carer+

developing digital competences
of care workers to improve
the quality of life of older people

The CARER+ Digital Competence Framework

for Care workers and Caregivers

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developing digital competences of care workers
to improve the quality of life of older people

supported by
Competitiveness and Innovation framework Programme
ICT Policy Support Programme

D2.2
CARER+ Digital Competence Framework for Care Workers and Caregivers

Deliverable Title	D2.2 – CARER+ Digital Competence Framework for Care Workers and Caregivers
Deliverable Lead	3s Unternehmensberatung GmbH
Work package	WP 2
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Dissemination level	public
Project Number	297304
Instrument	CIP – ICT PSP – Pilot B
Start date of Project	09/03/2012
Duration	36 months
Project coordinator	IFEF | IPERIA

Abstract

This document presents the CARER+ Digital Competence Framework for care workers and caregivers which is the key product of Work Package 2: Identification of ICT knowledge and skill-based competences for domiciliary care workers and caregivers. In Chapter 2, the methodology of the empirical research is summarised and selected evidence introduced. Chapter 3 elaborates on the analysis of related projects, initiatives and frameworks. Chapter 4 outlines the logic of the CARER+ Digital Competence Framework design and gives overview of its structural elements. The resulting product is delivered in Chapter 5, through a summarising 3-dimensional display as well as through the set of 5-dimensional competence cards. Full account of the research outputs is found in Annexes.

Quality control checklist

Quality Control Check	Tick box
Generic Minimum Quality Standards	
Document Abstract provided	☐
Document Summary provided (with adequate synopsis of contents)	☐
CARER+ format standards complied with	☐
Language, grammar and spelling acceptable	☐
Objectives of Description of Work covered	☐
Work deliverable relates to adequately covered	☐
Quality of text is acceptable (organisation and structure; diagrams; readability)	☐
Comprehensiveness is acceptable (no missing sections; missing references; unexplained arguments)	☐
Usability is acceptable (deliverable provides clear information in a form that is useful to the reader)	☐
Deliverable specific quality criteria	
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Checklist completed and deliverable approved by Name: Signature: Date:	

Final checklist to be completed and deliverable signed off by primary reviewer

Document review history

Version	Name	Status *	Date	Summary of changes
1	Lubomir Valenta	A	14/04/2013	First draft
2	Stylianos Hatzipanagos	SIR	20/05/13	
3	Margarita Perez Garcia	PIR	20/05/13	

***Status:** Indicate if:
A - Author (including author of revised deliverable)
PIR – Primary internal reviewer
SIR – Second internal reviewer
ER – External Reviewer

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Table of contents

1. Document summary

This document presents the proposal for a CARER+ Digital Competence Framework (DCF) for care workers and caregivers that has been produced within the project's Work Package 2: Identification of ICT knowledge and skill-based competences for domiciliary caregivers and care workers.

Two lines of research activities have informed the development of the DCF. Firstly, empirical research in seven European countries was carried out combining qualitative and quantitative methods to inquire into the central topics of WP2 interest: relevance of digital competence in the care sector; possibilities for applying digital competence in care work in near future; specific digital competences needed by carers and relevance for care recipients. Within this line of research, a document analysis was conducted, expert focus groups organised, individual expert interviews held, and a questionnaire survey was disseminated among care work practitioners. The research outputs collected are:

- 57 competence-related documents analysed (curricula, qualifications standards, occupations standards, etc.)
- 8 expert focus groups organised
- 46 expert interviews conducted
- 156 questionnaires returned by care workers and caregivers

The evidence collected and reported through the above outputs was analysed and mapped on various versions of the DCF structure, and contributed to the definition of competence categories as well as the related learning outcomes..

Secondly, a context analysis was carried out examining a number of international projects on digital competence and social care work including related literature. Three major digital frameworks were analysed in closer detail: The European Computer Driving Licence (ECDL), the European e-Competence Framework (e-CF), and the Framework for Developing and Understanding Digital Competence in Europe (DIGCOMP). Particularly the DIGCOMP initiative developed by the European Commission Joint Research Centre proved, despite being still in progress, to be a key source of information on general digital competence architecture of our framework.

In line with the DIGCOMP approach as well as with the latest developments in the conceptualisation of competences and learning outcomes, the CARER+ DCF adopts the understanding of digital competence as a multi-faceted entity of practical/instrumental knowledge and skills, soft and transversal skills and capabilities, and personal attitudes and values.

To transfer the concept of general digital competence into the specific context and needs of domiciliary care, the CARER+ DCF is designed around three Competence Domains:

- Domain A: General digital competence (DIGCOMP adapted)
  > Competences relevant for the development of general ICT literacy.

- Domain B: Enabling digital competence in social care work
  > Competences to make the application of digital technology possible, sustainable and accepted by both care workers and care recipients.

- Domain C: Care-specific digital competence
  > Competences focused on care sector-specific application of digital competence, and on enhancing the employability of carers through organisational digital competence and skill management.

The DCF structural elements are organised according to five dimensions:

- 3 Competence Domains
- 11 Competence Areas
- 41 Competences
- 2 Application Levels

Examples of Learning Outcomes

The following diagram represents the high-level structure of the CARER+ DCF, illustrating the dimensions of Domains (central circle) and Competence Areas (square objects), and indicating the numbers of single Competences in each Domain (numeric circles):

The red section in the diagram represents Domain A: General digital competence. It contains 19 Competences distrubuted into 4 Competence Areas. This Domain builds on, and adapts, the DIGCOMP framework: four out of five DIGCOMP Competence Areas were used including their Competences. Corresponding examples of learning outcomes defined by DIGCOMP were also adopted (in the User Application Level) and complemented with new examples defined for the Mentor/Guide Level. The resulting set of Competences refers to the ability to use digital technologies in general, and to mediate this ability to others.

The blue section in the diagram represents Domain B: Enabling digital competence in care. The 4 Competence Areas and 13 Competences therein address one of our principal research findings, namely that a digitally competent care worker or caregiver will be expected not only to apply general digital literacy but also to make the concept of digital competence meaningful and accepted in the context of his/her work. In the perspective of the two Application Levels this means enabling digital competence both in the carers' own work practices and in the care recipients' perception and adoption of digital technologies. The Domain B, therefore, contains soft skills, interpersonal abilities and transversal competences linked with digital knowledge, skills and attitudes.

The yellow section of the diagram represents Domain C: Care-specific digital competence. The elements contained therein (3 Competence Areas comprising 9 Competences) refer to the aspects of digital competence that are not general-user oriented but address the tasks and usage scenarios found specifically in social care work. These include different kinds of solutions oriented towards supporting the independent living of care recipents as well as socail and professional development of carers. Also in this Domain, competences are included that relate to care workers' employability, ranging from the ability to administer care work by using digital technology to the ability to seek the recognition and/or certification of own digital learning outcomes.

We foresee three elementary purposes of the Carer+ Digital Competence Framework. The tool will:

- inform and contribute to the next outcomes and activities within the Carer+ project, in particular the Work Package 4: Development of the learning environment, pathways and resources.
- serve interested external stakeholders such as IVET and CVET providers or enterprises to define training programmes, modules, competence standards or occupation standards. In this scenario the Framework can serve as a general orientation mechanism / organising principle or simply as a source of competence description and examples of learning outcomes.
- contribute to the discussion on digital competence in social care work among experts, researchers, project teams and policy makers.

2. Research methodology and outcomes

This chapter[1] outlines the conceptual background, methodology, and evidence-based results of the research carried out to inform the development of a CARER+ Digital Competence Framework for care workers in the domiciliary care sector.

2.1. Introduction

Today it is possible for almost everyone to receive the care they need at home, even if they suffer from chronic illnesses. Yet frail older people still move to assisted living facilities or nursing homes. For many, that transition is driven by a lack of qualified caregivers, an absence of basic services such as transportation, no access to appropriate housing, and loneliness. Recent research has shown that a large segment of the growing number of older people in Europe can be encouraged to use technology-based services, and that ICTs (Information and Communication Technologies) and AAL (Ambient Assisted Living) technologies can radically improve their quality of life by supporting ageing well in the community and at home. The key mediator between these ICT-based opportunities and their integration into older people's lives stands in the available human resource represented by the domiciliary care workers and the set of competences they possess.

In recent years a number of initiatives and projects have reflected on the need to map the role of digital technology in the social care sector by investigating phenomena found at the interface between ICTs and care work. The CARICT project has illustrated the diversity as well as complexity of this domain. Within the project they selected and analysed fifty two ICT-based initiatives for caregivers in Europe (Schmidt et al., 2011) and from the evidence gathered they concluded that ICT-based services empower both care recipients and carers and improve their quality of life at affordable costs and without the feared dehumanising effects (Carretero et al., 2012).

Two inter-connected areas can be identified where the increased proximity of technology and care has advanced significantly: first telemedicine/telecare, and health monitoring systems and second assistive technologies. Telecare, understood as remote assistance enabled by digital technology, has already gained wide recognition in the professional care sector, although international comparative analyses indicate persisting economic as well as political limitations (Kubitschke and Cullen, 2010). The area of assistive technologies covers an extensive range of solutions from simple alarm buttons, vital signs monitoring and self-diagnosis devices to complex systems known as smart homes. As these technologies become more commonplace in care provision then increasing levels of digital competence are likely to be expected in the near future in the care workers and caregivers across Europe (cf. Hjalager 2009).

[1] THE TEXT OF THIS CHAPTER IS ADAPTED FROM OUR CONFERENCE PAPER TO BE PRESENTED THE EDEN ANNUAL CONFERENCE IN OSLO IN JUNE 2013 (CF. VALENTA ET AL., 2013).

However, technically clear-cut and specific application scenarios such as telecare and assistive technologies are only one of the drivers towards an examination of the digital competences of care workers and care working sector. The research described here to inform the CARER+ digital competence framework for care workers is based on the assertion that being digitally competent transcends mere technical dexterity and cannot be reduced to instrumental knowledge and skills such as operation of specific software. Rather, digital competence is to be understood as part of the:

> "...essential life skills and assets in the information society. Developing digital competence should be considered as a continuum from instrumental skills towards productive and strategic personal competence. Mastering basic tools and computer applications is only a first step towards advanced knowledge, skills and attitudes," (Ala-Mutka, 2011: p. 5).

On one hand digital competence, as one of the key competences for lifelong learning (European Parliament and the Council, 2006), contributes to determining our overall capacity to engage with present-day social, cultural and economic settings. Yet, the theoretical notion of competence manifests itself in practice only through application in a specific context. Therefore, the central research question has been formulated as follows:

How is the transversal or non-domain specific aspect of digital competence manifested, supplemented and modified through its contextualisation in care work?

Our approach to the concept of 'competence' and the underlying notion of learning outcomes is clarified below, before proceeding to the methodology for collecting empirical information on the components of digital competence in care work.

2.2. Competences and learning outcomes

The adoption and implementation of a 'learning outcomes' approach to educational interventions can be considered among the most significant developments in educational policy and practice worldwide in recent years. Within the framework of the European policies in education and lifelong learning, learning outcomes are understood as

> *"...statements of what a learner knows, understands and is able to do on completion of a learning process, which are defined in terms of knowledge, skills and competence,"* (European Parliament and the Council, 2008: p. 4).

However the definition and in particular the related implementation mechanisms remain far from unchallenged.

The literature in this domain covers a wealth of academic and practice-oriented debates on learning outcomes. Elaborating on these debates is beyond the scope of this Deliverable but by way of illustration it is enough to state that the main objections to the concept of learning outcomes have been towards the reductionist implications in the behaviouristic conviction that all learning outcomes can take form of observable performances (Cedefop, 2012; cf. also Lassnigg, 2012). This is related to another line of critique that points to the danger of confusing the *sign* (a learning outcome statement) and the *signified* (the reality of learning it described), that therefore creates the illusion that the sole act of describing learning

outcomes automatically implies their validity (cf. Souto-Otero 2012). The misappropriation of the use of learning outcomes as a self-sufficient managerial instrument has been well demonstrated (Hussey and Smith, 2002). These critiques have been reflected in changes to European policy documents where the previously unreflexive approach to learning outcomes prevalent in early EU policy documents (Cedefop, 2008) has been superseded by a more refined stance in later policy outputs:

> "*Contemporary accounts of learning outcomes emphasise their diversity and suggest that, where learning outcomes are tacit, context-bound or applied in combination with one another, then inferential rather than behaviouristic approaches will be more appropriate (...). Learning outcomes are no longer conceptualised as self-evident performances*,"
> (Cedefop, 2012: p. 33).

Related to this understanding of learning outcomes is the question of competence which situates itself as a key concept informing the CARER+ conceptual background. Some educational and training discourses use the terms learning outcomes and competence interchangeably (Cedefop, 2012), yet a conceptual distinction between the two allows for more clarity as well as it brings about a sound analytical strategy:

> *"Competences usually refer to practices in the workplace and, by extension, to wider social and personal practices. Learning outcomes refer not directly to work practices but to competences. Accordingly, learning outcomes are validated by their connection to competences which are understood as part of the world of work (as their source),"*

.. whereas learning outcomes are therefore part of the educational design. Thus, it is useful to distinguish:

> *"some systematic way of identifying competences and translating them into learning outcomes. (...) The conceptual separation of learning outcomes and competences allows us to see that learning outcomes can communicate between the status quo of competences in the world of work and competences (specific to individuals) that enter the employment market in the future,"* (Cedefop, 2012: p. 35).

Rather than start at the level of inductively defining learning outcomes in terms of knowledge, skills and competence CARER+ chooses to start at the level of competence. This is deductively defined as a dialectics of knowledge, skills, attitudes and purposes, where broader competence areas derive from the socio-economic context and are translated into learning outcome *examples*. This approach has been inspired by the conceptual logic of the forthcoming European Digital Competence Framework, currently finalised by the European Commission Joint Research Centre, Institute for Prospective Technological Studies (Ferrari, 2012a; 2012b), which has served as a structural model for the CARER+ Digital Competence Framework for care workers.

2.3. Methodology

To investigate the relevance of digital competences in the care sector, as well as to identify the digital knowledge and skills likely to emerge within care workers' activities in the near future, four research methods were implemented:

- document analysis

- expert focus groups
- semi-structured individual interviews with experts
- a questionnaire survey to care workers and caregivers.

Nine project partners in seven European countries participated in the research. 3s Unternehmensberatung GmbH (Austria) as the work package leader, Arcola Research (United Kindgom), EOS – Educating for an Open Society (Romania), Iperia L'Institut and Fédération des Particuliers Employeurs de France (France), Istituto per la Ricerca Sociale (Italy), LIKTA - Latvijas Informacijas en Komunikacijas Tehnologijas Asociacija and LSA - Latvijas Samariesu Apvieniba (Latvia), and TELECENTRE Europe (Belgium).

Focus groups and interviews with experts took place in all seven countries (AT, BE, FF, IT, LV, RO, and UK) in line with the research design[2], while the desk research and questionnaire survey were limited to countries where the pilot testing of CARER+ outcomes will take place in the next phase of the project (FR, IT, LV, RO)[3].

Phase 1: Desk research – document analysis

The objective of this research activity was to identify and analyse accessible educational and occupational documentation in the care sector, examine how digital competence is reflected, and report examples of digital learning outcomes found. In particular, the following types of documents were consulted:

- Curricula of initial vocational training programmes for care workers;
- Curricula of continuing vocational training programmes for care workers;
- National Qualifications Frameworks / Systems / Registers;
- Qualification standards;
- Assessment standards;
- Europass Certificate Supplements;
- Occupational standards;
- Job descriptions and job advertisements.

Phase 2: Expert focus groups

Within this phase of research, focus groups in all partner countries were organised, that brought together 5 to 10 national experts in various fields related to the project scope. In Phase 1 the outputs depended, in principle, on the quality of information available in external sources and thus turned out to be of miscellaneous relevance. But in Phase 2 the aim was to ensure that specificities identified within the scope of the CARER+ scope were addressed. In

[2] Originally, the research methodology provided in CARER+ Deliverable 2.1 (Valenta et al., 2012) foresaw 8 countries participating in the research. This number was amended to 7 due to the Swedish partner's exit from the project.

[3] And Spain. The Spanish partner, however, replaced the exiting Swedish partner only after the research activities were conducted.

other words, the focus groups were expected to provide information on topics of direct to CARER+ around the interface between care work and digital competence.

For the objectives of the focus groups to be met, it was of great importance that the participants were selected according to the project rationale but also with regard to the diversity of views and fields of expertise. The participants in the expert focus groups thus included:

- leading personnel in care providing organisations, both public and private;
- leading personnel in charities, care worker associations and care recipients' associations;
- academics and researchers in the field of socal care, eHealth, Ambient Assisted Living (AAL);
- medical and nursing professionals;
- experts in national as well as European policy of social cohesion, welfare and active ageing;
- entrepreneurs and technical experts in the field of assistive technologies;
- experts in digital literacy and e-learning.

The three principle areas of inquiry discussed in each focus group were:

- What is the current situation? What digital skills do care workers currently need and utilise? To what extent is ICT relevant in the field?
- How can ICT be further used to support both care workers in their work and care recipients in their daily lives?
- What new digital skills will care workers need? What should be included in a carer's digital competence list?

PHASE 3: SEMI-STRUCTURED EXPERT INTERVIEWS

By interviewing selected experts individually, Phase 3 aimed to gain deeper insight in the research area, and to add more detail to information collected through Phases 1 and 2,. Each partner invited 5 to 10 experts for semi-structured interviews. The respondents may or may not have been members of the focus groups established in Phase 2, yet they were recruited from the same categories of respondents as in the case of focus groups.

Three themes were addressed during each interview, with the following inquiry logic and elementary questions:

- Theme 1. Current experience with implementing digital competence and ICTs in care work:
  - 1a) In general, what do you think about the relationship between digital skills/ICT and care work?
  - 1b) If you were to describe a care worker's typical day, how would the use of ICT occur in it?
- Theme 2. Care recipients' needs:

> 2a) What, in your opinion, are the care recipients' needs that could be met using digital technology?
> 2b) How you think care receivers will react to services involving digital technology?

Theme 3. Digital competence for care workers and caregivers:
> 3a) Presently, how are digital competences incorporated in care workers' qualifications?
> 3b) Which digital competences would you name as substantial for care workers?
> 3c) Which additional digital competences would you regard advantageous for care workers?

PHASE 4: QUESTIONNAIRE AMONG CARE WORKERS AND CAREGIVERS

While Phase 1 derived information from official documentation, and Phases 2 and 3 investigated expert opinion, Phase 4 complemented the research with information from practitioners, i.e. care workers and caregivers. This was done through a multiple choice questionnaire filled in by care workers and caregivers either in hard copy or via an online interface. The project partners were asked to collect 40 completed questionnaires in each of the four countries involved in this phase, thus arriving at a total of 160 questionnaires. This would then provide a pool of data on practitioner's current digital skills and related views and preferences for the next research steps..

For the sampling methodology, the selection of respondent samples was non-random in two ways. First, the partners did not build representative samples of the whole population but selected respondents from the narrowly defined groups of care workers. Secondly, these groups tended to vary according to their member features and average profile among countries, for example, the probability of a typical care worker having a migrant status was significantly higher in Italy than in Romania. Legal provisions regulating the conditions for access to care professions also differed from country to country, not to mention the unofficial caregivers who were often reluctant to be surveyed due to their unofficial economical or migrant status. Therefore it was impossible to define common sampling quotas for all countries involved in the survey. The partners were advised to apply their judgement based on knowledge of their national situation to build as representative samples as possible. Professional organisations, foundations, care associations and other stakeholders with good overview of the field were consulted regarding the profile of the respondent sample in each country.

The questionnaire was divided into four sections:

Pre-section. Category of respondent:
> 4 questions on respondent's job, level of formal education, experience in care work, country of origin.

Section A. Respondent's current level of digital competence:
> 10 questions on (mostly instrumental) ICT competences; self-assessment on a scale from 1 to 10

Section B. Relevance of digital competence and technology in care work:

> 7 statements assessed against a self-anchoring scale from “not at all” to “very much so” or its variants

Section C. Assessment of clients’ needs:

> 4 statements assessed against a self-anchoring scale from “not at all” to “very much so” or its variants

2.4. Key results and findings

In this chapter we provide a consise overview of the key results and findings of the CARER+ research on ICT knowledge, skills and competences in the international care sector. Due to the comparatively large amount of data gathered, a full account of the qualitative and quantitative evidence collected by the CARER+ research is found in Annexes.

The following table summarises the outputs delivered as compared to expected:

Table 1 Research outputs

Research phase	Number of countries involved	Outputs per country, planned minimum	Outputs total, planned minimum	**Outputs total, delivered**
1:Document analysis	4	not specified	not specified	**57**
2: Focus groups	7	1	7	**8**
3: Interviews	7	5	35	**46**
4: Questionnaires	4	40	160	**156**

The table shows that in research phases 2 and 3, where quantitative targets were set, the numbers of planned outputs were exceeded (rather significantly for interviews: 31,4% more interviews were conducted than planned in phase 3). In phase 4, 160 questionnaires were planned but only 156 collected. The difference was caused by a lower response rate in Italy where there are an above-average number of undeclared care workers active in a grey market and thus reluctant to get exposed by taking part in a survey.

QUESTIONNAIRE SURVEY TO CARE WORKERS AND CAREGIVERS: SELECTED EVIDENCE

The following tables demonstrate selected evidence provided by a quantitative analysis of the questionnaire survey conducted in four partner countries (Ziegler, 2012).

Tables 2, 3 and 4 contain information on the sample, Tables 5, 6 and 7 show respondents’ answers to selected questions concerning their current digital competence and views on its future development.

Table 2 Number of care workers and caregivers surveyed in each country; absolute numbers

France	Italy	Latvia	Romania	**Total**
55	19	40	42	**156**

Table 3 Distribution of respondents according to the type of involvement in care work; % of total

Freelance care worker/caregiver (hired directly by client)	Organised care worker/caregiver (hired by an agency, social service, etc.)	Care worker-to-be (currently in training)	Family member / relative	Other	**Total**
45	34	9	7	5	**100 %**

Table 4 Distribution of respondents according to the length of experience in care work; % of total

Less than 2 years	2 to 5 years	6 to 10 years	More than 10 years	**Total**
25	25	22	28	**100 %**

Table 5 "How would you assess your overall digital competence? (1= no skills at all; 10= top expert)"; % of total

1	2	3	4	5	6	7	8	9	10	n/a	**Total**
12	7	6	5	14	16	21	14	5	1	**1**	**100 %**

Table 6 "To perform your job well, the level of your digital competence is..."; % of total

Not relevant at all	Negligible	Fairly important	Very important	Don't know	**Total**
27	18	34	17	7	**100 %**

Table 7 "Do you think your older clients would appreciate additional services supported by digital technology?"; % of total

Not at all	Unlikely	Possibly	Likely	Very likely	Don't know	**Total**
18	24	19	10	13	16	**100 %**

EXPERT VIEWS ON DIGITAL COMPETENCE IN THE CARE SECTOR

This section summarises key findings of the qualitative analysis of the information collected through expert focus groups and interviews.

A cross-referential discoursive analysis of the reports from focus groups and individual interviews allowed for identification of several areas where recurrent views were expressed across all, or in some cases, most countries. The more frequently expressed opinions can be divided into three thematic areas:

- views on the changing attitudes of the care recipients towards ICTs;
- views on the ways care workers can support the care recipients in this process of digital emancipation;

views on how carers themselves can further utilise digital competence in various aspects of their work.

The majority of experts agreed that notion of digital competence can already be seen as useful and needed in the social care sector, and that it will gain a more central position in care work in a near future. This will partially be due to rapid developments in eHealth, tele-care and assistive technologies that are being translated from cutting-edge experiments into commonplace practical solutions that are affordable to a growing number of care services as well as care recipients. As importantly, every-day digital technologies such as personal computers, tablets and smart phones are becoming more pervasive and entering the lives of the care recipients. The stereotype of older people opposed to digital developments and unwilling or afraid to engage in ICT-based services can no longer be taken for granted. A number of experts have acknowledged that recent experience shows that older people are increasingly open to digital technologies provided they are user-friendly and adjusted to specific user need. They are now more often losing their timidity and becoming willing to learn about the possibilities afforded by the use of ICTs.

However, many experts warned against exaggerated digital optimism and indiscriminate futurism. In the area of telemedicine, traditional solutions such as alarm buttons or self-diagnosis measurement devices are widely used by people in home care, but more sophisticated arrangements such as video monitoring and other features of *smart homes* cannot yet be seen as standard. With regard to more widely available technologies, several interviewees pointed out that non-smart phone and television remain by far the most often used digital devices in the lives of older people. According to the experts, this fact should be acknowledged and ways should be explored to capitalise on the care receivers' familiarity with phone and television e.g. by extending TV functions to online connection or introducing to older people alternative ways of making phone calls via internet-based services such as Skype.

The area most frequently raised was the potential for ICTs to improve the social aspects of the lives of care recipients. The majority of interviewees as well as focus group participants were convinced that online communication should be regarded as the primary benefit brought to home care recipients by digital technology. Easy messaging, video calls and chats can facilitate and intensify an older person's contact with his/her family and wider social circle. Online networks and communities can help an isolated person (re)establish relationships and get (re)involved in local affairs as well as remote ones. According to the experts interviewed, online interaction should no longer be considered dehumanising or inferior to "real" relationships. In their view, the avenues for online participation are now no longer cryptic code-based hideaways but allow for direct inter-personal contact, audio-visual communication, inclusiveness and productive togetherness. Yet there are risks with online participation and include the safety and privacy of the user. These are factors that older people might be particularly vulnerable to and this was often mentioned as one of the areas where the care-worker can step in.

When asked about the current average level of digital competence among care workers, most experts agreed that it is generally low and needs improvement. However, due to the heterogeneity of the target group it is difficult to draw universal conclusions. Qualified professional care workers are more likely to have a basic to average level of digital

competence than unofficial caregivers. Normally, qualified care workers have completed a certain level of formal education and be in official employment with a care organisation. This tends to involve systematic training and CPD as well as require day-to-day work with ICTs for the purposes of administration, planning and reporting of care work.

Caregivers are often challenged by their lower social background, language barriers and lack of access to further learning. It was also reported that some caregivers are recruited from economic migrants coming from Eastern Europe, where they may have held qualified jobs and used ICT on a daily basis but chose to relocate and accept non-qualified jobs in Western Europe - in response to the difficult living conditions in their countries of origin. A good level of digital competence can be found among these caregivers (reported in Italy in particular). In conclusion, most experts agreed that further training in digital competence for care workers as well as caregivers is desirable, promising and appropriate with regard to future developments in the sector, and in society.

In the view of the experts the role of the carer as a guide and mediator who facilitates the care recipient's gradual adoption of digital technology was central. The presumption here was that the care worker who becomes digitally competent will allow him/her to encourage the care recipient to explore the advantages of digital technology, and guide them through various aspects of its usage. Experts agreed that the care worker should not be expected to perform the role of a "technician" who would be responsible for setting up equipment or for repairing tasks but instead should mediate the client's dealing with services such as internet providers, equipment sellers and on on). With more advanced levels of digital competence, the care worker should be able to assess a care recipient's individual needs, interests and preferences and recommend corresponding digital services. A digitally competent care worker will also be able to help ensure client's security in digital environments.

Often mentioned was the inter-personal merit of "learning together", i.e. strengthening social bonds between the care worker and the care recipient through purposeful interaction in exploring digital technologies and services.

Apart from applying digital competence in their work with care recipients, the care worker is expected to utilise technology in supplementary organisational and administrative tasks. According to the experts, there is great potential in the portable modern device such as smart phone and tablet. Because geographic mobility and time flexibility are among the key principles in care work, the technology that allows for mobile connectivity should be seen as highly adequate a work tool for care workers. Planning, tracking, recording and monitoring visits to clients through smart mobile devices in real time was seen by the experts as beneficial to both care workers and the care services that employ them. Another area where digital competence was reported as increasingly relevant was care administration and management. Many care services either use special software already or see the adoption of one as a necessary next step. The ability to engage in digital administration was also reported as a precondition for care workers' career growth within their organisations.

Finally, e-learning and peer communities were repeatedly mentioned as highly advantageous for care workers. Digital platforms for the exchange of professional experience can potentially help care workers quickly consult immediate problems with peers, as well as enhance their overall care work competence in the long term. Also, caregivers who tend to be more liable to social isolation (for example due to language or cultural barriers) can overcome

this predicament by joining a network of fellow caregivers or finding online new clients interested in their services.

TEXTUAL ANALYSIS TO IDENTIFY COMPETENCE CATEGORIES AND EXAMPLES OF LEARNING OUTCOMES – ILLUSTRATION OF THE METHOD

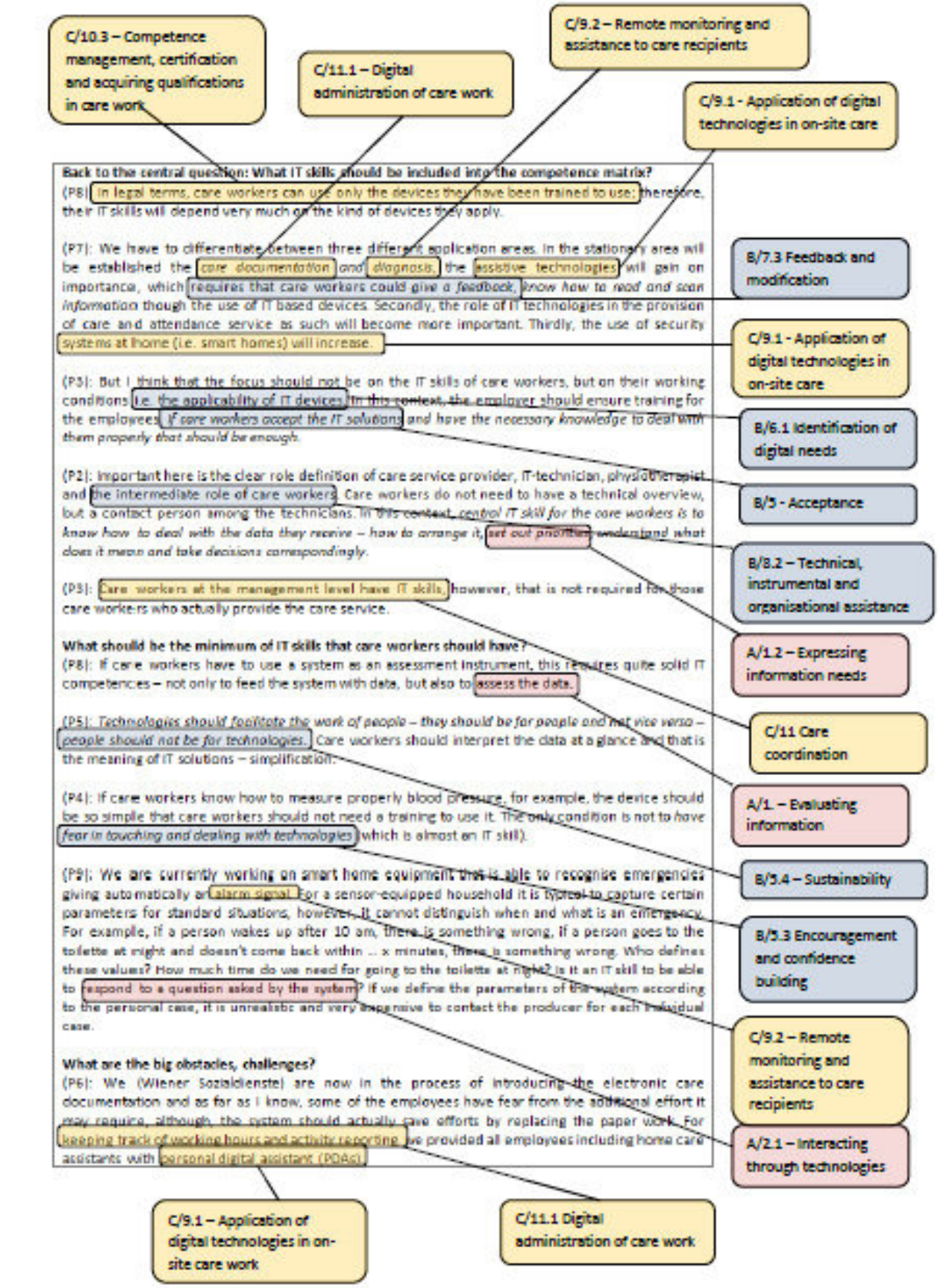
All narrative reports from research phases 1, 2 and 3 (competence documents, focus group reports, interview reports) were analysed using the methods of qualitatitve textual analysis and text-mining. The objective of this analytical exercise was twofold:

- to identify recurring categories, concepts and learning-outcome examples that would define the structural elements of the framework such as Competence Areas and Competences;
- to verify the structural elements defined in consultation with other sources (literature, other frameworks and initiatives) by mapping the research data on the framework's categories and concepts.

The method is illustrated by the image on the next page. The screenshot depicts a randomly selected page from an authentic focus group report.[4] Specific formulations and quotations recorded by the focus group rapporteur have either informed the establishment of, or have been mapped on, the different Competence Areas and Competences in the CARER+ framework's coding system represented in the image by the coloured shapes (consult later chapters of this document for more information on the coding system). All narrative research outputs found in Annexes have been processed in this way:

[4] THE PAGE COMES FROM THE FOCUS GROUP REPORT SUBMITTED BY THE AUSTRIAN PARTNER. SEE ANNEXES FOR COMPLETE REPORTS.

Image 1: Illustration of the textual analysis method / mapping on the framework's coding system (demonstrated on an authentic page from the Austrian focus group report, cf. Annexes).



3. Context analysis

To map and analyze the conceptual and applied developments at the interface of digital technology and care work, a number of related literature items, projects, initiatives and structures were consulted (see section 3.1 below). Three major developments were identified as key sources of information for the CARER+ Digital Competence Framework, and examined more closely (section 3.2).

3.1. List of relevant projects and initiatives consulted

Title	Website	Rationale
ICARE Project	www.icareproject.eu	The ICARE project focuses on the adaptation of an already existing system of vocational qualifications in the field of personal care and social work in coherence with the ECVET framework, and on the testing and development of relevant tools for a steady application of ECVET principles and specifications.
Journal of Medical Imaging and Health Informatics	http://www.ingentaconnect.com/content/asp/jmihi/2012/00000002/00000001	Special Issue on Ubiquitous Computing in Healthcare
Go-myLife Project	www.gomylife-project.eu/	Go-myLife is an *Ambient Assisted Living* project aiming to improve the quality of life for older people through the use of online social networks combined with mobile technologies.
PRIMER-ICT Project	www.primerict.eu	The project aims to educate students primarily from health and ICT related fields who will in turn educate both older people and the multipliers (community nurses, nurses in senior homes, family members, volunteers from different sectors/ages).
ICT & Ageing – Users, Markets and Technologies	www.ict-ageing.eu/	The ICT & Ageing – Users, Markets and Technologies study was funded by the European Commission. The primary aim was to identify existing market barriers that hinder uptake of technologies for independent living and identify recommendations for action in order to address older peoples' needs and market potentials.
CARICT: ICT-based solutions for caregivers	www.euro.centre.org/detail.php?xml_id=1850	The main goal of CARICT was to investigate the potential impact of information and communication technologies (ICTs) on informal

		carers of older people living in the community (e.g. relatives and friends) as well as on paid assistants employed by private households.
The Potential of ICT to Support Domiciliary Care	ipts.jrc.ec.europa.eu/publications/pub.cfm?id=3019	A series of country reports published by the EC Joint Research Centre.
Cedefop Statistics and Indicators: ICT skill levels on the rise	www.cedefop.europa.eu/EN/articles/20404.aspx	ICT skill indicators and related findings published by the European Centre for the Development of Vocational Training
4Leaf Clover Model for Senior Service Sector	www.adam-europe.eu/adam/project/view.htm?prj=3828#.UWgUHFdIMwc	A Leonardo da Vinci innovative project aimed at: mapping the future senior service sector with focus on the expected challenges in recruitment and working schemes in 15-20 year perspective (patterns of change); recommending changes in CVET patterns and training solutions which should meet theses challenges using LLL principles; developing concrete models which can be used by CVET provider Europe wide.
Proper Chance Project	www.proper-chance.eu	The aim of the project is to support professional permeability and mobility for workers in the field of health and social care by promoting the use of ECVET to support transparency and recognition of learning outcomes and qualifications, including non-formal and informal learning.
NoBoMa	www.noboma.at/	In the NoBoMa project the VQTS model is used for developing a Competence Matrix, Competence Profiles and a Future Competence Matrix by using new ideas, new methods and by adding future skill needs, in order to meet future challenges in the field of social care.

3.2. Major sources examined

Three international frameworks representing three different approaches to digital competence architecture were analysed in order to discover how their logic and structural components can inform the design of the CARER+ Digital Competence Framework:

- The European Computer Driving Lincence (ECDL)
- The European e-Competence Framework (e-CF)

The Framework for Developing and Understanding Digital Competence in Europe (DIGCOMP)

Whereas the first two have been functioning as established mechanisms for some time now, the DIGCOMP study is being finalised parallel with this Deliverable. However, its interim proceedings allowed for the integration of its logic and conceptual background in the CARER+ analysis. In the following, the outcomes of the analysis are outlined.

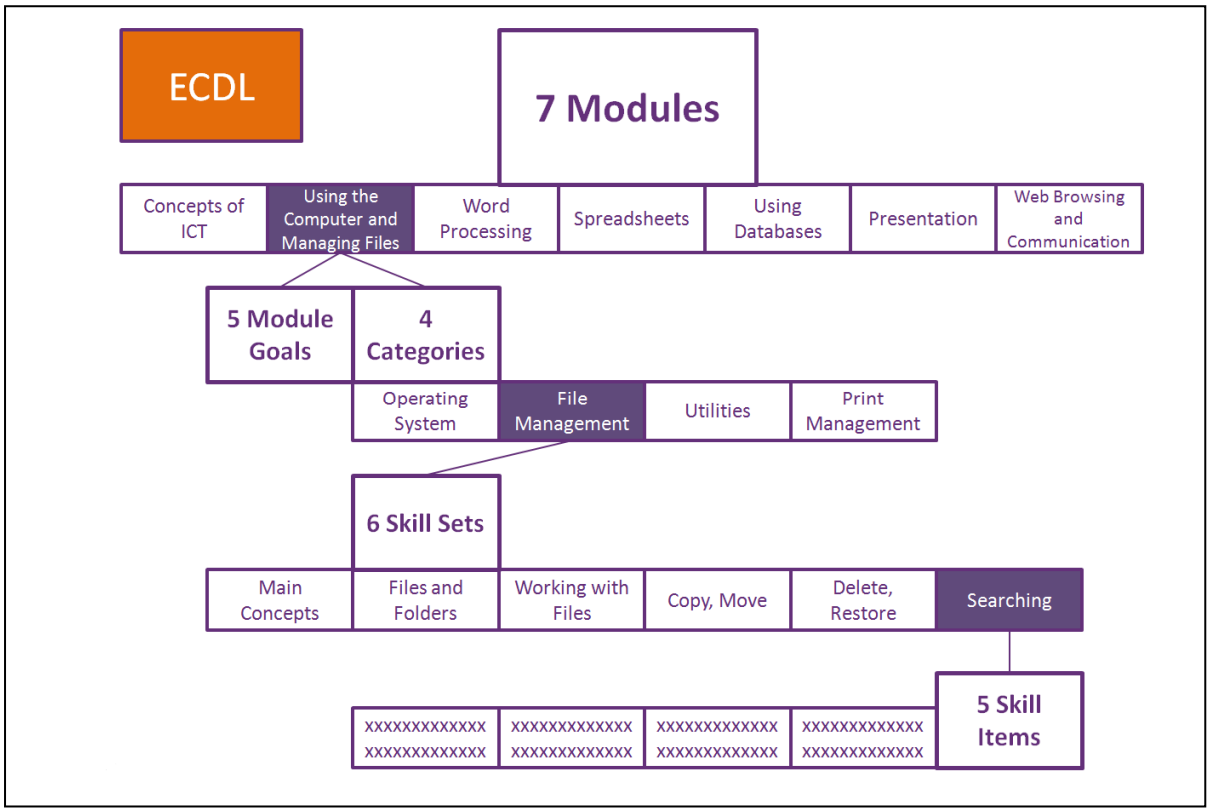
The European Computer Driving Licence (ECDL)

ECDL (and its international variant ICDL) is a training and certification scheme offering a set of mechanisms and tools "for everyone who whishes to become fully competent in the use of a computer and common applications. Each ECDL/ICDL module provides a practical programme of up-to-dat skills and knowledge areas which are validated by a test."[5]

The ECDL approach to digital competence can be regarded as instrumental, practice-oriented and skills-based. Analysis of the ECDL Syllabus Version 5.0 (ECDL Foundation, 2007) shows that the concept of digital competence is understood within this scheme as the ability to demonstrate task-oriented knowledge and to deploy practical skills in performing specific actions with a computer or an application.

The structure of the syllabus can be illustrated through the following diagram showing a selected line of hierarchy of categories and concepts applied:

Image 2: Structure of ECDL (source: own analysis based on EDCL Foundation, 2007)



[5] HTTP://WWW.ECDL.ORG/PROGRAMMES/INDEX.JSP?P=102&N=108&A=0, DISPLAYED 20.11.2012.

The lowest niveau of the above represented hiearchy are the Skill Items, i.e. detailed descriptions of practical skills to be demonstrated by a person in an ECDL test. Hence, it can be inferred that the ECDL framework is a rich repository of instrumental skills organised according to an elaborate logic of user tasks.

As mentioned earlier in this report, however, a contemporary understanding of the concept of digital competence must reach beyond mere technical and instrumental dexterity to capture the competence in its comprehensiveness. Such approach can be partially identified within the following development.

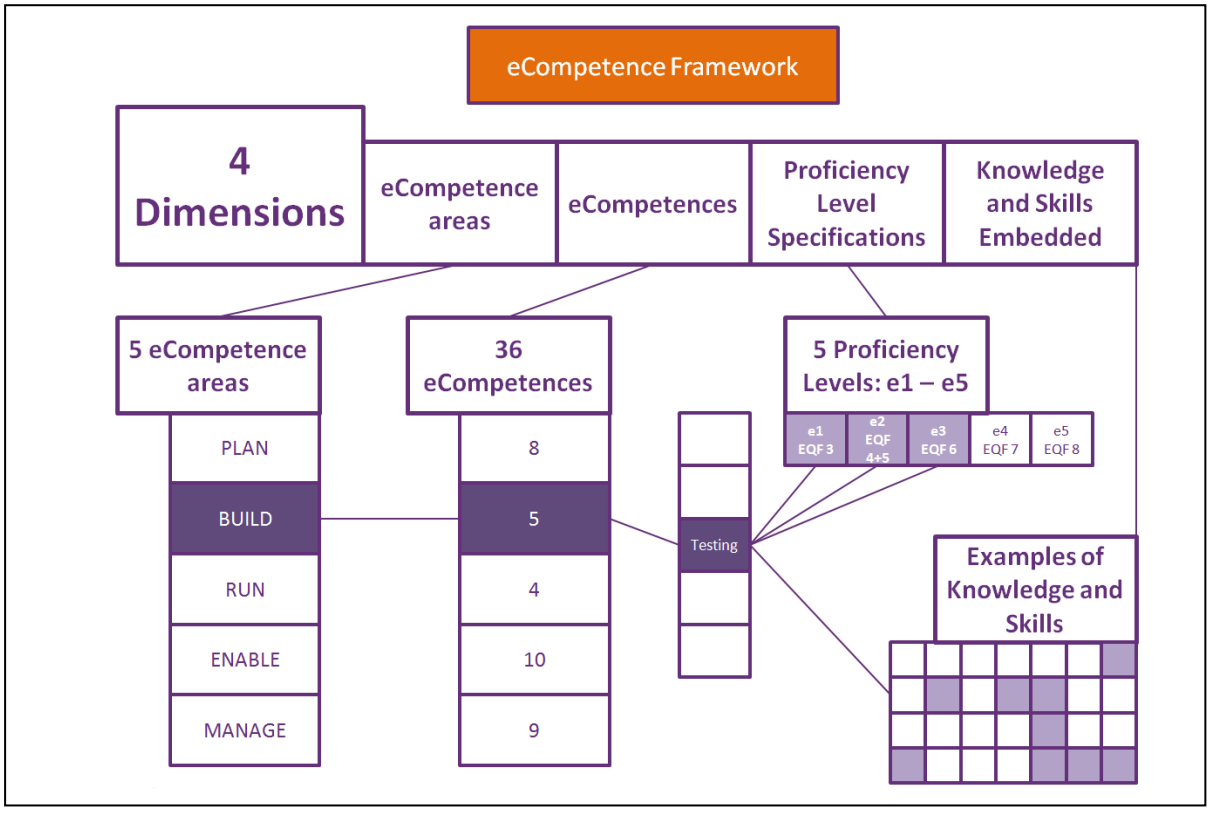
The European e-Competence Framework (e-CF)

The European e-Competence Framework (e-CF) has different application purposes than ECDL. While ECDL's rationale is to serve as a testing and certification scheme, eCF was created to "provide a common, shared, European tool to support organizations and training institutions in recruitment, assessment, competence needs analysis, learning programmes, career path design and development," (Marinoni and Rogalla, 2010, p. 3). The primary users are thus ICT staff and their employers.

On one hand, therefore, the focus on professional users of digital technology sets the actual contents of the e-CF framework beyond the needs of CARER+ that remain at the level of non-professional, general digital user. On the other hand, the e-CF was among the first to introduce the approach to digital competence that starts from abstractly defined *areas of competence* that represent broader cognitive concepts, to proceed only lower in the structure to specific instances of these abstract concepts manifested through *examples* of knowledge and skills.

The general logic of the e-CF shall be illustrated by the following diagram showing a selected line of hierarchy traced within the framework:

Image 3: Structure of e-CF (source: own analysis based on Marinoni and Rogalla, 2010)



The framework is organised around four dimensions: eCompetence Areas; eCompetences; Proficiency Level Specifications; and Knowledge and Skills examples. The key notion here is the dimension of eCompetence Areas that are not ICT-specific activities but rather abstract concepts referring to five cognitive capabilities: plan; build; run; enable; and manage. Defining such broad competence areas allowed the e-CF to accommodate, on lower niveaus of the structure, transversal competences that are necessary in performing ICT tasks but cannot be inferred directly from digital technology alone.

Another important aspect introduced by the e-CF is the conceptualisation of knowledge-and-skill definitions as mere examples rather than constitutive elements of the competence. As discussed above, the earlier approach to defining competences through discrete and would-be-exhaustive "packages" of knowledge and skill items necessarily implies reductionism and limits the applicability of the outcome in changing contexts. Rapid pace of development and change being a basic characteristic of digital technology, it can be held that a more flexible, liberal and modifiable way of difining competence is the only sustainable methodological strategy. This can be achieved, as the e-CF proposes, by defining the dimension of knowledge and skills as an open set of changeable examples rather than a discrete set of immovable structural entities.

Nevertheless, despite the important steps towards a more comprehensive and flexible interpretation of digital competence, at the level of contents the e-CF follows the needs of its target group: ICT professionals. From here, therefore, the CARER+ analysis moved on and turned to a recent European development that builds on the conceptual achievements of the e-CF but focuses on general public: the DIGCOMP initiative.

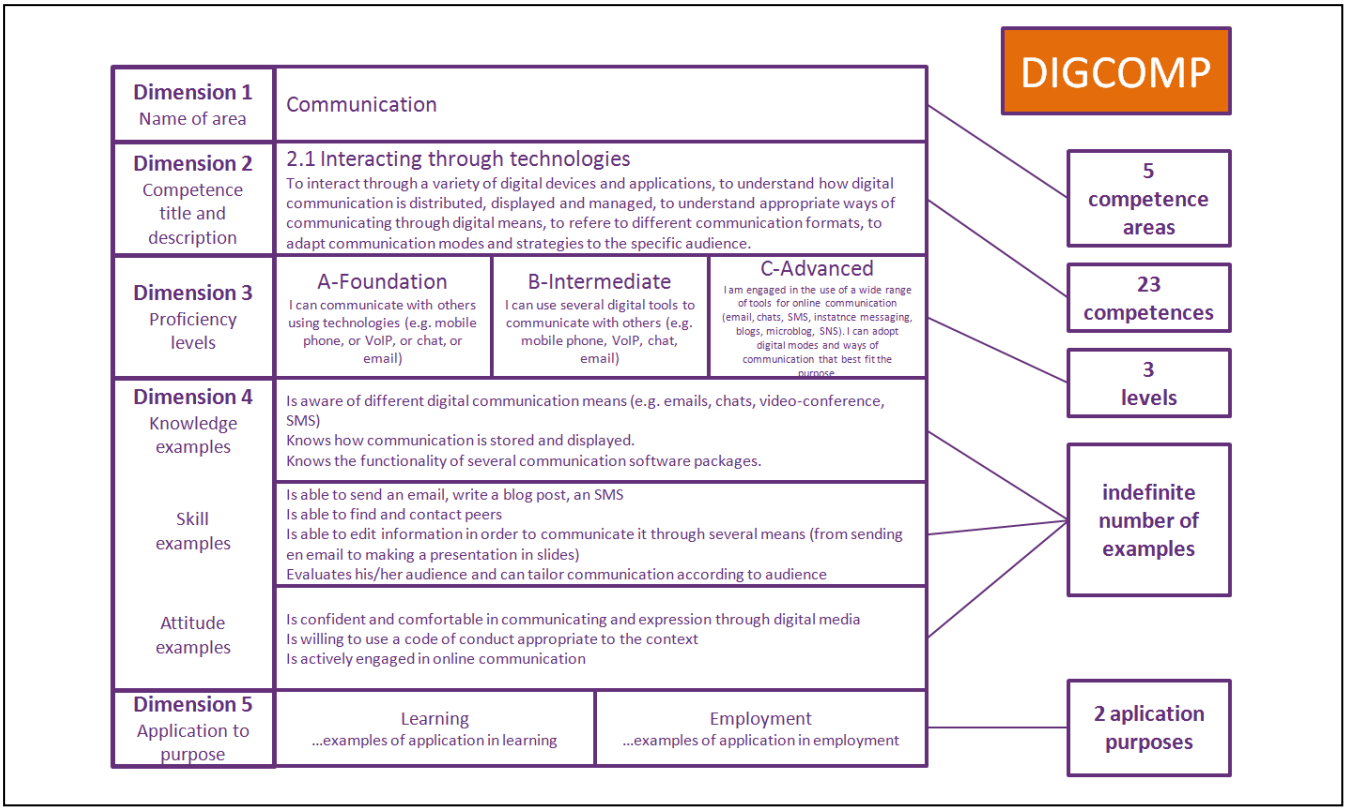
DIGCOMP: A Framework for Developing and Understanding Digital Competence in Europe

The DIGCOMP study has been realised by the European Commission Joint Research Centre, Institute for Prospective Technological Studies (IPTS). The work is still in progress, and the CARER+ analysis is based on the outcomes so far available (Ala-Mutka, 2011; Ferrari, 2012; and Ferrari, forthcoming). However, the pre-final outputs provided by IPTS for the stakeholder consultation process (involving CARER+ experts) have delivered sufficient basis for integrating the main characteristics of DIGCOMP into our analysis. Also, the policy background of DIGCOMP indicates that this development has considerable potential to become, in a foreseeable future, Europe's reference mechanism in the area of digital competence. Therefore, if CARER+ is to ensure relevance and compatibility with key European policy developments, the DIGCOMP initiative is a primary source to seek synergies with.

DIGCOMP adopts a broad definition of digital competence understood as interplay between instrumental/technical knowledge and skills, transversal/soft knowledge and skills, and personal attitudes. It builds on the structure introduced by the e-CF and starts by defining general competence areas that are populated by particular competences which in turn are illustrated through examples of knowledge, skills and attitudes. To the four dimensions defined by e-CF, DIGCOM adds a fifth dimension: Application Purpose.

To approximate the five dimensions of DIGCOMP, the following diagram can be used illustrating on a randomly selected competence the structural components of the system:

Image 4: Structure of DIGCOMP (source: own analysis based on Ferrari, forthcoming)



The DIGCOMP framework distinguishes 5 competence areas: Information; Communication; Content creation; Safety; and Problem solving. Within these areas, 23 competences are defined altogether. As the competence areas, the competences too remain at a comparatively abstract and/or broad level. The framework features competences with titles such as “Interacting through technologies” which would comprise all kinds of digital communication and the variety of related skills from using email to microblogging; or “Developing content” that can refer to diverse skills from using a word processor to write simple texts to creating complex multimedia presentations.

The advantage of this approach is that more generally/abstractly defined categories allow for accommodating new developments in digital technology as well as non-technical abilities, such as critical evaluation of information or proactiveness and responsibility in online interactions, that exceed specific ICT instrumental skills but are preconditions for authentic digital competence required by contemporary digital environments.

The authors of the DIGCOMP concept have foreseen that their general framework will serve as a point of departure, a component, and/or a basic organising principle for creating more context-specific frameworks according to particular needs and purposes. Hence, the next chapter outlines the logic of the CARER+ Digital Comptence Framework design.

4. Logic and design

Based on the qualitative and quantitative information collected by the CARER+ research, and on the context analysis of related frameworks and developments, the CARER+ Digital Competence Framework has been designed around the following structural dimensions (with indication in brackets of the respective number of elements present in each dimension):

- Dimension 1: Competence Domains (3)
- Dimension 2: Competence Areas (11)
- Dimension 3: Competences (41)
- Dimension 4: Application Levels (2)
- Dimension 5: Examples of Learning Outcomes (unlimited)

Competence Domains and Competence Areas (Dimensions 1 and 2)

- Domain A: General digital competence
- Domain B: Enabling digital competence in social care work
- Domain C: Care-specific digital competence

DOMAIN A: GENERAL DIGITAL COMPETENCE

Domain A draws on the above discussed DIGCOMP framework and contains Competence areas and Competences focused on general digital competence, i.e. instances of digital literacy applied by a common user of ICTs. This Domain represents the non-sectoral baseline of the framework. The competences contained are therefore not care-specific but aim at equipping care workers and caregivers with a reference for acquiring general digital knowledge, skills and attitudes as defined by DIGCOMP. The 19 single Competences of this Domain are grouped into the following 4 Competence Areas:[6]

- Information
- Communication
- Content creation
- Safety

To observe the compatibility and correspondence of the Carer+ DCF with the state-of-the-art European developments, the DIGCOMP framework was used as the main source of structure and categorisation of this Domain. Also, the titles of competences and some of the

[6] THE ORIGINAL DIGCOMP FRAMEWORK CONTAINS 5 COMPETENCE AREAS WITH A TOTAL OF 23 COMPETENCES. FOR THE PURPOSES OF THE CARER+ FRAMEWROK, THE FIFTH DIGCOMP AREA, "PROBLEM SOLVING", HAS BEEN MODIFIED AND TRASFERRED INTO DOMAIN B.

examples of learning outcomes were adopted from DIGCOMP (in the User Application Level mostly). More learning outcomes were defined for the Mentor/Guide Application Level. The adaptation of DIGCOMP by other initiatives has been explicitly encouraged by its authors (Cf. Ferrari, forthcoming) as the framework has the ambition to become a European-level reference framework for digital competence. Carer+ has followed the invitation of the authors of DIGCOMP to use, adapt and enlarge the general framework in more specific contexts.

Domain B: Enabling digital competence in social care work

Domain B represents a component of the framework that addresses the specifics of applying digital competence in the social care sector. Responding to the identification of obstacles such as low acceptance of digital technology among both care workers and care recipients, and the social and psychological needs specific for the context of social care work, this Domain contains 4 Competence Areas comprising 13 single Competences that can be regarded as meta-competences to enable and facilitate the very possibility of digital competence in the sector, the acceptance of it by all parties, and its sustainability over time. Thus, non-technical, interpersonal, soft, mediation-oriented and transversal competence elements are brought into the context of applied digital competence through this Domain. The Competence Areas in Domain B are:

- Acceptance
- Adaptation
- Progression
- Support

Domain C: Care-specific digital competence

Domain C is designed to accommodate the aspects of care workers' digital competence that reflect activities, processes and technologies specific for for applied care work, or the aspects that contribute to the employability and professional development of care workers (e.g. working with systems for digital administration in care work). The applied scenarios are reflected in the 9 single Competences of Domain C, grouped in the following 3 Competence Areas:

- Independent living and social participation for care recipients
- Personal development and social integration of carers
- Care coordination

The competences contained in different Domains are not to be understood as totally independent of each other but rather as mutually supportive, complementary and interactive. Learning outcomes that are characteristic for a given competence can function as precondition of, supplement to, as well as result of another competence. This will allow for creative and user-specific utilisation of the framework, e.g. for creating tailored learning architecture and programmes by combining selected elements of the framework rather than following its structure schematically. Also, different learing pathways for learners at different levels of digital literacy can be designed due to the open nature of the framework.

The CARER+ Digital Competence Framework (DCF) can be illustrated by the following diagram, where the central circle represents the three Competence Domains; the square elements represent the Competence Areas belonging to each Domain; and the numeric circles express the number of Competences in each Domain.

Image 5: High-level structure of CARER+ DCF

Competences and Application Levels (Dimensions 3 and 4)

As discussed above, the framework has three Domains in Dimension 1 divided into 11 Competence Areas in Dimension 2. Each Competence Area, then, is further divided into a number of single Competences in Dimension 3. Altogether, the framework has 41 single Competences. Each Competence is defined by the following aspects:

- numeric code indicating the Competence's position within the framework;
- title of the Competence;
- description of the Competence representing its main contents, and formulated as a series of sentences with gerund verb forms and divided by semi-colons. This is a general description of the competence where the order of elements represented by consecutive verb-object constructions may follow a progress logic from less to

more complex, as well as a temporal logic illustrating the development of the competence in time.

Most Competences have two Application Levels (Dimension 4) in order to address the need of distinguishing two different modes of care workers' and caregivers' application of digital competence:

- User
- Guide/Mentor

User

The User Application Level refers to the development of the care workers' own digital knowledge, skills and attitudes, building his/her own digital literacy, and performing all digital-competence-related work tasks that do not comprise direct interaction with care recipients (but can be, and often are, either preparation or conditional for the work with care recipients).

Guide/Mentor

The Application Level Guide/Mentor builds on the competence contained in the User level, and brings it forward into the context of interaction between care workers and care recipients. This Application Level thus mainly refers to care workers' abilities to mediate digital competence to care recipients, to assist them in adopting it, and to facilitate care recipients' usage of, and/or benefiting from, digital technologies and solutions.

It is important to note that the rationale of the two Application Levels differs in the three different Competence Domains:

- Domain A is about general digital competence and common user skills. Therefore, the User level is essential in this Domain, whereas the Guide/Mentor level mostly consists in care workers' mediating the User knowledge, skills and attitudes to the care recipients.
- Domain B addresses making digital competence possible in care work and sustainable in the lives of the care recipients. Therefore the User level here refers to care workers' own acceptance of, and dealing with, digital technology. The Guide/Mentor level refers to addressing the challenges the obstacles on the side of care recipients, and ensuring their relevant and sustainable use of digital technologies.
- Domain C addresses the actions and processes supported by digital competence specific for the care sector, and the employability and professionalisation of carers. Some of the Competences therein allow for both Application Levels. Some, however, can be only applied in the User mode, and some are only applicable in the Guide/Mentor mode.

Examples of Learning Outcomes (Dimension 5)

The fifth dimension of the framework is represented by Examples of Learning Outcomes. Normally, these items are described for both Application Levels of a Competence; in the exceptional cases where only one Level is described through Learning Outcomes, the other Level is not applicable for that Compentence.

As discussed above, these items are not to be understood as constitutive "must-haves" of the Competence but mere examples of how the competence can manifest itself through observable instances of a person's:

- Knowledge
- Skills
- Attitudes

Each learning-outcome item is formulated in the following pattern:

"He/She is able to...<infinitive action verb> + <object construction> + <context construction>."

Knowledge items normally refer to what a person is able to understand, explain, define, describe, distinguish, or exemplify. Sometimes knowledge items may also refer to intellectual actions such as to identify, analyse, or evaluate, even though these action verbs can also be used to express skills.

Skill items refer to any acts a person is able to perform. These can include simple instrumental actions usually expressed by verbs such as to use, make, send, edit, modify. However, skill items can also represent more complex acts expressed by verbs such as support, protect, mediate, assit, or plan.

Attitudes items refer to values, motivations, personal characteristics or ethical considerations that complement an individual's knowledge and skills and enable a full manifestation of the competence complex. These can be expressed through verbs such as to demonstrate, cultivate, promote, prioritise, observe, consider, maintain, and many others.

The next chapter introduces the contents of the CARER+ Digital Competence Framework. First, a 3-dimensional display is given to provide a compact overview of the framework up to the level of Competences and their basic descriptions. Secondly, a 5-dimensional display is provided to introduce each Competence separately through a "competence card" containing also the two Application Levels and their Examples of Learning Outcomes.

5. The CARER+ Digital Competence Framework

3-dimensional display:

X: COMPENTECE DOMAIN

0 Competence area	0.0 Competence title	Competence description

Domain A: General digital competence (DIGCOMP adapted[7])

1 Information	1.1 Browsing, searching, & filtering information	Accessing and searching for online information; finding relevant information; selecting resources effectively; creating personal information strategies.
	1.2 Expressing information needs	Understanding when information is needed and what type of information will fill a knowledge gap; articulating information needs in efficient way.
	1.3 Evaluating information	Making sure that the information fulfils the needs; gathering, processing, understanding and critically evaluating information.
	1.4 Storing and retrieving	Manipulating and storing information and content for easier retrieval; organising information and data.

2 Communication	2.1 Interacting through technologies	Interacting through digital devices and applications; understanding how digital communication is distributed, displayed and managed; understanding appropriate ways of communicating through digital means; referring to different communication formats; adapting communication modes and strategies to specific audiences.
	2.2 Sharing information and content	Communicating with others the location and content of information found; sharing knowledge, content and resources; acting as an intermediary; spreading news, content and resources; applying citation practices and integrating new information into existing bodies of knowledge.
	2.3 Engaging in online citizenship	Participating in society through online engagement; seeking opportunities for self-development and empowerment in using technologies and digital environments; being aware of the potential of technologies for citizen participation.
	2.4 Collaborating through digital technologies	Using technologies and media for team work, collaborative processes and co-construction of digital content and resources.
	2.5 Netiquette	Knowing behavioral norms in online/virtual interactions; understanding cultural diversity aspects; protecting self and others from possible online dangers; developing active strategies to identify bad behaviour.
	2.6 Managing digital identity	Creating, adapting and managing one or multiple digital identities; protecting one's online reputation;

[7] FOR SPECIFICS ON THE ADAPTATION OF DIGCOMP, AND FOR REFERENCES, CONSULT CHAPTERS 3 AND 4 ABOVE IN THIS DOCUMENT.

		dealing with the data that one produces through several accounts and applications.

3 Content creation	3.1 Developing content	Creating content in different formats; editing and improving content that one has created or that others have created.
	3.2 Integrating and re-elaborating	Modifying, refining, and combining existing resources to create new, original and relevant content and knowledge.
	3.3 Copyright and licenses	Understanding how copyright and licenses apply to information and content.
	3.4 Producing multimedia and creative outputs	Improving and innovating with ICT; actively participating in collaborative digital and multimedia production; expressing self creatively through digital media and technologies; creating knowledge with the support of technologies.
	3.5 Programming	Programming applications, software, devices; understanding the principles of programming; understanding what is behind programmes.

4 Safety	4.1 Protecting devices	Protecting own devices and understanding related risks and threats; applying safety and security measures.
	4.2 Protecting data and digital identity	Understanding common terms of service; actively protecting own data; respecting other people's privacy; protecting self from online fraud, threats and cyberbullying.
	4.3 Protecting health	Avoiding health-risks related with the use of technology in terms of threats to physical and psychological well-being.
	4.4 Protecting the environment	Being aware of the impact of ICT on the environment; observing principles of efficiency and effectiveness.

Domain B: Enabling digital competence in social care work

5 Acceptance	5.1 Role of digital competence in care work	Understanding the role of digital competence in care work; understanding how different kinds of digital technology can support care workers in their profession as well as care recipients in their daily lives; realising the benefits and challenges of implementing ICT in social care.
	5.2 Inception and promotion	Bringing digital competence and technology into own work practices; clarifying the advantages of digital technology to care recipients; introducing various types and possibilities of digital activity to care recipients; inspiring interest in ICT.
	5.3 Encouragement and confidence building	Overcoming psychological obstacles to the implementation of digital technology in care work such as the fear and mistrust of technology, low self-esteem and lack of interest; encouraging care recipients to gradually discover ICT-based activities; building confidence.
	5.4 Sustainability	Ensuring user-friendliness and adequacy of digital technology used by the care recipient; avoiding over-complexity; observing sustainable user development; preventing discouragement and loss of interest.

6 Adaptation	6.1 Identification of digital needs	Identifying own as well as care recipients' needs that can be addressed by digital technology; inspecting own as well as care recipients' daily practices, routines, interests and wishes and determining where digital technology can provide more effectiveness, efficiency and comfort.
	6.2 Identification of digital responses to needs	Identifying, based on own and care recipients' needs, appropriate digital solutions, strategies and activities; matching areas of need with available solutions; evaluating solutions and selecting ones best fitting particular situation's/person's context.
	6.3 Tolerance and patience	Communicating digital technology to care recipients in appropriate manner; adjusting the pace of learning to individual capacities and objective setbacks; dealing with failure and finding alternative solutions; promoting cooperative optimism; maintaining realism in expectations.
	6.4 Variability, creativity and resourcefulness	Supporting variability in digital technologies used and activities carried out; helping care recipients discover the creativity and multi-dimensionality of digital environments; preventing stereotypisation and boredom; providing orientation and guidance; helping with systematisation.

7 Progression	7.1 Learning together	Strengthening the social bond between care worker and care recipient through the process of discovering digital technology together; balancing the role of guide with that of peer learner; identifying areas of common interest; promoting reciprocity, openness and cooperation; preserving mutual trust.
	7.2 Evaluation of progress	Setting learning targets; observing own and care recipients' advancements in digital competence; verifying acquisition of specific knowledge and skills; mapping the progress on competence frameworks and individual plans.
	7.3 Feedback and modification	Reflecting with care recipients regularly the advantages and challenges brought in their lives by digital technology; addressing obstacles; giving constructive and sensitive feedback; acknowledging achievements; modifying care recipients' digital user strategies and learning plans where appropriate.

8 Support	8.1 Guidance and mentoring	Guiding care recipients through all stages of acquisition of digital competence according to individual needs and capabilities; mentoring and consulting; building on achievements and addressing challenges; responding to both explicit and tacit needs of assistance; promoting care recipients' autonomy and active approach.
	8.2 Technical, instrumental and organizational assistance	Performing basic technical operations; setting-up and launching standard equipment and applications; solving non-complex technical problems; trouble shooting; arranging for expert assistance in more complex problems; assisting care recipients in dealing with service providers and other external stakeholders.

Domain C: Care-specific digital competence

9 Independent living and social participation for care recipients	9.1 Application of digital technologies in on-site care work	Helping care recipients understand, install and use digital technologies at their homes; applying the principles of Ambient Assisted Living (AAL) in on-site care work; selecting, combining and adjusting digital technologies, devices and software solutions to specific contexts and individual needs.
	9.2 Remote monitoring and assistance to care recipients	Supporting care recipients' independent living through the application of digital technologies used in the absence of care workers, or used by care workers for remote supervision; enabling remote consultation and off-site assistance to care recipients; providing care recipients with the means to monitor, record and report health- and care-related issues; ensuring care recipients' safety and well-being from distance.
	9.3 Enabling communication and networking	Mediating to care recipients a variety of means of digital communication; establishing conditions for care recipients to enhance, build and maintain social relations through digital technologies; supporting care recipients' active participation in online social networks; observing elementary safety and privacy of care recipients' online participation.
	9.4 Counselling for care recipients and families	Being able to function as a first point of inquiry for care recipients and their families in matters of digital competence; providing orientation and advice to care recipients with regard to their specific digital needs; earning care recipients' trust as a competent user as well as a guide through digital technologies; promoting different user strategies with a special focus on social care-related digital solutions; mediating professional/technical assistance where necessary.

10 Personal development and social integration of carers	10.1 Learning through ICTs	Improving own professional competences in care work by engaging in various kinds of e-learning activities; keeping up with developments in digital technology in general as well as its implementation in care sector; self-assessing learning results via evaluation exercises and by using competence frameworks; mediating digital learning opportunities to care recipients.
	10.2 Peer support and exchange of good practices	Engaging in peer communities of care workers and caregivers; participating actively in the exchange of good practices; publishing and consulting online examples, from own work and from the work of others; identifying local as well as remote care work groups and associations and contributing to their activities; coordinating with peer care workers the services provided to common or related care recipients.
	10.3 Competence management, certification and acquiring qualifications in care work	Identifying specific areas of digital competence to establish the ones in which one is particularly interested; pursuing improvement in such areas; working towards specialisation and acquisition of expert knowledge and skills; understanding the purpose of certification; validating one's learning outcomes through certificates, diplomas and other means of formal recognition.

11 Care coordination	11.1 Digital administration of care work	Using digital devices and applications to independently plan, monitor and report care activities; tracking through ICT's the places visited and recording the activities carried out; ensuring flexible reactions and real-time response to care recipients' needs as well as to instructions from care service organisations.
	11.2 Organising and supervising care work	Using care organisations' systems for managing care workers; participating in coordination and monitoring of work of others through digital technologies; undertaking supervision and leading roles in care organisations through digital means.

5-dimensional display:

Competence domain	X	…
Competence area	0	…
Competence title	0.0	…
Competence description		…

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples	…	…
Skills examples	…	…
Attitudes examples	…	…

Competence domain	**A**	**General digital competence**
Competence area	**1**	**Information**
Competence title	1.1	Browsing, searching, & filtering information
Competence description		Accessing and searching for online information; finding relevant information; selecting resources effectively; creating personal information strategies.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples	- understand how information is generated, managed and made available - understand which search engines or databases best answer to his/her own information needs - understand how information can be found in different devices/media	- understand how care recipients' face-to-face modes of inquiry differ from digital ones - distinguish search engines and strategies most appropriate for care recipients
Skills examples	- adjust searches according to results - use filters and agents - use search words that limit the number of hits	- mediate the User skills to care recipients - support care recipients in adopting the User skills
Attitudes examples	- demonstrate proactive attitude towards looking for information - be motivated to seek information for different aspects of life	- encourage care recipients' curiosity and willingness to look for information

Competence domain	**A**	**General digital competence**
Competence area	**1**	**Information**
Competence title	1.2	Expressing information needs
Competence description		Understanding when information is needed and what type of information will fill a knowledge gap; articulating information needs in efficient way.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples	- evaluate own information needs - understand how information is made available online - understand the difference between data and information - understand how data is structured in a digital environment	- evaluate care recipients' information needs - define specifics of care recipients' information needs
Skills examples	- adjust searches according to specific needs - identify information gaps - follow information flows across different sources, devices or media	- mediate the User skills to care recipients - support care recipients in adopting the User skills
Attitudes examples	- realise that information is needed to solve problems in different contexts - be reflective about own information needs	- be reflective about care recipients' information needs

Competence domain	**A**	**General digital competence**
Competence area	**1**	**Information**
Competence title	1.3	Evaluating information
Competence description		Making sure that the information fulfils the needs; gathering, processing, understanding and critically evaluating information.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples	- understand that information sources need to be cross-checked - analyse retrieved information - evaluate media content	- describe how non-critical adoption of information found online can imperil care recipients - give examples of reliable information sources relevant for care recipients
Skills examples	- judge the validity of content found on the internet or the media - interpret information - transform information into knowledge - assess the usefulness, timeliness, accuracy and integrity of information - compare, contrast and integrate information from different sources	- mediate the User skills to care recipients - support care recipients in adopting the User skills
Attitudes examples	- be critical about information found - be aware that search engine mechanisms and algorithms are not necessarily neutral in displaying information	- protect care recipients from perils related to unreliable or biased information

Competence domain	**A**	**General digital competence**
Competence area	**1**	**Information**
Competence title	1.4	Storing and retrieving
Competence description		Manipulating and storing information and content for easier retrieval; organising information and data.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples	- understand the purpose of information storing and back-up - describe different storage options, devices, services, and media - realise benefits and shortcomings of online and local storage	- identify care recipients' preferred storage options - evaluate care recipients' technical possibilities for storage and retrieval of information and content
Skills examples	- structure and classify information and content - organise information and content - select appropriate ways of storing information according to context - download/upload information and content - use information management services, software, applications - retrieve and access previously stored information and content	- mediate the User skills to care recipients - support care recipients in adopting the User skills
Attitudes examples	- acknowledge the importance of an intutive and pragmatic storage system/method - realise the consequences of storing information and content as private/public	- promote the advantages of digital memory storage and its benefits to care recipients - observe care recipients' privacy and safety when assisting in storing and retrieving their information and content

Competence domain	**A**	**General digital competence**
Competence area	**2**	**Communication**
Competence title	2.1	Interacting through technologies
Competence description		Interacting through digital devices and applications; understanding how digital communication is distributed, displayed and managed; understanding appropriate ways of communicating through digital means; referring to different communication formats; adapting communication modes and strategies to specific audiences.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples	- describe different digital communication means (e.g. email, chat and video-conference, mobile messaging) - define the benefits and limitations of different means of digital communication - select appropriate means of digital communication according to context	- understand how communication generally benefits the lives of care recipients (e.g. diminishing solitude, re-establishing relationships, etc) - propose strategies to introduce digital communication to care recipients
Skills examples	- send email, SMS, chat message - find and contact people online - edit information in order to communicate it through several means - tailor communication according to audience - filter and organise incoming communication (e.g. organise emails in folders, follow blogs and websites)	- mediate the User skills to care recipients - support care recipients in adopting the User skills
Attitudes examples	- be confident and comfortable in communicating and expressing him/herself through digital means - observe the risks linked with online communication with unknown people	- balance non-digital and digital communication in care recipients' lives - encourage care recipients' interaction with family, friends and peers through digital technology

Competence domain	**A**	**General digital competence**
Competence area	**2**	**Communication**
Competence title	2.2	Sharing information and content
Competence description		Communicating with others the location and content of information found; sharing knowledge, content and resources; acting as an intermediary; spreading news, content and resources; applying citation practices and integrating new information into existing bodies of knowledge.

Application level	**User**	**Guide/Mentor**
	He/She is able to...	
Knowledge examples	- decide which content/knowledge/resources can be shared - judge the value of resources shared - distinguish types of audiences to share resources with	- understand positive effects of exchange of content/knowledge/resources by care recipients - give examples of types of content care recipients can share - give examples of audiences for care recipients' sharing
Skills examples	- share content found online (e.g. share video in social networking site) - use online environments to promote results of own activity - check property rights of content shared	- mediate the User skills to care recipients - support care recipients in adopting the User skills
Attitudes examples	- be proactive in sharing content/knowledge/resources - observe benefits, risks and limits of sharing - observe copyright issues	- observe care recipients' privacy and safety when assisting in sharing their information and content - ensure that care recipients keep overview of their sharing activities

Competence domain	**A**	**General digital competence**
Competence area	**2**	**Communication**
Competence title	2.3	Engaging in online citizenship
Competence description		Participating in society through online engagement; seeking opportunities for self-development and empowerment in using technologies and digital environments; being aware of the potential of technologies for citizen participation.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples	- understand the participatory and engagement possibilities brought by digital technology - understand that technology can be used for engagement in civic and democratic actions - give examples of different forms of public/civic participation through digital means	- evaluate care recipients' level of engagement in various networks, local communities, civic life and interest circles - explain how engagement and participation can benefit care recipients' lives - give examples of social media and online participation opportunities for care recipients
Skills examples	- find online networks, communities and social media corresponding to own interests and needs - access relevant networks and communities actively	- mediate the User skills to care recipients - support care recipients in adopting the User skills
Attitudes examples	- value the benefits of online participation and networking - maintain watchful attitude towards different social media functionalities	- encourage care recipients to become active and participate in public/local/interest-related affairs - promote diversity of interests and opportunities to engage in communities with others

Competence domain	**A**	**General digital competence**
Competence area	**2**	**Communication**
Competence title	2.4	Collaborating through digital channels
Competence description		Using technologies and media for team work, collaborative processes and co-construction of digital content and resources.

Application level	**User**	**Guide/Mentor**
	He/She is able to...	
Knowledge examples	- understand how collaborative processes facilitate content creation - distinguish when content creation can benefit from collaborative processes and when not - understand different roles needed in diverse forms of online collaboration	- describe how care workers can benefit from digital collaboration with each other - describe what advantages digital collaboration among care workers can bring to care recipients - give examples of concrete digital collaboration activities in care
Skills examples	- use collaborative features of software packages and web-based collaborative services (e.g. Word document track changes, comments, tags, wikis) - give and receive feedback - work at a distance with others	- mediate the User skills to care recipients and fellow care workers - support care recipients and fellow care workers in adopting the User skills
Attitudes examples	- demonstrate willingness to collaborate with others - function as part of a team - seek new forms of collaboration not necessarily based on previous face-to-face engagement	- recognise the potential of working collaboratively with other care workers

Competence domain	**A**	**General digital competence**
Competence area	**2**	**Communication**
Competence title	2.5	Netiquette
Competence description		Knowing behavioural norms in online/virtual interactions; understanding cultural diversity aspects; protecting self and others from possible online dangers; developing active strategies to identify bad behaviour.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples	- describe examples of correct and wrong conduct in digital interactions - understand consequences of own behaviour in digital environments - understand ethical issues in digital media such as improper websites and cyberbullying	- identify ethical issues and threats specifically concerning care recipients in digital interactions (e.g. cyberbullying, online fraud, misconduct, hoax, misuse of personal data, disturbing or improper content)
Skills examples	- protect him/herself and others from online threats - ban/report abuse and threats - develop strategies for handling cyberbullying and inappropriate conduct	- mediate the User skills to care recipients - support care recipients in adopting the User skills
Attitudes examples	- consider ethical principles of use and publication of information - demonstrate flexibility and sensitiveness for different communication cultures	- prioritise protection of care recipients over functional demands of technologies, applications and online environments

Competence domain	**A**	**General digital competence**
Competence area	**2**	**Communication**
Competence title	2.6	Managing digital identity
Competence description		Creating, adapting and managing one or multiple digital identities; protecting one's online reputation; dealing with the data that one produces through several accounts and applications.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples	- define the benefits of having one or more digital identities - understand the interlinks between the online and offline world - understand that several actors can positively or negatively contribute to constructing his/her digital identity	- explain to care recipients the concept of digital identity - familiarise care recipients with elementary principles for creating and managing digital identities - describe specifics of care recipients' dealing with digital identities, footprint, disclosure of information
Skills examples	- construct profiles that benefit his/her needs - track own digital footprint - protect him/herself and others from online threats to their e-reputation	- mediate the User skills to care recipients - support care recipients in adopting the User skills
Attitudes examples	- realise the benefits and risks related to online identity exposure - be willing to disclose certain type of information about self - consider multiple ways of expressing his/her own personality through digital means	- protect care recipients from risks related to their online exposure - encourage care recipients' active and safe building of their digital identities

Competence domain	**A**	**General digital competence**
Competence area	**3**	**Content creation**
Competence title	3.1	Developing content
Competence description		Creating content in different formats; editing and improving content that one has created or that others have created.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples	- understand how different content is created - distinguish which software/application fits best the content he/she wants to create	- define the types of content care recipients can create - identify easy-to-use content development packages for care recipients to create and edit texts, tables, images
Skills examples	- use basic packages to create content in different forms (text, spreadsheets, audio, numeric, images) - edit content created by him/herself or by others - create knowledge representations using digital media	- mediate the User skills to care recipients - support care recipients in adopting the User skills
Attitudes examples	- be innovative towards commonly used forms of content creation - explore new ways and formats	- support creativity of care recipients - encourage care recipients' transition from non-digital to digital creation fo content - observe user friendliness and intuitiveness of content development tools used by care recipients

Competence domain	**A**	**General digital competence**
Competence area	**3**	**Content creation**
Competence title	3.2	Integrating and re-elaborating
Competence description		Modifying, refining, and combining existing resources to create new, original and relevant content and knowledge.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples	- understand that resources can be built from diverse and non-sequential information sources - distinguish different databases and resources that can be remixed and re-used	- identify in care recipients' digital activity the possibilities for creative modification and combining of sources - give examples of open-source repositories and databases with content relevant for care recipients
Skills examples	- use edit functions to modify content in basic ways - remix different existing content into something new - exploit digital repositories (e.g. Open Educational Resources) - use appropriate licenses for authoring and sharing content	- mediate the User skills to care recipients - support care recipients in adopting the User skills
Attitudes examples	- be critical in the selection of content and resources to be re-elaborated - assess and appreciate the work of others	- support creativity of care recipients - cultivate care recipients' independence and proactivity in their work with content

Competence domain	**A**	**General digital competence**
Competence area	**3**	**Content creation**
Competence title	3.3	Copyright and licenses
Competence description		Understanding how copyright and licenses apply to information and content.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples	- consider license-related regulation principles of use and publication fo information - understand copyright and license rules - distinguish different ways of licensing intellectual property - understand differences between copyright, creative commons, copyleft and public domain licenses	- distinguish copyright and license matters particularly relevant to care recipients
Skills examples	- license own original production - find information on copyright and license rules	- mediate the User skills to care recipients - support care recipients in adopting the User skills
Attitudes examples	- behave independently and assume responsibility for own behaviour and choices	- promote to care recipients the importance of lawful use of online resources - protect care recipients from unintended copyright violation

Competence domain	**A**	**General digital competence**
Competence area	**3**	**Content creation**
Competence title	3.4	Producing multimedia and creative outputs
Competence description		Improving and innovating with ICT; actively participating in collaborative digital and multimedia production; expressing self creatively through digital media and technologies; creating knowledge with the support of technologies.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples	- understand how meaning is produced through multimedia (text, images, audio, video) - give examples of various ouputs produced by digital media - explore the possibility of hyper-texts	- identify the benefits of audio-visual means of expression for the lives of care recipients - explain how using multimedia can enhance care recipients' contacts with family, peers, communities and carers - explain how creative work with media can help maintain and strengthen care recipients' cognitive powers
Skills examples	- use a variety of media to express him/herself creatively (text, images, audio, video) - use common software packages to work with images, audio, video, graphics - edit content in order to enhance the final product	- mediate the User skills to care recipients - support care recipients in adopting the User skills
Attitudes examples	- realise the potential of technologies and media for self-expression and knowledge creation - recognise the added value of new media for creative and cognitive processes - engage with creative content	- guide care recipients through different ways of creating and usng multimedia to preserve creativity and cognitive powers - promote exploitation of audio-visual culture for socialising purposes

Competence domain	**A**	**General digital competence**
Competence area	**3**	**Content creation**
Competence title	3.5	Programming
Competence description		Programming applications, software, devices; understanding the principles of programming; understanding what is behind programmes.

Application level	**User**	**Guide/Mentor**
	He/She is able to...	
Knowledge examples	- explain how digital systems and processes work - understand the basics of software meta-operation	- assess the extent to which care recipients can benefit from carers' programming skills
Skills examples	- create models, simulations and visualisations of the world using digital information and means - code and program digital applications and devices	- set-up and program care recipients' smart devices (e.g. vital sign monitors, alarms, reminders, multifunctional smart objects) - adjust software and application settings to the needs of care recipients
Attitudes examples	- be curious about the processes enabling the use of ICTs - explore the possibilities of programming and creation of outputs	- observe that care recipients are not discouraged by the complexity of technological meta-information - support care recipients who are curious about technological meta-information and programming

Competence domain	**A**	**General digital competence**
Competence area	**4**	**Safety**
Competence title	4.1	Protecting devices
Competence description		Protecting own devices and understanding related risks and threats; applying safety and security measures.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples	- become aware of risks associated with using digital devices - distinguish between basic principles of handling digital devices - give examples of measures to protect devices from damage and wear-out	- assess care recipients' general ability to use digital devices safely - identify various scenarios of damaging devices and describe appropriate preventive measures
Skills examples	- initiate, set-up and control safe operation of various digital devices (mobile/smart phones, tablets, laptops, table computers, digital cameras, audio devices, specialised health and care aids) - use safety accessories to protect devices from physical damage and wear-out - examine malfunctioning devices and decide where professional service is needed	- mediate the User skills to care recipients - support care recipients in adopting the User skills
Attitudes examples	- read and observe user manuals and operation instructions for devices - use devices sustainably and economically	- promote to care recipients the importance of referring to user manuals and operation instructions for devices - prioritise the safety of care recipients over the protection of devices and equipment

Competence domain	**A**	**General digital competence**
Competence area	**4**	**Safety**
Competence title	4.2	Protecting data and digital identity
Competence description		Understanding common terms of service; actively protecting own data; respecting other people's privacy; protecting self from online fraud, threats and cyberbullying.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples	- understand the terms of use of online services (e.g. collection of personal data by providers) - give examples fo up-to-date strategies to protect own systems and data - realise the visibility of own digital footprint - understand the risks of identity theft and other credentials' theft	- explain why care recipients can be particularly vulnerable to online misconduct, fraud and other threats - give examples of assistance and protective measures to be offered to care recipients in relation to data protection - understand carers' responsibilities and considerations when handling care recipients' private or otherwise sensitive information
Skills examples	- install and use various anti-virus systems and applications - take steps to mitigate risks of fraud by using strong passwords - monitor own digital footprint - modify or delete information about self or others he/she is responsible for	- mediate the User skills to care recipients - support care recipients in adopting the User skills
Attitudes examples	- follow the principles of online privacy and safety - act critically when disclosing information about him/herself of others online	- combine data protection with respect to care recipients' privacy - ensure that care recipients keep track of all security measures they take (e.g. passwords and PIN codes applied, user accounts created)

Competence domain	**A**	**General digital competence**
Competence area	**4**	**Safety**
Competence title	4.3	Protecting health
Competence description		Avoiding health-risks related with the use of technology in terms of threats to physical and psychological well-being.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples	- understand various effects of using technology on users' health - distinguish real risks from common myths as regards health threats caused by technology - be aware of basic principles for the protection of physical and mental health related to digital technology use	- understand general and specific health risks imposed on care recipients using ICTs - adjust the type and extent of digital engagement to care recipients' particular capacities and health condition - identify potential threats to care recipients physical and mental health related to using ICTs
Skills examples	- protect own physical health when using ICTs by taking appropriate preventive measures (e.g. correct physical posture by computer, correct light conditions and optimal distance from the device) - protect own mental health when using ICTs by taking appropriate preventive measures (e.g. avoiding harmful content, balancing activities)	- mediate the User skills to care recipients - support care recipients in adopting the User skills
Attitudes examples	- demonstrate balanced and healthy attitude towards using technology	- challenge care recipients' unsubstantiated preconceptions about health risks posed by technology - support preventing real health risks

Competence domain	**A**	**General digital competence**
Competence area	**4**	**Safety**
Competence title	4.4	Protecting the environment
Competence description		Being aware of the impact of ICT on the environment; observing principles of efficiency and effectiveness.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples	- determine appropriate and safe digital means - compare efficiency and cost-effectiveness of various ICTs - understand the environmental impact of ICTs and other electronic devices	- take into account economic possibilities of care recipients or their families as regards use of ICTs - explain to care recipients the principles of cost-efficiency and time-efficiency related to digital technologies - advise care recipients on environmental aspects of ICTs
Skills examples	- use digital equipment cost-efficiently and time-efficiently - make good purchasing decisions (e.g. about buying devices or internet services) - recycle ICTs and their parts where possible	- mediate the User skills to care recipients - support care recipients in adopting the User skills
Attitudes examples	- recognise environmental and economical issues related to the use of digital technology	

Competence domain	**B**	**Enabling digital competence in social care work**
Competence area	**5**	**Acceptance**
Competence title	5.1	Role of digital competence in care work
Competence description		Understanding the role of digital competence in care work; understanding how different kinds of digital technology can support care workers in their profession as well as care recipients in their daily lives; realizing the benefits and challenges of implementing ICT in social care.

Application level	**User**	**Guide/Mentor**
	He/She is able to...	
Knowledge examples	- give examples of everyday uses of digital technology - describe a digitally competent person - explain how digital technology can benefit the work of carers - describe different ways of applying digital technology in own practice	- explain how digital technology can benefit care recipients - give examples of digital technology already used by care recipients - describe common challenges preventing care recipients from using digital technology and improving their digital competence
Skills examples	- assess own level of general digital competence - search for national and international examples of practices and projects in digitally supported care work - select good practices applicable in own work	- estimate care recipients' current attitude towards digital technology - evaluate care recipients' willingness to accept digital technology and improve their digital competence - assess care recipients' current level of general digital competence
Attitudes examples	- adopt positive attitude towards digital technology - demonstrate willingness to gain and/or improve own digital competence	- maintain positive as well as realistic approach to the role of digital competence in care recipients' lives

Competence domain	**B**	**Enabling digital competence in social care work**
Competence area	**5**	**Acceptance**
Competence title	5.2	Inception and promotion
Competence description		Bringing digital competence and technology into own work practices; clarifying the advantages of digital technology to care recipients; introducing various types and possibilities of digital activity to care recipients; inspiring interest in ICT.

Application level	**User**	**Guide/Mentor**
	He/She is able to...	
Knowledge examples	- understand how digital technology brings more efficiency and effectiveness to the performance of common and traditional carer's work tasks - describe new work tasks brought to carers by digital technology	- understand the particulars of introducing digital technology to the elderly - understand the need for a tailored individualised approach to introducing digital technology to care recipients
Skills examples	- analyse own work practices - identify work tasks, processes, procedures and routines where digital technology can be effectively used - realise the transition to using digital support in suitable work tasks	- help care recipients to understand the basic concept of digital technology - explain to care recipients the advantages and challenges of using digital technology - build on the technology already used by care recipients - promote the effects and outcomes of using ICT rather than the technologies and processes involved
Attitudes examples	- demonstrate motivation to introduce digital technology to enhance own work	- inspire in care recipients interest in digital technology - promote ICT gradually, naturally, and with regard to individual circumstances

Competence domain	**B**	**Enabling digital competence in social care work**
Competence area	**5**	**Acceptance**
Competence title	5.3	Encouragement and confidence building
Competence description		Overcoming psychological obstacles to the implementation of digital technology in care work such as the fear and mistrust of technology, low self-esteem and lack of interest; encouraging care recipients to gradually discover ICT-based activities; building confidence.

Application level	**User**	**Guide/Mentor**
	He/She is able to...	
Knowledge examples	- understand social, economical and psychological factors that have impact on the use of ICT by carers - reflect on own subjective and objective barriers to adopting ICT	- understand social, economical and psychological factors that have impact on the use of ICT by care recipients - define strategies to address common prejudices towards ICT
Skills examples	- search and find reliable information to address own as well as care recipients' questions about the safe and easy use of ICT - communicate information on digital technology clearly, objectively and confidently	- address care recipients' mistrust in digital technology by communicating a realistic conception of risks and how they can be addressed. - address care recipients' fear of digital complexity by introducing easy-to-use and ambient solutions - enhance care recipients' self-esteem and motivation through tailored and target-oriented learning strategy - expose and challenge common myths and misconceptions about ICT
Attitudes examples	- demonstrate willingness to overcome own reservations towards ICT - cultivate understanding for the concerns and worries of others	- address care recipients' concerns seriously and objectively - act as an informed and trustworthy advisor

Competence domain	**B**	**Enabling digital competence in social care work**
Competence area	**5**	**Acceptance**
Competence title	5.4	Sustainability
Competence description		Ensuring user-friendliness and adequacy of digital technology used by the care recipient; avoiding over-complexity and high costs; observing sustainable user development; preventing discouragement and loss of interest.

Application level	**User**	**Guide/Mentor**
	He/She is able to...	
Knowledge examples	- understand the possibilities and limits of digital technology - understand the priority of user experience - provide overview of basic ICT user strategies and goals	- understand the limitations of individual care recipients' capacity to use ICT - anticipate the adequacy of different digital solutions for different users
Skills examples	- evaluate relevance and suitability of different kinds digital technology in different contexts - select digital devices and applications with regard to own needs and work tasks - test-use and evaluate the relevance of different digital technologies	- observe balance between care recipient's digital and non-digital activities - determine the level of user-friendliness of different technologies - ensure cost-effectiveness and economy of the digital solutions used - support continuous interest and self-development of care recipients - adapt technologies to care recipient's circumstances
Attitudes examples	- combine optimistic and critical attitude towards digital technologies	- prioritise care recipient's needs over technological requirements - cultivate care recipient's curiosity and optimism as well as critical assessment of digital possibilities

Competence domain	**B**	**Enabling digital competence in social care work**
Competence area	**6**	**Adaptation**
Competence title	6.1	Identification of digital needs
Competence description		Identifying own as well as care recipients' needs that can be addressed by digital technology; inspecting own as well as care recipients' daily practices, routines, interests and wishes and determining where digital technology can provide more effectiveness, efficiency and comfort.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples	- understand that digital technologies are tools to address specific needs - distinguish between personal and work-related needs	- explain how to analyse care recipients' common and individual needs, daly practices, routines, interests and wishes - give examples of typical care recipients' needs that can be addressed by digital technology
Skills examples	- inspect own personal needs, routines, interests and wishes - inspect own care-work practices - identify in own personal as well as work-related pactices the needs that can be addressed by digital technology - consult peers and professional sources to find out about different ways of care-work-related application of ICTs	- communicate with care recipients about their needs and interests - observe care recipients' routines, habits, feelings and wishes - synthesise observation-based information on care recipients' daily lives into formulation of needs - decide which needs can be addressed by digital technology
Attitudes examples	- apply digital solutions where they are effective and efficient	- apply individual, case-by-case focus when observing digital needs of care recipients while allowing room for generalisation - observe care recipients' comfort and well-being when identifying digital needs

Competence domain	**B**	**Enabling digital competence in social care work**
Competence area	**6**	**Adaptation**
Competence title	6.2	Identification of digital responses to needs
Competence description		Identifying, based on own and care recipients's needs, appropriate digital solutions, strategies and activities; matching areas of need with available solutions; evaluating solutions and selecting ones best fitting particular situation's/person's context.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples	- understand how identified needs can be linked to digital responses - have overview of a variety of ICTs and digital solutions	- understand that care recipients might not be able to match their needs with digital technology
Skills examples	- transform identified digital needs into search words and browsing strategies - match categories of needs with corresponding areas of ICTs and online services - test various ICTs and services against his/her personal and work-related requirements - decide which ICTs and services best address his/her needs	- help care recipients realise the connections between daily activities and digital technology - demonstrate to care recipients examples of digital alternatives to traditional activities (e.g. writing a letter vs. writing an email; using paper notes vs. using an online planner; making phone calls vs. making skype calls) - assist care recipients in testing, adopting and/or replacing different digital responses to their needs
Attitudes examples	- apply digital solutions where they are effective and efficient - broaden and deepen constantly own insight in digital technology to discover ever more adequate responses to needs	- introduce ICTs to care recipients based on real needs - realise that different individuals with the same needs may prefer different digital solutions

Competence domain	**B**	**Enabling digital competence in social care work**
Competence area	**6**	**Adaptation**
Competence title	6.3	Tolerance and patience
Competence description		Communicating digital technology to care recipients in appropriate manner; adjusting the pace of learning to individual capacities and objective setbacks; dealing with failure and finding alternative solutions; promoting cooperative optimism; maintaining realism in expectations.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples	- understand that people learn new things at different speed and through different techniques - identify own learning preferences, habits and practices as well as those of others	- explain why tolerance and patience are generally useful when dealing with care recipients' adoption of digital competence - give examples of areas where care recipients may encounter learning difficulties
Skills examples	- adjust own way towards digital competence accordingly - set him/herself and others realistic targets and learning objectives - transform own mistakes into useful lessons for him/herself as well as for others	- adjust teaching and learning techniques to care recipients' individual capacities and objective setbacks - introduce new information to care recipients only after ensuring that previous information has been sufficiently processed - deal constructively with care recipients' failure and mistakes
Attitudes examples	- maintain optimism and constructiveness in learning - be open to changing priorities and adapting goals	- ensure unceasing support and reassurance to care recipients is given

Competence domain	**B**	**Enabling digital competence in social care work**
Competence area	**6**	**Adaptation**
Competence title	6.4	Variability, creativity and resourcefulness
Competence description		Supporting variability in digital technologies used and activities carried out; helping care recipients discover the creativity and diversity of digital environments; preventing stereotypisation and boredom; providing orientation and guidance; helping with systematisation.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples	- recognise the diversity of digital technologies available - distinguish different digital user strategies	- explain to care recipients the richness of digital possibilities - identify tendencies to stereotypisation and loss of interest in care recipients' digital activity
Skills examples	- find alternative digital solutions for identified needs - change digital strategies where appropriate - combine different devices and application according to work-task requirements - test new formats and platforms	- introduce to care recipients a variety of available digital tools, applications and methods to carry out common activities - engage care recipients in new digital activities and services - update regularly the portfolios of digital services used by individual care recipients - assist care recipients in systematising their digital portfolios, accounts and identities
Attitudes examples	- maintain variability of own digital activity while preserving systematic approach	- observe the risks of digital addiction - encourage resourcefulness and innovation

Competence domain	**B**	**Enabling digital competence in social care work**
Competence area	**7**	**Progression**
Competence title	7.1	Learning together
Competence description		Strengthening the social bond between care worker and care recipient through the process of discovering digital technology together; balancing the role of guide with that of peer learner; identifying areas of common interest; promoting reciprocity, openness and cooperation; preserving mutual trust.

Application level	**User**	**Guide/Mentor**
	He/She is able to...	
Knowledge examples	- explain how his/her own digital learning can benefit from working with care recipients - give examples of areas of digital activity that can be explored together with others - define the concepts of reciprocity / cooperation / respect	- understand the social bond between carer and care recipient - explain how the social bond can be strengthened by learning together - give examples of socialising activities related to discovering digital technology
Skills examples	- search advice when learning about digital technology - consult others to solve digital problems and address needs - join peer learning platforms and communities - establish peer learning platforms and communities	- set up learning plans to involve care recipients in mutual digital learning - balance own role of guide with that of peer learner - exploit areas of common interests with and/or between care recipients - organise group learning sessions bringing care recipients together
Attitudes examples	- recognise the value of second opinion - promote reciprocity and openness in digital learning	- approach care recipients as a peer learners rather than pupils - acknowledge care recipients' input in digital learning strategies

Competence domain	**B**	**Enabling digital competence in social care work**
Competence area	**7**	**Progression**
Competence title	7.2	Evaluation of progress
Competence description		Setting learning targets; observing own and care recipients' advancements in digital competence; verifying acquisition of specific knowledge and skills; mapping the progress on competence frameworks and individual plans.

Application level	**User**	**Guide/Mentor**
	He/She is able to...	
Knowledge examples	- have overview of elementary components of digital competence - explore various digital competence frameworks	- understand individual progress pace of care recipients - adapt various digital competence framworks
Skills examples	- set own digital learning targets - define timelines for own digital learning - check regularly own progress in digital competence against set criteria - build on own advancements to identify new learning goals	- consult various digital competence frameworks to map care recipients' digital progress - help care recipients set individual digital learning targets - check with care recipients their progress against set targets - emphsise care recipients' advancements to motivate further progress
Attitudes examples	- acknowledge the function of external digital competence systems while observing individual contexts and needs	- avoid the risks of rigid and/or linear evaluation of progress - maintain objectivity and systematic approach to evaluation of progress

Competence domain	**B**	**Enabling digital competence in social care work**
Competence area	**7**	**Progression**
Competence title	7.3	Feedback and modification
Competence description		Reflecting with care recipients regularly on the advantages and challenges brought in their lives by digital technology; addressing obstacles; giving constructive and sensitive feedback; acknowledging achievements; modifying care recipients' digital user strategies and learning plans where appropriate.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples	- understand principles of self-reflection - give examples of own strengths and weaknesses as regards digital competence	- realise benefits as well as challenges brought to care recipients' lives by digital technology - understand principles of constructive feedback and motivation - give examples of positive and negative feedback
Skills examples	- reflect on own digital competence in terms of modification and adjustment - modify own digital user and learning strategies	- listen actively to care recipients' explicit as well as implicit notions about the role of ICTs in their lives - reflect with care recipients on specific obstacles and modification needs as regards their digital activities - give constructive and sensitive feedback - propose alternative learning paths and/or areas of activity - acknowledge care recipients' achievements - modify care recipients' digital user and learning strategies
Attitudes examples	- maintain integrity and authenticity in reflecting own self	- maintain integrity and authenticity in reflecting others

Competence domain	**B**	**Enabling digital competence in social care work**
Competence area	**8**	**Support**
Competence title	8.1	Guidance and mentoring
Competence description		Guiding care recipients through all stages of acquisition of digital competence according to individual needs and capabilities; mentoring and consulting; building on achievements and addressing challenges; responding to both explicit and tacit needs of assistance; promoting care recipients' autonomy and active approach.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples		- define main characteristics and responsibilities of a guide/mentor working with care recipients
Skills examples		- address care recipients' explicit questions, problems, requests regarding digital technology - identify non-verbalised problems and needs for assistance regarding digital technology - provide advice on digital technology where possible - consult online sources, experts and service providers where needed
Attitudes examples		- perform guidance as partner and facilitator rather than teacher or lecturer - estimate realistically own capacity for ICT-related counselling

Competence domain	**B**	**Enabling digital competence in social care work**
Competence area	**8**	**Support**
Competence title	8.2	Technical, instrumental and organisational assistance
Competence description		Performing basic technical operations; setting-up and launching standard equipment and applications; solving non-complex technical problems; trouble shooting; arranging for expert assistance in more complex problems; assisting care recipients in dealing with service providers and other external stakeholders.

Application level	**User**	**Guide/Mentor**
	He/She is able to...	
Knowledge examples	- have basic overview of technical aspects of ICTs' operation - give examples of most common technical problems and malfunctions of ICTs	- keep overview of hardware/software used by care recipients - keep overview of digital services provided by external parties to care recipients
Skills examples	- operate on user level a variety of digital hardware (e.g. initiate new devices, plant and charge batteries, connect devices with each other, switch-off safely) - operate on user level a variety of software and applications (e.g. download and install, launch and close, set-up user settings, update, uninstall) - analyse causes of minor technical/instrumental problems - trouble-shoot minor technical/instrumental problems	- mediate the User skills to care recipients where possible/appropriate - exercise own User skills on care recipients' ICTs where possible and safe - search expert assistance where needed - mediate care recipients' contacts with external parties (e.g. internet connection providers, mobile network operators, service companies)
Attitudes examples	- approach technical/instrumental tasks safely but confidently	- challenge unsubstantiated fear of technology and technical tasks - remain realistic about own and care recipients' technical/instrumental competence

Competence domain	**C**	**Care-specific digital competence**
Competence area	**9**	**Independent living and social participation for care recipients**
Competence title	9.1	Application of digital technologies in on-site care work
Competence description		Helping care recipients understand, install and use digital technologies at their homes; applying the principles of Ambient Assisted Living (AAL) in on-site care work; selecting, combining and adjusting digital technologies, devices and software solutions to specific contexts and individual needs.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples	- have overview of digital technologies that can be used in on-site care work - distinguish between general digital tools and the technologies designed specifically for supporting social care - understand the principles of Ambient Assisted Living (AAL) - distinguish a variety of eHealth technologies, tools and applications	- explain how digital technologies in general can be used by care recipients at their homes - explain the roles and functions of care worker supporting care recipients in using assistive digital technologies at their homes (selection, installation, usage, maintenance, adaptation of digital tools)
Skills examples	- analyse a variety of home care scenarios and propose adequate digital technologies - install and use digital technologies for different purposes, such as scheduling, impairment correction, personal safety	- plan with care recipients specific configurations of digital solutions supporting their independent living - optimize with care recipients their usage of supportive digital technologies - mediate for care recipients the services of technicians and professionals where needed
Attitudes examples	- observe the accuracy, efficiency, effectiveness and adequacy of digital solutions used to support care recipients at their homes - hold care recipients' individual needs and idiosyncrasies as guiding principles in applying on-site digital solutions	- work towards increasing the independence of care recipients supported by care-related digital technologies - observe the balance between care recipients' usage of digital/technological aids and other ways to increase personal independence

Competence domain	**C**	**Care-specific digital competence**
Competence area	**9**	**Independent living and social participation for care recipients**
Competence title	9.2	Remote monitoring and assistance to care recipients
Competence description		Supporting care recipients' independent living through the application of digital technologies used in the absence of care workers, or used by care workers for remote supervision; enabling remote consultation and off-site assistance to care recipients; providing care recipients with the means to monitor, record and report health- and care-related issues; ensuring care recipients' safety and well-being from distance.

Application level	**User**	**Guide/Mentor**
	He/She is able to...	
Knowledge examples	- explain how digital technologies can be used for remote interaction between care worker and care recipient - distinguish between passive monitoring (such as off-line self-diagnosis technologies) and active remote assistance (remote emergency intervention, online consulting)	- understand the value of indepence of care recipients based on their ability to solve common problems without the direct presence of a care worker - give examples of typical situations where remote assistance by care worker can be applied - understand the advantages and risks of remote monitoring of care recipients
Skills examples	- introduce the purpose and functioning of digital self-diagnosis and self-treatment systems to care recipients - set-up and operate digital remote monitoring technologies such as emergency/alarm buttons, movement monitors, vital-sign monitors - operate digital tools for providing remote consultation and assistance to care recipients	- assist care recipients in understanding data provided by self-diagnosis and self-treatment systems - receive, evaluate and respond to requests for remote assistance - react properly to alarms and emergency calls set off by care recipients - create overviews of remote monitoring outcomes to share with care recipients
Attitudes examples	- observe the necessary level of privacy and dignity of care recipients when using remote monitoring and assistance	- promote adequate and effective use of both self-monitoring and remote monitoring digital technologies by care recipients

Competence domain	**C**	**Care-specific digital competence**
Competence area	**9**	**Independent living and social participation for care recipients**
Competence title	9.3	Enabling communication and networking
Competence description		Mediating to care recipients a variety of means of digital communication; establishing conditions for care recipients to enhance, build and maintain social relations through digital technologies; supporting care recipients' active participation in online social networks; observing elementary safety and privacy of care recipients' online participation.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples	- define various ways of online communication and social interaction - understand the advantages and disadvantages of different digital communication media in relation to social care (email, text-chat, video-call, social networking, etc.)	- understand the specifics of care recipients' needs, opportunities and threats in regard to digital communication and online social participation - explain to care recipients the difference between communication strategies suitable for interacting with close social circles and strategies applied in broader online environments
Skills examples	- set up, install and run digital communication and networking devices and/or applications - engage in online communication and networking with care recipients - use communication tools and online networks for different purposes such as leisure, information, learning, socialising, shopping and services, hobby	- evaluate care recipients' communication styles and preferences - propose adequate mix of communication tools - assist care recipients in finding digital ways of intensifying and/or maintaining their family and social interactions, citizenship, interests - build online networks, groups and socialising platforms of/for care recipients
Attitudes examples	- adhere to the principles of netiquette in online communication and social interaction - observe a healthy balance between digital and non-digital participation	- support care recipients creative attitude to online social interaction while observing the rules of safety and privacy - protect care recipients from a variety of forms of online abuse

Competence domain	**C**	**Care-specific digital competence**
Competence area	**9**	**Independent living and social participation for care recipients**
Competence title	9.4	Counselling for care recipients and families
Competence description		Being able to function as a first point of inquiry for care recipients and their families in matters of digital competence; providing orientation and advice to care recipients with regard to their specific digital needs; earning care recipients' trust as a competent user as well as a guide through digital technologies; promoting different user strategies with a special focus on social care-related digital solutions; mediating professional/technical assistance where necessary.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples		- organise own knowledge, skills and attitudes related to digital competence into a transferrable form - give examples of right and wrong approaches to counselling and advising care recipients - have overview of frequent user problems with digital devices and applications
Skills examples		- introduce to care recipients basic strategies for analyzing the nature of a problem and finding appropriate help - advise care recipients how to perform elementary troubleshooting and recovery operations
Attitudes examples		- empower care recipients by supporting their creativity, independence and can-do attitude in gaining and improving digital competence - take into account obstacles and limits met by individual care recipients in gaining and improving digital competence

Competence domain	**C**	**Care-specific digital competence**
Competence area	**10**	**Personal development and social integration of carers**
Competence title	10.1	Learning through ICTs
Competence description		Improving own professional competences in care work by engaging in various kinds of e-learning activities; keeping up with developments in digital technology in general as well as its implementation in care sector; self-assessing learning results via evaluation exercises and by using competence frameworks; mediating digital learning opportunities to care recipients.

Application level	**User**	**Guide/Mentor**
	He/She is able to...	
Knowledge examples	- understand that learning can take place through digital means and resources - have overview of various types of virtual learning environment, modules, open-source learning resources and pathways, e-learning communities and forums - give examples of sources of information on digital technology in care work	- give examples of special learning needs of care recipients - distinguish areas of e-learning relevant for care recipients in general and for individual care recipients in particular
Skills examples	- plan own e-learning according to identified needs and areas of interest (e.g. by consulting digital competence frameworks) - take e-learning courses, modules and classes systematically - join and participate actively in e-learning communities and forums - access open source learning resources and pathways - assess own learning results through evaluation exercises and self-assessment	- plan care recipients' e-learning according to identified needs and areas of interest (e.g. by consulting digital competence frameworks) - mediate relevant e-learning courses, communities and resources to care recipients - assist care recipients in self-assessment exercises - use e-learning resources as support to face-to-face training sessions with care recipients
Attitudes examples	- approach e-learning as both personal interest and a means to social and professional mobility	- support care recipients' active ageing and independence through learning new information and skills

Competence domain	**C**	**Care-specific digital competence**
Competence area	**10**	**Personal development and social integration of carers**
Competence title	10.2	Peer support and exchange of good practices
Competence description		Engaging in peer communities of care workers and caregivers; participating actively in the exchange of good practices; publishing and consulting online examples, from own work and from the work of others; identifying local as well as remote care work groups and associations and contributing to their activities; coordinating with peer care workers the services provided to common or related care recipients.

Application level	**User**	**Guide/Mentor**
	He/She is able to...	
Knowledge examples	- distinguish various ways how digital technology allows for collaboration, exchange of information and peer cooperation	- understand how digitally supported collaboration between peer care workers can streamline care services and benefit care recipients
Skills examples	- search existing communities of care workers and caregivers as well as networks of organisations and associations - publish online own knowledge, experience and work outcomes - consult with online peer communities about various issues related to care work - establish new digital peer networks and engage peers and organisations - adapt best practices shared by peers to his/her own cotexts of work - utilise knowledge on care networks and organisations for job-search purposes	- reply to information requests of peers by providing own knowledge, experience and feedback - share with peers the care-related information about common or related care recipients while observing privacy and safety issues - coordinate work tasks with other carers via online planning and collaboration systems/networks/databases
Attitudes examples	- recognise the value of peer exchange and cooperation - be willing to share own knowledge and good practices with peers	- maintain own professional integrity and ethical behaviour when sharing information on care recipients with peers

Competence domain	**C**	**Care-specific digital competence**
Competence area	**10**	**Personal development and social integration of carers**
Competence title	10.3	Competence management, certification and acquiring qualifications in social care
Competence description		Identifying specific areas of digital competence to establish the ones in which one is particularly interested; pursuing improvement in such areas; working towards specialisation and acquisition of expert knowledge and skills; understanding the purpose of certification; validating one's learning outcomes through certificates, diplomas and other means of formal recognition.

Application level	**User**	**Guide/Mentor**
	He/She is able to...	
Knowledge examples	- understand how specialisation and expertise can enhance his/her employability - identify areas of digital competence that he/she is particularly interested in - understand the particulars of training programmes and certification schemes at the interface of care work and digital competence	
Skills examples	- collect information on special areas of digital competence systematically - consult qualification and assessment standards - consult care work associations to analyse current skills needs in the sector - validate own learning outcomes through certificates, diplomas and other means of formal recognition	
Attitudes examples	- exploit his/her interests and talents in order to pursue specialisation and expertise - acknowledge the value of formal recognition and certification of skills and competences	

Competence domain	**C**	**Care-specific digital competence**
Competence area	**11**	**Care coordination**
Competence title	11.1	Digital administration of care work
Competence description		Using digital devices and applications to independently plan, monitor and report care activities; tracking through ICT's the places visited and recording the activities carried out; ensuring flexible reactions and real-time response to care recipients' needs as well as to instructions from care service organisations.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples	- distinguish various digital devices and applications that can support digital administration of care work - explain the advantages of digital support to planning, monitoring and reporting care-related activities	- give examples of how care recipients can participate in care workers' digital administration of care work (planning, scheduling, reporting)
Skills examples	- use basic office applications to create or fill administrative forms and reports - operate basic office equipment (e.g. printers, scanners, card readers) - use care organisations' administrative systems and databases to plan, monitor and report own work - digitalise hardcopy care documentation (e.g. by scanning and storing receipts, medical reports, images) - submit digital reports and work-hour sheets - synchronise his/her monitoring /tracking devices with care organisations' systems	- introduce to care recipients various digital tools for confirming and recording care visits and activities realised (e.g. electronic signature, assignment of specific bar and QR codes, chip cards) - feed the outputs of care recipients' health diagnostics recorded during care visits into online systems operationally
Attitudes examples	- recognise the benefits of rigorous planning, monitoring and reporting of own work - comply with care organisations' digital administration practices	- balance digitally supported recording activities during care visits with personal attitude, communication and socialising with care recipients

Competence domain	**C**	**Care-specific digital competence**
Competence area	**11**	**Care coordination**
Competence title	11.2	Organising and supervising care work
Competence description		Using care organisations' systems for managing care workers; participating in coordination and monitoring of work of others through digital technologies; undertaking supervision and leading roles in care organisations through digital means.

Application level	User	Guide/Mentor
	He/She is able to...	
Knowledge examples		- have overview of various digital business packages and applications - understand care organisations' management processes and procedures - select appropriate and/or most efficient systems for organising care work
Skills examples		- plan care workers' schedules and tasks through digital systems and databases - monitor care work performed by others through tracking and reporting tools - administer digital profiles of carer workers and other staff - process digital administrative input submitted by care workers (e.g. reports, work-hours sheets, client requests) - create periodic statistics and overviews of care workers' activities - communicate online with related services and bodies such as municipalities, social offices, medical facilities, other care organisations - provide online guidance and supervision to care workers
Attitudes examples		- promote effectiveness and efficiency of care organisations' processes - balance digital management with personal and case-specific attitude to care workers

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supported by
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ICT Policy Support Programme