

SEVENTH FRAMEWORK PROGRAMME

ICT and Ageing



extending Professional Active Life

D3.1 Interim Report on Gap Analysis

January 2009

D3.1 – Interim Report on Gap Analysis

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Abstract:

Work Package 1 of ePAL began by mapping the current support environment and relevant actors, in relation to active aging. This information was condensed in the form of a Baseline report. Having refined this Baseline and established a consolidated vision of how to help senior professionals extend their professional active life in Work Package 2 (WP2), the subsequent challenge for ePAL is to identify the development needs (gaps), which will serve as the rough input for constructing the roadmap and reaching the stated vision of ePAL. We further define the “Gap” as the differences which emerge from those practices identified in the Baseline studies carried out in Work Package 1 (WP1) with those identified as an integral part of the Vision established in WP2. The differences between the Baseline and the Vision will determine the overall Gap between current practice and a desired future.

Successful achievement of the ePAL Vision is dependent on a number of endogenous and exogenous factors which have potential to both positively and negatively influence the project’s main aims and goals. This document seeks to highlight the tools the EU needs to aid active senior professionals, relevant socio-economic factors and external influences which have the potential to impact successful delivery of the ePAL roadmap. For purposes of clarity these influences are instantiated and further consolidated into the 3 main perspectives of ePAL, social, organisational & technological, established in WP2. They are then identified with relevant facets of the ePAL Vision according to the level of influence they are likely to exert upon them.

The influence maps developed for the three perspectives provide some qualitative analysis (and visual representation) of the state of potentials and barriers on the road to reach the vision. Therefore, these maps will help experts in observing how difficult or easy it is to achieve every vision facet, as well as serving as input to the next phases of the project.

The achievements summarized in **Deliverable 3.1 (D3.1)** will provide a basis for what limitations need to be addressed in the RTD recommendations of the ePAL roadmap. **D3.1** will also feed into the identification of appropriate organisational models presented in deliverable **D4.1 of Work Package 4 (WP4)**. D4.1 in turn, will highlight key areas of organisational model research that will underlie the strategic research plan to be developed. The analysis identified in these two Work Packages will provide a solid basis for the final “roadmapping” activities due to be carried out in **Work Package 6**.

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1. INTRODUCTION

Deliverable **2.1 (D2.1)** proposed a **1st vision statement for ePAL**, and introduced the **three instantiated vision statements** for the technological, organizational, and social perspectives of this vision. Under this methodology the desired future for the ePAL project was clarified in such a way that future action points could be categorised and addressed separately by specialist actors. Deliverable **3.1 (D3.1)** continues this logic. The chief purpose of the “gap analysis” is to establish how realistic each facet of the three instantiated vision statements is and how difficult these facets will be to realise given the current status (D1.1) and the numerable factors/trends which will influence their realisation.

ePAL’s envisioned future is of an EU in which active senior professionals are supported in their work towards filling the emerging skills gaps in European society. Assuming reduced state pension benefits and private pension funds (being also affected by various factors) will force seniors to remain professionally active for longer, there will be a rise in demand to support the growing number of senior workers. Furthermore, many of the seniors contacted by ePAL have expressed that they view their involvement in some sort of professional activity as a fundamental element of wellness and personal fulfilment. Many of these retired professionals resent the fact that they were forced to retire at a certain age and they would rather prefer to have the choice of continuing working for as long as they wish. This envisioned future is also dependent on governments having recognized the growing trend of an aging workforce and therefore seeing the logic of creating a legal infrastructure that will facilitate both seniors in extending their active role in society and those who look to leverage their skills for the good of the socio-economic system in general.

However, achievement of this vision is also dependent on a number of internal and external factors which do not necessarily follow such logic. For example, a number of organizations and studies have highlighted that regardless of the fact that younger workers will become an increasingly scarce resource, many employers in Europe still attach negative stigmas to senior workers and demonstrate a reluctance to employ or work with them. Fundamental societal changes must take place. ICT technology needs to develop in a senior-friendly way, which means seniors being able to adapt application systems to their needs as well as the creation of new IT tools and systems, the majority of which are still not currently designed with the particular needs of seniors in mind. There is also the concern that the technological, social and organizational changes that are necessary to support the ePAL vision won’t take place before the problem of an aging Europe becomes even more critical.

It is essential therefore if the necessary advances in technology and organizational models are to be developed that their market potential and social function are fully recognized. In this sense, those who build these tools must be aware of a growing silver economy, of seniors and support organizations that will be their principle consumers. Dissemination amongst the private sector of an awareness of a growing number of active senior professionals, who require these advances to facilitate their new role, is key. These advances also need to take place at a time where both the public and private sector of the EU are (justifiably) distracted from these important issues by (we hope) short term concerns for a faltering economy, concerns which might prevent them from preparing for an uncertain future. In short, the achievement of the ePAL vision requires significant investment from a vast number of political, economic and societal actors. The needs of seniors and those of the wider socio-economic system need to be inter-communicated.

Furthermore, the positive developments which do take place cannot happen in isolation. The Technological, Societal and Organisational aspects of the instantiated ePAL vision all identify separate barriers which need to be overcome and challenges which need to be addressed. Efforts to address these barriers and challenges need to be coordinated in line with a common purpose, which requires knowledge of how such efforts complement/interact with each other and develop in tandem. In other words, a purely “technocratic” approach to new ICT development is not a promising way to address the complex challenges of active ageing support.

Previous deliverables of ePAL produced a realistic summary of the current state (baseline) and ePAL vision and delineated the facets which define the desired future needed to achieve this vision. The research presented in this deliverable looks to create a critical analysis of the impact of internal and external factors which will influence if the “gap” between the baseline and the desired vision is surmountable. In so doing, it is intended to act as a guide to experts, observing how difficult or easy it is to achieve every vision facet.

The first stage of this process is identifying the relevant influential factors categorised within a **SWOT analysis**. Within this analysis, positive and negative factors affecting the global ePAL vision are categorised as **strengths, weaknesses** (in regard to the capabilities within the EU), **opportunities and threats** (those influences not directly controlled by the EU). The deliverable then subdivides and feeds these factors into the three key perspectives of the ePAL project in accordance with the **three instantiated vision statements** for the technological, organizational, and social perspectives of the **1st vision statement for ePAL**.

In mapping which specific facets of the ePAL Vision are more difficult to achieve, the work carried out in D3.1 provides a basis for identifying what key areas of further research are needed to tackle specific limitations, to be addressed in the next phase. D3.1 also serves to inform Work Package 4's identification of suitable organisational models for channelling the efforts of senior professionals, in highlighting the main organisational strengths and limitations of the present day EU. In turn, Work Package 4 will highlight relevant areas of research on organisational models for the roadmap. The coordinated interrelation between the two Work Packages provides a consolidated set of analysis to form the basis of the final roadmap of planned actions proposed in Work Package 6 of ePAL.

2. BASELINE FINDINGS

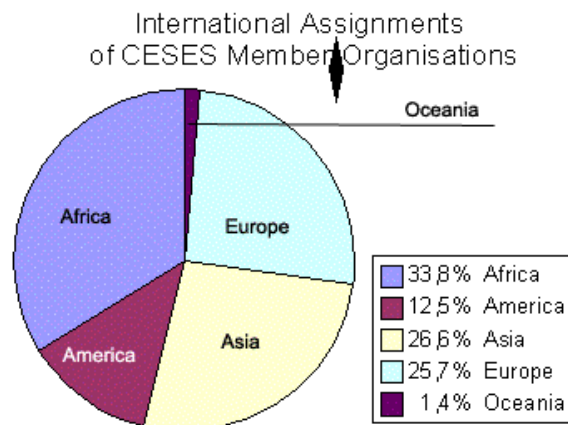
In order to properly prepare the reader for the gap analysis which follows, this Chapter provides a summary of the current state of the art and shortfalls in those social, organisational, and technological factors affecting the extension of active professional life within the EU.

The overriding findings from the ePAL Project's study of the present baseline is that the wider EU is at present, slow to recognize the rationale behind fully supporting the extension of active professional life. The capacity of the service sector to fully support these activities is, at present, limited, given the huge number of individuals that need to be mobilized. A regulatory and fiscal policy environment which can complement and support this sector is also not yet clearly defined.

At present, seniors are still facing a number of legal and fiscal barriers which make it more difficult for them to continue their professional active lives. Education and employment status in the EU needs to become more flexible and react to the new demographic aging reality of the EU's population.

In the private sector, much of these limitations are the consequence of a lack of awareness of senior professionals as potential clients. Though there are some notable exceptions, groups such as Age Concern have highlighted the negative connotations and image which still exists concerning the older worker. Employment agencies are aware that many employers have this negative image of seniors and therefore focus on jobseekers of a younger age even though they have less experience. There are also issues around quantifying and characterizing the skills and experience which seniors offer, when they look to effect a career change in later life.

In the field of senior volunteer organisations, the scale of operations is limited as compared to groups such as the AARP (formally the American Association of Retired Professionals) in North America. The low level of membership for senior organisations in the EU in relation to their potential membership base is a concern. AARP in the US has a membership of over 40 million people age 50 and older, half of whom remain actively employed. It also claims to have the "world's largest circulation magazine". Why are European seniors not engaging with these organisations at the same level as in the US? The social capital and capacity of such an organisation is far greater than anything which exists within the EU. The Confederation of European Senior Expert Services (CESES) represents 25 organisations from the member states of the European Union but only offers the skills and life-time experience of around 24,000 Senior Experts. The EU has a larger population than the US. Furthermore, CESES, the main coordinating body in the Europe sees its role as "to contribute to raising standards of living in developing economies through voluntary assistance to small and medium-size, financially weak, enterprises and institutions". This though admirable, represents a brain drain of the skills of senior professionals working outside of Europe. This is illustrated by a breakdown of project involvement on the CESES' website:



CESES website – Countries Served – Accessed from CESES website;
<http://www.ceses.net/Pages/Countries.html>

Figure 1 – Example of international assignments

Discussions with individual associations, members of CESES, also revealed that, in general, there is a lack of demand for their services. In other words, they would have a much wider potential than the limited number of projects / initiatives they are involved in. There is a clear need for an improved brokerage function to identify the market needs and match them with the skills base available on these associations.

In the technological sector, it is clear that many of the present advances in ICT are not aimed at Senior Professionals as a target audience. This is perhaps because those that design this software by and large do not come from a senior generation and do not have a proper understanding of the needs of seniors which they can input into their design. This leads to a vicious circle whereby software and applications are designed for a younger audience who then become its chief consumers and market, influencing its future development. Even if this trend cannot be broken, fully adaptable interfaces can help seniors overcome this lack of understanding through allowing them to adapt ICT tools to their specific needs.

This trend is no more evident than in social networks which are phenomena amongst younger generations, who connect with them in vast numbers and are designed and built around applications with this sector of society very much in mind. Facebook, Bebo and Youtube have made ICT a very important force in mobilizing the social capital of a younger generation, who both relate strongly to this field of communication and are savvy enough to adapt it to their own user generated content. Networks and interconnections are continuously expanded and enriched by this new content. Since this environment is very much designed with the younger user in mind, seniors are wary of and feel excluded from its use. These networks provide a level of adaptability which is aimed largely at a younger generation and while very successful, do not help develop an online culture among seniors.

From an organisational perspective there is a chronic shortage of models which can effectively leverage the usage of the skills of seniors. At present there is still a lack of communication between employers/customers and seniors concerning the skills and experience they can effectively bring to the marketplace. While some positive examples illustrate how SMEs and start-ups, for instance, can benefit from support/mentoring/consultancy offered by senior professionals, the demand has remained quite residual. Effective and efficient new brokers are needed to ensure that such issues do not slow down the rate of adaptation of recruitment and employment practices to the new demographic realities of the EU.

3. GAP ANALYSIS METHODOLOGY¹

We define “gap” as the differences which emerge from those practices identified in the Baseline research carried out in WP1 and those improvements identified as an integral part of the Vision established in WP2. The differences between the Baseline and the Vision will determine the overall gap between current practice and a desired future. The purpose of this Chapter is to explain how this analysis was carried out.

Purpose: To identify the gap between the current baseline and the desired vision.

This process involves naturally a judgment by experts and as such shall consider all addressed perspectives. Putting the baseline and the vision statement side by side will allow making both a conceptual as well as a “visual” comparison and therefore better identification and characterization of the gap.

For this purpose the following steps are adopted:

Step 0: Synthesize the baseline’s findings

Elaborate a synthesis of the main findings regarding the baseline (from D1.1) and follow up activities conducted in WP1.

In order to facilitate the next steps of the gap analysis, this synthesis shall be organized according to the 3 perspectives considered for the vision instantiation and the sub-elements considered under each perspective.

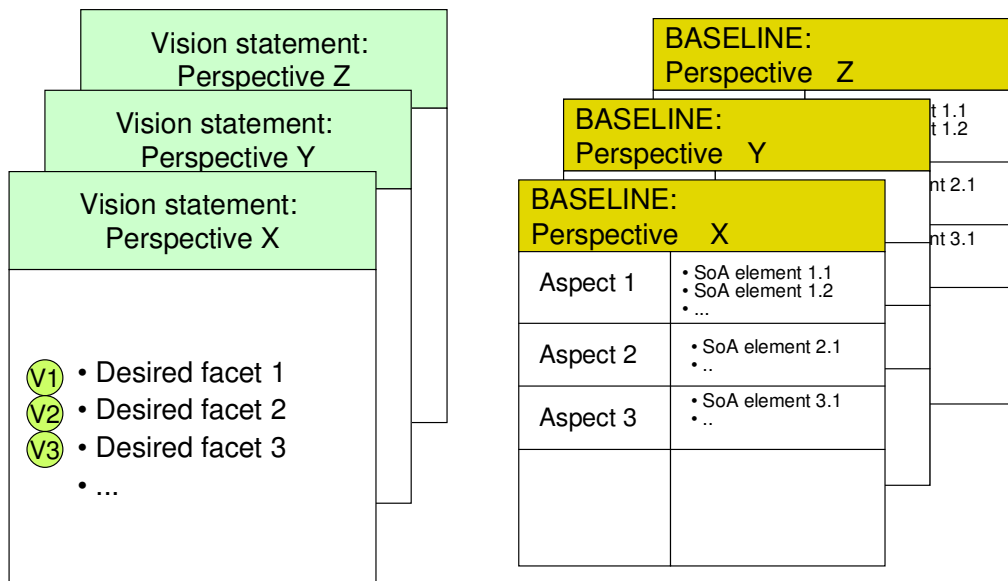


Figure 2 – Synthesis of baseline

An “aspect” in the baseline is one component of the “universe of analysis”. For instance, in the technological perspective we could have;

Aspect 1: Architectures for collaborative networks.

A “desired facet” in the vision usually corresponds to an aspect, characterized with certain aimed value, to partially support the vision. For instance, a desired facet for the technological vision instantiation, associated to the above facet, could be:

Desired facet 1: Novel architectures for collaborative networks.

Here the term “novel” expresses the desired level or aimed value for this aspect in the future.

¹ Prepared by L. Camarinha-Matos and H. Afsarmanesh

Step 1: Elaborate a macro-gap analysis

In this step a macroscopic analysis is elaborated regarding the global vision statement. For this purpose a SWOT analysis method is used.

	Helpful to achieving the vision	Harmful to achieving the vision
Internally originated European Union level	<p>Strengths</p> <ul style="list-style-type: none"> S trength 1 S trength 2 ... 	<p>Weaknesses</p> <ul style="list-style-type: none"> Weakness 1 Weakness 2 ...
Externally originated Surrounding environment	<p>Opportunities</p> <ul style="list-style-type: none"> Opportunity 1 Opportunity 2 ... 	<p>Threats</p> <ul style="list-style-type: none"> Threat 1 Threat 2 ...

Figure 3 – SWOT analysis

The “internal context” shall be the European Union. In other words, the purpose is to identify what are the Strengths and Weaknesses at the European level regarding the potential to achieve the vision. These Strengths and Weaknesses refer to the actors (stakeholders) which the ePAL Vision looks to influence, namely associations of senior professionals, the senior professionals themselves that will constitute their membership base as well the EU governmental bodies, intermediaries and technology developers that will support and help facilitate the work of these actors.

As “surrounding environment” we can consider both the European socio-economic context and the regions outside Europe. This environment is split between Opportunities to be exploited by and Threats to the main actors, previously named, of the ePAL Vision. The wider socio-economic context represents factors beyond the scope of influence by the ePAL project. As such, the roadmap presented by ePAL will not look to directly influence the global EU population and factors relating to the global social and economic development of the EU. As much of the ICT that will be needed to support the extended active life of senior professionals might originate outside the EU’s borders, and global social and economic trends are also relevant, these will also be considered as important “external” factors relating to a surrounding environment.

Step 2: Elaborate a detailed gap analysis

At this stage a detailed gap analysis is made considering the three perspectives under which the vision was instantiated, namely the Technological, Social, and Organizational perspectives. Instead of a full SWOT analysis, this step focuses on two lines of analysis: Strengths and Weaknesses / Limitations. These are the most relevant elements facilitating or constraining the elaboration of a plan of actions. The other elements of a typical SWOT analysis are mainly used during the road mapping process in checking / refining the vision statement.

Since the vision statement is instantiated according to these three perspectives and the baseline is also synthesized according to these same perspectives (step 0), this process can also follow three parallel analysis threads.

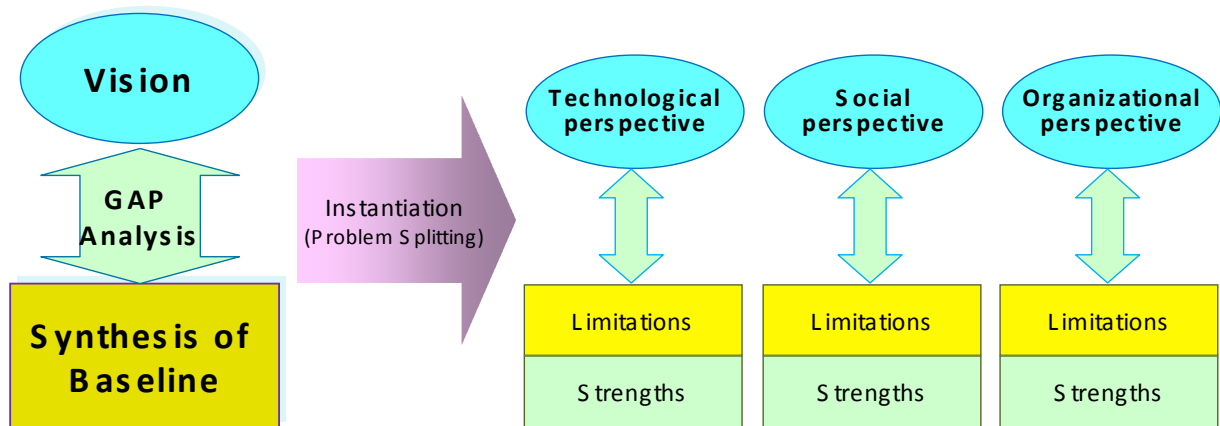


Figure 4 – Gap analysis

For this analysis the detailed facets considered under each perspective shall define the granularity of the analysis. To determine the gaps, the *desired facets* in the vision statement are compared with the *SoA elements* in the corresponding *aspects* of the baseline.

The identified gaps can be expressed through the generation of a set of three “Influence maps” (matrix and/or graph) to represent both the positive and negative influences of the baseline on the achievement of the vision.

Perspective: Technological

	V1	V2	V3	V4	V5	V6		
S1								Positive influence
S2								Moderate
S3								High
S4								
L1								Negative influence
L2								Moderate
L3								High
L4								
L5								
L6								
L7								

Where:

- S1 ... S4 – European strengths identified regarding the considered perspective
E.g.: S1 – Europe has a leading role in conceptualization of Collaborative Networks
- L1 ... L7 – European limitations regarding the considered perspective
E.g.: L1 – Most Internet technologies are still originated in the USA

Figure 5 – Influence maps

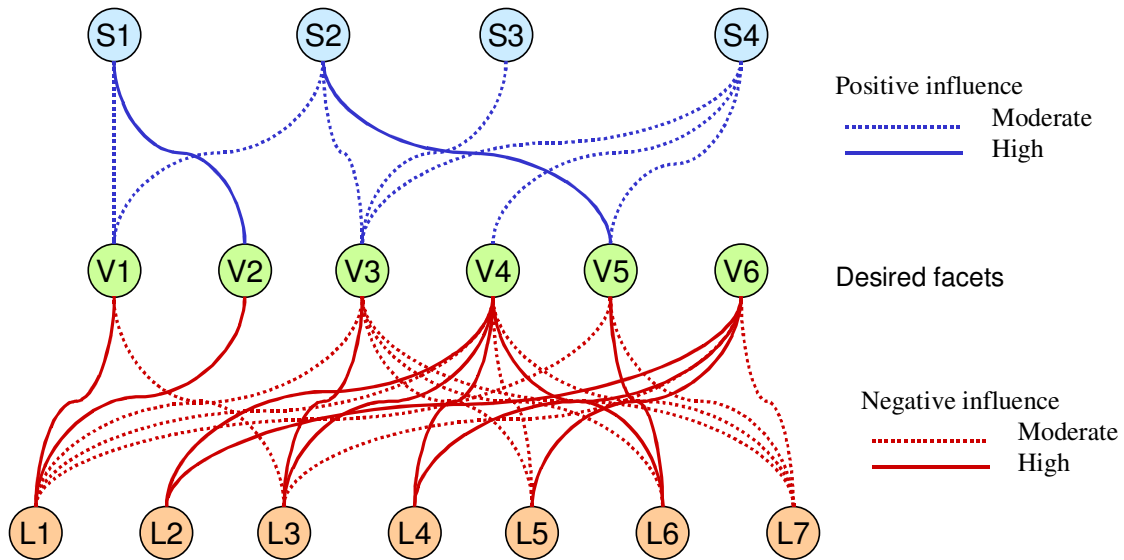


Figure 6 – Influence map – another representation

Since it is difficult to adopt a quantitative scale, a qualitative scale (e.g. High, Moderate) is proposed for qualifying the level of influence of the baseline facets identified as strengths and limitations on the vision facets.

One “strength” is likely to have a positive effect (moderate or high) on some of the vision facets. One “limitation” on the other hand will have a negative influence (moderate or high) on the achievement of some of the vision facets.

The influence maps developed for the three perspectives provide some qualitative analysis (and visual representation) of the state of potentials and barriers on the road to reach the vision. Therefore, these maps will help experts to observing how difficult or easy it is to achieve every vision facet, as well as serving as input to other work packages.

4. GAP ANALYSIS

Step 0 – Synthesis of Baseline Findings

The preparatory phase of the Gap Analysis serves to put it in context with previous Work Packages. The tables which follow show a direct correlation between the ePAL Vision and the consolidated baseline.

Social Perspective

Aspect	SoA Element
<p>Aspect 1 - Social welfare mechanisms</p> <p><i>Vision Facet:</i></p> <p>Motivating mechanisms for senior professionals to join CASPs</p>	<ul style="list-style-type: none"> ▪ Since the end of the 19th century all European countries have set in motion a variety of social security systems, amongst which retirement pensions are notable. ▪ Continental systems are based on the payment of a pension that is entirely State-funded and linked, in varying degrees depending on the country, to the tax payments to the social security system made by the working population. ▪ In Nordic systems, however, the payment of a minimum state pension, sometimes statutory and independent of tax income, is complemented with the availability of income from private pension systems. Private pensions can be either voluntary or obligatory. ▪ In both systems there are usually specific groups of workers (Civil service, army, rural workers, house care etc) that have special pension systems.
<p>Aspect 2 - New adaptable frameworks to facilitate social collaboration</p> <p><i>Vision Facet:</i></p> <p>Mechanisms to support cross-cultural interactions among senior professionals as well as to the active labour force</p>	<ul style="list-style-type: none"> ▪ There are a number of local, national and international organizations which organise the knowledge transfer (on a voluntary basis) between seniors and younger workers, with a focus on the SME market. ▪ One key model is “mentoring” whereby senior retired workers provide help younger workers overcome business challenges either on a one to one or group basis.
<p>Aspect 3 - Mechanisms to enable social cohesion</p> <p><i>Vision Facet</i></p> <p>Mechanisms to support cross generational interaction between seniors and younger citizens; fomenting inter-generational solidarity and understanding within the EU</p>	<ul style="list-style-type: none"> ▪ There are many not for profit organizations in the EU that coordinate philanthropic activities on the part of seniors. ▪ Seniors voluntary networks also often play a key role within their local communities. ▪ However the involvement in active economy is still limited and even senior associations face difficulty in attracting “customers” to the services they are willing to provide.

<p>Aspect 4 - Frameworks to support social knowledge and experience exchange</p> <p>Vision Facet</p> <p>New mechanisms for social networking to help articulate the collective needs of seniors across national boundaries</p>	<ul style="list-style-type: none"> Affective or emotionally intelligent computing even at present stage of development can potentially help facilitate intergenerational communication. As well as positively influence the development of social networks. This is already observed in a few cases that represent a kind of pilot experiments, but more scalable initiatives are needed
<p>Aspect 5 - New human resource policies</p> <p>Vision Facet</p> <p>Mechanisms to support a balanced economic benefits sharing among the entire society including senior professionals.</p>	<ul style="list-style-type: none"> The need for HR departments to plan for this inevitable eventuality has been a relevant topic of concern for a number of years now. Older employees will require a whole different set of benefit packages to their younger counterparts having a different set of health insurance and dependant care requirements corresponding to their more advanced years. Compensation packages are also likely to change as employers look to reduce their overheads through linking pay more to performance than seniority.
<p>Aspect 6 - New approaches to promote life-long learning</p> <p>Vision Facet</p> <p>Mechanisms to capitalise on the increased sense of trust and understanding which comes through leveraging seniors' social capital</p>	<ul style="list-style-type: none"> Education in the EU needs to become more flexible and work in ways that help people work for longer through providing a constant update of skills in reaction to the changing needs of the labour market. In order to make these transition more fluid life long learning, the EU is looking to learn from a state labour model pioneered in Denmark of "flexcurity", whereby citizens are prepared for a more unstable/flexible labour market partially through provision for life-long learning.
<p>Aspect 7 - Demographic Shifts</p> <p>Vision Facet</p> <p>New mechanisms to enhance positive understanding and perception of in society regarding the value of the abilities, skills and experience of senior professionals in the economy.</p>	<ul style="list-style-type: none"> Seniors will form an increasingly larger percentage of the potential EU workforce. It is becoming clear that younger workers are going to become an increasingly scarce resource and those younger workers who are just entering employment are going to have to learn quicker than ever in order to plug the skill gaps that are already emerging in European Society. Senior workers have a role to play in increasing knowledge transfer efforts so that these younger workers are prepared earlier for the demands of the workplace. However, we also need seniors to participate in the economic growth of Europe by continuing to generate wealth and responding to the demands of the marketplace directly.

Organisational Perspective

Aspect	SoA Element
<p>Aspect 1 - Employment and retirement policies</p> <p>Vision Facet:</p> <p>Employment and retirement policies will change to provide greater flexibility for seniors as economic actors</p>	<ul style="list-style-type: none"> Older adults are becoming an increasingly important labor resource. To maintain an active and paid ageing is somehow in contradiction with the unions' agendas that try to keep early retirement ages. In various European regions there is the necessity to give retired professionals an extra income due to the lack of good pensions. A very large percentage of them tend to be self-employed. Two future lines are developing: the possibility of increasing the retirement age and the possibility that once retired, people will be able to earn extra economic benefits by being paid for work or services rendered. However work needs to be done on identifying sources of remunerated employment for seniors. New forms of employment are appearing for senior professionals like regular part-time work, working reduced hours, flexible work schedules, job sharing and telework, but this is not yet a widely disseminated practice. There is a general consensus that in order to secure the continued

	<p>successful development of the EU, national/regional bodies with the help of private sector must redefine the traditional role of pre & post retirees.</p>
<p>Aspect 2 - Global regulations and policies regarding collaboration of businesses with senior professionals</p> <p><i>Vision Facet:</i></p> <p>Global regulations and policies will change to encourage the participation of businesses in collaboration with senior professionals.</p>	<ul style="list-style-type: none"> ▪ Some companies, namely multi-nationals, start to realize the potential of keeping some links with their former employees and thus new organizational forms are emerging. ▪ It is increasing the number of senior organizations which have as principal goal giving professional help to young people, SMEs and other organizations that cannot afford to pay consultancy companies. ▪ The private sector has a number of significant adjustments to make if they are to prepare themselves adequately for an older workforce. The situation is especially true for women who have been the most penalized.
<p>Aspect 3 - Use of knowledge and skills of seniors to generate wealth and stimulate innovation</p> <p><i>Vision Facet:</i></p> <p>The knowledge and skills of seniors will be harnessed to generate wealth and stimulate innovation amongst European businesses.</p>	<ul style="list-style-type: none"> ▪ Senior professionals clearly feel the need and will to remain active and somehow involved in the socioeconomic system after retirement in order to continue feeling useful to the society by sharing their experiences, skills and knowledge. ▪ Some specific mechanisms are available and emerging with the potential of using the professional knowledge and experience of senior people, for instance: the concept of jubilee for retired university professors, free lancing, and time bank. However these mechanisms are still quite limited. ▪ In some regions, concerns with talent shortage are leading to studies on how to keep human resources. ▪ Younger workers are going to become an increasingly scarce resource so the society needs to facilitate elderly workers in increasing knowledge transfer efforts.
<p>Aspect 4 - New forms of intermediate organisations to provide efficient brokerage</p> <p><i>Vision Facet:</i></p> <p>New forms of intermediate organization will provide highly efficient brokerage that will help seniors engage with businesses in Europe</p>	<ul style="list-style-type: none"> ▪ It is difficult for retirees to individually acquire work opportunities in the society that are also being targeted by other formal service providers. Even when such opportunities are brokered, the process of building trust and fulfilling expectations for each individual retiree might be very challenging. ▪ Given the difficulty in establishing relations between the senior professionals and the recipients of their services there is a need for bodies and institutions which develop mediation services between both participants, but such entities do not exist or the interaction mechanisms are not yet in place. ▪ North American organizations seem to have a completely different model in terms of addressing remunerated activity. There are several initiatives helping seniors to find jobs (particularly in the USA and Canada). ▪ The governance rules are practically common to all senior associations and in terms of organization's structure they practically run over similar hierarchies and governance principles. ▪ Apparently all organizations make use of some kinds of basic database systems, however some claim that their systems are quite old and with user interface problems. No adequate profile / competency models seem to be in place. ▪ In order for these organizations to survive several improvements must be taken into consideration, the ICT tools are essential but solving problems such as the socio-economic issues or adapting the social security to this new reality should be thought of. ▪ With the development of new collaborative tools supported by Internet and a better understanding of mechanism of collaborative networks, new organizational forms are naturally starting to emerge in different sectors. An association of retired professionals if provided with new tools and adequate governance mechanisms can represent a special form of a professional virtual community.

<p>Aspect 5 - Financial support to new forms of senior associations and other intermediate brokers</p> <p><i>Vision Facet:</i> There will be significant long-term funding - from both public and private sectors - and the political drive to support new forms of senior associations and other intermediate brokers.</p>	<ul style="list-style-type: none"> ▪ Most organizations depend on a membership fee which can vary from 30€ to 50€. The membership by itself is not enough for the majority. There are organizations that do not charge any membership fee to its members resorting only to public or private external entities or even governmental funds. ▪ Most organizations operate on a relatively passive basis. A frequent complaint is that they do not have enough work for all their members.
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<p>Aspect 6 - Seniors' access to (re)training services</p> <p><i>Vision Facet</i> Seniors will have access to the (re)-retraining they need to facilitate their continued professional life.</p>	<ul style="list-style-type: none"> ▪ Senior associations try to provide some re-training to their members but this training does not seem to be enough. Familiarity with technology is advancing in newer generations but there is still a long way to go. ▪ The universities (except the so-called 3rd age universities, which are not real universities) do not yet offer education for seniors. The concept of life-long learning, when addressed by some universities, seems to be focused on younger ages. ▪ Education and employment status in the EU needs to become more flexible and react to the new demographic aging reality of the EU's population.
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<p>Aspect 7 - Organizational culture embracing relationships between senior professionals and pre-retired (active) professionals</p> <p><i>Vision Facet</i> New organizational structures to positively embrace relationships between senior professionals and pre-retired (active) professionals to increase collaboration potential</p>	<ul style="list-style-type: none"> ▪ A number of different organizational forms and mechanisms are emerging, focused on providing ways to help senior professionals remaining active, in professional terms, after retirement. ▪ Associations of seniors or retired professionals represent an important organizational structure in support of active aging. Many of the existing associations refer the fact that currently they do not find enough activities for all their members. ▪ Regarding existing organizations of professional seniors, they are mostly composed of a "professional elite", have reasonable pensions (in some countries) and can afford to do voluntary activities. However, the number of people involved in such mechanisms is not very high. ▪ Organizations such as Age Concern are working to address the negative stereotypes surrounding older workers. We also need to recognize the role of and support those who provide a home environment for elderly workers and have a large responsibility for supporting them financially and socially. ▪ Workplaces are also a social hub and continued employment can have the positive effect of extending the social side of work which many retirees miss upon leaving work. This is available in universities (jubilee professors) and a few large companies only.
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Technological Perspective

Aspect	SoA Element
<p>Aspect 1 - Theoretical foundation for technological developments</p> <p><i>Vision Facet</i> Development of collaboration ontology supporting variety of stakeholders</p>	<ul style="list-style-type: none"> ▪ Good progress was achieved on conceptual models for collaborative networks (CN) during recent years, including reference models (e.g. ARCON), CN taxonomy, VBE generic ontology, understanding of the VO creation process, etc. ▪ Achieved research results in the area of collaborative networks mostly address challenges related to collaboration among organizations, e.g., the results from the ECOLEAD project. Considering the ePAL scenario, these results need to be adapted and extended to meet the requirements and challenges related to collaboration among senior professionals. ▪ More research is needed on "soft issues", including trust management, collaboration readiness assessment, value systems alignment and credit assignment, emotional health of the network, etc.

<p>Aspect 2 - Advanced collaboration support services, including (virtual) teams' formation and management</p> <p><i>Vision Facet</i> Advanced collaboration support services, including (virtual) teams' formation and management & Support for establishment of trust among stakeholders</p>	<ul style="list-style-type: none"> ▪ Various advanced prototypes have been developed for management systems for VO Breeding Environments and Professional Virtual Communities, including tools for VO / VT creation and negotiation have been developed (e.g. ECOLEAD project), but still with limited use in real businesses. ▪ Generic tools in the areas of CSCW and social networking (including chats, forums, emails, VoIP, etc) are becoming widely available.
<p>Aspect 3 - Support for user-generated knowledge content</p> <p><i>Vision Facet</i> Support for user-generated knowledge content</p>	<ul style="list-style-type: none"> ▪ Configurable document management platforms supporting multiple users & different roles, over the net are becoming available (e.g. JOOMLA). ▪ Various successful experiments (and supporting platforms) for "mass creation" of generic multimedia content (videos, photos, podcasts, etc.) are available (e.g. YouTube, Flickr, blogs). This is also creating a "culture" of content sharing. ▪ However, when it comes to supporting the generation of business related content (processes, drawings, and other technical data) the possibilities are much more limited and there are also many interoperability problems. ▪ This area also raises many unsolved issues e.g. IPR, ethical principles, ownership and protection.
<p>Aspect 4 - "Configure yourself" based philosophy infrastructure</p> <p><i>Vision Facet</i> "Configure yourself" based philosophy infrastructure</p>	<ul style="list-style-type: none"> ▪ Some preliminary attempts to let the user configure his/her user interface and customize his/her desired functionalities/services that are provided by a shared system, through composing / assembling the system's components have started to appear (still in a rudimentary form) in some Internet systems (e.g. FaceBook, i-Google). ▪ Sustainable development of this concept requires the creation of libraries of components and proper interoperable reference architectures.
<p>Aspect 5 - Easily adaptable and customizable user interfaces</p> <p><i>Vision Facet</i> Easily adaptable and customizable user interfaces</p>	<ul style="list-style-type: none"> ▪ The growing number of application features and the desire to optimize usage of screen space raise the need to allow users or applications to customize the interfaces. Adaptive interfaces that can change their appearance based on some algorithm, such as a least-recently used criterion (e.g. the Microsoft XP/ Vista desktop icons, Portlet internet technology, etc.) start to appear. ▪ One of the simplest forms of user interface customization is the notion of skins and themes available in some applications and user interface toolkits (e.g. Microsoft OP themes, iGoogle). ▪ Other efforts are being directed towards automatic adaptation of different output channels (PCs, mobile phones, PDAs, etc.). ▪ Together with the "configure yourself" approach, this area is likely to have fast developments in the coming years.
<p>Aspect 6 - Tools supporting the process of value creation</p> <p><i>Vision Facet</i> Tools supporting the process of value creation</p>	<ul style="list-style-type: none"> ▪ Preliminary conceptualization of value systems and benefit analysis for collaborative networks is emerging, but not practical support tools are available yet. ▪ Most existing value systems focus on providing guidelines related to optimizing and/or sharing organization's or individual's gains, and typically related to financial gains. However, the current regulations in some European regions restrict any sort of financial gains for retired professionals, and therefore for ePAL scenarios, new value systems and related supporting tools need to be developed. ▪ There is a lack of sound models and tools for IPR and risk management in CNs, which are fundamental in promoting value creation.

<p>Aspect 7 - Affective computing and context aware enriched environments</p> <p><i>Vision Facet</i> Affective Computing and context aware enriched environments</p>	<ul style="list-style-type: none"> ▪ Affective computing is a new and very active research field. So far most efforts have been put in the perception/recognition of emotions (e.g. biosensors, digital cameras, speech treatment) and expression of emotions through complex media (e.g. robots, avatars, music). However, results are still at an early stage. ▪ Other research activities in affective neuroscience and psychology indicate that human affects and emotional experiences play a significant and useful role in human learning and decision-making. ▪ It is becoming clear that the utilization of emotions to regulate virtual environments (to motivate, engage or create trust) is a promising approach, but no developments yet exist in this direction. In the ePAL context, new directions for affective computing can be opened such as identification of the emotional state of the community / network (collective emotion), use of affective principles to smooth collaboration, development of self-healing mechanisms in case of conflicts, development of emotional models focused on elderly, etc. But all these areas are practically untouched.
<p>Aspect 8 - Contractual and cooperation agreements, including negotiation support</p> <p><i>Vision Facet</i> Novel contractual and cooperation agreements, including negotiation support</p>	<ul style="list-style-type: none"> ▪ Some contract models / frameworks were developed for specific domains (e.g. civil construction) but this is still a research issue. ▪ Various prototypes and models of negotiation, namely following a multi-agent -systems approach, have been proposed, but are still far from practical use. ▪ There are also some conceptual and prototypical developments on e-institutions such as e-notary, including safety infrastructures, but still with poor integration with collaboration environments. ▪ For the support of electronic contracts and negotiation some facilitating tools have been suggested such as "Contract wizards".
<p>Aspect 9 - Marketing and brokerage services</p> <p><i>Vision Facet</i> Advanced Marketing and brokerage services</p>	<ul style="list-style-type: none"> ▪ Intensive developments around Service Oriented Architectures turned this approach and associated technologies a "popular" stream in systems integration, service publishing and access. Various standards try to facilitate the interoperability issues. However, the usage of this technology still requires good technical skills. ▪ Considering the universe of SMEs and senior professionals, further developments are needed, namely in the following directions: <ul style="list-style-type: none"> - Facilitating the technology usage by people not very skilled in SOA. - Development of new conceptual and technological approaches to introduce a "pro-active" component in the software services. E.g. more dynamic services marketing / brokerage (how to make services provided by senior professionals known to the universe of potential clients). A combination of principles from SOA, Multi-agent systems, and blackboard architectures might provide some background in this direction. - Elaboration of libraries of template services oriented to consultancy activities (and particularly to the kind of consultancy services to be provided by senior professionals).
<p>Aspect 10 - Networking models for elderly communities' involvement with the socio-economic system</p> <p><i>Vision Facet</i> New networking models for elderly communities' involvement with the socio-economic system</p>	<ul style="list-style-type: none"> ▪ In addition to the free-lancing activities, several (virtual) communities try to organize groups of retired professionals and promote their active ageing. ▪ One fundamental role for the establishment of collaborations among senior professionals is related to the intermediation of the interactions between individual senior professionals and clients for their services. The intermediary organizations can be either brokers or regulatory bodies. There is still a lack of clear understanding on how this role can be handled and who (or which organization) is responsible. Thus models and tools need to be developed to guide and support the needed interactions related to this role. ▪ These communities try to promote the involvement in the socio-economic system but currently face a number of limitations: <ul style="list-style-type: none"> - Most actions are carried out by single individuals (no real notion of collaborative network / team work). - Very limited brokerage functionality. - Poor integration with the other stakeholders of the socio-economic system, thus not really known by potential customers.

	<p>- Very little use of collaborative technologies is made as these communities only have access to basic tools.</p>
<p>Aspect 11 - Security and ethical / privacy support</p> <p>Vision Facet</p> <p>Security and ethical/privacy support</p>	<ul style="list-style-type: none"> ▪ A large panoply of mechanisms and tools for safe communications (including cryptography), user identification and authentication (including biometric systems), access / visibility rights definition and control have been developed. ▪ Most of the base building blocks in this area are available, but their integration and configuration according to the specific needs of each application scenario is still a difficult issue. ▪ When considering the ePAL scenarios, in which it is necessary to combine leisure / social activities with professional activities, there is a need to design proper reference architectures that cope with these specific contexts.

Step 1: Macro-gap analysis

The main purpose of this stage of the analysis is to provide a balanced, all-inclusive consideration of the challenges faced by the socio-economic & political stakeholders who will be charged with the successful realisation of the global ePAL Vision.

In seeking to provide a macro perspective, the main factors affecting this realisation are identified as positive and negative as well as endogenous or exogenous to the main areas of direct influence for ePAL. Those factors highlighted in Strengths represent positive recent developments in the EU context which the recommendations presented in the ePAL project will count on when trying to reach the vision. Weaknesses represent internal EU factors which represent obstacles to implementing the vision and thus require special attention. Both these categories are thus considered endogenous as they relate to areas the project is looking to directly influence. Opportunities represent key areas which the principal actors/stakeholders (detailed in the methodology presented in Chapter 3 of this deliverable) affected by the ePAL Vision can look into in order to exploit them for the benefit of both themselves and the wider EU society. Threats highlight the factors beyond the direct scope of the envisioned stakeholders which have the potential to negatively impact upon the desired future, envisioned by ePAL. These two factors are therefore considered exogenous.

The findings presented in Step 1 of the gap analysis in highlighting the endogenous Strengths and Weaknesses and exogenous Opportunities and Threats affecting the ePAL project are directly related to the global vision of ePAL. At this stage of the overall analysis we are not looking to define the gap in direct relation to the three instantiated perspectives of the ePAL Vision, Social, Organisational and Technological. From an endogenous perspective, the purpose here is to provide a general view of the health of active aging for senior professionals within the EU as well as providing an assessment of what progress has been made and what the main challenges are in regard to achieving the stated aims of the global ePAL vision. Strengths do not represent areas which are sufficiently advanced to achieve the Vision, rather, achievements which need to be built on if this is to be the case. Weaknesses represent areas of shortfalls in the capacity of the key ePAL stakeholders, identified to date, which must be addressed if the Vision is to succeed. Opportunities represent recent developments in the socio-economic system, which have the potential to act as a catalyst for overcoming the Weaknesses highlighted in the endogenous analysis as well further motivation for building on the corresponding Strengths. This is, of course, dependent on their proper exploitation by the key stakeholders of ePAL. Threats, on the other hand, signal situations in the “surrounding environment” (detailed in the methodology presented in Chapter 3 of this deliverable), that if not avoided in the future have the potential to compromise the work of these key stakeholders towards realising the global ePAL Vision.

Global ePAL Vision

<ul style="list-style-type: none"> □ <i>Identifies the required areas of research & development, related to technological, social, and organizational perspectives</i> □ <i>Identifies the requirements from other social bodies (i.e. governmental and other regulatory entities)</i> □ <i>Identifies the potentials for creation of new opportunities in the European market and society</i> 	<p>Core ideology:</p> <p style="text-align: center;">Building a strong and cohesive social fabric to embody active senior professionals, as an important part of the European silver economy</p> <p>Envisioned future:</p> <p>In the coming decade, a comprehensive paradigm will emerge in response to Europe’s ageing population and its inevitable skill shortage, that extends the balanced active life of senior professionals, facilitating the use of their talents and expertise, and thus facilitating value creation from these mature assets, for the benefit of both Europe’s economy as well as the European society as a whole.</p> <p>Main desired facets:</p> <ul style="list-style-type: none"> ▪ Well founded reference model of the environment, specifying its: <ul style="list-style-type: none"> ▪ endogenous (<i>structural, componential, functional, and behavioural</i>) and exogenous (<i>market, support, societal, constituency</i>) elements, and their interlinks ▪ Well established technological infrastructure, support tools/services ▪ Support for social responsibility and adaptation of suitable ethical code ▪ Established organizational infrastructure, supporting economic and societal involvement through government policies and actions ▪ Established national/international regulations for involvement of senior professionals in market/society and related legal frameworks
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Figure 7 – ePAL vision

SWOT Analysis

Strengths

1. **Motivation and awareness of seniors.** Seniors across Europe want to work, have the desire to continue engaging in meaningful activity and are increasingly aware of their political power and economic potential.
2. **Changes in the way we work.** The diversification of working practices across Europe has created new opportunities for seniors to continue active engagement with society in a way that matches their capacity and willingness. Examples include remote working, the portfolio career, skills-based employment models, flexible working practices etc.
3. **Promotion of initiatives, laws and policies across Europe that support active ageing.** There are many initiatives, both at EU level and at national level, that are aimed at addressing issues around seniors continued active participation in society. These include issues around employment policies, pensions, and support for lifelong learning.
4. **ICT infrastructures exist across Europe to provide the technology building blocks that will be needed to implement the ePAL vision.** The pervasiveness and strength of the ICT infrastructure facilitates interaction across geographical boundaries, and provides the basis for achieving the aims of the ePAL vision. This infrastructure is inducing high levels of engagement in (web-based) tools that facilitate communication, collaboration, content creation and management, document management and so on.
5. **Some inspiring examples of how seniors can interact with business, organisations, society.** There are currently a number of existing initiatives, organisations, networks, and so on that demonstrate better futures for seniors in Europe. These include examples of interactions between seniors and SMEs, pan-European networks that support, organise and coordinate activity, organisations that provide job opportunities (both voluntary and paid) to seniors, initiatives to support seniors in entrepreneurial activities and agencies that promote and provide training to seniors.
6. **Strong conceptual frameworks and implemented pilot studies for collaborative networks.** We have made good progress on the conceptual basis and reference models for a diversity of collaborative networks and their supporting collaboration platforms. The experience of pilot projects is starting to be adopted by senior communities.

Weaknesses

1. **Lack of effective role for governmental bodies within the EU.** There is a lack of funding opportunities for the activities of senior professionals. More government regulations are also needed for Associations of Senior Professionals e.g. labour systems, IPR, liability. At present, there is also too much regulation in terms of the presently overly restrictive retirement laws imposed by many EU governments. Further to this, the creation of incentives for all stakeholders in areas such as tax and social security would also benefit senior workers.
2. **Weaknesses of Associations of Senior Professionals.** At present there is a lack of new organisational, operational and business models for these associations. Many associations display a low level of marketing ability evidenced by their low membership rate. Another common flaw among many such associations is a lack of sufficient mechanisms for identifying funding opportunities within the EU. More benefits need to be derived from the potential for inter Association networking.
3. **Lack of Support Services for Senior Professionals.** There is, in comparison with other sectors of society, a low level of social networking and trust building among senior professionals. Seniors also need an educational sector which offer more options for higher and further education training opportunities. This should be coupled with more research into the job market opportunities for senior professionals.
4. **Lack of effective models for Intermediaries.** More research is needed into effective roles for intermediaries, both brokers and supporters in senior associations. Brokers are defined as those intermediaries that make direct connections between senior associations/senior professionals and their client base. Supporters provide financial advice and funding other forms of more generalised support.
5. **Lack of consolidated Theoretical Base in areas such as reference modelling.** There is a need for a more consolidated theoretical base for ePAL, especially in the areas of reference modelling and architecture.
6. **Lack of effective ICT Support.** More tools are needed for facilitating the provision of services and collaboration of Associations of Senior Professionals, in conjunction with the development of more specialised, advanced user interfaces and “pro-active” semi-automated components. There is also a lack of research into “soft issues”, including trust management, collaboration readiness assessment, value systems alignment and credit assignment, emotional health of the network, etc.

Opportunities

1. **People are becoming more community minded thanks to the web.** Recent years have seen the emergence of new organisational forms and ways to work together on the web e.g. Virtual Communities and Virtual Organisations. This means trust creation is becoming easier to achieve, thanks to the use of the web in the sense that people are getting more used to trusting others remotely. These new avenues create more opportunities to cement trust amongst Senior Professionals and enable them to collaborate better.
2. **Cross Cultural Understanding in Business.** Recent trends show an emergence of increased social protection for people and organisations with special needs. Liberalization and globalization policies have enabled people including senior professionals to work across countries and continents. Therefore, their values are being recognized, while their limits for involvement in the workforce (e.g. limited time) is being tolerated and understood. However, the continuity of this trend needs to be properly supported and thus more funds are needed for intermediate, brokerage, support institutions, Associations of Senior Professionals and Senior Professionals themselves.
3. **The increasing scarcity of younger workers.** The EU has an aging population which will mean the emergence of skill shortages and lead to a scarcity of younger workers. Thus employers will increasingly need to employ Senior Professionals to plug the skill gaps and occupy the positions that the lower number of younger workers will not be able to fill.
4. **Improvements in modern medical science.** People are living longer and modern medical support and healthcare provision means seniors professionals are able to remain actively involved in the socio-economic system of the EU for longer.
5. **Challenges presented by increased competitiveness in the EU Marketplace as a result of globalisation.** Globalisation and relaxed trade laws have opened up the EU Marketplace to competition from outside the EU. In order to survive in this environment SMEs need more investment to keep their competitive edge. Consequently, they are constantly in need of money to invest in professional consultancy and skills training, which is often more than they can easily afford. Associations of Senior Professionals are able to offer these services on a voluntary basis, thus filling a gap in the market. Seniors who have the increased financial security of a private pension will be able to offer their services at a very competitive rate.
6. **ICT Advances in remote worker infrastructure.** Remote worker infrastructure provides more opportunities for seniors to offer their services which are supported by the increased user friendliness of ICT systems. This technology also enables seniors to work from their own home which reduces the negative effects of mobility problems. Seniors who are retiring now and into the future are increasingly proficient in the use of ICT technology.

Threats

1. **Society does not react to change.** Major stakeholders in society – unions, media, politicians, church, and businesses fail to reach social consensus that leads to a timely restructuring of society in order to effectively accommodate the new realities of an older population.
2. **Slow pace of adaptation.** The pace of adaptation in society in terms of technology, business strategies/models, ways of working etc – leads to higher levels of exclusion amongst older people.
3. **New technology brings privacy/ethical issues.** The development of specialised technologies to facilitate human capabilities and emotional interaction increases the risk of intrusions of privacy and complications around ethical issues. Furthermore, use of these technologies could result in social stigma.
4. **Lack of proper regulation.** Failure to implement effective regulations or to embed a wide acceptance of good business practices could discredit the whole ePAL approach.
5. **Failure to adopt an holistic approach in relation to ICT** – ICT development doesn't take account of social, economic and organisational factors – could see new technologies fail to meet the needs of society and, therefore, to be widely adopted.
6. **Loss of Competitive edge in senior related technology.** Failure to invest in advanced collaboration platforms for seniors could see Europe lose its competitive edge in this area as the base technology will end up being American.

Step 2 - Map of Influences

Having contextualised the global vision statement taking into account the relevant endogenous and exogenous factors, the analysis is now reinforced with a description of the main advances achieved and challenges faced in each perspective, social, organisational and technological.

In this step the positive and negative factors established in the Macro Analysis of Step 1 are further detailed according to level of direct influence upon the individual facets of the ePAL Vision. In so doing, these factors have been divided amongst the three main perspectives for the Vision of Social, Organisational and Technological which help to define the extent of the challenge involved in achieving each facet of the vision as well as isolating areas of particular concern.

Social Perspective

Strengths	Limitations
<p>S1 The increasing scarcity of younger workers, leading some companies to start changing their view of older workers</p> <p>S2 Improvements in modern medical science, increasing the duration of healthy senior life</p> <p>S3 Increased competitiveness in the EU Marketplace as a result of globalisation, which may open new opportunities for highly experienced professionals</p> <p>S4 Cross Cultural Understanding in Business means improved collaboration</p> <p>S5 Motivation and awareness of seniors of the benefits of active ageing</p> <p>S6 Motivation and awareness of society for the need to find more sustainable social security mechanisms</p> <p>S7 Senior mentoring and volunteering organisations for seniors are established across the EU and a variety of new experiences are emerging</p> <p>S8 The private sector in some fields is beginning to recognize the need for compensation and benefit packages tailored to senior professionals</p>	<p>L1 Negative and outdated assumptions regarding the abilities of senior professionals persist</p> <p>L2 There is still evidence of discrimination against senior professionals in the workplace</p> <p>L3 Lack of understanding of the specific needs of senior professionals</p> <p>L4 Education in the EU lacks flexibility, with more emphasis needed on life-long learning and retraining opportunities for seniors</p> <p>L5 Lack of a research into those socio-economic sectors in which senior associations could play an increased role</p> <p>L6 Lack of access to computer and high speed internet connections systems in many seniors' homes</p>

Social Perspective Vision Facets

- V1** New mechanisms to enhance positive understanding and perception of in society regarding the value of the abilities, skills and experience of senior professionals in the economy
- V2** Motivating mechanisms for senior professionals to join CASPs
- V3** Mechanisms to support cross-cultural interactions among senior professionals as well as to the active labour force
- V4** Mechanisms to support a balanced economic benefits sharing among the entire society including senior professionals
- V5** New mechanisms for social networking to help articulate the collective needs of seniors across national boundaries
- V6** Mechanisms to support cross generational interaction between seniors and younger citizens; fomenting inter-generational solidarity and understanding within the EU
- V7** Mechanisms to capitalise on the increased sense of trust and understanding which comes through leveraging seniors' social capital

Influence Map:

	V1	V2	V3	V4	V5	V6	V7		
S1	Dark Blue		Cyan			Cyan			Positive Influence
S2		Cyan						Dark Blue	High
S3	Cyan	Dark Blue	Dark Blue		Dark Blue			Cyan	Moderate
S4		Cyan	Dark Blue	Cyan	Dark Blue		Cyan		
S5		Dark Blue			Cyan		Cyan		
S6		Cyan		Dark Blue					
S7	Cyan		Cyan			Cyan	Cyan		
S8									
									Negative Influence
L1	Red		Orange			Red		Red	High
L2	Red	Orange	Orange			Red		Orange	Moderate
L3	Orange	Red	Orange	Orange			Red		
L4	Red		Orange						
L5	Red	Orange			Orange				
L6		Orange			Orange				

Figure 8 – Influence map – social perspective

Organisational Perspective

Strengths	Limitations
<p>S1 Some organizational approaches have manifested in practice, focused on the use of the experience and knowledge of senior professionals e.g. senior professionals associations</p> <p>S2 Changes have emerged in ways of working, such as freelancing and service based contracts, which are more suitable for senior professionals</p> <p>S3 There are some new initiatives, laws and policies across Europe oriented towards supporting active ageing for senior professionals</p> <p>S4 New conceptual frameworks and organizational forms, e.g. the collaborative networks paradigm, as well as the implementation of pilot cases, demonstrate new ways of supporting senior professionals who wish to remain active</p> <p>S5 There is a growing increase in awareness on the part of managers and leaders regarding the need to keep in contact with their retired employees in order to continue using their experience</p>	<p>L1 Lack of common EU-level policies among European countries and the EU itself on the enhancement of active life of senior professionals</p> <p>L2 Lack of proper organizational/operational models to support the establishment and management of associations of senior professionals effectively involved in socio-economic activities</p> <p>L3 Lack of committed organizations and their related business models to act as brokers for senior professionals and to build trust between senior professionals and their potential clients</p> <p>L4 Lack of comprehensive policies, regulations, and laws which favour the involvement of senior professionals in the silver economy, in particular, related to formal positions, payments, and access to opportunities</p> <p>L5 Lack of stable financial sources and supports for associations of senior professionals to enhance their operations and guarantee their continuity. Currently they are operating on the basis of small membership fees which is not enough</p> <p>L6 Lack of specialized and well formalized continuing education for senior professionals to update themselves with the new developments in the market</p>

Organisational Perspective Vision Facets:

- V1** Employment and retirement policies will change to provide greater flexibility for seniors as economic actors
- V2** Global regulations and policies will change to encourage the participation of businesses in collaboration with senior professionals
- V3** The knowledge and skills of seniors will be harnessed to generate wealth and stimulate innovation amongst European businesses
- V4** New forms of intermediate organization will provide highly efficient brokerage that will help seniors engage with businesses in Europe
- V5** There will be significant long-term funding – from both public and private sectors – and the political drive to support new forms of senior associations and other intermediate brokers
- V6** Seniors will have access to the (re)-training services they need to facilitate their continued professional life
- V7** New organizational structures to positively embrace relationships between senior professionals and pre-retired (active) professionals to increase collaboration potential.

Influence Map:

	V1	V2	V3	V4	V5	V6	V7		
S1	Dark Blue	Light Blue	Dark Blue	Light Blue			Dark Blue		Positive Influence
S2	Dark Blue	Dark Blue	Dark Blue		Light Blue	Light Blue	Light Blue		High
S3	Light Blue	Dark Blue	Light Blue	Dark Blue	Light Blue	Light Blue			Moderate
S4			Dark Blue	Dark Blue					
S5		Light Blue	Light Blue	Light Blue			Light Blue		
L1	Red	Red			Red	Orange			
L2							Red		Negative Influence
L3				Red	Orange			Red	High
L4		Red	Orange		Orange	Orange		Orange	Moderate
L5				Orange	Red	Orange			
L6						Red			

Figure 9 – Influence map – organisational perspective

Technological Perspective

Strengths	Limitations
<p>S1 Good progress in conceptual models for collaborative networks (although mostly focused on industry)</p> <p>S2 There is already an understanding of the needed management functionalities for VO breeding environments and professional virtual communities</p> <p>S3 Various partial models and advanced prototypes (e.g. negotiation, trust promotion, value systems) have been developed to support collaborative environments</p> <p>S4 ICT infrastructures exist across Europe to provide the basic communication building blocks that will be needed to implement the ePAL vision</p> <p>S5 Generic tools in the areas of CSCW and social networking (including chats, forums, emails, VoIP, etc) are becoming widely available</p> <p>S6 Configurable document management platforms supporting multiple users, with different roles, over the network are becoming available</p> <p>S7 A large panoply of mechanisms and tools for safe communications (including cryptography), user identification and authentication (including biometric</p>	<p>L1 Lack of consolidated theoretical base in areas such as reference modelling for active ageing support systems</p> <p>L2 Lack of effective and integrated ICT support for collaboration (till large fragmentation of functionalities)</p> <p>L3 ICT research in this area too much focused on the “last phases of life”, reducing the needed attention to active ageing support</p> <p>L4 Fast proliferation of new tools and functionalities without a holistic approach, an obstacle for adoption by seniors</p> <p>L5 There is an increasing trend to focus on a techno-centric approach for ICT R&D, which hinders proper understanding of the critical issues of the socio-technical systems needed to support active ageing</p> <p>L6 Support for Business related content (processes, architecture design, and other technical data) is limited and there are also many interoperability problems</p> <p>L7 There is a lack of sound models and tools for IPR and risk management as well as supporting ethical principles in collaborative networks, which are fundamental in promoting value creation</p> <p>L8 Current regulations in some European</p>

<p>systems), access / visibility rights definition and control have been developed</p>	<p>regions restrict any sort of financial gains for retired professionals, and therefore for ePAL scenarios, new value systems and related supporting tools need to be developed</p> <p>L9 Very little use of collaborative technologies is made in online senior communities, which only have access to basic tools</p> <p>L10 Lack of proper reference architectures which allow a combination of leisure/social with professional activities</p>
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Technological Vision Facets:

- V1** Advanced collaboration support services, including (virtual) teams' formation and management
- V2** Development of collaboration ontology supporting variety of stakeholders
- V3** Support for user-generated knowledge content
- V4** "Configure yourself" based philosophy infrastructure
- V5** Easily adaptable and customizable user interfaces
- V6** Affective Computing and context aware enriched environments
- V7** Support for establishment of trust among stakeholders
- V8** Tools supporting the process of value creation
- V9** Advanced marketing and brokerage services
- V10** Novel contractual and cooperation agreements, including negotiation support
- V11** New networking models for elderly communities' involvement with the socio-economic system
- V12** Security and ethical/privacy support

Influence Map:

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12				
S1		Dark Blue	Dark Blue	Light Blue			Light Blue	Light Blue			Dark Blue					
S2				Light Blue				Light Blue	Light Blue	Light Blue	Light Blue					
S3				Light Blue				Light Blue	Light Blue			Light Blue		Positive Influence		
S4				Light Blue	Light Blue	Light Blue								Dark Blue	High	
S5	Light Blue				Light Blue		Dark Blue	Dark Blue			Light Blue			Light Blue	Moderate	
S6	Light Blue			Dark Blue				Dark Blue			Light Blue					
S7							Dark Blue					Dark Blue				
L1	Red	Red	Red						Orange		Orange	Orange				
L2				Red	Orange		Orange	Orange			Orange	Orange		Negative Influence		
L3	Orange	Orange	Orange	Orange					Orange	Orange	Orange			Red	High	
L4				Orange	Orange	Orange	Orange							Orange	Moderate	
L5	Orange	Orange	Orange					Red	Orange	Orange	Red	Orange				
L6	Orange		Red		Orange			Orange	Orange							
L7							Red	Orange				Red				
L8										Yellow	Red					
L9	Red		Red					Orange			Red					
L10	Orange										Orange					

Figure 10 – Influence map – technological perspective

5. SUMMARY OF GAP ANALYSIS FINDINGS

In order to provide a fuller picture of the “gap” outlined in the previous Chapter, the following provides a more detailed description of challenges facing the EU from a social, organisational and technological perspective if it is to reach the envisioned future of ePAL.

5.1 Social perspective

The social perspective of the ePAL vision is perhaps the most difficult to achieve as it requires a mass mobilization of a large number of actors. Social cohesion and a change in attitudes towards older professionals is a difficult task. The traditional view that those reaching retirement age are about to make the transition to passive actors must become largely redundant due to the pan European demographic changes of an aging EU. The recognition of this new role is vital not just for governmental bodies and the wider EU public but also older workers themselves and their unions. This is where the creation of mechanisms to support this active involvement is a key element.

The poor economic climate and declining rate of return on private pension plans as well as an increasing reduction in state pension provision will mean that many will find themselves having to postpone the retirement plans they may have had. In many cases, full retirement has never been a viable option for seniors. This is particularly true of many female seniors in the EU:

“In 2005, an average of 21 % of women aged 65 and over in the EU was at risk of poverty, defined as having an equivalised disposable income (22) below 60 % of the national median, as compared with 16 % of men (Figure 138 and Annex Table A.88).” (*Eurostat Publication, 2008*)

However, more flexible labour laws and anti age discrimination measures would mean that those who wanted or needed to continue their professional life for longer will find that this will be an easier process. There is also an increasing need for a re-characterisation of the senior professional. Advances in modern medical science mean that people are not only living longer but also remaining healthier for longer and thus more able to make an extended active contribution to the European socio-economic system. This alone is grounds for challenging the negative assumptions surrounding the capabilities of seniors since many will have been made on an out of date characterisation of the physical and mental capabilities of older workers.

Social cohesion is an important area of consideration as the rise of the senior worker will not happen in isolation. As an ever increasing percentage of EU society, seniors' contribution to their society at a local, national and regional level needs to grow. If society needs to grow and adapt according to its constituent parts this is only logical. To ensure that the potential of this contribution is properly gauged and coordinated new mechanisms which gather consensus and outline the role of seniors in EU development will need to be created. The capacity of organizations such as the AARP (formally the American Association of Retired Professionals) in the US, with a membership of some 40 million dwarfs the capacity of mobilization within the EU. This organization has a significant lobby potential and knowledge of its members' needs and capabilities. However, it is important that such mobilisation should not lead to the ghettoisation of seniors and/or become a source of division within EU society. These mechanisms should also serve as a vehicle to increase communication between seniors and wider EU society.

Mobilising the capabilities of seniors should also not be restricted to national borders. At present, many senior organizations source their members on a purely national level. Frameworks to support seniors' interaction and solidarity across national boundaries and mechanisms to capitalise on the increased sense of trust and understanding which comes through leveraging seniors' social capital could work to benefit wider social cohesion within the EU.

The ePAL project does not envision a future whereby seniors work separately from the rest of society, since a higher percentage of older professionals will mean a change in the social fabric of workplaces. Age ranges will grow and the intergenerational mix of the work environment will become more varied. Seniors and those just starting employment will have to learn to work together and effectively communicate. There will also be an increasing burden on seniors as mentors and a need for knowledge transfer between younger and older workers which will require improved mechanisms to facilitate this. As part of this there will have to be a greater understanding of the new needs this will create and new forms of leveraging the capabilities of seniors. Furthermore, many seniors will find themselves in the position of having to effect a career change in later life. This places a burden on them to learn how to remarket the skills they have learned and experience they have gathered. At the same time “seniority” (meaning position in a company) within a business environment will no longer be so closely linked to age. Older professionals will find themselves working side by side with younger professionals. On the other hand, if older workers are investing in and contributing more to the active development of EU society it is only right that there are complementary mechanisms to ensure a balanced economic benefit sharing with those seniors. Maureen Minehan, as early as 1997 noted a trend that while older workers will have to accept that pay in later life will become more linked to performance rather than “seniority”, HR departments are increasingly expecting that new forms of health and other benefits will come into place to attract senior workers (*Minehan, 1997*).

This brings us to another fundamental change that must take place. As seniors make up an increasing number of the potential workforce within the EU, employers will have to look to attract and value the skills that they bring as much as younger workers. It has been noted in other work packages that younger workers will become an increasingly scarce commodity. Recent studies show that many older workers still consider themselves to be discriminated against in the workplace and some employers are prejudiced by stigmas of inadaptability and lack of learning ability when they apply for jobs. These perceptions need to be challenged as if they continue fundamental divisions may begin to emerge between the logic of the labour marketplace and recruitment practice. Mechanisms to support cross generational interaction between seniors and younger citizens; fomenting inter-generational solidarity and understanding within the EU would have the knock on effect of improving employment systems and creating a healthy employment balance.



Base: Total (n = 1500)
 Q28a. "Based on what you have seen or experienced, do you think workers face age discrimination in the workplace today?"

AARP Knowledge Management – 2008

Figure 11 – Workers who believe age discrimination exists in workplaces

At an individual level, the role of public bodies in this task is to provide motivating mechanisms for seniors to continue adding value to the EU economy beyond traditional retirement age. The provision of more adequate social security policies are vital to ensure that senior professionals do not find themselves prejudiced for wishing to extend their professional lives. Some EU nations such as Great Britain provide pension benefits to those who wish to continue working past retirement age.

5.2 Organisational perspective

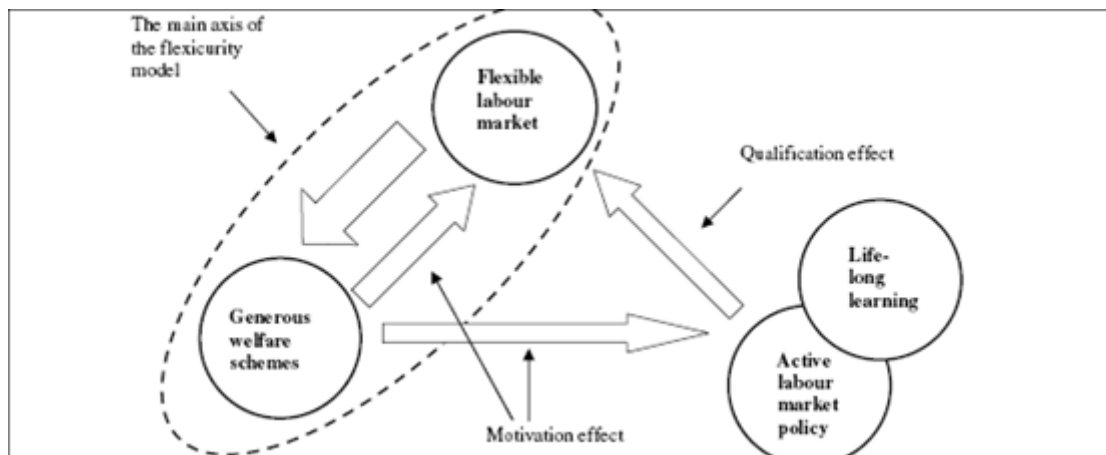
The organizational perspective of ePAL can be divided into two main strands. The first is employment policies and regulations which will facilitate the rise of the active senior professional and the second is mechanisms which will harness the potential of these actors and provide increased support and structure to their contribution to the EU economy. As has been mentioned in the social perspective there is a great need for a full understanding of what seniors, in a non traditional role as active professionals, can bring to society. This requires in part a mobilization of senior social capital by seniors themselves supported through relevant mechanisms. The social perspective of ePAL also highlighted the negative stigmas that many seniors are subject to when applying for jobs and in the workplace. However, there is much discussion taking place around the need for governments to take a more sophisticated approach when it comes to legislating for older people. Simple categorizations of young and old and pre and post pension age individuals do not fully reflect the demographic reality of the EU. The +50s are not a homogenous group. Charles Feaver of Young Retired in Canada creates a subdivision of the elderly and the "wellderly". The elderly are those who are too frail to make an active contribution to socio-economic life of their nation/region and the "wellderly" are those who though they may be past official retirement age have the ability and willingness to continue as active professionals. Project ePAL is directed and set to benefit the "wellderly". Though this is a rather crude division, it is enough to influence a broadening of demographic categorizations and a reconsideration of how present societal groups are legislated for. Professor Harry Gray of Emeritus College has highlighted the differences in approach between the EU and North America to this issue:

"The US welfare culture is significantly different in values and provision from the EU. This simplification of age issues is also most universal in the gerontological literature and the demographic approach adopted by the European Union, OECD and national governments."
(Gray - 2008)

With a fuller understanding of active senior professionals as a group, who deserve their own specific consideration, comes the need for more flexible labour policies/initiatives and tax incentives to help seniors continue their professional life as well as increased governmental advice and support for those making the transition from full-time employment to post retirement professional activity. The EU needs to clarify its role in this.

Now that the importance of the role of senior professionals in the economic future of the EU is more accepted, it is important to understand how these skills can be properly leveraged. A full understanding of the needs and issues around active senior professionals can provide the basis for strategic investment into more efficient and specific forms of brokerage and support services tailored to the realities of the senior economy. Such brokerage should also take into account ways of mitigating against problems with cross generational communication and what are the most efficient forms of work for seniors as compared to other types of professionals. ICT brokerage also has the potential to cross national boundaries helping SMEs reach a larger pool of senior talent to work with and vice versa.

It seems increasingly likely that the extension of active life will go hand in hand with a change in the average person's career trajectory. Labour systems such as "flexicurity" have attracted a lot of interest and the reduced labour rigidity and indeed rights such systems bring would have a significant impact on the way people work in the future. Of most relevance to ePAL is the effect such labour law changes would have on the traditional divisions between pre and post retirement life. Fewer EU citizens are working long term for one employer and are incentivised to retrain themselves throughout their lives and consequently take more control of financial provision for their retirement. An accent on life long learning implies that many people will have to take time out of their active professional lives at several stages of their career, with retirement planning forming part of a more sophisticated concept of career and financial planning. Brokerage for senior professionals will need to develop a wider knowledge of how it fits into this equation. Financial services specifically aimed at seniors will have to do the same. However, a pool of senior talent which is used to remarketing itself would in theory, make the role of brokers in leveraging this talent to diverse sources easier. Such career fluidity would also have a consequential effect on the concept of a senior worker itself.



EEO Autumn Review, 2006

Figure 12

If the traditional concept of a senior worker is to change, it is important that new organisational, operational and business models which reflect this change are developed. This is very much a long term, ongoing area of research as such models will need to be adaptable to changes in the wider labour market as well as the changing needs of seniors themselves.

5.3 Technological perspective

The provision of ICT technology for active senior professionals is a difficult area. It is often mentioned that the current level of technology is confusing and off-putting for older people. It is certainly true that the applications which drive such phenomena as online social networking are aimed at younger generations. Much discussion around the development of technology for seniors centres around assistive developments which focus on the needs of those who have physical limitations. This leaves a gap in the market for tools which facilitate intercommunication between seniors who have no physical limitations but are keen to expand their networking potential. At the same time, such tools must bridge communication gaps between senior professionals and SMEs. One of the main challenges for achieving the ePAL vision is to embed a culture of online and ICT led networking in older generations. Technology has the potential to play a key role in assisting the development of such a culture, by making existing ICT tools more user-friendly and adaptive to seniors. These advances are of course, dependent on a drive to ensure seniors' access to ICT equipment.

There are a number of new ICT technologies and advances which show the potential to facilitate the extension of professional active life amongst seniors, but their scope at present is not clearly defined and there is a real need for their advancement to be steered towards the needs of senior professionals. Affective computing has the potential to make human interaction with ICT technology easier and provide an automated form of mediation for intergenerational communication. It also has the potential to "measure" the emotional health of networks as a whole and provide indicators for intervention by key brokers. However, the scope of this technology is at present hypothetical and relies upon a consistent basic research effort oriented towards affective computing for collaborative networks.

When discussing the technological perspective of ePAL it seems logical to concentrate on the state of art and relevant capabilities of various individual technologies and how they would need to be improved in order to achieve the ePAL vision. However, the baseline research carried out in Work Packages 1 and 2 of the ePAL Project indicates that one of the key areas where technological development is lacking is concerning the infrastructure which is needed to support collaborative networks focused on active ageing. Another key area for development is issues concerning the interrelation between the technological and organisational perspective. There is much interdependency between the two in terms of their correct future development.

In order for advances in ICT brokerage systems to have the desired effect they should be developed with a proper understanding of the needs of those who will be using them. This may seem an obvious point, but it would appear important that the technological aspects of ePAL advance in line with organisational models. However, in a highly competitive industry which develops at a lightning pace with a constantly updated line of services in which new advances quickly become redundant this would mean too much of a barrier to its normal development. One solution to this problem, which is very much in line with present technological trends, is to offer a high degree of built in adaptability to new technology. Further advances in “configure yourself” technology and support systems for user generated knowledge content along with easily customizable interfaces are crucial to allow brokers and senior professionals themselves to react to changes in a non static marketplace. However, where seniors are working with younger professionals adaptable technology would have to be compatible and not virtually alienate seniors from their co-workers. The issue of stigma could become a problem within the context of seniors working within a professional environment – if a senior needs to use an adaptive technology in order to interact with others, this may be seen as a sign of weakness or as an indicator of an inability to effectively do the job (even if it is merely a sign of a minor health issue – partial sightedness for example). This is in part, a cultural issue and one that may take time to change.

The introduction of new working patterns, relying for instance on remote collaboration of teams of senior professionals interacting with brokerage entities and customers, also introduces the need for new infrastructure functionalities and tools supporting e.g. trust building, value systems alignment, performance assessment in collaborative environments and distributed negotiation mechanisms, etc (*L.M. Camarinha-Matos, H. Afsarmanesh, 2004*).

6. CONCLUSIONS AND RECOMMENDATIONS

The biggest conclusion to be drawn from the Gap Analysis performed in this document is that in parallel with the development of new supporting technologies, there is a need for a change in culture and attitudes towards older workers. This culture change is something which must pervade both public and private sector. In both, there seems to be an overly generalised, simplistic view of both the needs and capabilities of senior workers. From a public sector point of view this manifests itself in such things as policies which consider the +55s as a homogeneous group and sees healthcare technologies as serving the same group of citizens as leveraging the skills of senior workers. In the private sector, there seems to be a set of persisting overarching negative assumptions about a very diverse sector of society. Furthermore, there is a real lack of recognition of senior professionals as a potential customer base for new ICT tools, which is needed to drive forward change and development of network technologies as well as support systems for an increasingly growing but unexploited marketplace, one which is vital for the economic and social prosperity of the EU.

It is arguable that were these cultural changes to take place and a greater appreciation of the active senior professional to emerge, there would be a knock on effect in terms of organisational and technological development. An increased demand for active senior professionals would create new markets for improved support infrastructures. Equally, the creation of organisational models which make the leveraging of professional senior talent more efficiently available would serve to counteract negative preconceptions of older workers and in turn increase demand for their services.

This is equally true of related improvements of ICT technology. In this regard, good progress has been made in modelling the ICT-supported collaborative networks that will be needed to leverage a growing number of active senior professionals. There is also a Pan-European network of organisations which coordinate the work of senior volunteers, but their membership base is not comprehensive enough and those organisations which help seniors find remunerated employment are not large, influential or supported enough. In short, currently in the EU there are elements of the solid supporting foundation for active senior professionals which need to be built on.

In the interest of providing a greater sense of continuity between the activities of Work Package 3, the recommendations presented herein are intended to offer an indication of the work which will be carried out in the next phase.

One of the key purposes of the gap analysis presented in this deliverable is to highlight areas of difficulty within the ePAL vision. Difficulties in the context of the vision do not reflect upon the validity or value of the various facets presented, but rather how realistic they would be to achieve or how much effort they would require given the current political and socio-economic situation in the EU and beyond. There are certain negative factors which are not considered within the desired sphere of influence of the ePAL project, those presented in the "Threats" to the ePAL Vision outlined in the SWOT analysis carried out in Step 2. However, where the recommendations offered by the Project can have a direct influence, the weaknesses highlighted must be subject to thorough research with a view to reducing their negative impact. What follows is an initial set of recommendations for key areas of research which will serve to lessen the influence of this negative impact, through strengthening the capacity of the EU's ability to achieve the ePAL vision. These preliminary recommendations should be treated as a precursor and preparation for the RTD activities to be proposed in the next stage of the WP3, which will add to, expand and refine upon the following observations:

1. Examples of government fiscal and social security incentives for senior professionals to extend the active professional life and join associations of senior professionals as well as for potential clients to employ their services.
2. Detailed research into new organisational operational and business forms for senior professionals which will serve to best leverage the skills of senior professionals. As an inclusive part of this research, more investigation is needed into the potential role to be played by intermediaries within and in support of associations of senior professionals and how these

roles can be maximised to ensure their efficacy. This task has begun in WP4 in presenting a guide to those wishing to further this research within the EU.

3. Mapping all the privacy and ethical issues that will emerge with the growth of new organisational forms for senior professionals.
4. In order to improve their capacity, research is needed into ways that Associations can market themselves more effectively to both senior professionals, with a view to increasing their membership base as well as to SMEs and other potential clients, with a view to expanding and diversifying their client base.
5. Research into areas of ICT support relevant to associations of senior professionals and their members. Key areas include: The introduction of pervasive and affective computing, advances in user interface and content awareness systems, collaboration supportive business systems and technological support for remote working, support for trust building, brokerage and negotiation, value systems and performance assessment in collaborative networks, etc.
6. Research into ways in which seniors can be marketed to ICT developers i.e. ways of promoting senior professionals as consumers and awareness raising of the needs of the senior marketplace/silver economy, directed at EU ICT developers. This research would serve to help improve the capacity and ability to leverage the skills of senior professionals as well as helping the EU develop a competitive edge in this growing marketplace.

REFERENCES

"Aging: Exploding the Myths", WHO/HSC/AHE/99.1, World Health Organization Report 1999

"Age and Identity: the rainbow helix", Harry Gray - Ref: Occ. Papers - Emeritus College Publications, 2008

Countries Served - Accessed from CESES website; <http://www.ceses.net/Pages/Countries.html>

L.M. Camarinha-Matos, H. Afsarmanesh, A roadmapping methodology for strategic research on VO, in Collaborative Networked Organizations – A research agenda for emerging business models, chap. 7.1, Kluwer Academic Publishers, ISBN 1-4020-7823-4, 2004

"The aging baby boomers - impact of post-retirement employment on companies" HR Magazine, April 1997 by Maureen Minehan. (www.hrmagazine.co.uk/)

"Nordic Model website - European Employment Observatory" – Contribution to the EEO Autumn Review 2006 "Flexicurity". Accessed from Nordic Model website; <http://aplefevre.wordpress.com/2008/01/23/the-danish-model-and-flexicurity/>

"Staying Ahead of the Curve 2007 – The AARP Work and Career Study" (AARP Knowledge Management – 2008). Accessed at http://assets.aarp.org/rgcenter/econ/work_career_08.pdf

The life of women and men in Europe - A statistical portrait, Eurostat Publication, Available from www.eurostat.gov.uk or ec.europa.eu/eurostat, Issue Date: 6 March 2008

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