



DigComp into action: Examples of implementation and use of DigComp

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Towards a national Digital Competence Network,

BU Ministry of Labour and Social Policy,

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DigComp continued

- DigCompAtWork: new guide focused on labour market and employability cases -> April 2020
- Co-working of DigComp, EntreComp, LifeComp and related frameworks, ETF event: -> June 2020
- Piloting a **self-reflection** questionnaire (IRL, LT, ES) and validation methodology -> Sept 2020
- DigComp 2.2 -> End 2020/Early 2021
- Revision Eurostat household questionnaires (DSI) -> 2021 & 2022

By and for external stakeholders:

All Digital DigComp Community of Practice

<https://all-digital.org/invitation-to-digcomp-community-of-practice-cop>



- Published May 2018
- A guide for stakeholders addressing digital skills
- It explains DigComp and how it is used
- It provides 38 examples of use, across
 - Formal education & training
 - Lifelong learning and social inclusion
 - Employability and employment
- An opportunity to learn from each other

> 40.000 DigComp downloads since 2017

DigComp Use and uptake

Multiple uses:

- Curricula review: E.g. Belgium-Flanders lower secondary education
- Student learning and/or assessment: E.g. Denmark, Estonia, Lithuania; also several higher education institutions: E.g. in Spain
- Labour market & employment (E.g. France, Spain, Italy, Poland, ...):
 - Self-reflection/self-assessment -> Training —> Certification
 - Unemployed, workers, public servants, overall population:
- Digital inclusion policies / digital skills training (E.g. Portugal; Poland)
- Social inclusion initiatives (E.g. All Digital Telecentres)
- EU level: Funding, measurement (DSI indicator), Europass CV, ...



Digital Education at School in Europe

Eurydice Report

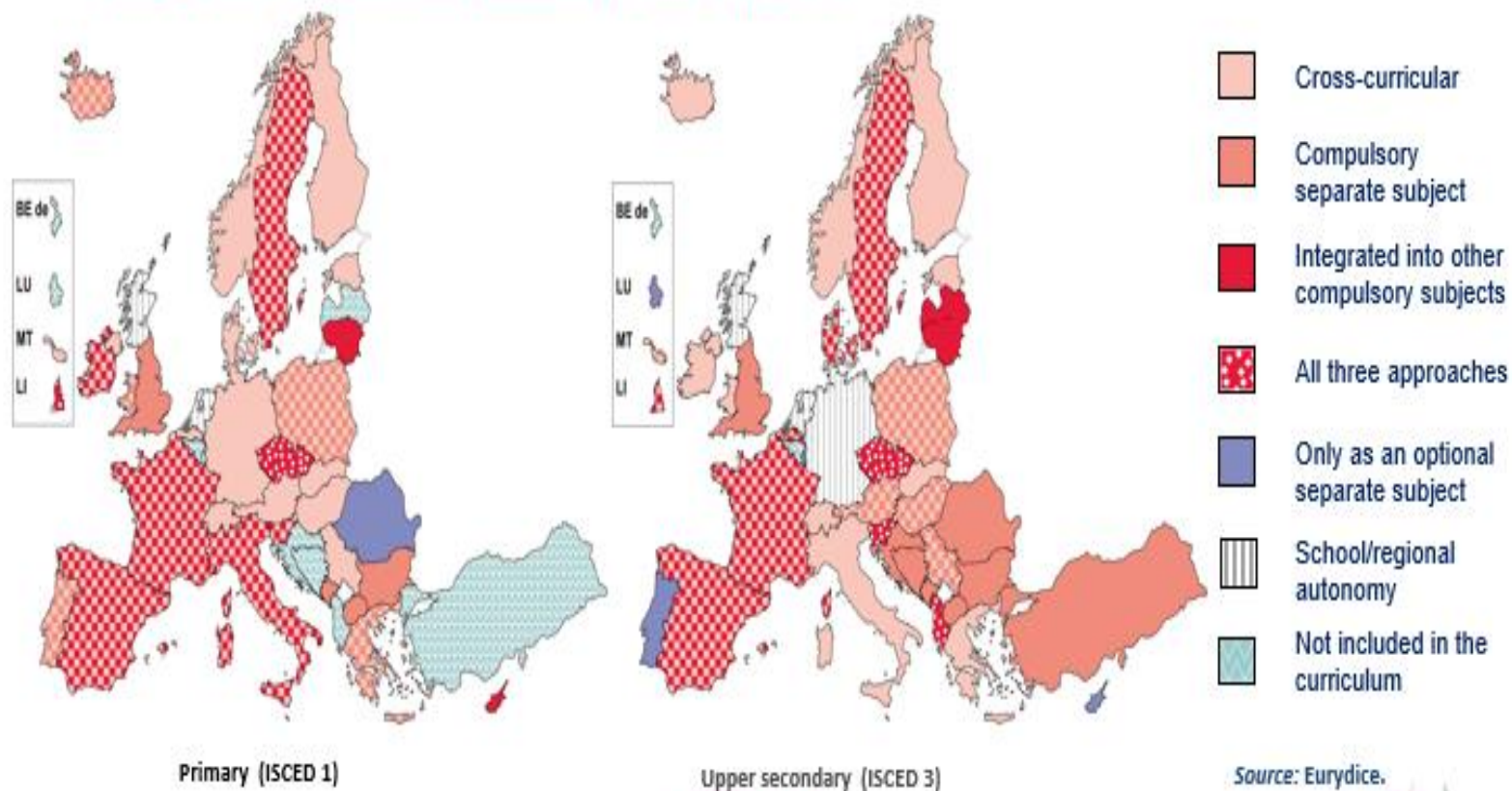


Education and
Training

européenne

Curriculum – Approaches

Figure 1.2: Curriculum approaches to teaching digital competences according to national curricula for primary and general secondary education, (ISCED 1-3), 2018/19



Source: Eurydice.

DigComp 2.1 Translations

- Portugal: <http://www.erte.dge.mec.pt/sites/default/files/Recursos/Estudos/digcomp2.1.pdf>
- Italia: https://competenze-digitali-docs.readthedocs.io/it/latest/_downloads/DigComp2-1_ITA.pdf
- Lituania: https://www.upc.smm.lt/tobulinimas/dokumentai/DigComp_2.1_translation_LT.pdf
- Slovenia: <https://www.zrss.si/digitalnaknjiznica/digcomp-2-1-okvir-digitalnih-kompetenc/files/assets/basic-html/index.html#1>
- Spain (online and pdf): <https://www.nccextremadura.org/competenciadigital/>
- Poland: <http://www.eccc.edu.pl/>
- Flanders/Belgium, Austria, Hungary,

New DigCompAtWork guide (April 2020)

FIGURE 3 COUNTRIES INVOLVED IN DIGCOMP CASES INCLUDED IN THE STUDY



- C1** From Pane e Internet to DCDS
- C2** ProDigeo
- C3** Ikanos
- C4** ECCC DigComp certification
- C5** Compass
- C6** MuSA
- C7** SmartiveMap
- C8** BAIT and Pathways4Employ
- C9** Adecco Competences Dictionary

List of case studies

List of Case Studies

DIGCOMP 01. From Pane e Internet to the DCDS project

AECA, the main association of VET organisations in Emilia Romagna, has implemented the Pane e Internet digital literacy project, the 3i informatics courses for unemployed people and is now in charge of the Digital Competence Development System project's methodology. All these initiatives base the design on their training offer on DigComp.

DIGCOMP 02. ProDigeo

Anpal Servizi, the operational arm of Anpal (Italian National agency for active employment policies), has developed the ProdiGeo eLearning platform and the ProdiGeo course for training on digital competence the staff of public (Centri per l'impiego) and private employment offices. The course 10 modules were designed using DigComp.

DIGCOMP 03. Ikanos project

The *Basque Country Government* launched in 2012 the Ikanos project to create a learning support infrastructure for the digital competence needs of citizens, enterprises, civil servants and others. Ikanos used DigComp to design a self-assessment test (linked to career and training guidance) and various tools and services to develop digital competence for employability, including industry 4.0 job profiles.

DIGCOMP 04. ECCC DigComp certification

ECCC Foundation was established in 2009 to promote its newly designed European Computer Competence Certificate. In 2016, ECCC foundation modified its certification system with the addition of a DigComp area (validated in about 80 accredited examination centres) and set up the DigComp National Contact Point to promote the new standard and a coherent training offer.

DIGCOMP 05. Compass project

Expertise France, the French public agency for international technical assistance, coordinated the development of an up-skilling online training course for young unemployed people. The Compass platform offers a self-assessment tool and 18 lessons addressing 9 - DigComp competences in four occupation areas: teaching; business & administration; legal, social and cultural professions; general and keyboard clerks.

DIGCOMP 06. MuSA project

Hellenic Open University coordinates the MuSA: Museum Sector Alliance project. This developed work profiles and an articulate training offer, based on the integration of DigComp and e-CF competences, for four new ICT-related job roles in museums: digital strategy manager, digital collections curator, digital interactive experience developer, and online community manager.

DIGCOMP 07. SmartiveMap

Smartive, a start-up in Milan, developed SmartiveMap, a self-assessment tool to analyse digital transformation readiness of individuals and organisations, based on their openness to change and digital skills. Assessment questions on digital competence are partly drawn from DigComp and partly identified by experts of the main business functions: purchasing, operations, finance and controlling, marketing & sales, human resources, ICT.

DIGCOMP 08. BAIT and Pathways4Employ

Tecnalía, Spain's largest private R&D entity, developed BAIT, the new digital competence certification system of Basque Country, fully based on DigComp and currently tested with IVAP public employees. Tecnalía was also partner of the Pathways4Employ (P4E) project,

DC01 From Pane e Internet to DCDS

Name of the leading organisation	AECA
Sector	NGO (association of VET organisations)
Name of the project	From Pane e Internet to DCDS
Country	Italy, Belgium, Greece, Latvia, Romania, Spain
Geographical scope covered	Italy - EU
Framework(s) used	DigComp
Start date of project - end date [if applicable]	Pane e Internet (2009 - ongoing) DCDS 01/2018 - 12/2019
Stage of development	Ongoing
Target audience	Unemployed people, people at risk of exclusion
Thematic domain	Employment
Professional sectors covered	-
Employee profiles covered (Professional Digital Profiles)	-
Stakeholders involved	VET organisations, local public administrations, public employment agencies
Resources developed available for other actors?	Pane e Internet learning materials (in Italian) Mireia project report DCDS Contents of self-assessment tool DCDS Methodology

Figure 2 - Mapping of Pane e Internet courses onto DigComp

DIGCOMP AREA	COMPETENCES	PROFICIENCY LEVELS
INFORMATION	1.1 BROWSING, SEARCHING AND FILTERING INFORMATION	A B C
	1.2 EVALUATING INFORMATION	A B C
	1.3 STORING AND RETRIEVING INFORMATION	A B C
COMMUNICATION	2.1 INTERACTING THROUGH TECHNOLOGIES	A B
	2.2 SHARING INFORMATION AND CONTENT	A B
	2.3 ENGAGING IN ONLINE CITIZENSHIP	A B
	2.4 COLLABORATING THROUGH DIGITAL CHANNELS	A B
	2.5 NETIQUETTE	A B
	2.6 MANAGING DIGITAL IDENTITY	A B
CONTENT CREATION	3.1 DEVELOPING CONTENT	A
	3.2 INTEGRATING AND RE-ELABORATING	A
	3.3 COPYRIGHT AND LICENCES	A B C
	3.4 PROGRAMMING	A
SAFETY	4.1 PROTECTING DEVICES	A B
	4.2 PROTECTING PERSONAL DATA	A B
	4.3 PROTECTING HEALTH	A
	4.4 PROTECTING THE ENVIRONMENT	A
PROBLEM SOLVING	5.1 SOLVING TECHNICAL PROBLEMS	A
	5.2 IDENTIFYING NEEDS AND TECHNOLOGICAL RESPONSES	A
	5.3 INNOVATING AND CREATIVELY USING TECHNOLOGY	A
	5.4 IDENTIFYING DIGITAL COMPETENCE GAPS	A

DC02 Prodigeo

Name of the leading organisation	Anpal Servizi
Sector	Government
Name of the project (s)	Prodigeo
Country	Italy
Geographical scope covered	National
Framework(s) used	DigComp
Start date of project - end date [if applicable]	2015 - 2017
Stage of development	Finished
Target audience	Employment services operators, NEETs, unemployed people
Thematic domain	Employment
Professional sectors covered	Public and private employment services
Employee profiles covered	-
Stakeholders involved	Public and private employment services
Resources developed available for other actors?	Training course in Italian freely available online (registration required)

Figure 1 - Structure of training modules (example about safety topic)



DC03 IKANOS

Name of the leading organisation	Basque Country Government
Sector (government, NGO, commercial)	Government
Name of the project (s)	Ikanos
Country	Spain
Geographical scope covered	Regional - Basque Country
Framework(s) used (DigComp, EntreComp, etc)	DigComp
Start date of project - end date [if applicable]	2012
Stage of development	Ongoing
Target audience	Employed, unemployed, generic population
Thematic domain	Employment
Professional sectors covered	Not relevant
Employee profiles covered (Professional Digital Profiles)	Fifteen profiles (see table 1)
Stakeholders involved (name and type)	Public administration, University, Private companies (manufacturing and other sectors), Public and private employment services
Resources developed available for other actors?	Self-assessment test (standard version) Professional digital profiles descriptions Professional digital profiles guide Personal learning environment documentation

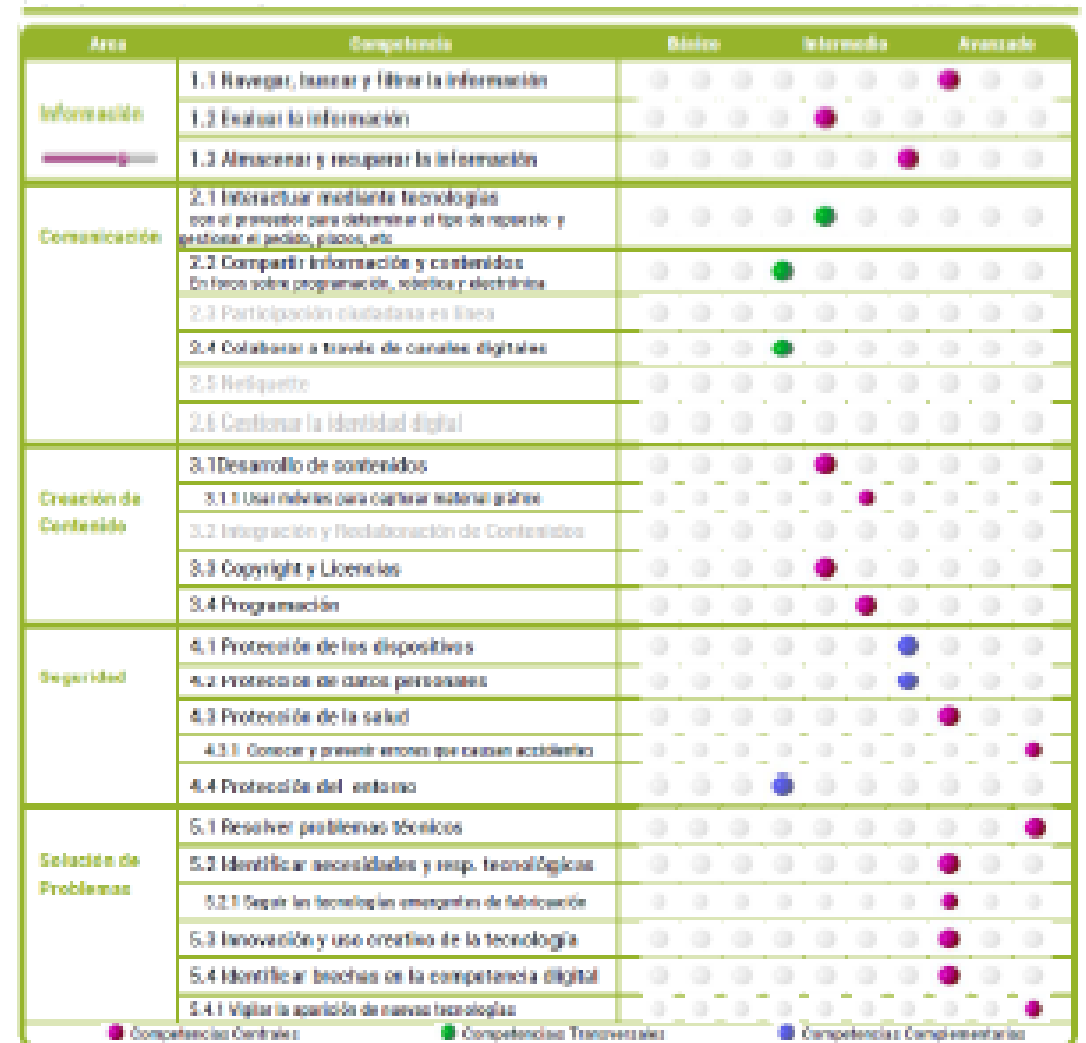
Figure 3 - Ikanos training design and employment orientation process logics



Table 1- Ikanos professional digital profiles by November 2018

Professional digital profile	Source/partner
Administrative staff (in public and private organisations)	Mondragon Univ.-
Machine operator	Ikanos
Sales representative	Ikanos
Entrepreneur	Ikanos
Industrial machinery operator and numerical control programmer	TolosaldeaLHII
Advanced manufacturing maintenance technician	Mondragon Univ.
3D designer for additive manufacturing	I.M.H. Hirudi3D
Additive manufacturing machinery operator	I.M.H. Hirudi3D
Robotics technician	Mondragon Univ.
SME digital transformation manager	ASLE
Manufacturing line operation technician	Aernnova
Consultant on services and programs for the Third Sector	EDE Taldea
Economist - Business Manager	Ekonomistak
Economist - Consultant	Ekonomistak
Economist - Specialist in digital marketing	Ekonomistak

Figure 7 – Digital profile of maintenance technician in advanced manufacturing



DC04 ECCC DigComp Certification

Name of the leading organisation	ECCC Foundation
Sector (government, NGO, commercial, ..)	NGO
Name of the project (s)	ECCC DigComp
Country	Poland
Geographical scope covered	National
Framework(s) used (DigComp, EntreComp, etc)	DigComp
Start date of project - end date [if applicable]	2016
Stage of development	Ongoing
Target audience	Employees, unemployed people, all citizens
Thematic domain	Employment, Digital Society
Professional sectors covered	-
Employee profiles covered (Professional Digital Profiles)	-
Stakeholders involved (name and type)	Training organisations, Government (national and local), Labour Offices
Resources developed available for other actors?	Syllabi and Learning outcomes of DigComp 5 areas at 3 proficiency levels DigComp Handbooks (in Polish only)

Table 1 - ECCC standard modules in different IT usage areas (in bold)

Information Technology Computer Hardware and Software Document Processing Spreadsheet Calculations Data Bases Multimedia Information-Communication Technology Mobile Technology Business Graphics Digital competences (DigComp) Information Communication Content creation Safety Problem solving	Professional Informatics e-Learning Healthcare Tourism Multimedia in Education Computer in Primary Education e-Office e-Marketing Interactive Technologies Graphics for Photographers Robots Workflow Management Information Security Green Office Project Planning and Tracking
Computer Science Programming Computer Graphics Web Application Development Robot programming	Applied Informatics CAD 2D CAD 3D

Table 2 - Composition of DigComp ECCC certificates by area and level (2018)

Modules/ areas	%
DC M1 – Information	22.6
DC M2 – Communication	21.6
DC M3 – Content Creation	21.3
DC M4 – Safety	18.3
DC M5 – Problem Solving	16.2

Level	%
A Foundation	83.8
B Intermediate	15.6
C Advanced	0.7

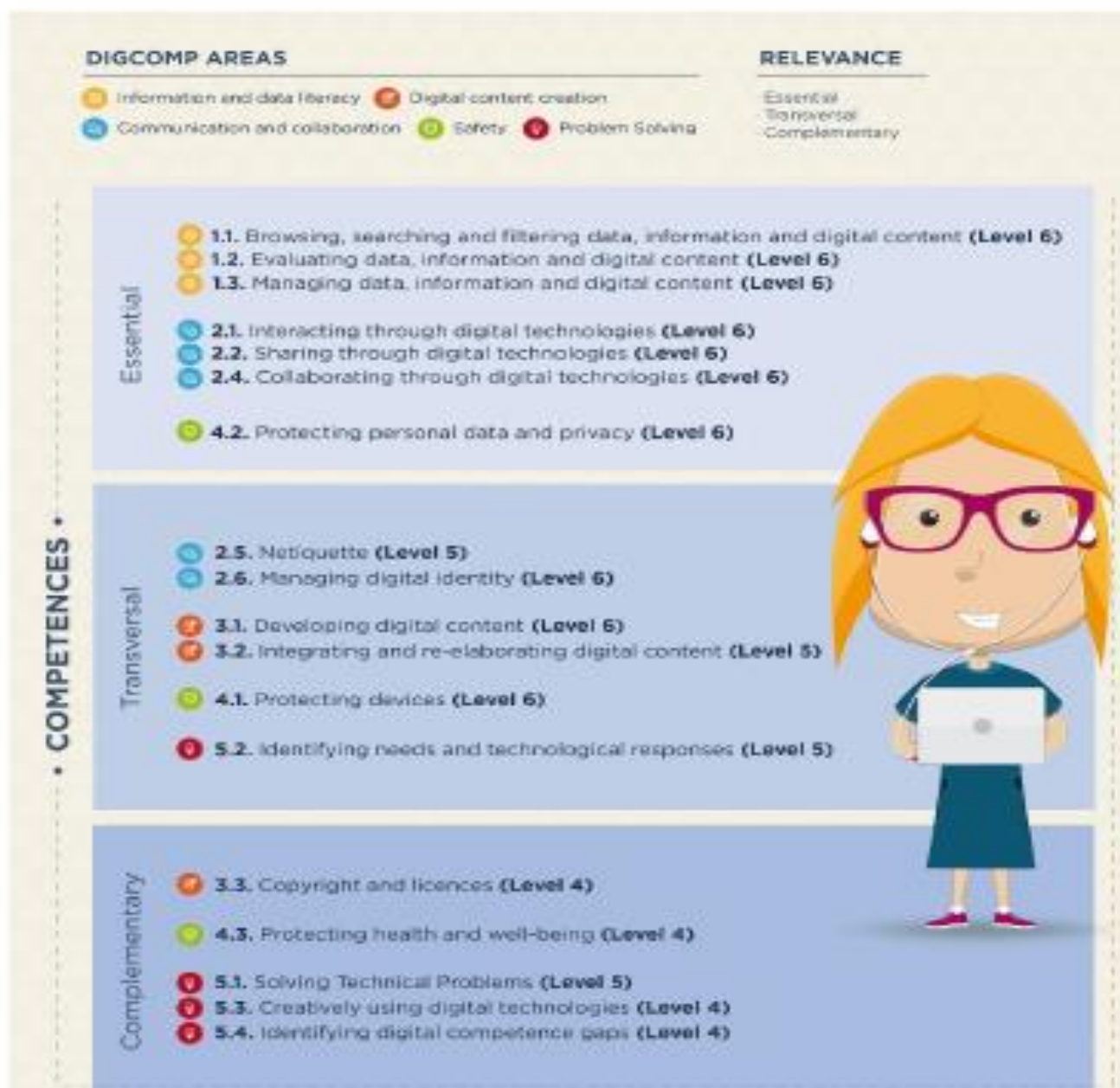
DC05 Compass

Name of the leading organisation	Expertise France
Sector (government, NGO, commercial)	Government
Name of the project (s)	Compass
Country	France, Ireland, Italy, Romania
Geographical scope covered	European
Framework(s) used (DigComp, EntreComp, etc)	DigComp
Start date of project - end date [if applicable]	12/2016 - 11/2018
Stage of development	Finished
Target audience	young unemployed people, NEETs
Thematic domain	Employment
Professional sectors covered	See Table 1
Employee profiles covered (Professional Digital Profiles)	See Table 1
Stakeholders involved (name and type)	Educational organisations, employers, labour market actors
Resources developed available for other actors?	Self-assessment test and training course freely available online (registration required)

Table 3 - Competence level of Compass lessons by career path (F=foundation, A=Advanced)


Career path	DigComp competence ⁵⁷								
	1.1	2.1	2.2	2.4	3.1	3.4	4.1	4.2	5.3
Vocational education teachers	F	F			A	F	A	A	F
Primary school and early child. teachers	F	F			A	F	A	A	A
Finance professionals	A	F		F	A	A		F	A
Sales, marketing and PR professions	F	A	F	F	A	A			A
General office clerks	A		A	A	F	F	F	F	
Secretaries (general)	A	F		A	F	A	F	F	
Authors, journalists and linguists	A	A	F		A	F	F	F	F
Creative and performing artists	A	A	F	F	A	F			F

VIRTUAL OFFICE WORKER PROFILE











Cross-case analysis











T.4 LMI SKILLING FUNCTIONS PROVIDED BY CASES (✓ WHEN DIGCOMP IS USED, X WHEN PERFORMED WITHOUT)

LMI SKILLING FUNCTIONS	AS PROVIDED IN DIGCOMP CASES								
									
Outreach to under/unemployed	X		X		X				
Career advice		X	✓		✓			✓	X
Personal development plan			✓		✓			✓	X
Labour market skills analysis (including analysis of professional digital profiles)		✓	✓	✓	✓	✓	✓	✓	X
Design training / development	✓	✓	✓	✓	✓	✓	X	✓	X
Delivery of training	✓	✓	✓		✓	✓	X		X
Workforce development			✓				✓		X
Assessment of skills	✓		✓		✓		✓	✓	✓
Certification of competence	✓	✓		✓	✓	✓		✓	
Liaising with employers for job placement / experience						X			X
Job search / support		X							X
Client tracking and monitoring			X				X		X
Employee support							X		X










T.7 OCCUPATIONS' COMPETENCE REQUIREMENTS IN THE DIGCOMP CASE STUDIES

CASES	OCCUPATIONS	AIMS			COMPETENCES ADDRESSED		
		Professional digital profile (PDP) training (T) assessment (A) certification (C)			DigComp competences (DC-C) DigComp level (DC-L) Ad-hoc sub-competences (AH), e-CF (e-CF) soft skills (SS)		
 PRODIGED	Employment services staff (C)		T		DC-C	DC-L	
 IKANOS	Various occupations (A, B, C, D)	PDP		A	DC-C	DC-L	AH
 COMPASS	8 occupations (A)	PDP	T		DC-C	DC-L	SS
 MUSA	4 occupations (D)	PDP	T		DC-C	DC-L	e-CF SS
 SMARTIVE	7 occupations (B)			A	DC-C	Functional digital competences + openness to change competence	
 BAIT	2 occupations (A)		T		DC-C	DC-L	C
 P4E	2 occupations (C)	PDP		A	DC-C	DC-L	
 ADECCO	2 occupations (C)	PDP		A	DC-C	DC-L	

T.6 STAKEHOLDERS INVOLVED IN DIGCOMP CASE STUDIES AND COOPERATION MODELS

CASE	STAKEHOLDER TYPE (leading in bold)	TYPE OF RELATIONSHIP			
		Institutional collaboration	Project-driven	Continuous dialogue	other
 AB PEI + DCDS	Training NGO (association of VET providers for PEI) European NGO (association of digital competence centres for DCDS) Public administrations / Educational experts / VET providers / Public employment agencies	✓	✓		
 PRODIGEO	Ministry of Labour and Social Policy Public and private employment agencies / Educational experts	✓	✓		Within which project-driven collaborations take place
 IKANOS	Regional Government Public administrations / University / Educational experts / Companies / Public and private employment agencies	✓			Ikanos practitioner community
 ECCC	Research and development NGO University / Educational organisations / Public administrations / Companies / Labour offices			✓	
 COMPASS	Public agency for international assistance Educational organisations / Employers / Labour market actors		✓		
 MUSA	University Museum and culture sector professionals / Museum and culture sector organisations / Public administrations / VET providers / Third sector organisations / Companies / University				Project-related (prolonged through different projects)
 SMARTIVE	Private company (service provider) Companies / Business function managers and specialists / Business consultants			✓	SmartiveMap editors
 A BAIT	Private research foundation University / Public administrations	✓			
 B P4E	Third sector organisations Companies / Free-lance professionals		✓		
 ADECCO	Private Companies (employment services) Educational organisation / University			✓	

T.8 COMPETENCE ASSESSMENT AND CERTIFICATION IN THE DIGCOMP CASE STUDIES

CASE		 AB							 A	 B
TEST TYPE	Self-Perception	✓								
	Knowledge Questions	✓	✓		✓	✓	✓	✓	✓	
	Performance Based	✓			✓ advanced levels only	✓			✓	✓
	Self-Assessment Questions			✓		✓				✓
TRAINING	Pre-course	✓								
	Post-course	✓	✓				✓	✓	✓	
OUTPUT	Self-assessment Feedback	✓				✓				
	Course badge	✓								
	Course certificate		✓				✓			
	Competence badge	✓				✓				✓
	Competence certificate				✓				✓	
	Personal profile			✓				✓		
	Profile badge						✓			✓

Key strengths of DigComp as reported by the case owners

- A common language and understanding facilitating mutual learning
- View of digital competence as not just technical, but as key transversal skills, knowledge and attitudes (digital culture) important for all
- Broad, clear and solid structure of the framework, but also flexible
- Technology neutrality (and country independence)
- EU origin, reference framework and sustainability

Lessons learn to DigComp use as reported by the case owners

- Basic technical skills less explicit in DigComp
- Need for localization, adaptation, translation and contextualization is quite labor intensive, and lack of guidance on concrete formulations of proficiency levels and learning outcomes and on flatness of the framework
- Need for stakeholders involvement and community of practice
- Need for awareness raising, especially in the world of work
- EU endorsement and label would be desirable

Thank you

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