ERASMUS PLUS 2015
SECTOR SKILLS ALLIANCES
AGREEMENT No. 2015 – 3212 / 001 – 001
PROJECT No. 562634-EPP-1-2015-IT-EPPKA2-SSA

<table>
<thead>
<tr>
<th>Deliverable Number:</th>
<th>D3.6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title of Deliverable:</td>
<td>VCP – environment conceptual design</td>
</tr>
<tr>
<td>WP related to Deliverable:</td>
<td>WP3</td>
</tr>
<tr>
<td>Dissemination Level:</td>
<td>RE</td>
</tr>
<tr>
<td>Nature of Deliverable:</td>
<td>R</td>
</tr>
<tr>
<td>Actual Date of Delivery to the CEC:</td>
<td>14/04/2017</td>
</tr>
</tbody>
</table>

PARTNER responsible for the Deliverable: SI4LIFE

PARTNER responsible for the Deliverable: SI4LIFE

WP starting month vxvc

WP ending month vxcv

Partner Contributor(s): cvx

Partner Reviewer(s): xcv

Funded by the Erasmus+ Programme of the European Union

*Dissemination Level:
PU=Public
CO=Confidential, only for members of the Alliance (including Commission Services).
PP=Restricted to external subjects in confidential mode (including Commission Services).
RE=Restricted to a group specified by the Alliance (including Commission Services).

**Nature of Deliverables:
R=Report
P=Prototype
D=Demonstrator
O=Other
1 ABSTRACT

The Deliverable 3.6 VCP environment conceptual design has the aim to describe the specific virtual environment that will be developed in WP5 Virtual Community of Practice: Building and Support. In the following report will be described the activities performed to define a conceptual design of the CARESS VCP including collection of feedback from the end user, the brainstorming activities performed during the project meeting, the state of art of the VCP from technical and educational point of view and the review of the already existing VCP in healthcare. These activities permitted to inquire information from different perspectives and have been the first step of the design process. The report will include also a brief section dedicated to the recognition of not formal and informal learning. At the end of the document will be presented some consideration about the data collected and a series of Use cases that will be the base for the development of the CARESS VCP.

2 KEYWORDS:

Virtual community of Practice, Healthcare, no formal and informal learning, design

3 LIST OF BENEFICIARIES (PP-RE)/PARTICIPANTS (PU-CO)***

<table>
<thead>
<tr>
<th>Ben. No.</th>
<th>Beneficiary Name</th>
<th>Short Name</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Si4Life – Scienza e Impresa Insieme per Migliorare la Qualità</td>
<td>Si4Life</td>
<td>Italy</td>
</tr>
<tr>
<td>2</td>
<td>Universidad de Valladolid</td>
<td>UVA</td>
<td>Spain</td>
</tr>
<tr>
<td>3</td>
<td>AGE platform</td>
<td>AGE</td>
<td>Belgium</td>
</tr>
<tr>
<td>4</td>
<td>OMNIA</td>
<td>OMNIA</td>
<td>Finland</td>
</tr>
<tr>
<td>5</td>
<td>Vittorio Emanuele II</td>
<td>VE II</td>
<td>Italy</td>
</tr>
</tbody>
</table>

*** List of Beneficiaries
In case of dissemination level PU or CO please indicate all the partners involved in this Deliverable.
In case of dissemination level PP please indicate the names of the other subject to whom the deliverable is devoted
In case of dissemination level RE please indicate the restricted group of partners.
4 VERSION HISTORY and AUTHORS

<table>
<thead>
<tr>
<th>VERSION</th>
<th>PRIMARY AUTHOR</th>
<th>VERSION DESCRIPTION</th>
<th>DATE COMPLETED</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Daniele Musian</td>
<td>ToC</td>
<td>06/03/2017</td>
</tr>
<tr>
<td>0.1</td>
<td>Asen Perez Juan Ignacio</td>
<td>ToC</td>
<td>06/03/2017</td>
</tr>
<tr>
<td>1.1</td>
<td>Sara Villagrà Sobrino, Estefanià Arribas</td>
<td>contribution</td>
<td>29/03/2017</td>
</tr>
<tr>
<td>1.2</td>
<td>Asen Perez Juan Ignacio</td>
<td>contribution</td>
<td>30/03/2017</td>
</tr>
<tr>
<td>1.3</td>
<td>Sirjie Hassinen</td>
<td>Contribution</td>
<td>05/04/2017</td>
</tr>
<tr>
<td>1.4</td>
<td>Serena Alvino</td>
<td>Contribution</td>
<td>05/04/2017</td>
</tr>
<tr>
<td>1.5</td>
<td>Daniele Musian</td>
<td>Contribution</td>
<td>06/04/2017</td>
</tr>
<tr>
<td>1.6</td>
<td>Borja Arrue</td>
<td>Contribution</td>
<td>06/04/2017</td>
</tr>
<tr>
<td>1.7</td>
<td>Sara Villagrà Sobrino, Estefanià Arribas</td>
<td>Contribution</td>
<td>06/04/2017</td>
</tr>
<tr>
<td>1.8</td>
<td>Maria Rosaria Troiani</td>
<td>Contribution</td>
<td>10/04/2017</td>
</tr>
<tr>
<td>1.9</td>
<td>Serena Alvino</td>
<td>Contribution</td>
<td>13/04/2017</td>
</tr>
<tr>
<td>2.0</td>
<td>Daniele Musian</td>
<td>Review</td>
<td>14/04/2017</td>
</tr>
<tr>
<td>SECTION</td>
<td>AUTHORS</td>
<td>PARTNER TYPE</td>
<td>NAME OF PARTNER</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>----------------------------------------------</td>
<td>--------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Introduction</td>
<td>Serena Alvino</td>
<td></td>
<td>SI4LIFE</td>
</tr>
<tr>
<td>VCP state of art - concept</td>
<td>Daniele Musian</td>
<td></td>
<td>SI4LIFE</td>
</tr>
<tr>
<td>VCP state of art - technical</td>
<td>Asen Perez Juan Ignacio</td>
<td></td>
<td>UVA</td>
</tr>
<tr>
<td>VCP state of art process to design and cultivate vcp</td>
<td>Daniele Musian</td>
<td></td>
<td>SI4LIFE</td>
</tr>
<tr>
<td>Inquire</td>
<td>Sara Villagrà Sobrino, Estefanià Arribas</td>
<td></td>
<td>UVA</td>
</tr>
<tr>
<td>Inquire - brainstorming valladolid</td>
<td>Maria Rosaria Troiani</td>
<td></td>
<td>VE II</td>
</tr>
<tr>
<td>Pilots target feedbacks</td>
<td>Sara Villagrà Sobrino, Estefanià Arribas, Maria Rosaria Troiani Sirjie Hassinen</td>
<td></td>
<td>UVA; VE II; OMNIA</td>
</tr>
<tr>
<td>Examples/cases of VCP in health sector – report doc</td>
<td>Daniele Musian, Sara Villagrà Sobrino, Estefanià Arribas, Borja Arrue</td>
<td></td>
<td>SI4LIFE, UVA, AGE PLATFORM</td>
</tr>
<tr>
<td>Conceptual Design - no formal and informal learning recognition</td>
<td>Serena Alvino</td>
<td></td>
<td>SI4LIFE</td>
</tr>
<tr>
<td>Conceptual Design - scenarios and use cases</td>
<td>Asen Perez Juan Ignacio, Serena Alvino, Daniele Musian</td>
<td></td>
<td>UVA, SI4LIFE</td>
</tr>
</tbody>
</table>
# Table of Contents

1. **ABSTRACT** .......................................................... 2

2. **KEYWORDS:** .......................................................... 2

3. **LIST OF BENEFICIARIES/PARTICIPANTS** ....................... 2

4. **VERSION HISTORY and AUTHORS** ............................... 3

5. **Table of Contents** .................................................... 5

6. **INTRODUCTION** ..................................................... 6

7. **VCP STATE OF ART** .................................................. 7

   7.1 **CONCEPT** .......................................................... 7

   7.2 **TECHNICAL STATE OF ART** .................................... 11

   7.3 **PROCESS TO DESIGN AND CULTIVATE VCP** .................. 13

     Inquire ............................................................................ 14

     7.3.1 Brainstorming Valladolid ............................................ 15

     7.3.2 Pilots target feedbacks ................................................ 16

     7.3.3 Examples/cases of VCP in health sector-report doc........... 30

8. **CONCEPTUAL DESIGN** ................................................ 63

   8.1 **Non-formal and informal learning recognition** ................. 63

     8.1.1 Competence recognition and ECVET ............................... 63

     8.1.2 Non-formal and informal learning in health sector .......... 65

     8.1.3 Non-formal and informal learning recognition in CARESS VCPs .................................................................................................................. 66

   8.2 **SCENARIOS AND USE CASES** .................................... 68

9. **LIST OF FIGURES** .................................................... 87

10. **LIST OF TABLES** ..................................................... 88

11. **REFERENCES** .......................................................... 90

12. **Annex** ........................................................................ 94

   12.1 **Annex I** .................................................................. 94

   12.2 **Annex II** .................................................................. 98
6 INTRODUCTION

CARESS pilots will implement different educational methods and will be based both on formal (presence learning an e-learning) and on non-formal/informal learning. They will target both explicit knowledge and effective transfer of tacit knowledge, which generally requires extensive personal contact, regular interaction and trust (Wenger, 2000); to this end, students attending the pilots will be involved in:

- work-based learning, including apprenticeships, alternation school/job, on the-job training periods in companies;
- individual and collaborative learning activities based on innovative strategies such as problem-based learning, case studies, critical incidents, role-playing, etc., both in presence and at distance (e-learning);
- Virtual Communities of Practice, i.e. groups of practitioners who develop their shared practice by interacting at distance through a virtual environment around problems, solutions, and insights, and building a common store of knowledge (Wenger et al., 2002).

Aside to presence learning activities and work-based learning, e-learning activities will be carried out supported by and e-learning platform (T4.3). This platform, developed in T4.1, will be integrated in T5.1 with a platform supporting Virtual Communities of Practice (see Figure 1) The ultimate goal is facilitating the transition from formal learning activities (supported by the e-learning platform) to informal/non-formal ones (targeted by the VCP Platform).

![Figure 1: Connections among tasks concerning VCPs.](image)

The present document details the main results of Task 3.6. This task is aimed at defining a conceptual design of the environment supporting VCPs in order to inform T5.1 aimed at the technical implementation of the environment and its integration with the e-learning platform (see Figure 1). In this task educational experts have collaborated with technical experts in order to identify specific functionalities and interface characteristics able to support and feed the birth and the growing of national and transnational Virtual Communities of Practice targeting the professionals involved in the pilots. Then the informal learning component of national pilots will be fostered through a “scaffolding” activity within the VCP platform in...
T5.2: educational experts will set up within the virtual environment the proper conditions in terms of incentives, motivating situation, useful tools, networking opportunities, etc. for stimulating the birth and the growth of VCPs. Interactions and networks will be managed both at national level, with the support of national partners, and at international level. Inter-professional exchanges and contacts will be fostered as well as the access to e-learning open contents, available in the final integrated platform.

7 VCP STATE OF ART

7.1 CONCEPT

The National Health Service (NHS) and other health care systems have worked really hard to reach a multi-disciplinary collaboration and organization-centered learning (Ferlie, 2005 [1]; Addicott, McGivern, and Ferlie, 2006 [2]; Battilana, 2011 [3]). In the last two decades these arguments have become common in the health sector and communities of practice have been supported by the health care professional to promote mutual learning and knowledge sharing to increase the common points among who does the same work. The concept of community of practice has branched out internationally, showing how learning unfold in health care settings and benefits of knowledge sharing (Bentley, Browman, and Poole, 2010 [4]; Ranmuthugala et al., 2011 [5]).

The term Community of Practice (CoP) was coined initially to describe the totality of the social learning systems that originates around any particular activity (Lave and Wenger, 1991[6]).

Wenger (2011) defined CP as “are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly” [7] CoPs represent social learning spaces in which commitment derives from identification with a shared domain of interest, a shared repertoire of tools and words and specific modes of communication which emerge as a result of continuous collaboration (Wenger, 1998 [8]). The CoP in fact is a social learning space where who participate has a common domain of interest, common tools, words and modes of communication (Wenger, 1998)[9]. In this learning space, an internal social organization arises and it has different levels of influences and prestige, then, with time, members of the CoP share common artefacts, narrative practices, knowledge and methods, so they become closer. The community of practice focuses the attention not only on learning process(the main object of situated learning theory) but also on the relationships and the exchanges to improve practices, in this way people with the same practice are joined by a “complex set of relationships, self-organization, dynamic boundaries, ongoing negotiation of identity and cultural meaning” (Wenger, 1988)[10].

CoPs works for different aims including knowledge sharing, innovation and peer learning. CoPs are very effective in learning processes of best practices through social relations, in solving problems and finding solutions, because the community members ask to who has the specific expertise, and in updating professional skills (Wenger and Snyder, 2000)[11].

The situated learning theory, born in 1980s, showed an alternative method of learning overcoming the traditional cognitive theory where knowledge passes from the teacher to the learner. The situated learning theory affirms that learning is a continuous active and social process characterized from the involvement in the socially constructed practice and the personal meaning that is associated with the experience (Elkjaer, 1999 [12]; Lave and Wenger, 1991[6] Brown and Duguid, 1991 [13]). Within this new approach, learning is conceived much more as a process involving practice and knowing in a social context.

Absorbing and being absorbed in the “culture of practice” (...) might include (knowing) who is involved, what they do, what everyday life is like, how masters
talk, walk, work, and generally conduct their lives, how people who are not part of the community of practice interact with it, what other learners are doing, and what learners need to learn to become full practitioners. It includes an increasing understanding of how, when, and about what old-timers collaborate, collude, and collide, and what they enjoy, dislike, respect, and admire. In particular it offers exemplars (which are grounds and motivation for learning activity), including masters, finished products, and more advanced apprentices in the process of becoming full practitioners (Lave and Wenger, 1991,[6]).

The health care sector has used the situated learning theory and CoP (Cope, Cuthbertson, and Stoddart, 2000[14]; Li et al., 2009a [15], 2009b [16]; Le May, 2009 [17]; Ranmuthugala et al., 2011[18]) because they could facilitate the engagement with stakeholders, for example in the input from patient-led communities (Le May, 2009[17]).

**VCP IN HEALTHCARE**

At first VCP was used in many leading organizations in the private sector, with the scope of labelling the operational changes introduced to share good practice over the geographical boundaries of big multinational organizations (Collison and Parcell, 2005[19]). One of the reason why CoP was introduced is to support the existing efforts to create multi-disciplinary collaborative arrangements into health care practice, so CoP were translated into this specific setting to hold its particular needs. There could be many barriers in the application of the CoPs in health care sector, for example in the private sector they set more difficulty within hierarchical organizations, studies found that conflicts could arise between managerial efforts to lead them in a “top-down” fashion, and their organic “bottom-up” commitment of community members (Agterberg et al. 2010 [20]). Instead, in health care CoPs there are more efforts to go beyond the barriers to multi-disciplinary collaboration (Bate and Robert 2002[21]; Oborn and Dawson, 2010 [22]; Kislov, Harvey, and Walshe, 2011[23]). This process of translation of the CoPs in the produced a wide variety of application and context in the health care sector. The concept of CoPs can be considered an umbrella term that covers different initiatives, it doesn’t concern only a specific method or technique, in fact analyzing previous CoP initiatives in health care, different goals, design, mode of operation and utilization of technology come out (Li et al., 2009a[15]). Li et al. (2009a[16]) highlighted the differences between accounts of initiatives about the CoP in healthcare sector. In particular several experience show the application of the CoP as tool to promote socialization of young professionals to facilitate knowledge sharing and creation, skill development and continuing education. The main differences between the former and the latter group of studies are that the firsts use the classical apprenticeship models, based on the development of professional identity and gradual skills acquisition. The latter group focus on knowledge creation and sharing among established professionals in the CoPs (Li et al., 2009a [15]).

**Supporting Socialization and Fostering Learning through Communities of Practice**

The situated learning theory addresses some of the limits of the traditional method to train and support the continuous professional development of health care professionals, an example is showed by the facts that studies many times find that traditional medical education is worried with approaching students with heavy amounts of theoretical knowledge (McKenna and Green, 2004 [24]). Certainly using knowledge is not a solution to lead to the development of skills applicable to practice. The practice of medicine is a craft that needs personal judgement and based on experience (Knight and Mattick, 2006[25]) .
Educational programs for health care professionals typically have a clinical practice component that complete the academic curriculum and prepare students for practice work, filling the gap that exist between theoretical base and applied knowledge. Clinical placements is the different way in which student are educated, coming into contact with communities of medical practice for the first time, so following the routines of communities of clinical practice their professional identity can come out and they collect hands-on experience that can “support, augment, contradict, or even resist the teaching and learning objectives of the formal curriculum” (Egan and Jaye, 2009[26]).

In this way students can work in real situations under the supervision of experienced colleagues, even if the passage from classroom to practice is not a simple experience. For example, at first they could feel stressed and abandoned in comparison with their previous educational experience Brown et al. (2005, [27]), but the proximity and the support of colleagues, with also the development of a sense of belonging to the team, raise the well-being of the students (Levitt-Jones et al., 2008[28]). CoPs are useful support for students and they permit them to join practice as legitimate participants and in the meanwhile to develop important skills “move through the zone of proximal development toward independent competence” (Cope, Cuthbertson, and Stoddart, 2000, [14]). Furthermore learners internalize values and cultural practice and they obtain a better comprehension of individuals and the community.

Authors as Egan and Jaye (2009)[26] don’t agree with this vision because, from their point of view, the trajectories of students that have access to clinical practice can remain peripheral, they could develop temporary attachments to small teams or their particular members.

Certainly there could be many difficulties for students to participate in the activities of the practical community, such as Short placements (Cope, Cuthbertson, and Stoddart, 2000 [29]; Warne et al., 2010 [30]; Papastavrou et al., 2010 [31]), lack of meaningful supportive relationships at workplace (Konrad and Browning, 2012 [32]; Nolan, 1998 [33]), general deficit of busy personnel’s attention and direction and the absence of effective introduction and guidance by a mentor or tutor (Dimitriadis and Evgeniou, 2014 [34]) may make it difficult for students to participate effectively in the activities of the practical community.

Literature (Wenger, McDermott, and Snyder, 2002 [35]; McDermott and Archibald, 2010 [36]) show that in the starting phase the involvement of recognizing experts as champions of the initiative could be the catalysts of interest to make the CoPs start operating. Moreover is essential that management gives support to the incoming CoP in terms of recognition, institutional support, governance, resources and infrastructure.

Others important challenge are finding ways to make these initiatives sustainable, common obstacle for example could be the provision of adequate leadership and governance, and developing successful mandated CoPs, for example having clear aims and deliverables and ensure that these are aligned with aims of the organization. Another important factor in developing sustainable CoP is the risk to be too close compared with the aims of the organization and be not involved in the entity activities. In this meaning the involvement of the manager staff for the definition of goals and deliverable coherent with the vision and mission of the organization could represent a critical factor for success.

All CoP practitioners have the main interest of demonstrating the value added to the organization and justifying the resource investments needed to sustain a CoP programme The CoPs’ added value that Wenger, Trayner, and de Laat (2011)[37] identified are:

1. immediate value (interactions and all the benefit that they create); potential value (the consequence of the interactions are new ideas or new resources);
2. applied value (CoP create knowledge that lead to changes); realized value (changes lead to improved performance);
3. Reframing value (thanks to the information exchange in the community, new goals, strategies, values and way of doing business are set).
Despite this need there are still few studies that provide quantitative analysis of the effectiveness of the COP Li et al. (2009a) [15] and Ranmuthugala et al. (2011) [18].

**Beyond Face to Face: Virtual and Online CoPs**

Virtual community of practice can have different aims and objective compared with the conventional one. The main needs addressed by the virtual ones include socialization of new, but not only, staff e.g., Jevack et al., 2014 [38]), and the share of knowledge among healthcare professionals. ICT and web tools are important instruments that can help people that are geographically or professionally isolated, to create social ties. Therefore Virtual CoPs are really important to overcome the disciplinary and professional boundaries, especially for who lives in rural areas (Rolls et al., 2008 [39]). Some relevant aspects that make an effective virtual CoP are the importance of voluntary and motivated participation on the part of members (Ho et al., 2010[40]); the role played by leaders and facilitators (Nurani et al., 2012[41]); and the provision of appropriate ICT infrastructure. One other important feature of the virtual CoP is that it increases the distinction between the two types of participation, core and peripheral. Anyway, this kind of CoP needs facilitators to help the members using it, in fact it needs to be simple enough to permit easy access and use and at the same time in the meantime it needs to support content and dialogue that meet the communities requirements (McDermott, 1999 [42]). This passive participation has been viewed as equivalent to the “legitimate peripheral participation” seen in more conventional CoPs, through which members can learn about a particular domain and be enculturated into its discourse and forms of practice (Russell et al., 2004 [34]). Another important aspect to be taken into consideration for the cultivation and development of the VoCP is the facilitation and leadership dimensions. The facilitators could solve the role of engage the users in different activities “ensuring that the database of members is up to date; targeting messages to appropriate subgroups based on members’ interests; reminding members of the opportunities for networking; and affirming the principle of reciprocity” (Russell et al., 2004 [34]). Another crucial point to promote the functioning of the VoCP is the informal interaction between the users involved that can help to sustain the VoCP activities. Some experience show the importance of promoting also this aspects through dedicated staff, founding and ICT tools (Nurani et al., 2012[41]).

Another critical element it’s the ICT structure on which is based the VoCP. In particular aspects such as usability and accessibility could be considered essential for the success of the VoCP. It need also to be tailored on the needs of the target, aims and objectives of the community (Dube and Jacob, 2005 [44]).

Some problems that usually affect the CoPs are the inability to secure a steady following, the lack of necessary connections and personal behavior like the tendency to control knowledge or to doubt of peers. In a systematic review of CoP-based initiatives in the surgical oncology area Fung- Kee- Fung et al. (2009) [45] found five factors from which depend the implementation of collaborative projects: trust among health professionals and health institution; the presence of accurate, complete, relevant data; clinical leadership; institutional commitment; the infrastructure and methodological support for quality management.

There are also some structural factors that could affect the participation in the CoPs including the group composition and the regularity of the meeting. Despite the health care sector is often based on compartmentalized organization that creates different professional identities, the creation of cross professional groups could contribute to stimulate the spread of knowledge and to encourage the overcoming of the traditional professional boarder identities Bartunek (2010) [46].

Also the institutions could play an important role in promoting the VoCp activities, in particular through the creation of established norms for the insitution and the sponsoring of the initiative with stakeholders that can include policy makers and scientific association as reference points of the subject.
7.2 TECHNICAL STATE OF ART

VCP platform is the ICT solution for supporting the VCP features (e.g., connect people, provide a shared context, enable dialogue, etc.) [47] along its lifecycle phases (e.g., inquire, design, prototype, grow, sustain, etc.), as identified in the previous sections.

A large variety of technical solutions exists for supporting VCPs. We can group them under three main categories which can be showcased by different existing VCPs in the field of Healthcare:

- VCPs based on the use of e-mail distribution lists (see, e.g.,[39])
- VCPs based on existing general-purpose social networks such as Facebook, Twitter, Youtube, etc. (see, e.g.,[48])
- VCPs based on purpose-specific web-platforms (see, e.g.,[49]). Some of these platforms are created with the specific goal of supporting VCPs (e.g., Ning [http://www.ning.com] or Elgg [https://elgg.org/]). In other cases, these web-based VCP platforms are based on extensions to widely-used Content Management Systems (CMSs). For instance:
  - The Drupal CMS (https://www.drupal.org/) with extensions such as CiviCRM (https://civicrm.org/) or Buddylist2 (https://www.drupal.org/project/buddylist2)

Reference provides a summary of core technical features that a VCP platform should provide (see table below), although not all of them can be found in all the cases of VCP in the health domain reported in the literature.

<table>
<thead>
<tr>
<th>Relationships</th>
<th>Learning</th>
<th>Action</th>
<th>Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distributed account management</td>
<td>Narrated PowerPoint presentations</td>
<td>Project management</td>
<td>Keyword and full-text searches (site-wide and by section)</td>
</tr>
<tr>
<td>Member networking profiles</td>
<td>E-learning tools</td>
<td>Task management</td>
<td>Structured databases and database tools</td>
</tr>
<tr>
<td>Member directory with relationship-focused data fields</td>
<td>Assessments</td>
<td>Document collaboration</td>
<td>Digital stories</td>
</tr>
<tr>
<td>Subgroups that are defined by administrators or that allow members to self-join</td>
<td>Web conferencing and webcasts</td>
<td>File version tracking</td>
<td>Idea banks</td>
</tr>
<tr>
<td>Online meetings/chat</td>
<td>Online meetings</td>
<td>File check-in and check-out</td>
<td>Web conferencing</td>
</tr>
<tr>
<td>Online discussions</td>
<td>Online discussions</td>
<td>Instant messaging</td>
<td>Online meetings</td>
</tr>
<tr>
<td>User-controlled delivery modes for notifications and information</td>
<td>Web-site links</td>
<td>Web conferencing and online meetings</td>
<td>Online discussions</td>
</tr>
<tr>
<td>Variety of community member roles and responsibilities is supported</td>
<td>Interactive multimedia</td>
<td>Online discussions</td>
<td>Announcements</td>
</tr>
<tr>
<td>Community activity reports</td>
<td>Variety of community member roles and responsibilities is supported</td>
<td>Individual and group calendar</td>
<td>Web-site links</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Subgroup working spaces</td>
<td>Multiple modes for knowledge representation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Resources directly associated with interaction</td>
</tr>
</tbody>
</table>

Table 1 VCP core technical feature

The inquire phase of this report (see section 5.3) will provide additional input for selecting which precise features are needed for the specific case of the CARESS VCP. The proposal for such set of features to be
provided by the CARESS VCP platform is contained in section 5.4. The selected features will be illustrated by a set of use cases.
7.3 PROCESS TO DESIGN AND CULTIVATE VCP

“Communities have lifecycles—they emerge, they grow, and they have life spans. For each lifecycle phase, specific design, facilitation, and support strategies exist that help achieve the goals of the community and lead it into its next stage of development. If the community is successful, over time the energy, commitment to, and visibility of the community will grow until the community becomes institutionalized as a core value-added capability of the sponsoring organization. The following model outlines the lifecycle phases of communities.” (Cambridge et al. 2005 [50])

Figure 2 Lifecycle phases of VCP design and cultivate [50]

The lifecycle phases include:

- Inquire: Through a process of exploration and inquiry, identify the audience, purpose, goals, and vision for the community.
- Design: Define the activities, technologies, group processes, and roles that will support the community’s goals.
- Prototype: Pilot the community with a select group of key stakeholders to gain commitment, test assumptions, refines the strategy, and establishes a success story.
- Launch: Roll out the community to a broader audience over a period of time in ways that engage newcomers and deliver immediate benefits.
- Grow: Engage members in collaborative learning and knowledge sharing activities, group projects, and networking events that meet individual, group, and organizational goals while creating an increasing cycle of participation and contribution.
- Sustain: Cultivate and assess the knowledge and “products” created by the community to inform new strategies, goals, activities, roles, technologies, and business models for the future.

Successfully facilitating a CoP involves understanding these lifecycle phases and ensuring that the expectations, plans, communications, collaborative activities, technologies, and measures of success map to the current phase of the community’s development. Without conscious facilitation, momentum may be lost during the launch phase and the CoP may not achieve the critical mass needed to evolve into a sustainable entity.

To design a new VCP it’s necessary to proceed step by step proceeding from identifying the main characteristics and objectives of the VCP that we would like to develop until the definition of the modalities to sustain the VCP designed.

The first step of the design process should include a process of exploration and inquiry; identify the audience, purpose, goals, and vision for the community. To perform it we started with a benchmark analysis to identify the best practices and the main characteristics of the VCP in health care sector already online.

Our main aims of the exploration and inquiry phase was to:
• brainstorming session during the III meeting of the CARESS project, on the VCP proposal and aims
• investigate the main needs of the end user, students that are following the courses to be trained in HHCP
• report the state of art on informal learning recognition thought the VCP
• the analysis of the VCP already designed and applied in health sectors

Inquire

With the aim of identifying specific functionalities and interface characteristics able to support and feed the CARESS Virtual Community of Practice (VCoP), in the last CARESS meeting in Valladolid, a special brainstorming session about VCoPs was performed among CARESS partners.

The results of this discussion as well as partners’ agreements will be presented in section 5.3.1 of this report. Moreover, 8 interviews (i.e. 3 in Spain, 3 Italy and 2 in Finland) involving the final pilots target were carried out in the three countries involved in this project. The main goals of the evaluation process were the following:

- To know what final users of pilots (i.e. students) expected from VCoP
- To understand what motivates them to participate in a VCoP
- To know the expectations of final users to participate in a VCoP
- To identify ideas, tools and learning contents according the final users perspectives and thoughts, as a way to foster the development of the CARESS VCoP.

In order to accomplish this task, a Power Point presentation (see, Annex) and an interview template (see Annex II) with 10 open questions were used with the aim of supporting involved partners in performing the interviews. Each interview was guide by a person in charge of the design of the CARESS pilot in each country. The interview protocol followed consisted into two parts:

- In first place, the interviewers showed the presentation provided in a power point format with the aim of foster informants to make explicit their knowledge and previous ideas about VCoP.
- Secondly, the interviewers collected the responses provided by the informants to 10 open questions.

Likewise, all the materials were translated into 3 languages (i.e. Italian, Finnish and Spanish), with the aim of facilitate the collection of data provided by the informants in their mother tongue.

Errore. L'origine riferimento non è stata trovata. provides an explanation about the main topics of analysis in which the information was gathered, linked to the specific questions showed in the interview evaluation tool.

Table 2. Topics of analysis regarding the interview questions

<table>
<thead>
<tr>
<th>Topics</th>
<th>Interview question number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Previous knowledge and background about VCoP</td>
<td>[1]; [2]</td>
</tr>
<tr>
<td>Identification of useful functionalities that can be applied in a VCoP</td>
<td>2); [3]; [4]</td>
</tr>
</tbody>
</table>
Section 6.3.2 provides a detailed description about the main results obtained from the evaluation process in the three countries involved, as well as general information about the recruited informants.

According to the aforementioned ideas, section 6.3.3 is focused on the identification of some contents, requirements, and ideas, which can be useful to design and develop the CARESS Virtual Community of Practice (see, D.5.1.1.1 VCP platform) taking into account the real needs of potential users.

### 7.3.1 Brainstorming Valladolid

Maria Rosaria Troiani (VE-II) leads the session supported by Estefanía Arribas (UVA).

VE-II recalls “Task 5.1 – Development of a Virtual Communities of Practice (VCP) Platform and integration with the e-learning Platform” presented by Asensio Perez (UVA) and “Task 3.6 - Conceptual Design of a virtual environment supporting Communities of practice” presented by PC in the morning. The two documents are the starting point for the discussion concerning the Virtual Community of Practice that the project partners need to develop as a non-formal/informal support to the project pilots.

VE-II reminds partners that a community of practice is a group of people who share common concerns, problems and interests and aim to fulfil both individual and group goals. A VCP is important to connect people who might otherwise have no opportunity to interact and provides a context to share information, stories, and personal experiences in a way that builds understanding, promotes dialogue, helps solve problems, creates beneficial opportunities, stimulates learning and generates new knowledge.

Designing the structure of the Caress VCP requires an assessment of the pros and cons of such a community.

The brainstorming activity involving all the people present in the session leads to the listing of a number of crucial questions to be answered:

- Why should stakeholders be willing to join such a community?
- What are the benefits for the stakeholders to use the VCP?
- How can new members learn about the community?
- What are the community’s norms for behaviour?
- What kind of benefits can be identified in order to increase the use of the platform by the stakeholders?

All partners provide their contributions to the discussion in order to identify the positive and negative aspects of a Virtual Community of Practice (VCP).

Positive elements able to involve the stakeholders are:

- acquiring valuable information, news, training skills
- being involved in “positive gossiping”, namely a way of talking about other people’s stories and experiences in a positive way, which creates an open and trustful working environment
- exchanging experiences and asking for advice
- increasing motivation
Negative elements that could lead stakeholders to desert the VCP are:
- too general an environment, lacking the in-depth information required by skilled and highly skilled professionals to spend some time on the platform
- excessive presence of posts that risks creating a congestion of information
- pressures exercised by lobbies
- presence of incorrect information and incapacity to make a selection
- difficulties in accessing the VCP platform

Partners actively participate in the discussion by providing ideas to develop a lively and user-friendly VCP. The main issues emerging at the end of the discussion are the following:
- Identifying the VCP audience: professionals, students, etc.
- identifying the VPC goals and purposes
- sharing good practices
- including alerts to remind participation
- organising contests that imply rewards and prizes
- having a moderator able to select and assess contributions
- motivating stakeholders by raising interesting questions and requiring the publication of contribution
- focusing on both professionals and students, engaging them in collaborative learning and knowledge activities, projects, events
- Creating live online events.

After a wide-ranging discussion, VE-II and UVa ask partners to split into two groups and start a discussion in order to identify the main elements required for the design of the possible Caress VCP home page. The two groups start exchanging views and working intensively at the issue.

At 12.30 Maria Rosaria Troiani (VE-II) leaves the session in order to take part in the General Assembly. Estefanía Arribas keeps on leading the session.

The conclusions drawn at the end of the session point out there are different groups with specific interests that might be interested in the Caress VCP:
- students, who can use the information of the platform to pass their exams or to acquire news about a specific topic;
- professional workers, who can find medical information in order to improve their skills;
- Common people assisting old relatives, who can find useful and safe information on the VCP platform.

The level of medical papers and the language used must be different, but there is already a digital key to allow a correct access to different users.

Assigning higher marks related to access to the platform could prove a possible benefit and incentive for students, whereas uploading professional courses can be an incentive for workers.

### 7.3.2 Pilots target feedbacks

This section illustrates the main evaluation results obtained from the analysis of the 8 interviews performed in Finland, Italy and Spain, as well as a detailed description about the context and the background of the informants involved in this process. Finally, section 5.3.2.1 draws down the main conclusions obtained from
the analysis performed in the three countries and identifies a set of recommendations to design the CARESS VCoP.

**Pilots target feedbacks in Spain**

Three interviews were carried out in Spain with three undergraduate students from the Faculty of Nursing (Valladolid, Spain)

Table 3 shows general information about the informants’ background as well as some data about the day and the method of the performed interviews. The informants were students from the faculty of Nursing in Valladolid, Spain. They were selected, thanks to the help of the Spanish pilot coordinators, due to their interest to get involved in the next training course in Home Care that will be carried out in Spain.

First of all, we requested their consent about to audio record the interviews. The interviews were carried out in a classroom of the Faculty of Nursing (Valladolid) with a good atmosphere. No incidents were registered. As a result, three interviews were audio recorded and transcribed.

<table>
<thead>
<tr>
<th>Informant</th>
<th>Day and method of the interview</th>
<th>Gender</th>
<th>Education level</th>
<th>Date of birth</th>
</tr>
</thead>
<tbody>
<tr>
<td>[I1]</td>
<td>14/03/2017. Face to face</td>
<td>F</td>
<td>2rd Course. Nursing Degree</td>
<td></td>
</tr>
<tr>
<td>[I2]</td>
<td>17/03/2017</td>
<td>Face to face</td>
<td>M</td>
<td>3rd Course. Nursing Degree</td>
</tr>
<tr>
<td>[I3]</td>
<td>17/03/2017</td>
<td>Face to face</td>
<td>F</td>
<td>3rd Course. Nursing Degree</td>
</tr>
</tbody>
</table>

**Interview analysis. Spain**

The interview protocol followed; consist in first place, in showing the informants a presentation in a Power Point format (see, Annex ) with the aim of breaking the ice and knowing their previous knowledge about virtual communities of practice.

The evidences will be presented following the topics showed in Table 4 through the use of the following codification system.

<table>
<thead>
<tr>
<th>Source</th>
<th>Informant</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Brainstorm]</td>
<td>1, 2, 3</td>
<td>Previous knowledge and background about VCoP</td>
</tr>
<tr>
<td>[Question]</td>
<td></td>
<td>Identification of useful functionalities that can be applied in a VCoP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Identification of issues and concerns in the health care field that are important to motivate users to participate in a VCoP</td>
</tr>
</tbody>
</table>
Users predisposition/expectations to participate in a VCoP

**Topic 1 - Previous knowledge and background about VCoP**

Two out of the three informants answered to have had previous experiences in the use of Virtual Communities of Practice. The experiences were developed in several courses within their career during a short period of time, no longer than one semester, as we can see in the following excerpts:

“I used a blog during one semester the past year in a course about Nutrition in the Faculty of Nursing. It was my first time involved in an experience like this” [Question, I1]

“There is a teacher in the Faculty that used to use a blog in a course of the Sexual Education (...). We have used the blog during one semester, until the end of the course” [Question, I2]

Usually, the informants tend to access to the blog to look for updating information that was shared by the teacher. This way, “this community was useful to us in order to find scientific information about the lessons learnt in class” [Question, I3] as well as to “share news and papers about different topics within the course” [Question, I1].

Informant 2 stated, “I do not know any Virtual Community of Practice and I have never participated in any experience like this”. Despite of, the informant highlighted that one strength of accessing to this kind of place can be “the possibility to communicate with others in an immediate and faster way”. However, according to informant 1, accessing to this kind of virtual spaces can be sometimes “(...) very time demanding. I want to emphasize that you should be active every time, everywhere. Sometimes, it can be stressful”.

On the other hand, all the informants declared to have previous experiences using social networks. Facebook, Twitter and Instagram are the most extended among the informants. According to their responses, they normally use these networks in their everyday lives, as we showed in the following excerpts:

“I know well Facebook, Twitter and Instagram” [Question, I1]

“Well, I have an account in Facebook, Twitter and Instagram, but I usually use more the first one”. [Question, I2]

“Yes, I know Facebook, and I use to see and share some publications. Some of them can be very useful to obtain information” [Question, I3]

**Topic 2 - Identification of useful functionalities that can be applied in a VCoP**

The different VCoP functionalities showed to the informants received high scores. As we can see in the following tables, any functionality received a value below 7. “Get in contact with professionals like you” and “Discuss about professional problems” were the functionalities in which informants reached more consensus.

To the question: get in contact with professionals like you
As this analysis showed, the informants identified more functionalities. Some of them are related with the possibility to access through the VCoP to several scientific databases, as we can see in the following excerpts:

“To find information I wish that in this virtual space could be links to scientific databases, as Pubmed [Question, I3]”

“I would find useful if this space can have a search engine, for instance, PubMed, as well as to incorporate a link to Vademecum, to look for medicines and treatments”. [Question, I2].

It is also worth noting that the information available in the virtual platform, according to our informants, should be labeled in a way that allows them to find the information easily.
“I think that its useful to look for information using keywords, as well as filtering by author, year of publication, idiom” (Question, I3)

“I would like to find information separated by labels according to different targets (Question, I1)”

“I think that it is important that the information will be labeled into the platform (...). Thus I would like to find information in a more accurate way (Brainstorm, I2)”

Moreover, in order to help users to keep the information that they like most, informant 3 suggested adding a functionality that allows users to restore different sources of information coming from different sources and restored into a kind of personal learning space, as we can see in the following excerpt:

“A thing that it’s interesting to me is the possibility of store videos, notifications, papers, or post in a kind of personal space. For example if I see that one user have published a paper that I want, and at this moment I do not have time to read it, I want to select this resource with the aim of check it later on.”(Question, I3)

Regarding this issue, informant 3 pointed out another interesting outcome, the need of incorporating the functionality of subscription-based notification in order to “received notifications from the people I follow, to see what are they publishing” (Question, I3). This way, a useful functionality could be having the option to manage how and when messages are delivered. Also, the exchanging of short information via Twitter, as informant 3 stressed: “I would like that some short messages can be shared via Twitter (...). This way, the user can see easily if he is interested or not in this information” (Question, I3).

All the informants agree that one feature that should be incorporated into the system was the possibility of create events about any topic related with the health field, by means of fostering the discussion among small groups of professionals with similar interests. As we illustrated in this excerpts:

“I think that can be useful to incorporate in the platform a space that allows the creation of events about congress, seminars, talks about several topics” (Question, I1)

“Might be important allowing professionals to create spaces in where people can discuss in small groups and share resources” (Question, I2).

“(..) Through this space people can talk and discuss in small groups about different issues of interest. For example, imagine that I can meet (on-line) with different caregivers to look for solutions and proposals in order to foster the mobility of our patients, or exchange resources with the aim of improving patient’s self-care. These meetings can be managed by the platform” (Question, I3).

According to the ideas mentioned above, 2 out 3 informants identified that forums could be an interesting tool to encourage the discussion and the exchange of experiences among users. Thus, forums could be used as a channel to solve their doubts.

“(...) An important element is to have different Forums. For instance, aimed at families. Imagine that you are at home with your relative who is dependent and you do not know how to provide the specific care she need. In this situation, families could enter to the platform to search for information or they could write in a forum their doubts. Then, a professional could give them a response”. (Question, I2)
“Furthermore, I think that the platform can be a space in which families can contact with professionals to solve their doubts (...) thus I think that can be useful to access to forums” (Brainstorm, I1).

On the other hand, there is a need of avoiding that virtual spaces can be only oriented to professionals, as it can showed in the following excerpts:

“I would like to see that families and patients have their own space in this place. Thus, they can keep in contact with professionals to solve their concerns” (Brainstorm, I2)

“It is necessary to give access to the information to different targets” (Brainstorm, I1).

Other functionalities that came up were the following:

Empower any sort kind of rewarding to foster users’ intrinsic and extrinsic motivation to be active involved, might be an important feature to integrate into a virtual system, as our informants stated:

“(..) to obtain a sort of recognition due to engagement within the VCoP it would be interesting to me (Question I1)

“it is important to feel that your contributions are recognized. If you feel that people value your work is an stimulus to continuous working” (Question, I3).

According to the aforementioned ideas, it can be useful to allow users to vote which resource of publication they like most, as informant 1 stated “I would like to vote which publications are more interesting to me”.

All the informants agree with the idea that in this kind of spaces the information should be clearly presented and the navigation should be easy. In some cases, the possibility of use videos to present the information was highlighted by informants as an important feature to have in mind.

“The information should be showed in a visual and intuitive way. If the platform can include videos, I think that it can helps to show the information in a more didactic and interesting way” (Question I3).

“I would like to see videos. Visual things are always better in order to allow users’ understanding” (Question I1).

“As I mentioned before, I think that videos are very important. Through the use of videos you can show how a specific protocol can be developed” (Question, I3).

Finally, according with our informants, the virtual community of practice should be a place adapted for people with functional diversity, and accessible through mobile devices, as we can see in the following statements:

“This space should be adapted to guarantee that people with functional diversity can access (Brainstorm, I2)”. 

“In order to foster users’ exchanges it can be useful allow their access through mobile phones” (Brainstorm, I2)”. 

“It would be nice if the platform can be very visual as well as suitable for people with handicaps, special needs...” (Question, I1).

“I would like to access the VCoP throught a mobile device” (Question, I1).

**Topic 3- Identification of issues and concerns in the health care field that are important to motivate users to participate in a VCoP**
Regarding the issues that were considered important by the informants in order to encourage their involvement in a virtual system, the three interviewees were agreeing in the following aspects:

a) Access to protocols, treatments, clinical cases, medical/clinical procedures and techniques explained by video, information in databases, students’ notes, and presentations. As we can see as follows:

“I would like to see information about care, protocols and techniques as well as guidelines to apply them. I am also interested in see treatments, and learn about techniques explained through videos” (Question, I1).

“I would like to access to scientific databases, like PubMed or having access to Vademecum (…). I also wanted to see guidelines to develop different techniques to care (Question, I2)

“I would like to access videos in where professionals are explaining procedures and ways of developing clinical techniques. Moreover, I would like to see protocols oriented to different professionals (…). I want to see manuals, documents, papers, visual presentations (…) and see students’ notes” (Question, I3).

b) Access to information about transversal issues that are important in the initial and ongoing training of socio-health professionals. Teamwork, communication skills, psychology practice, information about gender-based violence, caregivers work rights and the use of eHealth technologies, are seen as a key elements according to our informants:

“I want to know more about how to support and help both families and patients from a physiological point of view” (Question, I1).

“To me it is important to know more about gender violence, I think that maybe a caregiver is not trained to detect this problem, and it is important. I also think that it is necessary to include information about caregivers work rights” (Question, I2).

“Occasionally patients only want your attention, we have to learn to listen them. I think that learning some techniques, procedures or knowing which guidelines are useful to give a better treat to the patient is a crucial part of our profession” (Brainstorm, I2).

"It is important to promote the coordination among professionals. For example, if a patient has fallen down, I need to know it. Besides, other professionals that are treating with this patient should be aware of this situation. As professionals we have to be coordinated. Thus, a technology system as “Gacela” [eHealth technology] can be helpful” (Question, I3).

Furthermore, informant 2 pointed out the need of accessing to innovations and knowledge about research advances as a way to be updated.

“I wish to see innovation experiences in healthcare that will be carried out, in Spain or in other countries, like for instance information about co-housing” (Brainstorm, I2).

**Topic 4- Users predisposition/expectations to participate in a VCoP**

Some informants highlighted the possibility to access to a virtual community of practice as a way to “find possible solutions to the problems” (Question, I1) in the everyday professional practice. Likewise, as Informant 1 stated “If I went to this space it would be because I have not encountered a solution to my problem”.

Likewise, “the VCoP, might be a place in which I can acquire knowledge to keep me professionally updated” (Question, I3). On the other hand informants would be interested in sharing their professional experiences, as well as their notes about several topics, as it is showed in the following excerpts:
“As a professional, I would like to share my personal experiences of treatments and care. I will access in a community platform to be updated. Within this place I would like to see guidelines or information to understand the problems in a holistic way. That’s mean taking into account the professionals’ different perspectives: the social, health, educational, psychological, among others” (Question, I1).

“I could share my notes about several topics that are interesting to me. For instance my work about a specific issue”. (Question, I3).

It is also worth mentioning that all the interviewees agreed in the added value of having access to a transnational VcOP in order to “know the different realities and contexts of professionals’ workplace” (Question, I2). Moreover two of them highlighted the opportunity of accessing to VCoP as a way to prevent the burn out syndrome, as it is reflected in the following excerpts:

“I want to see how professionals solve their problems both in my country or in others, because it can help you in avoiding the typical burn out syndrome” (Question, I2).

“I think that can access to a VCoP can be very helpful to find support among professionals. It will be useful as a way to prevent the burn out syndrome. (Brainstorm, I1).

Language barriers in accessing to this virtual place are seen as a problem to our informants. However in order to solve this problems, some informants pointed out the possibility of introducing learning materials and information in several languages. Moreover they understood that incorporating a system to automatized the translation into previous selected idioms, could be useful, as it is showed in the following excerpts:

“I am not enough fluent in other languages. Thus, it would be nice if the user can select the idiom. Moreover it can be useful to have access to multilingual resources”. (Question, I1)

“(…) yes, the language can be a problem. A translation system can be introduced in the platform in order to solve this problem (Question, I3).

“Yes, the language can be a problem, but if you give users the option to change the language would be perfect” (Question, I2)

Pilots target feedback in Italy

As agreed at the Valladolid meeting, the interview with the representatives of the target involved in the Italian pilot was held at VE-II in order to gather information about students’ previous ideas related to VCP. The final users of the pilot were asked their opinion about their expectations from VCPs, their motivation to participate in a VCP and the kind of things they might be committed with.

Maria Rosaria Troiani, VE-II reference person of the Caress project, was in charge of the interview, supported by Enrica Repetto, head of the Social and Healthcare Services course.

The informants were three students of the Social and Healthcare Services class identified as the final users of the pilot of the Caress project. The three girls were recruited following a detailed analysis of the class members performed by the project referents, whose choice was based upon the students’ communicative and collaborative attitude. When asked about their response to the participation in the interview, the three girls were enthusiastic although they were not totally aware of the target of the interview.

The interviews were carried out on Monday, 20th March 2017 in the premises of Vittorio Emanuele II – Ruffini. The students were summoned in a meeting room; the atmosphere was warm and pleasant, and everybody was feeling relaxed and involved. The interview was divided into two parts:
• Part 1: the three informants were shown a presentation provided in a power point format with the aim of helping them imagine how a Virtual Community of Practice can be, and gather information about their previous knowledge of the issue.

• Part 2: the students were asked 10 questions. The interviewers took notes in the template in order to collect the information. The informants were listened to carefully and their motivations to participate in this interview were asked to each of them. They proved really involved and willing to give an active contribution to the project. Encouraged to expand on their answers and to give as many details as possible, the students were really helpful.

Table 9 shows general information about the informants’ background.

Table 9. Italian Pilot target background

<table>
<thead>
<tr>
<th>Informant</th>
<th>Day and method of the interview</th>
<th>Date of birth</th>
<th>Educational level</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informant 1</td>
<td>20/03/2017 Face to face</td>
<td>09.01.1998</td>
<td>5th year of upper secondary school</td>
<td>female</td>
</tr>
<tr>
<td>Informant 2</td>
<td>20/03/2017 Face to face</td>
<td>30.07.1999</td>
<td>5th year of upper secondary school</td>
<td>female</td>
</tr>
<tr>
<td>Informant 3</td>
<td>20/03/2017 Face to face</td>
<td>12.10.1998</td>
<td>5th year of upper secondary school</td>
<td>female</td>
</tr>
</tbody>
</table>

Interview analysis. Italy

**Topic 1: Previous knowledge and background about VCoP**

The three informants state they normally use Virtual Communities of Practice, not so much for professional as for studying reasons (Facebook Instagram, Twitter, We chat). They have been using both WhatsApp and Facebook since they were attending the lower secondary school to discuss with their schoolmates and teachers about homework, to share information about specific topics, etc.

For a few months they have been using a virtual classroom called “We School”. They are all well aware of the advantages that using these tools can give them.

**Topic 2: Identification of useful functionalities that can be applied in a VCoP**

The three informants have pointed out that the main aims for VCoPs to be used in everyday life are:

- Sharing ideas, materials, photos, events, daily images, complains
- Keeping in touch with distant people
- Exchanging views with professionals about experiences and daily activities, in order to improve the workplace and professional practices.
- Promoting learning and information exchange.
- Organising events and meetings.
- Exchanging experiences and best practices with professionals in other countries in order to improve the Italian health system.
- Improving collaboration.

In their opinion, a VCoP should be simple, fast, and really user-friendly, with few practical functions similar to those of Facebook:

- Home.
- Chat.
- Groups.
- Histories.
• Events.
• Profiles of firms, institutions, boards.

There should be areas for each professional category.

Legislative and legal issues should be constantly updated.

There should be the opportunity to ask for information and comments, and to get quick answers to questions.

There should be strict control over fake information.

Users should be automatically included in the reference group.

Effective filters and motivated feedbacks should be applied.

It shouldn’t be too coloured. The home page should be in light colours and with not too much information. A legible font should be used.

**Topic 3: Identification of issues and concerns in the healthcare field that are important to motivate users to participate in a VCoP**

• Improvement in the organisation of the healthcare team work
• Discussion of legislative and legal issues concerning healthcare professions
• The possibility of talking about mistakes, difficulties, problems
• The need for more strictly applied rules
• Opportunity to make other people know one’s own profession
• Good practices to avoid the waste of materials
• Time management

**Topic 4: Users predisposition/expectations to participate in a VCoP**

According to the informants, the many issues and problems related to the social and healthcare profession that might be facilitated and solved by participating in a VCoP include:

• Improvement in the organisation of the healthcare team-work.
• Assessment of skills and competences.
• Analysis of mistakes/errors/“worst” practices and possible solutions
• Information about courses, events, meetings.
• Improved time management.
• Improvement of one’s own professional profile.

The three informants stated that the personal/professional information they would like to find in a community like this are:

• Description of the healthcare professional profiles
• List of institutes, care homes, etc.
• The possibility to upload their curricula.
• Information about professional courses, competitions, etc.
• Legal issues and norms concerning the healthcare sector.

They believe that a Community like this could help them:

• Improve their professional profile and their knowledge.
• Be in contact with different realities, countries, systems.
• Exchange views and experiences with people of other cities and countries.
• Make friends with people of various nationalities.
• Know about working opportunities abroad.
• Improve their language skills.

They would devote time to participate in this kind of community for the following reasons:
• Curiosity
• Professional advantages
• Serious discussions about their profession
• Information about events and competitions
• Entertainment
• Opportunity to get answers to questions related to professional issues
• Opportunity to get in touch with foreign professionals

Pilots target feedback in Finland
Two interviews with practical nurse students were carried out in Finland. The final users of the pilot were asked their opinion about their thoughts about Virtual Communities of Practice, as well as their motivation and expectations to get involved in a VCoP around health care issues.
Two representative members of OMNIA, Katie Laine and Shanna Hosio performed the interviews. The interviews were carried out at the beginning of April, 2017 in the premises of OMNIA. The interviews were performed following the protocol provided by UVa-Evaluation team. No incidents were registered.
Table 10 shows general information about the informants’ background.

<table>
<thead>
<tr>
<th>Table 10. Finnish Pilot target background</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Informant 1</strong></td>
</tr>
<tr>
<td>Informant 1</td>
</tr>
<tr>
<td>Informant 2</td>
</tr>
</tbody>
</table>

| **Informant 2** | **Day and method of the interview** | **Date of birth** | **Educational level** | **Gender** |
| Informant 2 | 30/03/2017 | 1992 | Secondary (first degree). Participant is going to complete practical nurse studies by end of May 2017 | female |

**Topic 1- Previous knowledge and background about VCoP**
The two informants stated that they normally use social networks in their everyday life (i.e, Facebook, Instagram, Twitter, Skype). Informant 2 said “Facebook could be useful tool in advertising VCP to colleagues”. Meanwhile, Informant 1 affirmed to use Virtual spaces for studying at OMNIA.

**Topic 2: Identification of useful functionalities that can be applied in a VCoP**
Informant 2, provided a list with the most interesting things for her that a VCoP should incorporate. The
ideas are structured as follows:

- **The possibility of contact to colleagues in home country and abroad**
- **The opportunity of discuss about professional issues in a virtual place.**
- **Be able to discuss about challenges in home health care practice**
- **The possibility of share documents.**

On the other hand, informant 1 pointed out their interest in accessing in a VCoP for:

- See investigation results according to elderly care and diseases.
- Discuss about professional problems.
- Share information and experiences of care/nursing work.
- Access to information about transversal competences (i.e, communication skills in the treatment of patients with dementia; as well as to know procedures about how “meet an aggressive client in a care work situation”.

Furthermore, Informant 1 highlighted that one important thing about the functionalities that the VcOP should accomplish has to do with having separate spaces to foster the communication among “small professional groups”. According to her, “It does not work if there is too many different professions at the same time”. This way, “research materials are different for doctors or physiotherapist, and this is the reason why the group cannot be too big”.

According to both informants, some functionalities of Facebook could be integrated in the VCoP:

- The possibility of creating discussion groups at small scale.
- Chat tool for the exchange of experiences during practical training in different work places.
- Access to a repository of documents/learning materials to students that cannot come to class
- Incorporate a system to “find some interesting articles about our studying topic”.

**Topic 3: Identification of issues and concerns in the healthcare field that are important to motivate users to participate in a VCoP**

Some of the topics that were identified by informants as a way to motivate them in contribute in a VCoP are showed below.

- Results of research (e.g., news related to the profession around the world, the development of Cancer treatment)
- Updated information about gerontechnology and ergonomic, as well as clear guidance about how to use them.
- Information about geriatric diseases of older persons, chronic diseases, national diseases.
- Access to links to current databases of medicaments
- Vacancies in social and health care, information about jobs
- Learning material in an audiovisual format about health care topics.
- Information about the challenges of homecare practice (i.e, atmosphere in work place, how to encourage other colleagues, time limitations and urgency in work).
- Information about regulations, rules and protocols in different countries.

**Topic 4: Users predisposition/expectations to participate in a VCoP**

Informant 1 stressed the importance of including trend topics and challenges about health care in a VCoP, as a way to foster home health care practitioners getting involved in a virtual place. Besides, having access to visual information through the VCoP it is also necessary, as is it reflected in the following excerpt:

*The benefit and how interesting the topic will be. Photos and videos (...). I can find time for this community if there would be interesting topics and I can feel that it is professionally beneficial for me [Question, I1]*
Language barriers in accessing to this virtual place are seen as a problem, mainly for older students, as it is showed in the following excerpt:

“Language skills is challenging for me, but I think that younger students can easier to communicate in English”. [Quest, Informant 1]

Furthermore, both informants highlighted to be motivated to use a VCoP for the following reasons:

- To keep in touch with professionals abroad.
- To share professional problems
- To know in dept how home care is structured in different countries, according the different legislations, policies, etc.
- To know different strategies and procedures to foster the coordination among healthcare practitioners
- To access to information about how to treat patients in a holistic way.

Conclusions of pilots target feedback in Spain, Italy and Finland

8 interviews were carried out in Finland, Spain and Italy. Table 11 summarizes the main results obtained from the analysis performed with respect to the evaluation topics previously mentioned.

Table 11. Main results obtained from target pilots interviews in Spain, Finland and Italy

<table>
<thead>
<tr>
<th>Previous knowledge and background about VCoP</th>
<th>All the informants have previous experiences in using social networks for studying and for informal communications among colleagues beyond to share professional concerns. Facebook, Twitter, Instagram are the most common social networks used among the informants.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification of useful functionalities</td>
<td>Among the different functionalities that came up, we can identify the following as the more relevant, according to our informants: Tools to be integrated in a VCoP</td>
</tr>
<tr>
<td></td>
<td>- Forums</td>
</tr>
<tr>
<td></td>
<td>- Chats</td>
</tr>
<tr>
<td></td>
<td>- Access to scientific databases in where users can find accurate information</td>
</tr>
<tr>
<td></td>
<td>- Voting systems</td>
</tr>
<tr>
<td></td>
<td>- Subscription to newsletters/RSS channels</td>
</tr>
<tr>
<td></td>
<td>- Visualization of information in different formats (pdf, docs, video, etc).</td>
</tr>
<tr>
<td></td>
<td>- Twitter</td>
</tr>
<tr>
<td></td>
<td>- Rewarding systems (i.e budgets, etc) to promote users engagement.</td>
</tr>
<tr>
<td></td>
<td>- Multilingual learning contents</td>
</tr>
<tr>
<td></td>
<td>- Creating groups</td>
</tr>
<tr>
<td></td>
<td>According to the look and feel of the VCoP the informants were agreed in the following issues</td>
</tr>
<tr>
<td></td>
<td>- Easy to use, intuitive.</td>
</tr>
<tr>
<td>Identification of issues in health care field</td>
<td>Information about transversal competences in healthcare (i.e communication skills, coordination among professionals, psychology)</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>• Medical/Nursing protocols/treatments</td>
</tr>
<tr>
<td></td>
<td>• Legal issues and norms concerning the healthcare sector.</td>
</tr>
<tr>
<td></td>
<td>• Policy regulations in healthcare among european countries</td>
</tr>
<tr>
<td></td>
<td>• Learning materials in several formats (simulations, case studies)</td>
</tr>
<tr>
<td></td>
<td>• Information about specialization courses, congress, professional events.</td>
</tr>
<tr>
<td></td>
<td>• Advances in research</td>
</tr>
<tr>
<td></td>
<td>• Information about e-healthcare</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Users predispositions to participate</th>
<th>Informants were interesting in participate in a virtual place on the condition that:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Can improve their professional profile.</td>
</tr>
<tr>
<td></td>
<td>• Can improve their skills in team-working</td>
</tr>
<tr>
<td></td>
<td>• Can increase their knowledge about challenge issues in healthcare</td>
</tr>
<tr>
<td></td>
<td>• Have the opportunity to analyse different practices with value in a certain field with the aim of avoiding mistakes/errors during their professional practice.</td>
</tr>
</tbody>
</table>
7.3.3 Examples/cases of VCP in health sector-report doc

To conduct the analysis of the VCP already existing and working in health care sectors we identified a set of variables and characteristics already applied by other reviews or defined by theoretical frameworks in the sector [50].

The Table 12, designed by Cambridge, Kaplan and Suter (2005) [50], has the aim to resume the technical features that the VCP use to perform the activities. The table was created to support the VCP designer in the design process to identify the tools that fits as much as possible with the community goals and actions selected. The authors remind also that most of the VCP existing use more than one of the technical features included in the table to support their actions and that some of them could be more useful to support some actions and someone other. Also, the phase of the design process could have an impact on the selection of the technical tool to be used. For example, during the Prototype phase, the feature most important could be the relation building, while during the Sustain phase it could be more important to share knowledge.

Table 13 and Table 14 have been designed following the Cambridge, Kaplan and Suter (2005) design approach Table 12. These tables have the aim to identify the main logical framework of the VCP including:

- **AUDIENCE**: who is this community for? Who are the community’s important stakeholders?
- **DOMAIN**: Domain: Given the intended audience, what are the key issues and the nature of the learning, knowledge, and tasks that the community will steward?
- **PURPOSE GOALS AND OUTCOMES**: Given the audience and domain, what is this community’s primary purpose? What are the benefits to the stakeholders? What specific needs will the community be organized to meet?
- **ACTIVITIES**: Activities: What kinds of activities will generate energy and support the emergence of community presence? What will the community’s rhythm be?
- **COMMUNICATION**: How will members communicate on an ongoing basis to accomplish the community’s primary purpose?
- **INTERACTION**: Interaction: What kinds of interactions (with each other and with the content of the community) will generate energy and engagement?
- **LEARNING**: What are the learning goals of the community, and how can collaborative learning be supported?
- **KNOWLEDGE SHARING**: What are the external resources (people, publications, reports, etc.) that will support the community during its initial development? How will members share these resources and gain access to them? COLLABORATION How will community members collaborate with each other to achieve shared goals?
- **ROLES AND SOCIAL STRUCTURES**: How will community roles be defined (individuals, groups, group leaders, community administrators, etc.) and who will take them on?
Table 12. VCP core technical features

<table>
<thead>
<tr>
<th>Core Technical Features</th>
<th>Relationships</th>
<th>Learning</th>
<th>Action</th>
<th>Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Distributed account management</td>
<td>▪ Narrated PowerPoint presentations</td>
<td>▪ Project management</td>
<td>▪ Keyword and full-text searches (site-wide and by section)</td>
<td></td>
</tr>
<tr>
<td>▪ Member networking profiles</td>
<td>▪ E-learning tools</td>
<td>▪ Task management</td>
<td>▪ Structured databases and database tools</td>
<td></td>
</tr>
<tr>
<td>▪ Member directory with relationship-focused data fields</td>
<td>▪ Assessments</td>
<td>▪ Document collaboration</td>
<td>▪ Digital stories</td>
<td></td>
</tr>
<tr>
<td>▪ Subgroups that are defined by administrators or that allow members to self-join</td>
<td>▪ Web conferencing and webcasts</td>
<td>▪ File version tracking</td>
<td>▪ Idea banks</td>
<td></td>
</tr>
<tr>
<td>▪ Online meetings/chat</td>
<td>▪ Online meetings</td>
<td>▪ File check-in and check-out</td>
<td>▪ Web conferencing</td>
<td></td>
</tr>
<tr>
<td>▪ Online discussions</td>
<td>▪ Online discussions</td>
<td>▪ Instant messaging</td>
<td>▪ Online meetings</td>
<td></td>
</tr>
<tr>
<td>▪ User-controlled delivery modes for notifications and information</td>
<td>▪ Interactive multimedia</td>
<td>▪ Web conferencing and online meetings</td>
<td>▪ Online discussions</td>
<td></td>
</tr>
<tr>
<td>▪ Community activity reports</td>
<td>▪ Variety of community member roles</td>
<td>▪ Online discussions</td>
<td>▪ Announcements</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and responsibilities is supported</td>
<td></td>
<td>▪ Web-site links</td>
<td></td>
</tr>
</tbody>
</table>
<pre><code>                                                                                   |                                         |                                             | ▪ Multiple modes for knowledge representation          |
                                                                                   |                                         |                                             | ▪ Resources directly associated with interaction      |
</code></pre>
Table 13. Audience, purpose, goals, and vision of the Virtual Communities of Practice already existing in Healthcare sector.

<table>
<thead>
<tr>
<th>AUDIENCE</th>
<th>DOMAIN</th>
<th>PURPOSE, GOALS, AND OUTCOMES KNOWLEDGE</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who is this community for? Who are the community’s important stakeholders?</td>
<td>Given the intended audience, what are the key issues and the nature of the learning, knowledge, and tasks that the community will steward?</td>
<td>Given the audience and domain, what is this community’s primary purpose? What specific needs will the community be organized to meet?</td>
<td>What are the benefits to the stakeholders?</td>
</tr>
</tbody>
</table>

Table 14. The activities, technologies, group processes, and roles that support the community’s goals of the Virtual Communities of Practice already existing in Healthcare sector.

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>COMMUNICATION</th>
<th>INTERACTION</th>
<th>LEARNING</th>
<th>KNOWLEDGE SHARING</th>
<th>COLLABORATION</th>
<th>ROLES AND SOCIAL STRUCTURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>What kinds of activities generate energy and support the emergence of community presence?</td>
<td>How members communicate on an ongoing basis to accomplish the community’s primary purpose?</td>
<td>What kinds of interactions (with each other and with the content of the community) generate energy and engagement?</td>
<td>What are the learning goals of the community, and how can collaborative learning be supported?</td>
<td>What are the external resources (people, publications, reports, etc.) that support the community? How members share these resources and gain access to them?</td>
<td>How community members collaborate with each other to achieve shared goals?</td>
<td>How community roles are defined (individuals, groups, group leaders, community administrators, etc.) and who take them on?</td>
</tr>
</tbody>
</table>

PLATFORM NAME

PLATFORM NAME
CHAIN

CHAIN, that means Contact, Help, Advice and Information Network is a virtual support network designed for workers in health and social care. The network born within the Research and Development programme of the NHS in UK. It is composed by different organisation and it involves different type of professionists, including researchers, managers, physicians etc. It is managed by a not for profit organisation and sustained by the founding of a consortium of stakeholder. It was born in UK, but during its lifetime several organisation coming from european and not european countries joined to it. The registration is for free and open to anyone working in health and social care. The main benefits for the users are the opportunity to be in contact with other members sharing the same interests, the opportunity to post questions about the work experience, and receive feedbacks suggestions and references to improve in the knowledge and career pathway. The CHAIN office has the aim to moderate and support the participation of the members, but you can also take contact with other members directly from their account. CHAIN include more that 30 subgroups, that enable the members with different interests and objectives to focus on specific subjects and meet each other more rapidly and easily. Some studies analysed the functionalities and the participation in the CHAIN community. At the time of the study (Russell, Jill et al. 2004 [51]), the CHAIN community had 2800 members. At the beginning the platform was born to make connections between the workers in healthcare sectors, but it has developed with the increasingly prominent role of the staff in brokering the contact between the different members. There are 2 main sources of information: from the members and from the staff. The messages of the members are usually filtered by the staff to target subset of members matching the interests. CHAIN can produce different benefits for participants, including access to informations and people with know how, promoting trans disciplinary collaboration and enabling participation in networking. The studies on it suggest a series of factors that could be considered critical for its success. One of the main feature of the CHAIN network that can be considered a reason for its success are the skilled staff that help maintain and develop the network. The main activities of the staff include: update the database, filter the messages targeting them to the appropriate subgroups, suggesting and reminding the opportunities. The review of the tool made by experts suggest that it could be improved by providing a more systematic horizon scanning service and providing more proactive facilitation of research collaboration.
<table>
<thead>
<tr>
<th><strong>AUDIENCE</strong></th>
<th><strong>DOMAIN</strong></th>
<th><strong>PURPOSE, GOALS, AND OUTCOMES</strong></th>
<th><strong>BENEFITS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Who is this community for? Who are the community's important stakeholders?</td>
<td>Given the intended audience, what are the key issues and the nature of the learning, knowledge, and tasks that the community will steward?</td>
<td>Given the audience and domain, what is this community's primary purpose? What specific needs will the community be organized to meet?</td>
<td>What are the benefits to the stakeholders?</td>
</tr>
<tr>
<td>CHAIN</td>
<td>Workers in health and social care. CHAIN is open to anyone working in health and social care. Being willing to share experience and aspirations, and being prepared to respond to other members' questions are the only criteria for joining CHAIN.</td>
<td>It is multi-professional and cross organisational, and is designed to connect like-minded health and social care practitioners, educators, researchers and managers.</td>
<td>It is designed to support getting research evidence into practice; and to facilitate networking between those who have common interests or complementary aspirations. CHAIN aims to remove barriers between research and practice, facilitate multiprofessional and interorganisational collaboration, and widen access to knowledge by facilitating and enabling the informal processes through which members identify new contacts, exchange expertise, and provide mutual support. CHAIN allows links to be made between researchers and clinical governance leads or practitioners on the ground, and this has the potential to harness and direct research capacity on the one hand, and aid implementation of new findings in the health service on the other (clinical governance facilitator, focus group of discussion)</td>
</tr>
</tbody>
</table>

Table 15 CHAIN main concept
## Deliverable 3.6

### Table 16 CHAIN functionalities structure

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>COMMUNICATION</th>
<th>INTERACTION</th>
<th>LEARNING</th>
<th>KNOWLEDGE SHARING</th>
<th>COLLABORATION</th>
<th>ROLES AND SOCIAL STRUCTURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>What kinds of activities generate energy and support the emergence of community presence?</td>
<td>How members communicate on an ongoing basis to accomplish the community’s primary purpose?</td>
<td>What kinds of interactions (with each other and with the content of the community) generate energy and engagement?</td>
<td>What are the learning goals of the community, and how can collaborative learning be supported?</td>
<td>What are the external resources (people, publications, reports, etc.) that support the community? How members share these resources and gain access to them?</td>
<td>How community members collaborate with each other to achieve shared goals?</td>
<td>How community roles are defined (individuals, groups, group leaders, community administrators, etc.) and who take them on?</td>
</tr>
<tr>
<td>1) A searchable online directory of members and their interests. (2) Being able to post questions or seek advice from a rich and diverse pool of members’ experience. (3) Receiving intelligence on resources, activities and opportunities relevant to one’s interest.</td>
<td>Members contact each other either through the database (which includes searchable fields of members’ interests and expertise) or by asking CHAIN’s staff to send out on their behalf an email message targeted to a relevant subgroup of members.</td>
<td>Information for dissemination comes from two sources: that circulated by staff about jobs, studentships, courses, conferences, funding opportunities, and key publications (a horizon scanning service); and that from CHAIN members which is checked, edited, and targeted by staff.</td>
<td>There is no evidence about the definition of learning goals and tools to support it.</td>
<td>Members can download CHAIN promotional materials, access the sub-groups resources, and read and download presentations from CHAIN events. Subgroups resources can include report, publications, founding opportunities.</td>
<td>Members can interact each other directly or by means of the CHAIN office, that has the aim to elaborate question and let them circulate to relevant members on behalf of members. Staff may want to discuss the targeting of the message with you to be sure of reaching the right people.</td>
<td>CHAIN membership is on the basis of individuals, not organisations. CHAIN includes more than 30 sub-groups and special interest groups which enable members from different components of the network to focus on areas of common interest. The CHAIN staff has the aim to CHAIN’s staff to send out on the behalf to the members the email message targeted to a relevant subgroup of members and to share with them opportunities and resources.</td>
</tr>
<tr>
<td>CORE TECHNICAL STRUCTURES</td>
<td>RELATIONSHIPS</td>
<td>LEARNING</td>
<td>ACTION</td>
<td>KNOWLEDGE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------</td>
<td>--------------</td>
<td>----------</td>
<td>--------</td>
<td>-----------</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CHAIN</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subgroups that are defined by administrators or that allow members to self-join</td>
<td></td>
<td>Web-site links</td>
<td>Online discussions Individual and group calendaring Subgroup working spaces</td>
<td>Keyword and full-text searches (site-wide and by section) Structured databases and database tools Resources directly associated with interaction</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CHAIN core technical structures
Coast city country General Practice Training

The main aim of the Coast City General practice VCP( http://ccctraining.org/about-us/about-cccgpt-2/) was to overcome the isolation of the professionist working in rural areas of Australia and improve their knowledge sharing. Coast City Country General Practice Training (CCCGPT), from January to July 2012. CCCGPT is a regional GP training provider in southern NSW, Australia, covering a region of 160,000 square kilometres. It includes rural and regional areas, incorporating the urban centres of Wollongong and Canberra. It is managed by Coast City Country General Practice Training (CCCGPT) is one of 17 Regional Training Providers (RTPs) delivering General Practice Training across the country. The main target are the GPs of the region. The vision of the VCP is to proote GPs connections to our regions and extend education and professional support to others involved in the provision of primary health care. The VCP gives the opportunity to share resources between the GPs, including reports and opportunities. It has some special sections dedicated to particular aspects of the professional practice. It provides also a calendar that make the participants able to share events and appointments.
<table>
<thead>
<tr>
<th>AUDIENCE</th>
<th>DOMAIN</th>
<th>PURPOSE, GOALS, AND OUTCOMES</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who is this community for? Who are the community’s important stakeholders?</td>
<td>Given the intended audience, what are the key issues and the nature of the learning, knowledge, and tasks that the community will steward?</td>
<td>Given the audience and domain, what is this community’s primary purpose? What specific needs will the community be organized to meet?</td>
<td>What are the benefits to the stakeholders?</td>
</tr>
<tr>
<td>General practice, or family physician</td>
<td>knowledge sharing</td>
<td><strong>Purpose:</strong> To provide advocacy and innovative, quality education that contributes to the standard, sustainability and accessibility of General Practice in our region. Social isolation, which can be described as a kind of loneliness, occurs more commonly during rural terms. The <strong>main goals</strong> are reduction of three types of isolation that in turn lead to decreased knowledge sharing, lowered intention to work in rural areas, and a change of career choice. <strong>Goal 1:</strong> Knowledge Sharing <strong>Goal 2:</strong> Overcoming Isolation/Providing Support</td>
<td>Overcoming isolation and improving connectedness through an online knowledge sharing community shows promise in GP training.</td>
</tr>
</tbody>
</table>
## Deliverable 3.6

### ACTIVITIES

What kinds of activities generate energy and support the emergence of community presence?

### COMMUNICATION

How members communicate on an ongoing basis to accomplish the community’s primary purpose?

### INTERACTION

What kinds of interactions (with each other and with the content of the community) generate energy and engagement?

### LEARNING

What are the learning goals of the community, and how can collaborative learning be supported?

### KNOWLEDGE SHARING

What are the external resources (people, publications, reports, etc.) that support the community? How members share these resources and gain access to them?

### COLLABORATION

How community members collaborate with each other to achieve shared goals?

### ROLES AND SOCIAL STRUCTURES

How community roles are defined (individuals, groups, group leaders, community administrators, etc.) and who take them on?

<table>
<thead>
<tr>
<th>CCCGPT</th>
<th>Participants are encouraged to post questions and comments or to respond again once a facilitator had replied.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1) asynchronous communication in forum 2) chat 3) meetings</td>
</tr>
<tr>
<td></td>
<td>one expert facilitator comment and give feedback. One of the authors (SB) maintained the role of central facilitator, co-ordinating the roster, sending out the weekly newsletter, and acting as support for other facilitators. This role required an average of 3 hours per week.</td>
</tr>
<tr>
<td></td>
<td>CCCGPT is committed to delivering flexible and quality training to the registrars in our region. CCCGPT Registrars are able to choose their own practice placements throughout their training from a pool of longstanding and accredited teaching practices in the region. Further intervention studies could engage more rigorous learning evaluation tools into their communities.</td>
</tr>
<tr>
<td></td>
<td>Publications, reports</td>
</tr>
<tr>
<td></td>
<td>Common task and help (forum) Connect GPR (Chat)</td>
</tr>
<tr>
<td></td>
<td>1) Facilitator (in charge of the Regional Training Provider) 2) participant 3) technical support in charge of University of Wollongong educational technology team</td>
</tr>
</tbody>
</table>

### Table 19 CCCGPT functionalities structure
OPIMEC Observatorio de Prácticas Innovadoras en el Manejo de Enfermedades Crónicas Complejas (Observatory of Innovative Practices in the Management of Complex Chronic Diseases) (http://www.opimec.org/) is a project promoted and financed by the General Secretariat of Public Health and Consumption of the Ministry of Health of the Junta de Andalucía (Spain). The Andalusian Plan for Integrated Care for Patients with Chronic Diseases (PAAIPEC) and the Andalusian School of Public Health (EASP), based in Granada (Spain), are actively involved in this development, as well as an increasing number of innovative people. The participants share a great interest in promote collaborative efforts to improve the care of people with chronic diseases worldwide, especially in the presence of pluripathology, through an integrated model of people-centred care.

OPIMEC it’s a virtual community of practice rooted in a model of Web 2.0. It seeks to promote collaboration and alliances between people, teams and organizations interested in sharing and working together on knowledge, experiences and information. It also looks at excellent organizations and innovative practices in Management of Chronic Diseases and seeks the modernization and improvement of health systems. Users of OPIMEC, members and moderators of the communities’s participate voluntarily.

This community of practice is organized in groups of interest, proposed by the administrator or any platform user. Each group of interest can create its own space within the community itself.
<table>
<thead>
<tr>
<th>AUDIENCE</th>
<th>DOMAIN</th>
<th>PURPOSE, GOALS, AND OUTCOMES KNOWLEDGE</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who is this community for? Who are the community’s important stakeholders?</td>
<td>Given the intended audience, what are the key issues and the nature of the learning, knowledge, and tasks that the community will steward?</td>
<td>Given the audience and domain, what is this community’s primary purpose? What specific needs will the community be organized to meet?</td>
<td>What are the benefits to the stakeholders?</td>
</tr>
</tbody>
</table>

**OPIMEC: Observatorio de Prácticas Innovadoras en el Manejo de Enfermedades Crónicas Complejas**

To improve the care of people with chronic diseases worldwide, especially in the presence of pluripathology, through an integrated model of people-centred care.

OPIMEC is aimed at people and organizations in the field of professional practice, research and management of social and health services, interested in reducing the impact of chronic diseases, with special emphasis in complex chronicity, comorbidity, multimorbidity, complexity and fragility. The stakeholders are foundations, research groups, universities, hospitals, care professionals, care services, public institutions, etc.

The key issues are “Care for chronic patients with complex health needs” and “Innovation in care for people with chronic diseases”, among others. The nature of learning, knowledge and tasks are a learning based on collective reflection on practical experiences. There are different communities depending of the subject of interest. Each practice community has a number of members who develop and share content, participate in the forum and communicate with other members. In general, the members of a community of practice should promote the publication of their contents, so that they can be enriched by the OPIMEC Community through their evaluations and comments.

As a member of a community of practice they can navigate through the different tabs, create collaborative documents or participate in their development before being published. They can also add and view files and links (attachments or web links) and start discussions using forum threads. Users can contact with other people in the community of practice through internal messaging and see/ participate in the development of collaborative documents from other communities, if they have been previously invited.

The mission of OPIMEC is to "coordinate, develop and establish basic structures for the creation and consolidation of a global community in the field of complex chronic diseases and pluripatatology, through systematic search and rigorous selection of innovations and contents of interest, as well as the promotion of collaboration and scientific and technical exchange.

It also collaborates with public service providers, especially the Public Health System of Andalusia, with the responsibility of promoting the generation of new knowledge and instruments to develop a new public health and a new organizational model of health and social services directed to the Population with complex chronic diseases.

In addition, OPIMEC is an initiative that focuses on new technologies, free software, social networks and collaborative global development.

It allows any registered user to create and propose the publication of contents (i.e. add practices, organizations, documents, multimedia, news, events, and Web resources).

It includes information on more than 590 practices or innovations spread around the world and links to almost 2500 contents of interest for professionals, patients and caregivers.

It is the largest social network in Spain related to chronic diseases in Spain. It supports the collaborative creation of knowledge through communities of practice; it call up for pioneering meetings from its thematic (i.e. polypathology, pluripatology, complexity) to the incorporation of new technologies (i.e. e-marketing, streaming); contributes to capacity building efforts through online learning activities based on Network learning; it allows commenting and voting on published content, facilitating the exchange of ideas and the creation of knowledge and encouraging the assessment of information, among others.

Table 20 OPIMEC main concept
## Table 21. OPIMEC functionalities structure

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>COMMUNICATION</th>
<th>INTERACTION</th>
<th>LEARNING</th>
<th>KNOWLEDGE SHARING</th>
<th>COLLABORATION</th>
<th>ROLES AND SOCIAL STRUCTURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>What kinds of activities generate energy and support the emergence of community presence?</td>
<td>How members communicate on an ongoing basis to accomplish the community’s primary purpose?</td>
<td>What kinds of interactions (with each other and with the content of the community) generate energy and engagement?</td>
<td>What are the learning goals of the community, and how can collaborative learning be supported?</td>
<td>What are the external resources (people, publications, reports, etc.) that support the community? How members share these resources and gain access to them?</td>
<td>How community members collaborate with each other to achieve shared goals?</td>
<td>How community roles are defined (individuals, groups, group leaders, community administrators, etc.) and who take them on?</td>
</tr>
</tbody>
</table>

**OPIMEC:** Observatorio de Prácticas Innovadoras en el Manejo de Enfermedades Crónicas Complejas

- Each participant can develop collaborative knowledge, for example through communities.
- It also, can propose the dissemination of innovative practices and organizations in the management of Chronic Complex Diseases.
- Can disseminate other interesting contents such as documents, events, resources, news.
- Can collaborate in the development of a glossary in Complex Chronic Diseases, and in first place, by creating a workspace with a profile, with content, blog and network of like-minded people.
- Can rate and comment published content.
- Participates in the OPIMEC Community can constitute or participate in teams, from which to create collaborative documents, start forums, convene.
- The collaborative documents of this community of practice. The purpose of a collaborative document is to share with others a document that has been previously created by members of a community of practice and developed through their comments and assessments.
- OPIMEC promotes virtual training activities with a practical perspective that contribute to improve the level of knowledge of professionals in the treatment of chronic diseases. Furthermore, it offers two online training courses.
- The courses are developed in a virtual community of practice that enables participants to acquire and share experiences and knowledge with other professionals of the OPIMEC Network, accessing other communities of practice related to the didactic units of the course.
- OPIMEC promotes virtual training activities with a practical perspective that contribute to improve the level of knowledge of professionals in the treatment of chronic diseases. Furthermore, it offers two online training courses.
- Events Documentation Multimedia resources News in the sector Good practices
- As the chapters of a collaborative document were uploaded to the platform, contributors and editors developed a list of experts who felt they could provide useful comments on each of the chapters. They are selected from colleagues they knew or from authors of key articles they had used as reference. The editors then sent an email to the members of that list inviting them to read the chapters and comment, either anonymously or by registering as members of the OPIMEC.

- Administrator
  - Community editor
  - Creators / editors: any user registered in OPIMEC can be creator/ publisher of contents.
  - Collaborators: The creators / editors can select any user of OPIMEC to participate in the Creation / editing of the contents. When a creator / publisher selects a person as collaborator this automatically
| Deliverable 3.6 | subscribe to RSS feeds to stay updated automatically on all kinds of information related to Complex Chronic Diseases. | meetings, etc. | For example, participants in this training activity will be able to access to other training activities also held by OPIMEC through courses more oriented to professionals in the field of management, research and teaching that wish to be introduced in chronicity and polyopathy. | community. In all cases, the support team was willing to offer the necessary technical assistance under the supervision of one of the editors. Throughout the process, the terms “contributor” and “contribution” were considered more consistent with modern approaches that recognize the work of members of taxpayer groups than the more traditional “author” or “authorship” At least a month after the chapters were uploaded to the platform, the editors reviewed all the comments received and produced lists of significant modifications that were sent to the main contributors to incorporate into the texts. Then the editors re-analyzed the revised versions thoroughly and introduced the | has the same permissions as a creator / editor. |
necessary modifications of the main text online. People who had made essential comments, with the consensus of the editors, recognized themselves as contributors to the book.
<table>
<thead>
<tr>
<th>CORE TECHNICAL STRUCTURES</th>
<th>RELATIONSHIPS</th>
<th>LEARNING</th>
<th>ACTION</th>
<th>KNOWLEDGE</th>
</tr>
</thead>
</table>
| OPIMEC: Observatorio de Prácticas Innovadoras en el Manejo de Enfermedades Crónicas Complejas | ▪ Distributed account manager  
▪ Member networking profiles  
▪ Member directory with relationship-focused data fields  
▪ Subgroups that are defined by administrators or that allow member to self-join  
User-controlled delivery modes for notifications and information | ▪ Narrated PowerPoint presentations  
▪ E-learning tools  
▪ Online discussions  
▪ Web-site links | ▪ Project management  
▪ Task management  
▪ Document collaboration | ▪ Keyword and full-text searches (site-wide and by section)  
▪ Online discussions  
▪ Announcements  
▪ Web-site links |

Table 22 OPIMEC core technical structures
PICuida

PICuida: Red de Cuidados de Andalucía (Andalusian’s Care Network) http://www.picuida.es/

PICuida is an Andalusian’s Care Network created by the Andalusian Health Care Service (Andalusian Health Service), where finding scientific information, opinion spaces, access to training resources as well as a place to exchange knowledge. In addition, it also has a place aimed at citizens, where they can find reliable health information, adapted guides and information on Patient Associations. The key and goal of PICuida will be to promote the development and innovation of care in the health system within a framework of inter-professional coordination. It also aims guiding the improvement of health care, based on ethical principles, aligned with the expectations and values of each person. The commitments and objectives of PICUIDA are the following:

1. Participate in the health outcomes of citizenship through care.
2. Ensure citizenship care of excellence with nurse leadership.
3. Adapt care to the specific health needs of the citizens, each person and his / her environment.
4. Ensure the effective participation of citizens in their own care.
5. Guarantee the safety of people in the care process.
6. Manage and generate knowledge in care for excellence, search for results and sustainability of the system.
7. Incorporate technology as a support tool for the advancement of care.

The purpose of this program, is to develop the digital presence of care in Andalusia that enhances the interaction between the health system, professionals and citizens, through the creation of a Network of Care: opinion space, bank of ideas in innovative practices in care, scientific information and knowledge exchange, which include communities of practice and training resources. Each professional participant is called “Picuider”.

Therefore, there are two platforms:

- PICUIDA for citizens: http://www.picuida.es/ciudadania/
- PICUIDA for professionals: http://www.picuida.es/

In this analysis, we will focus in the professional platform. The platform contains many resources in different formats:

- PICUIDA training: training resources.
- PICUIDA participation: through different sections:
  - Agora PICUIDA: repository of good practices
  - Ask PICUIDA: in this section of the web you can ask questions related to the care strategy, procedures, evidence, etc.
  - Question bank: bank with questions made for professionals and asked by them.
  - Proposals to improve, contact.
- PICUIDA resources: Library, webinars, infographics, resources for innovation and research, mobile applications, links to different scientific and professional organizations and institutions related to research and care, access to scientific data bases to find reliable information about health, links to health associations and research observatories, either to receive help from people with equal interests, to join associations or to collaborate as a volunteer.
- PICUIDA communities: actually, there are three virtual communities of practice here: cases management, therapeutical education, and innovation in health.
- PICUIDA news: in this section the user can find information about training courses, professional events, and any interesting new related to health.

This net of resources is linked to Twitter and uses this application as a main way to disseminate their activity.
<table>
<thead>
<tr>
<th>AUDIENCE</th>
<th>DOMAIN</th>
<th>PURPOSE, GOALS, AND OUTCOMES KNOWLEDGE</th>
<th>BENEFITS</th>
</tr>
</thead>
</table>
| PICUIDA: Red de Cuidados de Andalucía | Health professionals | There are three virtual communities of practice:  
- Case management: Community of Practice of Nursing Case Managers, with interest to develop knowledge, improve clinical practice and share their experiences.  
- Therapeutical education: Community of health professionals interested in developing knowledge, improving clinical practice and sharing their experiences in Therapeutic Education.  
- Innovation in health: this is a community of health professionals with interest in research and innovation in care. The objectives are to improve the quality of care, share ideas and establish a network of referents. | The primary purpose is to create a space where professionals can share their doubts and knowledge, and learn through others professional’s contributions. To share their knowledge and be updated. |
### Table 24 PICUIDA. functionalities structure

<table>
<thead>
<tr>
<th>PICUIDA: Red de Cuidados de Andalucía</th>
<th>ACTIVITIES</th>
<th>COMMUNICATION</th>
<th>INTERACTION</th>
<th>LEARNING</th>
<th>KNOWLEDGE SHARING</th>
<th>COLLABORATION</th>
<th>ROLES AND SOCIAL STRUCTURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questions raised in the core of the group.</td>
<td>What kinds of activities generate energy and support the emergence of community presence?</td>
<td>How members communicate on an ongoing basis to accomplish the community’s primary purpose?</td>
<td>What kinds of interactions (with each other and with the content of the community) generate energy and engagement?</td>
<td>What are the learning goals of the community, and how can collaborative learning be supported?</td>
<td>What are the external resources (people, publications, reports, etc.) that support the community? How members share these resources and gain access to them?</td>
<td>How community members collaborate with each other to achieve shared goals?</td>
<td>How community roles are defined (individuals, groups, group leaders, community administrators, etc.) and who take them on?</td>
</tr>
<tr>
<td>Webinars, although this activity does not run inside the virtual community group.</td>
<td>Through publishing messages when the participants are active in their profile.</td>
<td>There is a list with the ten more visited contents, when you can see seminars, articles, calendars or any other popular content. Webinars seem to be the activity that engages more interaction by asking questions through different channels. With the tag #PiCuida on Twitter, through the contact form or leaving a comment on the webinar post. Also, each participant is called a “Picuider”. Those “Picuiders”</td>
<td>The purpose of this program is to develop a Network of Care though an opinion space, bank of ideas in innovative practices in care, scientific information and knowledge exchange, which include communities of practice, and training resources. Nevertheless, there are an space dedicated to training in the main PICUIDA platform with online free courses, training platforms, online. Having access to all the contents, receiving updated information by mail. They can attend Webinars (online conferences). Participants can download manuals and exclusive contents. In addition, they can participate in the Bank of Questions and Answers.</td>
<td>Mainly by posting comments into forums, answering questions in the question bank, participating in webinars, posting in Twitter with the different hashtags designed.</td>
<td>There is an administrator for each community of practices. Eventually could be a moderator. The rest are just participants.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Deliverable 3.6

| may recognize each other by wearing a tag that announces, “this is a Picuider” when assisting to real venues or congress. | resources for training, previous webinars videos, events announcements, scientific health congress venues, etc. |   |   |   |
Table 25 PICUIDA core technical structures

<table>
<thead>
<tr>
<th>CORE TECHNICAL STRUCTURES</th>
<th>RELATIONSHIPS</th>
<th>LEARNING</th>
<th>ACTION</th>
<th>KNOWLEDGE</th>
</tr>
</thead>
</table>
| PICUIDA: Red de Cuidados de Andalucía | ▪ Distributed account manager  
▪ Member networking profiles  
▪ Subgroups that are defined by administrators or that allow member to self-join  
▪ Online meetings/chat  
▪ Online discussions  
▪ User-controlled delivery modes for notifications and information | ▪Narrated PowerPoint presentations  
▪ Web conferencing and webcasts  
▪ Online meetings  
▪ Online discussions  
▪ Web-site links | ▪ Project management  
▪ Task management  
▪ Instant messaging  
▪ Web conferencing and online meetings  
▪ Online discussions  
▪ Subgroup working spaces | ▪ Keyword and full-text searches (site-wide and by section)  
▪ Structured databases and database tools  
▪ Idea banks  
▪ Web conferencing  
▪ Online meetings  
▪ Online discussions  
▪ Announcements  
▪ Web-site links  
▪ Resources directly associated with interaction |
Community of practice in Primary Attention in Health (APS) in Chile

Comunidad de prácticas en APS (Community of practice in Primary Attention in Health (APS) http://buenaspracticasaps.cl. APS it’s aiming to foster collective learning through the interaction of diverse actors, facilitating the identification and the report of experiences in primary attention in health (i.e. good practices and innovative experiences), the exchange of information, resources and work methodologies, allowing to strengthen the collective management of knowledge. Also, the VCOP tries to serve as a meeting point and debate on issues related to policy makers, managers, researchers and professionals in the health sciences in Chile.

During 2010, the Regional Office of the Pan American Health Organization (PAHO / WHO) - WDC Health Systems Area based on Primary Health Care / HSS, Integrated Health Services Project / HSS-SIS WHO / OPS Washington) and the Andalusian School of Public Health (EASP), in partnership with the Ministry of Health (Brazil), leader the project to construct a community of practice in primary health care in the region of the Americas. The final result of this collaboration entailed the creation of the APS virtual community of practice.

For this community, different types of collaborators are defined:

A) Collaborators who provide evidence of good practices (GP): people who identify GP in Chile and abroad, elements of success, allowing a second-order observation of what is being done in the field of GP and allowing the exchange of experiences.

(B) "Advanced" contributors: young people who are already virtually actives, present the community of practice and work together on a proposal of how they would be integrated into the community.

C) Collaborators with a background in the primary health attention who carry out practices with value or who can identify them and act as a bridge between the health teams and the community of practice.

D) Collaborators with career and political responsibilities in the health care system.

Their activity within the VCoP moves around those elements:

- Conversations (Let’s talk). Here the members of the VCoP can exchange ideas and talk about emerging issues of interest to Primary Health Care. In addition, the moderators will disseminate the most solid and constructive comments to the VCoP team, and they will channel the concerns that have arisen in this space towards the national political actors who can do something about it.

- Primary health care forums. Forum around subjects of interest. The idea is to discuss and share the work done in primary care, papers and interviews in different areas of our work (i.e. clinical, management, community, teams).

- Share your experience: review and comment on experiences that may be of interest to the members of the community.

- Good practices bank: with the goal of knowing the good practices deeper and share it with participants. In this section, participants will find a search engine as well as a category and tag selector to help them to find the practice that will approach their interests.

- Resources: with various materials destined to Primary Care teams. Clinical and anticipatory guidelines, relevant APS research, and other documents to support health teams at work, etc.
<table>
<thead>
<tr>
<th>AUDIENCE</th>
<th>DOMAIN</th>
<th>PURPOSE, GOALS, AND OUTCOMES KNOWLEDGE</th>
<th>BENEFITS</th>
</tr>
</thead>
</table>
| Who is this community for?  
Who are the community's important stakeholders? | Given the intended audience, what are the key issues and the nature of the learning, knowledge, and tasks that the community will steward? | Given the audience and domain, what is this community’s primary purpose?  
What specific needs will the community be organized to meet? | What are the benefits to the stakeholders? |

**CREAS: Comunidad de redes para el aprendizaje en salud**

The CREAS (Community of Networking for Health Learning) platform allows anyone to have a space to create and manage virtual communities of practice to interact with other users around issues related to health and social welfare. To do this, CREAS integrates web 2.0 tools that aim to facilitate the exchange and horizontal participation of health professionals, through a series of functionalities such as: blogs, shared file and link management, group calendar, forums, bulletin board. It incorporates the possibility of sending messages in a private way as well as a chat tool. The main stakeholders are health and social professionals, as well as health and social work centres. There are currently 1,866 users working in 130 virtual practice communities. 54,011 messages have been exchanging, as well as 3,400 files, 146 links and 358 blog posts.

This VCP is created by the Andalusian agency of sanitary quality. This agency promotes the management model by competencies, through the implementation of collaborative spaces and tools to support the processes of professional development and training. CREAS is a collaborative space to promote the professional development. Through this CVP, the Andalusian Agency of sanitary quality, puts at the disposal of professionals and health and social centres a tool that support the agency processes of professional development and training. Facilitate the exchange and horizontal participation of health professionals, through a series of functionalities. To keep update and share interest and information with other health professionals.
## Table 27 CREAS functionalities structure

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>COMMUNICATION</th>
<th>INTERACTION</th>
<th>LEARNING</th>
<th>KNOWLEDGE SHARING</th>
<th>COLLABORATION</th>
<th>ROLES AND SOCIAL STRUCTURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>What kinds of activities generate energy and support the emergence of community presence?</td>
<td>How members communicate on an ongoing basis to accomplish the community’s primary purpose?</td>
<td>What kinds of interactions (with each other and with the content of the community) generate energy and engagement?</td>
<td>What are the learning goals of the community, and how can collaborative learning be supported?</td>
<td>What are the external resources (people, publications, reports, etc.) that support the community? How members share these resources and gain access to them?</td>
<td>How community members collaborate with each other to achieve shared goals?</td>
<td>How community roles are defined (individuals, groups, group leaders, community administrators, etc.) and who take them on?</td>
</tr>
</tbody>
</table>
| **CREAS:** Comunidad de redes para el aprendizaje en salud | **Each participant can develop collaborative knowledge, for example through groups of interest. Also, each participant can “follow” other participant’s activity of his/her interest.** | **Each user has a personal space, a desktop, and shared work spaces, as such as groups or communities of practice.** | **Once inside the group the user can do contributions by:**  
- Writing on the blog  
- Posing doubts in the forum  
- Suggesting interesting links  
- Sharing documents  
- Consulting the calendar of the group and calling Meetings or online dating  
- Uploading photos or creating albums  
Each group have associate a blog, which seems to be the tool that generate more energy and engagement.  
In a lateral window in the main page the administrators of the Communities of practice will announce the news that are going put in place in the community.  
There are not specific learning goals in this community of practice.  
Nevertheless, you can create a new group of interest or join an already existing group. There are open groups (that you can join immediately) and closed groups (you need permission) | **There are not specific learning goals in this community of practice.** | **Events**  
- Documentation  
- Blog  
- Multimedia resources  
- News in the sector  
- Good practices  
Once inside a group of interest, a member can make contributions by:  
- Writing on the blog.  
- Communicating doubts in the forum.  
- Suggesting interesting links.  
- Updating material.  
- Consulting the group’s calendar and meetings or online dating.  
- Uploading photos or creating albums.  
By sharing the information about good practices and events.  
Through a box in the main page a participant can share any message (twitter mode, 140 characters) quickly with the rest of users of the community.  
All these messages are published, together with those of other users, in the main page.  
In a central column there is a ’wall’ where all the activity that occurs in the network are displayed.  
Through a forum, They share doubts and opinions with other users in a fast and structured way.  
Unlike the blog, the forum can be used to ask questions to the community and seek answers on specific topics, generating a discussion’s chain.  
There are individuals, groups, group leaders, and community administrators. There is not any formal definition. |
In 2008, the Global Health Delivery Project (GHD) at Harvard University built GHDonline to systematize the translation and dissemination of evidence-based health information into practice. GHD aimed to diffuse knowledge by enabling researchers and practitioners to share all forms of data, expertise and resources widely and quickly. The GHDonline PVCs address common challenges in health care delivery—integrating new treatment protocols, quality improvement measures, and emerging research—within an open-access online platform. Built on this foundation of creating public goods, GHDonline has developed an approach to community management focused on fostering high-quality, dynamic conversations amongst a group of diverse health care professionals. Initially developed for professionals in low-resource settings internationally, GHDonline received funding from AHRQ in 2013 to launch the US Communities Initiative (USCI), a series of PVCs for US-based health care professionals working predominantly with underserved patient populations. Nearly 16,000 health care professionals use these virtual communities to share advice and disseminate proven practices and tools. Target users of the GHDonline PVCs work in a wide variety of roles as clinicians, researchers, program officers, engineers, technical specialists, community health workers, and policy-makers. Each GHDonline community is built in close collaboration with a group of expert moderators who guide and shape community discussions, programming, and events. Moderators ensure interactions in the PVCs are productive, high quality, and relevant to the diverse needs of members living and working in the US and around the world. GHDonline encourages leaders in the field to share their expertise during online Expert Panel discussions—virtual, week-long events that address key issues in the field (see Table 29). Panelists share their experiences and answer member questions in a text-based, asynchronous discussion. In addition to highlighting best practices, Discussion Briefs feature vital references and identify areas for further research and exploration. These documents are reviewed by experts prior to publication and made available exclusively to GHDonline members for reference and dissemination.
<table>
<thead>
<tr>
<th>AUDIENCE</th>
<th>DOMAIN</th>
<th>PURPOSE, GOALS, AND OUTCOMES KNOWLEDGE</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who is this community for? Who are the community’s important stakeholders?</td>
<td>Given the intended audience, what are the key issues and the nature of the learning, knowledge, and tasks that the community will steward?</td>
<td>Given the audience and domain, what is this community’s primary purpose? What specific needs will the community be organized to meet?</td>
<td>What are the benefits to the stakeholders?</td>
</tr>
<tr>
<td>GHDonline</td>
<td>This tool is for experts and practitioners in the field of healthcare.</td>
<td>The community aims at favoring the exchange of information for hands-on health professionals. It deals with clinical issues and issues that are important for the delivery of good healthcare (communication, new technologies, etc.)</td>
<td>The primary purpose is to help healthcare professionals deliver good healthcare. It addresses the need for healthcare professionals to engage in a discussion with other colleagues around critical issues for their work.</td>
</tr>
</tbody>
</table>
### Table 29 GHDonline functionalities structure

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>COMMUNICATION</th>
<th>INTERACTION</th>
<th>LEARNING</th>
<th>KNOWLEDGE SHARING</th>
<th>COLLABORATION</th>
<th>ROLES AND SOCIAL STRUCTURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>What kinds of activities generate energy and support the emergence of community presence?</td>
<td>How members communicate on an ongoing basis to accomplish the community’s primary purpose?</td>
<td>What kinds of interactions (with each other and with the content of the community) generate energy and engagement?</td>
<td>What are the learning goals of the community, and how can collaborative learning be supported?</td>
<td>What are the external resources (people, publications, reports, etc.) that support the community? How members share these resources and gain access to them?</td>
<td>How community members collaborate with each other to achieve shared goals?</td>
<td>How community roles are defined (individuals, groups, group leaders, community administrators, etc.) and who take them on?</td>
</tr>
<tr>
<td>GHDonline</td>
<td>Each community, focusing on a specific theme, is led by an expert. Each has high level moderators who make the discussions dynamic. Evaluation shows 91% satisfaction with the community.</td>
<td>Communities have a forum-like structure. Participants can ask questions, react to others contributions, etc.</td>
<td>Moderators are active and propose new topics for discussion. They share news, updates, new research findings, etc.</td>
<td>The learning goals do not seem to be pre-established: each participant gets involved to achieve their own learning goals.</td>
<td>Each thematic community includes links to relevant research (resources). There is a specific section with resources in each community. It seems that all participants can add resources.</td>
<td>There are several moderators per community. The rest seem to be normal users without specific privileges.</td>
</tr>
</tbody>
</table>
The Canadian Patient Safety Institute within the framework of the Safer Health Care Now designed the web based community of practice for their professionals. The main activities that can be performed within the community include to share the documents and reports, participate in discussion and look for events within the initiative of the Institute. The CPSI VCP enable the users to receive updates from the Safety Improvement Advisors. Each user have to create an own profile and from its profile can manage the the emails and the alerts that receives from the community when new documents or discussions are added. The user could also receive daily and weekly updates. The profile section gives to the user the opportunity to have a view of the list of the groups/communities that has joined. It includes 2 types of communities the public and the private ones. A public community is open to everyone. No login is required to view any of the discussions or shared resources. Private communities require a login and special permission to view and contribute. A private community may belong to an educational program where curriculum materials are posted for the course attendees. Private communities require approval of the administrator to join and are not publicly accessible for public access. Private communities are created for various reasons, such as to help past participants of education sessions continue their learning of patient safety and quality improvement. The benefits of joining the community include contribute to discussions, share documents and set alerts updating you on the community. To oper up a dialogue on a particular topic the user can ask question or add a new discussing topic. Every community has a General discussion boards and some of them may have more than one discussion boards on various topic. The communities topics include several topics Acute Myocardial Infarction (AMI), Advancing Safety for Patients In Residency Education (ASPIRE), Central Line-Associated Bloodstream Infection (CLI), Communities of Practice Administrators, Education/Resource Working Group (EdRes), ICU Collaborative is a national group of interdisciplinary critical care and improvement professionals focused on improving patient care and safety for critically ill patients, Incident Analysis Trainers, Medication Reconciliation (MedRec), Adverse drug events (ADEs), Patient Safety Education Program Affiliate Hub (PSEP – Affiliate Hub), Prevention of Falls (Falls), Quality Improvement and Measurement (QIM), Rapid Response Teams (RRT), Safe Surgery Saves Lives – Canada, SSI - Surgical Site, VAP - Ventilator-Associated Pneumonia, VTE - Venous Thromboembolism.
<table>
<thead>
<tr>
<th><strong>AUDIENCE</strong></th>
<th><strong>DOMAIN</strong></th>
<th><strong>PURPOSE, GOALS, AND OUTCOMES</strong></th>
<th><strong>BENEFITS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Who is this community for? Who are the community’s important stakeholders?</td>
<td>Given the intended audience, what are the key issues and the nature of the learning, knowledge, and tasks that the community will steward?</td>
<td>Given the audience and domain, what is this community’s primary purpose? What specific needs will the community be organized to meet?</td>
<td>What are the benefits to the stakeholders?</td>
</tr>
<tr>
<td>CPSI-ICSP</td>
<td>This community targets healthcare professionals.</td>
<td>The community provides a platform for the exchange of experiences of healthcare professionals by themes.</td>
<td>The aim of the community is to help professionals exchange information and experiences regarding different clinic conditions they are faced with. They seem to prioritise public health issues that are prevalent in the country (Canada), with a focus on allowing for greater patient security.</td>
</tr>
</tbody>
</table>
Table 31 CPSI-ICSP functionalities structure

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>COMMUNICATION</th>
<th>INTERACTION</th>
<th>LEARNING</th>
<th>KNOWLEDGE SHARING</th>
<th>COLLABORATION</th>
<th>ROLES AND SOCIAL STRUCTURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>What kinds of activities generate energy and support the emergence of community presence?</td>
<td>How members communicate on an ongoing basis to accomplish the community's primary purpose?</td>
<td>What kinds of interactions (with each other and with the content of the community) generate energy and engagement?</td>
<td>What are the learning goals of the community, and how can collaborative learning be supported?</td>
<td>What are the external resources (people, publications, reports, etc.) that support the community? How members share these resources and gain access to them?</td>
<td>How community members collaborate with each other to achieve shared goals?</td>
<td>How community roles are defined (individuals, groups, group leaders, community administrators, etc.) and who take them on?</td>
</tr>
<tr>
<td>CPSI-ICSP</td>
<td>The community does not seem to have moderator roles and discussions seem to engage little activity.</td>
<td>Communication takes place through forum-like exchanges.</td>
<td>Participation is free and learning goals are set by each participant.</td>
<td>Each thematic community includes materials that have been shared by participants.</td>
<td>There seems to me no clear moderation or activation of the communities; they look rather inactive.</td>
<td></td>
</tr>
</tbody>
</table>

CPSI-ICSP:
- The community does not seem to have moderator roles and discussions seem to engage little activity.
- Communication takes place through forum-like exchanges.
- Participation is free and learning goals are set by each participant.
- Each thematic community includes materials that have been shared by participants.
- There seems to me no clear moderation or activation of the communities; they look rather inactive.
The Table 32 resume the main characteristics of the existing VCP in health care. In particular we decided to split the main functionalities in five different sections Management of participants (including use role management and profile, group management, personal and shared workspaces, user controlled notifications), Content management (Searching and Browsing, Recommendations, Resource Annotation, Resource Management ) Content types (including Blogs, Collaborative Documents Multimedia Resources , Web Link Suggestions) and Communication (Messaging, Online Meetings, Discussion Forums, Individual and Group Calendars )

Table 32 VCP in health care sector functionalities

<table>
<thead>
<tr>
<th>VCP Platform Functional Feature</th>
<th>Data source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Management of participants</strong></td>
<td><strong>User/Role Management and Profiling</strong></td>
</tr>
<tr>
<td></td>
<td>[Lit_EDUCASE05][VCP_OPIMEC][VCP_CREAS][VCP_PICUIDA][Brain][VCP_CHAIN][VCP_CCCGPT][VCP_GHDonline][VCP_CPSI-ICSP]</td>
</tr>
<tr>
<td></td>
<td><strong>Group Management</strong></td>
</tr>
<tr>
<td></td>
<td>[Lit_EDUCASE05][VCP_OPIMEC][VCP_CHAIN][VCP_GHDonline]</td>
</tr>
<tr>
<td></td>
<td><strong>Personal and Shared Workspaces</strong></td>
</tr>
<tr>
<td></td>
<td>[Lit_EDUCASE05][VCP_CREAS][VCP_CHAIN]</td>
</tr>
<tr>
<td></td>
<td><strong>User-controlled Notifications (reminders, newsletters,...)</strong></td>
</tr>
<tr>
<td></td>
<td>[Lit_EDUCASE05][Lit_Barnett14][52][Lit_Nicoli15][53][VCP_PICUIDA][Interviews_UVa][VCP_CHAIN][VCP_CCCGPT]</td>
</tr>
<tr>
<td></td>
<td><strong>Searching and Browsing</strong></td>
</tr>
<tr>
<td></td>
<td>[Lit_EDUCASE05][VCP_All][Interviews_UVa][VCP_CHAIN]</td>
</tr>
<tr>
<td></td>
<td><strong>Recommendations</strong></td>
</tr>
<tr>
<td></td>
<td>[Lit_Nicoli15][Interviews_UVa]</td>
</tr>
<tr>
<td></td>
<td><strong>Resource Annotation (ranking, labeling, ...)</strong></td>
</tr>
<tr>
<td></td>
<td>[Interviews_UVa]</td>
</tr>
<tr>
<td></td>
<td><strong>Resource Management (upload, remove, share,...)</strong></td>
</tr>
<tr>
<td></td>
<td>[Lit_EDUCASE05][Lit_Barnett14][VCP_All][CHAIN][VCP_CCCGPT][VCP_GHDonline][VCP_CPSI-ICSP]</td>
</tr>
<tr>
<td></td>
<td><strong>Blogs</strong></td>
</tr>
<tr>
<td></td>
<td>[VCP_OPIMEC][VCP_CREAS]</td>
</tr>
<tr>
<td></td>
<td><strong>Collaborative Documents (Wikis, ...)</strong></td>
</tr>
<tr>
<td></td>
<td>[Lit_EDUCASE05][Lit_Barnett14][VCP_OPIMEC]</td>
</tr>
<tr>
<td></td>
<td><strong>Multimedia Resources (text, audio, video,...)</strong></td>
</tr>
<tr>
<td></td>
<td>[Lit_All][VCP_All]</td>
</tr>
<tr>
<td></td>
<td><strong>Web Link Suggestions</strong></td>
</tr>
<tr>
<td></td>
<td>[Lit_Barnett14][Lit_Nicoli15][VCP_PICUIDA][CHAIN][VCP_CCCGPT]</td>
</tr>
<tr>
<td></td>
<td><strong>Messaging</strong></td>
</tr>
<tr>
<td></td>
<td>[Lit_All][VCP_PICUIDA][CHAIN][VCP_CCCGPT]</td>
</tr>
<tr>
<td></td>
<td><strong>Online Meetings</strong></td>
</tr>
<tr>
<td></td>
<td>[Lit_EDUCASE05][Interviews_UVa][VCP_CCCGPT]</td>
</tr>
<tr>
<td></td>
<td><strong>Discussion Forums</strong></td>
</tr>
<tr>
<td></td>
<td>[Lit_All][VCP_PICUIDA][VCP_CHAIN][VCP_CCCGPT][VCP_GHDonline][VCP_CPSI-ICSP]</td>
</tr>
<tr>
<td></td>
<td><strong>Individual and Group Calendars</strong></td>
</tr>
<tr>
<td></td>
<td>[Lit_EDUCASE05][VCP_CREAS]</td>
</tr>
</tbody>
</table>
Table 32 Identified functional features for the CARESS VCP Platform and data sources where the use of the features has been reported (labels are based on the ones shown in Figure 4. Elicitation of the CARESS VCP Platform Functional Features. Data sources are identified by labels subsequently used along the section, particularized according to the contents of sections 6.2, 6.3.1, 6.3.2, 6.3.3).
8 CONCEPTUAL DESIGN

8.1 Non-formal and informal learning recognition

8.1.1 Competence recognition and ECVET

Validation of non-formal and informal learning (the process of its identification, documentation and recognition) is recognized as an important tool in the pursuit of economic and social goals at European level.

A number of EU initiatives and tools focus on this challenge; among them we could cite [CEDEFOP, 2010][57]:

- The European Qualifications Framework (EQF), which has encouraged Member States to work towards the introduction of their own National Qualifications Frameworks, defining levels of learning in terms of learning outcomes;
- The European Credit System for VET (ECVET), a unit-based credit system for vocational education and training, which requires a validation system in order to recognise learning acquired through non-formal and informal means;
- The European Quality Assurance Reference Framework for VET (EQAVET), which provides a framework for a common approach to QA in VET and as such also concerns validation;
- Europass, a set of documents which are recognized across Europe, which people can use to present their skills and qualifications and which enable individuals to ‘visualise and validate’ their learning outcomes;
- The proposal for a European Skills, Competences and Occupations (ESCO) taxonomy, a multilingual dictionary linking skills and competences to occupations, will help to create a common language for employment and education / training and could help to raise the profile of validation;
- The Bologna Process in higher education and the European Universities’ Charter on Lifelong Learning, which includes ‘recognition of prior learning’ as one of the ten commitments made by universities in addressing the development and implementation of lifelong learning strategies.

In the Vocational Education and Training sector, the introduction of the European Credit System for Vocational Education and Training (ECVET) is intended to facilitate[58]:

- the validation, recognition and accumulation of work-related skills and knowledge acquired during a stay in another country or from different learning experiences;
- the development of flexible and individualized pathways;
- the recognition of learning outcomes which are acquired through non-formal and informal learning [CEDEFOP, 2010] [57]

ECVET is based on learning outcomes, units of learning outcomes that are components of qualifications and ECVET points, which provide additional information about units and qualifications in a numerical form. The development of outcomes-based qualifications makes it easier to identify the level of learning which takes place outside the formal system provided this is described in terms of learning outcomes and assessed in a quality assured manner.

Recommendations of the EU parliament and of the council on the establishment of ECVET[59] states that “a learner can achieve a qualification by accumulating the required units, achieved in different countries and different contexts (formal and, where appropriate, non-formal and informal)”

The validation of non-formal and informal learning enables individuals to receive recognition for what they have learnt through professional activities, volunteering or leisure activities or any other learning.
Validation and recognition of non-formal and informal learning can take many forms, from acknowledgement of one’s competences by an employer (appraisal or job offer), through guaranteeing access to a training programme or an exemption from part of the programme to the award of a (full or partial) qualification [ECVET Users’ Group, 2012][60].

The process of validation and recognition of non-formal and informal learning is typically based on:

- the existence of a standard that describes the expected knowledge, skills and competence of a person (this can be a job description, the qualifications standard, or the learning outcomes description of a unit);
- a process by which the individuals’ learning outcomes are identified and compared to the standard: i.e. assessment and validation.

ECVET can support the validation of non-formal and informal learning since:

- ECVET is based on the use of units of learning outcomes; the learning outcomes of a unit represent a ‘standard’ against which a person’s knowledge, skills and competence is assessed (see above);
- the use of units creates the possibility to recognize learning outcomes for parts of qualifications and to give people the possibility to achieve the remaining units of learning outcomes through formal learning;
- ECVET uses the distinction between the processes of assessment, validation and recognition; the assessment process identifies the learning outcomes achieved independent of the process through which they have been acquired; these learning outcomes are then validated based on the unit learning outcomes descriptions and then recognized (see Figure 3).

Figure 3: How can ECVET technical specifications support the validation of non-formal and informal learning [ECVET Users’ Group, 2012].
8.1.2 Non-formal and informal learning in health sector

According to ECVET Glossary [61], “non-formal learning is not provided by an education or training institution and typically does not lead to certification; however, non-formal learning is intentional on the part of the learner and has structured objectives, learning time and learner support”; “informal learning results from daily activities related to work, family life or leisure, it is not structured and most often does not lead to certification; in most cases, informal learning is unintentional on the part of the learner”.

So the difference between “non-formal” and “informal” is given by:

a. intentionality on the part of the learner;
b. the presence of structured objectives, learning time and learner support.

Both of them differs from formal learning which [Hager & Halliday, 2006][56]:
- involves a specified curriculum,
- is taught by a designated teacher or group of teachers,
- involves the learning attained by individual learners being suitably assessed and certified.

As discussed at length in Hager and Halliday [2006], key features of informal learning are:
- that it is indeterminate
- and opportunistic, involves internal and external goods,
- and is an ongoing process as described in the following.

The indeterminate dimension is linked to the fact that it is significantly contextual, i.e. its content is significantly shaped by the particularities of the context in which it occurs [Kelly & Hager, 2015][62]. As well, learners themselves are part of the context, thereby adding to the uniqueness of the particular learning situation. Then informal learning is often connected with making appropriate judgements about how best to proceed in a continually evolving process, one in which participants are required to constantly monitor and perhaps revise their short term goals [Hager & Halliday, 2006][62]. This is a crucial dimension of indeterminacy of informal learning. Finally, much valuable informal learning is significantly tacit [Eraut, 2000][63]. It is the whole-person embodied learning, including affective dimensions that cannot be fully captured in a set of curriculum statements [Kelly & Hager, 2015][62].

Much valuable informal learning is opportunistic and contingent, both at the individual and communal levels. Because informal learning situations are typically indeterminate, they continually throw up unanticipated new learning opportunities [Kelly & Hager, 2015][62].

Finally, informal learning is best understood as an ongoing process of becoming by the learner, rather than as them attaining a particular state in preparation for something else.

All of the above described features fits very well with the Social and Health Care professional context. Social and Health Care Professionals learn through formal learning both at the beginning and throughout their careers; but research demonstrates that learning achieved through informal experiences is equally relevant for achieving full competency as felt by professional concerned and by his/her own colleagues [Cheetham and Chivers, 2011][64]. In Social and Health care, professional practice is not just doing but also learning from doing and building upon existing mental models derived from previous experience [65]. Informal learning involves learning both from others and from personal experience, and can take many different forms [Eraut, 2000][63]. Examples of informal learning are mentoring, learning from complex problems, working above your grade, being forced to change perspectives, and being stimulated to reflect [Cheetham & Chivers, 2001]. A significant part of Social and Health Care Professionals competences development takes place outside formal educational and training contexts [Day et al., 2014][66].
Lave and Wenger [1991][67] attribute all learning to engagement in a Community of Practice (CoP). In their view, learning basically involves becoming an insider and acquiring the ability to behave like a practitioner. The learning of language, technical skills and cultural knowledge takes place through increasing participation. Later, the theoretical perspective on learning in CoP’s has been broadened and actualized within the scope of knowledge management, due to increasing recognition of the value of tacit knowledge and knowledge sharing for organizations [Nonaka et al., 2001][68], including hospitals [Nicolini et al., 2008][69]. Well-functioning CoP’s support a sense of collective identity and provide a social context for exchange of explicit as well as tacit knowledge, which facilitates learning and knowledge creation [Torunn Bjørk, et al., 2013][70].

Virtual Communities of Practice (VCPs) could play an important role in Social and Health Care Professionals competences development, replicating in a virtual environment the main characteristics of presence CoPs. They could support a learning process which can be defined non-formal as well as informal since:

a. they suppose an intentionality on the part of the practitioner joining the community concerning the participation in a process of knowledge sharing and building, although normally there’s no structured learning objectives and learning time in a VCP;

b. learner support is provided in terms of “feeding” and “scaffolding”, i.e. setting up all of the proper conditions in order to enhance the VCP development;

c. in VCPs learning takes place although people are not always consciously aware of it; this process is influenced by the interactions between how the environment affords learning and participation, and how individuals elect and engage in the afforded learning opportunities.

8.1.3 Non-formal and informal learning recognition in CARESS VCPs

As introduced in 8.1.1, ECVET [ECVET Users’ Group, 2012] uses the concept of units, which group learning outcomes into sets that are smaller than the full qualification. Competent authorities may decide to structure their qualifications in units and give learners the possibility to achieve units one by one and to achieve the full qualification following the accumulation of units. The competent authorities may wish to condition the award of the qualification with a requirement that students must successfully pass a final assessment that would indicate that they are capable of combining the knowledge, skills and transversal competences from all units in view of a more complex product or project. So if a set of learning outcomes is defined as well as criteria and conditions to assess the mastery level of knowledge, skills and transversal competences associated to them, the way you get mastered can be flexible and adaptable to specific contexts (formal and, where appropriate, non-formal and informal). Thus, non-formal and informal learning can be the way a practitioner gets mastered about a specific competence.

In CARESS project, pilot courses has been designed in compliance with ECVET, so:

- a set of learning outcomes has been properly set (in terms of knowledge, skills and transversal competences) for each of them, and grouped into units of learning outcomes (see D3.4 - Instructional design documents of 3 national VET pathways targeting different HHCPs);

- specific learning outcomes have been associated to different learning methods, including work-based learning and non-formal and informal learning (see D3.4 - Instructional design documents of 3 national VET pathways targeting different HHCPs);

- a set of criteria and conditions for the assessment has been defined for each of them (see D3.4 - Instructional design documents of 3 national VET pathways targeting different HHCPs and D6.2 - Evaluation and monitoring plan).

In such a way non-formal and informal learning can be recognized. As stated by ECVET, in the assessment process the individuals’ learning outcomes will be identified and compared to the set of learning outcomes.
defined in the pilot design. This will be made through a number assessment methods and tools (detailed in D6.2 - Evaluation and monitoring plan and applied in T6.3 - Formative and summative evaluation of pilots and responsiveness to the needs of job market).

Taking into account these premises, in the conceptual design of the VCP platform tools and functionalities supporting the recognition of non-formal and informal learning should be identified. They should support the recognition of the learning process developed both by the practitioners attending the CARESS pilot courses and, in general, by the future members of the VCPs. In such a way, the CARESS VCP environment could be integrated in other formal curricula targeting HHCPs, as a way to enhance non-formal and informal learning, supporting the recognition of competences developed while participating in the Communities.

CARESS VCP Platform will support non-formal and informal learning recognition by 2 main types of tools and functionalities:

- **users tracking functionalities**: the participation of a member in a VCP will be tracked automatically by the system; information such as number and duration of the connections, visited areas, uploaded documents, messages sent (number and contents), participation in virtual meetings, etc. will be available on the platform; these data could be exported in standard formats; **the export of these data could be managed directly by the user** (VCP member) in order to get information which could be provided to the competent authorities (to teachers for instance) to support competence recognition; a detailed list of tracking data which will be available on the platform will be defined in collaboration with T6.2 (Evaluation and monitoring plan) activities.

- **VCP experience diary**: this tool will allow for a personal description of the user experience as a member of the VCP; it will be managed directly by the VCP member who could choose, among the other functionalities of the platform, to fill-in periodically a diary where he/she could describe his/her own experience in the VCP (activities, discussions, lesson learnt, created contacts, etc.); this tool will provide questions/incitements/hints for the textual description of the personal experience, in specific sections or chapters; the chronological versioning of the resulting diary should be tracked and presented in the final output someway; the user will be able to export the diary anytime, in a user-friendly format.

This approach to non-formal and informal learning recognition is based on the following assumptions:

- VCPs are communities of professionals, which should be responsible for their own learning experiences;
- No role of tutors/teachers/trainers will be envisaged in the platform, since it could be opposite to the nature of VCPs;
- Formal learning institutions and competent authorities could choose to advise learners to engage in CARESS VCPs and ask them to report their activities; so the user (VCP member) should be responsible for reporting his/her own experience; to this end the above mentioned tools and functionalities will be managed directly by the user;
- Provided with both quantitative data about user participation and qualitative data derived by a narrative description of the learning experience, tutors/teachers/trainers could choose the proper way to use these data for the assessment of the achievement of specific learning outcomes; for instance, they could be discussed in an oral exam together with other issues included in formal learning units.
8.2 SCENARIOS AND USE CASES

The Analysis of the state of the art in VCPs in section 6.2, as well as the Inquire phase reported in section 6.3, have provided a variety of information sources for understanding the potential affordances of VCPs in general, as well as the specific requirements and expectations for VCPs in the specific sector of Home Healthcare. The analysis of these information sources (see Figure 4) has helped in the identification of the main set of functional features that would be needed for a technical platform supporting the envisioned VCP for Home Healthcare. Such technical platform will be developed within the CARESS Work Package 5 (“Pilots Implementation: Virtual Communities of Practice (VCP) Building and Support”).

The following use cases illustrate the main types of tasks that the participants of the CARESS VCP are expected to carry out (they do not cover the complete space of functional features, which will be provided in the technical documentation to be generated in WP5). These use cases are related to the identified functional features for the CARESS VCP Platform enumerated in Table 1 below. In a typical requirements elicitation process, use cases are formulated well before deciding about the main functionalities of the supporting system. However, in this case, we are combining a top-down approach (the formulation of a set of use cases by domain experts) with a bottom-up approach (identification of typical functional features of VCP platforms for VCPs in the field of Home Healthcare). This way, knowing in advance affordances provided by typical VCPs, domain experts can reflect and elaborate on how to use such affordances for their specific needs.

The following use cases assume that in the CARESS VCP:

- There will be four main types of members or roles:
  - VCP Member: any user registered in the VCP platform. All VCP Members will be allowed to carry out basic community actions: search/browse people or groups, suggest the creation of groups, managing their own profile, managing their social network within the community, contribute to the groups they belong to.
  - Moderator: a VCP Member (typically someone belonging to the CARESS consortium) with special rights to intervene in any of the groups of the community.
o Technical administrator: VCP Member (typically someone belonging to the CARESS consortium) with permissions for any type of action.

o VCP Senior Member: VCP Member promoted (by the Moderator or the Technical Administrator) to be moderator or a specific group within the community.

- There will be two main types of groups in the VCP:
  o National/International professional groups. These groups will be created by the Technical administrator or the Moderator (e.g., Group of Italian Nurses). The enrollment of VCP Members to these groups will be made automatically after registration in the platform (according to the profile provided by the registered user).
  o Thematic groups. Groups of VCP Members with a specific common interest. The creation of these groups will be suggested by VCP Members and approved by the Moderator.

In any case, more detailed rules for the feeding of the groups will be defined in T5.2
### Table 33 Use Case Suggestion for the Creation of a “Thematic Group”

<table>
<thead>
<tr>
<th>Use Case</th>
<th><strong>Suggestion for the Creation of a “Thematic Group”</strong></th>
</tr>
</thead>
</table>
| Involved Roles | Group Manager (the VCP Member that suggests the creation of the Group)  
VCP Moderator (who will approve, or not, the creation of the Group)  
Group Collaborators (VCP Members that are invited to join the Group) |
| Short description | A member of the VCP suggests the creation of a group of members to collaborate around a specific topic of interest |
| Sample scenario | A Spanish nurse (a VCP Member that will play the role of Group Manager) wants to discuss with other European colleagues (VCP Members in the role of Group Collaborators) about how to administer new treatments for Alzheimer’s disease based on transdermal Patches. Her ultimate goal is to generate a document with generic guidelines and best practices.  
The Group Manager selects the option of “Create Group” in the platform, names the group as “Alzheimer transdermal patches”, indicates that it is aimed at “Nurses” and selects a set of tags for the group (that includes the already existing tag “Alzheimer”). Additionally, the Group Manager selects, among her existing network of contacts, those specific people that she wants to invite to the Group. The Group Manager also indicates that the Group accepts requests for joining (from VCP members not initially invited by the Group Manager).  
The VCP Moderator receives a notification indicating that the creation of a new group has been suggested. The VCP moderator checks that the group is compliant with the policy of the VCP and approves its creation.  
The Group Manager receives a notification indicating that the creation of the group has been approved.  
The Group Collaborators (those who configured the VCP platform for receiving mails about Group Membership invitations) will receive an email with an invitation to join the “Alzheimer transdermal patches” Group. The Group Collaborators will accept the invitation by clicking in a URL or by entering the VCP platform and checking the “awaiting invitations” section.  
All involved participants will see the “Alzheimer transdermal patches” group in their “My Thematic Groups” section. This way they all will be able to access the “Alzheimer transdermal patches” Group workspace. |
| Pre-Conditions | All involved roles are already registered in the VCP platform as Members  
Group Collaborators are members of the network of contacts of the Group Manager |
| Post-Conditions | A new Group workspace has been created. Only Group Manager and Group Collaborators can access this Group workspace. Only the VCP Moderator can remove this group. |
| Involved VCP Platform Features (from Errore. L'origine riferimento non è) | Group Management  
Personal and Shared Workspaces  
User-controlled Notifications |
### Joining a Recommended “Thematic Group”

<table>
<thead>
<tr>
<th>Use Case</th>
<th>Joining a Recommended “Thematic Group”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involved Roles</td>
<td>VCP Member (that wants to join the group)</td>
</tr>
<tr>
<td></td>
<td>Group Manager (the VCP Member that suggested the creation of the Group)</td>
</tr>
<tr>
<td>Short description</td>
<td>The VCP platform sends/shows a notification to a VCP members with the recommendation about an existing Thematic Group in the community this members might be interested in.</td>
</tr>
<tr>
<td>Sample scenario</td>
<td>An Italian nurse (VCP Member) registered in the VCP platform indicating her HHCP type (“Nurse”) and selecting several tags to describe her profile. Among the selected tags she chose “Alzheimer”, since in her current job position she is taking care of elderly patients with this type of disease. She has also configured the VCP platform to receive notifications with recommendations about the creation of groups that might fit her interests. At some point, she receives an email notification about a recently created group called “Alzheimer transdermal patches”. This recommendation also appears in the “Recommendations panel” of her personal space in the VCP platform. She clicks in the provided URLs to check the description of the Group. Once she has checked the description of the Group, she can click in the “Join Group” button. Depending on the configuration of the group, the requested membership may be approved automatically or may require the explicit approval of the Group Moderator (the VCP Member that created the group).</td>
</tr>
<tr>
<td>Pre-Conditions</td>
<td>All involved roles are already registered in the VCP platform VCP members that receive the recommendation provided a description of their profile and interests when registering into the VCP platform.</td>
</tr>
<tr>
<td>Post-Conditions</td>
<td>Once the new membership is approved (automatically or by the Group Moderator) the new member can access the Group Workspace.</td>
</tr>
<tr>
<td>Involved VCP Platform Features (from Errore. L’origine riferimento non è stata trovata.)</td>
<td>Personal and Shared Workspaces User-controlled Notifications Recommendation Group Management</td>
</tr>
</tbody>
</table>
### Table 35 Use Case Joining a “Thematic Group” found after a Search (or after Browsing)

<table>
<thead>
<tr>
<th>Use Case</th>
<th>Joining a “Thematic Group” found after a Search (or after Browsing)</th>
</tr>
</thead>
</table>
| **Involved Roles** | VCP Member (that wants to join the group)  
Group Manager (the VCP Member that suggested the creation of the Group) |
| **Short description** | A VCP Member uses the Search feature to look for Thematic Groups in the community s/he might be interested in. Once the Member finds a Group of interest, s/he requests becoming a member. |
| **Sample scenario** | An Italian nurse (VCP Member) registered in the VCP platform indicating her HHCP type (“Nurse”) and selecting several tags to describe her profile. Among the selected tags she chose “Alzheimer”, since in her current job position she is taking care of elderly patients with this type of disease.  
She accesses the “Search for Groups” option of the VCP Platform where she can indicate some “keywords” of interest. For instance, she searches for “Alzheimer” and gets a list of 10 “Thematic Groups”. She clicks on each of them to get a description. Finally, she decides that the most interesting group is the one called “Alzheimer transdermal patches”.  
She can click in the “Join Group” button. Depending on the configuration of the group, the requested membership may be approved automatically or may require the explicit approval of the Group Moderator (the VCP Member that created the group). |
| **Pre-Conditions** | All involved roles are already registered in the VCP platform |
| **Post-Conditions** | Once the new membership is approved (automatically or by the Group Moderator) the new member can access the Group Workspace. |
| **Involved VCP Platform Features** | Personal and Shared Workspaces  
User-controlled Notifications  
Recommendation  
Group Management  
Searching and Browsing |
Table 36 Participating in an “National/International or Thematic Group”

<table>
<thead>
<tr>
<th>Use Case</th>
<th>Participating in an “National/International or Thematic Group”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involved Roles</td>
<td>VCP Member (that wants to participate in the group)</td>
</tr>
<tr>
<td>Short description</td>
<td>A VCP Member is enrolled in a set of groups. These groups can be “National/International” (typically created “a priori” by the VCP Moderator) or “Thematic” (their creation is suggested by the VCP Members dynamically). When a VCP Member accesses the workspace of a Group (regardless of its type), s/he will find a set of tools for contributing to the Group.</td>
</tr>
<tr>
<td>Sample scenario</td>
<td>An Italian nurse (VCP Member) registered in the VCP platform and is already member of the Thematic Group called “Dementia”. This group is listed under the “My Thematic Groups” section of his/her home page in the VCP platform.</td>
</tr>
</tbody>
</table>

![HOME CARE VCP](image)

When she clicks in the icon/button of that group, she accesses the group’s workspace. There, she will find a set of options for contributing to the group and/or interacting with its members. For instance:
- wiki tools: tools enabling multiple people to work together on a single document or file to achieve a single final version.
- polls: sampling or collection of opinions on a subject, taken from either a selected or a random group of people, for the purpose of analysis.
- event calendars: to define and share events or meetings.
- clinical cases: spaces to discuss together about critical clinical cases and share opinions on them.
- repository: collection of reports and documents than can be uploaded/downloaded.
- community: information about the composition of the group and support for communication (e.g., sending private messages, setting up videoconferences, etc.)
- forum/topic of discussion: spaces to discuss about some specific topic proposed by the users.
- bookmarks: links to materials of interest.

### Pre-Conditions

**All involved roles are already registered in the VCP platform**

### Post-Conditions

**None**

### Involved VCP Platform Features

- Personal and Shared Workspaces
- Collaborative Documents
- Multimedia Resources
- Web Link Suggestion
- Messaging
- Online Meetings
## Discussion Forums

**Individual and Group Calendar**

### Diagram

- Select Group
- Access Group Workspace
- Contribute to the Group

**VCP member**
**Table 37 Use case Setting up and participating in an online meeting**

<table>
<thead>
<tr>
<th>Use Case</th>
<th>Setting up and participating in an online meeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involved Roles</td>
<td>VCP Members that belong to the same Thematic Group</td>
</tr>
<tr>
<td>Short description</td>
<td>A VCP Member belonging to a Thematic Group wants to set up an online meeting opened to all the members of the Group</td>
</tr>
<tr>
<td>Sample scenario</td>
<td>An Italian nurse (VCP Member) registered in the VCP platform and is already member of the Thematic Group called “Dementia”, where she has moderator rights (e.g., she suggested the creation of the group and was promoted by the VCP Moderator to the role of “Senior Member”. This group is listed under the “My Thematic Groups” section of his/her home page in the VCP platform.</td>
</tr>
</tbody>
</table>

**HOMECARE VCP**

```
SEARCH FOR GROUPS  SUGGEST THE CREATION OF NEW GROUPS

MENU

MANAGE YOUR PROFILE  COMPETENCE RECOGNITION

SEND A PRIVATE MESSAGE

MY THEMATIC GROUPS

TOPIC: DEMENTIA  TOPIC: PRIMARY CARE

MY PROFESSIONAL GROUPS

NURSES - ITA  NURSES - INTERNATIONAL

When she clicks in the icon/button of that group, she accesses the group’s workspace. There, she will find a set of options for contributing to the group and/or interacting with its members. For instance:```
If she goes to the “Community” option she will find the possibility of setting up a videoconference. She selects that option and she configures the date and time of the videoconference, describes the topic of the conference, and decides whether it will open to all the Group members.

Then, she goes to the “Events/Calendar” option to create a new event in the shared calendar with the data of the online meeting.

All members of the Group will receive a notification with the creation of the event (if they configured the VCP platform for receiving such notifications) and the new event will appear in their calendars. They will be able to join the online meeting by clicking in the link provided in the calendar event.

<table>
<thead>
<tr>
<th>Pre-Conditions</th>
<th>All involved roles are already registered in the VCP platform</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post-Conditions</td>
<td>After creating the online meeting and booking it in the shared calendar, the event will appear in the calendars of all participants in the group.</td>
</tr>
</tbody>
</table>
| Involved VCP Platform Features | Personal and Shared Workspaces  
Messaging  
Online Meetings  
Individual and Group Calendar |
Table 38 Diary activities report

<table>
<thead>
<tr>
<th>Use Case</th>
<th>Diary activities report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involved Roles</td>
<td>VCP Member</td>
</tr>
<tr>
<td>Short description</td>
<td><strong>VCP experience diary:</strong> this tool will allow for a personal description of the user experience as a member of the VCP; it will be managed directly by the VCP member who could choose, among the other functionalities of the platform, to fill-in periodically a diary where he/she could describe his/her own experience in the VCP (activities, discussions, lesson learnt, created contacts, etc.); this tool will provide questions/incitements/hints for the textual description of the personal experience, in specific sections or chapters; the chronological versioning of the resulting diary should be tracked and presented in the final output someway; the user will be able to export the diary anytime, in a user-friendly format.</td>
</tr>
<tr>
<td>Sample scenario</td>
<td>A Spanish nurse (VCP Member) registered in the VCP platform participate in the VCP in the Thematic Group “Frailty”. She shares with the other component of the thematic group the WHO guidelines on frailty management and asks to the members involved group some suggestion about how to implement the guidelines. This starting point make It possible to open a dialogue and the share of the experiences with the other VCP members. After concluding the activity the nuers decide to request for a recognition of the competences gained in the VcP. He/She accesses to the Comentence recognition function and reports on the activity diary, the activities perfomed.</td>
</tr>
</tbody>
</table>

![Image of HOMECARE VCP interface](image-url)

| Pre-Conditions | VCP member |
| Post-Conditions | |

562634-EPP-1-2015-IT-EPPKA2-SSA CARESS Project 82 of 106
<table>
<thead>
<tr>
<th>Involved VCP Platform Features</th>
<th>Competence Recognition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Errore. L'origine riferimento non è stata trovata.</td>
<td>Receives Recommendation</td>
</tr>
<tr>
<td></td>
<td>Contribute to the Group</td>
</tr>
<tr>
<td></td>
<td>Creates Calendar Event</td>
</tr>
<tr>
<td></td>
<td>Creates Calendar Event</td>
</tr>
<tr>
<td></td>
<td>competence recognitiion</td>
</tr>
</tbody>
</table>
The following use cases illustrate the types of tasks that the participants of the CARESS VCP are expected to carry out. These use cases are related to the identified functional features for the CARESS VCP Platform enumerated in Error. L'origine riferimento non è stata trovata. In a typical requirements elicitation process, use cases are formulated well before deciding about the main functionalities of the supporting system. However, in this case, we are combining a top-down approach (the formulation of a set of use cases by domain experts) with a bottom-up approach (identification of typical functional features of VCP platforms for VCPs in the field of Home Healthcare). This way, knowing in advance affordances provided by typical VCPs, domain experts can reflect and elaborate on how to use such affordances for their specific needs.

<table>
<thead>
<tr>
<th>Use Case</th>
<th>Creation of a “Group of Interest”</th>
</tr>
</thead>
</table>
| **Involved Roles** | Group Manager  
Group Collaborators |
| **Short description** | A member of the VCP creates a group of members to collaborate around a specific topic of interest |
| **Sample scenario** | A Spanish nurse (Group Manager) wants to discuss with other European colleagues (Group Collaborators) about how to administer new treatments for Alzheimer's disease based on transdermal Patches. Her ultimate goal is to generate a document with generic guidelines and best practices.  
The Group Manager selects the option of “Create Group” in the platform, names the group as “Alzheimer transdermal patches”, indicates that it is aimed at “Nurses” and selects a set of tags for the group (that includes the already existing tag “Alzheimer”). Additionally, the Group Manager selects, among her existing network of contacts, those specific people that she wants to invite to the Group. The Group Manager also indicates that the Group accepts requests for joining (from VCP members not initially invited by the Group Manager).  
The Group Collaborators (those who configured the VCP platform for receiving mails about Group Membership invitations) will receive an email with an invitation to join the “Alzheimer transdermal patches” Group. The Group Collaborators will accept the invitation by clicking in a URL or by entering the VCP platform and checking the “awaiting invitations” section.  
All involved participants will see the “Alzheimer transdermal patches” group in their “My Groups” section. This way they all will be able to access the “Alzheimer transdermal patches” Group workspace. |
| **Pre-Conditions** | All involved roles are already registered in the VCP platform  
Group Collaborators are members of the network of contacts of the Group Manager |
| **Post-Conditions** | A new Group workspace has been created. Only Group Manager and Group Collaborators can access this Group workspace |
| **Involved VCP Platform Features** (from Error. L'origine) | Group Management  
Personal and Shared Workspaces  
User-controlled Notifications |
<table>
<thead>
<tr>
<th>riferimento non è stata trovata.)</th>
<th>Diagram</th>
</tr>
</thead>
</table>

Diagram:

- **Group Manager**
  - Create Group
  - Invite Members
  - Receive Invitation

- **Group Collaborator**
  - Confirm Invitation
### Table 40: Use Case Recommendation of a “Group of Interest”

<table>
<thead>
<tr>
<th>Use Case</th>
<th>Recommendation of a “Group of Interest”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involved Roles</td>
<td>VCP Member</td>
</tr>
<tr>
<td>Short description</td>
<td>The VCP platform sends/shows a notification to a VCP member with the recommendation about an existing Group in the community this member might be interested in.</td>
</tr>
<tr>
<td>Sample scenario</td>
<td>An Italian nurse (VCP Member) registered in the VCP platform indicating her HHCP type (“Nurse”) and selecting several tags to describe her profile. Among the selected tags she chose “Alzheimer”, since in her current job position she is taking care of elderly patients with this type of disease. She has also configured the VCP platform to receive notifications with recommendations about the creation of groups that might fit her interests. At some point, she receives an email notification about a recently created group called “Alzheimer transdermal patches”. This recommendation also appears in the “Recommendations panel” of her personal space in the VCP platform. She clicks in the provided URLs to check the description of the Group.</td>
</tr>
<tr>
<td>Pre-Conditions</td>
<td>All involved roles are already registered in the VCP platform. VCP members that receive the recommendation provided a description of their profile and interests when registering into the VCP platform.</td>
</tr>
<tr>
<td>Post-Conditions</td>
<td>None</td>
</tr>
<tr>
<td>Involved VCP Platform Features (from <em>Errore. L'origine riferimento non è stata trovata.</em>)</td>
<td>Personal and Shared Workspaces, User-controlled Notifications, Recommendation</td>
</tr>
<tr>
<td>Diagram</td>
<td><img src="image" alt="Diagram" /></td>
</tr>
</tbody>
</table>
9 LIST OF FIGURES

Figure 1: Connections among tasks concerning VCPs. ................................................................. 6
Figure 2 Lifecycle phases of VCP design and cultivate ................................................................. 13
Figure 3: How can ECVET technical specifications support the validation of non-formal and informal learning................................................................................................................ 64
Figure 4. Elicitation of the CARESS VCP Platform Functional Features. Data sources are identified by labels subsequently used along the section ........................................................................... 68
10 LIST OF TABLES

Table 1 VCP core technical feature ................................................................. 11
Table 2. Topics of analysis regarding the interview questions.............................................. 14
Table 3. Spanish Pilot target background........................................................................ 17
Table 4. Employed codification system............................................................................. 17
Table 5 Answers to question on contacts with other professionals ........................................ 18
Table 6 Answers to question on share documents ............................................................ 19
Table 7 Answers to question about professional problems.................................................... 19
Table 8 Answers to be part of a professional community...................................................... 19
Table 9. Italian Pilot target background ............................................................................ 24
Table 10. Finnish Pilot target background ........................................................................... 26
Table 11. Main results obtained from target pilots interviews in Spain, Finland and Italy .... 28
Table 12. VCP core technical features ................................................................................ 31
Table 13. Audience, purpose, goals, and vision of the Virtual Communities of Practice already existing in Healthcare sector. ......................................................... 32
Table 14. The activities, technologies, group processes, and roles that support the community’s goals of the Virtual Communities of Practice already existing in Healthcare sector ......................................................... 32
Table 15 CHAIN main concept ......................................................................................... 34
Table 16 CHAIN functionalities structure .......................................................................... 35
Table 17 CHAIN core technical structures ......................................................................... 36
Table 18 CCCGPT main concept ......................................................................................... 38
Table 19 CCCGPT functionalities structure ......................................................................... 39
Table 21 OPIMEC main concept ......................................................................................... 41
Table 22.. OPIMEC functionalities structure ..................................................................... 42
Table 23 OPIMEC core technical structures ...................................................................... 45
Table 24.PICUIDA main concept ......................................................................................... 47
Table 25 PICUIDA. functionalities structure ...................................................................... 48
Table 26 PICUIDA core technical structures ...................................................................... 50
Table 27CREAS main concept ........................................................................................ 52
Table 28 CREAS functionalities structure .......................................................................... 53
Table 29 GHDonline main concept .................................................................................... 56
Table 30 GHDonline functionalities structure ..................................................................... 57
Table 31 CPSI-ICSP main concept ..................................................................................... 59
Table 32 CPSI-ICSP functionalities structure ..................................................................... 60
Table 33 VCP in health care sector functionalities ............................................................... 61
Table 34 Use Case Suggestion for the Creation of a “Thematic Group” ................................................................. 70
Table 35 Joining a Recommended “Thematic Group” ............................................................................................... 72
Table 36 Use Case Joining a “Thematic Group” found after a Search (or after Browsing) ............................. 74
Table 37 Participating in an “National/International or Thematic Group” ...................................................... 76
Table 38 Use case Setting up and participating in an online meeting ........................................................................ 79
Table 39 Diary activities report .......................................................................................................................... 82
Table 40 Use Case Creation of a “Group of Interest” .......................................................................................... 84
Table 41 Use case Recommendation of a “Group of Interest” ............................................................................ 86
11 REFERENCES


60. ECVET Users’ Group (2012) “Using ECVET to Support Lifelong Learning - annotated examples of how ECVET can be used to support lifelong learning” http://www.anpcdefp.ro/userfiles/Ghid_utilizare_ecvet_LLL.pdf


65. Mooi Standing (2010), Clinical Judgement and Decision-Making in Nursing and Inter-Professional Healthcare, McGraw-Hill Education


12 Annex

12.1 Annex I

Let’s imagine a Virtual Community of Practice for «XXX»

Si4Life
T3.6

Funded by the Erasmus+ Programme of the European Union

Imagine a VCP – CARESS Project T3.6

where you can meet with other professionals like you
where you can discuss with them about your job, providing and asking for opinions and experiences
where you feel part of a group, a COMMUNITY of people who play the same job, built on trust, mutual respect and reciprocity
where the COMMUNITY itself could generate new knowledge by the sharing of individual best practices and experiences
... imagine you can enter this place anytime you want...

... in a short break or at lunchtime

... at home, in your free time

... travelling by train on your smartphone

... during a boring meeting or lesson on your tablet

SINCE IT IS A VIRTUAL PLACE

introduce yourself as a professional [xxx nurse for instance]

be recognized as a professional in a COMMUNITY

get in contact with other professionals like you

and USE that PLACE to IMPROVE your PROFESSIONALITY
...imagine that in this virtual place you could find TOOLS for...

...sharing docs (publications, reports, laws/rules, guidelines) useful for your profession

...sharing questions, doubts, request for opinions, clinical cases and discussing them by messages or posts

...sharing personal contacts and arrange professional agreements

...planning common activities

Have you imagined it?
Ok! Good...
So now you can share with us what you’ve figured out
12.2 Annex II

ERASMUS PLUS 2015
SECTOR SKILLS ALLIANCES
AGREEMENT No. 2015 – 3212 / 001 – 001
PROJECT No. 562634-EPP-1-2015-IT-EPPKA2-SSA

WP3 – VCP-Students Interview Supporting Tool

PIN participant

Interviewer

Interviewer signature

Funded by the Erasmus+ Programme of the European Union
<table>
<thead>
<tr>
<th></th>
<th>Interview Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Birth Date</td>
</tr>
<tr>
<td>3</td>
<td>Education Level</td>
</tr>
<tr>
<td></td>
<td>primary</td>
</tr>
<tr>
<td>5</td>
<td>Gender</td>
</tr>
<tr>
<td></td>
<td>Male</td>
</tr>
<tr>
<td>6</td>
<td>Method of interview</td>
</tr>
<tr>
<td></td>
<td>by phone</td>
</tr>
</tbody>
</table>

**Dear MS/Mr....**

Let’s start with few information about the Virtual Communities of Practice that you experienced.

1. *Have you ever use any Virtual Community of practice? When and for how long?*

   Take note according to user free speech

   **NOTES:**
2. Do you know social networks? Which kind of social networks functionalities do you think could be useful also for these virtual communities?

Take note according to user free speech

NOTES:
3. **What function of the virtual community of practice could be more interesting for you? (give an importance ranking)**
   a. Get in contact with professionals like you
   b. Share documents
   c. Discuss about professional problems
   d. Be part of a professional community
   e. Other (specify)

Take note according to user free speech

1.-

2.-

3.-

4.-

5.-

POSSIBLE NOTES:
4. Could you suggest other functions or tools, which could be integrated?

Take note according to user free speech

NOTES:
5. **According to you, what are the main issues/concerns of your profession, which could be addressed/solved/facilitated by participating in such a Community?**

Take note according to user free speech

1) ____________________________________________

2) ____________________________________________

3) ____________________________________________

4) ____________________________________________

5) ____________________________________________

POSSIBLE NOTES:
6. What kind of personal/professional information would you like to share in a Community like this?

Take note according to user free speech

NOTES:

7. Do you think that a community like this could improve your professionalism?

Take note according to user free speech

NOTES:
8. **What can motivate you to devote time to participate in this kind of Community?**

Take note according to user free speech

NOTES:

9. **Do you think you could be motivated to interact also with professionals like you in other countries? Which kind of added value could provide trans-nationality? English could be a problem?**

Take note according to user free speech

NOTES:
10. What kind of personal/professional information would you like to find in a community like this?

Take note according to user free speech

NOTES:

Thank you for your cooperation!