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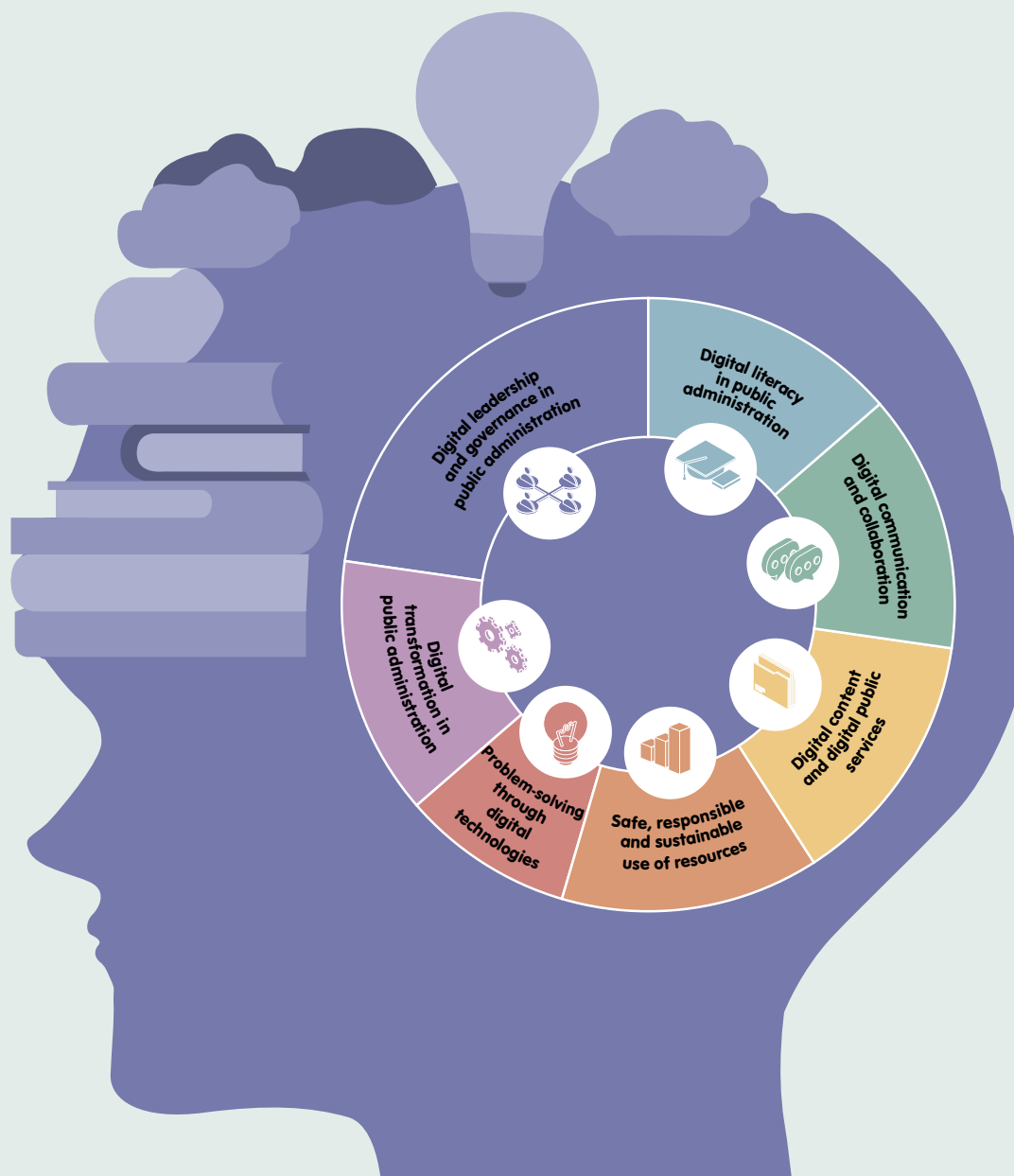


AUTORITATEA
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TSI component Romania:
Developing a General Digital Competence Framework for Civil Servants

OUTPUT 2

PROPOSED DIGITAL COMPETENCY FRAMEWORK FOR CIVIL SERVANTS IN ROMANIA



WORLD BANK GROUP

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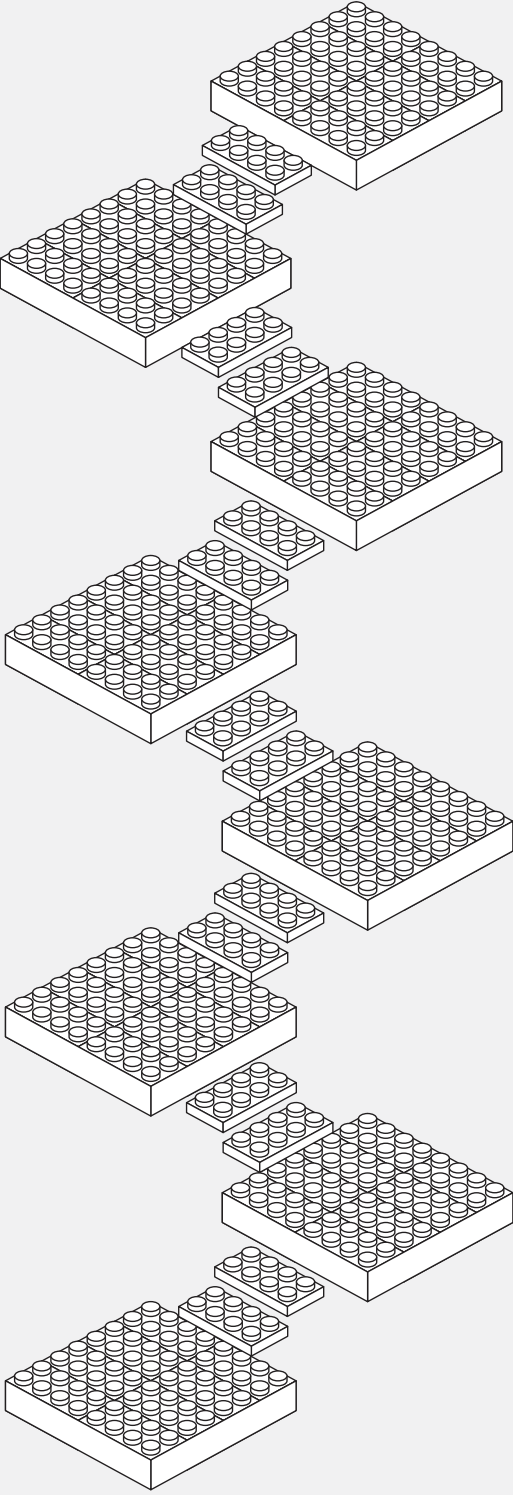
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Abbreviations

ADR	Authority for the Digitalization of Romania
AI	Artificial Intelligence
AI Act	Artificial Intelligence Act
BAIT	Spanish Digital Skills Certification Platform
CEN	European Committee for Standardization
CNPP	National House of Pensions in Romania
ComPAct	Public Administration Cooperation and Capacity-building initiative (EU)
CRA	Cyber Resilience Act
DESI	Digital Economy and Society Index
DMA	Digital Markets Act
DNSC	National Directorate for Cyber Security (Romania)
DSA	Digital Services Act
DSI	Digital Skills Indicator
e-CF	European e-Competence Framework
eIDAS	Electronic Identification, Authentication and Trust Services Regulation
EN 301 549	European standard on accessibility requirements for ICT products and services
EU	European Union
GEO	Government Emergency Ordinance
GDPR	General Data Protection Regulation
GoR	Government of Romania
GTMI	GovTech Maturity Index
HR	Human Resources
HRM	Human resources management
ICDL	International Computer Driving Licence
ICT	Information and Communication Technology
IKANOS	Basque Country Digital Competence Framework and Assessment Platform
INAP	National Institute of Public Administration (Spain)
INA	National Institute of Administration (Romania)
JRC	Joint Research Centre (European Commission)
KSA	Knowledge, Skills and Attitudes
MEDET	Ministry of Economy, Digitalization, Entrepreneurship and Tourism
MLFYSS	Ministry of Labour, Family, Youth and Social Solidarity
NACS	National Agency for Civil Servants (Romania)
NIS2	Directive on measures for a high common level of cybersecurity across the EU
NLP	Natural Language Processing
NRRP	National Recovery and Resilience Plan
OECD	Organization for Economic Co-operation and Development
OOTS	Once-Only Technical System
OUG	Government Emergency Ordinance (Romanian abbreviation)

PA	Public Administration
PIX	French Digital Competence Assessment and Certification Platform
PNADD	National Digital Decade Action Plan (Romania)
RAS	Reimbursable Advisory Services (World Bank instrument)
ROeID	Romanian electronic identity system
SDGR	Single Digital Gateway Regulation
SFIA	Skills Framework for the Information Age
SG REFORM	European Commission's Reform and Investments Task Force
SNSPA	National School of Political and Administrative Studies in Romania
SPSS	Statistical Package for the Social Sciences
Stata	Statistical software package “Stata”
TNA	Training needs assesment
TSI	Technical Support Instrument (European Commission)
UNESCO	United Nations Educational, Scientific and Cultural Organization
WB	World Bank
WCAG	Web Content Accessibility Guidelines

Executive Summary

Romania's public administration faces structural barriers that limit the development of digital skills in the public administration, which hinders digital transformation efforts. Although competency-based human resources management (HRM) reforms are underway, digital competencies remain poorly defined and inconsistently applied, typically reduced to basic software use rather than the broader capabilities required for data use, collaboration, risk management, and digital service delivery. The lack of a structured digital competency framework has weakened workforce planning, training targeting, and career development, resulting in fragmented capacity-building with limited systemic impact.

To address these challenges, the World Bank, in partnership with the European Commission, is supporting the Government of Romania through a Technical Support Instrument (TSI) project to develop a General Digital Competency Framework for civil servants. The project is implemented with the National Agency for Civil Servants (NACS), The Authority for Digitalization of Romania (ADR), and the National Institute of Administration (INA) as beneficiary institutions and aims to define nationally consistent digital competency standards aligned with EU reference frameworks and Romania's Digital Decade commitments. Its theory of change is based on identifying current and future digital skills needs, establishing structured competency descriptors and proficiency levels, and integrating these incrementally into HRM processes – first in recruitment and training, and later across additional personnel management functions.

The framework design is grounded in a robust evidence base developed through comprehensive analysis and consultation. Under Output 1 of the project¹, this included reviews of EU and national strategies, legal and institutional assessments, detailed civil service job analysis, international benchmarking, foresight exercises, and extensive stakeholder engagement. Piloting and validation phases ensured that competency definitions reflect both current operational realities and anticipated future demands of digital government.

The TSI project follows a phased structure that links analysis, framework design, legal integration, training operationalization, and EU knowledge sharing. Activity 1 assessed competency needs; Activity 2 designed and piloted the framework; Activity 3 focuses on embedding competencies in the legal framework and HR processes; Activity 4 operationalizes skills development through updated training needs assessment and curriculum tools; and Activity 5 will capture lessons learned and facilitate transfer of the Romanian model to other EU Member States.

This report constitutes Output 2 under the TSI project and presents the proposed digital competency framework model for Romania's civil service. It details the competency areas, descriptors, and proficiency levels and demonstrates alignment with the existing general competency framework. The proposal also documents the design methodology and choices informed by consultations with the HR Working Group, which was established under the TSI project to support the assessment and design phases and brought together HR experts from central public administration.

A complementary Connected Report accompanying Output 2 addresses specialized ICT roles and job classification in the public administration. Given the highly technical nature of ICT functions and the detailed classification work developed under the TSI project, these topics were consolidated into a dedicated stand-alone document. While not an official project deliverable, the Connected Report is essential to fully capture the digital competency architecture for the public sector – linking the general digital competencies applicable to all civil servants with the specialized competencies required for ICT departments. It presents tailored recommendations on ICT role profiles, competency requirements, and HRM system adjustments needed for these positions, which fall outside the scope of the general framework presented in this report.

The scope of this report is limited to presenting the proposed digital competency framework structure and rationale rather than prescribing implementation arrangements. Detailed guidance on institutional

1. World Bank, [Output 1 - Report on the Assessment of the Digital Competencies Needed in the Romanian Civil Service: Taking into Account Relevant Policies at the National and European Union Levels](#), 2025.

roles, HRM integration, and capacity-building mechanisms is addressed separately in **Output 3** on legal and operational integration and **Output 4** on training needs assessment methodology and curriculum development, in line with the intervention logic of the TSI project.



FIGURE 1: Project intervention logic (as reflected by the project deliverables)



Methodological approach and pilot testing

The digital competency framework model was developed through a robust evidence-based methodology combining top-down strategic analysis, bottom-up job assessment, international benchmarking, and foresight exercises. Under Output 1 of the TSI project, mapping of national and EU regulatory frameworks identified growing requirements for competencies in areas such as cybersecurity, data protection, AI governance, and digital service delivery, while highlighting fragmented HRM legislation and unclear institutional mandates for digital skills development across NACS, ADR, and INA. This analysis confirmed the need for a framework that differentiates general execution-level competencies from managerial leadership competencies to support both frontline delivery and digital transformation governance.

A comprehensive bottom-up institutional assessment provided practical grounding for the framework design. Job analysis of over 2,380 civil service positions across 20 central institutions, supported by focus groups, interviews, workshops, using natural language processing (NLP) and NLP-assisted text mining, revealed major inconsistencies in the way digital skills are reflected in job descriptions – with most referencing only basic software use, limited recognition of advanced digital skills, and 15 percent containing no digital requirements at all. The absence of formal ICT career paths and weak links between skills, training, and certification further underscored the need for a structured framework able to translate implicit digital tasks into explicit HR standards.

International benchmarking demonstrated that Romania's approach is aligned with emerging good practice across EU administrations. Review of frameworks including the EU's DigComp 2.2, national public-sector adaptations in Spain and Italy, UNESCO models on AI and digital transformation, and professional ICT standards (SFIA, e-CF, ECSF) showed that countries commonly differentiate between general digital competencies applicable to all staff, specialized ICT roles, and leadership competencies focused on transformation and governance. These models also emphasize continuous framework updating, strong links with training and certification platforms, and clear governance arrangements – all features embedded into the Romanian framework design.

A dedicated foresight exercise ensured that the framework addresses not only today's needs but also future digital workforce requirements. This exercise and the collaboration with international experts identified emerging ICT-intensive, ICT-enhanced, and ICT-dependent public-sector roles, as well as increasing demand for competencies in AI policy, digital ethics, predictive governance, data-driven

decision-making, and platform-based citizen engagement. These insights confirmed the necessity of a flexible framework capable of differentiating skills by function, digital intensity, and leadership level.

The framework design was shaped through an iterative consultation process with the HR Working Group. This group was established under the TSI project to support the assessment and design phases and it brought together HR experts from central public administration. Four structured technical workshops held between February and June 2025 tested competency content, descriptors, terminology, and proficiency-level calibration against the practical realities of civil service roles. Exercises included mapping DigComp concepts to national job requirements, distinguishing general versus role-specific competencies, validating proficiency scales, and refining a separate leadership area for managers. This collaborative process ensured institutional ownership and strengthened the framework's practical usability.

Consultations highlighted key implementation considerations that informed the framework's design logic. Participants emphasized the importance of future certification and validation mechanisms, voiced concerns about integrating digital competencies across all HRM processes too quickly, and confirmed international practice favoring early use in training needs analysis and recruitment rather than performance appraisal. Consensus emerged that the digital competency framework should remain a stand-alone yet interoperable system alongside the existing general competency framework, preserving conceptual clarity and adaptability over time.

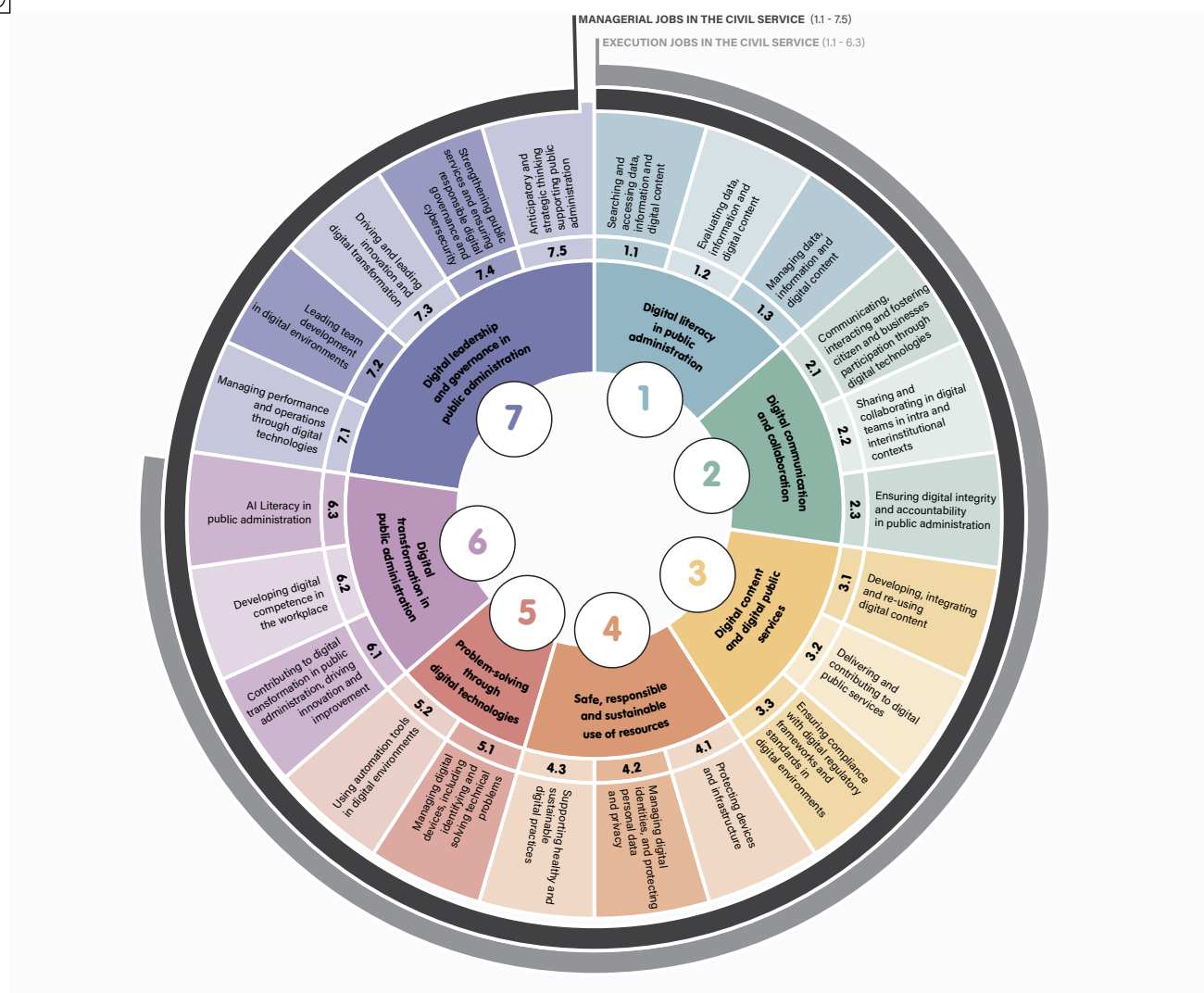
Pilot testing validated the relevance, calibration, and operational realism of the framework. Fieldwork across three large public institutions from the central and territorial public administration in Romania covered over 800 job profiles through structured interviews, role analysis, and ICT-focus exercises. Using standardized relevance scoring for current and future needs, the pilot confirmed the universal necessity of basic digital competencies, the selective but broad application of intermediate skills, and the targeted relevance of advanced leadership competencies. The results supported fine-tuning descriptors under the Digital Leadership and Governance area, recommended flexible application of proficiency Levels B and C based on institutional maturity, and reinforced the need for a legally defined minimum digital baseline as a priority training target.

The proposed digital competency framework model

The report proposes a tailored definition of digital competence for Romania's public administration anchored in effective, responsible service delivery. Digital competence is defined as the confident, critical, responsible and effective use of digital technologies, data and information systems to deliver, innovate and improve public services, in line with national and EU objectives. The definition explicitly covers secure and ethical use, citizen engagement, data-driven policymaking, and adaptability to emerging technologies. It thus aligns with DigComp and other international models, but is framed explicitly around the tasks and responsibilities of civil servants.

The digital competency framework is structured around seven modular areas, moving beyond DigComp 2.2 (and its recent 3.0 updates ²) into a public administration relevant model. The proposed framework distinguishes three categories: (i) fundamental digital competencies expected of all civil servants (Areas 1–5), (ii) digital transformation-related competencies for all roles (Area 6), and (iii) digital leadership competencies for managers and project leads (Area 7). Within these, 22 competencies are defined and described across three proficiency levels (A – basic, B – intermediate, C – advanced), each supported by descriptors for knowledge, skills and attitudes. This modular structure supports self-assessment, HR use and training design, while keeping the architecture simple and scalable.

2. COSGROVE, J. and CACHIA, R., DigComp 3.0: European Digital Competence Framework - Fifth Edition, Publications Office of the European Union, Luxembourg, 2025, <https://data.europa.eu/doi/10.2760/0001149>.


FIGURE 2: The proposed general digital competency framework for the public administration

FIGURE 3: Excerpt from the structure of the proposed general digital competency framework

A	B	C	D	E	F	G	H
Competency area	Competency title	Competency number	Levels	Descriptor	Descriptors	K S A	Grd
1. Digital literacy in public administration	Evaluating data, information and digital content	1.2	A	8	Understands that not all online information is reliable and that some information is designed to influence (beliefs, values, citizen behaviour).	K	1.2.1
			A	9	Makes accurate distinctions between reliable sources of evidence for policy purposes (e.g. scientific evidence, research outputs) and other types of knowledge and information.	K	1.2.2
			A	10	Knows how to evaluate public data and their sources (e.g. Eurostat, OECD) for tasks in public administration, e.g. analysis and comparison, support decision making processes.	S	1.2.2
		1.2	B	11	Understands the concept of "data-driven public administration" e.g. an awareness of the value and potential of data for supporting decision making, process design, product and service development and solution delivery.	K	1.2.3
			B	12	Knows how to use indicators on monitoring activities and policies in public administration, e.g. for digital policy implementation, performance measures.	S	1.2.3
			B	13	Values the relevance of data on decision-making and policymaking, and the opportunities of using data in government.	A	1.2.1
		1.2	B		Understands the value and potential of digital content and information, and their data sources, based on needs for public sector use.	S	1.2.1
			C		Understands the value and potential of data visualisations and content about a given topic or policy development in a given field of public administration.	S	1.2.2
			C		Understands the value and potential of data to support policy development in a given field of		
			C				

Levels of complexity:
3 progressive levels
A: Basic – for all users; covers basic knowledge and routine use of common digital tools.
B: Intermediate – autonomous use, adaptation to different contexts, broader knowledge.
C: Advanced – use at an advanced technical level or in a coordination role (Area 7).

Descriptors: Grouped by levels and thematic sub-components. They reflect the knowledge, skills, and attitudes required for each level of complexity.

The framework is fully adapted to public administration needs, while remaining traceable to DigComp 3.0. Many competencies are adapted or modified from DigComp, but several are heavily re-framed or entirely new to capture public-sector specific needs such as digital integrity and accountability, compliance with digital regulation, digital leadership and governance, AI literacy in administration, and anticipatory use of data for strategic decision-making. Areas 1 – 5 keep continuity with DigComp for general literacy and tool use, while Areas 6 – 7 add transformation and leadership dimensions that are essential for a modern administration. This ensures compatibility with EU instruments and certificates, but frames competence in language and scope that make sense for Romanian institutions.

Digital transformation and accessibility are integrated as cross-cutting dimensions, not treated as add-ons. Digital transformation is captured both in a stand-alone area and in leadership competencies, reflecting that all staff (not only ICT specialists) must contribute to change. Digital accessibility is embedded in content creation, service delivery and communication competencies, ensuring that inclusiveness is treated as a mainstream concern.

The strategic importance of artificial intelligence in public administration is addressed through both a dedicated competency and systematic mainstreaming across the model. AI is explicitly addressed through Competency 6.3 (AI literacy in public administration), which ensures that civil servants understand what AI is, how it functions, and how it can be used responsibly, including issues of explainability, data protection, bias mitigation, and institutional accountability. This competency is designed to support compliance with Article 4 of the EU AI Act. In parallel, AI-related descriptors are embedded across multiple other competencies: for example, Competency 1.1 (Searching and accessing information) covers the use of AI systems and prompt development; Competency 2.3 (Digital integrity and accountability) addresses algorithmic bias and transparency risks; and Competency 7.5 (Foresight and strategic thinking) includes the use of AI for predictive analytics and scenario modelling in whole-of-government planning. This integrated approach ensures that civil servants are equipped not only to use AI tools, but also to critically assess their governance, ethical and service-delivery implications, in line with emerging international standards, including the AI-related emphasis of DigComp 3.0.

The A – B – C proficiency levels translate EU standards into a simple model usable in HR processes. For general competencies (Areas 1 - 6), the levels reflect increasing complexity, autonomy and problem-solving, while for digital leadership (Area 7) they are aligned with managerial tiers in the Administrative Code (first-line, middle and senior management, including digital project managers). The A – B – C structure is mapped to DigComp levels 1 - 6, allowing external DigComp-based certifications to be recognized in recruitment, while higher DigComp levels 7 - 8 are reserved for specialized ICT profiles, better covered by the European e-Competence Framework (e-CF)³. This keeps the general framework lean for most jobs, while leaving space for more advanced ICT careers.

Competency descriptors combine knowledge, skills and attitudes to support realistic assessment and training design. Unlike the current general competency framework, which relies solely on behavioral indicators, the digital framework uses integrated descriptors tagged as K (knowledge), S (skill) or A (attitude) to reflect the full nature of digital proficiency. Only the high-level model (areas, competencies, definitions) is recommended for inclusion in primary legislation, while detailed descriptors would be set out in secondary regulations for flexibility. These descriptors directly inform the design of training curricula under Output 4, ensuring a clear bridge between competency standards and learning content.

Operationalization of the framework in HR processes is recommended to be gradual and developmental. Initial integration is recommended only in recruitment and training needs assessment, where digital competencies add immediate value and can be implemented with manageable administrative effort. The model is not proposed, at this stage, for performance appraisal or promotion, to avoid overload and poorly calibrated ratings. Assessment options include using the existing 1 - 5 national competency scale, DigComp-style self-assessment tools, point-based systems or proficiency bands, but in all cases

3. The European e-Competence Framework is a shared framework for ICT professionals, providing 41 competences. The e-CF was published by the European Committee for Standardization (CEN), and the framework is a major component of the European Union's initiative for digital skills development.

individuals should be judged against the A–B–C level set for their job, with results used primarily to guide upskilling and not to penalize staff.

The combined use of complexity levels and assessment scales clarifies the distinction between role expectations and individual proficiency. Complexity levels define what level of digital competence a job requires, while assessment scales measure how far an individual has reached that level. Ratings below the minimum acceptable level should trigger training and support rather than automatic exclusion, reinforcing a development-oriented approach. This design keeps the system coherent, comparable and adaptable, while providing Romania's public administration with a solid, future-ready foundation for building digital capacity.

Relevance validation and mapping to the civil service career structure

A pilot exercise validated both the relevance of the framework and the practicality of its phased introduction. The pilot covered a broad sample of core business roles (policy design and service delivery) and support functions (HR, finance, procurement, administration), using structured interviews and task-based job mapping to assess current and future relevance by proficiency level. Results showed that core business roles consistently rate digital competencies as more relevant than support services, reflecting frontline exposure to digital needs of policy making roles and digital service delivery pressures. Support functions, however, anticipate the strongest growth in competencies related to Digital Transformation, pointing to the urgent need to modernize internal workflows. Across all functions, Digital Literacy and Digital Communication and Collaboration remain the most immediately relevant competencies, confirming that foundational digital skills are now fully embedded in everyday administrative work.

Future demand shifts clearly toward strategic and governance-focused capabilities. Anticipated growth is strongest in competencies related to Digital Leadership and Governance and Digital Transformation, particularly within core business roles. This highlights the increasing expectation that civil servants – especially those in coordination and managerial positions – will not only use digital tools, but also manage digital processes, lead institutional change, and support transformation initiatives.

The pilot confirmed the robustness of the tiered proficiency model but underscores the need for flexible application. Level A (basic) emerged as a universal requirement across all institutions and job families, validating its designation as the baseline for every civil servant. Level B (intermediate) is broadly relevant, particularly in operational, analytical, and citizen-facing roles, including many support functions, but the evidence showed that it should be assigned selectively based on real job demands rather than automatically by grade. Level C (advanced) is relevant only to a limited set of roles, mainly those involving leadership, governance, strategic coordination, or advanced analytical responsibilities. The pilot identified the need to refine Level C descriptors in Area 7 for competencies associated with digital leadership, oversight, and institutional governance.

Overall, the framework structure proved sound and did not require fundamental redesign. All competency areas were validated as relevant, with strong and sustained emphasis on Levels A and B as the main drivers of operational digital capacity across the civil service. Calibration was needed primarily at the upper end of the scale to ensure that Level C remains targeted and realistic. The pilot therefore strongly supports retaining the tiered structure while applying it pragmatically and evidence-based.

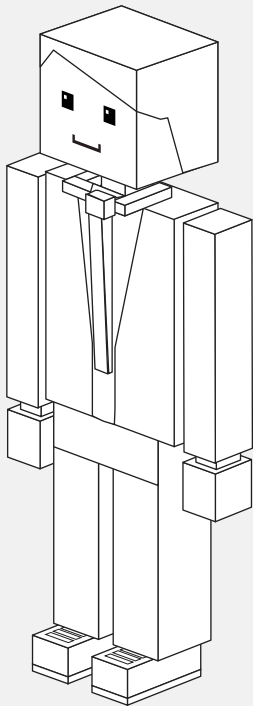
Compatibility with Romania's general competency framework is confirmed. A dedicated technical mapping process aligned digital competencies with the country's existing general competency framework at the level of main competencies, avoiding unnecessary complexity linked to sub-competency mapping. This alignment supports coherence between HR systems without merging assessment processes. Digital competencies need to remain subject to dedicated assessment instruments – primarily within recruitment and training needs analysis – consistent with recommendations in Outputs 3 and 4, rather than being embedded into regular performance appraisals.

The proposed mapping of digital proficiency levels to the civil service grading structure reflects a Phase 1, pilot-based adaptation rather than a final normative distribution. Initial assumptions that

execution-level positions would automatically correspond to Level A proved inaccurate. The pilot evidence showed that many execution-level jobs already require **Level B** competencies, due to routine needs for data analysis, digital collaboration, and moderately complex problem-solving. Therefore, the proposed grading-to-proficiency mapping assigns a significant share of execution roles to Level B and recommends a minimum of Level B for most managerial positions. This mapping represents a transitional calibration for the initial operational phase, designed to support workforce upskilling and guide training priorities rather than to impose binding recruitment or appraisal standards. In Phase 1, recruitment would continue to test only selected Level A competencies, while the broader mapping serves as a reference for training needs assessments and learning pathway design.

Importantly, this mapping is intended as a living instrument. As institutional capacity, digital maturity, and assessment systems evolve, proficiency expectations by grade can be progressively updated based on new evidence, sector needs, and implementation experience. The pilot-based Phase 1 mapping thus establishes a realistic starting point – ambitious enough to reflect actual job demands, but flexible enough to evolve as Romania’s competency-based HRM and digital governance systems mature.

I. Introduction



- 18** 1.1 Context and rationale for the development of a general digital competency framework for the public administration
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1.1 Context and rationale for the development of a general digital competency framework for the public administration

1. **Romania's public administration continues to face structural challenges that constrain the development of digital competencies across the civil service.** These challenges slow down both the country's digital transformation and the human resources management (HRM) reform agendas. Gaps in digital skills are closely linked to systemic weaknesses, including difficulties in attracting and retaining qualified staff, rigid salary and career structures, and limited professional development opportunities. These challenges are exacerbated by the absence of a comprehensive strategy linking public administration HRM modernization with digital transformation objectives, as well as by institutional fragmentation and weak coordination mechanisms.⁴
2. **Romania has made progress in introducing competency-based HRM, but digital competencies remain poorly defined and inconsistently applied across the civil service.** While a general competency framework underpins national recruitment and is gradually being extended in line with the National Recovery and Resilience Program (NRRP), digital skills are still defined and treated narrowly - often reduced to Microsoft Office use. The absence of a structured digital competency framework limits effective workforce planning, training, and career development, and has led to fragmented capacity-building with limited impact.
3. **Strengthening digital competencies is not only about improving IT literacy but also about enabling public servants to work in new ways - using data, collaborating across institutions, and managing digital risks.** A structured framework would make it possible to differentiate between basic skills required by all staff and advanced skills linked to specialized roles, while also aligning HR practices with the EU Digital Decade objectives. Most importantly, embedding digital competencies into HRM reforms would create a direct link between recruitment, training, and career development, ensuring that digital skills evolve with the transformation of government itself.
4. **Digital competencies need to be defined and introduced in the Romanian civil service primarily as a tool for learning and upskilling, in line with international best practice.** International experience shows that digital competency frameworks are most effective when used first and foremost as learning and development tools to upskill the existing workforce, rather than being rolled out indiscriminately across all HR processes. Spain (through the INAP⁵ framework) and, at the subnational level, the Basque Country (IKANOS) use digital competencies to guide training pathways and capacity-building, while France's PIX platform links assessment directly to personalized learning. These examples demonstrate that prioritizing training and recruitment avoids turning digital competencies into a bureaucratic "check-box," and instead ensures they drive real improvements in public sector capacity and digital transformation.
5. **To address these gaps, the World Bank, in close collaboration with the European Commission, is supporting the Government of Romania (GoR) in developing a general digital competency framework for civil servants.** The project is financed through the Technical Support Instrument (TSI) and is implemented in partnership with three beneficiary institutions: the National Agency for Civil

4. Systemic HRM challenges were analyzed by the Bank in detail in Deliverable 1.1 developed under the Reimbursable Advisory Services on Developing a Unitary Human Resources Management System in the Public Administration in Romania - HRM RAS: Baseline review of the national framework for HRM and its institutionalization (2019). Key challenges related to institutional fragmentation are still valid, as reflected in that document. Document available at: <https://sgg.gov.ro/1/wp-content/uploads/2010/01/Livrabilul-1.1-Baseline-review-of-the-national-framework-for-HRM-and-its-institutionalization.pdf>.

5. National Institute of Public Administration from Spain.

Servants (NACS), the Authority for the Digitalization of Romania (ADR), and the National Institute for Administration (INA). The project's objective is to support the development of a digital competency framework that supports workforce development and aligns with Romania's digital transformation priorities. The theory of change underpinning this framework is that by (i) identifying digital competency needs relevant to both the national and EU context, (ii) defining general digital competencies in a structured format with clear descriptors and proficiency levels, and (iii) integrating them into key HRM processes such as recruitment and training, Romania can strengthen a critical pillar of its digital transformation: the public administration workforce.

6. **The development of the digital competency framework needs to be firmly underpinned by evidence on both current and future needs of Romania's public administration.** This evidence base was established under Output 1⁶ developed under the TSI project, which included a comprehensive review of EU and international strategic frameworks, an assessment of the national legal and institutional context, a job analysis of civil service roles, and an examination of international experience with digital competency frameworks. Foresight methods were also applied to anticipate emerging requirements and ensure that the framework not only addresses today's gaps but also prepares the civil service for the challenges of digital transformation in the years ahead.



FIGURE 4: Evidence base for the design of the digital competency framework under the TSI project



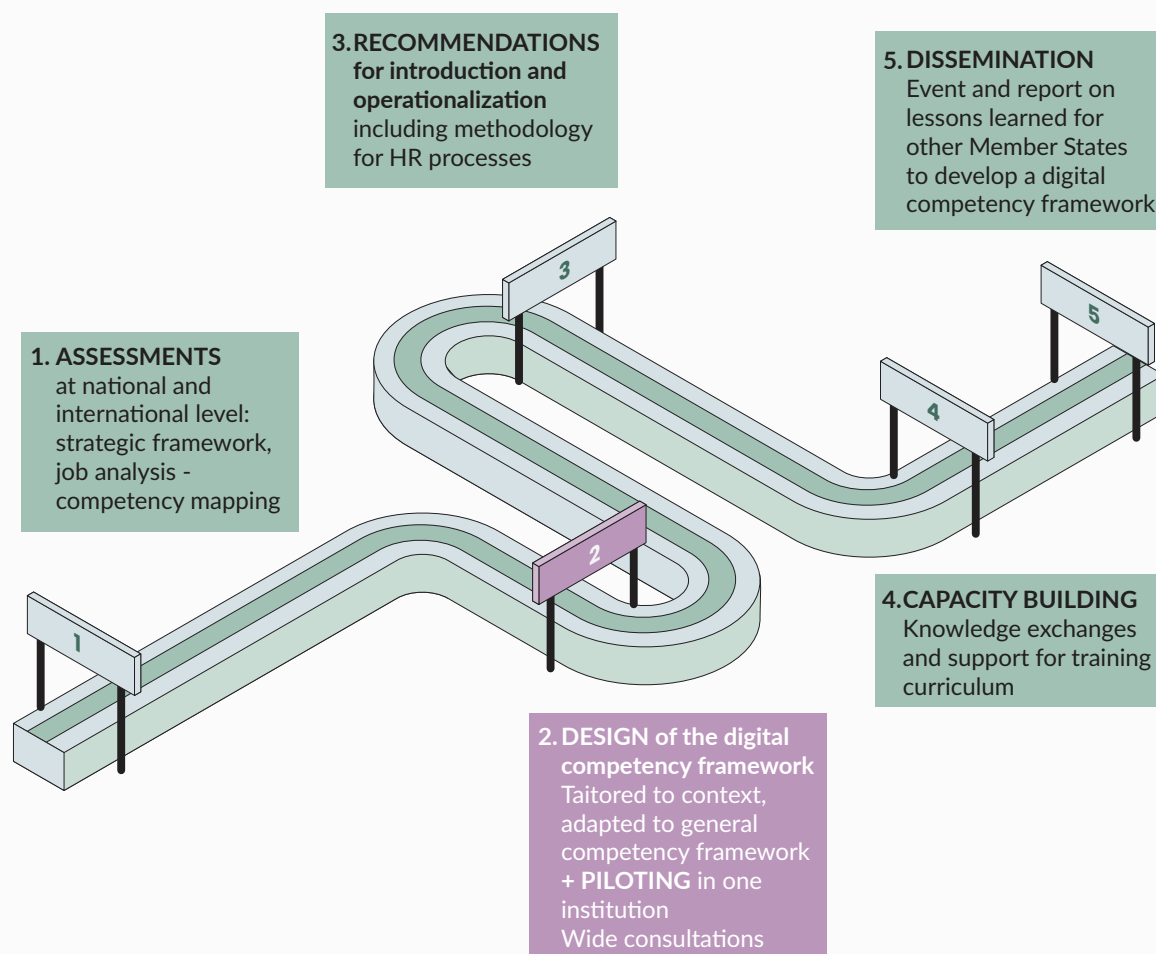
Source: Authors' elaboration

6. WB (2025), [Report on the assessment of the digital competencies needed in the Romanian public administration](#).

7. **In addition, a comprehensive design process was structured (as detailed in this report), combining piloting and consultation phases** to ensure the framework is both evidence-based and grounded in institutional realities.
8. **The project was designed to complement and build on ongoing HRM reforms supported by the Bank's technical assistance.** Strong synergies exist between the TSI project on developing a general digital competency framework for civil servants and the Reimbursable Advisory Services (RAS) on Support to NACS for HRM reforms, which aim to modernize HRM processes across the public administration. Digital competencies are central to these reforms, particularly for advancing strategic workforce planning and future learning programs. In addition, the framework builds on Bank assistance provided to the Ministry of Economy under the Digital Skills Training for All Romanians RAS, which adapted the European DigComp 2.2 into DigComp RO, adopted through GEO 27/2025. Both DigComp 2.2 and DigComp RO provide essential reference points for defining the digital competencies relevant to Romania's public administration workforce.
9. **The TSI component "Developing a General Digital Competency Framework for Civil Servants in Romania" consists of five key activities, as detailed below:**
 - **Activity 1 encompasses an assessment of digital competencies needed**, combining a review of EU and national policies with job analysis and foresight, to identify digital competencies needed in the public administration over the short to long-term. It includes mapping digital competencies to existing and future civil service jobs through focus groups, interviews, and data analysis.
 - **Activity 2 focuses on designing the digital competency framework**, defining competency areas, and for each area the relevant knowledge, skills, and attitudes, as well as the applicable proficiency levels. This phase also includes a pilot exercise to test and update the framework and an ample consultation process with stakeholders to validate the framework.
 - **Activity 3 covers the development of recommendations for integrating the framework into the legal framework and into HRM processes**, including a methodology for the application of digital competencies in key HR processes.
 - **Activity 4 covers capacity building support** through study visits, the updating of training needs assessment methodologies, as well as the development of curriculum elements, and facilitating knowledge-sharing events.
 - **Activity 5 is aimed to facilitating knowledge sharing**, by developing a final report on lessons learned for other Member States to develop a digital competency framework based on the Romanian model. A final learning and dissemination event with relevant national stakeholders and experts from other EU countries will explore the relevance of Romania's digital competency framework in the EU context.
10. **This report constitutes Output 2 under the TSI project and proposes the digital competency framework model for the Romanian civil service.** The report is also complemented by a *Connected Report with recommendations on the specialized ICT roles and ICT job classification for the Romanian public administration*. **Output 3** (*Recommendations for introductions and operationalization*) and **Output 4** (*TNA methodology and support for training curriculum*) build upon this report, supporting the framework's implementation and operationalization.



FIGURE 5: TSI project intervention logic: this report corresponds to Activity 2



Source: Authors' elaboration

1.2 Scope of the report

11. **The current report outlines the structure, rationale, and design process for the development of the digital competency framework designed for Romania's civil service.** The framework defines digital competency as the knowledge, skills, and attitudes required across the public administration, responding to both current operational needs and the ambition for a digitally enabled state. It provides a unified yet flexible system that can support training, recruitment, performance development, and strategic workforce planning.
12. **In that sense, the purpose of the report is threefold:**
 - I. to present the draft framework, including the competency areas, individual competencies, descriptors, and associated complexity levels (A-B-C);
 - II. to document the design process and justify key choices, particularly those based on inputs from the inter-institutional HR Working Group formed to support this TSI, and
 - III. to highlight the compatibility with the general competency framework for civil servants.

13. **Recommendations included in this report do not address operational or implementation aspects**, such as institutional roles and responsibilities, integration with core HRM processes (recruitment, training, performance evaluation), or capacity-building requirements. These elements are covered separately and consolidated in Output 3 of the TSI project, which will focus specifically on translating the framework into legally anchored and practically applicable HR instruments.

1.3 Methodological approach

14. **The proposed digital competency framework model builds directly on the analytical work conducted under the TSI project under Output 1**, which provided the empirical foundation for both the structure and content of the model. Key features from Output 1 and assessment pillars are briefly mapped in the box below, along with key findings and recommendations.



BOX 1: Key findings and recommendations resulting from Output 1



Top-Down legal and strategic mapping

Rationale of the assessment:

The development of the public administration capabilities needs to ensure alignment with national policy and legal instruments, including national commitments in the area of digitalization, the National Cybersecurity Strategy, Law 242/2022 on interoperability and other legislation (as mapped under Output 1), ADR digital maturity framework, and institutional strategic plans 2025–2028.

Key findings:

- Romania's public administration operates within a complex digital regulatory environment, shaped by recent EU legislation (e.g. DSA, DMA, AI Act, Cyber Resilience Act), which requires civil servants to possess not only foundational digital skills but also specialized competencies in areas such as AI governance, cybersecurity, and data protection.
- The national legal and policy framework for HRM reform remains fragmented. While Romania has a general competency framework for civil servants, digital competencies are not yet systematically defined or embedded in HR processes (recruitment, training).
- Institutional mandates for digital skills development are unclear. NACS, ADR, and INA each play important roles, but overlapping responsibilities and limited coordination hinder strategic planning. For example, while NACS leads HRM modernization, it lacks formal authority over digital skills policy. ADR's Digital Transformation Strategy remains unadopted, and INA's training role is constrained by limited resources.
- There is no national digital skills plan for the public administration. As a result, efforts such as the NRRP-funded digital training program for 30,000 civil servants lack sustainability and strategic alignment.

Key conclusion:

The future digital competency framework model needs to balance relevance with feasibility. The top-down assessment revealed that the implementation of the current strategic and legislative framework necessitates a wide range of digital skills that the public administration should be equipped with in order to support the digital transformation agenda. Digital competencies should be differentiated at least between general execution level jobs and managerial jobs, to ensure that managers could be capacitated to provide direction and lead sectoral reforms while integrating digital components.



Bottom-Up institutional assessment

Rationale:

The job analysis process needs to guide the relevance and feasibility of the future digital competency framework model and of its implementation. The Bank team, supported by the HR Working group, conducted a comprehensive mapping of over 2,380 job descriptions across 20 central public institutions; structured focus groups, interviews, and workshops with HR units, managers, and experts to capture real job tasks and implicit digital skill needs. In addition, The Bank team used Natural Language Processing (NLP) and AI-assisted techniques to extract, classify, and cluster digital competency needs directly from Romanian job descriptions.

Key findings:

- Job descriptions across 20 central public institutions show significant inconsistency in digital skill requirements. While 74% reference Microsoft Office, critical competencies, like cybersecurity, data analytics, or digital service design, are rarely mentioned. 15% make no reference to digital skills at all.
- Many digital skills are implicit rather than clearly defined, making it difficult to integrate them into structured HR processes.
- There is a lack of defined ICT roles and career paths. Current salary structures and job classification systems make it difficult to attract and retain skilled IT professionals, resulting in high turnover, outdated systems, and growing operational risks.
- Advanced digital skills are rarely linked to structured upskilling paths, certifications, or strategic workforce planning. Outdated job descriptions and limited investment in training further widen the skills gap.
- A preliminary set of general digital competency areas was identified, including Digital literacy and information management, Secure digital communication and collaboration, Cybersecurity and data protection, Digital service delivery and automation, Data analysis and decision support, Digital transformation and governance, Emerging technologies and innovation.

Key conclusion:

The digital competency framework is expected to be easily correlated with the existing general competency framework model, but subsequent adjustment of the specific digital competencies already defined by institutions will be needed. Job descriptions will need to be updated to reflect general digital competencies and, if needed, specific ones, derived from job analysis. Given the status quo, considerable efforts will be needed in training to facilitate the introduction of the general competency framework model, without cascading digital competencies across all HR processes. Recommendations will be available in Output 3.



International Benchmarking

Rationale:

The future digital competency framework is expected to be aligned with international best practice and relevant European models that are already mature and have proved their value in practical application. The Bank team conducted a comparative analysis of international frameworks: DigComp 2.2, Spanish and Italian DigComp Public Sector adaptations, UNESCO framework on AI and Digital Transformation, Apolitical, e-CF, ECSF, and SFIA frameworks.

Key findings:

- Most EU countries are still in early stages of defining digital competencies for public administrations. Only five (e.g., Spain, Italy, Denmark, Finland, UK) have developed structured frameworks.
- Spain and Italy provide strong models. Both have adapted DigComp 2.2 to national contexts, developed solid frameworks, and linked them to digital training platforms and certification systems (e.g., Spain's AgeDigital and Digital Skills Certification Platform BAIT; Italy's "Nuove Competenze" and Syllabus platform).
- Countries usually differentiate between: (1) General digital competencies for all staff, (2) Specialized ICT roles with technical skill profiles, (3) Leadership and transformation roles focusing on digital change and governance.
- International models emphasize the importance of: (1) Regular framework updates, (2) Tailored training programs, (3) Self-assessment and certification tools, and (4) Clear governance structures and role coordination.

Key conclusion:

The digital competency framework developed for the public administration in Romania needs to closely mirror DigCompRO and the recent DigComp 3.0 update⁷. It also needs to be linked to training and certification systems, as seen in Spain and Italy. International experience clearly shows that digital competencies are not integrated across all HR processes, but is primarily prioritized in training, which is also the recommended direction for Romania.



Foresight exercise on future roles

Rationale:

The digital competency framework developed for the Romanian public administration is expected to be not only relevant for current needs, but also supportive of future digital transformation efforts. As part of a dedicated foresight exercise, the Bank team worked with international experts from the JRC and Prospectiva to anticipate emerging public sector digital skills needed and roles (e.g. AI policy, predictive governance, citizen participation platforms, blockchain, digital ethics governance, integrated foresight tools).

Key findings:

- By 2032, Romania's public administration will require a mix of strategic, operational, and technical digital roles: (1) ICT-intensive: cybersecurity analysts, cloud engineers, AI governance experts, (2) ICT-enhanced: digital transformation officers, smart city managers, (3) ICT-dependent: service designers, user experience experts, data analysts.
- The foresight confirms the need for a competency framework that allows differentiating skill sets and levels by function and level of digital engagement.
- Strategic roles, such as Digital Transformation Leaders, must combine governance, change management, and policy expertise, bridging the gap between generalist and specialist functions.

Key conclusion:

Given the growing demand for ICT-intensive (e.g. IT professionals), ICT-enhanced, and ICT-dependent roles, Romania needs to future-proof its public workforce by anticipating emerging functions and technologies. A dedicated area in digital transformation is supportive of adaptations needed in the public administration to support the digital transformation agenda in the future.

Source: WB (2025), Report on the assessment of the digital competencies needed in the Romanian public administration, available at <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099071725093059745/p506325-5d25a447-aa60-4b9e-aad0-a7193167bc98>.

15. **In addition, the design process relied on an iterative technical process of collaboration with the HR Working Group.** Consistent participation was ensured by HR experts throughout the process, with over 20 people attending each session and ensuring adequate representation across the central public administration. Four working group meetings were conducted as part of the design phase, between February and June 2025:⁷

- **4 February 2025.** The meeting focused on discussing assessment from phase 1 that informed the design process, presenting the DigComp 2.2 framework. Participants were invited to focus on selected competencies and descriptors from DigComp and the Digital Maturity Framework, and to indicate if they are applicable or not to civil service jobs and, in case they are applicable, if the relevant skills/behaviors/knowledge are expected to be tested at entry or to be in focus only after the entry into the civil service. This exercise helped the selection of relevant concepts that were analyzed by the Bank team and also provided insights to inform recommendations regarding the operationalization of the digital competency framework. The exercise reconfirmed the validity of the DigComp model and structure also for public administration HR purposes (showing an alignment

7. COSGROVE, J. and CACHIA, R., DigComp 3.0: European Digital Competence Framework - Fifth Edition, Publications Office of the European Union, Luxembourg, 2025.

in terms of existing descriptors of over 60%, even if the respective DigComp 2.2 descriptors were not public administration specific).

- **20 March 2025.** Focus remained on competency content and on relevant descriptors, with a view to inform a correct scoping of areas and competencies applicable across the entire civil service. Participants were given relevant descriptors selected from frameworks analyzed (for example from UNESCO, Spanish digital competency framework for public administration (PA), the Digital Maturity model developed by ADR, prioritized based on the key concepts derived from the assessment results reflected in Output 1). Participants worked on mapping relevant descriptors that are compatible with the activities and requirements of the majority of civil service jobs. An excerpt of the list of descriptors and questions is included below, in Figure 6. Following that, the participants were invited to map areas of digital competencies across the general competencies already applicable in the Romanian civil service (Figure 7).



FIGURE 6: Excerpt from the HR Working Group activities

DigCompRo COMPETENCE	Statement	Should this be included in the model	Only for specialised
1.1. Searching and accessing data, information and digital content	I know how to use web portals to download information and subscribe to newsletters or mailing lists of interest to my professional work.		
1.2. Evaluating data, information and digital content	Before accessing an unfamiliar website, be sure to check the reputation of the site using browser tools or specific online tools.		
1.2. Evaluating data, information and digital content	I analyse the provenance, reliability and authorship, as well as the licence of use, of professional resources I find on the internet before using them in my work.		

Is something totally missing?
Write it on a post-it

Scoping: in or out?
"X" if in = general digital competence
If only for specialist, "X"



FIGURE 7: Excerpt from exercise on mapping digital competencies from DigComp to general competencies from the Administrative Code

CLASS	KSA	KSA Description text	General competence
BROWSING, SEARCHING AND FILTERING DATA, INFORMATION AND DIGITAL CONTENT	Knowledge	1. He/she knows that some online content in search results may not be freely accessible or free of charge and may require a fee or registration to access.	Problem solving and decision making
BROWSING, SEARCHING AND FILTERING DATA, INFORMATION AND DIGITAL CONTENT	Knowledge	2.He/she is aware that some online content available without monetary costs is funded through advertising or by selling users' data.	Problem solving and decision making

→ **7 May 2025.** The meeting focused on exploring the structure the digital competency framework model clearly separating IT related professional competences from those expected from all civil servants. The conceptual model was discussed. An excerpt is included below, in Figure 8. A preliminary draft of the model was presented to the HR Working Group, including the digital competency areas, the list of competencies and selected descriptors. For selected descriptors, the group explored the relevant public administration terminology (see example in Figure 9). Area 7 for managers was discussed as a stand-alone topic, to ensure a general understanding that the proposed model applies across the entire civil service, but that managerial jobs require additional digital competencies. Participants were given a set of 50 behaviors, skills and knowledge elements corresponding to managerial jobs and were invited to mark as general or specific and to identify the relevant hierarchical level. The exercise allowed the testing by the Bank experts of the option of proposing a distinct area for managers, with competency descriptors evolving along the logic of hierarchical managerial levels.



FIGURE 8: General conceptual model summarized for HR Working Group participants

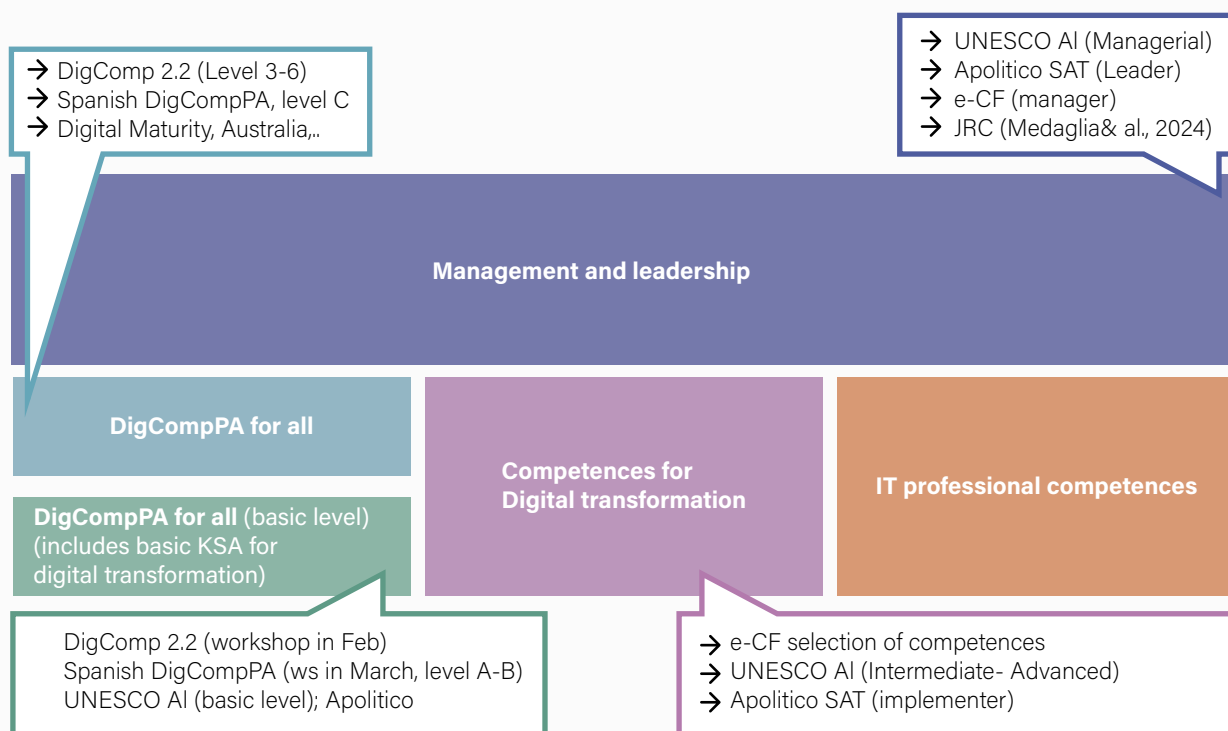


FIGURE 9: Example of descriptors discussed in the HR Working Group, to test terminology

1.2 Evaluating data, information and digital content

- To analyse, compare, and critically evaluate the credibility and reliability of sources of data, information, and digital content. To analyse, interpret, and critically evaluate them for specific needs, e.g. policy purposes, monitoring, performance measures.
- Recognise that data-driven decision-making can address problems through the use, analysis and interpretation of data that measures underlying phenomena; using data to promote evidence-led policymaking.

- **11 June 2025.** A detailed exercise was proposed to HR experts, involving a long set of descriptors, building on all previous technical sessions. The descriptors were mapped to the general digital competencies and participants were divided in subgroups and were invited to reconfirm whether the descriptors are general (relevant for a general framework) or specific (and therefore not applicable to all jobs) and to explore the proficiency level on the scale A – B – C. The exercise allowed the confirmation of the ease in applying a simple scale with three levels and allowed further refining of descriptors.

16. **The series of working group meetings conducted as part of the framework development process also played a critical role in surfacing key design and implementation concerns.** These exchanges enabled the Bank team to better understand the expectations of HR experts and strategic planning experts from the central public administration and the practical constraints for future application. Key takeaways are summarized below and are addressed in Outputs 2, 3 and 4.

- **A prominent concern raised was the need for credible systems of recognition, validation, and certification of digital competencies,** particularly to ensure that demonstrated proficiency is acknowledged both internally and externally. These mechanisms are addressed in detail under **Output 3**, with recommendations covering possible institutional responsibilities, certification formats, and validation pathways for different levels of digital competence.
- **Another important insight from the consultations was the general hesitation to apply the digital competency framework uniformly across all HRM processes in public administration.** Civil servants expressed concerns about the feasibility and added burden of integrating digital competencies in all recruitment, evaluation, and promotion practices. Instead, participants generally agreed that the use of the framework should be prioritized, with particular emphasis on its relevance for training needs analysis and learning pathways. Recruitment should also continue to test digital competencies, but as a distinct area, as currently approached. This feedback also reflects international practice, where digital competencies are typically used to shape targeted upskilling and reskilling strategies and are not necessarily prioritized, for example, in the performance appraisal processes.
- **Discussions also led to a preliminary recommendation that the digital competency framework should be designed as a stand-alone construction, however compatible and linked to the general competency framework** for Romania's public administration but not necessarily subsumed under it. This dual approach would enable institutions to signal the transversal importance of digital competencies while preserving the conceptual clarity and practical usability of each model. By showing where general digital competencies intersect with the behavioral expectations of civil servants at different hierarchical levels, the framework can support alignment without adding too much complexity and unnecessary burden on HR staff, managers and the wider civil service.
- **HR experts from selected institutions also cautioned against merging digital competency descriptors into each general competency framework currently regulated under the Administrative Code.** Such an approach would likely lead to confusion in interpretation and generate unnecessary complexity that could limit flexibility and future application. Importantly, it may also hinder the evolution of the digital competency model as technologies and institutional needs change. These issues and corresponding operational recommendations are addressed in Output 3.

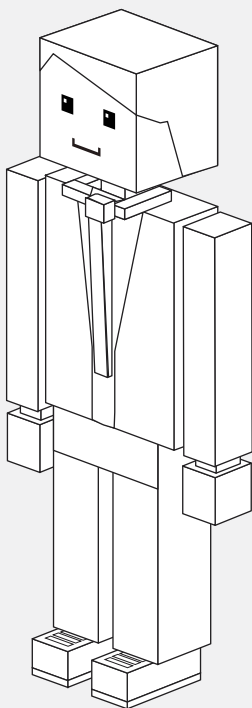
1.4 The testing of the proposed digital competency framework as part of a pilot process

17. **A pilot process was also conducted to test the practical relevance, clarity, and calibration of the proposed general digital competency framework** against real job profiles in the Romanian public administration, and to assess whether both the general competency structure and the proposed specialized ICT roles reflect operational needs. The objectives were threefold: (i) to validate the types of competencies and their clustering across the seven framework areas and three proficiency levels (A–B–C); (ii) to calibrate the proposed ICT specialist role profiles and assess their potential alignment with existing positions and workforce-planning needs; and (iii) to gather additional evidence to inform recommendations on the phased implementation of the proposed framework.
18. **The pilot targeted a broad functional coverage across the participating institutions, to ensure that findings reflected the diversity of roles and work processes** within the Romanian public administration. Fieldwork was conducted in three public authorities: the Ministry of Labour, Family, Youth and Social Solidarity (MLFYSS); the National House of Pensions (CNPP) and Bucharest Pension House (including the six sector pension houses); and the Ministry of Economy, Digitalization, Entrepreneurship and Tourism (MEDET).
19. **Across the participating institutions, a total of 22 interviews were held - primarily group discussions, complemented by individual interviews, and over 800 positions were covered through interviews and department-level analyses.** These included 328 roles at the Ministry of Labour, approximately 110 roles at CNPP, around 390 roles in Bucharest Pension Houses, and targeted digital transformation roles at MEDET. This breadth ensured representation of policy functions, service delivery units, support services, and ICT teams, providing a robust cross-section of large and operationally diverse public organizations.
20. **Overall, the pilot methodology ensured proportional coverage, minimized administrative burden on institutions, and produced evidence grounded in real operational contexts.** This approach strengthened the validity of the framework calibration, supported refinement of competency descriptors and ICT role profiles, and provided a reliable basis for subsequent recommendations on HRM integration and workforce development planning. The pilot followed a streamlined three-step methodology:
 - First, the team carried out institutional and role analysis based on organizational regulations, departmental mandates, and existing job descriptions (including materials collected under Activity 1 of the TSI project), to gain a better understanding of the operating environment.
 - Second, structured interviews were undertaken using a questionnaire covering all 22 competencies of the digital competency framework across the three proficiency levels. These discussions tested the clarity and applicability of descriptors and gathered evidence on actual digital task patterns and current practices.
 - Third, a dedicated exercise focused on ICT roles, involving targeted interviews with ICT staff and simulated mapping of existing positions against the proposed ICT role classification, while also identifying additional potential roles driven by digital transformation needs.
21. **During interviews, respondents assessed both current relevance and future relevance for each competency and proficiency level, using a standardized 1–5 scale, where 1 indicated “not relevant” and 5 indicated “critically relevant.”** Relevance referred to the importance of the competency for job performance, even where current systems or workflows did not yet enable its full application, allowing recognition of both conceptual usefulness and future preparedness. The comparison between

current and future ratings generated a “relevance shift” indicator, highlighting anticipated changes in importance driven by ongoing reforms and digitalization.

22. **Data was analyzed across three layers:** the overall framework level (general trends and baseline metrics), institution level (comparative snapshots across participating authorities, anonymized below department level), and functional level distinguishing core business units from support services. For each layer, analysis examined mean relevance scores, relevance shifts, and the distribution of ratings across proficiency levels A, B, and C.
23. **The evidence collected from the pilot allowed the team to fine-tune digital leadership competencies, confirm the need for minimum legal thresholds and flexible advanced levels, and generate targeted evidence for ICT capacity-building.** Following the pilot process, a set of targeted adjustments was identified for several descriptors under Area 7 – Digital Leadership and Governance, particularly to improve clarity, calibration, and alignment with real managerial practices. The pilot also generated evidence supporting the need for a more flexible application of proficiency Levels B and C, allowing institutions to tailor expectations based on organizational mandate, digital maturity, and management structures, rather than imposing uniform requirements across all entities. In parallel, findings confirmed the value of establishing in the regulatory framework a minimum digital competency threshold to be prioritized during the first phase of training and capacity-building, ensuring a common baseline across the civil service. Finally, the pilot enabled the formulation of institution-specific conclusions on ICT capacity gaps, particularly within internal ICT departments; tailored summary notes capturing these findings were prepared and shared individually with each participating institution to support more targeted workforce planning and development actions.
24. **A detailed analysis of the pilot results is included in Annex 2.**

II. The proposed general digital competency framework



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2.1 Considerations regarding the general definition of digital competencies

Current national context: definition of digital competence in the Romanian civil service

25. **The current legal framework⁸ artificially differentiates between *theoretical IT knowledge* and *digital competencies*.** A more detailed review of the current national legislation defining digital competencies for the public administration was included in Output 1⁹. Two concepts are defined, which are not clearly delineated in terms of coverage: (i) *theoretical IT knowledge* is treated as a form of general knowledge and constitutes a universal prerequisite for entering the civil service (being assessed in the national recruitment system for the “beginner user” level similar to the ECDL or ICDL certification levels¹⁰), with responsibility lying entirely with the candidate; and (ii) *digital competencies* are defined as specific competences, required only for certain positions, as identified by various institutions; these are therefore expected to be tested in the second phase of the job based selection process, by institutions, and also in the various HR processes in which specific competencies are targeted (promotion, mobility, performance appraisal).
26. **The general competency framework for civil servants is defined under the Administrative Code (OUG 57/2019), with Annex 8 listing the general competencies common to all positions** and also defining what specific competencies are as a category. This framework is mandatory for recruitment, selection, performance appraisal, promotion, and mobility. NACS oversees its application and reviews specific competencies proposed by public institutions. In 2024, NACS issued Order no. 332/2024, providing a Methodology-Framework for Job Analysis, which serves as a procedural manual for identifying and approving specific competencies.
27. **Despite these advances, the current legal definition and systematization of digital competence remain narrow and current HR practice is inconsistent, as shown in Output 1.** The most common reference is a generic “digital competency” included in job descriptions, typically understood as the ability to operate basic office software or use institutional platforms. While this covers fundamental ICT literacy, it omits more advanced or role-specific competencies, such as data governance, digital collaboration, cybersecurity awareness, AI integration, or digital service design, which are increasingly essential in a modern public administration.

International and EU perspectives on defining digital competencies

28. **At EU level, there is no framework dedicated exclusively to public administrations, but two established instruments provide useful guidance.** DigComp 2.2 defines 21 competences across five domains and eight proficiency levels, while the European e-Competence Framework (e-CF) specifies the skills required of ICT professionals. Although designed for broader audiences, both have been successfully adapted in countries such as Spain and Italy, where role-specific competences are linked to training and certification platforms. These experiences suggest practical entry points for Romania to design its own model while ensuring consistency with EU standards.
29. **At the international level, several organizations have advanced models for public sector digital competences.** As shown in the review of international strategic framework and international experience included in Output 1,

8. Administrative Code, Government Emergency Ordinance no. 57/2019.

9. WB (2025), Output 1, Report on the assessment of the digital competencies needed in the Romanian civil service, section 3.5.

10. According to Article 47(3) of Annex No 10 to GEO No 57/2019 on the Administrative Code.

the OECD highlights a progression from basic literacy to advanced leadership, with emphasis on user-centered design, responsible data use, and collaborative delivery. Output 1 stresses the need to combine foundational skills with advanced capabilities in data-driven decision-making, cybersecurity, and digital communication. UNESCO goes further by integrating technical and managerial skills with “digital attitudes” such as adaptability, creativity, and trust, recognizing that sustainable transformation depends as much on mindset and culture as on technical expertise.

30. **The table below summarizes the main definitions and thematic emphases across international and EU frameworks.** These frameworks serve as key references for defining general digital competencies. Taken together, they show that a comprehensive approach must integrate knowledge, skills, and attitudes, while covering the full spectrum of digital dimensions, from basic literacy and data use to communication, cybersecurity, AI, and digital leadership. They also prove that a robust definition of digital competencies for Romania’s public administration should reflect both the technical and behavioral aspects of digital transformation, as well as the attitudinal ones. While no single international model can be fully transposed, the above-mentioned existing frameworks provided valuable reference points for both the scope of competences and the way they are categorized, described, and applied.



TABLE 1: Comparative overview of key international and EU digital Competence Frameworks and definitions

Organisation / Framework	Target group	Descriptive overview	Scope	Main focus
OECD, Framework for Digital Talent and Skills in the Public Sector (2021)¹¹	Public sector workforce	Digital competencies are defined as a multi-tiered collection of foundational digital literacy, user-level skills, socio-emotional capacities, professional technical abilities, and leadership competencies designed to ensure public servants can effectively operate within and contribute to a digitally mature public sector.	Embedding digital capability across public sector roles.	→ Digital government user skills → Socio-emotional skills → Professional skills → Leadership skills → 21st-century skills (e.g., using digital tools, critical thinking, communication, collaboration).
World Bank, GovTech Maturity Index (2022); Digital Progress and Trends Report (2023)	Public sector workforce	Digital competencies can be defined as the practical abilities and institutional capacities needed by public servants to use, manage, and innovate with digital technologies. They include basic skills for accessing and using digital tools and services, advanced technical skills such as programming and application development ¹² , and the broader organizational capability to leverage digital public infrastructure (e.g. identity systems, data platforms, AI tools) to enhance governance, service delivery, and citizen engagement ¹³ .	Linking digital competencies to GovTech maturity and digital public infrastructure.	→ Foundational digital literacy → Data-driven decision-making → Cybersecurity awareness → Digital communication

11. OECD, [The OECD Framework for digital talent and skills in the public sector](#), 2021.

12. In the context of the GovTech Maturity Index, digital competencies are discussed in relation with the broader enabling environment that supports digital government maturity – for details please see [World Bank, GovTech Maturity Index - Trends in Public Sector Digital Transformation Report](#), 2022.

13. World Bank, [Digital Progress and Trends Report](#), 2023. The report emphasizes the central role of digital public infrastructure (DPI), such as identity platforms, data sharing architectures, and digital services, in enabling equitable digital development. While this report does not strictly define competencies, it underscores the need for public institutions to have the capabilities to build, manage, and utilize DPI effectively, including navigating advances in areas like AI and cloud computing.

Organisation / Framework	Target group	Descriptive overview	Scope	Main focus
UNESCO, AI and Digital Transformation Competency Framework (2022)	Civil servants	Digital competencies can be defined as ¹⁴ the knowledge, skills, and attitudes that enable civil servants to plan and design digital transformation, use and govern data responsibly, and manage or execute digital initiatives in ways that are ethical, inclusive, and citizen-centric. They encompass not only technical literacy (e.g. data use, AI awareness, digital service design) but also attitudinal dimensions such as trust, adaptability, creativity, curiosity, and experimentation.	Enabling inclusive, ethical, and future-oriented digital transformation of public administration.	→ Digital planning and design → Data use and governance → Digital management and execution
European Commission, DigComp 2.2 Framework (2022)	General population	"Digital competence involves the confident, critical and responsible use of, and engagement with, digital technologies for learning, at work, and for participation in society. It includes information and data literacy, communication and collaboration, media literacy, digital content creation (including programming), safety (including digital well-being and competences related to cybersecurity), intellectual property related questions, problem solving and critical thinking." ¹⁵	EU-wide reference for digital competence in education, assessment, and policy.	→ Information and data literacy → Communication and collaboration → Digital content creation → Safety → Problem-solving
CEN, European e-Competence Framework v.4.0 (2019)	ICT professionals	Digital competences are defined as the knowledge, skills, and attitudes required by ICT professionals to plan, build, run, enable, and manage information and communication technology in a professional context ¹⁶ .	Harmonises ICT roles and competence expectations across European countries.	→ Plan (A. Strategy and planning) → Build (B. Development) → Run (C. Service and operations) → Enable (D. Support) → Manage (E. Management)

14. Definition summarized by authors based on the detailed framework from UNESCO, [Artificial intelligence and digital transformation: competencies for civil servants](#), 2022.

15. Definition extracted from Vuorikari, R., Kluzer, S. and Punie, Y., [DigComp 2.2: The Digital Competence Framework for Citizens](#), Publications Office of the European Union, Luxembourg, 2022, ISBN 978-92-76-48882-8, doi:10.2760/115376, JRC128415.

16. [European e-Competence Framework](#).

Suggested definition for digital competences in the Romanian public administration

31. **Building on international and EU-level definitions, the following is proposed as the definition of digital competence in the public administration:**

Digital competence in the Romanian public administration is the confident, critical, responsible, and effective use of digital technologies, data, and information systems to deliver, innovate, and improve public services, in ways that are secure, ethical, inclusive, and aligned with national and European digital transformation objectives. It encompasses the knowledge, skills, and attitudes required to access, evaluate, create, and manage digital resources; collaborate and communicate effectively in digital environments; ensure data protection, cybersecurity, and ethical AI use; leverage data and digital infrastructures for evidence-based policymaking, citizen engagement, and organizational transformation; and adapt to emerging technologies and evolving societal needs.

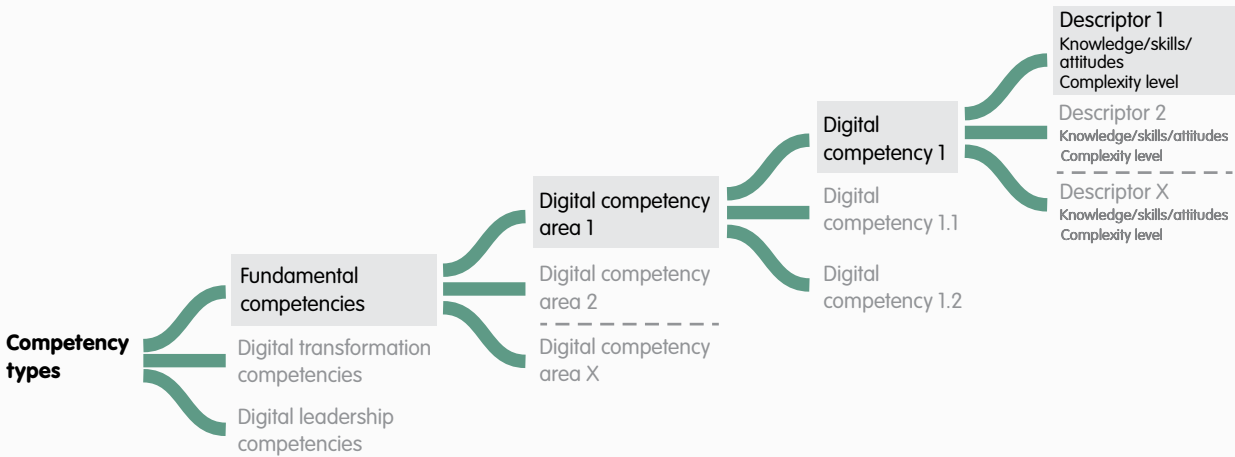
32. **The proposed Romanian definition aligns in broad terms with the principles and structures found in major international and European digital competence frameworks,** building mainly on DigComp and adapting key elements from the other relevant frameworks, while being specifically adapted to the context and mission of the civil service in the Romanian context.

2.2 Structure and content of the digital competency framework

33. **The framework developed for the Romanian public administration combines two structural dimensions to capture the digital competencies required.** First, it distinguishes between three types of competencies: fundamental digital skills expected of all civil servants; specialized, non-IT skills linked to digital transformation; and managerial competencies needed for leadership and strategic oversight. Second, it applies a modular structure that organizes competencies into thematic areas, defines them clearly, and describes them across three progressive levels of complexity (basic, intermediate, advanced). Each competency is further detailed through descriptors covering knowledge, skills, and attitudes, allowing for self-assessment, structured evaluation, and training design.



FIGURE 10: Proposed digital competency framework



Source: Author's elaboration

34. **In terms of competency types, three types of digital competencies are defined based on their thematic focus and scope:**
- *Fundamental competencies: essential digital skills expected of all civil servants, enabling them to operate effectively in a digitally enabled environment. These competencies ensure close alignment with DigComp 2.2 and the recent DigComp 3.0 update.*
 - *Digital transformation-related competencies: specialized, yet non-IT competencies, that apply to all civil servants, but are not meant to be tested in recruitment. These are meant to support the design, implementation, or facilitation of digital transformation processes within institutions.*
 - *Managerial digital competencies: competencies specific to civil servants in leadership or supervisory roles, focusing on the strategic and organizational aspects of digital transformation.*
35. **In terms of structure, the modular structure proposed mirrors international best practice, including the following elements:**
- **Competency areas:** broad clusters that group related competencies under a common thematic dimension.
 - **Competencies:** defined within each area, each with a title and a clear definition describing the core capability and its scope.
 - **Proficiency levels:** each competency is described across three progressive levels:
 - *Level A, Basic:* expected of all users; covers foundational knowledge, skills and attitudes enabling a routine use of digital tools.
 - *Level B, Intermediate:* reflects more autonomous use, adaptation to different contexts, and the ability to support to others.
 - *Level C, Advanced:* involves strategic use, innovation, or oversight in digital domains.
36. **Each competency is further detailed through descriptors that reflect the required knowledge, skills, and attitudes** at each level of proficiency, supporting both self-assessment and structured evaluation, and creation of training content.

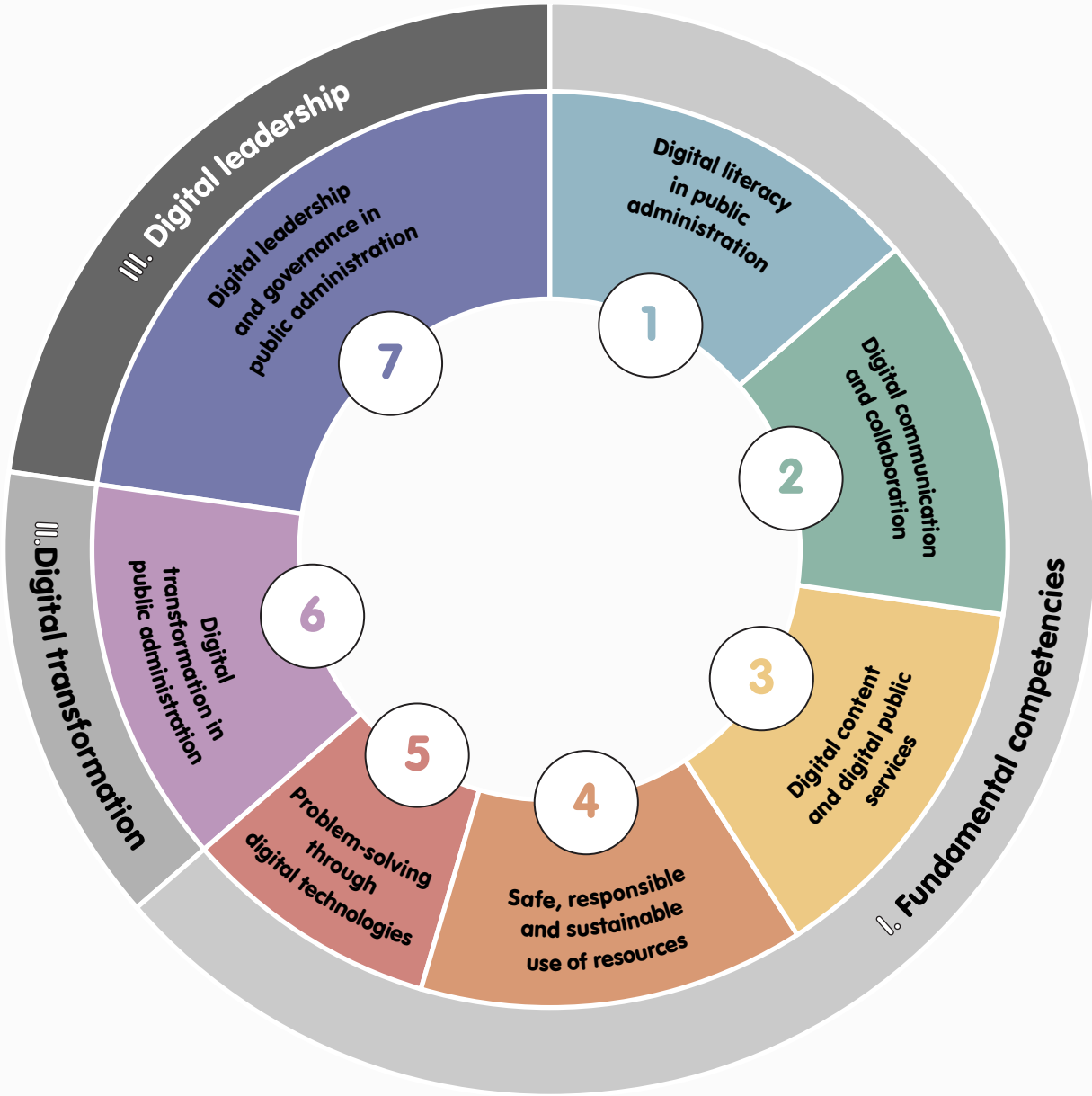
2.2.1 Competency types

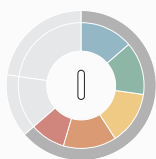
37. **The proposed competency types are meant to reflect the technical and also the hierarchical dimensions of the civil service.** The framework is organized into three distinct competency types:
- I. fundamental competencies (corresponding to Areas 1-5),
 - II. digital transformation competencies (Area 6) and
 - III. digital leadership competencies (Area 7).
38. **The proposed design closely mirrors DigComp to ensure traceability, ease of future updates, and adaptability to learning programs on digital competencies already available in various EU settings, while adapting it to the needs of Romania's public administration.** Areas 1-5 build on DigComp as the common reference for digital literacy, but they are not a direct transfer: new elements have been added (e.g. use of institutional systems, interoperability, responsible AI), and language and descriptors have been tailored to reflect the tasks, responsibilities, and compliance obligations of civil servants. The correspondence with DigComp is analyzed in Table 2 in the following section. While civil servants are also citizens, their professional digital competencies must be defined in terms that match their institutional roles, enabling them to apply digital skills in policy design, service delivery,

data governance, and citizen interaction. At the same time, the framework moves beyond basic digital literacy. International evidence (OECD, UNESCO, World Bank, as well as national frameworks such as Spain and Denmark) shows that public administrations also require competencies for driving digital transformation (Area 6) and for digital leadership and governance (Area 7). These additions ensure that civil servants are not only digitally literate users, but also agents of innovation and change, capable of leading teams, managing institutional risks, and aligning digital initiatives with national and European strategies. By combining adapted fundamental competencies with transformation- and leadership-oriented ones, the framework fills a critical gap in Romania’s HRM system, avoiding overlap with existing general competencies (such as “initiative”) and providing a structured, public-administration-specific reference for institutional digital capacity building.



FIGURE 11: Competency types in the proposed digital competency framework model



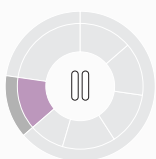


Fundamental competencies (Areas 1-5)

Scope and justification

These apply across the entire civil service, to all job profiles and institutional contexts, with varying levels of complexity. They represent the foundational digital knowledge, skills and attitudes all public servants are expected to demonstrate.

This category represents the **“what” and “how”** of digital work. It focuses on the functional, operational knowledge and abilities to use digital tools and handle information with the right purpose, in the right and safe way.



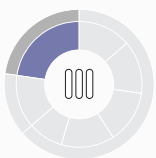
Digital transformation (Areas 6)

Scope and justification

A mindset- and change-oriented area that supports innovation and service improvement. Competencies in this area apply across all roles at A (sometimes B) level, but they can be adapted flexibly for some roles based on the extent of involvement in digital transformation teams/initiatives.

While additional specific roles for digital transformation and ICT will be defined, this area allows for easy mapping across the entire civil service, ensuring that the framework prioritizes digital transformation as a key priority in the public administration.

This category represents the **“why”** of digital work. It is more a behavioral and cultural competency focused on improvement, innovation, and adaptability. It answers the question: “Beyond fundamental competencies, how can civil servants contribute to make processes/ public services better, more effective by contributing to digital transformation?”



Digital leadership (Areas 7)

Scope and justification

Competencies in this area are exclusive to formal and functional leadership roles - such as project leads, technical, middle and senior managers.

Managers play a pivotal role in setting digital direction, enabling transformation, and ensuring that digital initiatives align with institutional goals. Their responsibilities go beyond individual digital proficiency; they are accountable for leading change, integrating digital tools into planning and performance management, ensuring responsible digital governance, and fostering innovation and team development.

Including a dedicated area for provides the basis for targeted capacity building and professional development, in line with Romania's administrative hierarchy and the broader HRM reform objectives. This differentiation helps bridge the gap between operational digital skills and the leadership capabilities needed to drive institutional transformation.

This category also covers the project managers who coordinate projects that have digital components, even if they are mapped to execution level civil service jobs. These roles often involve cross-functional coordination, oversight of digital tools or systems, and accountability for delivering results in a digital context. Including them ensures that critical coordination functions are equipped with the digital leadership competencies necessary to manage complexity and support organizational change.

This category represents the **“who” and “how”** of digital leadership in the public administration. It focuses on the general strategic, governance, and managerial capabilities required to integrate digital technologies into institutional strategies, ensure responsible digital governance, and lead teams toward innovative and efficient outcomes. It answers the question: “How can managers leverage digital tools and strategies to lead effectively, ensure accountability, and achieve institutional goals in a digital era?”

* This category should not be confounded with specialized managerial ICT roles mapped to ICT departments. ICT roles, including managerial, are described as specialized profiles in the Connected Report that accompanies Output 2.

2.2.2 Proposed digital competency areas and digital competencies for the Romanian public administration

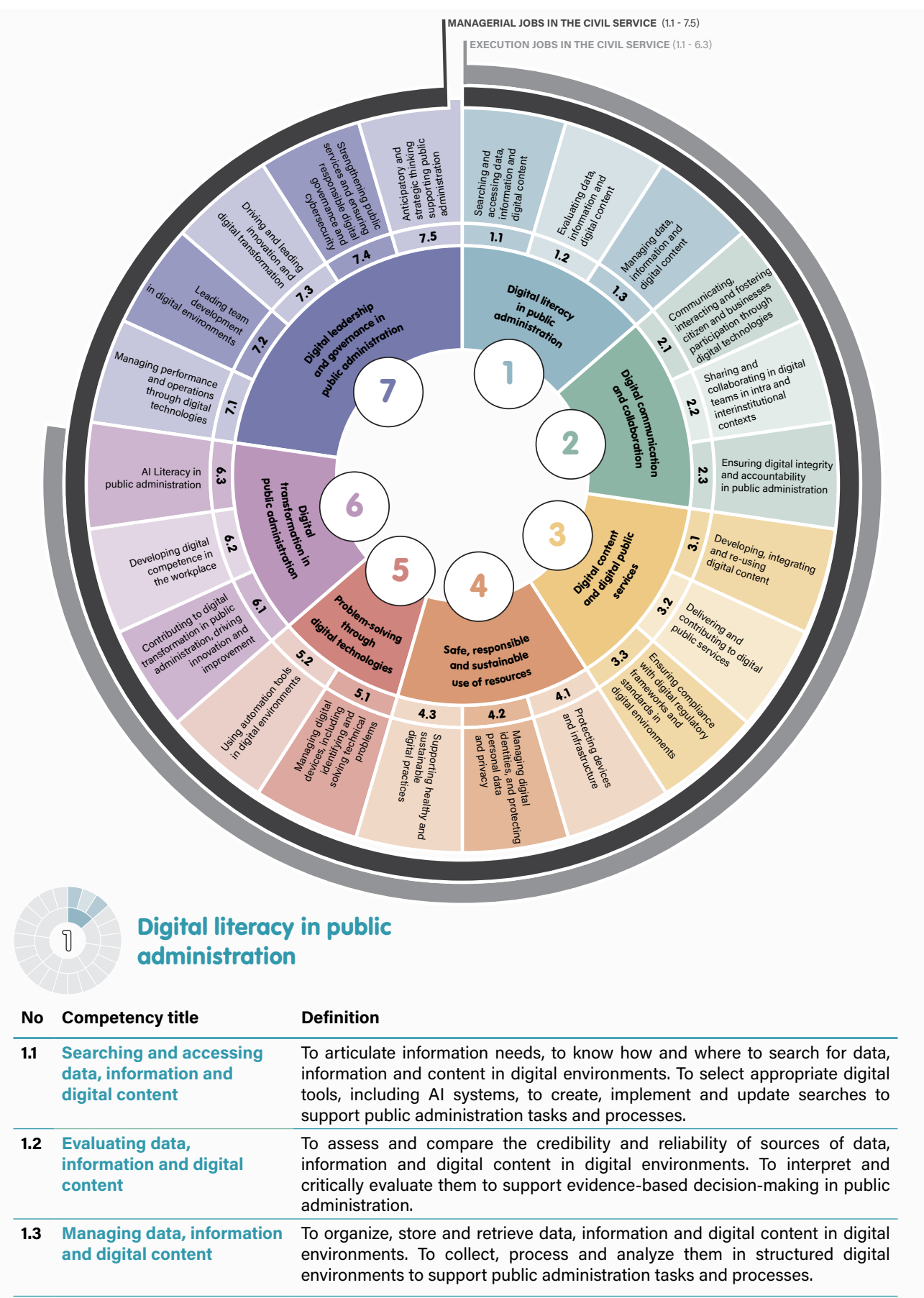
39. **This section introduces the proposed competency model with its areas and general digital competencies for the Romanian public administration.** The designed model builds upon various models analyzed as part of the assessment phase (Output 1). Although designed for Romania's administrative context, approximately one-third of all descriptors were directly inspired by established digital-competence and AI-governance frameworks for the public sector, including models and guidance from Australia¹⁷, Ireland¹⁸, Latvia¹⁹, Spain²⁰, UNESCO/ITU²¹, the JRC Policymaking Competence Framework²², Apolitical's AI Readiness Check²³, and the European Commission's AI literacy materials under the AI Act²⁴. The recently updated DigComp 3.0²⁵ allowed the integration of the most recent conceptual advancements in areas such as AI, data use, and digital safety. The framework also reflects the design work conducted with the HR Working Group.
40. **Figure 12 outlines the overall structure of the conceptual model, while the detailed descriptors - covering three levels of proficiency (A - basic, B - intermediate, C - advanced) - are presented in the Annexes.** Together, these elements provide a comprehensive reference for defining, assessing, and developing the digital capacities required across the civil service.

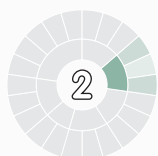
Note: To enhance transparency and usability, all descriptor sources, along with information on proficiency levels, descriptor types (knowledge, skill, attitude), and thematic tags such as AI relevance, are documented in a dedicated **accompanying spreadsheet**. This resource is intended to support training providers, curriculum developers, and institutional HR units by offering a structured and easily navigable evidence base for designing learning pathways and upskilling programmes aligned with the framework.

17. Australian Digital Capability Framework, 2022. <https://www.dewr.gov.au/skills-and-training/resources/australian-digital-capability-framework>
18. Guidelines for the Responsible Use of Artificial Intelligence in the Public Service by Department of Public Expenditure, NDP Delivery and Reform, Ireland, 2025
19. Public Administration digital skills and competences framework, Latvia, 2024
20. INAP, "Marco de Competencias Digitales," Spain, 2023. <https://www.inap.es/es/aprendizaje/ecosistema-competencial/marco-de-competencias-digitales>
21. UNESCO, Broadband Commission ITU, "Artificial intelligence and digital transformation: competencies for civil servants - UNESCO Digital Library," 2022. <https://unesdoc.unesco.org/ark:/48223/pf0000383325>
22. Schwendinger, F., Topp, L., Kovacs, V. Competences for Policymaking — Competence Frameworks for Policymakers and Researchers working on Public Policy, EUR 31115 EN, Publications Office of the European Union, Luxembourg, 2022, ISBN 978-92-76-53454-9, doi:10.2760/642121, JRC129623.
23. Apolitical, AI Readiness Check: <https://apolitical.co/en/pages/arc>
24. European Commission, AI Literacy - Questions & Answers, Definitions of article 4 and the AI Act, 2025 <https://digital-strategy.ec.europa.eu/en/faqs/ai-literacy-questions-answers>
25. Cosgrove, J. and Cachia, R., DigComp 3.0: European Digital Competence Framework - Fifth Edition, Publications Office of the European Union, Luxembourg, 2025, <https://data.europa.eu/doi/10.2760/0001149>, JRC144121



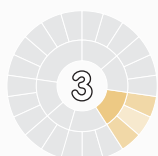
FIGURE 12: Proposed digital competency model: areas, competencies and their definitions





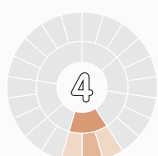
Digital communication and collaboration

No	Competency title	Definition
2.1	Communicating, interacting and fostering citizen and businesses participation through digital technologies	To communicate and interact with citizens and businesses through appropriate digital technologies to foster their engagement and trust in public administration. To adapt communication to specific contexts, and to ensure simplicity and clarity.
2.2	Sharing and collaborating in digital teams in intra and interinstitutional contexts	To share data, information and digital content responsibly with others through appropriate digital technologies, interoperability standards and open data initiatives. To use digital technologies for collaborative processes to support public administration tasks and workflows.
2.3	Ensuring digital integrity and accountability in public administration	To promote ethical digital practices and good governance principles in all digital interactions and services towards citizens while respecting their rights and choices. To apply measures to take accountability for public administration tasks, including where AI is used, ensuring trustworthy and traceable processes and outputs that do not violate guidelines or policies.



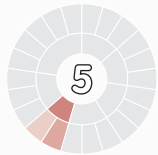
Digital content and digital public services

No	Competency title	Definition
3.1	Developing, integrating and re-using digital content	To create and refine a variety of digital content while adhering to institutional requirements, ensuring reusability and digital accessibility across public administration.
3.2	Delivering and contributing to digital public services	To contribute to the creation of inclusive, digitally accessible and people-centric digital public services for citizens and businesses through digital technologies. To support the creation and improvement of digital public services delivery, and to support citizens and businesses to interact with them.
3.3	Ensuring compliance with legal and regulatory frameworks and standards in digital environments	To comply with, and implement, legal and regulatory requirements and standards related to digital public services while protecting fundamental rights, ensuring fairness and promoting public trust in public administration.



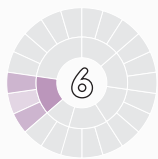
Safe, responsible and sustainable use of resources

No	Competency title	Definition
4.1	Protecting devices and infrastructure	To apply safety and cybersecurity measures to protect digital devices, content and infrastructure. To be aware of the evolving nature of risks and threats in digital environments. To follow institutional cybersecurity measures and safety protocols to ensure the continuity of digital public services.
4.2	Managing digital identities and protecting personal data and privacy	To manage digital identities (e.g. eID) to ensure secure and reliable digital identification for accessing and using digital public services, and their related digital processes. To ensure compliance with personal data regulations and privacy in public administration.
4.3	Supporting healthy and sustainable digital practices	To use digital technologies to minimize risks and threats to physical, mental and social wellbeing of oneself and others. To use digital technologies to support sustainability and environmental practices in public administration.



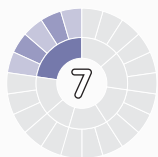
Problem-solving through digital technologies

No	Competency title	Definition
5.1	Managing digital devices, including identifying and solving technical problems	To know digital tools (e.g. devices, interfaces, software applications) and understand the basics of digital technologies used in public administration processes. To identify technical problems and to solve them through a variety of means.
5.2	Using automation tools in digital environments	To understand and implement steps to analyze issues (e.g. identify repetitive digital tasks and processes) in public administration workflows that can be simplified, and plan and develop a sequence of instructions for a computing system to solve them or to perform a specific task.



Digital transformation in public administration

No	Competency title	Definition
6.1	Contributing to digital transformation in public administration, driving innovation and improvement	To identify and support digital transformation initiatives, and to be open to experiment with digital technologies to innovate processes and services in public administration in a people-centric manner.
6.2	Developing digital competence in the workplace	To recognize where one's digital competence needs to be improved or updated to be adequate for working in public administration. To stay informed about digital technological developments and their personal, professional and societal implications.
6.3	AI Literacy in public administration	To ensure a general conceptual understanding of what Artificial Intelligence (AI) is, contexts for its application, and critical, ethical and responsible approaches to using AI in public administration tasks and processes. Understand legal requirements concerning the use of AI in public administration (e.g. AI Act).



Digital leadership and governance in public administration

No	Competency title	Definition
7.1	Managing performance and operations through digital technologies	To use digital technologies for planning, organising, and monitoring activities and resources, ensuring efficient achievement of institutional objectives within defined parameters.
7.2	Leading team development in digital environments	To align the use of digital technologies with organizational and strategic priorities (e.g. managers support team's digital upskilling) while fostering organizational culture to support institutional performance and adaptability.
7.3	Driving and leading innovation and digital transformation	To initiate, sustain and coordinate institutional digital transformation by integrating innovation and process changes to solve complex societal problems. To mobilize necessary financial, human and social capital resources to turn ideas into value in public administration while minimizing the negative impact and maximizing the benefits of change.

No	Competency title	Definition
7.4	Strengthening public services and ensuring responsible digital governance and cybersecurity	To lead the creation of digital governance principles and frameworks for responsible use of data and technologies in public administration. To coordinate policies on long-term data governance, their quality, ownership and regulatory compliance ensuring transparency and interoperability of information systems and digital services.
7.5	Anticipatory and strategic thinking supporting public administration	To use strategic foresight to anticipate and prepare for potential changes, guiding decision-making in public administration towards more sustainable, long-term solutions. To understand systemic interdependencies and formulate anticipatory responses to institutional challenges due to technological trends impacting societies.

41. **The proposed model was designed to be conceptually aligned with DigComp 2.2 and was subsequently updated to be aligned with the recently adopted version DigComp 3.0²⁶.** This recent update reflects rapid technological change since 2022, including the systematic and transversal integration of artificial intelligence and the introduction of more granular learning outcomes that improve the precision of skills profiling and assessment. Aligning the Romanian framework with DigComp 3.0 ensures coherence with EU digital-skills policies and initiatives, notably the Digital Decade Policy Programme and the Union of Skills agenda, while providing a future-ready foundation that captures emerging competence requirements relevant to modern public administration.
42. **Table 2 reflects the correspondence with DigComp competencies.** In the proposed model, 7 competencies were adapted from DigComp, 5 were modified more to fit public administration needs and 3 were heavily modified, adding new elements. 7 competencies are completely new additions compared to DigComp. In this comparison, the terminology used has the following meaning:

26. <https://publications.jrc.ec.europa.eu/repository/handle/JRC144121>

**TABLE 2:** Comparison of the proposed digital competency framework with DigComp 3.0

Adapted to PA → The competence exists in DigComp 2.2, but wording and definitions were *adjusted* to reflect the specific tasks, systems, and compliance obligations of public administration (e.g. data management adapted to institutional platforms). The core definition of the competence remains the same, but its application is tailored.

Modified for PA → The competence draws on one or more aspects of DigComp 2.2 but was restructured or combined to better fit the institutional and service-delivery context of the public administration. In these cases, the competence is recognizably linked to DigComp competencies, but its scope, emphasis, or clustering is *different*.

Heavily modified → The competence has a DigComp counterpart, but has been significantly expanded or reframed to address new requirements of the public sector (e.g. interoperability, governance responsibilities).

Totally new → The competence has no equivalent in DigComp 3.0. It was developed to reflect specific needs of public administration, such as digital leadership.

The proposed digital competency framework for the public administration		DigComp 2.2	Level of modification
1.1	Searching and accessing data, information and digital content	1.1	Adapted to PA
1.2	Evaluating data, information and digital content	1.2	Adapted to PA
1.3	Managing data, information and digital content	1.3	Adapted to PA
2.1	Communicating, interacting and fostering citizen and business participation through digital technologies	2.1; 2.5	Modified for PA
2.2	Sharing and collaborating in digital teams in intra- and inter-institutional contexts	2.2; 2.4	Modified for PA
2.3	Ensuring digital integrity and accountability in public administration	2.3	Modified for PA
3.1	Developing, integrating and re-using digital content	3.1; 3.2	Adapted to PA
3.2	Delivering and contributing to digital public services	Not available	Totally new
3.3	Ensuring compliance with legal and regulatory frameworks and standards in digital environments	3.3	Heavily modified
4.1	Protecting devices and infrastructures	4.1	Adapted to PA
4.2	Managing digital identities, and protecting personal data and privacy	4.2; 2.6	Modified for PA
4.3	Supporting healthy and sustainable digital practices	4.3; 4.4	Modified for PA
5.1	Managing digital devices, including identifying and solving technical problems	5.1	Adapted to PA
5.2	Using automation tools in digital environments	3.4	Heavily modified
6.1	Contributing to digital transformation in public administration, driving innovation and improvement	5.2; 5.3	Heavily modified
6.2	Developing digital competence in the workplace	5.4	Adapted to PA
6.3	AI Literacy in public administration	Not available	Totally new
7.1	Managing performance and operations through digital technologies	Not available	Totally new
7.2	Leading team development in digital environments	Not available	Totally new
7.3	Driving and leading innovation and digital transformation	Not available	Totally new
7.4	Strengthening public services and ensuring responsible digital governance and cybersecurity	Not available	Totally new
7.5	Anticipatory and strategic thinking supporting public administration	Not available	Totally new

43. The proposed digital competency framework is also aligned **with the digital competency needs derived from the bottom-up assessment process conducted under Output 1**. Table 3 below summarizes the correspondence between the key digital competency needs identified in Output 1 through the job analysis process and the proposed digital competencies to which they are mapped.

 **TABLE 3:** Correlation between the digital competencies proposed and the digital competency needs identified in the bottom-up analysis

Bottom-Up competency theme	Components of the areas derived from the bottom-up analysis	Mapped to digital competencies
Digital literacy and information management	Understanding digital data, evaluating sources, using open data	1.1 (Search), 1.2 (Evaluation), 1.3 (Management), 2.2 (Open data)
Digital communication and collaboration	Secure communication, interoperability, e-government engagement	2.1 (Communication), 2.2 (Collaboration), 3.2 (Service delivery), 3.3 (Compliance), 2.3 (Digital integrity and accountability)
Cybersecurity and data protection	Cyber threat awareness, GDPR compliance, digital ID security	4.1 (Device security), 4.2 (Data/privacy), 7.4 (Digital governance)
Digital service delivery and process automation	Digital-by-default, AI for efficiency, accessibility/usability	3.2 (Public services), 3.1 (Content creation), 5.2 (Automation), 6.1 (Digital transformation)
Data analysis and decision support	Excel, Power BI, data interpretation, predictive analytics	1.2 (Evaluation/analytics), 1.3 (Data tools), 7.1 (Performance), 5.2 Using automation tools), 7.5 (Foresight)
Digital transformation and digital governance	AI ethics, e-signatures, digital records, change management	6.1 (Transformation), 6.3 (AI literacy), 7.3 (Leadership), 7.4 (Governance), 3.3 (Legal compliance), 6.2 (Digital upskilling)
Emerging technologies and innovation	Cloud, blockchain, IoT, big data, AI for policymaking	1.3 (Big data), 6.1 (Innovation), 6.3 (AI literacy), 7.5 (Strategic foresight), 7.3 (Innovation leadership)

44. **The proposed digital competency framework is designed to strengthen the capacity of Romania's civil service to respond to the strategic priorities of a modern, citizen-oriented administration.** It reflects a progression from foundational digital competency to strategic leadership and explicitly supports core public sector objectives such as data-driven policymaking, service delivery improvement, transparency and accountability, cross-sector coordination, and citizen trust. The proposed model represents a context-specific yet forward-looking framework that aligns with Romania's public sector reform priorities.
45. **Data-driven policymaking is reflected through competencies on evaluating, managing, and analyzing information and data** (Areas 1 and 7). Competencies such as 1.2 (Evaluating information and digital content, including data analysis) and 7.5 (Using digital technologies for anticipatory and strategic thinking) equip civil servants to assess, interpret, and apply data to inform evidence-based policies. At advanced levels, the framework encourages the use of predictive analytics and foresight to support program evaluation, results-based planning, and strategic decision-making.
46. **Improvement of digital public services is a central focus of the model.** Competency 3.2 (Delivering and contributing to digital public services) outlines the role of civil servants in ensuring accessible, inclusive, and user-centered services. Also, Competency 2.3 (Ensuring digital integrity and accountability in public administration) promotes ethical digital practices and ensuring accountability for public administration tasks, including where AI is used. Additionally, 6.1 (Contributing to digital transformation) and 5.2 (Using automation tools) support the adoption of digital tools and workflows that enhance efficiency, transparency, responsiveness, and innovation in service provision. Also, Competency 6.1 frames digital transformation not merely as a technical process, but as a means of

innovation and institutional performance improvement. This reinforces the shift from compliance-based administration to a model that prioritizes responsiveness and citizen experience.

47. **The proposed model incorporates digital accessibility (DA) as a cross-cutting concern, aligning with EU priorities and international standards such as WCAG 2.1 and EN 301549.** While not structured as a standalone competency, accessibility is explicitly addressed in multiple areas. Competency 3.1 (Developing and reusing digital content) includes descriptors focused on designing accessible digital materials and ensuring interoperability across platforms. Competency 3.2 (Delivering digital public services) emphasizes inclusive access to digital services and user support, particularly for individuals with limited digital skills or disabilities. Digital accessibility is also reflected in Competency 2.1, which highlights inclusive communication practices (see Table 4, heatmap for DA).
48. **Cross-sector coordination is supported by a combination of competencies that address both operational collaboration and strategic alignment across institutions.** Competency 2.2 (Sharing and collaborating in digital teams) is central, with descriptors that emphasize interinstitutional workflows, secure data exchange, and the use of interoperable systems and platforms. These support day-to-day coordination and data-sharing across administrative boundaries. Complementing this, Competency 7.5 (Anticipatory and strategic thinking) contributes at a strategic level, with descriptors focused on whole-of-government foresight, predictive analytics, and scenario planning to inform cross-sector policy development. In addition, elements of Competency 7.4 (Responsible digital governance) reinforce coordinated governance practices, including data stewardship and institutional accountability frameworks that support alignment across sectors. Together, these competencies ensure that both the operational and strategic dimensions of cross-sector coordination are addressed in the framework.
49. **Digital transformation is supported through a comprehensive set of competencies in Areas 5, 6, and 7, which cover the integration of digital systems into operational and managerial processes.** These include 5.1 (Managing digital devices), 6.1 (Contributing to digital transformation), and 7.3 (Driving and leading digital transformation). These competencies guide civil servants not only in adopting digital tools but also in leading change, embedding digital thinking into policy and service cycles, and aligning transformation initiatives with strategic priorities (see Table 4, heatmap for DT).
50. **Moreover, establishing Area 6 on Digital Transformation as a separate area is justified to ensure the future-readiness of the framework.** While Areas 1–5 cover the operational use of digital tools - how to search, evaluate, manage, create and communicate information securely - Area 6 captures the key skills and attitudes needed to drive transformation. What might appear as overlaps with Areas 1–5 are, in fact, dimensions distinct in orientation: for example, AI in Area 1 is treated as an operational tool to support tasks, while in Area 6 it is framed as a strategic transformation driver, requiring literacy in AI related ethics and governance (e.g. the context the AI systems are to be used in and the persons on whom the AI systems are to be used). It also reinforces that digital transformation is a shared responsibility of all staff, not just IT experts, making visible the cultural and behavioral dimensions of change. Countries are increasingly moving in this direction: for example, in August 2024, Latvia adopted a Digital Skills and Competencies Framework for Public Administration, structured around six thematic areas and 29 competencies²⁷. The framework goes beyond basic digital literacy and operational skills, explicitly integrating competencies in areas such as AI use, digital leadership, governance of digitalization, change management, and systems thinking. In line with relevant international frameworks, the Latvian model also signals that digital transformation requires not only proficient use of tools but also the ability to lead change, manage complexity, and sustain innovation. Similarly, the Spanish framework of digital competencies (Marco de Competencias Digitales) includes a dedicated area for digital transformation. The Spanish model is already considered a mature system, that was a solid reference for the assessment and design processes conducted under the TSI project. This example illustrates a broader international trend: governments are increasingly treating digital

27. More information available at: <https://www.vas.gov.lv/lv/jaunums/izstradats-publikas-parvaldes-digitalo-prasmju-un-kompetencu-ietvars>.

transformation and leadership as distinct competency areas, essential for building future-ready public administrations.

51. **Citizen and stakeholder engagement is embedded in Competency 2.1, which emphasizes the role of civil servants in fostering digital participation and interaction with both citizens and businesses.** This is reinforced by the focus on accessible digital services (Competency 3.2) and anticipatory policy engagement (7.5). These elements aim to enhance the legitimacy of public decision-making and build digital citizenship.
52. **The proposed model reflects the growing strategic importance of artificial intelligence in the public administration through a dedicated competency on AI literacy (6.3), as well as the integration of AI-related descriptors across several other areas.** Competency 6.3 ensures that civil servants understand what AI is, how it functions, and how to use it responsibly, addressing critical issues such as explainability, data protection, bias mitigation, and institutional accountability. This Competency is also meant to cover the requirements of art. 4 of the AI Act. In addition, AI elements are embedded across the framework: for example, Competency 1.1 (Searching and accessing information) includes the use of AI systems and prompt development; Competency 2.3 (Digital integrity) addresses risks associated with algorithmic bias and AI transparency; and Competency 7.5 (Foresight and strategic thinking) covers the use of AI for predictive analytics and scenario modelling in whole-of-government planning. Embedding AI across both technical and strategic dimensions ensures that civil servants are equipped not only to use AI tools, but also to critically assess their implications for governance, ethics, and service delivery. This structured and anticipatory approach aligns closely with emerging international standards, also with the AI focus in DigComp 3.0, and is highly relevant in the current context of rapid AI adoption and regulation across the EU.
53. **The heatmap in Table 4 shows the focus of each of the competences on AI.** Currently, it shows that 8 of the general competences applicable to all civil servants (areas 1-6) include descriptors that cover pertinent aspects of AI use in civil servants' tasks using a heat scale from 0 to 4. For example, competence 6.3 "AI Literacy in public administration" shows full heat with all the descriptors covering aspects of AI, whereas for the competence 2.3 "Ensuring digital integrity and accountability in public administration", it shows that half of the descriptors cover aspects of AI.
54. **Similarly, the heatmap below reflects the focus on Digital Transformation of public administration (DT) and focus on Digital Accessibility (DA).** Further work will validate and refine the heatmap and its utility for end-users.

TABLE 4: Heatmap – focus of the proposed framework – descriptors with content relevant for AI, Digital Transformation and Accessibility



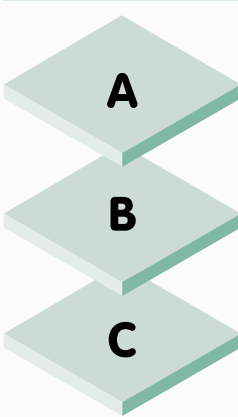
55. **Transparency and accountability are addressed through several dedicated competencies.** For instance, 2.3 (Ensuring digital integrity and accountability), 4.2 (Managing digital identities and protecting personal data), and 7.4 (Ensuring responsible digital governance) promote ethical conduct, responsible data management, and adherence to privacy and security regulations. Also, the proposed model integrates **open data** as part of a broader approach to transparency, interoperability, and strategic reuse of public data. While not presented as a separate competency, open data is explicitly referenced in Competency 2.2 (Sharing and collaborating in digital teams), where descriptors emphasize the value of open data standards and mechanisms for data reuse. These are key to promoting data sharing and reuse, supporting both efficiency and citizen trust. Competency 7.4 (Responsible digital governance) further reinforces this through C-level descriptors that promote institutional mechanisms for data transparency, traceability, and digital accountability. Related ethical concerns, such as algorithmic transparency, data integrity, and AI explainability, are addressed in Competency 2.3 and Competency 6.3, reflecting the connection between open data and responsible AI use.

2.3 Proficiency levels associated to each competency (A-B-C)²⁸

56. **Each digital competency in the framework is described across three levels of proficiency: A, B, and C.** For competency areas 1 to 6, which represent general digital competencies applicable to all civil service jobs (execution and managerial), the A – B – C levels reflect progressive complexity of tasks, autonomy and cognitive domain characteristics in knowledge, skills, and attitudes. The proposed approach implies that each digital competency is defined once, while its proficiency level is illustrated differently depending on the expected level, as explained in Table 5. In this way, the A-B-C levels operate inside each digital competency, clarifying how the same competency evolves in depth and complexity.
57. **In competency area 7, which addresses digital leadership and governance, the A – B – C levels instead reflect increasing levels of managerial responsibility as defined in the Romanian Administrative Code:**
- Level A for first-level managers (heads of service and other equivalent jobs *and project managers*). As a novelty, project managers of projects that have digital components should also be mapped to this level, even if they are de jure hired on an execution level job. This allows a correct mapping of their managerial responsibilities in terms of digital competencies needed.
 - Level B for mid-level managers (directors, deputy directors, general directors, deputy general directors and equivalent jobs), and
 - Level C for senior managers (secretaries general and deputy secretaries general).

28. The choice of three proficiency levels is also aligned with the Spanish model of digital competencies, which was tested and also mapped against Romanian job descriptions under Output 1 (see section 4.2 from Output 1, *Report on the assessment of the digital competencies needed in the Romanian civil service*).

TABLE 5: Proficiency levels (areas 1-6)

	Profile	Description
	Basic level/ basic user	Involves the knowledge and application of basic digital concepts to execute simple tasks by following instructions.
	Intermediate level / intermediate user / contributor	Involves applying digital knowledge to carry out multi-step tasks and resolve problems with a certain degree of complexity. It can also imply proposing improvements to an existing digital process or finding solutions to unexpected digital challenges.
	Advanced level / advanced user (or for responsible authority)	Involves using a deep understanding of digital tools to generate new knowledge, procedures, and strategies. This implies innovating and solving complex problems where the digital solution is not obvious. May shape policy or drive digital initiatives. Level C across areas 1-6 is not inherently managerial.

58. **This approach is also consistent with international practice.** The Spanish *Marco de Competencias Digitales para empleados públicos*, developed by INAP, provides a mature reference model, already tested on Romanian jobs in the assessment of existing job descriptions across different public administration roles. As reflected in Output 1²⁹, this practical application demonstrated that the progression of competencies across basic, intermediate, and advanced levels can be effectively mapped to real civil service functions. An analysis of digital competency requirements across institutional categories, using the Spanish digital competency framework, enabled the mapping of proficiency levels on its three-tier scale: basic (A), intermediate (B), and advanced (C). The results showed that most job descriptions include responsibilities corresponding to **Level B**, reflecting a moderate degree of digital proficiency. At the same time, statistical comparisons confirm that the demand for digital skills differs significantly between institutions. The Romanian framework therefore builds on this experience, aligning to proven models while adapting the descriptors to the digital competency needs identified through the various assessments reflected in Output 1.
59. **The proposed model with A-B-C levels is aligned with the European DigComp proficiency levels 1-6, but translated into terms relevant for public administration jobs.** In practice, this means that any DigComp-based certificate obtained externally could be recognized in recruitment processes – mainly for areas 1–5 of the framework, which cover general digital competencies required across the civil service. *Details on operationalization will be included in Outputs 3 and 4.* However, the training system inside the civil service should rely on the adapted digital competency framework for public administration proposed in this report, which builds on DigComp but is tailored to the current and future needs of public administration jobs, including digital governance and leadership.
60. **The highest DigComp levels (7 and 8), which reflect highly specialized digital expertise, innovation, and the ability to create new digital solutions, fall outside the general scope of the A-B-C model.** These levels are typically relevant only for more specialized ICT professionals or specialized digital leaders and are better defined using competences from e-CF. For the majority of civil service roles, the expected digital proficiency will remain within levels 1-6, mapped to A-B-C. By distinguishing these higher levels, the framework allows Romania to ensure that specialized ICT jobs can be benchmarked against European standards, while keeping the general system streamlined and focused on the broader civil service.

29. See Section 42, Figure 13 from Output 1, *Report on the assessment of the digital competencies needed in the Romanian civil service*.



FIGURE 13: Alignment of Romanian A-B-C levels with DigComp proficiency levels



Romania (the proposed digital competency framework for public administration)	DigComp levels (3.0 proposal)	Description
Level A (Basic user)	1–2 (Foundation) (1-2 <i>Basic</i>)	Can perform simple digital tasks with guidance; basic tool use
Level B (Intermediate user)	3–4 (Intermediate) (3-4 <i>intermediate</i>)	Can complete well-defined multi-step tasks, solve predictable problems, propose improvements
Level C (Advanced user)	5–6 (Advanced) (5-6 <i>Advanced</i>)	Can solve complex problems, adapt digital solutions, generate new procedures or strategies
(Not covered in A-B-C)	7–8 (Highly specialized) (7-8 <i>Highly advanced</i>)	Innovates, creates new digital solutions, leads in complex and uncertain contexts

2.4 Competency descriptors

61. **The proposed descriptors for digital competencies are presented in Annex 1.** These are organized by three levels of complexity: A (basic), B (intermediate), and C (advanced). Each descriptor is marked with the type of element it covers - knowledge (K), skills (S), or attitudes (A) - ensuring a comprehensive and balanced structure aligned with international digital competence standards. The descriptors for each proficiency level across all digital competencies are presented in **Annex 1**.
62. **Under the Administrative Code general competencies rely only on behavioral indicators, but digital competencies require integrated descriptors covering attitudes, knowledge, and skills to reflect true digital proficiency.** The general competencies for civil service jobs are defined through behavioral indicators only, as reflected in Annex 10 to the Administrative Code. However, digital competencies require a more integrated structure, and thus the proposed descriptors incorporate not only attitudes (A) but also specific knowledge (K) and skills (S). This structure better reflects the nature of digital proficiency, where appropriate behavior must be supported by technical understanding and demonstrable ability.
63. **The proposed digital competency framework model could be adopted in a separate annex to the Administrative Code.** This would ensure comparability across institutions and HR processes. However, only the digital competency framework model, the competency areas and competencies with their definitions should be included in primary legislation. The detailed competency descriptors should be regulated by secondary legislation, to ensure more flexibility to adopt changes when needed. Detailed recommendations supporting adoption (including legal adoption) and institutionalization and operationalization are proposed in **Output 3**, which was developed under the TSI project.
64. **The detailed competency descriptors are meant to be the basis for the development of training programs.** A preliminary set of elements of curriculum area already proposed in **Output 4**.
65. **As described in the section on alignment with general competencies, the majority of civil service jobs could be generally mapped to Levels A and B of digital competencies.** This corresponds to basic and intermediate levels of digital proficiency, which is appropriate for most public administration roles. It is important to clarify that Level C descriptors, across Digital Competency Areas 1 - 6, do not imply managerial responsibilities and do not correspond to hierarchical levels. Rather, they reflect higher proficiency in specific digital competencies and are relevant to both execution and management positions where such depth of competence is needed.
66. **Ensuring flexibility in the operationalization of the framework is also important, especially given the evolving nature of digital tasks and tools.** Institutions should be encouraged to use job analysis to determine if a higher proficiency level (e.g. Level B or C) is required for particular roles, without the need to define new, specific competencies in cases where in fact the competency needed is only a higher proficiency level of a general digital competency. For example, Competency 1.2 – Evaluating data, information and digital content might be mapped at Level C for a counselor superior role in the National Institute of Statistics, where advanced data analysis is a core job function. In addition, institutions could define additional limited number of specific digital competencies (e.g. knowledge of particular software or platforms) relevant to job-specific tasks, for example: in the National Institute of Statistics: knowledge and use of SPSS, R, or Stata; in the Ministry of Health: use of public health data systems. More detailed examples and proposals on the job analysis process, including clarifications on how to distinguish between general and specific digital competencies are included in **Output 3**.

2.5 Operationalization and assessment scale in HR processes

67. **The introduction of the digital competency framework should follow a structured and phased legislative and implementation pathway.** The framework should be adopted through legislation and operationalized only in selected HR processes. Output 3 developed under the TSI project proposes recommendations on this operationalization process.
68. **The proposed digital competency framework is designed to be integrated into the civil service HR system in a way that is practical, developmental, and aligned with Romania's reform objectives.** Its primary focus should be on two areas of the HR cycle: recruitment and training needs assessment. In recruitment, selected digital competencies from areas 1-5 should be applied to ensure that candidates are assessed consistently and transparently. In training needs assessment, the framework will help institutions to identify gaps between current staff capacities and the levels of digital proficiency required for their jobs, thereby guiding targeted investment in learning and development.
69. **By contrast, it is not recommended to embed digital competencies into other HR processes in the first phases of implementation, especially in performance appraisal systems.** International experience analyzed in Output 1 shows that competency frameworks are most effective when used to structure learning pathways and job requirements. Given current reform efforts in Romania, the integration of digital competencies into performance appraisal can lead to administrative burden, inconsistent rating, or even punitive use of scores. Because digital competencies combine technical knowledge, skills, and attitudes, expecting managers to assess them accurately in performance reviews can be unrealistic, especially in a context where capacity for large scale HRM reform is still to be developed. The Romanian approach should therefore align with best practice by applying digital competencies where they add the greatest value - at entry (through recruitment) and to support development (through training and development). **Output 3 provides detailed recommendations on how digital competencies should be integrated into recruitment and training, including options for implementation which will be dependent on the instruments developed.** This will allow institutions to gradually operationalize the framework, ensuring that it strengthens workforce digital capacity without creating unnecessary administrative burdens.
70. **When defining the assessment scale for use in selected HR processes, various options can be considered, again, the choice should be guided by the instrument developed and its specific requirements.** Such requirements range from the need to assess the level of a given competence at the time, or for example, a need to understand the overall level of digital competency of a given individual. Various examples exist, some of which are outlined below:
 - **assessing each competence by applying a scale**, consistent with the 1-5 scale already in place in the Romanian civil service;
 - **assessing each competence by using a points-based system** or proficiency bands, depending on the HR process or the training needs assessment method applied;
 - **assessing individuals' overall level of digital competence** (including competences across all areas), e.g. using a criterion-based assessment such as the one used by EU's Digital Skills Indicator (DSI).
71. **One option is to use the 1-5 scale that is already used for evaluating general competencies, as foreseen under the Administrative Code.** The assessment of general competencies is conducted using a standardized 1 to 5 scale, based on the extent to which candidates demonstrate behavioral indicators associated with each competency, in recruitment. The same scale is applied in performance

appraisal. The 1 to 5 scale is described in the Administrative Code (Government Emergency Ordinance 57/2019, Annex 8, art. 20). The current scale for competency assessment, that is in place in the Romanian public administration, is defined as follows:

- 1 – Does not correspond: the expected knowledge, skills and attitudes are not demonstrated at all.
- 2 – Demonstrated to a very small extent.
- 3 – Acceptable: meets the minimum expected level.
- 4 – Demonstrated to a large extent.
- 5 – Fully demonstrated.

72. **The A-B-C complexity levels of each competency and the 1-5 assessment scale already used in the Romanian civil service serve different but connected purposes:**

- ➔ **The A-B-C complexity levels are attached to each competency and reflect the depth and sophistication of knowledge, skills, and attitudes expected for a given job.** In practice, the complexity level defines the standard for the role: For example, for a competency of 1.3 Data management, a secretary may be expected to demonstrate basic (A) skills in data management, while a policy officer may be required to reach intermediate (B) level.
- ➔ **The 1-5 assessment scale is applied to the individual and measures how well the civil servant demonstrates the level of competency required by their job. The use of the same 1-5 scale allows institutions to integrate digital competencies into the existing HRM system.**

73. **Together, the A-B-C complexity levels of the competencies and the 1-5 scale of assessment ensure distinction between role expectations and individual demonstrated proficiency.** Importantly, a rating below “3” on the 1–5 scale does not automatically disqualify an employee from holding a position but indicates a skills gap that should be addressed through targeted training or support. This ensures that the assessment process is not punitive but development-oriented, while also safeguarding the level of digital proficiency necessary for effective public service delivery. An example is included in the table below.



TABLE 6: Relationship between competency complexity levels and individual assessment scale.

Scale	What it applies to	Purpose	Example in practice
Complexity levels (A-B-C)	The competency, as associated to a given job	Defines the expected depth of knowledge, skills, and attitudes for a given job	For “Data analysis,” a policy officer job might be set at Level B (Intermediate), but a frontline service job might be set at level A.
Assessment scale (1-5)	The individual employee	Measures how well the person demonstrates the competency at the proficiency level required by their job	The policy officer could be individually assessed through TNA at “4” (good) against the Level B requirement for data analysis. An employee in the frontline service job could be assessed at “2” (insufficient) against the level A required, which means he/she would need training to reach the minimum acceptable level of “3” at Level A.

74. **The above-described operationalization of a scale, however, with its simple application might leave out some subtleties that the notion of knowledge, skills and attitudes provides.** Notably, in the current legal framework, the scale is applied only to behavioral indicators, as general competencies are defined exclusively in behavioral terms. By contrast, the proposed framework defines digital competencies more comprehensively, combining knowledge, skills, and attitudes, which better captures the nature of digital proficiency. Accordingly, the assessment of digital competencies should better cover these aspects, therefore, applying the response options from **the DigCompSat³⁰** tool, which is scientifically reliable and validated assessment instrument by the JRC, could also be considered (see table), especially when it is about assessment for training purposes.



TABLE 7: Example – DigCompSat tool assessment scale²¹ for citizens

 Knowledge (K) items	 Skills (S) items	 Attitude (A) items
0. I have no knowledge of this / I never heard of this	0. I don't know how to do it	0. Not at all
1. I have only a limited understanding of this and need more explanations	1. I can do it with help	1. Not much / very little
2. I have a good understanding of this	2. I can do it on my own	2. Yes / Yes I am /Yes I do
3. I fully master this topic/issue and I could explain it to others	3. I can do it with confidence and, if needed, I can support/ guide others	3. Very much

75. **Alternatively, the assessment methods would vary depending on the HR process in which they are used.** For instance, in recruitment, digital competencies could be assessed through point-based systems (e.g., up to 100 points) as part of candidate testing or selection procedures. In training needs assessments, results may be expressed either through a numeric score or by grouping individuals into proficiency bands. Some practice shows a preference for the latter: for example, digital self-assessment tools such as PIX (France) or IKANOS (Basque Country, Spain) categorize outcomes into bands (basic, intermediate, advanced, expert), which allow defining developmental profiles and are easy to link to training pathways.
76. **For example, the French PIX platform provides a useful illustration of how digital competencies can be assessed by combining both numeric scoring and proficiency bands.** Aligned with the European DigComp framework, PIX uses an adaptive online test to assign individuals a score of up to 1,024 points, which corresponds to the highest proficiency level (level 8). For example, reaching level 7 requires a cumulative score of around 897 points³². These point thresholds are then mapped to the DigComp levels (foundation, intermediate, advanced, highly specialized), ensuring that the numeric score has clear qualitative meaning. This dual approach that includes granular measurement through points and interpretability through levels, demonstrates how assessment systems can be both precise and user-friendly, and offers a relevant reference for designing Romania's own methodology.

30. Information available at: <https://publications.jrc.ec.europa.eu/repository/handle/JRC123226>.

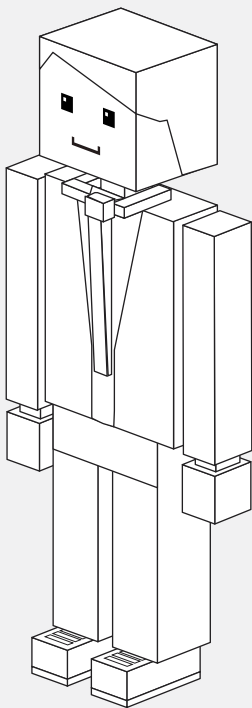
31. Details available in: Clifford Ian; Kluzer Stefano; Troia Sandra; Jakibzone Mara; Zandbergs Uldis, *DigCompSat, A Self-reflection Tool for the European Digital Competence Framework for Citizens*, JRC, 2020. pp. 15-16.

32. Details are available at: <https://pix.org/en/the-tests>.

77. **Finally, another option is measuring individuals' overall level of digital competence – which is less common in the public administration.** The Digital Skills Indicator (DSI), used by Eurostat³³, offers a different way of measuring digital competence, instead of focusing on each competence at the time, it measures the overall level based on a criterion; individual should have some competence in each of the different areas of the model (i.e. areas 1-6) in order to have at least a basic level. In this case, the focus of assessment is on the overall competence to perform at a given level, not one of the competences or areas at the time. This offers an efficient way for diagnostic, for example.
78. **It is important, however, to underline that regardless of the specific rating tool used, individuals should be assessed against the proficiency level expected for their job.** This ensures consistency with the framework's A-B-C proficiency levels, which define the depth of knowledge, skills, and behaviors required for each role. In this way, the system retains its coherence and comparability, while allowing flexibility in the practical design of recruitment and training instruments.

33. <https://publications.jrc.ec.europa.eu/repository/handle/JRC130341>.

III. Justifications and strengths of the proposed framework

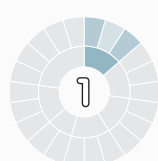


- 57 3.1 Legal and strategic justifications for the proposed digital competencies and their descriptors
- 62 3.2 Strengths of the proposed digital competency framework model

3.1 Legal and strategic justifications for the proposed digital competencies and their descriptors

79. The purpose of this section is to present, in a concise format, the key legal and strategic justifications for the design of the digital competency framework model, including for the content of the proposed competencies and their descriptors. These justifications serve both as a reference for reviewing the draft framework and as an input for future consultations that may accompany the legal adoption of the framework. The table below summarizes the main justifications, drawing on the detailed analysis conducted under Activity 1 of the TSI project and documented in Output 1³⁴.

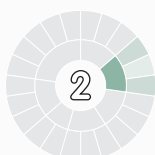
TABLE 8: Legal and strategic justification for the proposed digital competencies



Digital literacy in public administration

No	Digital competency	Justification
1.1	Searching and accessing data, information and digital content	EU Open Data Directive and Implementing Regulation on High-Value Datasets require civil servants to know how to search, access, and use publicly available datasets in machine-readable form. OECD (2021 Framework) stresses that civil servants must leverage digital government user skills to access reliable data for evidence-based policymaking.
1.2	Evaluating data, information and digital content	The Open Data Directive emphasizes the reuse of public sector information, requiring skills in assessing the reliability and relevance of public datasets for policy-making. The overarching concept of “data-driven public administration” from national strategies like the PNADD (National Digital Decade Action Plan) provides the strategic justification for these skills. The European Skills Agenda and Digital Decade emphasize evidence-based decision-making underpinned by data literacy. OECD (2024 “Developing Skills for Digital Government”) stresses skills for data-driven government, including validation of official sources (Eurostat, OECD, national statistics). UNESCO (2022 Framework - Artificial Intelligence and Digital Transformation Competencies for Civil Servants) highlights “data use and governance” as a core competency domain for civil servants.
1.3	Managing data, information and digital content	Interoperability Act and Law 242/2022 on Interoperability require civil servants to follow classification, metadata, and archiving rules. The Data Act, and Data Governance Act foresee that public administrations must be able to collect, store, and process data.

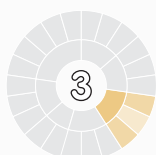
34. WB (2025), Report on the assessment of the digital competencies needed in the Romanian public administration.



Digital communication and collaboration

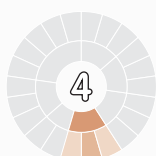
No	Digital competency	Justification
2.1	Communicating, interacting and fostering citizen and businesses participation through digital technologies	Single Digital Gateway Regulation (SDGR) obliges administrations to ensure clear, inclusive, and accessible digital communication channels. Web Accessibility Directive mandates that communications and digital services be usable by all, including persons with disabilities. UNESCO (2024 Broadband report) emphasizes citizen-centric communication and inclusivity.
2.2	Sharing and collaborating in digital teams in intra and interinstitutional contexts	Interoperable Europe Act requires seamless cross-border data sharing and collaboration across institutions. The Data Governance Act and Data Act explicitly require public administrations to facilitate secure access and reuse of data. Open Data Directive promotes collaboration and reuse of public data. Law No. 242/2022 on Interoperability OECD emphasizes open collaboration and multidisciplinary teamwork as pillars of digital government maturity.
2.3	Ensuring digital integrity and accountability in public administration	The AI Act explicitly requires human oversight, accountability, and transparency in AI-enabled decisions. Digital Services Act (DSA) requires public authorities to ensure safe and ethical digital interactions. The Defence of Democracy package (2023)³⁵ promote the participation of citizens and civil society organisations in policy making UNESCO (2022 Framework - Artificial Intelligence and Digital Transformation Competencies for Civil Servants) highlights trust, transparency, and ethical AI use as key digital attitudes.

35. https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/new-push-european-democracy/protecting-democracy_en#countering-disinformation



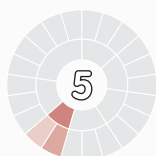
Digital content and digital public services

No	Digital competency	Justification
3.1	Developing, integrating and re-using digital content	Web Accessibility Directive and EN 301 549 standards mandate accessibility of digital content. Digital Decade and CompAct initiative stress interoperable and reusable public administration content. UNESCO (2022 Framework - Artificial Intelligence and Digital Transformation Competencies for Civil Servants) calls for creativity, adaptability, and ethical AI use in content development.
3.2	Delivering and contributing to digital public services	Single Digital Gateway and Once-Only Technical System (OOTS) require civil servants to design services that reduce administrative burden and ensure cross-border access. eIDAS 2.0 and the EU Digital Identity Wallet obligate member states to build digital services around secure e-identification. World Bank (GTMI 2022) and UNESCO emphasize citizen-centered service design and usability.
3.3	Ensuring compliance with legal and regulatory frameworks and standards in digital environments	GDPR, Data Act, AI Act, NIS2 Directive, and Cyber Resilience Act impose direct obligations for compliance. National AI Strategy (2024–2027) and Government Cloud Strategy require competencies in compliance, cloud governance, and cybersecurity. OECD stresses the need for civil servants to understand legal requirements for trustworthy technology and open data.



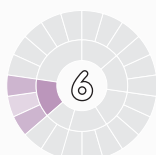
Digital content and digital public services

No	Digital competency	Justification
4.1	Protecting devices and infrastructure	NIS2 Directive, Cybersecurity Act, and Cyber Resilience Act establish legal obligations for cybersecurity. Romania's National Cybersecurity Strategy (2022–2027) requires civil servants to apply preventive measures.
4.2	Managing digital identities and protecting personal data and privacy	GDPR and the Data Governance Act require secure storage, documentation, and traceability of personal data. eIDAS 2.0 and ROeID require secure handling of digital identities and signatures. UNESCO highlights the centrality of digital identity management to service delivery.
4.3	Supporting healthy and sustainable digital practices	Digital Decade Declaration on Digital Rights and Principles promotes sustainability, wellbeing, and inclusivity. UNESCO emphasizes adaptability, inclusiveness, and responsible digital practices for civil servants.



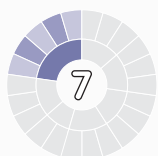
Problem-solving through digital technologies

No	Digital competency	Justification
5.1	Managing digital devices, including identifying and solving technical problems	OECD stresses that public servants must be able to use and troubleshoot digital tools for continuity of services. The GovTech Maturity Index highlights operational continuity as a driver of maturity in government systems.
5.2	Using automation tools in digital environments	EU AI Act encourages the safe use of automation while mitigating risks. ComPact initiative explicitly promotes workflow automation in public administrations. OECD highlights computational thinking and automation as essential for public sector innovation.



Digital transformation in public administration

No	Digital competency	Justification
6.1	Contributing to digital transformation in public administration, driving innovation and improvement	EU Digital Decade, ComPact initiative, OECD foresee that civil servants should actively support innovation, interoperability, and emerging technologies. OECD (2021 Framework) emphasizes that transformation is not the responsibility of ICT units alone, but all staff.
6.2	Developing digital competence in the workplace	European Skills Agenda and Pact for Skills highlight continuous upskilling and reskilling, including for public sector staff; Romania's national Public Policy in eGovernment.
6.3	AI Literacy in public administration	AI Act (2024) explicitly requires AI systems providers and deployers ensure AI literacy for all staff (Art. 4). UNESCO (2022) identifies AI literacy as a core competency domain, emphasizing risk awareness, ethics, and safe use. Romania's National AI Strategy (2024–2027) aligns with EU governance and demands widespread understanding of AI risks and opportunities.



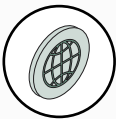
Digital leadership and governance in the public administration

No	Digital competency	Justification
7.1	Managing performance and operations through digital technologies	The Digital Decade 2030 requires public administrations to monitor progress against digitalization targets, using dashboards and indicators. EU rules on Open Data and the Data Governance Act mandate transparency, reporting, and traceability of public sector data. OECD's Framework for digital talent and skills in the public sector emphasizes managers' ability to use data analytics, KPIs, and digital monitoring systems to improve performance and efficiency. World Bank's GovTech Maturity Index (2022) stresses the importance of data-driven management and automation for performance monitoring in digital governance.
7.2	Leading team development in digital environments	The European Skills Agenda and Pact for Skills explicitly call for continuous learning ecosystems, including within public administrations. The ComPact initiative requires digital upskilling of civil servants, with managers responsible for aligning team skills with emerging needs (AI, cybersecurity, interoperability). OECD (Framework for digital talent and skills in the public sector) highlights managers' role in talent pipelines, skills mapping, and fostering organizational learning cultures. UNESCO's AI and Digital Transformation Competency Framework stresses adaptability, curiosity, and continuous learning as leadership attitudes.
7.3	Driving and leading innovation and digital transformation	The Digital Decade and ComPact initiatives require leaders to champion innovation, agile methodologies, and user-centered design in digital services. The AI Act requires public sector institutions to establish governance for AI use, requiring leadership to coordinate adoption and scaling responsibly. OECD and World Bank emphasize leaders' role in building innovation ecosystems, piloting emerging technologies, and using iterative delivery models. Romania's National AI Strategy (2024–2027) requires leadership capacity to integrate AI into service design and ensure regulatory compliance.
7.4	Strengthening public services and ensuring responsible digital governance and cybersecurity	GDPR, NIS2 Directive, Cyber Resilience Act, and Interoperable Europe Act impose compliance obligations that require governance at managerial level. The AI Act requires leadership to implement AI governance frameworks and accountability structures. Romania's National Cybersecurity Strategy (2022–2027) requires leaders to oversee institutional risk management and ensure coordination with national cybersecurity bodies (DNSC).
7.5	Anticipatory and strategic thinking supporting public administration	The Digital Decade Policy Program and EU-level monitoring (DESI, country reports) require administrations to anticipate digital trends and prepare forward-looking strategies. OECD stresses the need for strategic foresight and systems thinking in digital government, including use of scenario planning and predictive analytics.

3.2 Strengths of the proposed digital competency framework model

80. **The table below summarizes the main strengths of the proposed digital competency framework for Romania’s public administration.** It highlights the framework’s structural coherence, alignment with international models, and adaptability to national HRM processes. Each strength is described in terms of its design features and relevance for implementation, with emphasis on practical usability, international comparability, and support for digital transformation efforts across institutions.

TABLE 9: Analysis of key strengths of the proposed digital competency framework



Alignment with international frameworks

Description

The proposed digital competency framework is structurally and conceptually aligned with key international reference models, including DigComp 2.2/3.0, the UNESCO Framework on AI and Digital Transformation Competencies for Civil Servants, as well as with relevant international standards and strategies as highlighted in Output 1, including relevant international experience from other EU member states where such models were already applied and are considered solid.

Explanation/ relevance

Ensures international comparability and enables Romania to benchmark its civil service against other EU Member States. Supports future participation in EU-level digital capacity-building programs, facilitates the adoption of shared digital training content, and positions the framework as interoperable with other public sector and education systems.



Consistent approach in defining complexity levels

Description

The A-B-C complexity model is applied across all competency areas, including Digital Leadership (Area 7), ensuring structural clarity and usability. This three-tier structure mirrors the progressive logic used in several international frameworks, including the Spanish digital competency framework for public administration

Explanation/ relevance

Provides a clear and easily understandable standard for describing digital proficiency. This structure avoids over-complication while allowing sufficient differentiation across roles and tasks. It offers a practical way to communicate expectations, design learning paths, and assess capability levels consistently.

The simplicity of the A-B-C model also facilitates adoption by institutions and supports integration across HR processes (e.g., recruitment, training, evaluation).

The A-B-C structure also ensures international comparability, enabling alignment with EU Member States and facilitating the use of common tools, benchmarks, and training resources.



Role- based differentiation, not only narrowly tied to hierarchical positioning in the job classification (digital skills needed do not evolve only in relation to coordination responsibilities)

Description

Recognizes that some execution-level jobs require higher digital skill levels (B or C).

Adds flexibility and avoids oversimplifying managerial vs. non-managerial distinctions.

Explanation/ relevance

Allows making flexible choices when deciding that a higher complexity level of a digital competency can be mapped to selected roles/institutions.



Recognition of digital transformation as a key priority

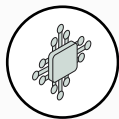
Description

Explicitly includes competencies in the area of digital transformation reflecting modern public administration needs.

Enables upskilling/reskilling paths across the civil service, helping to drive digital change.

Explanation/ relevance

This will be reflected in operational recommendations on how to map these competencies for digital transformation teams.



Mapping of Area 7 to managerial jobs, in alignment with digital competency needs for this category of personnel

Description

Area 7 complexity levels mapped across three hierarchical levels of managers in the public administration.

Explanation/ relevance

This will also facilitate the mapping to general competencies already in use in the Romanian civil service.



Balanced focus on knowledge, skills, and behaviors (KSAs)

Description

Descriptors reflect the full range of digital proficiency elements, not only behavior, but also understanding and practical ability.

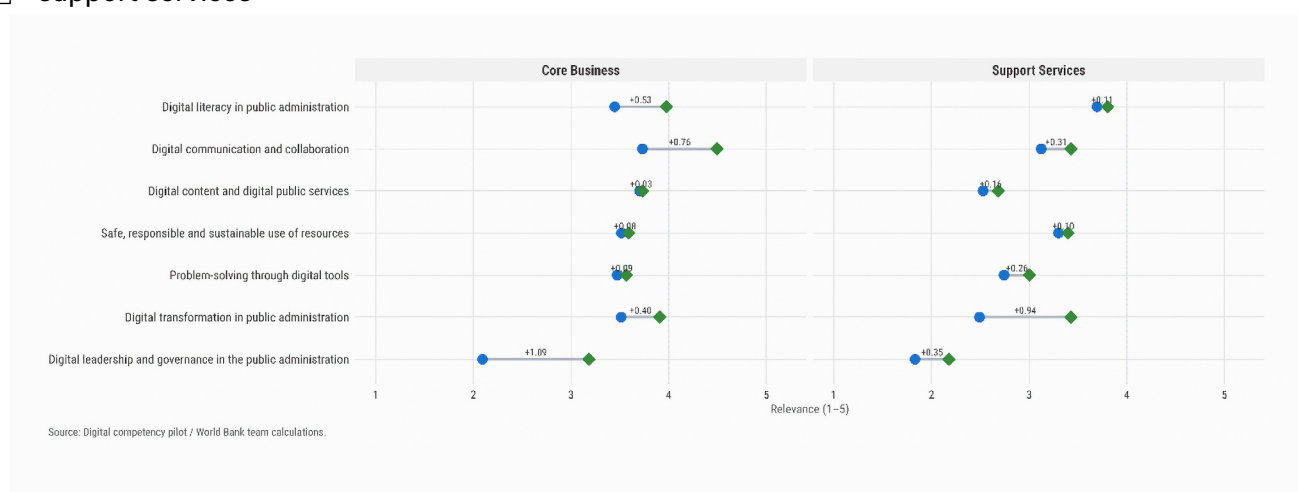
Explanation/ relevance

Enables comprehensive assessment and training design, aligned with the realities of digital work in public institutions.

IV. Relevance of the proposed general digital competency framework

81. **The pilot exercise provided critical evidence to validate the relevance of the proposed digital competency framework across different institutional functions and types of functional units.** Based on the methodological approach detailed in Section 1.4, the pilot covered a broad sample of positions across core business and support functions in participating institutions, using structured interviews and job-task mapping to assess the current and future relevance of digital competencies by proficiency level. Core business roles are positions directly involved in developing policies or delivering public services, while support roles cover internal functions such as HR, finance, procurement and administration that enable organizational operations. ICT departments were targeted separately through the pilot on ICT roles, as reflected in the Connected report accompanying this report. The purpose of the pilot was to test the practical applicability of the framework and to calibrate competency requirements based on real job demands, generating evidence to inform both framework refinement and implementation priorities.
82. **The pilot results reveal that core business roles assign higher current and future relevance to digital competencies than support services.** Core business functions rate digital competencies as more relevant both today (3.23 vs. 2.73) and in the future (3.73 vs. 3.05) and also anticipate a larger overall increase in relevance (+0.50 vs. +0.32). These differences reflect the more immediate digital transformation pressures facing beneficiary-facing service delivery. At the same time, patterns vary across competency areas. Support services anticipate the largest growth in Digital Transformation (+0.94 vs. +0.40), signaling the need to modernize internal operations and workflows, while core business functions record the strongest shift in Digital Management and Governance (+1.09), identifying this as a priority for frontline units. Digital Communication and Collaboration shows strong growth in both groups, whereas areas such as Safe and Responsible Use, Digital Problem Solving, and Digital Content and Public Services remain relatively stable.

FIGURE 14: Digital competency areas - shift in perceived relevance – core business versus support services



83. **Digital Communication and Collaboration and Digital Literacy are currently the most relevant competencies across all functional groups, underpinning daily administrative work.** These competencies receive the highest current ratings in both core business and support units, reflecting widespread reliance on email, digital document management, shared platforms, and online coordination tools. Their consistently high relevance confirms that foundational digital skills have become embedded across organizational functions and represent the operational backbone of everyday public-sector activity.
84. **Future relevance is shifting toward more strategic digital capabilities in areas 6 and 7.** Anticipated increases are strongest in governance- and leadership-oriented digital competencies, especially within core business roles, indicating rising expectations for staff to manage digital workflows, coordinate processes, and contribute to digital transformation leadership.

85. **The analysis of future relevance by competency area and proficiency level, across core business and support units, shows the need to allow institutions flexibility to assign higher proficiency levels to certain jobs when required, when needed.** The heatmap in Figure 15 highlights how each proficiency level (A, B, C) is expected to matter in the coming years across the seven digital competency areas. Understanding which competencies are perceived to gain importance is critical for ensuring that the framework is future-ready, aligned with evolving job demands, and capable of guiding workforce development and strategic planning. **A detailed analysis of relevance ratings across all digital competencies is included in Annex 2.**



FIGURE 15: Future relevance by competency area and proficiency level

Digital literacy in public administration	4.9	4.8	2.1
Digital communication and collaboration	4.8	4.4	3.2
Digital content and digital public services	4.4	4.1	1.7
Safe, responsible and sustainable use of resources	5.0	3.8	1.8
Problem-solving through digital technologies	5.0	4.2	1.0
Digital transformation in public administration	4.9	4.5	1.8
Digital leadership and governance in the public administration	3.8	2.8	2.0
	A	B	C
Competency Level			
A = Basic, B = Intermediate, C = Advanced			
Source: Digital competency pilot / World Bank team calculations			

86. **Level A (basic proficiency) emerges as universally essential across the civil service.** Across all competency areas and institutional groups, Level A displays exceptionally high future relevance (4.4–5.0), confirming that foundational digital skills are no longer optional, but a baseline requirement for all roles. Digital literacy, safe and responsible use of digital resources, digital problem-solving, communication, digital transformation, and even contribution to digital public services are all expected to be needed at basic level by virtually all staff. This supports the framework's premise that universal digital capability must underpin the modern public administration.
87. **Level B (intermediate proficiency) is broadly relevant but should be applied selectively by job type.** Ratings remain consistently above the relevance threshold, particularly in core business roles (often 4.0–4.7), reflecting increased demands for more advanced digital skills in operational, analytical, and citizen-facing work. Support services also show strong relevance at Level B, driven by transversal digital workflows in HR, finance, and procurement. However, the differentiation across competency areas indicates that intermediate proficiency is not required for every role. The findings suggest that Level B should not be applied automatically based on grade alone, but mapped more carefully to positions with demonstrated digital task requirements, with clearer guidance for institutions on selective application.

88. **Level C (advanced proficiency) is relevant only for a narrow group of roles and must remain highly targeted.** Across most competency areas and both functional groups, Level C scores are low (typically 1.0–2.5), especially within support services, indicating that advanced digital leadership, transformation design, and technical expertise are not relevant for the majority of civil service positions. While core business units show early signals of rising relevance in certain leadership-oriented competencies, these remain limited to specific managerial and coordination roles. The pilot therefore confirms that Level C should not be mandated broadly, but applied flexibly where institutions can demonstrate genuine need. It also highlights the importance of recalibrating Level C descriptors toward strategic leadership and governance responsibilities rather than technical execution, ensuring alignment with actual senior civil-service mandates while preserving ambition for developing digital leadership capacity.
89. **The pilot confirmed that the draft general digital competency framework is broadly relevant and does not require structural redesign.** All seven competency areas are considered relevant, with particularly high current and future importance attached to Digital Literacy, Digital Communication and Collaboration, and, looking ahead, Digital Management and Governance and Digital Transformation. The strong and consistent emphasis on Level A (basic) and Level B (intermediate) across institutions and job families demonstrates that these proficiency levels capture accurately the baseline expectations and the more advanced, yet still widespread, requirements for operational and analytical work in a modern administration.
90. **At the same time, calibration adjustments proved needed at the upper end of the proficiency scale only for selected descriptors.** Advanced proficiency (Level C) is perceived as relevant only for a narrow set of roles and tasks, particularly in core business units with more strategic or specialized responsibilities. For many other positions, Level C competencies are considered too technical in relation to actual mandates. This is especially visible in Area 7 (Digital Leadership and Governance), where certain Level C descriptors were perceived as linked more to ICT specialists, data teams or central digital authorities. The pilot therefore suggested refining Level C descriptors in Area 7 to emphasize governance, oversight and strategic direction, rather than technical execution, and using Level C more selectively, mapped to specific roles where advanced responsibilities genuinely exist.
91. **As a result of the pilot, the framework was slightly adjusted in area 7 - especially competency 7.4, toward descriptors linked to tasks that are genuinely managerial: setting governance principles, overseeing data quality and compliance, guiding ethical and responsible use of digital technologies, and strengthening public services through strategic direction.**
92. **Overall, the pilot provided strong evidence that the tiered complexity model should be retained but applied with flexibility.** Level A should remain the universal baseline; Level B should be used selectively, based on clear evidence of job-related digital requirements and not as an automatic default for higher grades; Level C should not be mandated by law for broad categories of jobs, but assigned on a role-by-role basis in those cases where advanced digital leadership, governance or analytical capabilities are demonstrably required.
93. **An adjusted mapping of the proficiency levels for the general digital competencies across the civil service career structure is proposed in chapter 6 of this report, reflecting refinements based on the pilot findings.** The mapping is tailored to the Romanian administrative context and indicates the minimum proficiency level expected for each job category. Importantly, these minimum levels serve solely as training targets for the initial operationalization phase. In recruitment, only Level A will be assessed for selected digital competencies, as proposed under Output 3 of the TSI project. As institutional capacity increases and digital maturity evolve, this mapping can be progressively upgraded based on evidence and sector needs.

V. Correlation with the general competency framework from the Romanian public administration

94. **The proposed digital competency framework model is compatible with the general competency framework that is already in place.** The logic of the general competency framework operates with competencies and sub-competencies that are added progressively across complexity levels and across hierarchical levels, as shown in Figure 16. Complexity levels include basic, operational, enhanced and strategic, that are mapped to the hierarchical logic of progression in the civil service career system. For example, high level civil servants are positioned in the general competency framework at strategic level on some of the general competencies and at enhanced level on other.
95. **The draft digital competency framework does not operate with sub-competencies, to avoid over-complexity and to ensure ease of operationalization and comparability with other international relevant benchmarks.** While the draft digital competency framework proposed does not include sub-competencies and does not operate with levels basic, operational, enhanced and strategic, the general digital competencies and the proposed proficiency levels A – B – C can be easily mapped across the general competencies.



FIGURE 16: The general competency framework model in the Romanian civil service

Competency cluster	Competency	Administrative staff	Execution level	Technical Manager	Mid-level manager	High Level Civil Servant
GENERAL COMPETENCY FRAMEWORK						
Personal Effectiveness	Problem Solving and Decision Making	basic	operational	enhanced	enhanced	strategic
	Initiative	basic	operational	enhanced	enhanced	enhanced
	Planning and Organizing	operational	operational	enhanced	enhanced	strategic
Interpersonal Effectiveness	Communication	operational	operational	enhanced	enhanced	strategic
	Team Work	operational	operational	operational	enhanced	enhanced
Social Accountability	Citizen Centricity	operational	operational	operational	enhanced	strategic
	Integrity	operational	operational	operational	enhanced	enhanced
Managerial Abilities	Managing Performance			operational	enhanced	enhanced
	Team Development			operational	operational	operational
Leadership	Create Engagement				operational	operational
	Promote Innovation and Guide Change				operational	enhanced
FUNCTIONAL & SPECIFIC COMPETENCIES						
Functional competency cluster	Functional competencies					

Sub-competencies correspond to different proficiency levels

Competency cluster	Competencies for Execution Level positions	Competencies for Technical Managers	Competencies for Mid-level Managers	Competencies for High level Civil Servants
Personal Effectiveness	Problem Solving and Decision Making	Problem Solving and Decision Making	Problem Solving and Decision Making	Problem Solving and Decision Making
		Forward & Conceptual Thinking	Forward & Conceptual Thinking	Forward and Conceptual Thinking
	Initiative	Initiative	Initiative	Initiative
		Accountability	Accountability	Accountability
	Planning and organizing	Planning and organizing	Planning and organizing	Planning and organizing
		Strategic Planning & Organizing	Strategic Planning & Organizing	Strategic Planning & Organizing
Interpersonal Effectiveness	Communication	Communication	Communication	Communication
		Networking & Influencing	Networking & Influencing	Strategic Communication
	Team Work	Team Work	Team Work	Team Work
			Conflict Mediation	Conflict Mediation
Social Accountability	Citizen centricity	Citizen centricity	Citizen Centricity	Citizen Centricity
			Politically Savvy	Politically Savvy
	Integrity	Integrity	Integrity	Integrity
			Managing Vulnerabilities	Managing Vulnerabilities
Managerial Abilities		Managing performance	Managing performance	Managing performance
			Resources and Process Management	Resources and Process Management
		Team Development	Team Development	Team Development
Leadership			Create engagement	Create engagement
			Promote innovation and guide change	Promote innovation and guide change
				Strategic Agility

Sub-competencies are added progressively across hierarchical levels

96. **The preliminary mapping of the proposed digital competencies to Romania's general competency framework was carried out through a structured technical process, consisting of the following steps:**

- ➔ **Initial alignment at descriptor level:** Each draft descriptor from the proposed digital competency framework was reviewed and mapped to the relevant descriptors in the general competency framework. This included associations not only at the level of general competencies, but also at the level of sub-competencies, where applicable.
- ➔ **Calculation of relevance weights:** To reflect the strength of the relationship between descriptors, relevance was assessed using percentage-based allocations. This approach provided a quantified view of how closely each digital descriptor aligned with one or more sub-competencies from the general framework.
- ➔ **Refinement to reduce complexity:** In cases where digital competencies—particularly those with descriptors at proficiency levels B and C—were mapped to both general competencies and their sub-competencies, the resulting overlaps introduced unnecessary complexity. To address this, the mapping was simplified by consolidating links only at the level of the main general competencies, excluding sub-competency-level distinctions.
- ➔ **Reduction of multiple mappings:** The initial results were reviewed to minimize cases where a single digital competency was mapped to multiple general competencies. This step aimed to ensure clarity and usability of the framework by promoting a one-to-one or most-relevant mapping approach wherever possible.

97. **The mapping of general digital competencies to the general competencies for civil servants is undertaken to support future phases of implementation (once the system is capacitated to assess digital skills consistently).** It helps clarify which digital capabilities influence the effective demonstration of specific general competencies in practice and informs the design of more targeted, task-based digital skills assessments tailored to different roles. This approach allows testing to reflect both the digital demands of job tasks and the general competencies relevant to each position. It does not imply that digital competencies should be assessed as part of the general competency evaluation process; digital skills remain subject to separate, dedicated assessment mechanisms, as proposed under **Outputs 3 and 4** under the TSI project.

FIGURE 17: Mapping of proposed digital competencies to the general competencies applicable in the Romanian civil service



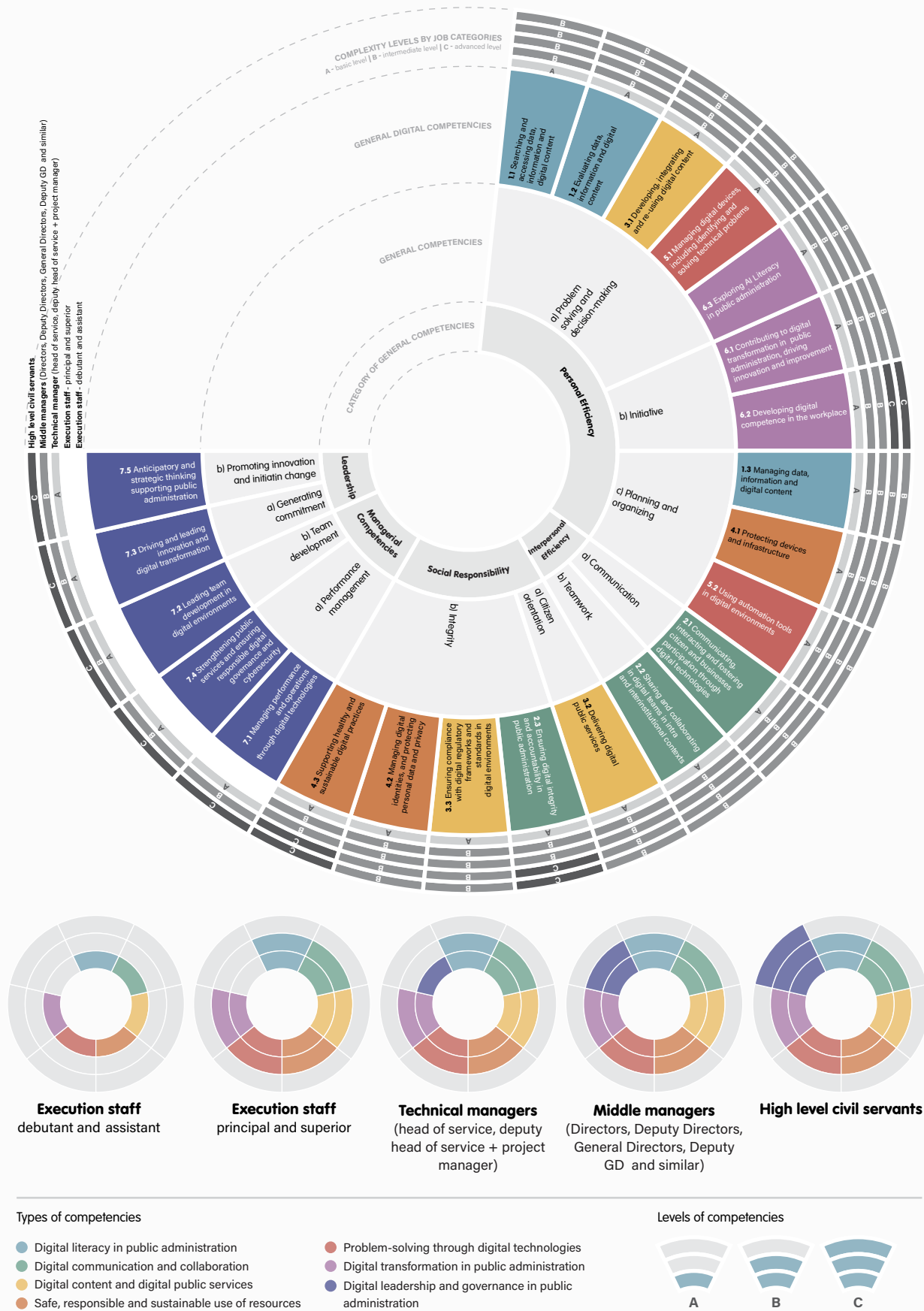
CATEGORY OF GENERAL COMPETENCIES	GENERAL COMPETENCIES	GENERAL DIGITAL COMPETENCIES
Personal Efficiency	a) Problem solving and decision-making	1.1 Searching and accessing data, information and digital content
		1.2 Evaluating data, information and digital content
		3.1 Developing, integrating and re-using digital content
		5.1 Managing digital devices, including identifying and solving technical problems
		6.3 AI Literacy in public administration
	b) Initiative	6.1 Contributing to digital transformation in public administration, driving innovation and improvement
		6.2 Developing digital competence in the workplace
	c) Planning and organizing	1.3 Managing data, information and digital content
		4.1 Protecting devices and infrastructure
		5.2 Using automation tools in digital environments
Interpersonal Efficiency	a) Communication	2.1 Communicating, interacting and fostering citizen and businesses participation through digital technologies
	b) Teamwork	2.2 Sharing and collaborating in digital teams in intra and interinstitutional contexts
Social Responsibility	a) Citizen orientation	3.2 Delivering and contributing to digital public services
	b) Integrity	2.3 Ensuring digital integrity and accountability in public administration
		3.3 Ensuring compliance with legal and regulatory frameworks and standards in digital environments
		4.2 Managing digital identities, and protecting personal data and privacy
		4.3 Supporting healthy and sustainable digital practices
Managerial Competencies	a) Performance management	7.1 Managing performance and operations through digital technologies
		7.4 Strengthening public services and ensuring responsible digital governance and cybersecurity
	b) Team development	7.2 Leading team development in digital environments
Leadership	a) Generating commitment	7.3 Driving and leading innovation and digital transformation
	b) Promoting innovation and initiating change	7.5 Anticipatory and strategic thinking supporting public administration

VI. Mapping of the digital competencies proficiency levels across the civil service career structure

98. **The mapping of digital competency proficiency levels across job categories was designed to reflect both the complexity of tasks performed and the actual digital demands identified (explicitly or implicitly) in Romanian civil service job descriptions.** The proposed streamlined mapping reflected in the table below (Figure 18) can enable institutions to understand the connections between the digital and general competency models while preserving conceptual clarity and avoiding overlaps. While it might be tempting to assume that all execution-level jobs should correspond to Level A (basic), the analysis shows this is not the case. Many execution-level positions involve tasks that go beyond simple tool use, requiring the ability to analyze data, collaborate digitally, or solve moderately complex digital problems. Therefore, assigning Level B (intermediate) to a significant share of execution-level jobs is both realistic and necessary to capture the digital requirements already embedded in day-to-day work.
99. **The proposed mapping of digital competency levels in Romania is supported by both international evidence and national analysis of job descriptions.** During the initial assessment phase, the Spanish *Marco de Competencias Digitales* (which also uses A-B-C levels) was tested on Romanian job descriptions. The results confirmed that most jobs were mapped at Level B, reflecting a moderate but consistent level of digital proficiency required across institutions. While the correlation between the Romanian and Spanish models is not absolute, given that descriptors were adapted to the Romanian administrative context, both frameworks share a common root in DigComp, which makes the proficiency levels broadly comparable. This means that if Level B from the Spanish model can realistically be applied to current Romanian job descriptions, then the proposed framework for Romania is also feasible at Level B for senior execution-level jobs. **This assumption will be further tested and validated during the pilot phase.**
100. **The proposed mapping of digital proficiency levels should be seen as a reference framework for institutions, a minimum standard that ensures consistency across the civil service.** At the same time, institutions should retain the flexibility to assign a higher proficiency level where the complexity of certain jobs requires it. For example, a data analyst recruited at debutant level may formally enter the civil service with a basic IT test, but if the institution needs the role to operate at Level B, it should have the possibility to require this higher level of proficiency. In recruitment, and given current capacity constraints, it may still be useful to test a general minimum proficiency level for all jobs – A (as is currently done, where IT knowledge is tested at beginner level in national competitions). However, in job descriptions the corresponding proficiency level should be mapped consistently to the framework (A, B, or C). This will ensure that training pathways are aligned with the actual requirements of each role and that staff are supported to reach the proficiency level necessary for effective performance. For managerial positions, a minimum of Level B is recommended, to ensure managers can lead and support digital transformation within their teams.
101. **The pilot process played a critical role in calibrating proficiency levels across civil service positions based on evidence.** While the initial mapping of digital competencies relied on normative assumptions, the pilot enabled a more accurate assessment of the current and future relevance of competencies across proficiency levels. Applying the methodological approach described in Section 1.4 of this report, the pilot exercise allowed validating, adjusting, and refining competency level requirements by comparing proposed standards with real job tasks, institutional priorities, and expected digital transformation needs, resulting in a more grounded and operational mapping. The key results of the pilot exercise are discussed in Chapter 4 of this report and further details are available in **Annex 2**.
102. **Although the pilot does not support making Level C mandatory across all general digital competencies for all jobs at a certain professional level, three competencies (*Managing data, information and digital content (1.3)*, *Ensuring digital integrity and accountability in public administration (2.3)* and *Developing digital competence in the workplace (6.2)*) are proposed to be assigned Level C for middle and senior managers** (including high-level civil servants) because they reflect core leadership responsibilities, regardless of institutional digital maturity (Figure 18). These competencies relate to strategic oversight, accountability, and workforce capability development, functions reinforced by the foresight scenarios as essential for future digital governance. This sequencing allows the administration to focus first on the core leadership functions that create the conditions for broader digital transformation, while maintaining flexibility for institutions to adopt higher proficiency levels selectively as their digital priorities evolve.
103. **For all other competencies, institutions retain full flexibility to selectively apply higher proficiency levels than the minimum mandated ones,** based on job analysis, organizational context, and digital transformation priorities. This approach ensures ambition where justified, while allowing tailored implementation across diverse administrative structures. Process recommendations on how to assign higher proficiency level as part of the job analysis process are included in Output 3.



FIGURE 18: Mapping of digital competencies proficiency levels across civil service job types



CATEGORY OF GENERAL COMPETENCIES	NO	GENERAL DIGITAL COMPETENCIES	EXECUTION STAFF - debutant and assistant	EXECUTION STAFF - principal and superior	TECHNICAL MANAGER (head of service, deputy head of service + project manager)	MIDDLE MANAGERS (Directors, Deputy Directors, Deputy GD and similar)	HIGH LEVEL CIVIL SERVANTS
Digital literacy in public administration	1.1	Searching and accessing data, information and digital content	A	B	B	B	B
	1.2	Evaluating data, information and digital content	A	B	B	B	B
	1.3	Managing data, information and digital content	A	B	B	C	C
Digital communication and collaboration	2.1	Communicating, interacting and fostering citizen and business participation through digital technologies	A	B	B	B	B
	2.2	Sharing and collaborating in digital teams in intra- and inter institutional contexts	A	B	B	B	B
	2.3	Ensuring digital integrity and accountability in public administration	A	B	B	C	C
Digital content and digital public services	3.1	Developing, integrating and re-using digital content	A	B	B	B	B
	3.2	Delivering and contributing to digital public services	A	A	B	B	B
	3.3	Ensuring compliance with legal and regulatory frameworks and standards in digital environments	A	B	B	B	B
Safe responsible and sustainable use of resources	4.1	Protecting devices and infrastructures	A	B	B	B	B
	4.2	Managing digital identities, and protecting personal data and privacy	A	B	B	B	B
	4.3	Supporting healthy and sustainable digital practices	A	A	B	B	B
Problem-solving through digital technologies	5.1	Managing digital devices, including identifying and solving technical problems	A	B	B	B	B
	5.2	Using automation tools in digital environments	A	B	B	B	B
Digital transformation in public administration	6.1	Contributing to digital transformation in public administration, driving innovation and improvement	A	B	B	B	B
	6.2	Developing digital competence in the workplace	A	B	B	C	C
	6.3	AI Literacy in public administration	A	B	B	B	B
Digital leadership and governance in public administration	7.1	Managing performance and operations through digital technologies			A	B	B
	7.2	Leading team development in digital environments			A	B	B
	7.3	Driving and leading innovation and digital transformation			A	B	B
	7.4	Strengthening public services and ensuring responsible digital governance and cybersecurity			A	A	B
	7.5	Anticipatory and strategic thinking supporting public administration			A	A	A

VII. Conclusions: from design to implementation

- 104. The proposed general digital competency framework provides a coherent, evidence-based foundation for building digital capability across Romania's civil service.** Drawing on extensive legal mapping, job analysis, international benchmarking³⁶, and a multi-institutional pilot, the framework establishes for the first time a common reference for defining what "digital competence" means in the Romanian public administration context. It moves beyond narrow IT literacy toward a comprehensive model that integrates knowledge, skills, and attitudes across seven clearly articulated competency areas. By defining competencies through three progressive proficiency levels (A–B–C), the framework ensures clarity of expectations while allowing sufficient differentiation to reflect the diversity of civil service roles.
- 105. A central strength of the model is its full adaptation to the operational realities of public administration.** While aligned with DigComp 3.0 as a European reference standard, the framework was tailored through bottom-up testing to reflect institutional workflows, regulatory obligations, and service delivery tasks specific to government functions. The resulting layered structure distinguishes between competencies relevant to all staff (Areas 1–6) and those applicable exclusively to leadership and managerial roles (Area 7). This design ensures that foundational digital skills become a universal baseline across the civil service, while advanced transformation, governance, and leadership competencies are concentrated where they are functionally required. Importantly, the framework avoids conflating proficiency with hierarchy alone, recognizing that some execution-level positions require intermediate or advanced digital capability based on task complexity rather than formal rank.
- 106. Pilot application across three major institutions confirmed the relevance and practical usability of the framework's competency structure and proficiency model.** Across both core business and support functions, digital competencies were rated as increasingly important, particularly in areas related to digital leadership, governance, communication, and transformation. Level A emerged as a universal requirement for all roles, validating the framework's premise of establishing a common digital baseline. Level B was shown to be widely applicable but best deployed selectively based on job demands rather than grade categories. Level C proved relevant only for a limited set of roles, supporting the recommendation for its targeted and flexible application. These findings allowed for the refinement of descriptors, especially in Area 7, and for a calibrated mapping of minimum proficiency targets aligned with actual institutional needs.
- 107. The framework's compatibility with the existing general competency framework further strengthens its institutional viability.** Systematic mapping demonstrated that digital competencies intersect substantively with behavioral general competencies already regulated under the Romanian Administrative Code, particularly in the areas of problem-solving, communication, integrity, performance management, and leadership. However, the report confirms the importance of maintaining digital competencies as a distinct framework rather than subsuming them into general competency assessments. This dual-system approach preserves conceptual clarity, avoids unnecessary bureaucratic complexity, and safeguards the flexibility needed to update digital skill descriptors as technologies and public sector requirements evolve. The mapping exercise is therefore designed not to merge assessment systems but to inform future phases of targeted, task-based digital testing aligned with role requirements.
- 108. Outputs 3 and 4 developed under the TSI project build upon the design phase and translate this conceptual framework into actionable recommendations for operationalization.** Output 3 builds directly on the model by proposing the legal anchoring of the framework and defining how digital competencies should be operationalized within selected HR processes, principally recruitment and training, while avoiding premature integration into performance appraisal or promotion systems. Output 4 converts the competency descriptors into proposed elements of curriculum, accompanied

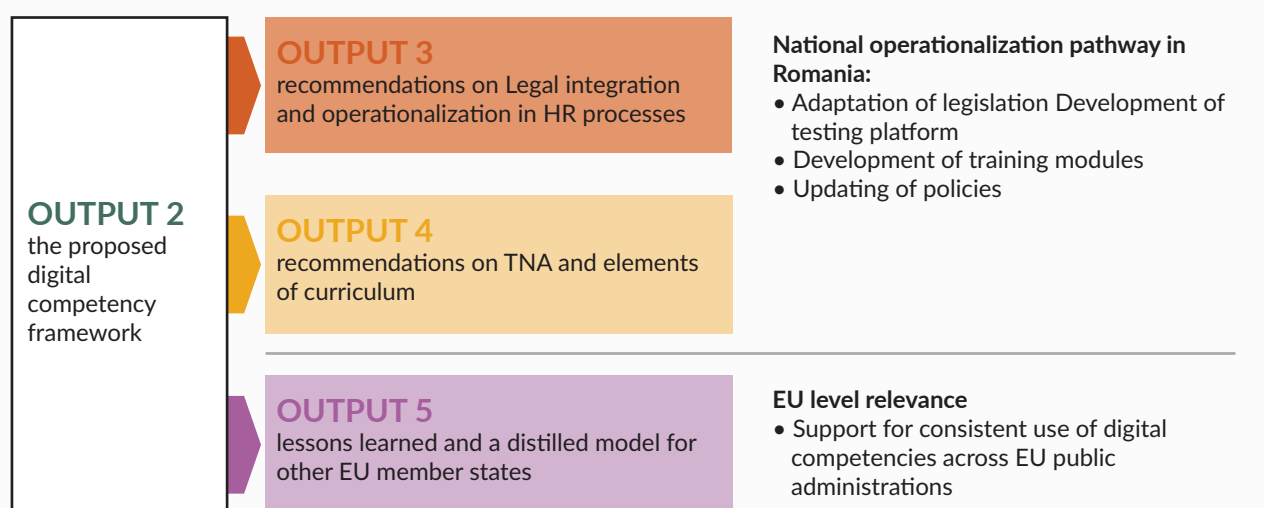
36. As described in Output 1 developed under the TSI project.

by a revised TNA methodology supported by platform-based skills diagnostics and learning analytics. Together, these outputs ensure that the framework functions not as a static regulatory catalogue, but as a dynamic workforce development tool capable of identifying skills gaps, prioritizing training investments, shaping curricula, and feeding into strategic HR planning.

109. **Subsequent outputs (3 and 4) also provide recommendations on a phased implementation roadmap.** The approach is meant to ensure that digital competencies are introduced in a meaningful manner in HR processes that bring the most added value. The implementation approach is meant to replace fragmented, ad hoc skills initiatives with a structured model linking competency standards, assessment instruments, training pathways, and certification mechanisms. By separating developmental diagnostics from performance evaluation and focusing early operationalization on recruitment and learning functions, the model aligns with international good practice and mitigates implementation risks. Over time, the framework provides a platform for progressive strengthening consistency across institutions, guiding workforce planning, and professionalizing leadership capacity for digital transformation.



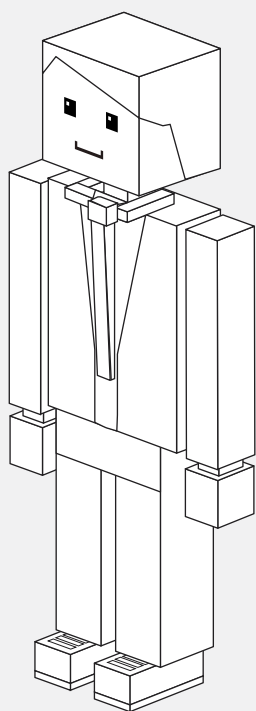
FIGURE 19: Relevance of Output 2: from design to implementation



110. **Beyond its national relevance, the Romanian model can constitute an important reference also for other EU Member States.** Its alignment with DigComp 3.0 ensures European comparability, while its adaptation to public administration realities results in a distilled, operational framework suited to government environments facing similar challenges of skills fragmentation, aging workforces, and accelerating technological demands. The modular competency structure, tiered proficiency model, and separation between assessment and appraisal together form a replicable approach that can inform the development of public-sector digital competency systems across the EU. As such, the Romanian experience contributes not only to domestic HRM reform but also to the broader European dialogue on building digitally capable, future-ready public administrations.
111. **In that sense, the final Output 5 of the TSI project consolidates Romania's experience into a set of transferable lessons and a distilled model for other EU Member States.** This final output synthesizes evidence from the legal mapping, framework design, pilot testing, and training needs operationalization to identify the core design principles, governance arrangements, and implementation drivers that enabled the development of a practical, scalable digital competency system for public administrations. It presents a modular version of the Romanian model aligned with DigComp 3.0, tailored to the diverse administrative contexts of EU countries. By combining methodological insights with concrete tools and examples, Output 5 is intended to support peer learning across the Union and contribute to a common European approach to strengthening digital competencies in the public sector.

Annex. 1:

General digital competencies and descriptors



81 Annex 1.1 Fundamental competencies

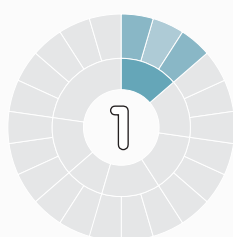
92 Annex 1.2 Digital Transformation competency

95 Annex 1.3 Digital Leadership competencies

Annex 1.1 Fundamental competencies

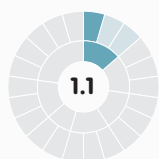
Areas 1 to 5 represent the core of the digital competency framework. They define the essential digital knowledge, skills and attitudes that all public servants need to operate effectively and responsibly in an increasingly digital working environment. These competencies apply across roles, sectors, and seniority levels and are relevant to the everyday realities of public administration.

This part of the framework aligns closely with European and international digital competency models, such as the DigComp framework, but has been tailored to reflect the institutional and operational context of Romania's civil service. While it draws on common digital concepts - such as communication, information handling, collaboration, and digital security - it anchors them in tasks and tools familiar to public servants, including administrative platforms, digital workflows, and citizen-facing services. Whereas some of the descriptors are derived from international practices ³⁷ and adapted to the Romanian context, others are purpose-specific for this framework.



Digital literacy in public administration

The focus of area 1 is on searching, evaluating and managing data and information.



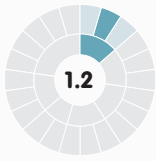
COMPETENCE

1.1 Searching and accessing data, information and digital content

To articulate information needs, to know how and where to search for data, information and content in digital environments. To select appropriate digital tools, including AI systems, to create, implement and update searches to support public administration tasks and processes.

Descriptor	Level
Able to identify and articulate specific information needs related to tasks in the public administration (e.g. reporting, policy design, service improvement), and select appropriate digital services to retrieve relevant information.	A
Search for professional content, resources and databases to accomplish tasks in their field of public administration (e.g. for reporting, policy briefs, to guide citizens).	A
Establish simple search strategies for data, information and resources stored on intranet and shared file storage systems (e.g. sharepoint) in public administration.	A
Distinguish relevant key features and purposes of a variety of search services and tools, including specialised search services for public administration use, AI systems and databases.	B
Apply appropriate strategies to use advanced features of search services, and tools to refine or filter existing digital results or outputs, including prompts to interact with AI systems.	B
Perform advanced searches demonstrating strategic use of search technologies, including AI systems, specialised search services and databases, to support complex information requirements in public administration.	C
Combine a variety of search technologies and strategies, including AI systems, to enhance access to institutional data and knowledge to support strategic decision-making in public administration.	C

37. Key sources include: DigComp 3.0, the OECD Framework for Digital Talent and Skills in the Public Sector, OECD report Developing Skills for Digital Government, UNESCO's Artificial Intelligence and Digital Transformation Competencies for Civil Servants, Italy's Syllabus for Digital Skills for the public administration, Spain's Digital Competencies of Public Employees: Reference Framework.

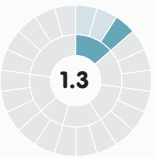


COMPETENCE

1.2 Evaluating data, information and digital content

To assess and compare the credibility and reliability of sources of data, information and digital content in digital environments. To interpret and critically evaluate them to support evidence-based decision-making in public administration.

Descriptor	Level
Understand that not all information and their sources in digital environments are reliable, and that some information is designed to influence (beliefs, values, citizen behaviour).	A
Make accurate distinctions between reliable sources of evidence for policy purposes (e.g. scientific evidence, research outputs) and other types of knowledge and information.	A
Know how to assess public data and their sources (e.g. Eurostat, OECD) for tasks in public administration, e.g. analysis and comparison, support decision-making processes.	A
Critically assess, compare and validate digital data, content and information, and their sources, based on credibility, reliability, completeness and appropriateness for public sector use.	B
Value the credibility and reliability of data in decision-making and policymaking, and the opportunities of using data in government.	B
Understand the concept of 'data-driven public administration', e.g. an awareness of the value and potential of data for supporting decision -making, process design, product and service development and solution delivery.	B
Use indicators to monitor activities and policies in public administration, e.g. for digital policy implementation, performance measures.	B
Thoroughly assess and compare a variety of data, data visualisations and content on a given topic or problem to make accurate inferences to support policy development in a given field of public administration.	C
Evaluate and audit strategies to analyse and interpret data to support policy development in a given field of public administration.	C



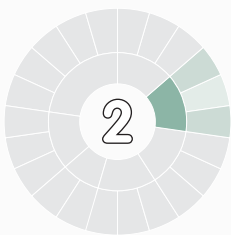
COMPETENCE

1.3 Managing data, information and digital content

To organise, store and retrieve data, information and digital content in digital environments. To collect, process and analyse them in structured digital environments to support public administration tasks and processes.

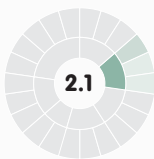
Descriptor	Level
Know that data and digital content can be stored in various locations, e.g. local devices, corporate network, in the cloud, and use the most appropriate one in each circumstance.	A
Know basic data management tools and platforms commonly used in public administration (e.g. document management systems, collaborative platforms, institutional databases, cloud).	A
Organise and format simple data within spreadsheets to support simple information processing and management tasks.	A
Organise, store and retrieve data, information and content in digital tools employed in public administration (e.g. document management systems, cloud, collaborative platforms, institutional databases).	B
Apply a range of data analysis techniques, including spreadsheets (e.g. using formulae, functions, macros) and AI-driven analytics, to support policy development in public administration.	B

Descriptor	Level
Value the importance of clearly and transparently structuring, documenting and explaining datasets for the benefit of others.	B
Use data cleaning and validation techniques to ensure that data and information used for documentation, reporting or decision-making is accurate and usable.	B
Acknowledge that data is an integral asset in public administration to support digital service delivery, organisational management and innovation.	C
Use big data techniques (such as data mining, simulation, AI) for data processing and analysis in public administration tasks.	C
Contribute to improvements of institutional standards, classification systems, electronic archiving rules and metadata to ensure easy access, traceability and management.	C



Digital communication and collaboration

The focus of area 2 is on communication and interaction with citizens and businesses through digital technologies, sharing and collaboration while ensuring integrity and accountability of public administration tasks and workflows, including when AI is used.



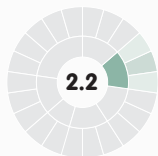
COMPETENCE

2.1 Communicating, interacting and fostering citizen and business participation through digital technologies

To communicate and interact with citizens and businesses through appropriate digital technologies to foster their engagement and trust in public administration. To adapt communication to specific contexts, and to ensure simplicity and clarity.

Descriptor	Level
Use appropriate digital tools (e.g. email systems, collaborative platforms, internal messaging tools) to compose, send, and manage professional communications in digital environments.	A
Interact through inclusive digital channels to ensure meaningful participation from diverse groups, including those with limited digital skills or access.	A
Use different communication styles and linguistic registers in interactions through digital technologies, depending on the tool used, and understand the need to ensure simplicity and clarity.	A
Understand the influence of digital and social media on public perception and participation, and apply this understanding in public communication strategies.	A
Carefully choose the most appropriate digital communication tools to interact with citizens, and public and private organisations, depending on the legal nature, complexity and degree of formality of the content.	B
Able to develop and deliver digital content and presentations tailored to specific audiences and administrative purposes, using appropriate visual and technical formats.	B
Promote and value inclusive civic participation in digital environments by citizens, and public and private organisations, e.g. digital citizenship topics to exchange on social and political issues, use of open public data by 3rd parties.	B
Recognise that citizens use digital tools to engage with public administration to express and enact their digital citizenship, and to participate in society through digital technologies.	B

Descriptor	Level
Contribute to the development of digital environments for community empowerment and civic participation to enhance trust in public institutions, and satisfaction with services.	C
Assess and audit the suitability of various digital interaction tools used in public administration for specific communication and interaction goals, taking into account advanced features, complex task requirements and context.	C

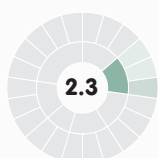


COMPETENCE

2.2 Sharing and collaborating in digital teams in intra- and inter-institutional contexts

To share data, information and digital content responsibly with others through appropriate digital technologies, interoperability standards and open data initiatives. To use digital technologies for collaborative processes to support public administration tasks and workflows.

Descriptor	Level
Know basic collaborative digital tools to share and work in digital teams, e.g. shared calendars, scheduling platforms, shared documents, project boards and task-tracking systems.	A
Use collaborative digital tools to coordinate activities, e.g. project boards, scheduling platforms, digital calendar, time reporting.	A
Use collaborative digital tools to co-develop materials and monitor progress within a team, e.g. shared documents, project boards, scheduling platforms.	A
Work with institutional tools and platforms (e.g. case management systems, interagency portals, shared databases) that support interinstitutional coordination, joint service delivery or multi-institutional workflows.	B
Use digital systems and protocols to securely exchange information and documents with other public institutions or external stakeholders, in compliance with interoperability and governance standards.	B
Manage roles and permissions in collaborative digital environments and workflow tools, e.g. authorising access to files or workflows, to share and edit files both synchronously and asynchronously.	B
Value open data standards to ensure the accessibility of governmental data to promote trust based on the reliability of data.	B
Promote the importance of documenting basic workflows in digital formats to support institutional knowledge.	B
Aware of various mechanisms to facilitate the reuse of an organisation's data within and across public administrations (interoperability standards, open data initiatives).	C
Can explain the benefits of interoperability of information systems in public administration and institutions to enhance the reuse of administrative data.	C

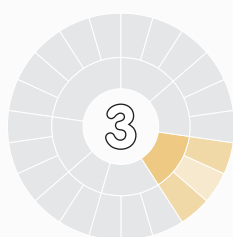


COMPETENCE

2.3 Ensuring digital integrity and accountability in public administration

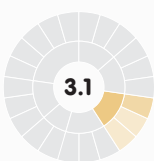
To promote ethical digital practices and good governance principles in all digital interactions and services towards citizens while respecting their rights and choices. To apply measures to take accountability for public administration tasks, including where AI is used, ensuring trustworthy and traceable processes and outputs that do not violate guidelines or policies.

Descriptor	Level
Apply digital etiquette and behavioural norms in interactions in digital environments ensuring respectful, inclusive and purpose-oriented interaction.	A
Value ethical principles when using digital technologies in professional contexts, ensuring fairness, non-discrimination, transparency and accountability.	A
Promote ethical digital practices by adhering to good governance principles and the code of conduct of public administration in all digital interactions and services towards citizens.	B
Maintain a professional digital reputation by responsibly managing one's digital footprint in work-related platforms and networks.	B
Apply measures to take accountability for public administration tasks where AI is used, e.g. checking that outputs are factual, non-harmful or do not violate guidelines or policies.	B
Acknowledge that responsible and ethical use of AI in public administration is guided by human-centric principles of fairness, accountability, transparency, safety, and ethical issues such as privacy, diversity, freedom from bias, information integrity and environmental sustainability.	B
Identify and mitigate risks related to digital misinformation and disinformation, including the specific risks associated with AI deployment, such as algorithmic bias and lack of transparency (like a 'black box').	C
Recognise the importance of considering transparency and accountability of AI systems in public administration and continuously scrutinise how AI systems might shape the interpretation of data and information.	C



Digital content and digital public services

The focus of area 3 is on creating and reusing digital content, contributing to inclusive and people-centred digital public services, while ensuring compliance with legal and regulatory frameworks in digital environments.



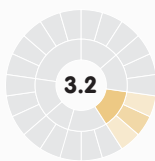
COMPETENCE

3.1 Developing, integrating and re-using digital content

To create and refine a variety of digital content while adhering to institutional requirements, ensuring reusability and digital accessibility across public administration.

Descriptor	Level
Know that digital content (e.g. reports, summaries, visuals, FAQs, guides, presentations) can be tailored to the needs of different target audiences (e.g. citizens, partners, private and public organisations).	A
Develop and modify digital content (e.g. presentations) to specific audiences and administrative purposes, using appropriate visual and technical formats.	A
Know how to use AI tools (e.g. generative AI) ethically and safely to generate simple digital content by developing and refining questions, commands or statements (prompts) to manage their quality.	A
Apply institutional guidelines for using AI systems in digital content productions within public administration tasks.	A

Descriptor	Level
Use institutional templates and digital text processing tools ensuring clarity, correctness and compliance with professional standards.	A
Value compliance with professional and institutional standards when creating, formatting and modifying digital content (e.g. official documents, visuals, institutional templates) for diverse administrative tasks.	A
Understand the official standards and guidelines (e.g. WCAG 2.1 and EN 301 549) related to digital accessibility of content (e.g. digital files, documents, web-based applications).	B
Know how to create and adapt digital content to meet digital accessibility and interoperability standards, ensuring it is reusable across different platforms and understood by different user groups.	B
Aware that user inputs (e.g. prompt engineering techniques) can be used to reduce the risk of biased, harmful or inaccurate outputs in generative AI tools when creating digital content with AI systems.	B
Document good practices, workflows or lessons learned in reusable digital formats (e.g. templates, guidelines, internal guidance), contributing to institutional knowledge.	B
Inclined to help others to improve their digital content (e.g. through providing useful feedback).	B
Create design guidelines for various types of digital materials (e.g. interactive presentations, data-driven reports, customisable for diverse audiences) optimising their reuse for administrative efficiency.	C
Analyse and audit digital content production, incorporating AI systems, within public administration, and take into account whether ethical, responsible and transparent processes are respected.	C



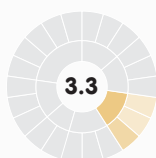
COMPETENCE

3.2 Delivering and contributing to digital public services

To contribute to the creation of inclusive, digitally accessible and people-centric digital public services for citizens and businesses through digital technologies. To support the creation and improvement of digital public services delivery, and to support citizens and businesses to interact with them.

Descriptor	Level
Identify the main digital public services available for citizens and companies in their field of public administration, e.g. ghiseul.ro, e-guvernare.ro, Punctul de contact unic electronic.	A
Aware that 'digital accessibility' means ensuring that everyone, including people with disabilities, can use and navigate public administration websites, digital files and use the services.	A
Open to support citizens and other beneficiaries in accessing relevant digital content, offering guidance where needed and helping adapt digital tools to user needs.	A
Open for collaboration to support the design of digital public services within multidisciplinary teams.	A
Help citizens and other beneficiaries understand, access and confidently use various digital tools in public services, ensuring inclusive and meaningful engagement in digital interactions with public institutions.	B
Support citizens to interact with digital services at government platforms, e.g. helping them obtain and authenticate themselves using ROeID.	B
Open to integrate formal and informal feedback from direct beneficiaries into the processes of adapting and improving digital public services.	B

Descriptor	Level
Contribute to the development, testing or improvement of public services supported through digital technologies, e.g. simplifying digital forms, automating steps, increasing usability and transparency.	B
Participate in the exploration, testing, or piloting of emerging digital tools and technologies relevant to public administration, contributing to innovation and service improvement.	C
Evaluate and audit the design and functionality of new digital services to ensure they meet user needs and are consistent with relevant frameworks, e.g. strategies, standards.	C

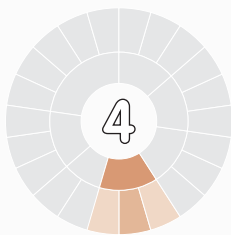


COMPETENCE

3.3 Ensuring compliance with legal and regulatory frameworks and standards in digital environments

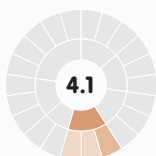
To comply with, and implement, legal and regulatory requirements and standards related to digital public services while protecting fundamental rights, ensuring fairness and promoting public trust in public administration.

Descriptor	Level
Recognise that different kinds of copyright and licences can apply to digital content (e.g. software, audio-visual material), including AI-generated content, and that these determine how content can be used and shared, also in public administration.	A
Understand the features of current legislation in relation to copyright and intellectual property, licensing, and the responsible use of digital technologies, including generative AI.	A
Aware of the methods identified by the legislation for a valid electronic submission of applications and declarations to public administration institutions.	A
Support and contribute to institutional compliance with regulations, standards and procedures applicable to one's area of responsibility (e.g. digital procurement, documentation, audit trails).	B
Apply key concepts related to e-Government and European developments, such as Digital Identity Regulation and European Digital Identity Wallet, and their possible implications.	B
Know the relevant principles from laws and EU regulatory frameworks governing data and data management, including the Interoperability Act.	C
Understand the main provisions of EU and national legislation in the context of public digital public services, such as the GDPR, Data Act, Data Governance Act, Digital Services Act, and relevant parts of the AI Act, considering implications and potential relevance to specific tasks.	C
Assist on main principles of the digital regulatory frameworks and initiatives in the context of public digital public services, e.g. Cybersecurity standards (aligned with National Cybersecurity Strategy), Data governance and interoperability (Law No. 242/2022 on interoperability, PNI platform), Cloud management and data protection (Government Cloud Infrastructure), Digital Identity Systems (ROeID), AI-enabled decision-making (National AI Strategy 2024–2027).	C



Safe, responsible and sustainable use of resources

The focus of area 4 is on protecting devices, data, privacy, and digital identity, promoting wellbeing, and ensuring responsible, sustainable use of digital technologies.

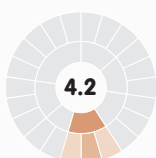


COMPETENCE

4.1 Protecting devices and infrastructures

To apply safety and cybersecurity measures to protect digital devices, content and infrastructure. To be aware of the evolving nature of risks and threats in digital environments. To follow institutional cybersecurity measures and safety protocols to ensure the continuity of digital public services.

Descriptor	Level
Follow and apply institutional cybersecurity practices and preventive measures (e.g. system updates, antivirus tools) to protect devices, digital content and infrastructure from cyber threats.	A
Generate and periodically change secure keys or passwords for the accounts used at work (e.g. ones that combine numbers, signs and letters, multi-factor authentication), knowing that since cyberattack techniques are changing, cybersecurity responses by users also need to change.	A
Acknowledge the importance of one's individual role in contributing to institutional safety protocols, e.g. in the secure management of devices and access to infrastructure.	A
Stay informed about evolving cybersecurity risks and digital threats in professional environments (e.g. phishing, spoofing, viruses, ransomware).	B
Implement secure data handling practices in public administration tasks to ensure compliance with cybersecurity regulations, collaborating with IT teams as needed.	B
Describe different categories of cybercrime, demonstrating knowledge of relevant legislation, such as the Cybersecurity Act, Cyber Solidarity Act and the European Directive on security of network and information systems (NIS).	C
Apply the cybersecurity policies outlined in Romania's Cyber Security Strategy (2022-2027) to ensure secure handling of electronic media in public administration tasks, collaborating with the National Cyber Security Directorate (DNSC) to implement best practices like access verification and incident reporting.	C

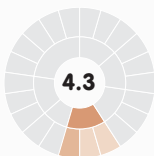


COMPETENCE

4.2 Managing digital identities, and protecting personal data and privacy

To manage digital identities (e.g. eID) to ensure secure and reliable digital identification for accessing and using digital public services, and their related digital processes. To ensure compliance with personal data regulations and privacy in public administration.

Descriptor	Level
Recognise the concept of digital identity as both a means of authenticating (validating) an individual, and the data generated by an individual's online activities, which can be combined from different sources.	A
Know that the public administration uses an e-signature system and is aware of its advantages and disadvantages.	A
Know how to use digital authentication services for public employees in their field of public administration and its related services, e.g. follow procedures to e-sign official documents and workflows.	A
Identify and apply basic measures and principles to manage digital identity and safeguard personal data, workplace and other sensitive information in digital environments.	A
Know the principles of how citizens can use eID to access digital public services and government platforms, e.g. Digital Identity Systems (ROeID).	B
Understand the different levels of privacy that can be set on one's own digital devices as well as on cloud services, and apply them in digital work environments.	B
Understand key concepts in the EU related to data protection and privacy legislation, including data minimisation.	B
Knows that in the EU, citizens have the right to ask the administrator of digital services to access the personal data held about them (right of access), to update or correct them (right of rectification), or remove them (right of erasure, also known as the Right To Be Forgotten).	B
Safely manage and share personal data and other sensitive information across public administration services under current data protection and privacy legislation.	B
Conduct privacy risk assessment to protect sensitive data and privacy from misuse and breaches, ensuring GDPR compliance.	C
Aware that various types of user data (e.g. personal, behavioural, contextual) can be used to produce user profiles for predictive purposes (e.g. identify potential beneficiaries of public services).	C



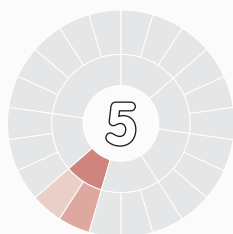
COMPETENCE

4.3 Supporting healthy and sustainable digital practices

To use digital technologies to minimize risks and threats to physical, mental and social wellbeing of oneself and others. To use digital technologies to support sustainability and environmental practices in public administration.

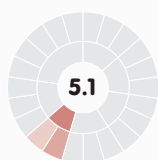
Descriptor	Level
Recognise individual wellbeing risks and threats associated with the use of digital technologies at work, such as negative impact on posture, sleep patterns, cyberbullying, grooming, self-perceptions, techno-stress, and types and signs of digital dependency.	A
Recognise the importance of energy-efficient practices at work when operating digital devices.	A
Contribute to a digital work culture that is respectful, inclusive, and supportive of diverse needs, fostering equitable access to digital services and tools.	B
Identify and act upon cases of cyber-bullying or internet fraud if they occur in the institution where they work.	B
Promote responsible and future-oriented attitudes in the use of digital resources (e.g. digital devices, AI systems, digital platforms), in line with institutional values and public service ethics.	B
Aware of the environmental impact of digital technology (e.g. energy use, device lifecycle, data storage) and apply sustainable practices when using digital tools.	B

Descriptor	Level
Assess and audit institutional practices in relation to health, wellbeing and inclusion in digital environments to guide future practices in a specific context.	C
Assess and audit ways of using digital tools to support socially and environmentally responsible behaviour in public administration, e.g. to prevent cyberbullying and to reinforce safe online use.	C



Problem-solving through digital technologies

The focus of area 5 is on the identifying and solving technical problems in digital environments, including on contributing to more efficient workflows by applying automation and programming techniques.

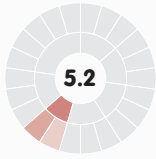


COMPETENCE

5.1 Managing digital devices, including identifying and solving technical problems

To know digital tools (e.g. devices, interfaces, software applications) and understand the basics of digital technologies used in public administration processes. To identify technical problems and to solve them through a variety of means.

Descriptor	Level
Use confidentially and safely institutional digital devices (workstations, printers), digital environments and core software applications for administrative work (e.g. document management systems, electronic archives, workflow and case management tools, public service delivery platforms).	A
Understand the basic operating logic and functionalities of digital devices, tools and infrastructures used in their field of public administration to resolve routine technical issues to complete professional tasks efficiently.	A
Autonomously use digital technologies to telework in their field of public administration.	A
Diagnose simple technical problems encountered when using digital tools, devices or systems in professional contexts (e.g. login issues, connectivity failures, file compatibility), using institutional guidance or support materials when needed.	A
Know a variety of alternatives to overcome technology limitations in order to perform necessary tasks at job (e.g. using alternative applications, scanning a document with a mobile device).	B
Document and report more complex technical issues to IT support or helpdesk teams, providing relevant context, screenshots, or error messages to ensure efficient resolution.	B
Coordinate with IT staff and other technology specialists to resolve technical issues affecting public administration tasks, ensuring operational continuity.	C
Analyse complex technical situations, both face-to-face and virtually, where employees need help to trouble-shoot a technical issue, and help create new step-by-step guidance such as video tutorials and other guidelines.	C



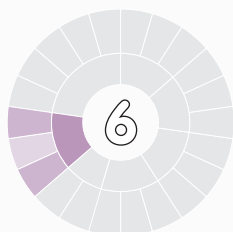
COMPETENCE

5.2 Using automation tools in digital environments

To understand and implement steps to analyse issues (e.g. identify repetitive digital tasks and processes) in public administration workflows that can be simplified, and plan and develop a sequence of instructions for a computing system to solve them or to perform a specific task.

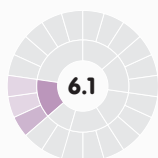
Descriptor	Level
Identify repetitive and basic digital tasks in one's work that can be streamlined using simple automation tools (e.g. email filters, form templates).	A
Follow basic instructions to automate simple tasks.	A
Understand that each problem, both analogue and digital, can be unpacked into different sub-problems and can have different entry points for developing solutions.	A
Take initiative in proposing or implementing changes that simplify procedures, increase efficiency, or improve service quality, using available technologies or piloting new ones.	B
Describe (with examples) the general steps in computational thinking, such as problem decomposition, pattern recognition, algorithmic thinking and abstraction.	B
Assess the use of office automation tools in routine tasks to ensure ethical and responsible deployment, data accuracy, transparency of steps, and compliance with institutional standards.	C
Represent simple sequences symbolically, or interpret simple symbolic sequences, to incorporate computational thinking basics into relevant tasks and goals.	C

Annex 1.2 Digital Transformation competency



Digital transformation in public administration

The focus of area 6 is on supporting digital transformation and developing capabilities to operate autonomously in digital environments, keeping pace with digital technological developments, including AI.

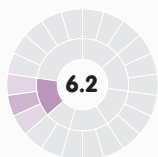


COMPETENCE

6.1 Contributing to digital transformation in public administration, driving innovation and improvement

To identify and support digital transformation initiatives, and to be open to experiment with digital technologies to innovate processes and services in public administration in a people-centric manner.

Descriptor	Level
Know some of the main drivers of digital transformation within their field of public administrations and its related services.	A
Identify some innovation initiatives that take advantage of digital and emerging technologies in their field of public administration.	A
Open to support organisation's leadership for digital transformation, including to new management and organisational practices (e.g. related to procurement and budgeting).	A
Aware that some of the tasks and workflows are better performed by using digital technologies, whereas other tasks are better performed by humans.	A
Engage and support the implementation of digital transformation initiatives in one's area of work, such as the adoption of new technologies, automation of workflows and digital services redesign.	B
Promote the importance of shaping the right environment so that digital transformation initiatives can be designed and developed in a given field of public administration.	B
Understand the importance of iteration and rapid feedback loops – allowing new ideas to be tested on a small scale before reaching a wider level of implementation – and the importance of incremental development approaches (e.g. each stage of a project builds on the preceding one).	C
Follow technological changes and disruptive developments of digital technologies, both in public administration and outside, to gather a comprehensive understanding of the needs for developing capacity and human resources in public administration.	C
Use approaches such as 'horizon scanning' and 'looking outwards' at the trends and drivers for emerging technologies to support innovation around the policy cycle (e.g. policy planning, policy design and impact assessment, policy implementation and policy evaluation phases).	C

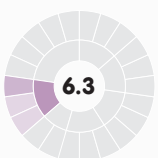


COMPETENCE

6.2 Developing digital competence in the workplace

To recognize where one's digital competence needs to be improved or updated to be adequate for working in public administration. To stay informed about digital technological developments and their personal, professional and societal implications.

Descriptor	Level
Open to adapt to use new digital tools and applications to complete one's work when supported by adequate training.	A
Aware of the training plans on digital skills and competences in their field of public administration, e.g. from public administration's e-learning campuses.	A
Engage with learning opportunities that best fit professional development needs (e.g. online courses, peer learning) for self-development at work and within a broader process of lifelong learning.	A
Apply newly acquired digital skills and competences in day-to-day tasks, evaluate their effectiveness, and refine practices accordingly.	B
Demonstrate motivation and responsibility for continuous digital development, modelling good digital practices and encouraging others to do the same.	B
Assess and audit methods to identify digital competence gaps at work (e.g. routine tasks, for remote work), and provide suggestions for new training methods and mentoring mechanisms.	C
Follow international trends in how the concept of digital competence and its continuum of proficiency evolves over time, e.g. by showing interest in international reference frameworks.	C



COMPETENCE

6.3 AI Literacy in public administration

To ensure a general conceptual understanding of what Artificial Intelligence (AI) is, contexts for its application, and critical, ethical and responsible approaches to using AI in public administration tasks and processes. Understand legal requirements concerning the use of AI in public administration (e.g. AI Act).

Descriptor	Level
Aware that when using any AI systems in public administration, the user should be provided with a sufficient level of AI literacy.	A
Open to consider the opportunities of AI systems and emerging technologies for the functions of public administration.	A
Recognise what AI is in general terms, making a basic distinction between what is and what is not an AI system.	A
When using AI tools in public administration tasks, even generative AI tools freely available, aware that public administration might have rules about their use at work (e.g. they might lack suitable institutional oversight and thus pose risks for use in public administration).	B
When using AI tools, either institutional or free ones from the Internet, aware that inputting sensitive, proprietary or personal data into AI systems can lead to unintended consequences, e.g. leakage of this data, misuse of personal data.	B
Identify which types of tasks in one's regular work in public administration are more or less suitable to complete using AI tools (e.g. generative AI) and can outline safeguards in place to ensure humans can override AI systems.	B

Descriptor	Level
Critically evaluate some capabilities of AI to support human skills and judgement, and know that AI can also be used to substitute human skills.	B
Know, in general terms, relevant AI concepts (e.g. large language models, machine learning, deep learning) and examples of their use in their field of public administration.	B
When using AI systems at in public administration tasks, aware of the risks of the AI system and basic steps to mitigate those risks, including how legal and ethical aspects can affect the individuals they are used on.	B
Value the importance of staying informed about, and discussing, digital technologies' ethical and social implications in public administration (e.g. AI systems in PA, digital inclusion/exclusion).	B
Contributes to the development of practices that support AI literacy guidance in public administration institutions according to legislation or industry standards.	C
Distinguish examples of high-risk AI systems (e.g. according to legislation) in their field of public administration, their potential negative impacts and how the persons on whom the AI system is used can exercise their rights.	C

Annex 1.3 Digital Leadership competencies

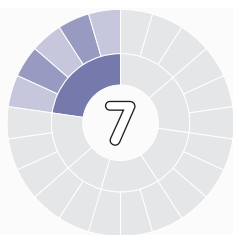
While general digital competency frameworks often apply the same structure across all roles, Area 7 introduces a distinct set of competencies for public administration managers, reflecting their responsibility to lead transformation, ensure institutional compliance, and guide strategic implementation of digital reforms. This need was clearly identified in the first assessment report and is reinforced by frameworks such as the EU Digital Decade, the OECD Going Digital Framework, and the evolving body of EU digital legislation (e.g. GDPR, AI Act, NIS2, Interoperable Europe Act).

This dedicated area ensures that digital competencies for leadership are not only formally recognized, but also strategically developed to meet Romania's public sector modernization goals. Beyond possessing strong general digital skills, managers must be equipped to translate digital strategies into action, oversee ethical and legal use of technology, and foster cross-cutting collaboration.

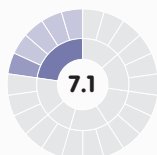
The A–B–C levels in Area 7 do not reflect increasing complexity of tasks— as in Areas 1 – 6 — but rather align with growing levels of managerial responsibility defined in the Romanian Administrative Code: from first-level managers (Level A) to senior institutional leaders (Level C). These competencies go beyond general ICT usage. They reflect the broader role of managers in shaping how digital transformation takes root across the public sector and in ensuring digital governance, cybersecurity and innovation. This includes using data and digital tools to monitor and improve how institutions perform day to day, while also supporting their teams in building the right digital skills and working methods. It involves encouraging innovation, guiding change, and creating the right conditions for new digital solutions to take hold. Managers are also expected to uphold strong digital governance - making sure that data is used responsibly, securely, and transparently. And as digital technologies evolve, they need to stay ahead by applying strategic thinking and foresight tools to plan for future challenges and opportunities.

Area 7 is intended for:

- Technical managers (head of unit) and Project managers responsible for projects that have digital components (even if they are at execution level with project coordination roles).
- Middle managers – they all oversee teams, implement reforms, or lead operational improvements.
- Senior civil servants and top management (e.g. secretaries general), who shape institutional strategy.



Digital transformation in the public administration

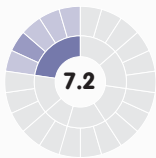


COMPETENCE

7.1 Managing performance and operations through digital technologies

To use digital technologies for planning, organising, and monitoring activities and resources, ensuring efficient achievement of institutional objectives within defined parameters.

Descriptor	Level
Use professional collaborative platforms for systematic activity management and monitoring team progress, e.g. through digital dashboards for KPI tracking with automated alerts and performance visualisation.	A
Apply concepts and principles such as: digital project management, digital workflow management and performance monitoring, e.g. dashboards, key performance indicators (KPI) and objectives and key results (OKR).	A
Demonstrate transparency through regular sharing of team performance indicators in an accessible format and proactively request feedback for continuous improvements.	A
Ensure comprehensive digital feedback systems for continuous improvement (e.g. through performance self-assessment), while applying digital documentation of evaluations with full traceability.	A
Apply concepts and principles such as: business intelligence, advanced performance analytics, process optimization, workforce analytics, predictive modelling and integrated management systems.	B
Integrate data from multiple institutional systems into unified dashboards to follow performance, using filtering and drill-down functions, to enable evidence-based resource allocation decisions and real-time operational adjustments.	B
Demonstrate digital agility through adopting new performance monitoring tools and experimenting with emerging solutions for performance & process optimisation.	B
Promote a culture of continuous optimisation (e.g. using advanced analytics to identify bottlenecks and measurably improve public services), including those delivered through digital technologies.	C
Shape strategic investment decisions for digital and operational initiatives by interpreting performance intelligence and scenario analyses to optimise resource use and strengthen institutional outcomes.	C



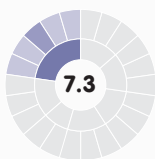
COMPETENCE

7.2 Leading team development in digital environments

To align the use of digital technologies with organisational and strategic priorities (e.g. managers support team's digital upskilling) while fostering organisational culture to support institutional performance and adaptability.

Descriptor	Level
Apply concepts and principles relevant to digital team development, such as digital learning, e-learning platforms, microlearning, digital skills assessment and constructive feedback.	A
Apply concepts and principles in digital environments, such as digital leadership, digital inclusion and emotional intelligence.	A
Create and support digital competency development plans for individuals with expected learning outcomes and encourage feedback mechanisms for continuous learning path adaptation.	A
Provide strategic direction, oversight and training opportunities for the use of AI tools in public administration to integrate them into relevant parts of the team's processes and workflows while mitigating the risk of discriminatory outcomes from AI uses.	A
Apply concepts and principles such as: blended learning, organizational learning, digital coaching, future skills and motivation psychology in remote work (autonomy, belonging, fairness).	B
Promote and ensure constant support for the team's digital development, pursuing early identification of necessary competencies, especially in AI use cases, and facilitating access to relevant learning resources.	B

Descriptor	Level
Enable and oversee the design and roll out of structured digital upskilling programs for the team (including training on AI systems where relevant), and support translation of acquired skills into updated job descriptions and workflows.	B
Operate with concepts and principles such as: strategic talent development, organisational capability, future of work, digital transformation culture, talent management, leadership pipeline and digital succession planning.	C
Shape and drive institutional digital workforce development by ensuring and aligning learning priorities, partnerships and investments with emerging upskilling needs (e.g. AI governance, advanced data literacy, interoperability expertise).	C
Promote an organisational culture of continuous learning, collaboration and digital innovation, through personal example and support programs that integrate digital technologies in professional competency development.	C

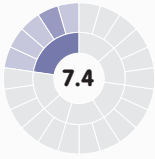


COMPETENCE

7.3 Driving and leading innovation and digital transformation

To initiate, sustain and coordinate institutional digital transformation by integrating innovation and process changes to solve complex societal problems. To mobilise necessary financial, human and social capital resources to turn ideas into value in public administration while minimising the negative impact and maximising the benefits of change.

Descriptor	Level
Provide strategic direction to operate with concepts and principles relevant to digital transformation in the public sector, such as people-centric public service design, accessibility-by-default, usability-testing, controlled environment testing, iterative delivery, rapid prototyping and agile methodologies applied in public administration.	A
Apply concepts and principles such as: innovation management, change management, design thinking, digital transformation, open innovation and digital resilience.	A
Coordinate, within their area of professional specialisation, the identification of opportunities for automation and digital transformation of work processes, and propose, pilot and support the implementation of process improvements (e.g. automations, AI proof-of-concepts) to optimise workflows and service delivery, in collaboration with relevant technical support units, and with attention to risk mitigation.	A
Apply concepts and principles such as: institutional digital maturity, digital disruption strategy, strategic digital partnerships, cultural transformation, regulatory innovation, public-private digital ecosystems and governance frameworks for digital innovation.	B
Support and refine the creation of criteria for evaluating and prioritising innovation ideas, taking into account conditions for controlled experimentation (digital sandboxes), and ensure the development of departmental digital transformation strategies with structured innovation pipeline processes.	B
Develop and support an institutional vision for digital transformation aligned with the national strategy and provide strategic direction for coordinating digital transformation initiatives.	C
Contribute to the development of an institutional AI roadmap, aligned with AI Act requirements and Digital Decade objectives, while ensuring organisational cultural transformation and change management processes.	C
Provide strategic direction to develop partnerships with actors from the technology ecosystem (e.g. with academia, private industry, civil society and other government agencies) to integrate digital solutions that meet institutional needs and increase public service value.	C

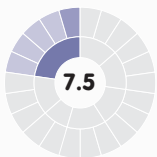


COMPETENCE

7.4 Strengthening public services and ensuring responsible digital governance and cybersecurity

To lead the creation of digital governance principles and frameworks for responsible use of data and technologies in public administration. To coordinate policies on long-term data governance, their quality, ownership and regulatory compliance ensuring transparency and interoperability of information systems and digital services.

Descriptor	Level
Apply concepts and principles such as: data governance frameworks, transparency by design, data lifecycle, information classification, digital interoperability, technical standards compliance, and digital ethics and integrity in public service.	A
Coordinate and monitor institutional procedures for data quality assurance and metadata managements (e.g. data classification procedures according to institutional standards), ensuring compliance with regulatory standards such as national classification schemes and the Once Only Principle System.	A
Monitor team compliance with basic cybersecurity (e.g. complex passwords, software updates, VPN usage) and personal data protection rules in digital workflows, identify and report incidents, and propose immediate corrective measures in line with GDPR and NIS2 requirements.	A
Provide strategic direction and collaborate with the development of digital governance policies aligned with organisational strategies to establish a long-term data culture in the organisation.	B
Support and oversee the data value chain for analytic techniques to discover and explore data insights, and to identify new data requirements, to address the organisation's challenges and opportunities, e.g. to solve complex problems, deliver better public services and provide evidence-led policymaking.	B
Contribute to the evaluation of ethical aspects of digital technology implementation, e.g. algorithmic bias, discrimination, automated decision transparency, AI ethical dilemmas in public service contexts, including environmental impact associated with AI adoption.	B
Advocate for the integration of digital ethics criteria and responsible AI principles (transparency, explainability, fairness) into technological transformation and innovation strategies.	B
Support and oversee the coordination and development of organisational digital governance strategies, aligned with a national legal framework and European regulations, including comprehensive AI and data governance frameworks for institutional implementation.	C
Know strategic concepts and guidelines related to digital risk management, zero trust, cyber resilience and national cybersecurity strategies.	C



COMPETENCE

7.5 Anticipatory and strategic thinking supporting public administration

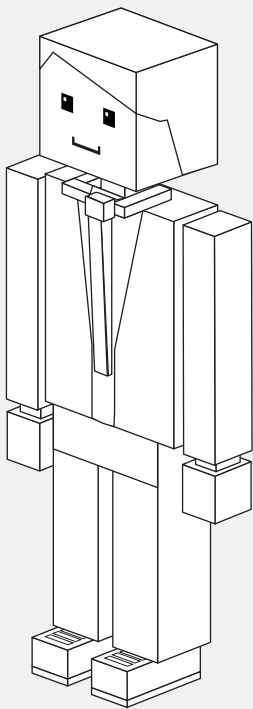
To use strategic foresight to anticipate and prepare for potential changes, guiding decision-making in public administration towards more sustainable, long-term solutions. To understand systemic interdependencies and formulate anticipatory responses to institutional challenges due to technological trends impacting societies.

Descriptor	Level
Familiar with concepts of anticipatory and strategic foresight in public administration (the ability to anticipate future developments, problems and unexpected events) to explore strategic opportunities and develop futures visions.	A

Descriptor	Level
Recognise the complexity and interconnected nature of problems governments face and the need to develop the ability to understand the properties and dynamics of complex systems.	A
Create simple what-if scenarios to simulate the impact of policy changes to better understand systemic interdependencies (e.g. in activities and service delivery).	A
Operate with concepts and principles such as: strategic anticipation, organizational intelligence, complex systems analysis, scenario planning for decision support.	B
Promote anticipatory and systemic thinking within teams, supporting use of digital tools to understand interdependencies and anticipate decision impact on public services.	B
Develop and promote strategic foresight capabilities across the organisation for anticipating societal and technological trends impacting digital public services.	C
Contribute to foresight scenarios to mitigate the risk of discriminatory outcomes from AI uses in public administration, especially those considered high-risk under current legislation (e.g. AI Act). This includes creating scenarios on the long-term impacts of AI systems on beneficiaries to inform strategies to better mitigate bias in welfare prediction systems.	C
Lead the development of institutional-level horizon-scanning and foresight exercises, integrating weak signals and emerging technological trends (e.g. quantum computing, generative AI) into long-term strategic planning while aligning them with EU and national strategies (e.g. Digital Decade 2030 targets).	C

Annex. 2

Findings and conclusions from the pilot exercise



- 101** Annex 2.1. Analysis of pilot results: relevance of digital competency areas
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- 114** Annex 2.3. Pilot results interpreted from the perspective of the initial foresight exercise
- 115** Annex 2.4. Conclusions: adjustments derived from the pilot process

Annex 2.1. Analysis of pilot results: relevance of digital competency areas

The analysis in this annex provides a more detailed overview of the main results of the pilot process. The pilot allowed distilling relevant insights regarding the relevance of digital competency areas, competencies and proposed descriptors across the 3 proficiency levels.

First, the analysis revealed that the pattern of perceived digital competency relevance differs between policy-making and service delivery institutions. The larger relevance shift observed in the service-delivery units reflects its stronger exposure to digital workflows and citizen-facing operations. Institutions with extensive transactional and operational responsibilities tend to anticipate a sharper increase in the importance of digital competencies, as their core functions depend increasingly on reliable, integrated digital systems. By contrast, policy-oriented units show a more moderate shift, consistent with their current reliance on analytical and regulatory processes that are digitalizing more gradually. Overall, this pattern confirms that digital competency needs are perceived as more relevant in environments where service delivery, case management, and operational continuity rely heavily on digital tools. For example, service delivery staff rate digital competencies as more relevant to their current work (3.37 on a 5-point scale) than policy making staff (2.65), a difference of 0.72 points, representing a 27% higher perceived relevance. This gap persists and widens when considering future relevance: service delivery staff anticipates an average rating of 3.92 compared to 2.94 in policy making units.

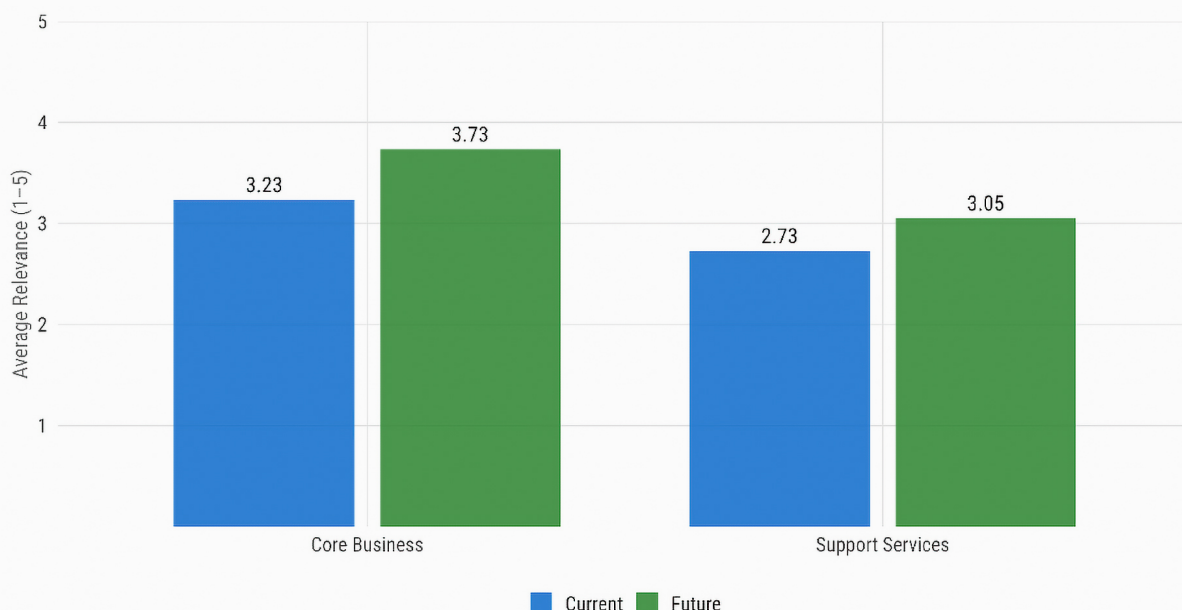
When examined by competency area, the institutional patterns reveal strategic differences:

- Digital Leadership and Governance stands out as the area with some of the largest relevance shifts across both policy making and service delivery units. Service delivery units rate the increase in relevance at +1.20 points, from 2.18 currently to 3.38 in the future, representing the single largest shift in the entire dataset. Policy making units rated it at +0.36 shift.
- Digital Communication and Collaboration shows the highest absolute relevance ratings in service delivery units (4.04 current, 4.84 future) with a substantial +0.80 shift. In policy making units, this area rates lower (2.81 current, 3.17 future) with a smaller +0.36 shift. The gap likely reflects the need in service delivery units for robust digital communication channels with their beneficiaries across Romania's territory.
- Digital Transformation presents an interesting pattern in which the relevance shift in policy making units exceeds the one in service delivery units (+0.67 compared to +0.49) despite lower absolute ratings. This difference suggests that policy making staff acknowledge digital transformation as an emerging priority, even though current relevance is considered moderate organization-wide.
- Safe and Responsible Use of Digital Resources and Digital Problem Solving both register shifts below +0.20 in both types of units, suggesting these are perceived as relatively important (around or above 3) and stable requirements rather than emerging priorities.

Secondly, the functional classification perspective aggregated departments according to whether they perform core business functions (direct service delivery, policy implementation) or support services (human resources, procurement, legal, communications). This perspective reveals where digital transformation pressure is concentrated within the organizational structure.



FIGURE 20: Digital competency areas – aggregate relevance in core business units versus support services



Source: Digital competency pilot / World Bank team calculations

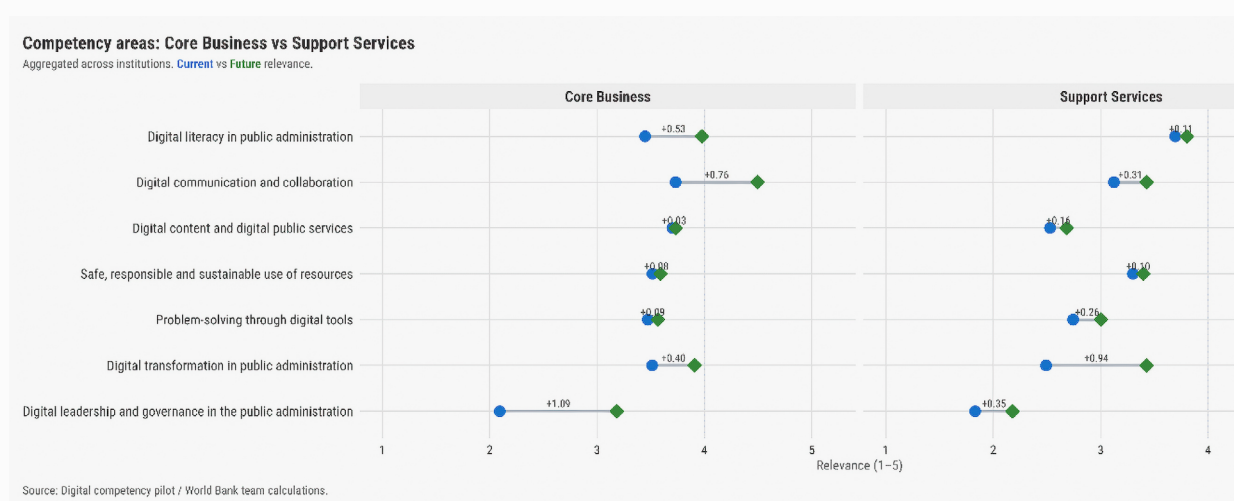
Core business functions rate digital competencies as more relevant than support services: 3.23 versus 2.73 currently, and 3.73 versus 3.05 for future relevance. Core business also anticipates a larger shift in relevance (+0.50) than support services (+0.32). This perspective aligns with the expectation that beneficiary-facing service delivery will face immediate digital transformation pressures.

The pattern varies considerably across competency areas:

- **The most notable finding is related to the perceived importance of the competency area for Digital Transformation.** This is the only area where support functions show a larger shift than core business: support services anticipate a +0.94 shift in relevance, compared to only +0.40 for core business. The pattern suggests that support units recognize the need to substantially transform their internal operations and ways of working, even as core business functions focus on service delivery improvements, raising the question of how to improve internal processes and digitalize workflows.
- **Digital Leadership and Governance** shows the largest shift for core business functions at +1.09, confirming this as the priority domain for frontline units. Support services also show an increase in this area (+0.35), but of less magnitude.
- **Digital Communication and Collaboration** shows substantial shifts for both groups (+0.76 for core business, +0.31 for support services), reflecting organization-wide recognition that digital collaboration capabilities are becoming more important.
- Several competency areas show minimal shifts for both groups: Safe and Responsible Use of Resources, Digital Problem Solving, and Digital Content and Public Services all register shifts below +0.16 for support services, suggesting these requirements are more stable rather than emerging priorities.



FIGURE 21: Digital competency areas - shift in perceived relevance – core business versus support services



Source: Digital competency pilot / World Bank team calculations

From an institutional perspective, these results show that competency areas related to Digital Management and Governance and Digital Transformation should be a key priority in these organizations. This competency area shows the largest shifts in relevance at both institutions and across both groups – core business and support units, yet it currently receives the lowest relevance rating. The combination of low current relevance and high anticipated future importance indicates that this is where capacity-building can generate the greatest returns.

The analysis also acknowledges that communication and digital literacy emerge as the most relevant areas today. Across both core business and support units, Digital Communication and Collaboration and Digital Literacy record the highest current relevance, reflecting the widespread reliance on email, document management tools, shared platforms, and coordination systems. These competencies form the operational backbone of daily administrative activities and indicate that staff need to be able to work extensively with digital communication tools to execute routine tasks. The fact that both groups (core business and support units) show similarly high relevance confirms that these foundational skills are embedded across different organizational contexts.

In the future, institutions expect major increases in the importance of digital governance, digital literacy, and digital collaboration. Core business units anticipate the largest relevance increase in *Digital Leadership and Governance* (+1.09), far exceeding shifts in other areas. This suggests a growing expectation that managerial staff will need stronger capabilities in coordinating digital processes, managing digital workflows, and contributing to digital transformation leadership.

These patterns point to a maturing digital environment, where institutions foresee a shift toward more strategic and high-value digital responsibilities. The consistent upward trajectory across nearly all competency areas shows that institutions expect digital tools, platforms, and processes to grow in scope and complexity. The largest increases in governance-oriented competencies illustrate that future roles will require staff to not only use digital tools, but also understand how to manage, coordinate, and govern them. Meanwhile, increases in digital literacy and communication show that foundational skills will remain essential as digital systems scale.

Annex 2.2. Analysis of pilot results: relevance of digital competencies and proficiency levels (A/B/C)

The analysis of future relevance rating by competency area and proficiency levels validates the framework's tiered complexity model. Institutions clearly distinguish between competencies at proficiency levels that must be of universal coverage (Level A), those required for many but not all roles (Level B), and those relevant only for certain jobs, when needed (Level C). This distribution supports a strategic approach to the application of digital competencies, for targeted training and workforce planning: broad-scale upskilling for foundational skills, selective development for intermediate competencies, and targeted investment for advanced capabilities.



FIGURE 22: Future relevance of digital competency areas by proficiency level

Digital literacy in public administration	4.9	4.8	2.1
Digital communication and collaboration	4.8	4.4	3.2
Digital content and digital public services	4.4	4.1	1.7
Safe, responsible and sustainable use of resources	5.0	3.8	1.8
Problem-solving through digital technologies	5.0	4.2	1.0
Digital transformation in public administration	4.9	4.5	1.8
Digital leadership and governance in the public administration	3.8	2.8	2.0
	A	B	C
	Competency Level		

A = Basic, B = Intermediate, C = Advanced

Source: Digital competency pilot / World Bank team calculations

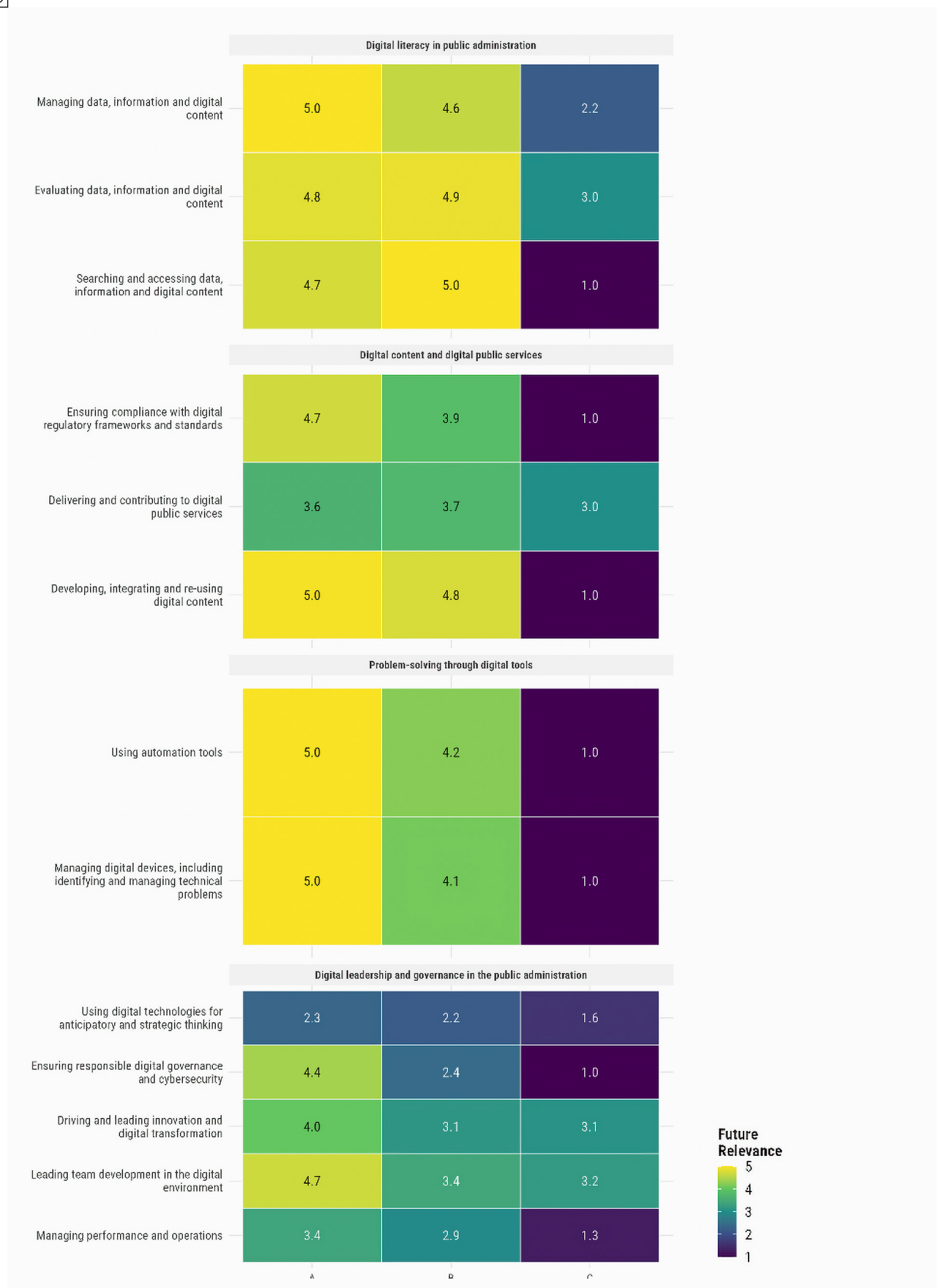
At aggregate level across all groups, the results show a strong and consistent emphasis on Level A (basic) digital competencies, which are rated with exceptionally high future relevance across all seven areas, ranging from 4.4 to 5.0. Areas such as *Digital literacy in public administration*, *Digital transformation in public administration*, *Safe, responsible and sustainable use of digital resources*, and *Problem-solving through digital technologies* all reach 4.9–5.0, signaling near-unanimous agreement that foundational digital skills must become universal in the civil service. Even competencies that traditionally were perceived as limited to more specialized roles - such as digital public services (4.4) or digital communication and collaboration (4.8) - show very high expected relevance at Level A. This highlights a clear structural message: basic digital proficiency is no longer optional but foundational for all roles in the administration.

At Level B (intermediate), future relevance remains high, though slightly lower than for Level A and more differentiated, with scores clustering between 3.8 and 4.8. The highest values appear in *Digital literacy* (4.8), *Digital communication and collaboration* (4.4), *Digital transformation* (4.5), and *Problem-solving through digital technologies* (4.2), indicating that many roles will require more than just baseline capability, particularly in areas of communication, data use, and digital workflow management. Competencies related to Digital content and digital public services (4.1) and Safe and responsible use of digital resources (3.8) still score above 3.5, confirming their importance but pointing to a more selective application across job families. Overall, Level B scores show that intermediate digital skills are expected to become common, though not universally required.

In contrast, Level C (advanced) competencies show the lowest future relevance, with values ranging from 1.0 to 3.2. The sharpest declines appear in *Problem-solving through digital technologies* (1.0), *Digital content and digital public services* (1.7), *Digital transformation* (1.8), and *Safe and responsible use of resources* (1.8). These results indicate that only a limited number of roles will require advanced capabilities in areas such as complex data analysis, digital service engineering, or advanced transformation design. Even traditionally strategic areas such as *Digital literacy* (2.1) and *Digital leadership and governance* (2.0) show modest relevance at advanced levels. The only advanced competency with moderate relevance is *Digital communication and collaboration* (3.2), suggesting that high-complexity communication and coordination skills may be needed in specific cross-institutional or multi-stakeholder roles. Overall, the pattern confirms that advanced digital competencies are considered niche and targeted to a small group of jobs with certain tasks, which need to be determined in institutional context.

The analysis of relevance ratings across hierarchical levels shows that the proficiency levels proposed for execution roles are highly aligned with operational realities in the pilot institutions. Execution-level staff consistently rated the proficiency levels mapped to their job types well above the relevance threshold (≥ 3), with scores of 4.4 and 3.8 in policy making units and 4.8 and 4.7 at in service delivery units. These results indicate that the foundational and intermediate proficiency levels - corresponding to Debutant/Assistant and Principal/Superior roles - reflect well in general the digital tasks performed daily, such as digital system use, document processing, information retrieval, and case management. The strong alignment across two very different institutions confirms that the framework captures the digital complexity of various types of civil service jobs.

By contrast, relevance ratings decline for the highest proficiency level mapped to senior civil service jobs (Area 7); interviews underline as a cause the way digital responsibilities are currently integrated into managerial roles. General digital competencies mapped at level C for senior managers and high-level civil servants were still considered relevant but with a lower score - 3.0 (in policy making units) and 3.7 (in service delivery units). This is still relevant, but notably lower than the mapping proposed for execution roles. This seems to reflect the current structure of senior-level jobs, where responsibilities are focused on coordination, policy development, institutional oversight, and stakeholder engagement, in which advanced digital governance and transformation were not yet systematically embedded.


FIGURE 23: Future competency relevance by level A/B/C within each area


	Digital communication and collaboration		
Ensuring digital integrity and accountability in public administration	4.8	4.3	3.7
Sharing and collaborating in digital teams in intra and interinstitutional contexts	4.8	4.4	3.0
Communicating, interacting and fostering citizen and businesses participation through digital technologies	4.9	4.5	3.0
	Safe, responsible and sustainable use of resources		
Promoting healthy and sustainable digital practices	5.0	1.8	1.4
Managing digital identities and protecting personal data and privacy	5.0	4.7	3.0
Protecting devices and infrastructure	4.9	5.0	1.0
	Digital transformation in public administration		
AI Literacy in public administration	4.9	4.7	3.0
Developing digital competence in the workplace	5.0	4.2	1.5
Contributing to digital transformation in public administration, driving innovation and improvement	4.9	4.6	1.0
	A	B	C

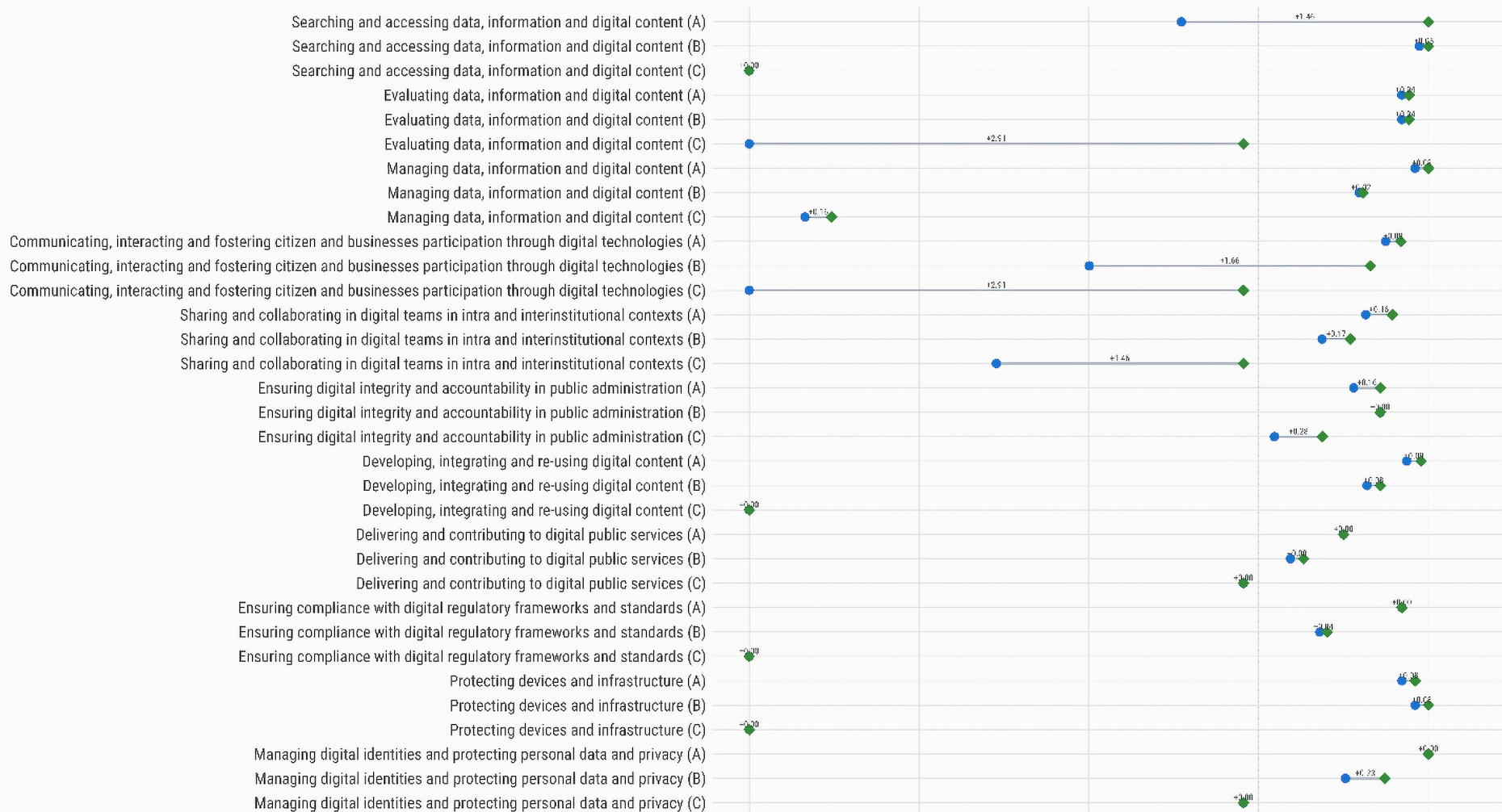
Source: Digital competency pilot / World Bank team calculations

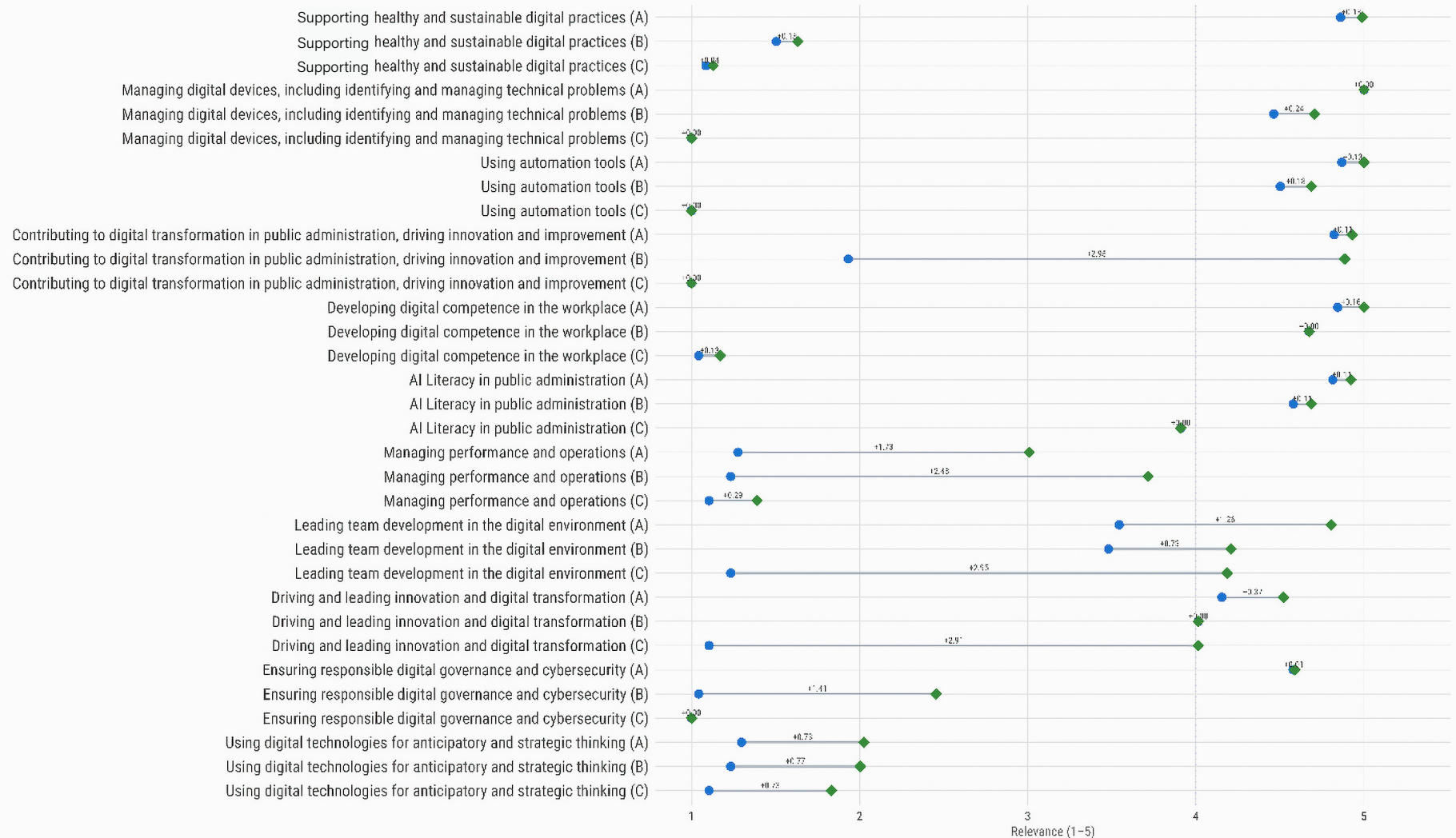


FIGURE 24: Digital competency relevance by proficiency level A/B/C in core business units

Skills by competency level: Core Business

Aggregated across institutions. **Current** vs **Future** relevance.





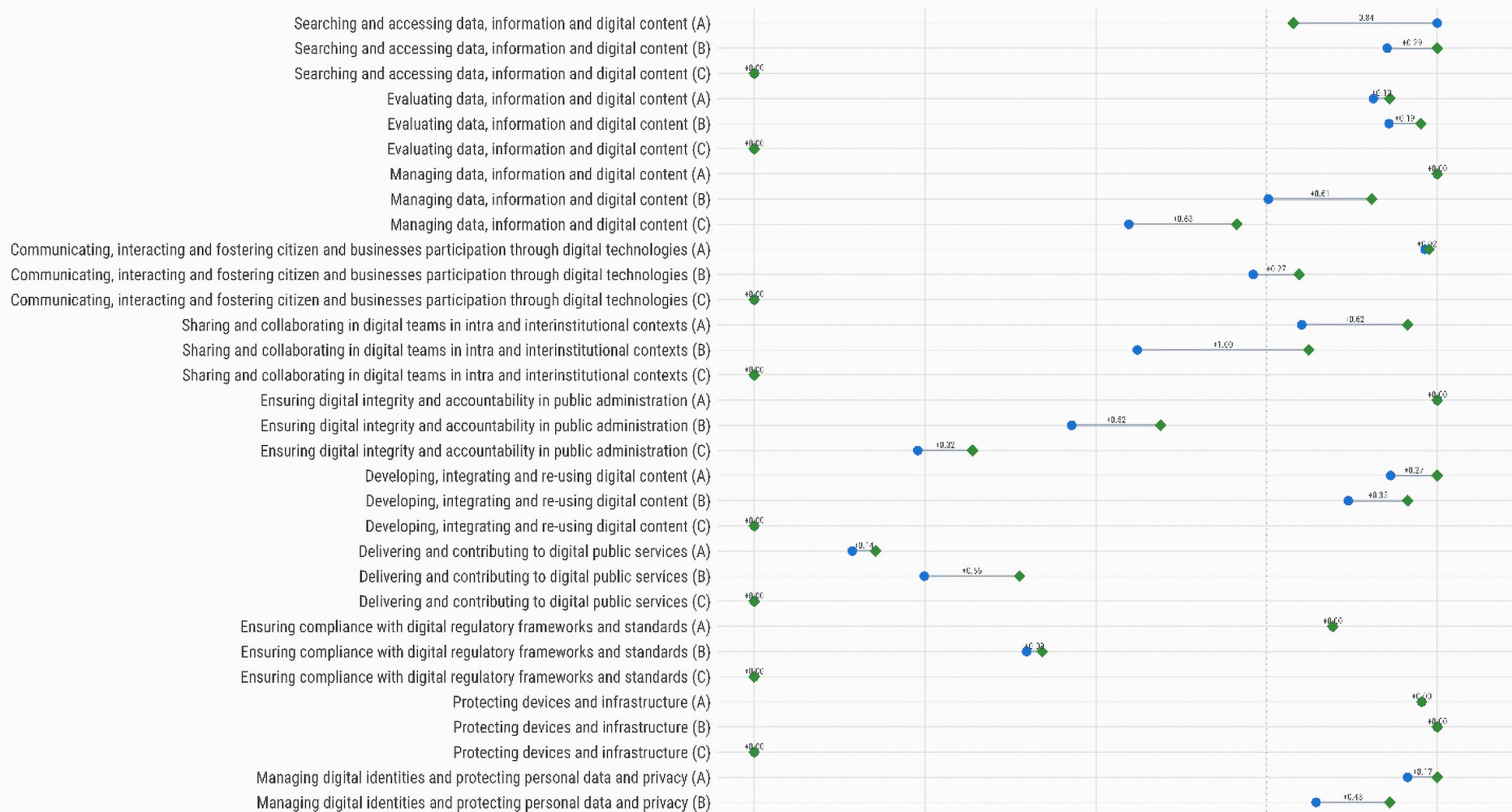
Source: Digital competency pilot / World Bank team calculations

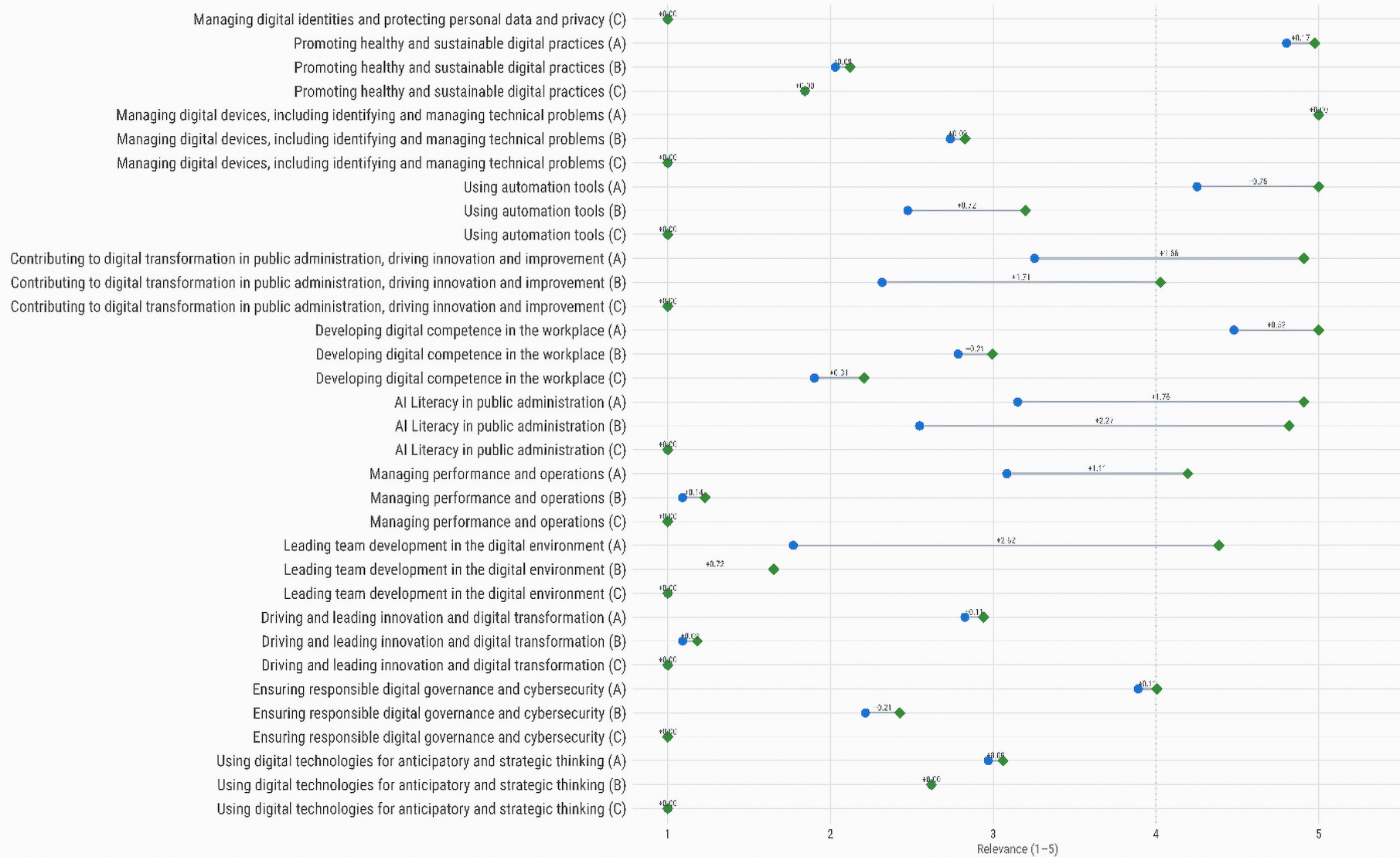


FIGURE 25: Digital competency relevance by proficiency level A/B/C, in support units

Skills by competency level: Support Services

Aggregated across institutions. **Current** vs **Future** relevance.





Source: Digital competency pilot / World Bank team calculations

The analysis of all the digital competencies across both groups (core business and support units) shows that only a very small number of competencies fall below the relevance threshold of 3 at Levels A and B, confirming that basic and intermediate proficiency levels remain generally relevant across all digital competencies and for most public sector roles. However, the competencies that fall below the threshold reveal important structural patterns in how digital tasks are distributed across functions. Within support services, several competencies consistently receive ratings between 1.0 and 2.5, particularly in areas related to *digital transformation, innovation management, AI use in administration, and contribution to digital public services*. These tasks are perceived as less relevant to administrative and back-office roles, which often do not engage in end-to-end service digitization or strategic digital transformation. As a result, competencies such as “Contribution to digital public services,” “Digital transformation in public administration,” and “Use of AI in administration” fall below the relevance threshold for Support Services at Levels A and B, while the same competencies remain firmly above the threshold for Core Business roles.

By contrast, core business units show very few competencies below 3 at Levels A and B, reflecting the stronger integration of digital processes in operational, regulatory, and citizen-facing work. The only borderline cases in core business are the more advanced descriptors at Level B that touch on innovation, foresight, or system-level digital governance. Even these remain close to or slightly above 3, suggesting that core business staff see clear emerging value in these competencies, even if they are not yet fully embedded in daily tasks. This difference underscores the generally higher digital intensity of operational work and the stronger exposure of core business staff to digital platforms, case management systems, and service delivery tools.

Level C shows a different pattern altogether. Across both groups, the majority of competencies at Level C cluster around rather low relevance scores - typically between 1.0 and 2.5 - signifying that the current formulation of Level C descriptors is too advanced, too technical, or too specialized for all civil service roles. However, a few competencies do approach the relevance threshold of 3, especially in core business units. These include areas linked to *digital communication, safe and responsible use of digital resources, and digital literacy*. These competencies are closer to 3 because some advanced forms of these skills, such as managing sensitive digital information or interpreting complex digital content are relevant for senior roles in operational units. Still, even in these cases, the future relevance remains moderate, suggesting that Level C is not perceived as essential for most jobs but may become more important selectively for roles involved in digital governance, strategic coordination, or advanced analytical tasks.

Ratings for level C conclusion reveal that this level of proficiency should be used selectively and flexibly, mapped only to those roles where advanced digital responsibilities genuinely exist. In support services almost no competencies at Level C were rated close to a score of 3. For administrative roles, the advanced-level descriptors are interpreted as quite specialized compared to the actual job demands, heavily oriented toward AI governance, digital transformation leadership, or system-level coordination. Support units do not perform these functions today, and staff do not anticipate performing them in the future, which explains the consistently low scores across the board.

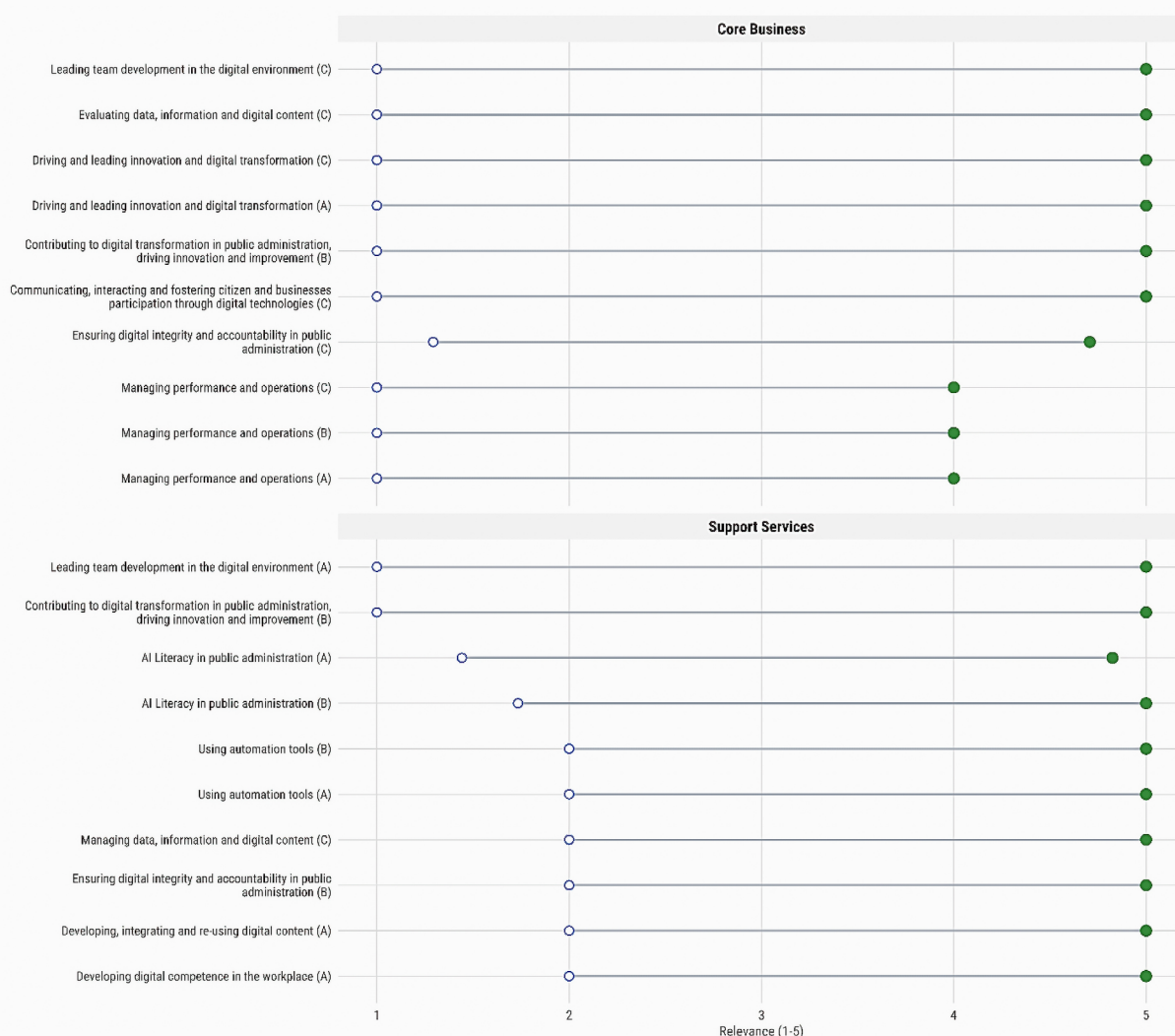
Based on these findings, certain targeted fine-tuning were considered needed in Area 7 of the proposed digital competency framework and were operated in the model proposed in this report. Based on the pilot questionnaire applied, interviews consistently pointed towards the fact that certain Level C statements contain terminology and expectations that exceed the practical responsibilities of high-level civil servants (such as for example statements discussing the technical configuration of digital tools, predictive modeling, cybersecurity management), tasks that, in the Romanian public administration, belong to ICT specialists, data teams, or central digital authorities. High-level civil servants are responsible for policy steering, coordination, and strategic oversight, not technical execution. Therefore, the terminology in Level C was adjusted to reflect leadership functions rather than complex technical operations, shifting from verbs such as “develops,” “implements,” “configures,” toward expressions like “oversees,” “ensures,” “provides strategic direction,” “approves frameworks,” or “ensures compliance.” This recalibration ensured

that the framework is more realistically aligned with existing job mandates, while still preserving ambition and supporting the development of digital leadership capacity at senior levels.

The analysis of future priority ratings across all competencies confirms that the framework captures forward-looking digital competencies. The competencies rated as most important for the future - digital leadership, innovation, advanced data use, automation, AI literacy, and digital integrity - are precisely the areas that international benchmarks identify as critical for next-generation public administrations. The fact that institutions consistently rated these high-complexity, emerging competencies at maximum future relevance (5), despite low current maturity, shows that the framework succeeds in revealing upcoming capability needs.



FIGURE 26: Digital competencies prioritized with highest shift in relevance in the future by core business units and support services



Source: Digital competency pilot / World Bank team calculations

The analysis for core business units shows a strong concentration of future priorities in competencies associated with managerial digital leadership (Area 7), innovation, and advanced data and content evaluation. Most of the steep relevance shifts occur at proficiency Level C in some of competencies from area 7, which is reserved for leadership roles. Current relevance scores are modest (typically around 1 – 2), but future relevance reaches the maximum value of 5 across all these competencies, signaling a clear expectation that managers in core business functions will need to play a much stronger role in steering digital transformation. This includes leading teams in digital environments, driving innovation, ensuring digital integrity, and interpreting complex digital information to support policy and service design. The pattern suggests that while these competencies are not yet embedded in day-to-day managerial practice, institutions anticipate a rapid expansion of digital leadership responsibilities in core operational areas. In other words, the steep shifts reflect an emerging strategic need: core business managers will increasingly serve as drivers of digital change, not only as users of digital tools.

Support services prioritize for highest future relevance the competencies linked to operational digitalization, automation, AI literacy, and data/content management. These competencies reflect their enabling role in supporting internal processes and ensuring the smooth integration of digital tools in daily work. While future relevance is also rated at the maximum level (5), the focus is clearly on practical, workflow-oriented digital competencies.

Annex 2.3. Pilot results interpreted from the perspective of the initial foresight exercise

Although the foresight exercise identified a wide range of future-oriented digital roles, many of them highly specialized, the pilot did not test these roles directly (given their complexity). Instead, the foresight results were used as an interpretive lens in this analysis to assess whether the patterns observed in the pilot suggest emerging needs that align with medium - to long-term scenarios³⁸.

Overall, the evidence indicates that over the medium- to long - term the core civil service will need to progress beyond operational digital capacity and gradually introduce more strategic and specialized digital roles. This comparative reading highlights that, while current institutional capacity remains concentrated in general digital competencies and operational ICT roles, the relevance shifts observed in the digital competency pilot point toward several roles becoming increasingly important over time. Specifically, the strongest future relevance increases identified for managers in core business functions in the general civil service - such as digital leadership, innovation, data evaluation, and digital governance - indicate that strategic roles like Digital Transformation Manager, Chief Data Officer, and AI policy and AI governance leads should be expected to become necessary as institutions mature.

The pilot also provides indirect validation for some of the foresight roles that extend beyond traditional ICT departments. For example, the strong emphasis on digital communication, accessibility, and user collaboration across both core and support units aligns with future-oriented roles such as Digital Inclusion Officer and Citizen Engagement Specialist, even if these roles do not yet exist in the current institutional contexts. Moreover, the limited institutional presence of roles related to data governance, security, and architecture - despite high rating for the future relevance for digital integrity and safe use of digital resources, suggests that profiles such as Data Specialist, or eventually Blockchain Policy Advisor will become increasingly important.

The adoption of technical roles that emerged from the foresight exercise (e.g., smart contract developers, geospatial data scientists) seems less feasible in the current context and will depend on readjusting national priorities and sector-specific investments, as the pilot reconfirmed the

38. The set of digital roles emerging from the foresight exercise were recommended in Output 1 developed under the TSI project.

importance of first consolidating basic digital and ICT capabilities, particularly within existing ICT units. Strengthening foundational skills and operational capacities is a prerequisite for any meaningful transition toward advanced roles. At the same time, the pilot reveals a growing demand for intermediate and strategic profiles that can enable institutions to collaborate more effectively with external providers, oversee digital transformation initiatives, and safeguard digital service quality. These roles serve as the bridge between today's operational capacity and tomorrow's advanced digital ecosystem.

Annex 2.4. Conclusions: adjustments derived from the pilot process

The pilot confirms that the proposed digital competency framework is broadly relevant and does not require structural redesign. All seven competency areas are considered relevant, with particularly high current and future importance attached to Digital Literacy, Digital Communication and Collaboration, and, looking ahead, Digital Management and Governance and Digital Transformation. The strong and consistent emphasis on Level A (basic) and Level B (intermediate) across institutions and job families demonstrates that these proficiency levels capture accurately the baseline expectations and the more advanced, yet still widespread, requirements for operational and analytical work in a modern administration.

At the same time, the pilot indicated that calibration adjustments are needed at the upper end of the proficiency scale for selected descriptors. Advanced proficiency (Level C) is perceived as relevant only for a narrow set of roles and tasks, particularly in core business units with more strategic or specialized responsibilities. For many other positions, Level C competencies are considered too technical in relation to actual mandates. This is especially visible in Area 7 (Digital Leadership and Governance), where certain Level C descriptors were perceived as linked more to ICT specialists, data teams or central digital authorities. The pilot therefore suggests refining Level C descriptors in Area 7 to emphasize governance, oversight and strategic direction, rather than technical execution, and using Level C more selectively, mapped to specific roles where advanced responsibilities genuinely exist.

Overall, the pilot provided strong evidence that the tiered complexity model should be retained but applied with flexibility. Level A should remain the universal baseline; Level B should be used selectively, based on clear evidence of job-related digital requirements and not as an automatic default for higher grades; Level C should not be mandated by law for broad categories of jobs, but assigned on a role-by-role basis in those cases where advanced digital leadership, governance or analytical capabilities are demonstrably required.

Also, the interviews during the pilot reconfirmed the conclusions of the assessment in Output 1: that digital competencies and ICT roles must be approached as a strategic measure, not simply as HR instruments. Their introduction needs to explicitly bridge ongoing HRM system reforms with the Government's broader digital transformation priorities. The findings show that skills, roles, technology, and organizational change evolve together and therefore must be planned together. This reinforces the need for a phased implementation approach, supported by a coherent roadmap that sequences the introduction of the general digital competency framework and ICT roles alongside investments in digital infrastructure, process redesign, interoperability, and organizational capability-building. Such a roadmap would ensure that the HRM system becomes an enabler of digital transformation rather than a parallel reform, aligning workforce development with the future digital architecture of the public administration.

