social and organizational perspective. Regular and effective dialogue between the manager and the employee is essential.

4.3.4. Local solutions to teleworking in the LRG sector

In several countries, the project exchanges highlighted a range of informative local solutions of how the individual municipalities regulate the use of teleworking in their workplaces in practice, and how this experience has evolved with the COVID-19 pandemic.

In Estonia, the pandemic made the remote work in the Tallinn City Government much more widespread. This led to creating a remote work policy, requiring to identify which roles are suitable for remote work. It also involved a remote workplace risk assessment (special form), a signed form to work environment specialist, based on the voluntary agreement between the employee and his/her manager (special form) and the written agreement with employee's employment contract. This policy appears to bear good results. In the 2022 Employee Engagement Survey, 72% of the employees of the Tallinn city organization, whose nature of work allows remote work, feel that remote work is viewed in their institutions in doing well.

²⁵ [Gute digitale Arbeit | ver.di \(verdi.de\)](https://www.verdi.de)

²⁶ [Distansarbete \(vision.se\)](https://www.vision.se)

Managers' attitude towards remote work is also considered by the employees to be generally supportive.

At the same time, experiences shared from Estonia show how different the extent of remote work was between the different municipalities.²⁷ In 2021, the largest share of employed people working remotely was in Harju County (35%), and one in three employed people living in Tartu County also worked remotely. In these regions, there are more top specialists with higher education, whose nature of work allows them to work remotely. Teleworking was the least common among people in Ida-Viru and Võru counties, where only 11–13% of those employed used this opportunity. Furthermore, this experience thus highlighted the need for IT solutions required for remote work, such as high-speed internet connection, remote computer management, common computer network, co-working solutions and cloud-based solutions. This also shows how necessary to contribute to the development of digital competences and skills of employees in the municipalities.

Interesting example of an approach to support appropriate use of telework is the label of smart work used in Estonia for employers. The label is a recognition of those organisations that implement remote work in their institutions. The label is a good opportunity to show that the institution contributes to increasing the satisfaction of its employees and helps to organize working time more flexibly. Its promoter is the Smart Work Association and Estonian Human Resource Management Association PARE. It was progressively issued to the seven municipalities. In 2023, the title of the best manager in favour of teleworking was awarded to Anti Puusepp, the mayor of Haljala rural municipality. As of 2023, the label was awarded to 195 organizations.

In France, 36,000 municipalities have different regulations on telework and negotiations take place at the local level. As a concrete example, in the city of Lyon, EUR 250 financial support is provided for the equipment when teleworking. On the other hand, there are no lunch vouchers provided if teleworking and a public transport allowance is also reduced when teleworking.

In **Belgium** the telework refers to work in a place other than the office, does not have to be home-based. Questions have also been raised about the role of office-based work as a social space and encouraging creativity and teamwork between the workers. There are differences between blue- and white-collar workers and workplaces which are also not teleworkable in the local and regional administrations, especially for frontline workers. Here, the experiences of using apps to track the movements of frontline workers pose questions about the privacy and data protection.

In Germany the question of workplace is discussed, under the term “mobile working”. Mobile working is not the home office where the employer would have to ensure the compliance with health and safety regulations. Hence, there are different rules for home office and mobile working with respect to the working time, health and safety and equipment.

4.2. Digital skills and securing employment

In the digital transformation of LRGs, the project discussions and research highlighted a number of main trends and challenges for appropriate level of digital skills and ensuring employment in the LRGs. These relate to the digitalization of workflows in the municipalities, the securing of the IT infrastructure, and the development of the workforce in times of a

²⁷ Based on Statistics Estonia, information provided in the project seminar in Estonia.

shortage of skilled workers. All these topics are linked by the need for well-trained and motivated LRG staff and the questions of how the LRGs can remain capable of acting in the future. Approaches to supporting digital skills and securing employment in the LRGs have been highlighted in the project exchanges in Austria, Belgium, Germany, Estonia, Denmark and Sweden. They highlight the importance of training and upskilling workers to adapt to digital changes in the LRG sector. From the governance perspective, in Austria, involving social partners like trade unions and works councils is crucial for successful digital transformation in LRGs. Similarly, a joint responsibility of trade unions and employers in the digital upskilling of LRG workforce is emphasised by Swedish LRG social partners. Collective bargaining agreements in Germany emphasize the need for lifelong learning and qualification to enhance digital skills of LRG workers. Securing employment is provided via guarantee to the equivalent job placement and qualification measures. Estonia focuses on providing digital solutions for local government services and addressing the digital divide between urban and rural areas. Sweden emphasizes the importance of security, competence development, and the joint responsibility in digitalization efforts. Also Denmark implements agreements and activities on enhancing digital skills at the local and regional government levels, emphasizing co-influence and co-participation between management and employees. Further details about the national experiences are discussed below.

The project seminar in Estonia highlighted **the Austrian** experiences on digital transformation in the LRGs. The key lesson learnt in the Austrian experience is the need to include the social partners in achieving successful and effective digital transformation processes in the LRGs.

In Austria, based on the labour law, the cities, works council and trade unions have to negotiate in the context of the introduction of new working methods and the use of new technological means and systems. The employer has to inform and consult the works council and negotiate. As an example, in the City of Vienna, the electronic access control for workplaces was introduced after an agreement on evaluation and deletion of data, immediately inform the works council and the evaluation carried out with involvement of the works council. Another example in the city of Linz related to the data governance in Linz. The key steps for success were the documentation of own data with metadata management software, training to empower experts in the specialist departments, analysing data, data profiling, determination of data quality and the development of quality assurance measures. This experience shows how the taking advantage of the opportunities from digital transformation requires an involvement of trade unions and works councils for the acceptance and success in digitalising the LRGs.

In Belgium Wallonia, the LRG social partners have undertaken a number of initiatives related to digital skills training including organising a range of dedicated and regular workshops and conferences. This is because the digitalisation has further increased the need for reskilling and upskilling workers to adapt to technological changes. The social partners have emphasised the importance of recognizing and valuing workers' skills. In this respect, the activities on training included a conference, including speakers from the state statistic and prospective administration and digital Wallonia, and a formation association. Training is considered important in relation to digitalization, and there are discussions about the rules and provisions for training workers. The administration gives recommendations to the Minister regarding training, and social dialogue is important in the decision-making process.

In the **LRG sector in Germany**²⁸, providing training and lifelong learning opportunities for the LRG workers are important for successful digitalization in the LRGs. Collective bargaining

²⁸ See Eurofound (2021), Social partners going digital: Using digital tools and adapting social dialogue processes, Publications Office of the European Union, Luxembourg.

agreements at the local level in the LRG sector include in general provisions for general training and learning opportunities, which can also cover digital skills. This is recognising the need for upskilling and reskilling of workers to adapt to digitalization and technological advancements. In particular, one such agreement stipulates that (Article 5)²⁹:

“A high level of qualification and lifelong learning are in the common interest of employees and employers. Qualification serves to increase the effectiveness and efficiency of the public service, promote young talent, and enhance employment-related skills. The collective bargaining parties also see qualification as part of personnel development.”

The agreements also recognise the right of employees to an annual assessment of their training and development needs with their supervisor. The costs of the training are to be primarily borne by the employer, and the training time is counted as the working time.

At the same time, no overarching collective bargaining agreement has been developed in relation to the digitalisation issues specifically for the entire LRGs in Germany. Instead, there are individual agreements on the issues related to digitalisation with unions and specific LRGs. Such agreements often echo the federal collective agreement on digitalisation for the federal government employees (see below). The agreements in the local municipalities are achieved after negotiations between staff council, IT and Legal-Department. Their key points relate to ensuring the job security for employees when the digitalisation affects their workplaces, the participation process ensuring that the works councils and trade unions can participate in designing the digital work processes, the qualification measures to ensure that the LRG workers receive appropriate training to keep their digital skills up to date, provisions for data security and rules on defining the access and modalities for mobile work/flexibility.

The collective agreement for employees of the federal government (2021) in Germany³⁰ shows that the digitalization within the meaning of this collective agreement is understood to mean the initial introduction or expansion/further development of digitally supported work processes. If the specified requirements are fulfilled, the federal employees are given job security, provisions for securing wages and qualification measures. The collective agreement includes a number of employment security provisions that will apply if certain conditions are met. More specifically, the agreement states that these provisions will apply if digitalisation results in a significant change in work processes (work technology, work organisation or both) in a department, leading to a significant change in job requirements or job conditions. Employees whose job effectively disappears as a result of digitalisation or if they need to move to another job, will be entitled to training and wages will be protected if the new job has a lower salary. Mobility payments and framework regulations for mobile forms of work are also included in the agreement. There are provisions on job security, establishing mechanisms to secure equivalent jobs and compensation if as a consequence of digitalisation there are job losses or job downgrading. There are also provisions on skills and qualifications intended to guarantee that employees receive the necessary training to adapt to new jobs and functions assigned to them, provisions on relocation allowances for employees who have to permanently change their place of employment and provisions setting out the conditions under which mobile forms of work are permitted.

The interviews in this project with the stakeholders in Germany highlighted the challenges of digitalization for the LRG administrations, particularly in terms of digitalizing day-to-day work,

²⁹ Durchgeschriebene Fassung des TVöD für den Bereich Verwaltung im Bereich der Vereinigung der kommunalen Arbeitgeberverbände (TVöD-V) vom 7. Februar 2006 in der Fassung der Änderungsvereinbarungen Nr. 15 bis 17, January 2023.

³⁰ [Digitalisierungstarifvertrag mit dem Bund vereinbart | ver.di \(verdi.de\)](https://www.verdi.de/digitalisierungstarifvertrag-mit-dem-bund-vereinbart)

administrative processes, and services. A view expressed by stakeholders interviewed in this project is that the key laws and guidelines regulating the LRG sector are not yet digital-ready, posing a significant challenge for digitalization efforts. There is a focus on the challenges faced in digitalizing day-to-day work, administrative processes, and services, and the need for alignment with the main legal frameworks regulating the LRG service provision and employment conditions. There are significant challenges and complexities of balancing flexibility and digitalization respecting the laws on working time and health and safety in public administration. There is a discussion about the difficulties in providing clear advice due to the conflict between the modern work practices and existing laws. The solution has been to engage with local unions and seek local level agreements to address some of the challenges.

The German experience highlights the difficulty in reaching a general agreement due to the diverse nature of work within the LRG sector, such as administrative roles, kindergarten staff, and construction workers. The focus is on encouraging local-level agreements and discussions to find the best solutions for different types of work within the LRG sector. This also includes the prevalence of teleworking and digital tools in the public sector and the need to address the challenges they bring.

The Digital change plan for local governments in Estonia involves providing digital solutions for sessions and meetings of the municipality (government and council meetings) and public consultations (e.g. participatory budgeting)³¹. It also covers the cyber security support for local governments and implementing the new Estonian information security standard (securing the digital local services/processes, not only the digital databases). Furthermore, the Plan covers the local government service owner development programme (training), strengthening the local government's digital community, developing the local government public services mapping model and unified user satisfaction measurement system and open data publication and data management support for local governments. It recognises that the digital transformation of LRGs does not only mean a transition from paper to the electronic environment, but it also affects the entire ecosystem of the organization management, which means that all LRG workflows and processes should be digitalised.

Thus, the focus in Estonia has been on the focus is on helping the municipalities that deliver e-services and how to improve the level and quality of e-services or how to channel the offline service to the online services for citizens. The approach taken is to develop e-services based on the lifecycle of citizens, so that the citizens access e-services in various life situations they face. Estonia is known for its digital pioneering and e-government at the state level. However, this digital advancement does not necessarily trickle down systematically to the local level, especially in rural areas. The disparity in digital services between urban and rural areas is a concern. There is a need to address the digital divide and ensure that digital services are accessible and effective at all levels of governance.

The LRG intention is trying to implement proactive services or life event services, such as automatic subsidies for life events like birth, marriage, or military service. Challenges exist in implementing proactive services, especially for small municipalities, due to the lack of skills and investment required. Transitioning offline services to online services brings about new complexities and nuances in digital skills required, such as managing applications and notifications. While there is advanced digital content on a state level, the municipal level faces challenges in digitalization due to the skill gaps and investment needs. Setting up systems correctly is crucial for success. Implementing and fine-tuning systems according to specific municipal needs is complex, and small municipalities may struggle with the cost and complexity of digitalization. Support for digitalization includes networking, online and offline seminars, and

³¹ [Digital Agenda 2030 | Majandus- ja Kommunikatsiooniministeerium \(mkm.ee\)](#)

mentorship programmes. Hiring consultants from the private sector can be complicated and expensive. Seeking state support and hiring knowledgeable staff can help municipalities progress in digitalization.

Thanks to digitalisation, the amount of information available for LRG employees will increase significantly, which may in turn create risks that important information remains unnoticed or employees are not sufficiently trained to draw productive conclusions. Without preparing people for digitization and continuous training, it is not possible to reap the benefits of digitization. A view expressed in the project consultations is that the state-funded Unemployment Fund should support employer's costs of digital skills trainings even more than they are doing now and the conditions should be more flexible.

Similarly in Sweden, the interviews for this research project revealed the importance of digitalisation in the local administration also to ensure the right LRG workforce development approach, also to address the challenges from the ageing LRG workforce. There is a focus on digitalization in the efforts to address demographic challenges, particularly related to ageing populations. CEMR member SALAR is initiating a significant effort to help local and regional authorities with digitalization, and the specific details and outcomes are being developed. The focus is on prioritizing and addressing key issues related to digitalization in local and regional authorities, especially the impact of changing demographics and an aging population on the workforce. The aim is to encourage people to work for more years and retire later. Digitalization is seen as a way to accomplish tasks with fewer people in the societal context where the aging population presents an urgent challenge.

Indeed, the interviews highlighted that the Swedish approach to digitalization involves a focus on security, competence development, and responsibility for both employers and employees. The role of trade unions in embracing digitalization and ensuring workers' employability is highlighted. In this context, the collective bargaining agreement framework between the state, unions, and employers in Sweden provides economic security and support for workers to digital transition and develop their skills. There is an understanding for the need for competence development, upskilling, and reskilling in the workforce in the LRG sector and its public services. Both sides face challenges, as there are reactions from employers and the challenges they face in investing time and money in employee development. There are also challenges associated with the capacity of the state to support individuals in their competence development. There was also a mention of the need for a certain mentality and willingness from individuals to engage in competence development. Overall, workers in general are willing to improve and upgrade their skills for better job opportunities. The main issue discussed is the challenge of finding time for competence development in the LRG sector due to downsizing and resource constraints. Thus, the views expressed highlighted that the trade union and employer organizations share a common responsibility and common challenges in finding solutions to the appropriate digital skills development of LRG employees. The need for a competent workforce in sectors with shortages is a shared concern for both trade unions and employers. Both LRG social partners have an interest in supporting members through digital transitions and addressing the needs of the labour market are highlighted as important joint responsibilities.

The joint presentation of **Swedish Social Partners** in the project workshop in Estonia showcased the digital transformation in one of the municipalities in Sweden - the Ronneby municipality. It has a digital family that aims to relieve their employees from administrative, monotonous and time-consuming tasks. The introduction of digital assistants has been done in close cooperation with the employees in Ronneby municipality. The digital family is aiming at increased accessibility and service in the form of an additional contact channel but does not replace the human interaction that remains. From the employers' perspective, it can lead to a

number of benefits, such as shorter processing times, increased accessibility towards the residents, increased quality assurance through equal handling of all cases and redistribution of resources.

At the same time, from the trade union perspective, several challenges remain. Digital tools require a common needs inventory and knowledge compilation, someone in charge with an overview of coordination, communication and safety concerning all the employer's digital systems, in-depth training and development of employees, information in advance, guidance and assistance 24/7, proper equipment and trade union participation in the participate in health and safety inspections concerning the digital working environment.

Such concerns have led to the unions in Sweden developing a **common guide for the health and safety inspections in the digital working environment**. The guide available online in Swedish is meant to support the digital safety inspection through a tool for systematically investigating and preventing risks in the digital work environment so that digital workplaces continue to be adaptable, usable and functional.³²

In Denmark, several agreements and activities on digitalisation implemented at Local and Regional level concerning Digitalisation, MED system and "Fremfærd" – Forward motion / conduct. **The MED system** is based on an agreement on co-influence and co-participation. It implements EU-directives, such as 2002/14/EC Framework for informing and consulting employees in the European Community. The agreement stipulates the foundation for improvement and development of the collaboration between management and employees. It states that all employees have a right to co-influence and co-participation. For LRG sector, the municipalities are delivering services for the citizens and through the inclusion of employees and their chosen representatives on shaping the approach to the work, the services delivered to citizens are strengthened. The overall agreement has led to the local agreements.

"Fremfærd"³³ is a collaboration between social parts in the municipal area set to develop the municipalities core welfare services. It hosts deep dive events and carries out projects covering all core services. The collaboration is working together on new technology – making the most out of the digital opportunities. There are four areas, three of which focus on the impact on working environment:

- How is the technology impacting the day-to-day work,
- How does the technology change the need for new skills and competences,
- How can we collaborate on good implementation.

Agreement has led to the development of best practice" Viden på Tværs" – Knowledge across³⁴.

4.3. Digitalisation and OSH

Project discussions and exchanges highlighted the importance of addressing occupational health and safety issues (OSH) in the context of digitalisation of LRGs.

To start with, there has been a broad understanding of OSH developing in the workplaces (including physical safety but also general prevention of ill health of workers, good organization of work, working conditions and working environment). According to the International Labour

³² [Digital safety inspection to support operations - Digi-round \(suntarbetsliv.se\)](#) [Digital safety inspection to support operations - Digi-round \(suntarbetsliv.se\)](#)

³³ [Om Fremfærd | VPT](#)

³⁴ [Knowledge across | VPT](#)

Organization (ILO), OSH is “the discipline dealing with the prevention of work-related injuries and diseases as well as the protection and promotion of the health of workers. It aims at the improvement of working conditions and environment”³⁵. This takes into account technical safety as well as the general prevention of ill-health, including the organisation of work, working conditions and social relationships and the influence of factors related to the working environment

In relation to OSH and digitalization, there are a number of opportunities for better OSH related to digitalization, as well as key challenges.³⁶ Opportunities relate to advancing OSH efforts, allowing workers to benefit from higher levels of autonomy and flexibility, better and more flexible work organisation and more effective OSH training, including remote and advanced workplace risk assessment.

Challenges relate to workers being more exposed to new types of digital OSH risks, the increase in work-related stress and poor mental health, permanent availability and lack of disconnection from work, increasing performance pressure and work complexity, irregular working hours, less social interaction and support at work, blurred boundaries between work and private life and the gaps in current mechanisms for managing and regulating OSH – e.g. in situations where workers are managed by intelligent machines.

There are a number of the key experiences and lessons learned from CEMR and EPSU affiliates with respect to promoting OSH in the digitalization of LRG services. They relate to the following areas.

First area concerns **developing and applying clear and explicit policies and regulatory frameworks to clarify OSH roles and responsibilities** between employers and employees in relation to new systems and new ways of working arising from the use of digital tools. It also includes regulating the OSH implications of teleworking - as seen in the experiences shared by CEMR and EPSU affiliates in Italy, Estonia, Norway and Sweden.

In **Italy**, the collective agreement on smart work adopted in the local government sector (see section 4.3.1) also established the worker’s responsibility in meeting health and safety conditions when performing smart work insofar “*the employee is obliged to ascertain the presence of the conditions that guarantee the existence of the minimum conditions for the protection of the worker’s health and safety, as well as the full operativeness of the computer equipment, and to adopt all the precautions and measures necessary and suitable to guarantee the absolute confidentiality of the data and information held by the entity that are processed by the worker*”.

The agreement also established the right to disconnect, defined as follows “the employee has the right to disconnection. To this end, without prejudice to the provisions of paragraph 1, letter b), and without prejudice to the activities functional to the objectives assigned, during the hours other than those included in the band referred to in paragraph 1, letter a) (the contactability band), contact with colleagues or with the manager is not required for the performance of work, the reading of emails, answering phone calls and messages, accessing and connecting to the Entity’s information system.” (Article 66).”

³⁵ See [Occupational safety and health | International Labour Organization \(ilo.org\)](https://www.ilo.org/)

³⁶ See also https://osha.europa.eu/sites/default/files/Digitalisation_and_OSH_EN.pdf

In **Estonia**, in 2022, the Act on Occupational Health and Safety was clarified by including additional teleworking provisions. It aims to make compliance with occupational health and safety requirements more understandable to the parties in the case of teleworking; to highlight more clearly the obligations of the employer and the employee in ensuring a safe working environment. In case of telework, the contested areas related to the responsibility for work conditions and workplace safety on employee, since it is challenging for employer to check the physical working conditions of employees' homes, libraries and cafeterias. Examples from Tallin municipality on applying digital OSH tools included the process to conduct a risk assessment based on a given form at his/her remote workplace; send the signed form to the work environment specialist of his/her institution; employees must inform any work-related incidents or injuries that occur while working remotely; training how to keep information safe and secure in the digital work environment.

In **Norway**, the LRG social partners Fagforbundet and KS have developed their national social dialogue experiences with the digitalisation (see section 4.3.2). The Committee was established as a result of the negotiations on the Collective Agreement in 2022. OSH was one of the themes discussed, as well as insurance. The parties have discussed potential challenges in current regulations on occupational injury insurance. A need for a possible follow up towards the government to conduct a study of the current regulations, or the practising of them, and their implications on telework. In contrast, the differences between the social partners show that the employee side have concrete suggestions for further regulations and common recommendations, in particular the insurance issue. The employers side emphasizes that there is not, at the current time, enough knowledge to develop such recommendations. They will, however, take care to guide the regions and municipalities in the regulations and how to facilitate appropriate solutions for working from home. The latest court judgement from the Supreme Court in 2024 clarified that the employee is not covered through insurance during the lunch break when teleworking.

In **Sweden**, the guidelines on remote working and teleworking developed as joint information from the Swedish Association of Local Authorities and Regions, Sobona - the employers' organization for municipal companies, and the OFR's general municipal sector. They established that the employer has a responsibility to ensure that the remote work location is functional and ergonomic and meets the requirements for a good work environment from a social and organizational perspective.³⁷

Second area relates to **the consultation and involvement of workers and workers' representatives when developing digital LRG processes**, with relevant experiences from CEMR and EPSU affiliates in Austria and Sweden. Such participation is to guarantee equal access to information about digital technologies by employers, managers, workers and their representatives. It is also instrumental in consulting workers and their representatives and get them to participate in the decisions taken regarding the development, implementation and use of digital technologies and systems, as well as maintaining transparency about how digital tools operate, and about their main benefits and drawbacks.

In **Austrian** experience, the cities, works council and trade unions have to negotiate in the context of the introduction of new working methods and the use of new technological means and systems. Examples provided during the project discussions showcased how this has worked in practice, ensuring a healthy working environment (see section 4.3.4).

³⁷ [Distansarbete \(vision.se\)](https://www.vision.se/)

The joint presentation of **Swedish Social Partners** in the project workshop in Estonia showcased a common guide for the health and safety inspections in the digital working environment.³⁸ This guide and accompanying training is to support the digital safety inspection through a tool for systematically investigating and preventing risks in the digital work environment so that digital workplaces continue to be adaptable, usable and functional.

Final area relates to providing effective OSH services to LRG workers in the digital world of work and an adapted and regular training for workers. This entails the provision of effective OSH services to all workers in the digital world of work and an adapted and regular training for workers so that workers are trained to use digital technologies safely and understand the potential risks. Employers should undertake risk assessment of remote and office based workplaces; organisations should provide workers with equipment, digital technologies, technical support and guidance on how to safely use them and how to set up a home workstation as well as office based work stations and hybrid work environments. Employers can also practise active listening to understand workers' needs and reduce isolation and have clear mental health support policies and channels. Additionally, they can provide training and education activities to raise awareness about safe work anywhere and introduce a clear policy on remote and hybrid work. This can include provisions on how to assess and manage occupational risks, ergonomic equipment, hours of availability and expected results.

From workers perspective, workers can optimise their workplace ergonomics and environment, move, change posture, stay active, take regular breaks and stay connected with colleagues and managers throughout the working day. A safe and healthy work–life balance should be pursued, especially by those working from home.

4.4. Surveillance and respect for human dignity

This is an area under development in the LRG sector in several countries, with few practices and officially agreed approaches emerging.

In **Estonia**, if the employer has installed special software on the employee's work computer for computer use and work efficiency during working hours for analysis, the use of such software must be written either in the employment contract or the work arrangement in the rules.

Guidelines on how to deal with digitalisation issues were adopted in **France** in 2018, when the CFE-CGC developed a HR Ethics and Digital Charter. Whilst not LRG specific, it is relevant, which outlines a set of definitions, principles and good practices with a view to promoting responsible use of personal data in algorithm-driven HR practices. The charter is intended to bring this fundamental right [the right to data protection] to the heart of social dialogue in companies, by placing it on the agenda of a works council.³⁹

A collective agreement on control measures is also in place in Denmark. It has been implemented as follows:

- Agreement signed in 2001 & 2006 (Private sector)
- Agreement signed in 2008 & 2015 (LRG)

³⁸ [Digital skyddsronnd för stöd för verksamheten - Digi-ronden \(suntarbetsliv.se\)](#)

³⁹ Eurofound. 2022. Ethics in the digital workplace, Publications Office of the European Union, Luxembourg.

- Agreement signed in 2010 (National Administration).

The purpose of the agreement consists of several aspects:

- The employer may, implement control measures. They must be factually justified for operational reasons and have a reasonable purpose; They may not be offensive to the employees, and they must not cause the employees a loss or notable disadvantages. Control measures must be designed so that there is a reasonable relationship between ends and means.
- The employer must notify the employees of new control measures no later than 6 weeks before they are implemented. However, this does not apply if the purpose of the control measure will thereby be lost, or if there are compelling operational reasons for this. In that case, the employer must notify the employees as soon as possible and explain the reason why the 6-week deadline could not be met.
- The individual employee cannot give consent to the implementation of control measures — neither in connection with employment nor at a later stage.
- In home workplaces, no control measures may be introduced that violate privacy.
- If, after being notified of a control measure, the employees find that the conditions for implementing the control measure are not or have been met, they demand that the resulting discrepancy be dealt with under industrial law.

4.5. The use of AI in the local and regional governments

LRG services are facing the adoption of AI and the increasing importance of automated routine tasks with the help of AI and possibilities to increase the efficiency of service delivery. At the same time, there are skills implications from applying AI for local and regional government workers, the transformation of existing tools as well as ethical concerns and the need to reflect the citizens' needs in delivering public services.

The key impacts on employment resulting from AI identified in the latest AI-related research are in three areas. Firstly, they relate to the impacts on job losses and job gains (which are currently considered to be in balance).⁴⁰ The current research considers that the net impact of AI on employment is probably likely to be ambiguous. AI is likely displace some human labour but it can also raise labour demand because of the greater productivity it brings (referring to the productivity effect). AI can also create new tasks, resulting in the creation of new jobs particularly for workers with skills that are critical to using AI. AI is expected to create new jobs in data science, cybersecurity, AI development, also this will affect the LRG sector where such positions are currently based. Initial findings from a new OECD survey of AI's impact in the manufacturing and finance sectors⁴¹ show that there is little evidence of significant negative employment effects due to AI. Empirical studies using cross-country experiences in adopting AI in workplaces or studies using within-country variation by local labour markets, do not find any statistically significant decrease in employment. Similarly, recent surveys of workers and firms, or case studies of firms adopting AI, find few employment changes. However, AI is evolving rapidly, and advances in generative in AI may disprove some of the evidence accumulated so far.

⁴⁰ OECD. 2023. OECD Employment Outlook 2023: Artificial Intelligence and the Labour Market, OECD Publishing, Paris, <https://doi.org/10.1787/08785bba-en>

⁴¹ Lane, M., M. Williams and S. Broecke (2023), "The impact of AI on the workplace: Main findings from the OECD AI surveys of employers and workers", *OECD Social, Employment and Migration Working Papers*, No. 288, OECD Publishing, Paris, <https://doi.org/10.1787/ea0a0fe1-en>

Secondly, the shifts in skills requirements are identified (involving reskilling and upskilling of workers and transforming the job contents)⁴². The utilization of artificial intelligence (AI) has the potential to enhance the physical safety of workers and automate repetitive tasks. It can automate repetitive and routine tasks, allowing employees to focus on more complex and creative aspects of their jobs, improve efficiency and accuracy. There was a recognition in the project discussions that automated administrative processes can save valuable working time for employees to handle more complex operations.

A third focus on main concerns associated with adopting AI in the workplace (ethical concerns, quality of work and fundamental rights implications). Research to date has shown increasing ethical concerns from the use of AI relating to the quality of work, fundamental human rights and ethical principles⁴³. The utilization of artificial intelligence (AI) has the potential to enhance the physical safety of workers and automate repetitive tasks. However, it is crucial that this implementation is accompanied by comprehensive training, upskilling, and reskilling programs for employees.⁴⁴ While AI and other advanced technologies can improve job quality by handling mundane responsibilities, there is a concern that human involvement may be marginalized. Studies have indicated that the impact of these technologies on social interactions in the workplace can vary depending on their specific applications.⁴⁵ Furthermore, the use of such technologies can affect workers' mental well-being through continuous and pervasive monitoring. Additionally, the constant monitoring aimed at boosting productivity may encroach upon employees' rights to freedom, security, privacy, and protection of personal data.⁴⁶

In the countries covered in the research, several CEMR and EPSU affiliates have adopted specific guidelines or policies to address the implications of AI use in the local and regional governments. Project discussions highlighted how important it is to develop a shared understanding of defining AI (as machine learning algorithms processing large sets of text /image data). Also, there is a need to control the AI based applications in the LRGs, including defining a clear legal basis for its use, ensuring that AI use is rule-based and clearly identifiable in the context of public services delivered by AI, as well as guaranteeing human control in training AI based on an ethical and non-biased basis. There is a need to ensure the data sets are free of discrimination and bias when AI is used to deliver public services. Consent of citizens to use their data for AI purposes is important (and ensuring that AI uses only data where consent has been provided), as well as hosting data in Europe. Also criteria used in data training for AI and human control is also very important. The EU AI Act adopted in 2024⁴⁷ is providing a regulatory framework for adopting AI in a responsible way.

Thus, LRG social partners could consider developing guidelines for employers and employees to guarantee the safety, protection of human rights and control of humans over machines and

⁴² Deshpande, A., Picken, N., Kunertova, L., De Silva, A., Lanfredi, G. and Hofman, J. (2021), Improving working conditions using artificial intelligence, Policy Department for Economic, Scientific and Quality of Life Policies, European Parliament, Brussels.

⁴³ Eurofound. 2022. Ethics in the digital workplace, Publications Office of the European Union, Luxembourg.

⁴⁴ Deshpande, A., Picken, N., Kunertova, L., De Silva, A., Lanfredi, G. and Hofman, J. (2021), Improving working conditions using artificial intelligence, Policy Department for Economic, Scientific and Quality of Life Policies, European Parliament, Brussels.

⁴⁵ Aloisi, A. and Gramano, E. (2019), 'Artificial intelligence is watching you at work: Digital surveillance, employee monitoring, and regulatory issues in the EU context', Comparative Labor Law and Policy Journal, Vol. 41, No. 1, pp. 95–121.

⁴⁶ FRA. 2020. Getting the future right – Artificial intelligence and fundamental rights, Publications Office of the European Union, Luxembourg.

⁴⁷ [Artificial Intelligence Act: MEPs adopt landmark law | News | European Parliament \(europa.eu\)](https://www.europa.eu/artificial-intelligence-act)

artificial intelligence in accordance to the national strategy for a successful human-centred implementation of AI. In this respect, the EU AI Act adopted in March 2024 also sets the regulatory framework obligations for AI based on its potential risks and level of impact. Clear obligations are foreseen for high-risk AI systems (due to their significant potential harm to health, safety, fundamental rights, environment, democracy and the rule of law). Examples of high-risk AI uses include many of local public services delivered by the CEMR and EPSU members.

There was a recognition in the project discussions that automated administrative processes can save valuable working time for employees to handle more complex operations. In this context, it is important to reflect on the experiences where a number of CEMR and EPSU members have worked on the policies and approaches to AI.

In Belgium Wallonia, the LRG social partners have recognised the impact of new ways of working and artificial intelligence on the workforce and administration, referring to the evolution of artificial intelligence and its potential impact on workers and citizens. This emphasizes the importance of continuous training for workers to adapt to new technologies and potentially earn more money. There is concern about the potential displacement of workers by artificial intelligence, leading to discussions within trade unions. The current use of artificial intelligence in local and regional administration is initial, including the use of apps to inform citizens about various matters and the increasing development of such technology. There are discussions about issues related to digitalization, such as data protection and personal data, where there may be differing views between employers and workers.

In **Germany**, the discussion on the use of AI in the local and regional governments revolves around handling personal devices, data protection, and privacy concerns. Germany is restrictive concerning data protection and data transfers, and there are ongoing discussions about it. There is a focus on data reduction and not collecting excessive data, which hinders some processes. Germany is interested in learning from other countries' approaches to data handling, such as in Estonia and Denmark. The discussion involves concerns about data protection and privacy related to the use of cards for various purposes in educational institutions. There are debates about the use of technology, such as artificial intelligence, in public administration and its potential impact on jobs and data privacy. The conversation also touches on the need for upskilling and reskilling of workers to adapt to digitalization and technological advancements. The use of artificial intelligence is seen as a potential solution to labour shortages in the face of a declining workforce in Germany. The association DSTGB (the employer side) is working on developing an official policy on artificial intelligence, which is expected to be finalised in 2024.

A recent survey of employees in Germany came to the conclusion that 38% of the daily work could be automated. Almost half of the staff are convinced that that artificial intelligence (AI) offers many possible applications for one's own administration. Nevertheless, only 7% of administrations use artificial intelligence in their daily work processes. Generally speaking, 70 % of respondents think that digitalization makes their own work easier, while 11% of this statement contradict. On the part of the employees the desire to try out new technologies and applications and to everyday life. Two-thirds of employees agree with this statement, while only 11% disagree. However, the employees see room for improvement on the part of the administration. Only 30% agree with the statement that they are their authority feels involved in digitalization.

In Germany, the German services union ver.di published in 2020 Ethical guidelines for the development and use of artificial intelligence (AI).⁴⁸ They are intended to provide guidance and practical advice to those who develop, introduce and use AI applications in the workplace. Ver.di guidelines argue that the personal data of employees need to be protected and that the use of AI technologies should not impact other personal rights.

In Sweden, SALAR has an official policy on the use of AI. This includes recommendations for the responsible use of AI.⁴⁹ This emphasizes the importance of transparency, accountability, and ethical considerations in the development and deployment of AI systems. It also highlights the need for human oversight and the importance of ensuring that AI systems do not perpetuate or exacerbate existing biases. To meet the need to further develop collaboration between municipalities in AI, a municipality-wide working group was established in the spring of 2023. The task of the group is, among other things, to work with specifically designated issues in AI, but also to anchor and transfer knowledge and experience back to other municipalities. A forum for learning from each other, coordinating efforts, identifying common issues to work on and anchoring principled positions.

Project discussions also showed concrete examples of using AI in delivery of local services.

The Shetlands Islands Council (Scotland) shared the experiences of using AI in their municipality, which is a remote and isolated area. As an example, AI solutions such as robotic cleaners helped to address the challenge of keeping the municipality buildings clean in the context of staff shortages and hard to fill vacancies of cleaners. He also pointed out that reducing the workload via AI does not automatically translate in availability of staff to fill vacancies. Also interesting is the corporate risk model which the municipality deploys when introducing AI to manage the risks.

Concrete experiences of using AI in the municipality of Linz were highlighted in **Austria**. The city developed its own LinzGPT where users in city administration defined which documents can be used by AI. LinzGPT is not for public and can be used by city employees to locate all the city documents. The impact has been faster work processes. Whilst no job losses can be anticipated in 3-5 years, in the medium term it can be anticipated that fewer administrative roles will be required due to AI driven innovation. At the same time, AI could also drive innovation in the public service delivery, such as building permits issued faster. Overall, AI consequences have to be handled in socially responsible way through the consultation and dialogue in the social dialogue structures.

4.6. Digitalisation strategies, structures and actions by CEMR and EPSU members

Digitalisation strategies were developed by local and regional government associations and trade unions in the following countries. Such strategies typically define the common direction and basic standards needed in the digitalisation, identify the digitalisation needs of municipalities, including priority action areas, targets, core principles of successful digitalisation and concrete actions, measures and tasks required in the organisations. The examples are as follows:

⁴⁸ See [Öffentliche und private Dienstleistungen, Sozialversicherung und Verkehr \(verdi.de\)](https://www.verdi.de/oeffentliche-und-private-dienstleistungen-sozialversicherung-und-verkehr)

⁴⁹ [Artificial Intelligence, AI | SKR](#)

- Denmark: KL Digitalisation Strategy and multi-annual programme⁵⁰, HK Kommunal Digitalisation Strategy⁵¹,
- Finland: Kuntaliitto, the Digital roadmap for municipalities,⁵²
- Netherlands: VNG Digital Security Agenda 2020-2024, VNG Digital Fundamental Rights and Ethics Agenda 2022-2026⁵³,
- Sweden: SALAR digital development strategy⁵⁴.

Furthermore, many CEMR and EPSU members also have **specific organisational structures** dealing with digitalisation agenda. Such digitalisation councils or committees are part of the overall governance and management structures at the CEMR/EPSU members, are composed of dedicated members who meet on a regular basis. They discuss, identify and put forward proposals for the organisations on further action, such digital strategies, digital tools, strategic development of digitalisation agenda in the member organisations. Some examples of such structures include:

- Austria: The Digitalisation council at Gemeindebund,⁵⁵
- Denmark: The KL/KOMBIT's Digitalisation Council, KL knowledge centre on digitalisation, ⁵⁶
- Lithuania: The LSA E-government Committee, ⁵⁷
- Slovakia: The Information technology council at ZMOS, ⁵⁸
- Spain: The FEMP Committee on Information Society, Technological Innovation and Digital Agenda. ⁵⁹

Finally, many CEMR and EPSU members also **developed projects, undertook research or organised events** to reflect on how to deal with digitalisation issues. This includes financing of research on the implications of digitalisation in the LRG sector, for employers and workers, producing publications, organising specific events, regular conferences, seminars and workshops to discuss the latest digitalisation related developments and challenges, providing digitalisation-related training to members (covering digital competences and their support in the LRG administrations), organisation of publicity and awareness raising events and activities (such as awards, keynote exchanges). Concrete examples of such activities include:

- Austria: CEMR member Städtebund e-government projects, ⁶⁰
- Belgium: studies and research (VVSG, Brulocalis CEMR member), ⁶¹
- Bulgaria: awards for e-government (NAMRB CEMR member), ⁶²
- Czechia: ČMKOS EPSU Member and LO Norway project "Trade unions and the digital world – possibilities and opportunities", ⁶³

⁵⁰ [At the forefront of future welfare - strategy for digitization, data and new technology \(kl.dk\)](#)

⁵¹ [kommunaldigitaliseringstrategiindsatser2018.pdf \(hk.dk\)](#)

⁵² [Digital roadmap for municipalities | Kuntaliitto.fi](#)

⁵³ [Digital Security and Privacy | VNG](#)

⁵⁴ [Digital Development Strategy | SKR](#)

⁵⁵ [E-Government - Österreichischer Städtebund \(staedtebund.gv.at\)](#)

⁵⁶ [KL/KOMBIT's Digitalisation Council](#)

⁵⁷ [Informacinės visuomenės plėtra – Lietuvos savivaldybių asociacija \(lsa.lt\)](#)

⁵⁸ [Informatization \(zmos.sk\)](#)

⁵⁹ [FEMP - Spanish Federation of Municipalities and Provinces](#)

⁶⁰ [E-Government - Österreichischer Städtebund \(staedtebund.gv.at\)](#)

⁶¹ [Transition numérique, digitalisation | Brulocalis](#)

⁶² [Until January 11, you can apply for the BAIT Awards Contest \(namrb.org\)](#)

⁶³ [| Českomoravská konfederace odborových svazů \(cmkos.cz\)](#)

- Denmark: EPSU member HK Kommunal SPACE research project on distance work, ⁶⁴
- Finland: The joint project "Digital in municipal work" by the Association of Finnish Local and Regional Authorities and the Employers of the Wellbeing Services Counties KT, ⁶⁵
- Germany: studies on digital local government issues, ⁶⁶
- Italy: FP CGIL smart working events, ⁶⁷
- Netherlands: The Algorithm Register of the Dutch government, ⁶⁸
- Romania: ACoR implements the project "Digital cooperation for local development". ⁶⁹

4.7. Digitalisation and the collective bargaining practices in the LRG sector

Another aspect for the LRG social partners to consider is how the digitalisation is affecting their current and future collective bargaining practices, processes and outcomes in the countries.

The latest pan-European research on the impact of digitalisation on social dialogue and collective bargaining⁷⁰ shows that social partners are increasingly adopting technological solutions to improve the services that they provide to their members and facilitate collective bargaining processes. The utilization of technological tools presents social partners with the opportunity to enhance consultation processes, engage with their members through digital means, improve service delivery, and expand networking activities, while also addressing the issue of declining membership. The adoption of digital technologies by social partners varies significantly among EU Member States. Approximately half of the countries have identified provisions in collective agreements related to various aspects of digitalization. These provisions aim to encourage members to enhance their digital skills through training, ensure fair and secure working conditions, and consider data protection and employee monitoring practices. The transition to digital technology is a significant driver of change in collective bargaining negotiations, with regulations on remote work now prevalent and agreements on technology integration in the workplace becoming more frequent. As technology directly impacts skills and job requirements, negotiations are increasingly focusing on retraining through training policies. Effective collective bargaining hinges on robust institutions, skilled participants, and a shared comprehension of sector or company challenges to facilitate innovative practices and agreements. A track record of collaboration, as evidenced by the ability to reach collective agreements, is particularly vital.

A three year project on digital collective bargaining lab, financed by the F. Ebert Stiftung has also shown how the collective bargaining is shaped by the new digitalisation practices. ⁷¹ It provides real life examples and key issues related to digitalisation of work, and to access real-world bargaining clauses and other language that can be adapted and used at the bargaining, including:

- Involvement, information and consultation
- Equity, diversity, and inclusion

⁶⁴ [Social Capital and Teleworking - HK](#)

⁶⁵ [Digital in municipal work | Kuntaliitto.fi](#)

⁶⁶ [Erkenntnisse zur Organisation der digitalen Transformation: Deutscher Städtetag \(staedtetag.de\)](#)

⁶⁷ [Elezioni Rsu, iniziativa Fp Cgil Asti 'Smart Working e digitalizzazione nella Pubblica Amministrazione' con Sorrentino - FP Cgil funzione pubblica](#)

⁶⁸ [Central algorithm register for governments launched | VNG](#)

⁶⁹ [ACoR implements the project "Digital cooperation for local development" – ACoR.ro](#)

⁷⁰ Eurofound. Eurofound (2022), Moving with the times: Emerging practices and provisions in collective bargaining, Publications Office of the European Union, Luxembourg.

⁷¹ [Digital Bargaining Hub - PSI - The global union federation of workers in public services](#)

- Employment, jobs, skills and lifelong learning
- Telework, working time, work-life balance and platform work
- Data rights and data protection
- Digital tools, artificial intelligence, and algorithms
- Health and safety
- Union communication, organising and representation.

4.8. Digitalisation in LRGs and the gender dimension

An important aspect in the LRG digital transformation is related to the gender dimension and gender considerations. Local governments are increasingly using digital tools to improve their service delivery, focusing on citizen-centered and user-oriented approaches. However, this transformation involves not just technological changes but also political, social, and organizational aspects. Gender equality in the digital realm has become more important with the rapid digital and data-driven changes in the ways LRGs are organising their work processes and delivering their services to local citizens and communities.

Equally empowering both women and men workers in LRGs through digital platforms can offer increased access to services, products, knowledge, and flexible work options. While digitalization can empower women, there are risks of reinforcing existing gender disparities. Overall, digitalization in local governments has the potential to revolutionize work organisation and service delivery, but addressing gender dimensions is crucial for ensuring fair outcomes for all LRG workers and all users of their services (i.e. citizens).

The COVID-19 pandemic has further emphasised the need for gender-responsive digital policies, also for LRGs. In particular, the pandemic highlighted firstly, the gendered impacts in relation to gender-based violence at the workplace (which increasingly became home-based) and secondly the gendered implications of teleworking for women in terms of negative work-life balance.

Firstly, the gendered impacts in relation to gender-based violence at the workplace (which increasingly became home-based) were highlighted in the pandemic.⁷² The lockdown and isolation measures created an enabling environment for abusers' coercive control of victims and led to more incidents of physical, psychological and sexual violence⁷³. Women and girls who were victims of intimate partner violence and sexual violence are confined at home, or in institutional settings, with their abusers, with less possibilities of seeking help without further endangering their lives.

This relates also to a broader trend when the violence acts affecting women in the workplace, such as sexual harassment, are increasingly mediated by digital technologies⁷⁴. With digitalisation, new forms and tools are emerging to perpetrate gender-based violence and sexual harassment. This includes various forms, such as hate speech in social media, the publication of intimate images online, to cyberstalking by means of geo-data localisation. This

⁷² EIGE. (2020). Covid-19 and gender equality. Retrieved from <https://eige.europa.eu/topics/health/covid-19-and-gender-equality>

⁷³ EWL. (2020). Women must not pay the price for COVID-19! Retrieved from https://www.womenlobby.org/IMG/pdf/ewl_policy_brief_on_covid-19_impact_on_women_and_girls-2.pdf

⁷⁴ European Parliament. (2018a). Bullying and sexual harassment at the workplace, in public spaces, and in political life in the EU. A study requested by the FEMM committee. Retrieved from [http://www.europarl.europa.eu/RegData/etudes/STUD/2018/604949/IPOL_STU\(2018\)604949_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2018/604949/IPOL_STU(2018)604949_EN.pdf)
European Parliament. (2018b). Cyber violence and hate speech online against women. Women's Rights & Gender Equality. A study for the FEMM committee. Retrieved from [http://www.europarl.europa.eu/RegData/etudes/STUD/2018/604979/IPOL_STU\(2018\)604979_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2018/604979/IPOL_STU(2018)604979_EN.pdf)

creates new challenges such as protection against sexual harassment during work/at the workplaces of LRGs.⁷⁵

Secondly, the COVID-19 pandemic has significantly increased the prevalence of teleworking, including within the LRGs which affected more negatively the women workers in terms of their work life balance⁷⁶. To facilitate work outside of traditional office settings, additional digital tools such as laptops and smartphones have been frequently provided by municipalities. These resources are expected to remain accessible in the future to support ongoing telework initiatives. The demand for remote work remains high in many LRG administrative settings due to its ability to reduce commuting times and provide individuals with caregiving responsibilities with greater flexibility to balance work and caregiving duties. This is especially relevant as caregiving continues to be provided by more women and men. However, teleworking can also blur the boundaries between work and caregiving responsibilities (see a study on the impact of teleworking conducted in Norway)⁷⁷. For example, the constant expectation of being reachable via mobile devices outside of regular work hours, as well as the potential for personal interruptions during work hours, can contribute to heightened stress levels and burnouts. This would disproportionately affect female LRG employees as they continue to bear more care responsibilities. Additionally, in organizations where performance is traditionally evaluated based on physical presence, teleworking arrangements may negatively impact employees who are not as visible within the organization.

The digital transformation is altering the work processes in local governments. This also entails new skills requirements on the LRG employees⁷⁸. For example, employees who process citizens' applications digitally need new skills to be able to use the corresponding software. These skills need to be valued and incorporated into training sessions. Often, employees, particularly women, are expected to develop these competencies through on-the-job training.

This digital skills gap between men and women is underpinned by general labour market trend which shows that men tend to participate more frequently in work related further education and training compared to women.⁷⁹ This is exacerbated further when it comes to digital skills training. Women generally experience large barriers obstacles in trying to improve their digital skills, owing to factors such as gender stereotypes (whereby women are considered to be less digital savvy than men), difficulties to find time for training alongside the care responsibilities and the broader societal, economic and technological environment⁸⁰. In the EU, men often have more advantages than women when it comes to the digital skills (information, communication, problem-solving and software skills) necessary to thrive in the digitalised world of work⁸¹. Negative gender stereotyping often deters women from selecting ICT-related training. In 2018, around 18 % of women compared with 22 % men had carried out at least

⁷⁵ Fact Sheet 14 Digital Municipalities, 2022, Germany, by the Agency for the Third Gender Equality Report. Publisher: Institut für Sozialarbeit und Sozialpädagogik e.V. Agency for the Third Gender Equality Report of the German Federal Government, 2022. Digital Municipalities.

⁷⁶ Eurofound (2022), The rise in telework: Impact on working conditions and regulations, Publications Office of the European Union, Luxembourg.

⁷⁷ Ingelsrud, Mari Holm; Aksnes, Siri Yde; Bernstrom, Vilde Hoff; Egeland, Cathrine; Hansen, Per Bonde; Pedersen, Eirin; Underthun, Anders; Weitzenboeck, Emily Mary (2022) Home–Away–Draw. Home office and other remote work: Mapping the scope, trends and consequences (oda.oslomet.no) AFI report 2022:04.

⁷⁸ Fact Sheet 14 Digital Municipalities, 2022, Germany, for the Third Gender Equality Report. Publisher: Institut für Sozialarbeit und Sozialpädagogik e.V. for the Third Gender Equality Report of the German Federal Government.

⁷⁹ See EIGE.2019. Gender Equality Report EU. Available at [Lifelong learning | European Institute for Gender Equality \(europa.eu\)](https://eige.europa.eu/lifelong-learning)

⁸⁰ OECD. (2018). Bridging the digital gender divide: include, upskill, innovate. Retrieved from <http://www.oecd.org/internet/bridging-the-digital-gender-divide.pdf>

⁸¹ EIGE. 2020. Digital technologies and gender equality. Report. Available at [Digital skills and training | European Institute for Gender Equality \(europa.eu\)](https://eige.europa.eu/digital-skills)

one training activity in the previous 12 months to improve skills relating to the use of computers, software or applications. Even where women have access to advanced training opportunities through their existing professional networks, the burden of unpaid care or domestic responsibilities may prevent them from availing themselves of these opportunities.

There is a growing need for training in digital skills across the services provided by LRGs. This includes the ability to search for and evaluate online information, communicate through digital platforms, and create digital content such as videos and audio. Knowledge of data security and privacy protection in the digital realm is also crucial. To ensure all employees benefit from these training opportunities, training programmes and offers need to be designed with a gender perspective in mind.

In summary, as digitalisation processes in the LRGs mean profound change, they also could present an opportunity to shape transformed digital municipalities in a way that leads to greater gender equality for LRG workers and the citizens they serve. For this to happen, the two policy concerns of digital transformation and gender equality could be considered in an interlinked way.