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Joint design of the Digi-B-Well digitalisation toolkit

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Digi-B-Well Project

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Joint Design of the Digi-B-Well Digitalisation Toolkit

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Authors	Ahmad Makhlouf, TUIL ahmad.makhlouf@tu-ilmenau.de Jonas Weber, TUIL jonas.weber@tu-ilmenau.de Andreas Will, TUIL andreas.will@tu-ilmenau.de Nigar Zahan, TUIL nigar.zahan@tu-ilmenau.de
Contributors	Rita Chiesa, UNIBO rita.chiesa@unibo.it Audrey Ansay Antonio, UNIBO audreyansay.antonio@unibo.it Alena Mezentseva, UNIBO alena.mezentseva2@unibo.it Marco De Angelis, UNIBO marco.deangelis6@unibo.it Martin Novysedlák, EUBA **martin.novysedlak@euba.sk** Peter Dorčák, EUBA peter.dorcak@euba.sk Peter Markovič, EUBA peter.markovic@euba.sk Sandra Linder, bwcon linder@bwcon.de Nina Vrabelj, CCIS Nina.Vrabelj@gzs.si

Balázs Barta, PBN
balazs.barta@pbn.hu

Aleksandra Christowska-O'Shea, ARRSA
achrystowska@arrsa.pl

Ingrid Garajová, CLC
ingrid.garajova@lucenec.sk

Alexandra Pivková, CLC
primatorka@lucenec.sk

Reviewers	Martina Cvetković, PGKC martina.cvetkovic@pgz.hr Luka Dragojević, PGKC luka.dragojevic@pgz.hr

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0.0	07.11.2025	Basic document structure	**TUIL**
1.0	27.11.2025	Added section 3.5 and toolkit screenshots	**TUIL**
2.0	28.11.2025	Integrated final feedback round	**TUIL**

Summary

This report, Deliverable D.2.1.1, forms part of Work Package 2 (WP2) of the Digi-B-Well project. It documents the joint design of the Digi-B-Well Digitalisation Toolkit, the central instrument developed under Activity A2.1, which aims to support organisations and individuals across the Triple Helix in achieving sustainable digital transformation while safeguarding employee well-being.

The toolkit translates the theoretical and empirical findings from Work Package 1 (WP1)—particularly the demand-resource balance model and the multi-level digital well-being framework—into a practical self-assessment and guidance instrument. It provides a structured way for organisations and employees to evaluate their digital maturity, identify sources of digital stress, and recognise opportunities for skill development and organisational improvement.

Structure and Content

The report is organised into four main sections. It begins with an introduction outlining the background, objectives, and conceptual grounding of the toolkit within the broader Digi-B-Well framework. The methodology section describes the co-design approach adopted by the consortium, combining a systematic review of existing digital stress and well-being toolkits with partner consultations and design workshops. These activities ensured that the toolkit's structure and content are both evidence-based and practically applicable across diverse sectors and national contexts.

The toolkit architecture section presents the core structure of the self-assessment instrument. Users are guided through an online interface that offers two parallel pathways: one for individual employees and another for organisational leaders. Each pathway features a sequence of questions rated on a five-point Likert scale, designed around six systemic levels—technological, individual, group, leadership, organisational, and overarching—derived from WP1's conceptual model. The toolkit calculates average demand-resource balance scores and provides tailored recommendations for action.

The integration and sustainability section explains how the toolkit will evolve from a conceptual design into a fully operational digital platform. It will be implemented under D.2.1.2, and later consolidated into the Transnational Digi-B-Well Solution (D.2.1.3) following pilot testing and refinement under Activities A2.2 and A2.3. This process ensures continuity between design, validation, and long-term accessibility.

Overview and Outlook

Through this deliverable, the conceptual, structural, and content foundations are established to create a tool that bridges scientific insight and real-world usability. The next phases will focus on technical implementation, cross-country pilot validation, and final integration into the transnational platform.

Ultimately, the Digi-B-Well toolkit is envisioned as a sustainable, accessible, and transferable resource that empowers organisations and employees to navigate digital transformation in a balanced, human-centred, and well-being-oriented way. It stands as a key contribution to the

project's broader objective of promoting healthier and more resilient digital workplaces across Central Europe and beyond.

The questionnaire draft forming the core of the toolkit was developed by colleagues at the University of Bologna, the project partner leading Work Package 1, ensuring conceptual continuity between the theoretical framework and the applied design.

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1. Introduction

1.1. Context of Activity 2.1 within the Digi-B-Well project

Activity A2.1 focuses on the design and development of the Digi-B-Well digitalisation toolkit, which supports organisations across the Triple Helix ecosystem (public sector institutions, industry actors, higher education and research organisations) in advancing digital transformation while safeguarding and enhancing employee well-being.

This activity builds upon the conceptual foundations and digital-era-fit operational models developed in work package 1, which outlines models for organisational change and capability transformation in the digital age. The toolkit designed under A2.1 serves as the practical translation of these conceptual models into a usable, accessible self-assessment and guidance instrument.

The output of A2.1 (this Deliverable D.2.1.1) will subsequently inform:

- D.2.1.2: Technical development and implementation of the digital transformation platform, and
- D.2.1.3: Finalisation of the integrated TN Digi-B-Well digitalisation solution, which will be piloted, validated, and publicly disseminated.

Thus, D.2.1.1 functions as a bridge between theoretical frameworks (WP1) and applied digital solutions (WP2 and WP3).

1.2. Problem Statement: Digital Transformation and Employee Well-being

Digital transformation introduces new organisational structures, workflows, and skill requirements across sectors. While these transformations can increase efficiency, responsiveness, and innovation capacity, they also introduce significant challenges for employees, including:

- digital overload and constant connectivity,
- accelerated skill obsolescence,
- increased cognitive load related to new tools and platforms,
- pressure to adapt to constantly changing digital environments.

These conditions may result in digital stress, reduced job satisfaction, and in severe cases, burnout. At the same time, variations in digital readiness across generations, departments, and organisational hierarchies require age-sensitive and context-aware approaches.

The Triple Helix environment complicates this further, as each sector faces distinct digital maturity patterns, operational cultures, and resource constraints.

Thus, organisations require structured, evidence-based tools to:

- assess their current digital maturity,
- identify digital stress and well-being risks among employees,
- evaluate capability gaps and upskilling needs,
- and select suitable transformation pathways aligned with their strategic goals.

The Digi-B-Well toolkit is designed to meet this need.

1.3. Objectives of the Digi-B-Well Toolkit

The primary objective of the Digi-B-Well toolkit is to enable organisations to self-assess and plan their digital transformation in a balanced manner that promotes both organisational effectiveness and employee well-being.

Specifically, the toolkit aims to:

- Assess digital maturity and organisational readiness
- Identify patterns of digital stress, burnout risk, and well-being concerns
- Map competency and upskilling needs of employees and leaders
- Support decision-making for adopting digital-era-fit operation models
- Offer guidance for reconfiguring capacities, workflows, and resources
- Provide tailored recommendations based on assessment outcomes (to be finalized during A2.2)

1.4. Relationship to D.2.1.2 and D.2.1.3

This deliverable (D.2.1.1) focuses on design, content development, and conceptual structuring of the toolkit. Further elements (like final scoring algorithms, automated recommendation tailoring logic, or interface-related platform implementation) will be developed and technically embedded under D.2.1.2, and subsequently refined through transnational pilot testing under A2.2 and 2.3.

The final integrated and publicly accessible version — the TN Digi-B-Well Solution — will be formalised in D.2.1.3 and hosted as part of the "one stop-shop for digitalisation in CE" space on an LP-designated platform.

1.5. Target users and triple helix scope

The toolkit is designed for use by organisations across the Triple Helix landscape, including:

- Public administrations and local/regional authorities
- Small and medium-sized enterprises (SMEs) and industrial actors
- Higher education and research institutions

Within organisations, the toolkit is intended to support leaders, HR/organisational development units, digital transformation teams, and employees in jointly shaping a human-centered digital transition.

2. Methodology and Joint Design Approach

2.1. Overview of the joint design approach

The development of the Digi-B-Well toolkit followed a research-informed, participatory and iterative co-design process, ensuring that both the conceptual foundations and practical design decisions reflect the needs and realities of organisations across the Triple Helix. The methodology combined:

- State-of-the-art review of existing digital stress, burnout, digital maturity and workplace well-being assessment tools
- Comparative analysis of relevant frameworks
- Structured partner consultations and review loops
- Design synthesis and prototyping based on user pathways and intended outcomes

This approach ensures that the resulting toolkit is evidence-based, aligned with partner competencies, and adaptable to cross-sector contexts.

2.2. State of the art: Toolkits for Assessing Digital Transformation Burnout and Digital Stress in the Workplace

Digital transformation in the workplace offers numerous advantages, including enhanced productivity and improved knowledge acquisition. However, technological advancements can also lead to burnout and digital stress, a psychological strain that arises from the challenges individuals face when adapting to new technologies (Jimmy et al., 2023). As organizations undergo digital transformation, managing burnout and digital stress becomes crucial to maintaining a sustainable and healthy work environment.

A systematic review of existing toolkits and diagnostic instruments was conducted to identify relevant models, assessment methods, thematic domains and delivery formats for evaluating digital maturity and employee well-being. The review examined 19 toolkits originating from EU-funded projects, academic research, and practice-oriented workplace interventions. These were categorised into high-, medium-, and low-relevance groups according to their applicability to digital stress and organisational transformation contexts.

- High-relevance toolkits (10) that directly assess and mitigate digital stress.
- Medium-relevance toolkits (3) that contribute to stress management but lack a primary focus on digital stress.
- Low-relevance toolkits (6) that primarily address general workplace stress or burnout without specific emphasis on digitalization.

By assessing these toolkits, the DIGI-B Well project aims to integrate best practices into its framework, ensuring an effective approach to mitigating digital burnout in the workplace.

2.2.1. High-Relevance Toolkits

The most relevant toolkits provide critical insights for refining the DIGI-B Well toolkit, ensuring its effectiveness in identifying and managing workplace burnout and digital stress. These toolkits offer structured interventions, digital stress assessments, and practical solutions for managing digital stress in workplaces.

A 2018 study of 500 senior HR executives from global organizations revealed that 70% recognized the importance of policies promoting digital well-being in the workplace. However, a parallel study indicated that 82% of SME employers lacked digital health or well-being policies and had no plans to implement them. In response to this gap, the Digital Crossroads project aimed to design, develop, and implement a comprehensive approach to training European SME managers in improving employee digital well-being.

The **Digital Crossroads Project**, an EU initiative, focused on enhancing digital well-being for SMEs. As part of this effort, it developed the Digital Well-Being Self-Assessment Tool, which provides insights for designing and implementing training strategies to help European SME managers improve employee digital well-being. The tool features a user-friendly online questionnaire with clear instructions and simple language, ensuring accessibility. Its structured format and easily interpretable results make it a valuable resource for assessing and enhancing workplace digital well-being.

Apart from online questionnaires in English and German, the Digital Crossroads Project also provides a Digital Crossroads Project self-learning tool. There are four modules in total, each will guide the user on how to develop a good practice of digital well-being within the workplace. Each module includes additional learning resources such as links to articles, interesting video content, and practical learning exercises and activities. Digital Crossroads Project stated that its tool is guided by the EU's Digital Competence Framework (DigComp) and UK JISC framework as we believe they offer a comprehensive description of the knowledge, skills, and attitudes that managers need to learn to effectively manage digital well-being in the workplace.

Wrede et al. (2021) identified digital stress and well-being among employees, particularly within German public administrations. They developed **the Digital Well-Being Scale (DWS)** as part of the Health and Digital Change Project in North Rhine-Westphalia, Germany. The DWS tool quantifies digital stress by identifying key workplace risk factors and offering targeted interventions to mitigate stress in digitally transforming environments. The tool consists of a user-friendly online survey that measures digital stress levels and evaluates workplace conditions that contribute to stress. The structured survey, which includes seven digital stress indicators and 19 workplace risk factors, provides clear, actionable insights for organizations aiming to enhance employee digital well-being. The entire assessment takes approximately 15 minutes to complete, ensuring efficiency without overwhelming respondents. With its simple language and straightforward format, the DWS delivers practical insights that organizations can use to enhance digital well-being initiatives.

The Prevention for Safe and Healthy Work with Digital Technologies (PräDiTec) project, conducted in Germany, examines digital stress and its contributing factors in the workplace. Gimpel et al. (2021) highlighted a strong correlation between digital stress and long-term mental health risks, such as burnout. It identified key workplace challenges, including a lack of clarity in digital processes, which exacerbate employee stress and impact overall well-being. To address

these concerns, the PräDiTec project developed a survey-based diagnostic toolkit, PräDiTec, designed to assess digital stress levels and provide actionable insights for organizations. The toolkit is interactive, accessible, and adaptable to various workplace settings. Its well-structured format ensures clarity, making it easy for employees and managers to understand and use effectively. Organizations can implement targeted strategies to enhance workplace well-being and prevent long-term mental health risks by identifying digital stressors. The findings from PräDiTec emphasized the importance of structured interventions to mitigate digital stress and promote a healthier work environment. The toolkit served as a valuable resource for businesses seeking to improve digital workflows and create a more supportive work culture.

The **Stress-Less Project**, developed under the Erasmus+ KA2 Programme, aimed to prevent and manage digital stress in SMEs while promoting mental health and employee well-being. It integrates a self-assessment tool and video-based learning modules to provide an effective workplace well-being approach. The self-assessment tool enables employees and managers to evaluate their digital stress levels, identify key stressors, and receive personalized recommendations. Through structured questionnaires, users get immediate feedback and targeted stress-reduction strategies, fostering healthier work habits.

Complementing this, the Stress-Less learning platform offers eight self-guided video modules covering topics such as Digital Self-Awareness, Single-Task Strategy, Business Communication in Digital Environments, and Work-Life Balance in the Digital Era. Additionally, leadership training, including Digital Transformation for Leaders, equips managers to build stress-resilient teams. With short, engaging video lessons (4-7 minutes), the platform ensures accessibility through web and mobile compatibility, multilingual support, and evidence-based training. Offering a structured and adaptable solution, the Stress-Less Project provides organizations with practical resources to assess, manage, and reduce digital stress while enhancing a healthier workplace.

The **Digital Stressors Scale (DSS)**, developed in Germany and Austria, also plays a crucial role in identifying digital stress within workplaces. This tool provides organizations with insights into the key stressors employees face in digital work environments, emphasizing the importance of digital literacy, effective communication, and structured support during technological transitions. By identifying workplace-specific digital stressors, organizations can implement targeted interventions to improve employee well-being and work efficiency.

The DSS assessment uses a paper-based questionnaire, designed for ease of use with clear instructions and simple language. Its well-structured format makes it accessible for employees at various levels, ensuring accurate and reliable data collection. Unlike online surveys, the DSS offers a controlled assessment environment, minimizing distractions and ensuring focus on self-reflection. The results guide organizations in formulating strategies to reduce digital stress by promoting digital literacy programs, facilitating smoother technological transitions, and providing continuous support for employees adapting to digital changes. In addition, Fischer et al. (2023) highlighted that organizations investing in structured digital stress assessments can enhance employee engagement, productivity, and mental well-being. By integrating DSS insights into their workplace strategies, businesses and public institutions can create healthier, more adaptable work environments.

The **Digital Transformation Stress Scale (DTSS)** is an assessment tool developed in Poland to measure stress associated with digital transformation in the workplace. It provides organizations with valuable insights into how digital transitions impact employees' well-being, enabling them to

identify key stressors and implement effective interventions. Research suggests that digital transformation stress is moderately correlated with general workplace stress, underscoring the need for structured support systems during technological change.

The DTSS is designed as an online self-report questionnaire, making it easily accessible across various industries. Its intuitive and user-friendly format ensures a seamless assessment experience, allowing employees to evaluate their stress levels related to digital transformation with ease. The questionnaire features clear and simple language, ensuring comprehensibility for users regardless of their familiarity with digital technologies. Organizations can utilize DTSS findings to develop targeted strategies for strengthening employee resilience, enhancing digital literacy, and facilitating smoother technological transitions. With its adaptable structure, the DTSS serves as a valuable resource for businesses and institutions navigating digital transformation. By integrating it into workplace well-being initiatives, employers can proactively manage digital stress, reduce resistance to technological change, and cultivate a healthier, more productive work environment (Makowska-Tłomak et al., 2023).

The **DeSTRESS Project**, an Erasmus+ initiative funded by the European Commission, addresses psychosocial stress caused by the increasing use of digital technologies in the workplace, commonly known as technostress. The project focuses on diagnosing and managing workplace stress related to digital transformation, providing organizations with tools to mitigate its impact and enhance employee well-being. The DeSTRESS Training Platform offers a structured approach to managing technostress. It emphasizes skill development in resilience, emotion regulation, time management, and decision-making to help employees navigate digital challenges effectively. Organizational support also plays a crucial role, with clear communication, well-defined support systems, and workload management contributing to stress reduction.

Designed for ease of use, the DeSTRESS Training Platform features an intuitive interface with interactive elements that engage users. It is available in multiple languages, ensuring accessibility for a diverse workforce, and supports individuals with varying levels of digital proficiency. The toolkit provides clear result interpretation, offering users understandable feedback that helps transfer learning to real-world applications. The DeSTRESS Policy Report highlights the importance of addressing technostress in SMEs. It offers practical recommendations for policymakers, employers, and managers, advocating for organizational policies, role clarity, and continuous stress monitoring. By implementing structured interventions, businesses can create a healthier digital work environment.

The **health-Promoting Leadership Toolkit** is a research-driven initiative developed to address employee stress caused by digital work-related risk factors in Germany, Austria, and Switzerland. The study, conducted by Bregenzer and Jimenez (2021), examined how leadership behaviors that prioritize health can mitigate the adverse effects of digitalization on employee well-being. By improving a work environment that supports mental health, leaders can reduce workplace stress and enhance employee resilience in digitally evolving workplaces.

The research utilized a web-based study format, collecting data through online questionnaires administered via the survey platform Questback. Participants were recruited from an online panel, ensuring a diverse representation of employees experiencing digital stress. The self-assessment tool, embedded within the study, offers a user-friendly and well-structured evaluation process, making it accessible and easy to understand for participants. This statistical measure provides

leaders with practical guidelines for mitigating work-related stress and fostering a healthier work environment.

The toolkit's relevance extends beyond assessment; it serves as a critical resource for leadership development, equipping managers with strategies to navigate digital work environments while prioritizing employee well-being. The findings of Bregenzer and Jimenez (2021) highlighted the necessity of integrating health-promoting leadership practices into organizations undergoing digital transformation.

Additionally, the **Technostress Questionnaire** is a research-driven self-assessment tool developed by universities in Italy to measure stress associated with the use of information and communication technology (ICT) in the workplace. The study conducted by Finstad and Giorgi (2021) highlights that technostress emerges when employees experience high digital demands, leading to decreased well-being and productivity. The research also emphasizes that supervisor and peer support play a crucial role in mitigating technostress, while targeted training and effective communication enhance role clarity and self-efficacy, reducing the negative impact of ICT-related stress.

Designed as a self-report questionnaire, the Technostress Questionnaire features a user-friendly format with clear instructions, making it easily accessible for employees and organizations seeking to assess and manage technostress. It is available in both Italian and English, ensuring broader applicability across different work environments. The questionnaire provides a comprehensive yet easy-to-interpret evaluation, offering specific insights through simple and understandable language. Its structured approach ensures that users can effectively identify key stressors and implement appropriate interventions to foster a healthier digital work environment. With its comprehensive coverage of technostress identification dimensions, the Technostress Questionnaire serves as a highly relevant resource for the development of the DIGI-B Well toolkit. Organizations can leverage their findings to design proactive strategies that minimize technostress and promote sustainable digital work practices.

Lastly, another **Technostress Questionnaire**, also developed as part of a research project at a university in Malaysia, assesses workplace stress related to the use of digital technologies. The study identifies key factors contributing to technostress, including techno-overload, complexity, insecurity, and uncertainty, all of which negatively impact employees' well-being. As digital transformation accelerates, Jimmy et al. (2023) identified employees face increasing challenges in adapting to new technologies, leading to heightened stress levels and reduced productivity.

This self-report Technostress Questionnaire features a user-friendly online format with clear instructions, making it easily accessible for employees across various industries. Its comprehensive yet straightforward structure ensures that users can effectively evaluate their technostress levels. The questionnaire is designed with simple and understandable language, allowing employees to assess their stress levels without difficulty. The tool also provides clear and specific interpretations, making it practical for organizations seeking to implement workplace interventions to reduce digital stress. Highly relevant to the development of the DIGI-B Well toolkit, the Technostress Questionnaire offers valuable insights into the psychological impact of digital technologies in the workplace.

2.2.2. Medium relevance toolkits

The Interreg DIGI-B Well project also examines medium-relevance toolkits. For example, the System P Toolkit which assesses workplace stress through Psychosocial Risk Assessment (PRA) and

Stress Management Training (SMT). While its web-based format offers adaptability, it does not explicitly focus on digital stress. Likewise, the Stress Out Toolkit, an EU-funded Erasmus+ project, helps employees identify early signs of burnout, but it lacks a dedicated focus on digital stress. Moreover, the Mental Stress and Strain Assessment Tool (MESTAT) provides broad stress management approaches, but it does not directly address digital work environments. Similarly, the Digitalized Idea and Work Management in Production, Logistics, and Trade (DIAMANT) project, conducted by various researchers in German institutions, focuses on mental stress and strain associated with digital work. Research indicates that digitalization significantly impacts participants' well-being. This user-friendly tool, available both online and in paper format, is suitable for HR and non-HR personnel and requires 34 to 49 minutes to complete. As a practical self-assessment tool, MESTAT strategically assesses digitalization's impact on employees and managers, enabling HR professionals to identify areas needing improvement. Therefore, it remains relevant for toolkit development.

Furthermore, the Stress Out Project, funded under the Erasmus+ program's Modern Tools for Work-Related Stress Management aims to reduce occupational stress and improve mental health outcomes. Lowering symptoms of depression and anxiety enhances employee well-being. The toolkit includes interactive self-assessment and learning tools, making it a comprehensive, accessible, and understandable solution for stress reduction.

2.2.3. Low relevance toolkits

On the other hand, several toolkits provide general stress assessments but lack a specific focus on digital transformation stress. For example, the Digital Stress Test (DST), developed by the Multimodal Behaviour Processing Group at Bielefeld University, measures acute psychosocial stress but does not examine workplace digital stress comprehensively. Instead, it focuses on individual-level digital stress checks with an emphasis on behaviour analysis. Similarly, the Get.ON Stress Toolkit, developed by the Technical University of Munich, applies cognitive-behavioural therapy (CBT) techniques to address workplace stress, but it does not emphasize digital transformation-related stress. As an interactive self-assessment tool, it offers a comprehensive, accessible, and understandable solution for reducing stress and enhancing employee well-being.

Additionally, the TRIGS (Training for Digital Stress Competence) Toolkit, developed through a collaboration of six European partners in adult education and workplace well-being, including German institutions, is funded under the Erasmus+ program. This toolkit focuses on digital stress, particularly stress caused by the increasing use of digital technologies in personal and professional settings. However, it primarily addresses individual digital stress rather than work-related stress, making it less relevant for workplace digital transformation.

Moreover, the H-WORK Innovation Platform, developed under the H-WORK project in the EU, is not exclusively dedicated to digital stress or burnout assessment but rather focuses on overall mental health in SMEs and public workplaces. The toolkit features an online interactive tool, a semi-structured interview protocol, and a digital questionnaire for collecting psychosocial risk data, mental health assessments, and well-being metrics for employees. As an open-access and comprehensive resource, this toolkit is useful for promoting mental health in workplaces, including SMEs. While insightful for toolkit development, it has low relevance for digital stress identification.

Furthermore, the Burnout Toolkit, developed by Harvard University, functions as a self-reflection exercise designed to guide users in managing burnout. However, it does not specifically address digital burnout in office environments, instead focusing on general workplace burnout. Finally, the Burnout Assessment Tool (BAT), developed under the BAT project by KU Leuven in the Netherlands, primarily diagnoses burnout without addressing other related concepts. This toolkit employs a mixed-method approach, combining self-report questionnaires (self-assessment tools) with in-depth interviews (lasting 1-2 hours). While relevant for measuring burnout, its low relevance for digital burnout assessment makes it less applicable to the development of the DIGI-B Well toolkit.

2.3. Comparative analysis of the relevant frameworks

High-relevance toolkits like DWS, PräDiTec, DSS, DTSS, and Stress-Less provide structured interventions and assessment tools, emphasizing digital literacy, leadership strategies, and self-assessment mechanisms. Medium-relevance toolkits address general workplace stress, while low-relevance toolkits focus on traditional stress management without direct digital stress mitigation. Organizations should prioritize high-relevance toolkits for effective interventions, ensuring a sustainable, well-being-focused digital transformation process. Future research should enhance digital stress assessment tools to refine strategies that meet the evolving challenges of modern digital workplaces.

A comparative analysis matrix was developed to compare each high relevant toolkit against key design dimensions, including:

- purpose and target users
- measurement constructs and indicators
- assessment types (self-assessment, organizational audit, mixed)
- result interpretation methods
- integration of training/recommendation components

This analysis informed which conceptual features to adopt (e.g., stressor categories, maturity dimensions) and which gaps the Digi-B-Well toolkit needs to address (e.g., integration of organisational AND individual perspectives; age-sensitivity; link between self-assessment results and transformation pathway selection). Key findings of relevant toolkits are in Table 1.

Table 1. Primary findings of relevant frameworks

Toolkit Name	Project Origin	Key Features
Digital Well-Being Self-Assessment Tool	EU Project (Digital Crossroads)	Focuses on digital well-being for SMEs. Provides SME managers with training strategies for employee digital well-being. Features a user-friendly online questionnaire with simple, accessible language.

		Generates easy-to-interpret results, making it a valuable tool for organizational well-being strategies.
Digital Well-Being Scale (DWS)	Research Project (Germany)	Measures digital stress levels among employees in German public administrations. Includes a 15-minute online survey with seven digital stress indicators and 19 workplace risk factors. Offers clear, structured insights to enhance digital well-being initiatives.
PräDiTec	Research Project (Germany)	Examines the relationship between digital stress and long-term mental health risks such as burnout. Developed an interactive diagnostic survey to assess workplace digital stress. Helps organizations implement targeted interventions to improve digital workflows and prevent burnout.
Stress-Less Project	EU Project (Erasmus+ KA2 Programme)	Integrates self-assessment tools and structured video-based learning modules. Helps employees and managers evaluate digital stress levels and develop healthier work habits. Provides eight self-guided video modules covering digital self-awareness, single-task strategies, and work-life balance.
Digital Stressors Scale (DSS)	Research Project (Germany & Austria)	Identifies key workplace stressors related to digital transformation. Uses a paper-based questionnaire for structured assessment. Enables organizations to develop strategies for reducing digital stress and improving digital literacy.
Digital Transformation Stress Scale (DTSS)	Research Project (Poland)	Assesses stress caused by digital transformation in various industries. Offers a self-assessment tool for employees to evaluate stress levels. Supports organizations in strengthening digital resilience and implementing smoother technological transitions.
DeSTRESS Project	EU Project (Erasmus+)	Addresses technostress caused by workplace digitalization.

		Provides a structured training platform focused on resilience, emotion regulation, and time management. Includes an interactive, multilingual platform supporting diverse workplace settings.
Health-Promoting Leadership Toolkit	Collaboration (Germany, Austria, Switzerland)	Examines leadership strategies to mitigate digital stress in organizations. Provides self-assessment tools and leadership training guidelines. Helps managers prioritize employee mental health and digital well-being.
Technostress Questionnaire (Italy)	Research Project (Italy)	Assesses stress associated with information and communication technology (ICT) in the workplace. Highlights the role of supervisor and peer support in reducing technostress.
Technostress Questionnaire (Malaysia)	Research Project (Malaysia)	Identifies key factors contributing to technostress, including techno-overload and insecurity. Provides self-assessment questionnaires for employees.

2.4. Collecting and consolidating co-design guidelines

2.4.1. Partner insights

Design decisions were shaped through consortium consultations, including a dedicated toolkit working group.

Key outcomes included:

- Reframing the toolkit structure to ensure the self-assessment is the core entry point
- Splitting questionnaires into two user pathways:
  1. Individual / Employee Digital Well-being Assessment
  2. Organisational / Management Digital Readiness & Well-being Assessment
- Confirming four core assessment domains:
  a) Digital maturity
  b) Digital readiness
  c) Burnout and digital stress indicators
  d) Organisational climate for digital well-being

- Agreement to include both general recommendations and personalised recommendations based on results

Not all partner suggestions were fully adopted at this stage. Suggestions requiring high development effort (e.g., gamified visual interactive logic, real-time animated feedback) were not prioritized at this stage, but noted for potential future integration under D.2.1.2.

2.4.2. Design principles and framework alignment

To ensure a clear connection with the digital-era-fit operational models, the toolkit's development was guided by a set of coherent design principles that shaped both its content and structure. At its core, the toolkit follows a human-centred approach, using accessible language and a non-technical tone to make the assessment process clear and inclusive for all users. It is designed to be action-oriented, ensuring that the results do not remain abstract but instead translate into concrete recommendations and transformation options that organisations and individuals can apply directly in their work environments.

Equally important is its dual-perspective structure, which accommodates both individual and organisational diagnostics, reflecting the interdependence between personal digital well-being and institutional readiness. The toolkit is modular and scalable, allowing it to evolve beyond its current web-based form and to integrate into broader digital transformation platforms or learning systems in the future. Finally, it has been conceived as age- and role-sensitive, recognising that experiences of digitalisation vary across generations, job functions, and hierarchical levels. Together, these principles ensure that the Digi-B-Well toolkit remains flexible, relevant, and responsive to the complex realities of modern digital workplaces.

2.4.3. Design translation: from research to prototype

The design process evolved in clearly defined stages, progressing from analytical groundwork to the development of a functional interface concept. It began with the identification of the main assessment domains, derived from both the literature review and priorities agreed upon within the consortium. Building on these foundations, dedicated question pools were developed for the two assessment pathways—individual and organisational—drawing on the conceptual guidance and frameworks provided by WP1 deliverables.

Once the core content was drafted, the focus shifted to refining and streamlining the questionnaire to enhance usability and minimise respondent fatigue, a task that will continue during Activity A2.2. Parallel to this, the preliminary logic for the recommendation system was outlined, pending the finalisation of the scoring model. The interface concept was then shaped around a simple and coherent user journey, ensuring intuitive navigation through the assessment process and clear presentation of results.

At present, the question banks have been fully drafted, establishing the content foundation of the toolkit. The next steps will concentrate on calibrating the scoring system, defining score thresholds for tailored recommendations, and preparing for pilot testing and further refinement under Activity A2.2.

2.5. Iterative validation and pilot preparation

The Digi-B-Well toolkit is conceived as a living instrument—one that evolves through iterative validation rather than being treated as a static product. Its refinement process will therefore rely on continuous feedback loops, both within the consortium and across participating organisations, to ensure that the toolkit remains empirically sound, user-friendly, and contextually relevant.

The first stage of validation will involve internal testing among consortium partners, allowing for a controlled assessment of the toolkit's structure, question clarity, and navigation flow. This step provides an essential opportunity to detect inconsistencies, ambiguities, or technical limitations before external deployment. The insights gained from this phase will inform the adjustments needed to strengthen the toolkit's coherence and ease of use.

Subsequently, the validation process will extend into the transnational pilot phases outlined under Activities A2.2 and A2.3. During A2.2, partners will jointly develop a comprehensive pilot strategy, defining the methodology, participant profiles, and evaluation criteria. In A2.3, the strategy will be implemented across diverse organisational contexts to gather data on usability, interpretability, and overall impact. This two-step approach ensures that the toolkit is tested both conceptually and operationally, capturing the diversity of workplace cultures and digital maturity levels across Central Europe.

Following these stages, the validated toolkit will be technically embedded within the Digi-B-Well digital transformation platform (D.2.1.2), enabling large-scale accessibility and integration with other project outputs. The final iteration—delivered under D.2.1.3 as the Transnational Digi-B-Well Solution—will incorporate the accumulated feedback, analytical refinements, and design improvements from all validation rounds. This iterative process guarantees that the toolkit emerges not only as a scientifically grounded assessment tool but also as a practical, adaptable, and enduring resource for supporting digital well-being and transformation in the years beyond the project's completion.

3. Toolkit Architecture and Questionnaire Building

3.1. Overview and design rationale

The Digi-B-Well toolkit is a practical and research-grounded self-assessment instrument developed to help organisations and individuals evaluate their digital maturity and overall digital well-being. It serves as the operational core of the Digi-B-Well solution, translating the theoretical and conceptual foundations established in Work Package 1 (WP1) into an interactive diagnostic tool that generates concrete insights and personalised recommendations.

The toolkit's architecture reflects the project's dual commitment to advancing digital transformation and safeguarding employee well-being. It recognises that technological progress and human sustainability are interdependent dimensions of a successful transformation process. By addressing both performance and resilience, the toolkit enables users to identify imbalances and opportunities for improvement within their digital work environments.

In its design, particular attention was given to accessibility, scientific integrity, and relevance across the Triple Helix context. The toolkit adopts clear, non-technical language and an intuitive navigation flow, ensuring usability for a wide range of organisations regardless of size or sector. Its structure is grounded in WP1's evidence-based model, maintaining methodological rigour while allowing users to engage in self-reflection without judgment or external evaluation.

Rather than simply measuring digital conditions, the toolkit conceptualises them as a dynamic relationship between digital demands and digital resources. This balance determines the degree to which digital systems contribute to engagement, learning, and productivity, or, conversely, lead to stress and burnout. By assessing both sides of this equation, the Digi-B-Well toolkit provides a holistic understanding of how digitalisation affects people and organisations—and how it can be shaped to support sustainable digital well-being.

3.2. Toolkit structure and user pathways

Upon accessing the toolkit webpage, users encounter a simple choice interface directing them toward one of two assessment pathways:

- Individual assessment
    - Target user: Employees
    - Purpose: Evaluate personal experiences of digital demands, digital stress, resources, and coping conditions.
- Team assessment
    - Target users: Managers, team leaders, HR staff, decision makers
    - Purpose: Evaluate digital maturity, organisational readiness, and structural well-being conditions at team or organisational level.

This ensures relevance and avoids mixing individual perceptions with organisational policy or leadership practice, which require different intervention strategies.

Navigation is deliberately linear and minimal, avoiding cognitive overload and maintaining user focus.

3.3. Assessment framework and question bank draft

The structure and wording of the assessment questions are directly informed by the conceptual framework, developed in WP1, which identifies that digital well-being depends on maintaining a balance between digital demands and digital resources across six systemic levels: technological, Individual, group, leadership, organization, and overarching levels.

Annex 1 includes the complete first draft of the question bank. The draft includes 10 demand-related items per level and 10 resource-related items per level. Later stages will see the final questionnaire shorter (at least 30%).

All items are rated on a 5-point Likert scale, allowing for:

- intuitive response behaviour,
- straightforward scoring,
- meaningful comparison across levels.

Scores are aggregated in the background into average values per level and into overall demand/resource balance scores.

3.4. User journey and interface flow

The Digi-B-Well toolkit is designed around a clear and uninterrupted user journey, ensuring that individuals and organisational representatives can move through the assessment with ease and minimal cognitive load. The interface follows a **linear flow**, guiding users from the landing page through the assessment and into their personalised results without unnecessary detours. Each stage of the journey is supported by visual cues, structured layouts, and intuitive interaction elements that reinforce clarity and engagement.

Landing Page

The journey begins on a visually clean and welcoming landing page. A short introductory block explains the purpose of the Digi-B-Well initiative, its connection to **Interreg Central Europe**, and the partnership behind the toolkit. The central feature of the page consists of two clearly distinguished buttons—*Individual Assessment* and *Team Leader Assessment*—presented as large, high-contrast cards or tiles, each accompanied by a brief description and icon (e.g., a person icon for individuals and a group/leader icon for managers). This layout ensures that users can immediately identify the pathway that applies to them.

Proposed wireframe mockup:

- **Header area** with project branding
- **Two main assessment cards** (side-by-side or stacked depending on screen size)
- **Footer section** containing links to consortium websites and social media pages

- Light animated background elements (e.g., floating geometric shapes) to create an inviting digital well-being aesthetic

Assessment Pages

After selecting a pathway, users encounter a short onboarding tutorial. This introductory screen explains the structure of the assessment, expected completion time, and how the Likert-scale responses work. A small mockup could show the response slider or button layout in advance.

Each assessment question is presented on its own dedicated screen to maintain focus and avoid overwhelming the user. The page contains:

- The question in large, readable font
- A **five-point Likert scale** presented either as a horizontal bar, labelled buttons, or an interactive slider
- A **progress bar** at the top indicating how far the user has progressed
- Subtle transition animations when moving to the next question

Between major sections—such as shifts between technological, individual, or organisational domain items—the interface displays short visual transition screens. These pages may include animated icons, micro-illustrations, or brief educational messages (e.g., “Next: Leadership and Digital Well-being”) to create a sense of pacing and segmentation within the assessment.

Suggested visual elements:

- Light colour-coded section dividers (e.g., different colours for each WP1 level)
- Optional micro-animations to keep engagement without distracting

Automated Scoring and Background Processing

Once the user completes the entire assessment, the system automatically performs scoring. This process is invisible to the user but essential for producing accurate results. The interface shows a brief loading animation ("Processing your digital well-being profile…") while average scores for each WP1 level are calculated, including the **digital demands vs. digital resources balance score**.

A short visual could appear during this stage—perhaps a rotating wheel or a pulsing diagram—to communicate that the system is analysing the data.

Results and Recommendations Page

The results page is the most visually detailed part of the toolkit. It presents the assessment outcomes using a clean and accessible data-visualisation format. Depending on technical capacity, this may include a **radar chart**, **bar chart**, or comparative horizontal score lines illustrating the user’s digital resources and digital demands across the six WP1 levels.

Below the visual results, a personalised recommendations section interprets the findings. This textual component explains the meaning of the scores in simple terms and offers tailored guidance aligned with the individual’s or organisation’s profile. The page also contains a **PDF export option**, allowing users to download, print, or share their results.

Possible layout elements:

- A large radar chart centred on the page

- Colour-coded demand vs. resource markers
- Dedicated recommendation blocks styled as collapsible cards
- Option to return to main menu or retake the assessment

Additional Toolkit Pages

Beyond the core assessment, the platform includes a set of supplementary pages designed to support deeper understanding and long-term usability. These consist of:

- **About the Toolkit:** A high-level explanation of the toolkit's purpose, supported by icons or a simplified process diagram.
- **About the Project:** A page explaining Digi-B-Well's objectives, funding, and partnership, illustrated with the project map or logo cluster.
- **How to Use the Toolkit:** A step-by-step guide, ideally including visual walkthroughs or mini wireframe images to show users what to expect.
- **The Science Behind the Toolkit:** An accessible overview of WP1 findings, the demand-resource model, and the six-level conceptual framework, potentially accompanied by simplified diagrams.
- **Partner and Social Media Links:** A final page offering direct access to partner organisations and Digi-B-Well's communication channels.

Together, these visual and structural elements ensure that the user journey is coherent, interactive, and grounded in both scientific knowledge and user experience design. The combination of mockup-informed layouts and clear instructional flow reflects the toolkit's commitment to accessibility, engagement, and practical relevance.

3.5. Preliminary Placeholder Interface Pages

To support the transition from conceptual design to technical implementation, a set of preliminary placeholder interface pages has been developed. These early mockups are not functional prototypes but serve as visual guides that illustrate the intended structure of the user journey and the overall layout of the toolkit's digital environment. Their purpose is to translate the narrative architecture outlined in this deliverable into an initial visual form that can guide developers, designers, and project partners as preparations for Deliverable D.2.1.2 move forward.

The placeholders depict the basic composition of key screens, including the landing page, the pathway selection pages, the question presentation format, and the initial structure of the results section. While these pages do not yet contain full interactive features, final styling, or refined graphic elements, they demonstrate the essential logic of the interface flow—showing how users will move from page to page, how questions are likely to appear, and how results may be displayed.

These early layouts also help ensure consistency between the conceptual framework derived from WP1 and the visual representation that will eventually be implemented in the digital transformation platform. They allow consortium partners to align expectations, identify usability considerations at an early stage, and anticipate any navigation or accessibility issues that may arise during technical development.

It is important to note that these pages are strictly preliminary. They will be redesigned and expanded significantly during the technical development phase, incorporating user experience best practices, graphic design refinements, accessibility guidelines, and partner feedback. Their primary value lies in providing a shared visual starting point for the team—not as finished design components.

To complement the descriptions provided in this report, screenshots of the placeholder pages are included in **Annex 2**, offering a basic preview of the interface direction that will inform the work carried out in D.2.1.2.

3.6. Tailored recommendation logic (under development)

The recommendation component of the Digi-B-Well toolkit translates assessment results into meaningful guidance that supports reflection and action. Its purpose is not only to display numerical outcomes but to interpret them within the broader context of digital well-being and organisational transformation. Each user, whether an individual employee or a team leader, receives feedback aligned with their specific assessment profile and role in the workplace.

For individual users, the recommendations will focus on strengthening personal digital resilience. This includes enhancing self-regulation, improving task management in technology-rich environments, and developing strategies to balance connectivity and recovery. The guidance will encourage users to recognise the limits of digital engagement, adjust work habits, and build awareness of their own behavioural patterns in relation to digital demands.

For leaders and organisations, the recommendations will extend beyond individual well-being and address structural aspects of digital work. They will guide decision-makers in identifying systemic factors that contribute to digital stress—such as inefficient communication flows, unclear digital responsibilities, or inadequate training opportunities—and propose actions to mitigate these challenges. This may include redesigning workflows, improving clarity in digital processes, fostering supportive leadership behaviours, or enhancing collective digital competencies within teams.

The logic underpinning these recommendations is based on the balance between digital demands and digital resources, as defined in the WP1 framework. Assessment data will be analysed to identify patterns across this matrix. Situations where high digital demands are coupled with insufficient resources will be interpreted as critical pressure zones requiring immediate intervention. More balanced profiles, where demands and resources are aligned, will be seen as stable but still in need of maintenance to prevent regression. Conversely, profiles showing strong resources and manageable demands will be regarded as resilient systems that can serve as models of good practice.

This mapping process ensures that feedback is both diagnostic and developmental, offering each user a set of context-appropriate suggestions rather than generic advice. The system is designed to encourage learning and dialogue rather than compliance, positioning digital well-being as a continuous process rather than a one-time evaluation.

The detailed scoring model and recommendation algorithms will be finalised following the pilot phase (A2.2), when real-world testing will provide data on how users interpret and apply the results. These insights will guide refinement of the thresholds, tone, and practical relevance of

the final recommendations to ensure that they support both individual growth and organisational change in a realistic and evidence-based manner.

4. Integration and Sustainability Considerations

4.1. Embedding the Toolkit into the Digital Transformation Platform (D.2.1.2)

The self-assessment toolkit developed under D.2.1.1 will be implemented and made publicly accessible through the Digi-B-Well digital transformation platform in the following phase (D.2.1.2). This stage marks the transition from conceptual design to functional deployment, where the questionnaire content, scoring logic, and recommendation mechanisms will be embedded into an interactive web-based environment that supports both user pathways—individual and organisational.

Comprehensive digital environment

The platform will operate as a comprehensive digital environment that brings together content, functionality, and user interaction. Its architecture will consist of a user-friendly front end designed for intuitive navigation and accessibility, combined with a robust back end that processes data, calculates the demand-resource balance, and generates tailored results. The scoring system will run automatically in the background, translating users' responses into meaningful insights without requiring any technical expertise.

A single-entry point

From a user perspective, the platform will serve as a single-entry point to the Digi-B-Well ecosystem. Visitors will be able to learn about the toolkit's purpose, choose their relevant assessment pathway, complete the questionnaire, and immediately view their results along with personalised recommendations. The interface will be streamlined to minimise cognitive load, providing clear instructions, progress indicators, and direct access to feedback that is both comprehensible and actionable.

A key design consideration in this phase is data protection and ethical compliance. All data will be handled in accordance with applicable privacy regulations, ensuring anonymity and confidentiality, particularly for employee assessments. No personal identifiers will be stored or shared, and the platform will operate under secure protocols consistent with the project's Data Management Plan.

By combining accessibility, automation, and security, the digital transformation platform will transform the Digi-B-Well toolkit from a conceptual prototype into a practical and sustainable online resource—one that can be continuously updated and expanded as the project evolves.

4.2. Integration into the Transnational Digi-B-Well Solution (D.2.1.3)

After pilot testing and refinement in Activity A2.2, the toolkit will be integrated into the Transnational Digi-B-Well Solution (Deliverable D.2.1.3). This stage represents the consolidation of all national inputs and pilot findings into a unified, accessible framework that can be applied consistently across the project's partner regions. The transition from prototype to transnational solution will ensure that the toolkit operates with cross-country usability, serving the needs of SMEs, public authorities, and academic institutions in diverse cultural and linguistic contexts.

A core focus of this phase will be harmonisation and standardisation. Terminology, scoring logic, and interpretation thresholds will be aligned across partners to guarantee comparability of results and coherence of recommendations. At the same time, the templates for tailored guidance will be adapted to reflect regional practices, sectoral differences, and varying organisational structures, maintaining both consistency and contextual flexibility.

Refinement will draw on several complementary feedback sources. User responses from the organisational pilot sites will provide quantitative insight into score patterns and the overall distribution of results, revealing whether adjustments to the balance thresholds or domain weightings are required. Qualitative feedback gathered through interviews and focus group discussions with leaders, HR professionals, and employees will offer a deeper understanding of how users interpret the questions and apply the recommendations in real settings. This mixed feedback approach will also help identify any usability barriers or comprehension issues that might limit the toolkit's effectiveness.

The final Digi-B-Well solution will thus emerge as a transnational support and benchmarking resource. By enabling organisations to monitor their progress over time and compare results across peer institutions, it will foster a shared understanding of digital well-being standards and promote collective learning across sectors. In this way, the toolkit will evolve from a stand-alone self-assessment instrument into a collaborative instrument for guiding digital transformation and well-being strategies on a European scale.

4.3. Hosting and Long-Term Accessibility

To ensure sustainability beyond the project lifetime, the Digi-B-Well toolkit and its outputs will be hosted on a "one-stop-shop for digitalisation in Central Europe" platform

This digital space will:

- Act as a permanent and publicly accessible access point to the toolkit
- Provide downloadable documentation and guidance materials
- Host user stories, FAQs, and updates based on post-project use
- Link to training, support, and additional project outputs

The hosting strategy ensures:

- Long-term visibility and institutional anchoring
- Ongoing access to tools for organisations at different digital transformation stages
- A foundation for future extensions, including multilingual versions (i.e., WP3) and sector-specific adaptations

4.4. Interoperability and Adaptability for Future Development

The toolkit is intentionally built with a modular architecture, allowing for future evolutions that may include:

- Integration with learning modules, coach-led interventions, or e-guides

- Synchronisation with HR systems or organisational training platforms (optional, long-term)
- Expansion to include industry-specific versions (e.g., healthcare, education, public administration)
- Development of mobile-responsive or app-based formats
- Benchmark dashboards allowing organisations to track progress over time
- Collaborative team reports supporting dialogue-based reflection and planning

4.5. Support and Capacity-Building for User Organisations

To enhance uptake, complementary support resources will be provided, including: short explanatory guides (text + video), facilitator instructions for organisational use and communication templates for internal rollout.

These materials will help organisations use the toolkit not only as a diagnostic tool, but as a conversation and planning instrument for building healthier digital workplaces.

5. D.2.1.1 Conclusion

5.1. Remaining Development Tasks

With the conceptual and structural design of the Digi-B-Well Toolkit (D.2.1.1) now complete, the focus shifts toward preparing the instrument for pilot deployment. The next development phase will concentrate on refining and consolidating the toolkit's components to ensure their accuracy, usability, and cross-cultural coherence across partner contexts.

Questionnaire revision

The first priority is the revision of questionnaire items, aimed at improving clarity and accessibility for all user groups. This process will involve linguistic adjustments, simplification of phrasing where necessary, and harmonisation of terminology across project languages. The objective is to guarantee a consistent user experience that reflects the same conceptual intent regardless of country or sector.

Scoring and recommendations

Parallel to this, the scoring methodology will be calibrated to establish meaningful threshold ranges for interpreting the balance between digital demands and digital resources. This step is essential to ensure that the assessment results are both statistically valid and practically interpretable. Once the scoring model is stabilised, attention will turn to finalising the tailored recommendation logic, ensuring that each result pattern corresponds to a relevant set of guidance points and digital-era-fit operational models developed under WP1.

In parallel, the user interface will be translated into a functional design framework, defining navigation flow, visual hierarchy, and the layout of key screens. This wireframing process will prepare the content for technical integration into the digital transformation platform under Deliverable D.2.1.2, paving the way for the pilot testing phase.

Together, these tasks mark the transition from design documentation to a fully operational toolkit ready for real-world evaluation and refinement.

5.2. Transnational Pilot Strategy (Activity A2.2)

Activity A2.2 is dedicated to designing the transnational pilot and will run until May 2026. Its purpose is to define how the prototype toolkit will be tested, by whom, and under what conditions, so that evidence gathered during implementation is comparable and meaningful across countries and sectors. The strategy will specify the pilot's objectives, sampling frame, recruitment approach, and the roles of participating partners. It will also set the evaluation framework, including success criteria, measurement points, and data collection instruments for both quantitative and qualitative feedback.

Alongside these core elements, A2.2 will implement linguistic and cultural adaptations, ethical and data-protection procedures, and the operational protocols for administering the assessment in organisational settings. Training materials for facilitators and guidance for participating sites will be prepared to ensure consistent delivery. By the end of A2.2, the project will have a fully

documented pilot playbook—covering timelines, responsibilities, onboarding processes, and reporting formats—ready to hand over to the implementation phase.

5.3. Pilot Implementation and Feedback (Activity A2.3)

Activity A2.3 covers the execution of the pilot and will run until November 2026, in parallel with finalising the toolkit's production version. During this phase, selected organisations will administer the assessment to employees and team leaders under real conditions, following the protocols defined in A2.2. Data will be gathered on user experience, clarity of items, the interpretability of results, and the practical value of recommendations in decision-making and team dialogues.

Feedback will be collected through the instruments specified in the strategy—post-assessment surveys, structured debriefs with site coordinators, and targeted interviews or focus groups where necessary. These inputs will drive iterative improvements to scoring thresholds, recommendation mapping, and interface flow. Interim analyses will be used to validate the demand-resource balance measures across contexts and to identify any systematic comprehension or usability issues. The phase concludes with a consolidated set of refinements and a release candidate for the final Digi-B-Well solution.

5.4. Update, Finalisation, and Integration into TN Solution (D.2.1.3)

Following the pilot phase, the Digi-B-Well toolkit will undergo a comprehensive review to incorporate lessons learned and user feedback before its integration into the transnational Digi-B-Well digitalisation solution (D.2.1.3). This refinement process will ensure that the final version of the toolkit is empirically validated, user-friendly, and contextually adaptable across the participating regions.

Revisions will begin with the questionnaire itself, where user responses and pilot observations will guide adjustments to the structure, flow, and wording of the items. The objective is to enhance readability and alignment between the assessment content and real organisational experiences, thereby improving the interpretability of results. In parallel, the recommendation system will be revised to increase its clarity and precision, ensuring that feedback is tailored, actionable, and sensitive to contextual differences between sectors and national settings.

Beyond these analytical refinements, the final phase will also focus on integrating sustainability and capacity-building materials into the toolkit ecosystem. This includes facilitator manuals, user guidance documents, and explanatory resources designed to help organisations implement the toolkit independently after the project's conclusion. Once the content is validated, the finalised interface and supporting materials will be prepared for deployment within the final platform, where the toolkit will be permanently hosted and maintained.

5.5. Conclusion

This deliverable (D.2.1.1) establishes the conceptual, structural, and content foundations of the Digi-B-Well self-assessment toolkit. It translates the theoretical insights developed in Work Package 1—particularly the demand-resource balance model and the multi-level digital well-being

framework—into a practical, research-informed instrument that organisations and individuals can use to diagnose and strengthen digital well-being within their work environments.

Through its dual focus on digital transformation performance and human sustainability, the toolkit bridges the gap between organisational strategy and individual experience. It provides a structured means to assess how digital systems, skills, and leadership practices interact, helping users identify imbalances that may lead to digital stress or inefficiencies, while highlighting opportunities for growth and resilience.

The forthcoming phases of the project will build on this foundation through technical implementation, pilot validation, and integration into the transnational Digi-B-Well solution. These steps will ensure that the toolkit not only functions seamlessly as a digital platform but also delivers meaningful, evidence-based guidance to diverse organisations across the Triple Helix sectors.

Once finalised, the Digi-B-Well toolkit will stand as a sustainable, accessible, and transferable resource, enabling workplaces across Central Europe—and potentially beyond—to manage digital transformation in a way that prioritises both innovation and well-being. By embedding human-centred values into digital change, the toolkit contributes to a more balanced and resilient future of work.

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Annex 1: Digi-B-Well Questionnaire draft

Technological level

	Digital Demands	Digital Resources
1	I need to use multiple IT systems and software programs daily to complete my work.	Digital systems in my organisation are well integrated, allowing me to switch between them seamlessly without re-entering data, duplicating work, or creating workarounds.
2	Because of the nature of my work, I need access to the most effective and up-to-date digital tools to perform well.	We use high-quality, up-to-date software that meets professional standards.
3	My work places high demands on the use of AI and automation systems.	A good portion of my manual tasks is effectively automated and streamlined through AI.
4	My work highly depends on the speed and stability of the internet connection.	The technical infrastructure at my workplace (e.g., internet connection, servers) is stable and reliable, allowing me to work without delays.
5	My work requires powerful and modern hardware (e.g., computer, laptop, monitor, processor, or other physical devices) as it cannot be done effectively on older or slower equipment.	I have access to powerful and modern hardware (e.g., computer, laptop, monitor, processor, or other physical devices) that allows me to work quickly and efficiently.
6	My work involves handling sensitive or confidential information, where digital security mistakes can have serious consequences.	The digital systems I use are designed to make security mistakes unlikely and breaches highly improbable.
7	Even minor technical errors can significantly disrupt my work or cause delays.	Built-in safeguards and recovery systems minimise the impact of technical errors on my work.
8	The digital tools we use make my work more complex and skill-demanding.	New digital tools enable me to accomplish tasks I couldn't do before and move my work forward.
9	My work requires using multiple digital tools to coordinate collaboration and manage tasks within the team.	The digital tools we use for collaboration and task management are well designed and make teamwork efficient.
10	Strict security and authentication procedures (e.g., logins, password rules, two-factor authentication) slow down my daily work.	Our IT systems allow me to log in once and securely access multiple platforms without repeated authentication.

Individual level

	Digital Demands	Digital Resources
1	I get bombarded by the amount of information and tasks spread across multiple disconnected digital systems and platforms.	I have effective personal strategies that help me manage information and tasks across multiple digital systems and platforms and prevent me from feeling overwhelmed.
2	I need to do a lot of learning to maintain or increase my competence in using digital technologies at work.	I feel confident that I can master new digital tools quickly.
3	I believe that I am at high risk of losing my job due to new technologies or automation.	I am confident that I can adapt my skills to remain valuable as technology and automation evolve.
4	I receive a high volume of work messages and emails across multiple devices, including personal ones, and delays in responding can slow down others' work.	I have established clear boundaries for responding to work communications, which help me protect my time without negatively affecting my performance or collaboration.
5	I am concerned that relying heavily on digital technologies may cause me to lose some of my existing skills or expertise.	I see ways to use digital tools to grow in my profession and learn new things.
6	My work calls and messages often interfere with my personal or family time.	I have clear routines and personal rules for when and how I respond to work communications.
7	I work under tight deadlines and manage a high volume of tasks, where every extra click or delay adds to my workload.	I have developed efficient ways of using digital tools, such as shortcuts, templates, or automations, that save time and minimise repetitive steps.
8	I constantly feel mentally tired from processing large amounts of information through digital screens and interfaces.	I take regular breaks from screens and have strategies to manage mental tiredness effectively.
9	I struggle to maintain focus and deep concentration due to frequent digital interruptions and notifications.	I find the expanded scope of my digital work engaging and aligned with my professional development goals.
10	I experience uncertainty about how to properly use new digital tools, which makes me anxious about making mistakes.	I have great autonomy in deciding which digital tools to use, and how and when to use them.

Group level

	Digital Demands	Digital Resources
1	Team members use various tools to work on the same tasks, leading to conflicts and difficulties in collaboration.	My team has created clear digital workflows so that everyone knows how tasks should be carried out and in what format they should be delivered.
2	We spend extra time resolving misunderstandings that arise from text-based communication (e.g., chat or email) and remote collaboration.	We have regular team check-ins to keep everyone updated and to solve problems or misunderstandings.
3	In my team, communication and collaboration happen mainly online, leaving little room for in-person interaction.	We have shared online repositories or knowledge bases where important information and documents are easy to find.
4	Team members have very different levels of digital skills, making collaboration on digital tasks challenging.	Team members support each other in learning and using digital technologies.
5	My colleagues show impatience when someone has technical issues or struggles to use corporate digital tools quickly.	The team fosters members to ask for help with digital tools without judgment.
6	The volume of team communication through digital channels has increased significantly.	Clear team agreements define how we use different communication channels for specific purposes.
7	My work is quite isolated, and I go through long stretches of time without seeing or talking to any of my colleagues.	I have opportunities to participate in online social activities that strengthen connections within our global team.
8	My colleagues get frustrated if I don’t respond to work messages within a few minutes.	Our team respects each other’s offline time and avoids unnecessary messages outside core working hours.
9	Digital tools make it easy for some people to offload tasks onto others without clear accountability.	Our team successfully uses digital tools to make workload distribution visible, ensuring fairness and accountability.
10	Cultural or generational differences within my team create tension around digital work expectations and communication styles.	Cross-generational mentoring arrangements help team members learn from each other's strengths and digital experiences.

Leadership level

	Digital Demands	Digital Resources
1	My supervisor frequently introduces new digital tools and processes and expects me to learn and use them quickly.	My supervisor ensures that training and support are available when new digital tools are introduced.
2	With the introduction of new digital tools, leadership expectations for performance and productivity have increased significantly.	My supervisor supports us in experimenting with new digital tools that could make our work more efficient and effective.
3	I face pressure from leadership to be more technologically skilled and digitally capable while still maintaining traditional processes.	My supervisor involves employees in decision-making about digital changes and initiatives.
4	My supervisor expects me to take initiative in using new technologies without providing detailed direction.	My supervisor has strong digital competencies and leads by example in using new technologies.
5	My supervisor expects me to answer work emails and messages outside normal working hours.	My supervisor sets aside time to communicate with employees, offer support, and provide feedback during digital change.
6	My supervisor uses digital dashboards and task-tracking systems to closely monitor my progress and requires frequent updates or reports.	My supervisor promptly responds and provides me with timely feedback through digital communication channels.
7	My supervisor emphasises the urgency and importance of digitalisation and digital transformation.	My supervisor provides employees with up-to-date information about digital changes and initiatives.
8	Unsuccessful attempts to automate or apply new digital tools can negatively affect my performance review with my supervisor.	My supervisor recognises and appreciates employees who take initiative in improving digital practices and adopting new digital tools.
9	My supervisor evaluates and compares employees based on how quickly they adopt new digital tools.	My supervisor encourages team collaboration and knowledge sharing when learning new digital tools.
10	My supervisor criticises me or other team members for mistaken or unreliable use of digital tools.	My supervisor allows employees flexibility in how they use digital tools to accomplish their tasks.

Organizational level

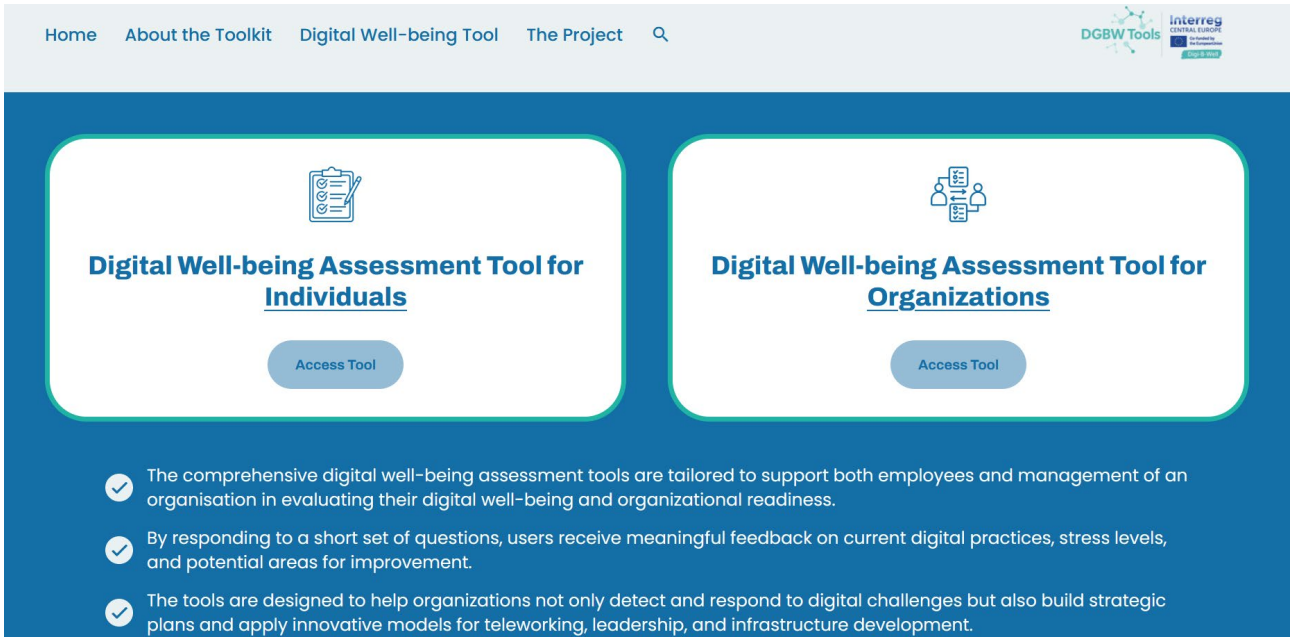
	Digital Demands	Digital Resources
1	My organisation maintains both old and new systems during transitions, forcing employees to follow duplicate procedures.	My organisation has clear policies outlining which IT tools and procedures (digital or paper-based) should be used and when.
2	The company's digital reporting and documentation requirements add substantial administrative workload.	Our organisation provides sufficient administrative or technical support to help employees manage digital reporting tasks.
3	My organisation has strict departmental boundaries and/or a rigid hierarchy, which slows down decision-making.	My organisation has policies that enable employees to participate in decision-making about the implementation of new digital tools and processes.
4	In my organisation, when new digital projects are launched, my regular duties are not reduced, so my overall workload increases.	Organisational policies promote work-life balance and establish the right to disconnect from work communications outside regular working hours.
5	My organisation introduces new digital projects without providing additional staff to handle the extra work.	My organisation offers employees regular training and development programmes on how to use new digital tools and technologies.
6	Mistakes or improper use of digital tools at my company can have serious consequences for performance evaluation or compensation.	My organisation's IT and data security teams are well resourced and provide reliable, timely support to employees using digital tools.
7	My organisation tracks employees' activity in digital systems (e.g., number of tasks completed, time spent online, or response times) to evaluate productivity.	Organisational policies allow employees flexibility in organising their work schedules and choosing work formats.
8	Digitalisation in my organisation has resulted in restructuring, where some departments have been downsized or merged.	Developing digital skills and contributing to digital innovation are taken into account in performance evaluations and career advancement decisions.
9	In my organisation, I am expected to master new technologies while still meeting my usual performance targets.	In my organisation, I am given dedicated time during working hours to learn and practise new digital skills.
10	My organisation frequently changes digital priorities or strategies, making it hard to plan work effectively.	My organisation clearly communicates its strategy, goals, and decisions related to the implementation of new digital tools and processes.

Overarching level

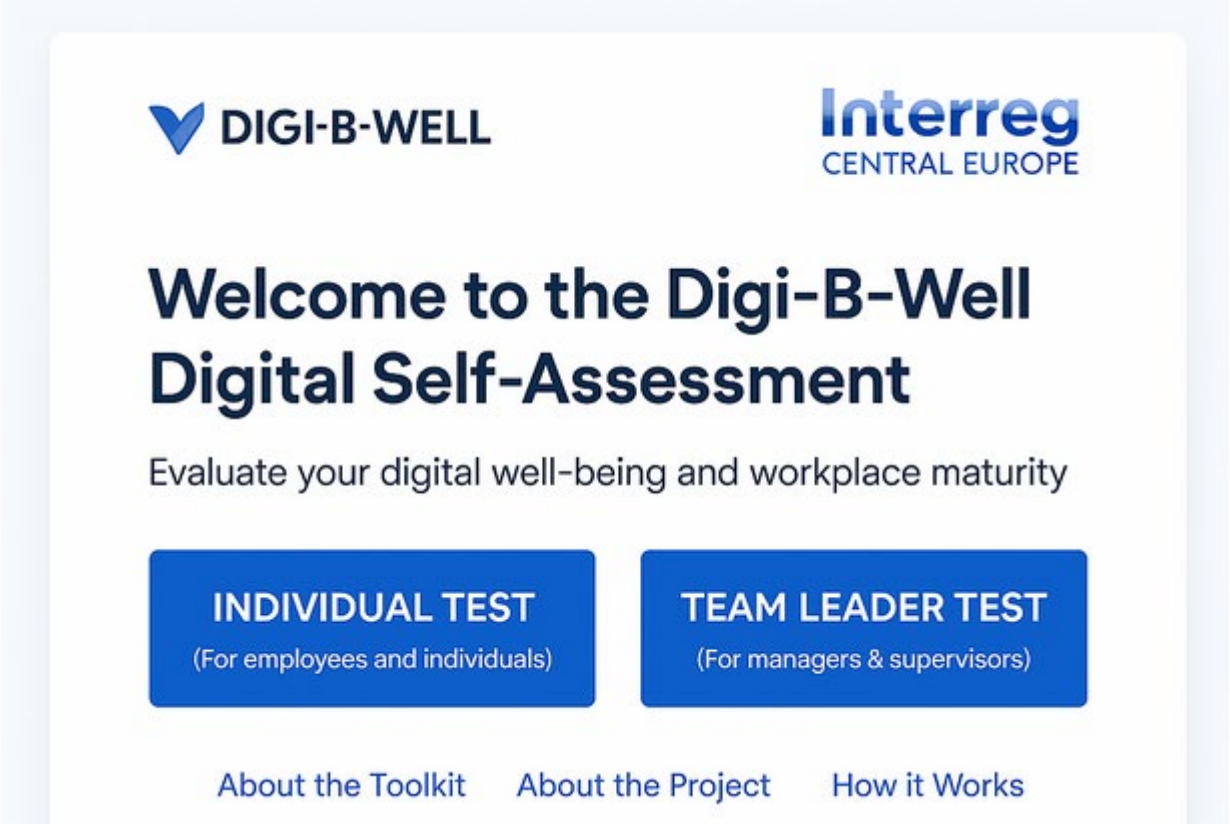
	Digital Demands	Digital Resources
1	Frequent changes in laws and rules about data protection and digital technology make it harder for my organisation to run digital projects.	International agreements and standards help our organisation integrate digital systems with partners abroad.
2	Economic and budget pressures at the national or regional level limit how much money is available for digital transformation.	Long-term national give our organisation stability to invest in digital projects.
3	There is strong pressure from the market and society for our organisation to deliver faster and more digital services.	Partnerships with other organisations give us chances to test and try out new digital solutions.
4	Very different levels of digital literacy among clients, citizens, or partner organisations make it difficult to implement digital initiatives.	Public campaigns that promote digital skills and trust in e-services make it easier for us to introduce new digital tools.
5	My organisation needs to balance going digital with still providing good service to people who aren't comfortable using digital tools.	Government tax incentives or subsidies encourage our organisation to invest in new digital technologies.
6	Cybersecurity risks and data breaches in our field create extra pressure to focus on safety and risk management.	National and EU cybersecurity rules give us clear guidance on how to keep our digital systems safe.
7	Public debates about technology, privacy, and automation create outside pressure on how we use digital tools	Collaboration across different sectors helps us share experiences and learn from others about digital transformation.
8	Public attention and accountability create pressure to make sure our digital projects are successful and visible.	Current laws give our organisation enough flexibility to try out new and innovative digital ideas.
9	The limited availability of skilled IT professionals in the labour market slows down our digital projects.	Professional networks and associations give us access to digital expertise and examples of transformation success.
10	Geopolitical risks, such as international conflicts or trade restrictions, threaten our organisation's digital supply chains and security	International examples and benchmarks provide inspiration and guidance for digital transformation efforts.

Annex 2: Tentative toolkit page structure

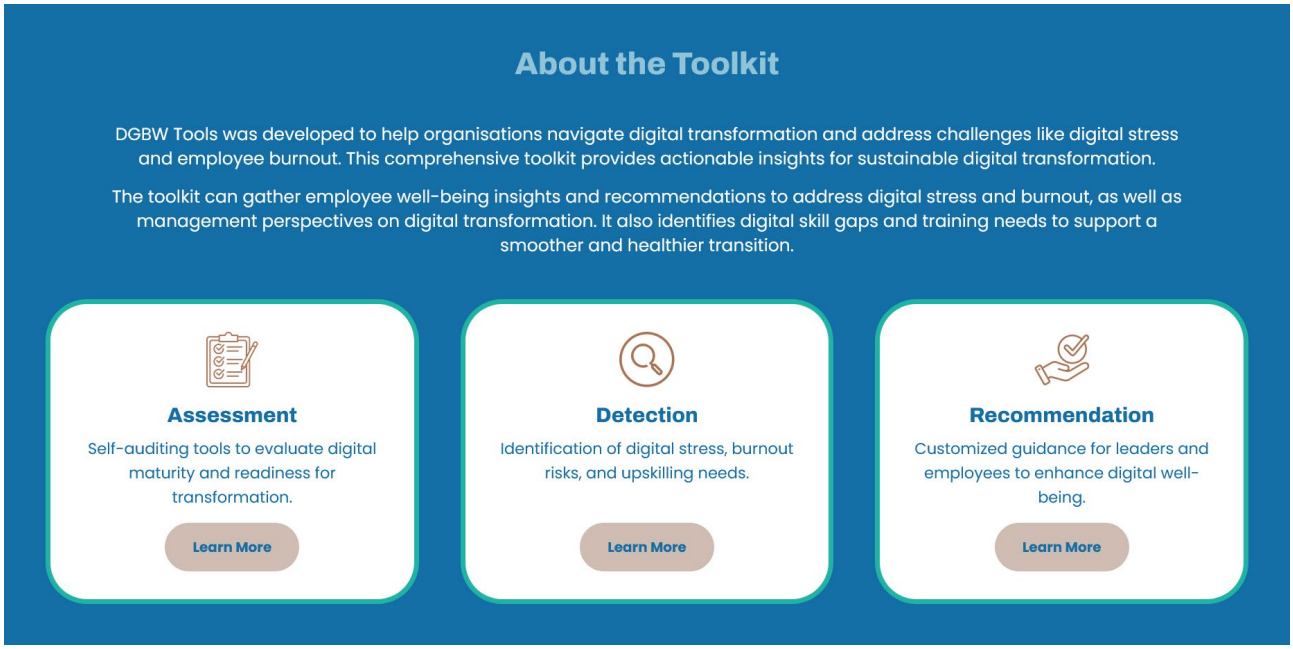
Intro page:


Home
About the Toolkit
Digital Well-being Tool
The Project
DGBW Tools
Digital Well-being Assessment Tool for Individuals
Access Tool
Digital Well-being Assessment Tool for Organizations
Access Tool
The comprehensive digital well-being assessment tools are tailored to support both employees and management of an organisation in evaluating their digital well-being and organizational readiness.
By responding to a short set of questions, users receive meaningful feedback on current digital practices, stress levels, and potential areas for improvement.
The tools are designed to help organizations not only detect and respond to digital challenges but also build strategic plans and apply innovative models for teleworking, leadership, and infrastructure development.

A more simplified direction:



About the toolkit:



Questions:

Question

How would you describe your team's readiness to adapt to new digital tools or workflows?

Select one of the options

- Highly prepared – We adapt quickly and support one another during digital transformation
- Generally prepared – We manage well, though some adjustments take time
- Somewhat prepared – We adapt, but often need additional support or time
- Not very prepared – Changes are challenging and disrupt our workflow
- Unprepared – We struggle significantly with digital transformation

< Previous Next >

Question

I receive adequate support and training to keep up with digital transformation.

Select one of the options

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

Next >

Results:


Downloadable Results & Recommendations
Digital Well-being Assessment Results
DOWNLOAD
Digital Well-being Assessment Recommendations
DOWNLOAD

About the project:

The project Digi-B-Well

Project Overview

The digital transformation offers new opportunities for organizations, but at the same time increases complexity. Especially employees over 55 can suffer from digital stress or burnout at the workplace.

The Digi-B-Well project helps organizations in Central Europe transform and make employees and management fit for the digital age. The project partners upskill the competences of managers in SMEs, public authorities, and academia (Triple Helix) to better prevent digital stress and burnout.

To address these issues, we have developed the DGBW Tools, a practical self-assessment toolkit designed to support organizations in managing digital change more effectively and sustainably.

Learn more about the project

Key Project Objectives

Support for Employees Over 55

Developing specialized tools and approaches to help older employees adapt to digital changes.

Combat Digital Stress

Creating frameworks to identify and address digital stress factors in the workplace.

Enhance Digital Well-being

Promoting practices that balance productivity with employee mental and physical health.

Cross-Sector Collaboration

Bringing together SMEs, public authorities, and also academia to share knowledge and best practices.