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<b>Keywords</b>	Dissemination, Exploitation, Strategic Objectives
<b>Abstract (for dissemination)</b>	<p>This deliverable describes the T&amp;Tnet project and outlines the dissemination strategy and activities per partner. Furthermore, the plan approach the initial set-up of the exploitation activities through a set of guidelines and a first identification of exploitable services and products.</p>



**T&Tnet: Travel & Transport solutions through emotional-social  
NETWORKing**

AAL-4-032

**Deliverable**

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**<Dissemination and Exploitation Activities>**

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## 1. T&Tnet Consortium

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The consortium's partners have been selected for their unique expertise and complementary skill sets in the areas of:

- Multimodal Travel and Transport Infrastructure.
- System Intelligence and artificial Reasoning.
- Journey Planner.

from the technology point of view, and:

- Social Care.
- Active Users Involvement.
- Social Inclusion/e-Inclusion.
- ICT for elderly.

The consortium is carefully composed to provide the scientific, technical and market expertise that is necessary to achieve the project goals; when combined, the partners hold all of the skills and competences required to ensure that the project has a high impact. Furthermore, all consortium partners have previously collaborated on large-scale research projects, which will ensure a swift launch and efficient execution of the project.

**Ingeniería y Soluciones Informáticas (ISOIN)** is a Spanish SME working in Information Technology fields, with a deep experience and a highly qualified labour in ambient intelligence, mobile communication, collaborative work and system integration. ISOIN has been qualified as Technological Agent by the Innovation Regional Agency, and is a service provider of the European Space Agency. ISOIN has been participating to a relevant number of research projects in National and European level, building a reference in research and innovation in our competences.

**Tellu AS** is a software company that provides applications within the mobile phone domain. Tellu developed a solution to track mobile units in collaboration with Telenor Objects. After the collaboration ended, Tellu has extended the solution into a complete sensor integration and application platform called SmartTracker. Tellu has developed the

frontend, rule engine as well as Android and iPhone clients for SmartTracker. Tellu's expertise lies in building solutions by integrating and combining a number of service enablers to form new services in an efficient way.

**Center for Usability Research and Engineering (CURE)** is one of Europe's leading organizations in the area of Human-Computer Interaction (HCI), User Experience Research, User Interface Design, User-Centred Design, Usability Engineering, and Next Generation Interfaces. It specialises in the utilisation and development of user experience engineering and user-centred design methods, the study of user experience and its influencing factors, and research of diverse contextual situations as well as the methodological transfer of the attained knowledge into alternative interface design approaches.

**Karde AS** is an SME offering R&D-services within innovation and project management and as specialists on assistive technologies for persons with dementia or intellectual disability, usability and accessibility. User requirements analysis and user-centric design are also Karde's areas of expertise.

**GeoImaging Ltd (GEO)** is a leading SME in Cyprus, established in 2002 at Nicosia. The company offers scientific and professional solutions in Geo-informatics and IT. It is also active in Research and Development (R&D) programmes, in EU & national funded projects and provides consultations services as well. The services and consultations of GeoImaging are tailored towards Geo-informatics area that helps public and private sector succeed with improving their performance and implementing projects. The products and services span state of the art knowledge and technology from spatial/image information acquisition, processing, analysis to representation and visualisation.

**The Aragon Institute of Technology (ITA)** is a non-profit Technology Centre whose main objective is to promote competitiveness in the industrial sector and to support the growth of business sectors by means of the development, acquisition, adaptation, transfer and diffusion of innovative technologies in a multi-agent collaborative framework.

**Reply S.p.A** is a leading Consulting, Systems Integration, Application Management and Business Process Outsourcing company, specialized in the creation and implementation of

solutions based on new communication networks and digital media. Founded in 1996, Reply closed 2012 with consolidated sales of about 500 million euros, and about 4000 employees. Reply [Rey.MI] is listed in the Star segment of the Italian stock exchange, operates in Italy, Germany, UK, USA and Brazil and is included in the top 10 ten list of the IT European Companies in terms of turnover. Santer Reply S.p.A., part of the group Reply S.p.A., operates from 2002 in system development and integration for many industrial sectors, public administrations and Healthcare.

**Seniornett Norge (SN)** is an NGO working for the inclusion of elderly people in the “e-” world: PC, Internet etc. As is the case all over Europe, the elderly people (of 55+ years) lags behind in the use of modern “e-“ tools thus causing exclusion. Seniornett Norge, through its voluntary work, seeks to counteract this sad state of affairs.

**City Council of Zaragoza, Urban Mobility Department. (ZGZ)** Zaragoza is the fifth Spanish city, with more than 700,000 inhabitants, equidistant to Madrid, Barcelona, Valencia and Bilbao. It is the centre of a 350 km radius area that aggregates 55% of the Spanish population and 60% of its GDP. Zaragoza works constantly to find new methods to achieve a sustainable mobility in terms of accessibility to all citizens, environmentally-friendly and economy-focused innovations.

The activities of the **Broca Hospital**, which belongs to the Cochin-Broca-Hotel-Dieu hospital and to Assistance Publique des Hôpitaux de Paris (**AP-HP**), include medical care, research and teaching in Geriatrics with (1) Geriatric network in the community (2) Acute and rehabilitation care hospitalisation, (3) Long-term hospitalisation, (4) Day care hospitalisation, (5) day care centre.

## **2. Introduction**

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This section is divided in two parts. The first one will explain the main purpose of the document, pointing the attention on the macro area of the activities that will be presented. The second part, instead, will present the structure of the document giving a global overview of the main topic presented.

### **2.1. Purpose and scope of the document**

This document, entitled D4.2 “Dissemination and Exploitation Plan” is prepared in the context of the Work Package 4 (WP4) “Raising Awareness and Exploitation Activities”.

The focus of this deliverable is to present the T&Tnet, Travel & Transport solution through emotional and social networking, project and to define the strategy for the dissemination and the guidelines for the exploitation. This will be a living document, to update time to time, with all the information and a timeline regarding activities and events performed by each partner, including the list of technology used, services implemented and all the exploitable results also.

Therefore, the focal point is to enable a maximum spread of and access to the results of T&Tnet Project.

### **2.2. Structure of the document**

This deliverable is organized as follows:

- *Section 1*: Brief description of the whole consortium.
- *Section 2*: Purpose, scope and structure of the document.
- *Section 3*: Definition of the key concepts of T&Tnet including the Mission and Vision statements, the Stakeholders and End-Users presentation and the complete list of the services provided.
- *Section 4*: Introduction of the Dissemination and Exploitation objectives to be reached by the whole consortium.
- *Section 5*: In this section will be presented the general dissemination strategy, both internal and external, and the specific strategy to use toward the macro category

identified: Scientific Community, Industry, Society and Standardization bodies. Furthermore a complete list of activities and events performed by each partner will be presented. In the last part it will be possible to find synergies with relevant initiatives also.

- *Section 6:* This section will be focused on the Exploitation of the T&Tnet services. For the whole consortium, as a common strategy and path to follow, will be presented a complete set of guidelines; then, as support for the guidelines, an overview on the concept of the Public-Private Partnership and the Pre-Commercial Procurement will be presented and explained. In the second part of the section there will be the exploitation plan per partner, based on the services provided, and a complete identification of the key project results.
- *Section 7:* A monitoring system, as a global procedure for the whole consortium, will be presented in this section. For every activity, will be presented a particular identifier able to monitor at its best, the specific event identified and performed, by each partner. An evaluation of the performance of the all events done will close the section.
- *Section 8:* The conclusion and an overall evaluation of the entire process will be presented.
- *Acronyms Table:* This table provide a list of all the acronyms used in this deliverable.
- *Templates:* This section will include the complete list of templates (web-site, flyers, brochure, etc.) used during all the events and all along the project development.
- *Annexes:*

### 3. T&Tnet Key Concepts

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In order to better address the overall strategy for the dissemination and the exploitation of the project it is very important to present the basis and the key concepts relying behind the T&Tnet, starting from the main idea and functionalities and the Mission and Vision statements, representing the “what” and “where”. In the second part of the section, basing the thinking on these two concepts, the macro category of the stakeholders and end-users and then the services developed will be presented.

The main idea of T&Tnet is to provide, to elderly people:

- personalized context-based multimodal and multinational social journey planning with affective capabilities,

and an

- easy to follow adaptive real time guidance making use of artificial reasoning based on an information manager (filtering and combining).

This solution will allow elderly to carry out and solve movement tasks and problems independently in a totally new way by offering a service of navigation and orientation adapted to the user preferences in real time. This process of full personalization of the user preferences will be done thanks to several macro-services:

- Transport information, such as schedule, delay, occupation etc.
- Real Time emotions of the user using the T&Tnet application.
- Collaborative Evolutionary Platform.

The system will be improved and constantly updated taking into account changing user’s preferences, surrounding and feelings in different situations. The application will also provide a help on demand system, which allows the user to contact directly with families or caretakers.

### 3.1. Mission and Vision

The Mission and Vision Statements represent the “what” and the “where” of the project and identify its main purpose, scope and willingness in the market.

- *Mission:* To make a difference in the elderly life and giving them the chance, through our system, to move, meet people, share ideas, emotions and live more easily and serenely.

With this statement the T&Tnet system is stating that its primary focus is to help elderly to live their life as they always did, by meeting people, taking trips, excursions and holidays. The system will help them in all the movement by scheduling and planning the route and even the meeting with some friend going through the same route; all these actions will be performed very easily thanks to the technology supporting the application and serenely thanks to the detailed and real time personalization. Furthermore, the navigation and orientation of the elderly, will be totally harmless thanks to the help on demand system implemented.

- *Vision:* To help people to live intensely and continue to share experiences and ideas between them all along their life.

The main idea relying on this statement is that all the elderly should continue to live their life as always, sharing their experiences, trip taken and ideas and feelings, by continuing to be an important part of the whole society and by giving their contribution to it.

### 3.2. Stakeholders and End-Users Definition

The identification of the Stakeholders and the End-Users is an important part of the process to identify the best strategy to use for both, dissemination and exploitation, because it will allow to better address the overall strategy first and then the particular one, toward the specific stakeholder and/or end-user and the process to choose the right action to undertake will be more accurate, impactful and fruitful.

### 3.2.1. End-users

As has been reported by the AAL Joint Programme, it is possible to identify three different groups of End-Users defined on their interaction with the application developed, T&Tnet in our case :

- *Primary end-user*: “is the person who is actually using an AAL product or service, a single individual, “the well-being person”. This group directly benefits from AAL by increased quality of life.”

The Primary T&Tnet end-user can be identified as an elderly having health problems and/or using walking aids (e.g. wheelchair) as long as they do not substantially limit his mobility and capability to use a smartphone and so the T&Tnet application. Because the T&Tnet system is designed to assist seniors in their navigation and orientation tasks with routes perfectly tailored to their accessibility and comfort preferences and not to increase their physical mobility, it is fundamental to assume a certain level of mobility and independence.

- *Secondary end-users*: “are persons or organizations directly being in contact with a primary end-user, such as formal and informal care persons, family members, friends, neighbors, care organizations and their representatives. This group benefits from AAL directly when using AAL products and services (at a primary end-user’s home or remote) and indirectly when the care needs of primary end-users are reduced.”

Taking into consideration, as specified before for the primary users, that the T&Tnet application assumes a good level of mobility and capability of using mobile technology, the secondary users are mostly engaged in mutual social interactions with the primary users, they are interested in their well-being and available to support them in case of emergency and/or when requested. Such users can be identified in family members, friends and relatives’ of the target users as well as organizations which support seniors’ well-being and mobility (e.g. travel agencies organizing trips for seniors).

- *Tertiary end-users*: “are such institutions and private or public organizations that are not directly in contact with AAL products and services, but who somehow

contribute in organizing, paying or enabling them. This group includes the public sector service organizers, social security systems, insurance companies. Common to these is that their benefit from AAL comes from increased efficiency and effectiveness which result in reducing or capping in the mid and long term.”

The tertiary users are organizations or enterprises dealing, directly or indirectly, with seniors, technology and mobility. Some examples can be: public transport organizations, local governments, organizations supporting technology usage for seniors, for instance Seniornett, member of T&Tnet Consortium, organizations promoting seniors’ well-being, and tourist organizations. The Consortium, taking into account that some tertiary users retain useful information to complete and improve the T&Tnet system, will approach them in order to collect and then to use, this information. The tertiary users will surely take advantage, both directly and indirectly, from a positive outcome of T&Tnet Project.

It is possible to summarize in a table the list of the main benefits, deriving from the use of T&Tnet System, for each group of end-users:

End-Users	Main Benefits
Primary End-Users	<ul style="list-style-type: none"> <li>• Mobility Improvements</li> <li>• Social Inclusion/E-Inclusion</li> <li>• Movement Problem Solution</li> </ul>
Secondary End-Users	<ul style="list-style-type: none"> <li>• Decreased Burden</li> <li>• Improved Social Interaction with elderly</li> <li>• Increased serenity during elderly movements</li> </ul>
Tertiary End-Users	<ul style="list-style-type: none"> <li>• Decreased Burden</li> <li>• Increased elderly Social Inclusion/E-Inclusion</li> <li>• Improvements in usage patterns</li> </ul>

Table 1 - End-Users Main Benefits

### 3.2.2. Stakeholders

Every entity or group or individual that is affected or may affect the achievement of T&Tnet’s objectives should be considered a Stakeholder. This extended variety and general

identification on the stakeholders group lead to a many different interest that, sometimes, may put conflicting pressure on the project. The consortium, on these bases, should recognize and then address the right needs to the right stakeholder in order to minimize the conflict and the possible pressure on the project and to maximize the desired output.

In order to efficiently perform this action it is essential to firstly identify some macro-groups to start shrinking the pool of stakeholders and to understand their real needs in terms of services and technologies. Following this principles and linking them to the main idea and concept of T&Tnet Project is it possible to identify the first macro-groups:

- *Society*: The society as a whole will benefit from such a solution due to its generic nature, which makes it almost universally deployable. From the social point of view, the T&Tnet System will reduce the risk of social exclusion for elderly and will allow them to continue to contribute actively to the society improvements. Moreover, from a more practical point of view, the collection of the feedback from the user using the T&Tnet application on a daily basis, and the technological discovery and improvement done by developing the system, will allow a better understanding of the city dynamics and transportation system and so will provide new kind of solutions and information to analyze.
- *Transport Companies*: The Transport Companies, in particular, may experience an increased value of their transport solutions, thanks to the feedback provided and the increased number of people using it, offering new ICT based services to the public in general.
- *Research Community*: The Research Community will draw advantages from T&Tnet in form of new knowledge in the involved research areas, new problem-solving skills and valuable experiences among the participants.
- *Others*: Other stakeholders including companies and organizations will prepare the ground for addressing new markets with new services by means of T&Tnet. As example, the public/private organization for social inclusion/e-inclusion will take advantage from the T&Tnet system thanks to its main features based :
  - on the social collaborative platform, allowing elderly users to communicate and collaborate between themselves and others

- on the navigation and orientation system that will support the organization during the planning of trips and routes for elderly
- and, moreover, thanks to the feedback and a help system decreasing the burden on the organization.

It is possible to summarize the macro-groups identified thanks to the main benefits they will gain from the direct and indirect use of the T&Tnet System:

Stakeholders	Main Benefits
Society	<ul style="list-style-type: none"> <li>• Problem Solving</li> <li>• Active Ageing</li> <li>• Avoid Social Exclusion</li> </ul>
Transport Companies	<ul style="list-style-type: none"> <li>• Increased Value</li> <li>• Improved usage/status patterns</li> <li>• User-generated content</li> </ul>
Research Community	<ul style="list-style-type: none"> <li>• Shared and Increased Knowledge</li> <li>• Learning and improving skills</li> <li>• Gain experiences</li> </ul>
Other Stakeholders	<ul style="list-style-type: none"> <li>• New services</li> <li>• New markets</li> </ul>

Table 2 - Stakeholders Main Benefits

### 3.3. T&Tnet Services

The description of the macro-technology-group and the correlated services developed is fundamental to complete the global presentation of T&Tnet System, to prove the excellence of the work performed and to illustrate then, how this System will impact on the overall community bringing different kind of benefits, as illustrated beforehand. All the services identified and developed are a direct results of the User Needs Analysis where an extended analysis based on three main action (questionnaire, Focus Group and user observation), per Partner Pilot (Austria, Norway, France and Spain), has been done. The main objective of the analysis is to have a very first point of contact with the primary end-users and to

involve them all in the process of creation and adaptation of T&Tnet system as well as user's mental model.

Therefore, for clarity and easiness, it is possible to group in three main macro-sectors the field of technology giving life to the entire T&Tnet System:

- *System Intelligence and Artificial Reasoning*: Sensor observations made by the user's device when on a trip, such as position, will be tracked and stored by the System Intelligence module. Other events from the device, such as alarm button press, will also be processed here. All sensors and other device data are processed by a rule engine, along with the preferences and other account data for the user. The rule engine allows implementing flexible artificial reasoning, running in real-time and monitoring the user on a trip. Rules are triggered as conditions are met, and this can have two consequences. The immediate consequence is to trigger service behavior, such as calculating a new route or alerting helpers in case of an emergency. The other consequence is learning - the system accumulates knowledge and this can trigger changes for the future, such as rating a route or changing the user's preferences.
- *Social Collaboration Platform*: The platform will support both, synchronous and asynchronous communication through a different kind of channels and devices offering a variety of software services and components. The main purpose of the platform is to allow users, not only the primary, but even secondary and tertiary, to find each other and to collaborate between themselves in order to improve the platform and the maps hosted always with new and relevant user information.
- *Multimodal Journey Planner* : The planner will help the elderly in defining the route to follow, according to the preferences chosen, thanks to the information derived from the reasoner and the algorithm to evaluate the best path. This kind of planners are based on time-dependent intermodal optimum path algorithms that have been fitted to multimodal transportation networks (TDMTN). This kind of networks are affected by two main problems : the dynamic change of the conditions (e.g. delays, crowding, time schedule change, routes exchange etc.) and the multiple modes of transportation operating simultaneously (e.g. train, bus, walk,

etc.) on an urban transportation network. Therefore, the TDMTN, that computes the optimum paths, should take into account these two main problems with all the related issues derived. The approach undertaken by T&Tnet will make use of network object modeling, meta-heuristic algorithms to find the shortest viable path from an origin to a destination. The main target of the project is to implement scenarios within urban areas. Rural areas are not to be considered due to the partners location and the notably difficulty of getting data from them. It is important to deal with the transport infrastructure. The following urban transport modes will be considered:

- *Walk*: Apart from walking through outside streets, some cities may have some kind of underground area which interconnects main complexes (hotel, offices, malls, so on). This issue needs more discussion.
- *Public bus*: As conventional mean of transport, their availability should be guaranteed in all cities.
- *Tram*: It is most likely target groups choose it as preferred transport mode due to their comfort and security.
- *Subway*: Although it is not as comfortable as tram, it gives rapid transit to move around the city.
- *Ferry*: In some cities, ferries are part of the public transportation infrastructure. When this is the case, the boat routes communicate with buses, trams etc. (Example cities: Hamburg, Oslo)
- *Bicycle*: There are an increasing number of elderly people that use it (particular bike or bike-sharing systems) in a daily basis for healthy purposes. This makes necessary to take into account the cycle networks
- *Regional rail (commuter rail)*: The migration of population from urban areas to the urban sprawl facilitated by the improvement and development of transportation systems makes T&Tnet to consider regional rail and commuter rail too.

Starting from this macro-category of technology used to develop the T&Tnet it is possible to define the main components and services composing the entire system:

- *Orientation*: A complete set of maps, totally updated fulfilled with relevant information about the urban transportation network and other user-relevant POIs (with high level of personalization), will allow the elderly to perfect orientate himself during a trip and to always find exactly the information he was looking for.
- *Navigation*: Thanks to the technologies developed and used by T&Tnet it will be possible always to find the best route, according to the user preferences. The Journey Planner will choose the route to follow thanks to the information derived and elaborated by the reasoner and the algorithm to evaluate the best route.
- *Mobile Application*: The mobile application will support a part of the overall functionality of the T&Tnet System; the application will leverage on all the sensors available on the smartphone where it is installed.
- *Bring Back System*: In order to guarantee the maximum serenity, at an elderly during a trip, this system will allow the user to activate, in case of emergency, an alarm. Moreover, when activated the system, while planning a new route to bring the user to a safe spot or at home, as the user defined in the preferences, it will alert a relative also.
- *Social Collaboration*: The T&Tnet users will collaborate to improve the system by providing information quantitative information (e.g. transportation delays, accessibility issue) and more qualitative feedback (e.g. emotional feedback on a route undertaken).
- *Other Services to be derived*:

Service	Brief Description

**Table 3 - Brief Services Description**

#### 4. Dissemination and Exploitation Objectives

The dissemination objectives and the exploitation objectives are strictly correlated and are derived, at different levels and from different point of view, from three main concepts: Stakeholders, Benefits and T&Tnet Services.

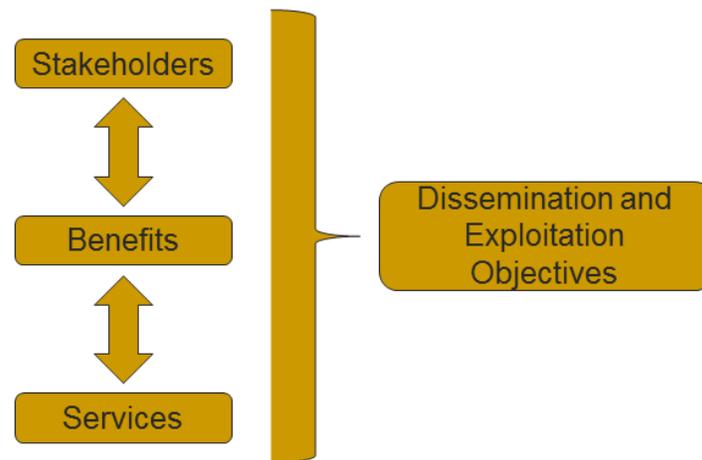


Figure 1 – Towards Dissemination and Exploitation Objectives

The Objectives definition can start from both side, services and stakeholders, moving through the benefit and reaching the other side: on one hand, the benefits are derived from the services developed and implemented in T&Tnet and are related to a different categories of stakeholder and on the other hand the benefits are a natural consequences of the real needs of the macro-category of stakeholders identified and are translated then in services for them. Moreover, the benefits may be seen as the balance between the real needs identified and the technology improvement and the services related. Therefore, following this thinking, the global objectives to pursue are benefits related and then declared both on services and stakeholders at different level of point of view:

- *Strategic Point of View*: This layer is referred to all the strategic objectives which are to be addressed with a long-term deadline; this objectives will be planned from

the beginning, starting from the Mission of T&Tnet, and pursued time to time and specific actions and activity will be performed in order to reach them.

- *Tactical Point of View*: In this level the strategic objectives are translated in tactical objectives with a medium temporal deadline.
- *Operational Point of View*: Here, the tactical objectives pinpointed are declared in operational objectives with a short deadline.

Moreover, all along each step (Strategic, Tactical and Operational) a feedback system, acting as a monitor measuring punctually the performance of the activity and action performed, will assure the right alignment with the objectives on one side and will be used to improve the strategy both for dissemination and exploitation time by time. Therefore the information collected will be processed in terms of three major points :

- *T&Tnet Perception*: This point is created directly from the user experience with T&Tnet services and application both with the direct and indirect use of it. This parameter is fundamental to evaluate two major points: the feelings of the end-user with the system developed and to prove how the system is accepted between the community and the stakeholders to maximize the exploitation.
- *T&Tnet Awareness*: This parameter is a measure of how many consumers are aware of the T&Tnet system, application and services and it will be useful to plan and adjust the dissemination strategy.
- *T&Tnet Image*: The “Image” represents the pool of emotions and sensations the end-user should experience while using T&Tnet system as thought by the consortium. This point will be used to measure the gap between the desired objective and the real outcome (System Perception).

All the objectives defined in such a way will have SMART characteristics, they will be: Specific, Measurable, Achievable, Realistic and Time-Bound to guarantee the maximum return in term of Dissemination and Exploitation.

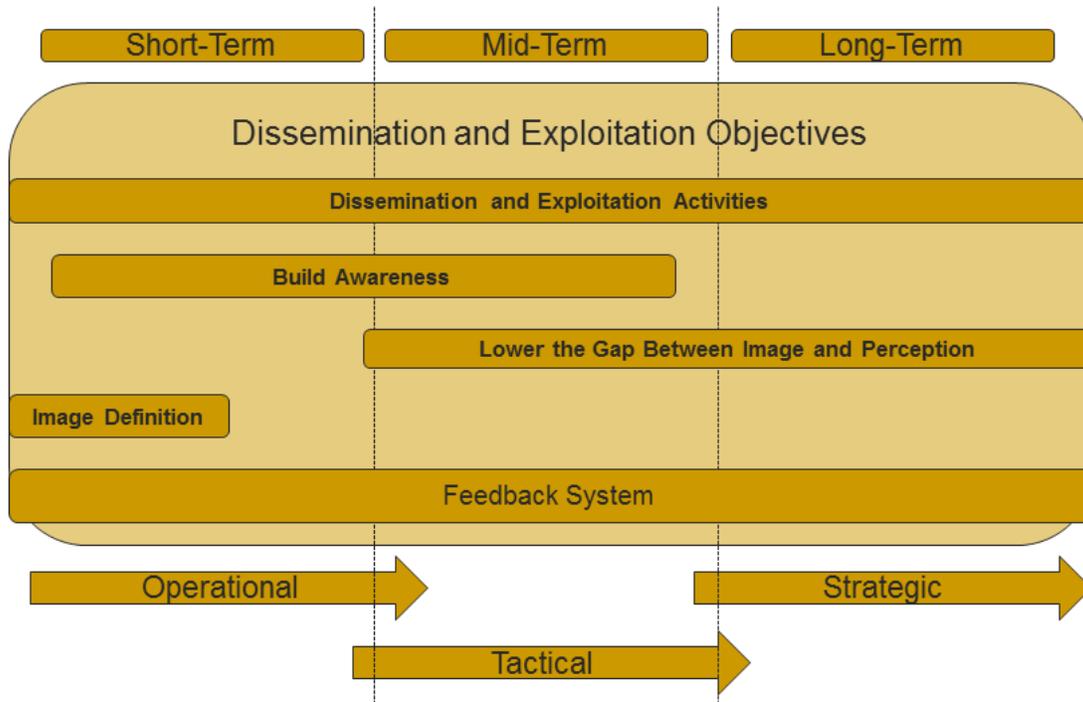


Figure 2 - Dissemination and Exploitation Objectives

The objectives can be summarized in three major categories as macro concepts:

- *T&Tnet Image Definition*: During the first phase, the Operational Layer, it will be fundamental to build a strong and powerful identity for T&Tnet based on the technology, and so the services which the system will provide and the real benefits which all the End-Users will gain. The Image will be adjusted, in the very first months, thanks to the information collected by the feedback system and then analyzed.
- *Awareness Generation*: This process will start immediately after the first T&Tnet Image Definition and will continue all over the Operational Layer and on the Tactical Layer also. During the first phase will be selected, from the pool of the disseminating activity identified the most suitable; each activity will be chosen in relation to the desired outcome and the stakeholder that the consortium is intended to reach at that time. The feedback system will help not only by monitoring the performance of the activities performed but even by letting the consortium to choose the best stakeholders to address the action towards.

- *Lower the Gap between the Image and Perception:* As explained, the Perception is strictly related to the user experience with the T&Tnet system while the T&Tnet Image represents how the consortium has planned to present the T&Tnet System. This point is the most important because on the long run, as a strategic objective, the Image and the Perception should correspond. Therefore, the process appointed to lower the gap between these two measures is critical; this gap will give to the consortium the chance to adjust step by step the dissemination and exploitation strategy and to build more and innovative services, over the basics, trying to address all the end-user issues and new needs. At the same time, by lowering this gap, not only the end-user will gain benefits, but even the stakeholder with a system always updated to the consumer necessity, and so the overall exploitation of T&Tnet will be maximized. Moreover, this process is strictly connected also to the feedback system that will be fundamental to analyze the gap and adjust the strategy.

## 5. Dissemination

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Starting from the objectives and the strategy presented, it is possible to define some main points and then to formulate a Dissemination Mission:

- Creating a framework that will stimulate existing and new companies and clusters to join the network and share knowledge.
- Reinforcing and establishing relationships with decision makers, with the industry, and with press and mass-media.
- Validating updated generated knowledge and translating research and ideas into practice, resulting in innovation that can be applied in the market.
- Setting up public support for innovation and research in the sector, produced by an enhanced awareness in the regional, national and European media, of the importance of the sector from a socio-economic standpoint, and of the existence and work of T&Tnet.
- Ensuring that the priorities of the private and R&D sectors are considered relevant by the regional authorities for the establishment of the regional strategic plans.
- Increasing the integration of SMEs in research driven initiatives facilitating knowledge sharing and business model awareness raising

*Dissemination Mission:* to communicate, to share and to promote the achievements, services and methodology of the T&Tnet project and create a feedback between the consortium and the various stakeholders.

The successful implementation of the dissemination plan requires the involvement of every Partner that should consider the dissemination tasks as part of its involvement; not only the Dissemination leader should perform dissemination activities.

In order to address at best the Dissemination Mission the Consortium identified some meaningful activities to be performed. The entire process of choice is based on two macro-pillars:

- *Service Based:* Starting from the technology at the base of T&Tnet have been identified some specific activities to valorize all the services developed, to promote the entire project and illustrate all the features and the possible upgrades.
- *Stakeholders Based:* Categorized the stakeholder in macro-category it is possible to deduce and to choose peculiar activities able to optimize not only the process of dissemination among the stakeholders, and so to generate awareness for T&Tnet, but even to launch the basis for possible exploitation processes.

Therefore, following a presentation of the main activities identified with a brief description and a motivation that led the Consortium in the choice:

- *Web Site:* ( <http://ttnet-aal.eu/> ) The web site represents the first tool to present and to promote T&Tnet. Thanks to it the Consortium will be able to keep updated, about all the news, not only the stakeholders involved and interested but also all the possible consumers and/or end-users looking for a project like the one proposed. Therefore, the web site needs to be enriched with extensive description about the technology and the services provided by T&Tnet, direct link to publications and all the public documentations, media contents, both audio and video, to provide a more practical and real view and understanding of the system, and a constant update of all the events and workshops that the Consortium hold and will hold.
- *Interactive Training Session:* The interactive Training Session will be used to present to a wide number of End-Users the potentiality of T&Tnet. The Primary users will be instructed and introduced in the mechanical of the system; they will learn the basic features and services, how to set-up the system on first use and how to use it daily for all the movement needed. The Secondary and Tertiary users may be take part of the training session to observe: the easiness to use, the efficacy of T&Tnet and the feelings of the Primary users. Since the Primary user will test all the features implemented this kind of activity will be useful to test the effective interest of primary users in the product, to learn more about the System and its services and to measure the gap between the end-users expectation and the real project developed; this measure of the gap will be useful in order to adjust the

exploitation strategy and to address the right service and /or technology to the right stakeholder.

- *Word of Mouth*: This is one of the most powerful and costless system to spread the information between End-Users and Stakeholder. To let this process work correctly it is essential that all the intended audience got in contact with T&Tnet system have a very clear and meaningful idea about the project so to be able to share their knowledge and experience. These people will be able, in cases, to intrigue the listener and to convince them to learn more about T&Tnet.
- *Audio/Video/Digital Media*: The video will introduce the T&Tnet system giving some information about its services and features; it will show how does the system really work and will provide Direct User Experience (e.g. the results of the Interactive User Experience, or some Demos). The Video, to increase the awareness process, can be stored on physical support (e.g. CD/DVD/USB Memory) to be distributed during workshops, seminars and other kind of events, uploaded on social media services (e.g. YouTube, T&Tnet Web Site, etc.) or linked (e.g. Twitter, LinkedIn). It will be an easy and fast way to learn about T&Tnet project with a wider and more global perspective. Moreover, by using the video it will be possible, on one side, to reach people not present during the Dissemination Events and not aware about the T&Tnet project yet and, on the other side, reinforce the idea for the people attending the Events. Interview of Primary End-Users and/or Project Partners may be also included as a strong feedback about T&Tnet.
- *Technical and Scientific Publications*: Mostly addressed to the research community and other specific stakeholders the publications will be a means to present the overall technology used and the services developed for T&Tnet. Moreover, information concerning the algorithms used and improved, specifically for this project, will be described opening the chance to start some fruitful collaboration with other centers of research of stakeholders interested in the deployment of new services.
- *Dedicated work-shop, Symposia and Technical Fair*: The planning of these three kinds of events will be crucial to illustrate the technology potentiality of T&Tnet on

one side and to demonstrate the benefits that the implemented system will bring to the End-Users and the various stakeholders.

- *(On-Line) Questionnaire*: The questionnaire will be built periodically with the specific intent to test the general awareness and perception. The target audience, will be asked to compile this brief document providing specific feedback about three different level:
  - *Technical*, concerning the technology used, as a quantitative feedback.
  - *Functional*, concerning the services developed, as a quantitative feedback.
  - *Practical*, concerning the efficacy and the efficiency of the entire system, both as a quantitative and qualitative feedback.
- *Posters, Flyers, Leaflets*: Images of Systems, Part of Menu, Scene of Real usage, part of end-user feedback, descriptive info, high-level technical info to create an overall and impactful perception of T&Tnet to be printed on paper and distributed inside and outside the dissemination events. The main purpose of this activity is to give an impactful flash of T&Tnet to involve people and generate an initial interest that will drive them to search more information.

Web Site	Interactive Training Session	CD/DVD/USB Memory
Word of Mouth	Audio/Video/Digital media	Technical and Scientific Publications
Dedicated Work-Shop and Symposia	Technical Fair	Conventions and Stakeholders Forums
RSS Feed	Interview	(On-Line) Questionnaire
Twitter/G+/LinkedIn/Others	Printed and On-Line Press	Posters, Flyers, Leaflets
White Paper	Public Deliverable and Official Presentation	Others to be derived from opportunity

**Table 4 - List of Activity and Tools for Dissemination**

All the activities identified and the overall strategy proposed will be differentiated and declined on stakeholder basis; this process allow the consortium to find the best strategy and activity to use for each of the macro-category of the stakeholder characterized.

### 5.1. Implementation of T&Tnet Dissemination strategy

As defined, the main steps to follow for an effective dissemination are three: Image Definition, Awareness Generation and Lower the gap between Image and Perception; the feedback system will monitor the overall process and the activities identified by the consortium will be spread all over the time-line.

The activities chosen for the dissemination and exploitation will follow the time-line identified (Figure 2 - Dissemination and Exploitation Objectives) and will be selected by purpose :

- *Operational Activities:* During this phase, the T&Tnet project is in its start-up stage and the related Image is still forming, not all the services are developed yet and the system is in constant upgrade. The activities best fitting with these premises can be identified in all of them where is possible to spread the ideas, the concepts and the benefits of T&Tnet with a special focus on the high level functionalities (e.g. Web-Site, Social Communication Platform, Official Presentation, Others to be derived from opportunity). The purpose is to present the main concepts and idea of T&Tnet, the first set of functionalities and, at a high level, the services that will be developed focusing on the benefits for the End-Users and stakeholders instead of the Technology that will be used. A first set of questionnaires will be prepared to be submitted to collect useful feedback.
- *Tactical Activities:* In this second phase the technology will be more mature and the services mostly developed and fully implemented, the first set of feedback will be analyzed and the T&Tnet Image will be fully identified; the End-Users and the Stakeholders have developed an overall knowledge on T&Tnet and its services and functionalities and the awareness generation process is in the middle-end stage. Therefore, it is important to start with some more interactive activities such as the Interactive Training Sessions to collect feedback on the real system and to prove the quality and the efficiency of T&Tnet to the intended stakeholders; it is fundamental to increase the number of technical and non-technical conferences to spread the first results, also. The use of the digital media (e.g. specific video/audio content) will increase the knowledge of the system and its functionalities and will help the

process of Awareness generation. The End-Users and the stakeholders will be asked, again, to express their opinion about T&Tnet to collect meaningful feedback both qualitative and quantitative.

- *Strategic Activities:* This is the last one of the three phase composing the entire plan. The project will be completed, the technology improved and the services working; there will be an extensive knowledge about T&Tnet and the benefits addressed to the community. Focal point during this stage is to lower the Gap between the Image and the Perception of T&Tnet: during this phase there will be an increase in all the activities focusing on the Direct/Indirect User Experience acquired during the Interactive Training Sessions, illustrating real feedback from both users and stakeholders and launching the basis to improve the system and to generate new services. This process of lowering the gap will be done, also, by collecting as much feedback as possible, from Interactive training session, official presentation and all the others events performed to share the knowledge of T&Tnet.

#### **5.1.1. Management and planning of dissemination opportunities**

The dissemination is a process not only intended for the end-users and for the stakeholders but also for all the partners composing the Consortium because it is crucial that all the partners will be always aligned.

#### **5.1.2. Internal communication**

To guarantee an high level of quality for the Consortium is fundamental to define some system to use for disseminate and share all the information between the partners. The activities identified will be used to let all the partners be always aligned and well informed about all the parts regarding the T&Tnet project and structure on one side, and to build a sense of collaboration and mutual aid:

- *Web-Site:* The Web-Site will be used as a space intended, from the Consortium point of view, to share and store contents and deliverables and to announce events.
- *Mailing List:* The Mailing-List is a powerful activity focused on the fast and easy sharing of information; all the participants to the project are registered so it is possible to communicate globally, and to manage all the communication process regarding the Call Conferences.

- *Call Conferences*: The Call Conferences, scheduled on a regular basis, it will help in all the management process for T&Tnet and is fundamental to present work upgrade, to manage issues arisen and to improve the global collaboration between partners.
- *Meetings*: The meeting is an event, scheduled on regular basis, with a purpose to cover three main concepts:
  - *Project Updates and Issues*: All the partners will present the result obtained at that time and, if arisen, the related issues.
  - *Collaboration and New Ideas*: The overall consortium will analyze all the content provided by each partner, in order to collaborate to solve possible problems, to collaborate in the development process and by presenting new possible ideas.
  - *Planning next step*: Based on the results obtained and discussed during the meeting the consortium will plan another meeting and the next step updating the time-line.

### **5.1.3. External communication**

While the Consortium as a whole is focused on a global dissemination at international level by “Going Global”, each partner instead, as a single entity, has to focus its attention at the national level by “Going Local”.

The process to follow, in order to maximize the results, in both cases is the same and will follow the general rule:

- *Who*: it is important to define always the intended audience whom the consortium is going to disseminate or exploit with, to choose the best activity and the best strategy.
- *What*: The content to illustrate during an event organized by the consortium need to be accurately chosen in order to avoid mistakes and it should be well planned to give at all the information intended.

- *Where*: Every location for an activity or an event needs to be evaluated carefully considering both, the audience participating and the kind of activity that the consortium is going to perform.
- *When*: The consortium has to set-up events and perform activities when an opportunity arise (e.g. services completion, technology improvements, system upgrades, when a stakeholders unveil some interests in T&Tnet).
- *Why*: The objectives defined for the dissemination and exploitation should always lead the consortium when choosing the activity to perform, in order to gain the most desirable output.
- *How*: The “*How*” is part of the strategic process for the external communication because it is related to all the previous points in a transversal way; to be effective all the partners should follow some principles :
  - *Active Listening*: This process represent a communication technique and is composed of three parts: comprehending, retaining and responding. During an event or while performing an activity where there is interaction with end-users and/or stakeholders, it is fundamental to look at every signal launched, both verbal or gestural, to better address the topic to the intended audience.
  - *Proactivity*: Thanks to the “*Active Listening*” technique it is possible to gain some important feedbacks and to use them to plan and adjust the strategy on time.
  - *Alignment*: In every action or activity or events all the partners have always to be aligned with the Mission, the Vision and the objectives of T&Tnet to guarantee a single line of action and a single path to follow.
  - *Networking*: The process of networking regards the possibility to build strong link with end-users and stakeholders in order to increase the number of people aware and interested in T&Tnet.
  - *Coherence*: The “*Coherence*” with the plan defined is important to avoid management issues among partners and to guarantee the overall “*Alignment*”.

- *Clearness*: the consortium needs to be always sure that the message that it is trying to explain is clear enough to be understood. The “*Clearness*” process will follow the 5W+H rule (Who, What, When, Where, Why and How).

#### 5.1.4. Specific T&Tnet events

In the table below is provided a list of all the events held by the Consortium and where it participate, structured as:

- *Partner*: The Partner/s holding/participating the event.
- *Who*: The intended audience.
- *What*: The main topic of the event.
- *When*: The period when the event will be held.
- *Where*: The Event identification and the location where it will be held.
- *Why*: The main objectives the partner want to reach and outcome expected. (e.g. awareness generation, exploitation chance, networking etc.)
- *How*: The kind of activity that will be included during the event. (e.g. Official Presentation, Content Audio/Video, Demos etc.)

Partner	Who	What	When	Where	Why	How
Tellu	Public Authority		27 February 2013	Conventions and Stakeholders forums	Awareness Generation and Data Collection	
APHP	Researchers in technologies for health	social media, mobile apps and internet/web 2.0 in medicine, health and biomedical research	September 23 & 24 2013	London, England	Networking	Official presentation (oral or poster)
CURE	AAL Forum 2013	General AAL networking event	September 24-26, 2013	Norrköping, Sweden	Networking	TBD (Poster, Extended abstract, Presentation, ...)
Reply	eHealth	E-Health,	May 28, 2013	eHealth	Networking,	Presentation,

Reply	specialist, ICT Specialist, Public Authority, Target Users	Social Inclusion, Active and Healthy Ageing		Forum, Rome, Italy	Awareness Generation	WoM, Brief Description
	AgeingWell Thematic Network	Active and Healthy Ageing	Newsletter of May 2013	International Newsletter	Awareness Generation, Networking	Brief Description
Reply	End-Users, Public Authority	World Masters Games	Turin, from 28 <sup>th</sup> July 2013 to 11 <sup>th</sup> August 2013	World Masters Games	Awareness Generation, Networking	Presentation, WoM, Brief Description
KARDE	AAL Forum 2013, Practitioners	General AAL networking event	September 24-26, 2013	Norrköping, Sweden	Awareness Generation, Networking	Poster, WoM
ITA	End-Users, Public Authority	Innovation Fair	October 10 <sup>th</sup> to 13 <sup>th</sup> , 2013	Saragossa's Fair Innovation Pavilion	Awareness Generation, Networking	Presentation, WoM, Brief Description
KARDE	Scientific and practitioners	On-line with age and dignity	23.5.2013, Scandic Gardermoen, Oslo Airport, Norway.	IT without thresholds. Final conference of IT Funk 1998-2012.	Scientific dissemination	General oral presentation of project
KARDE	Scientific and practitioners	Technologies for mastery, pleasure and well-being	Velferdsteknologikonferansen 2013 – VELKON 2013 23.10.2013	Rica Hell Hotel, Værnes, Norway.	Scientific dissemination	General oral presentation of project
KARDE	Scientific and practitioners	Karde's involvement in AAL-projects (Call 3,4,5)	12.11.2013, Oslo, Norway.	POSEIDON Kick-off (7FP, Grant agreement no. 610840)	Scientific dissemination	General oral presentation of project

Table 5 - T&amp;Tnet Events

### 5.1.5. Synergies with relevant initiatives

## 5.2. Scientific Dissemination

The main actors involved in this process can be identified as:

- *Researchers, Academics and Scientists*: interested in the scientific sharing knowledge and in the possible upgrade of the technology through further studies.

- *Entrepreneurs and Technical Managers*: interested in the practical aspect of the technology used, to build new services and application to introduce in the market.

The aim of the Consortium, in this process, is to present a complete set of valuable and meaningful publication to the actors involved; this publications will cover all the technical aspects believed important from the consortium firstly and then all the information valuable for the actors, derived from the feedback system.

### 5.2.1. Papers

(This section will be fulfilled with all the technological and scientific publications following this principle: Publication Name, Objective, When, Audience, Description)

Partner	Publication	Objective	When	Audience	Description
CURE	“I need to know, I cannot, I don’t understand”: older users’ requirements for a navigation application	Scientific dissemination	AAATE 2013 (September 19-22, 2013)	Scientific	Summary of the results of the T&Tnet requirements analysis
KARDE	HCI and usability issues in mobility (Poster)	Scientific dissemination	AAL Forum 2013	Practitioners	Design methodology of the system and its HCI
ISOIN/GEO/ITA	T&Tnet – Towards the standardization of collecting urban mobility data in the cities: gtfs	Scientific Dissemination	AAL Forum 2013	Mobility managers and travel planners	Description of a common transport data format
CURE	T&Tnet – Older users’ requirements for a navigation application	Scientific Dissemination	AAL Forum 2013		

APHP	(Poster)			
	Seniors Navigation: Understanding Their Needs as to Create an Adaptive Smartphone Application	Scientific Dissemination	September 23 & 24 2013, London, England	The aim of this exploratory study is to identify the daily navigation needs and issues of seniors from four countries (France, Austria, Norway and Spain).

Table 6 - T&amp;Tnet Papers

### 5.2.2. Scientific communication management process

The content generation process for a scientific publication starts from the whole system evaluation, taking into consideration the three main concept of: technology, services and related benefits for the overall community. Each of these three concepts feed the others as a mutual sharing process.

Since the publication's target may vary depending on the content, the consortium will distinguish two possible pathway:

- *Sharing Knowledge*: this pathway is identified for an audience interested in a mechanism of sharing knowledge with the final objective of improving and strengthen the scientific knowledge. Moreover, The T&Tnet system will benefit of this pathway thanks to the related feedback that will allow the consortium also to improve its expertise and knowledge in a specific technology field and enhance the publication's level gaining more visibility on the overall scientific community and going to increase the global awareness. This process may lead also in the identification of new benefits, technologies or services deployable for T&Tnet and so in new exploitable outcomes.

- *Further Exploitation*: The Further Exploitation pathway takes into consideration an audience mostly interested in the chance to develop services and products, not strictly related to T&Tnet also, starting from the technology innovation reached by the consortium. Since this kind of audience will use the T&Tnet results going to further exploit them the consortium will collect meaningful information on the opportunity to integrate new processes in the T&Tnet system going to increase the benefits provided on the community and on the quality of the work done, secondly.

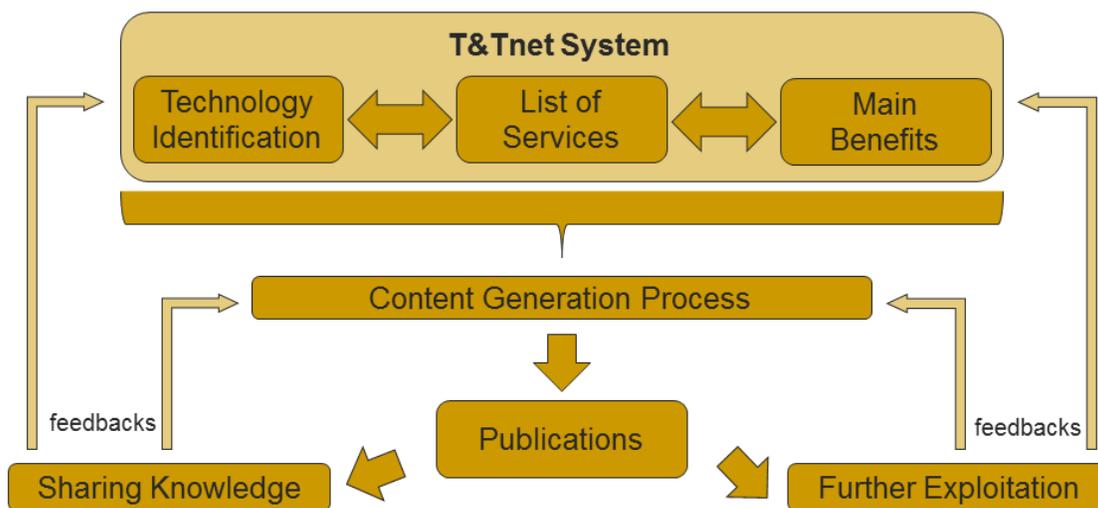


Figure 3 - Content Generation Process

Since the scientific publication is one of the disseminating activities identified by the consortium and has this dual application (Sharing Knowledge and Further Exploitation) it is necessary to allocate this activity in the strategic process identified for the dissemination and exploitation (Figure 2 – Dissemination and Exploitation Objectives).

Therefore, as defined, a publication will occur every time a meaningful milestone will be reached or when an opportunity arise; following this thinking the natural allocation and utilization in the strategic process is:

- *Publication in the Operational Layer*: During this step the system is evolving, thanks to the user needs analysis and the first feedbacks, and the T&Tnet image is in the definition and consolidation stage; therefore to maximize not only the awareness but in order to gain quantitative feedback on the technology and services in

developing, the publication should be used mostly as a mechanism for the sharing knowledge.

- *Publication in the Tactical Layer:* In this layer the T&Tnet image is already defined and the process of awareness generation is ongoing; the consortium will have more content to generate thanks to the feedback system both at quantitative and qualitative level. An increase in the publication process is highly recommended not only for the sharing knowledge mechanism but also to start teasing the stakeholder in further exploitation process. The main feedback that the consortium will gain is in term of: new market opening, new technologies and services and so more benefits for the whole community of End-Users.
- *Publication on Strategic Layer:* On the long run the publication process needs to be strengthened and specifically addressed to the intended audience. The consortium will identify, on one side, specific stakeholder interested in the development of particular services based on the technology innovation of T&Tnet bringing back new solutions and possible services; on the other side, the consortium will be focused in the identification of specific audience interested in the sharing knowledge mechanism going to improve this process of innovation growth.

### **5.3. Dissemination towards Industry**

The industrial actors, interested in T&Tnet technology and developed services, can be divided in two main categories based on their intents, and so the consortium can address two different strategies for each of them:

- *Direct Exploitation:* In this first case the industrial actor will point its attention on a specific innovation technology or innovative service developed or, maybe on the whole T&Tnet system and has the idea to use it directly, as intended.
- *Further Exploitation:* In this second pathway the industrial actor involved is interested in possible improvement for T&Tnet in order to create new services and/or applications and to use it on new markets.

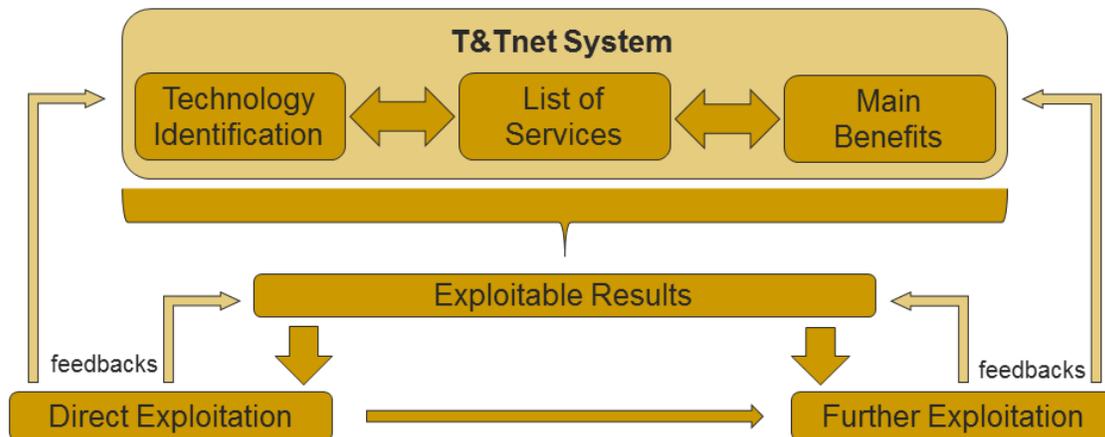


Figure 4 - Exploitable Results

The consortium will address specific kind of activities following the global strategy identified in stages:

- *Operational Layer*: In the short-run, when the project is in the initial stage, the awareness generation process is running and thanks to the User Needs Analysis has been identified the main technology to use and the first services, the consortium will start to present the main ideas through technical fair, workshops and official presentation of T&Tnet to increase the awareness generation. During this phase the industrial actors will be mostly involved to be introduced at the T&Tnet system and its main benefits and technological innovation.
- *Tactical Layer*: In the middle-run the whole T&Tnet system is mostly completed and so the consortium can start to present the real services developed through technical fair and workshops. Moreover the use of official presentation during stakeholders forum will increase not only the awareness generation but also the exploitation possibilities. In this phase the industrial actor should start to focus its attention also on the hot feedbacks collected by the consortium, thanks the direct involvement and collaboration with the End-Users; by using this feedback the consortium will prove how T&Tnet really work and how the end-users use it easily, efficiently and by purpose.
- *Strategic Layer*: In the long-run the aim of the consortium is to exploit both, directly the application developed and with further upgrades and updates of the

T&Tnet system and the related services. For the stakeholders interested in a direct exploitation, will be useful to increase the number of the Interactive Training Session jointly with the End-Users feedback to prove how the system is effective and efficient and truly address the benefits to the end-users and the whole community as intended. The industrial actors, in this phase, are already aware about the project and its potentiality so they need just to see it in action as many times as possible. The consortium, from its point of view, will gain meaningful feedback from the industrial stakeholders to further improve the system. On the other hand, for the actors interested in a process of further development and so for a further exploitation of the T&Tnet application, the consortium will prepare technical fair and workshops illustrating, with plethora of details, the white papers written, all the scientific publications, the end-users feedbacks and various scenarios of utilisation, in order to encourage and arouse the stakeholder.

#### **5.4. Societal dissemination and standardization bodies**

One of the most important points for the consortium is the dissemination towards the whole community, towards the society to help on one hand, in the improvement for elderly's social life and inclusion and on the other hand, to contribute in technological improvement resulting in a global benefit; the consortium consider as an important point during the development of the whole T&Tnet system the collaboration, also, with standardization bodies in order to commonly generate new relevant outcomes.

Therefore, the main actors that can be identified are:

- *Primary and Secondary End-Users:* As defined by the AAL-JP, the primary users are directly involved with the T&Tnet system and so they are the real users of the services developed; therefore they are the most important actor involved in the process. They will generate the market and from them the consortium is collecting the primary feedback to enhance the T&Tnet system and the dissemination and exploitation strategy. The dissemination process towards them follows the general rules based on the three different layers (Operational, Tactical and Strategic) and the

final objective is to let the users be aware about the T&Tnet system as a first step and then to let them also be involved in the process and interactive in order to collect meaningful feedback. The secondary users, instead, taking indirect benefits from T&Tnet, will be not mostly interested in the application itself but on the benefits it will give to their relatives; therefore the final objective for the consortium is to prove them how does the T&Tnet system truly work and how real and concrete are the benefits provided.

- *Tertiary End-Users and Society*: The Tertiary End-Users and the whole society are intended by the consortium as the vehicle thanks to which the T&Tnet will be available on the market and will be used when accepted by the Primary End-Users; therefore the final objective in this case is to enhance the quality of the work done in term of technology and services not only to integrate all the possible features as intended by the primary-users but also to provide concrete benefits for the community deriving from the primary benefit for the Primary End-Users.
- *Standardization Bodies*: The consortium is working using open standards and open projects in order to enhance the sharing knowledge mechanism and actively contribute in the improvement of the actual standards and in the implementation of new ones.

#### **5.4.1. Societal dissemination strategy**

As indicated the dissemination strategy will follow the three layers' general rule identified:

- *Operational Layer*: The main focus is to let the actors involved be aware about T&Tnet, they will collaborate in the preliminary identification of the system image going to generate a cycle of feedback that will help the consortium to enhance and adjust the strategy. Therefore activities such as official presentation of the main T&Tnet idea and technology jointly with a process of word of mouth and workshops are highly recommended. In this very first stage of application and services development the consortium will also use open standards and will collaborate with global open community increasing the T&Tnet awareness also toward this actor.

- *Tactical Layer*: In the second phase the main objective to pursue is to increase the awareness and to start proving the real performance of T&Tnet application. The primary users will be involved in cycle of Interactive Training Sessions with the dual intent to demonstrate, as primary intent, how does the system work and how easy to use and efficacy it is and, as second intent, to collect important and meaningful feedbacks. The tertiary users also and exponent of local government need to be involved in this sessions so that they can learn more about the system and collect hot feedback from the primary users, the real users of the end T&Tnet application; the advantage for the consortium is that this process will maximize also the exploitation chance. Moreover, all the services developed by using open standards will be presented in technical fair and with scientific publications jointly with the T&Tnet system.
- *Strategic Layer*: On the long run the main objective is to lower the gap between the T&Tnet Image created and the Perception that the End-users and the stakeholders have of the entire T&Tnet project. The consortium has to point the focus in all the activities that will prove the efficiency and the efficacy of the system, on one side, and how these services developed will provide the benefits as initially intended by the consortium. The End-users will be asked to complete questionnaire and to provide feedback about T&Tnet so that the consortium will be able to plan future exploitation strategy and can start to plan the possible development of new services.

#### **5.4.2. Standardization actions and input expected**

The consortium is actively involved in the process of using existing standards and open standards in order to collaborate with existing communities and projects and to improve the global research in the specific sector. A mechanism of knowledge sharing will be used to enhance the quality of the work performed and to be performed.

- *ISO/IEC 24751:2008 – Individualized adaptability and Accessibility in e-learning Education and Training*: The standard was developed by ISO/IEC JTC1/SC36 (Information Technology for Learning, Education and Training); Karde AS is currently working closely with the GPII and Cloud4All projects to ensure that the

standard will meet the needs of the users and the approach chosen. The new model will support also semantic web technologies and a first draft is expected early 2013.

- *IMS Global Access for ALL v3.0* : As reported on the IMS GLOBAL Learning Consortium web-site (<http://www.msglobal.org>) “*The Accessibility project group has released a public draft of IMS Access for All v3.0. The public draft is provided so that implementers have the opportunity to begin work and provide comments before production of the final specification.*”
- *Open Street Maps* : (<http://www.openstreetmap.org/>) Open Street maps is an open project created thanks to the effort of a collaborative global community having a common interest. Every single person can map a single portion of a specific territory or can improve an existing one; there are also community working on other project with the intent to upgrade the Open Street Maps as possible. Moreover some communities are interested in mapping only some relevant features category such as: Accessibility (e.g. wheelchair routing, OSM for the Blind), Infrastructure (e.g. Highways, Railways) etc. The consortium will use Open Street Maps as base for T&Tnet system and will enhance part of the project with the dynamic geo-emotional-database collecting useful information from the End-users and feeding the Open Street Maps.
- *GTFS*: The General Transit Feed Specification (GTFS) defines a common format for public transportation schedules and associated geographic information. The Consortium intends to make use of this format to make sure that the final application is in line with the current technologies in mobility projects.
- *Open Trip Planner*: (<http://opentripplanner.com/>) As reported on the official Web-Site “*OpenTripPlanner (OTP) is the leading open source platform for multimodal trip itinerary planning and network analysis. Launched in 2009, the project has since attracted a thriving community of users and developers, with live deployments now found in twelve countries*”.

## 5.5. List of Action per nations

ITA:

- In their personal web site, (www.ita.es) and the other related to logistics division, ITA will present the T&Tnet project and will allow the upload of the videos and other multimedia content generated. This disseminating activity will be useful for T&Tnet project to be known by other relevant projects going to increase the global awareness and knowledge of the services the consortium is going to develop.
- ECITL event will be held by ITA in 2013 (<http://www.ecitl.eu/index.php>).
- ITA will perform some dissemination activities to other relevant partners involved in other projects (e.g. CarCoDe, GoRural, LOGINN, SoCool).
- The ITA's twitter account is active and linked to the T&Tnet account and will be used to spread content and information through the social platform.
- The focus group users involved in the process will be active participants in training sessions; volunteers in Zaragoza social house and others will be trying T&Tnet services and application during the project.
- During some Master Classes, ITA will perform also some dissemination activities to let the master students be aware about the potentiality and the benefits of the whole T&Tnet application.

**Reply:**

Reply will use all its network to disseminate the T&Tnet project focusing the attention on the benefits that the application with all the high level services will provide to the end-users:

- *Workshop and Conventions:*
  - 28 May, Rome, National Health Forum
  - 29-31 October, Genova, CpExpo
- *Thematic Network:* Submission of T&Tnet project to the Ageing Well Thematic network (<http://www.ict-ageingwell.net/>) and network exploitation.
- *Web-Site and Social Communication:* Reply will use its network to promote T&Tnet; the use of the TamTamy platform will be used for internal dissemination.

- *World Masters Games* (<http://www.torino2013wmg.org/><sup>1</sup>): During all the event, Turin 28<sup>th</sup> July 2013-11<sup>th</sup> August 2013, Reply will have a permanent stand presenting its offering and projects. The T&Tnet project will be presented as well using the dissemination material
- *Other*: Presentation of T&Tnet project and benefits to relevant partners in the e-health, tele-health, tele-care and e-social-inclusion sector.

**Tellu:**

Tellu's partner, Karde handles most dissemination activities for the Norwegian part of the project so Tellu will assist them when required, specifically in providing technical information for dissemination material. In addition Tellu will talk about the project every time an opportunity will arise and will host all the relevant information on their own web site. Moreover they will present the project also at their partners in the tracking and AAL fields.

**GEO :**

- *Workshop*: according to our national contract, GEO will organize a workshop in Nicosia, Cyprus. At this stage the workshop is scheduled to take place at the end of the project for the final project outcomes presentation. The consortium reserves the possibility to change the workshop date to address the dissemination objectives of the project in an optimum date. In the workshop, GEO will invite local stakeholders such as relevant ministries, local authorities, NGOs, academia and research institutes. The initial target estimation of participation is 50-100 persons.
- *Papers*: GEO is planning to prepare 2 papers to present the work to be done for the social collaborative and journey platform. The papers are scheduled either to be presented in relevant workshops/conferences or in appropriate journals. At this stage is impossible to define both the exact titles and the fora to be presented.
- *Website*: All project activities are presented in our website at [www.geoimaging.com.cy](http://www.geoimaging.com.cy). At the same time, GEO is providing text and useful input the update of the project website [www.ttnet-aal.eu](http://www.ttnet-aal.eu).

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<sup>1</sup> Link checked as available at 2th august 2013

- *Video-DVD*: according to the national contract signed by GEO, a promotional video will be prepared and delivered as DVD in order to promote T&Tnet project and enhance visibility during and after the termination of the project. The video will be used by all partners in dissemination activities and will be available also through online streaming through the partners' websites.

### **KARDE:**

Throughout the lifetime of the project KARDE foresee the following activities aiming at both creating interest for the coming application in the Norwegian society as well as getting feedback that can be used in the further development:

- *Karde's website*: covering the professional network of ICT-related companies and individuals, as well as user groups representing elderly citizens and volunteer associations.
- *Focus group members*: Spreading information about technology opportunities by "word of mouth" in collaboration with Seniornett Norge.
- *Oral presentations*: Spreading by word of mouth in everyday working contexts and using presentations at conferences, seminars and meetings in Norway.
- *Popular scientific papers at conferences that cover*:
  - Elderly citizens' ICT/AT needs
  - HCI design, soft methodologies
  - AT consumer market

### **SN:**

Throughout the lifetime of the project Seniornett foresee the following activities aiming at both creating interest for the coming application in the Norwegian society as well as getting feedback that can be used in the further development :

- *The Seniornett website*: Thanks to the website (<http://www.seniornet.org/>), covering the member population (7000) and the Norwegian elderly population in general, will be presented an extensive overview of T&Tnet and will be uploaded all the videos and the other dissemination material that will be elaborated.

- *Focus group members:* Seniornett will spread the information and the relevant content by “word of mouth”.
- *Local Clubs Demo:* Demo, presentation and other content will be used to present T&Tnet and to prove the efficiency and the performance of the entire system developed, to their 175 clubs all over Norway. Moreover there will be invitation to local newspapers thereby reaching the local community.
- *Selected members in groups:* Seniornett will also participate in some Interactive Training Session with a pool of selected member with the final objective to provide useful feedbacks and to spread the information of T&Tnet by “word of mouth”.

**ISOIN:**

ISOIN takes T&Tnet as a key project in the development of one of its strategic field of knowledge and business. In this sense, most of its local partners have shown interest in the outcomes T&Tnet will provide and ISOIN has taken the commitment to spread them all effectively. Then, it is intended to organize and carry out a set of events to accomplish such dissemination. Namely:

- *Presenting the project to companies, universities, research centres and institutions* at a national & EU level involved in the innovation and inclusion of ICT technologies in telemedicine and healthcare.
- *Organizing workshops and conferences.* In addition, ISOIN will take advantage of social networks (mainly Facebook and Twitter) and specific e-resources such as specialized webs, blogs, journals, etc.
- *Publishing the project in the company website,* and all the relevant content generated throughout the project which can engage partners and other companies both at national and international levels.
- *Disseminating results to Spanish Technological Platforms* (e.g. eHealth, wellbeing and social eInclusion, Mobile and Wireless Communications and Systems with integrated intelligence, as well as the Mobility Regional Office of Seville).

## 6. Exploitation

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The process of exploitation is led by the technology and the services developed during the project and how these outcomes are addressed, at different levels, to the various actors involved. As indicated in the Objectives that T&Tnet is going to pursue, the first step to undertake for an efficient exploitation is the *Awareness Generation*, related to the idea of spread the knowledge of the project and to convince the End-Users and the stakeholders to use the application and the services developed. Moreover, the feedback system, giving each time information about the Perception of T&Tnet and leading the process of the strategy's adjustment, will be the base to guarantee the sustainability of the project after its conclusion also. The exploitation process can be divided in two main parts:

- *Mainstreaming*: Convince Stakeholders to introduce the application and services developed, in the market and in their business line to make them available for the End-Users.
- *Multiplication*: Convince the End-users in using the application and services developed.

### 6.1. Guidelines

The Exploitation Strategy's definition takes into account several factors (e.g. feedbacks, technology used, stakeholders involved, etc.) and have a mixed approach; effectively the process involve all the partners taking part to the consortium and it is based on few macro points:

- *Technology Identification*: Each partner of the consortium have some specific characteristics; it will own and share at same time with the other partners, some particular expertise and knowledge. Therefore, this will allow the consortium to choose the best technology to use and to launch the basis for the project. The feedback system will support the process of decision making.
- *List of Services*: During the development of T&Tnet, many services related to the various macro category of technology identified, will be produced and enhanced. Each partner will be asked to identify, time by time, the main services in phase of

development; again this process will be supported by the feedback system giving useful information about the real needs of the users, hints of future needs and market perception of T&Tnet.

- *Stakeholder Identification*: Over the macro-category of stakeholder globally identified, each partner at national level, will identify possible stakeholders interested to participate at dissemination events and ready to start a dialog for future exploitation and collaboration.
- *Strategy Definition*: Collected all the information related to the technology, services and stakeholders it will be possible to mix all the information to define a specific strategy for the consortium and the specific partner; every service developed will be addressed to the right and most interested stakeholder identified.
- *Dissemination and Exploitation Feedback*: The Feedback system, active all the time, will give useful information about the perception of T&Tnet and will allow the strategy's enhancing. This step will allow the gap identification between the market and T&Tnet idea also.

Since the exploitation of the results will be realized not only at International level by the whole consortium, strong and leaded by the mutual collaboration and knowledge, but also at National level by Partner, it is essential to build a common model that can be adapted on purpose for each partner and to define a pathway to follow.

The use of a federated model, combined with a Pre-Commercial Procurement system (PCP) will allow each partner of the consortium to better address on the local area all the services of T&Tnet project going to improve also the global awareness.

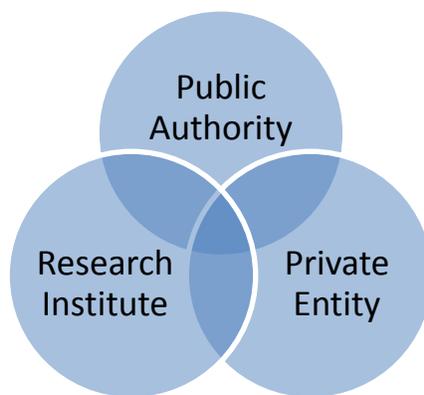
The national federated model should be constituted by three kind of entity, each of them having a specific role to undertake:

- *Research Institute*: The research institute will be responsible of the improvement and upgrades of the technology used by the system allowing the development of new and more advanced services to exploit on the market. The process of knowledge increase will be led by two macro-factors based on the opportunity: the

real needs of the global community and the improvement of the scientific knowledge.

- *Public Authority*: The Public Authority plays another fundamental role in the model identified; it will provide services on the local area allowing their exploitation and accessibility.
- *Private Entity*: The Private Entity will be responsible of the direct exploitation of the application and the related services on the market.

In the model identified every actor involved play an important role, and only if each of them will address its task efficiently the national federation will be successful. This process will be useful to understand the mutual needs of the actors involved and to share objectives and outcomes avoiding the pursuing only of the personal interests.



**Figure 5 - National Federated Model**

Therefore, following this scheme and relying on the strength of the whole consortium every Nation will be able to develop a personal and specialized exploitation plan to better address the products and services on the local market.

Although joint exploitation is seen as the most promising and preferred way to exploit T&Tnet results, the Consortium partners have a priori identified individual exploitation macro objectives. The individual exploitation plans complements the joint exploitation strategy in an attempt to optimize the exploitability and the impact of the T&Tnet application; this approach aims to secure that there will always be a realistic exploitation

plan for each partner. The individual exploitation will be aligned with the joint exploitation plans and with the global objective identified for the whole consortium.

The industrial partners individually can exploit research results by enhancing their existing or creating new products and services. These products and services will lead to a competitive advantage and will create substantial benefits for their customers.

In order for the exploitation to be effective, an integrated approach will be necessary within each partner's organization and according to the organization's strategies and objectives. The integrated approach will be accompanied by the following activities:

- Transfer of research results into actual developments, products and services.
- Collect feedback on economic benefits and impact of the research project especially through focus group, interview, questionnaire and tests.
- Market examination for the best use of the research results and for creating new business opportunities; a dedicated deliverable for T&Tnet is in development stage and will be used to adjust and enhance the overall exploitation strategy.
- Achieving high exploitation through the feedback from large customer groups and other technical and scientific networks of the consortium partners.

The first draft of the Individual exploitation strategies will be developed after the user requirements have been clearly defined and then when the first prototypes have been validated in field trials and all the services will be mostly identified there will be the finalization of the plans. The commercial exploitation activities will be focused on early adopters among customers, in order to optimize time-to-market.

## **6.2. Public-Private Partnership and Pre-Commercial Procurement**

The *Pre-Commercial Procurement (PCP)* is related to the Research and Development (R&D) phase and can be described as an approach to obtaining R&D services that will have both risk and benefits sharing between the private partner and the public procurer. More in detail, the principles of the procurement will be:

- *Separation of the R&D phase from deployment of commercial volumes of end-products*: sometimes the fact that a company has done well all the R&D phase is not

a guarantee that it will win a follow-up contract for the mass delivery. This separation will allow the company to filter out all the technological R&D risk of different solutions before to start the large scale commercial roll-out.

- *Risk-Benefits sharing according to market conditions*: the public purchaser will share the results with other public authorities and industry and to grant that both may benefit from the results they will share all the R&D risk and benefits.
- *Intellectual Property Right (IPR) Sharing*: The contracting authority has to share the rights or with the supplier or by making them public and can't keep it as exclusive.

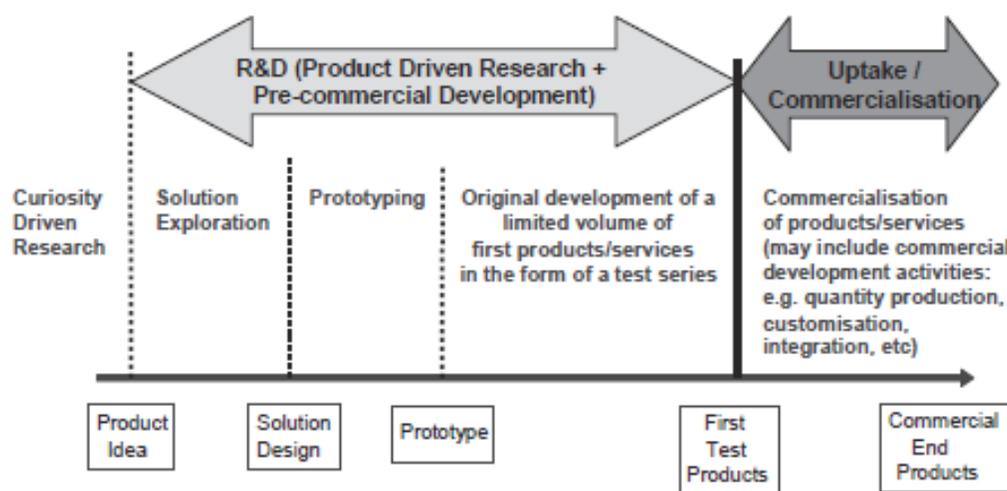


Figure 6 - Typical product innovation life cycle

Therefore, this procedure can be seen as a co-evolution and a mutual learning for the end-users and the stakeholders because all of them will get benefits from their personal point of view. On the demand side they will obtain useful information about functional needs while on the supply side information about technology's capabilities and limitations.

Thanks to the PCP it will be possible to better identify services and features of T&Tnet according to the real needs of the End-Users going to prevent the development of features not really needed by the community; at the same time, this process will prevent, also, future issue about the selling of the system. Since the modification and the adjustment of the system in the R&D phase are less expensive than in the commercial phase, there will be a substantial monetary saving. As structured the pre-commercial procurement, with this

process of mutual learning, guarantee at the suppliers shorter time to market and the chance to anticipate future demand for new solutions and features.

As the consortium deals with joint public/private workforce, Pre-Commercial Procurement strategies should be explored before the starting of the trial, in order to provide the right commitment to industrial partners.

The *Public-Private Partnership (PPP)* defines contractual forms, possible relationship and mutual cooperation between public and private entities; moreover it represents an instrument, for the government, to assure that the social obligations are really addressed. The partnership will be used to allocate in an efficient and optimal way all the tasks and the risks between all partners taking into account the personal and mutual advantages; while the government will provide benefit to the partnership regarding the social responsibility, the awareness and the sharing knowledge, the private sector instead will provide benefits related to the business management process by using its technological, commercial and management expertise. This kind of structure and process should guarantee an efficient risk allocation by spreading it between all the partners to guarantee high performance while lowering the overall cost.

The main motivations leading the government in entering such a partnership can be summarized as:

- *to attract capital investment from private sector*: the finding of the monetary resources is one of the major issue for the government that is constantly challenged by the necessity to develop new structures and services for the whole community trying to address their current needs and trying to anticipate their future needs. If structured efficiently the Public-Private Partnership will allow, on one side, the government to find the funds and the models to address its issues and, on the other side, will allow the private sector, at local and international level, to exploit business opportunities.
- *to use the resources available in a more efficient way*: with a PPP the government, focused on its core responsibilities (e.g. regulations, supervision), may pass all the operational activities to a well specialized private operators; this approach will

result, at the end, in more useful and cheaper services and features for the whole community and in a lower money emission for the government.

- *to reallocate roles and incentives trying to reform the sectors intended:* the PPP can be used by the government to create open discussion between the private and the public sector on particular reform or to clarify roles within a specific sector.

As briefly described, the Pre-Commercial Procurement and the Private-Public Partnership are both a mechanism leading to the cooperation between the public sector and the private sector but they will follow different rules.

### **6.3. Per Partners**

*(Macro-Points to develop :*

- *Objectives*
- *Technology and Services identified and developed ( Industrial and Research partners )*
- *Macro-Category of stakeholders and benefits identification )*

#### **6.3.1. Industrial Partners:**

The objectives for the industrial partners composing the consortium can be summarized in two macro-points :

- *Existing Market Improvement:* they want to improve their current business position in the existing markets by using the outcomes of T&Tnet.
- *New Market Exploration:* the industrial partners, thanks to the technology improvement and the services developed for T&Tnet will try to expand their business and expertise to new market.

All the technical improvement reached can be exploited by the Industrial Partners following two principles criteria :

- *Internal Exploitation:* The internal exploitation means that the industrial partner will use the upgrade in technology reached and the results obtained to improve other project they are involved in and to decrease the time needed to develop new technologies and consequently the time to-market.

- *External Exploitation:* The main objective is to develop new services for an existing market and to exploit the solutions identified; moreover the industrial partners will start to create a new community around the services developed in order to create new relationships with new possible customers going to increase their market size and customers base.

**ISOIN** will take advantage of the experience in the T&Tnet project in several concepts. First of all, related to the internal exploitation, it is interesting to mention that as the leader in management tasks, ISOIN will get in touch with the varied know-how needed to perform the project. In relation to this, T&Tnet enables ISOIN to support some of its strategic lines, such those related to transportation and mobility, mobile and computer applications, and e-health.

Another interesting point for ISOIN is the participation of the organization in the integration of the mobile and computer platforms. As this task deals with the integration of the components and services, and the implementation of a common infrastructure, the main topics of the referred task will let ISOIN go beyond its own state of the art in concepts that are clearly related to the organization's main activities.

On the other hand, and related to the external exploitation of the results of this project, T&Tnet can play the role of generating a marketing strategy to produce impact on potential clients. As stated before, one of the markets in which we are very interested is the related to eHealth. At present, the market for accessible products and services addressing the needs of elderly people is quite small. However, considering that the elderly population of EU-27 will significantly grow within the next few decades, a market for the demands of elderly is expected to emerge as a result of it. The potential market of these kinds of products are defined by the following figures:

- It is estimated that Europeans over 65 possess wealth and revenues of over €3000 billion, thus representing a huge market potential.
- The market for smart homes applications (age-related assistance in shopping, dressing, moving independently) is expected to increase from 13 million people up to 37 million between 2005 and 2020. Also, it is estimated that the amount of

people with several forms of age-related impairment will grow to 84 million in 2020.

- Evidence also points out at the fact that ICT can improve the delivery and efficiency of health and social care systems.

This future market will be structured by various stakeholders of possible value chains. The main stakeholders of the market described above are expected to be ICT companies, caregivers and professionals, patients and public healthcare systems.

The group of product providers gives the impression of an already existing market while it is assumed here that it is, however, research organisations that provide the main information sources on future market structures. The motivation for companies to invest in new branches or topics of research requires a strong economic prospect. Other organisations involved in this field are active due to already existing demands or other driving forces. They complete the overall impression of a future market structure.

**GEO** will try to utilize the results of the TTNET project in its capacity as SME, acting in geo-informatics and software sector. GEO will focus more on the exploitation of social collaboration platform and the journey planner. Especially, GEO is interesting in the commercial exploitation and the exploitation of the TTNET's project know-how. In addition, GEO will attempt to combine TTNET's know-how with existing technologies developed within the framework of other projects, in order to offer holistic services to public and private users.

**TELLU's** main technology asset relevant to the project is the SmartTracker platform. This is a platform for sensor-based services. It contains modules for the reception, processing and storage of sensor observations, a data model which connects sensor observations with entities such as persons and zones, a rule engine for specifying service logic and a web application for managing and using the services. The platform is generic and highly flexible, and can be used to provide functionality for end users and service providers in different domains, such as e-health, alarm services and security, and vehicle tracking. We currently have support for a large number of sensor devices and technologies, and new are added as needed. The sensor data processing and system intelligence in T&Tnet will be

based on SmartTracker. In relation to the SmartTracker platform, Tellu will be developing it to meet the needs of the project; they will also provide the service of running and maintaining an instance of the platform for use in the T&Tnet project. Tellu have a modular tracker client system for Android devices, from which phone clients for SmartTracker are built; this will be used and further developed for the tracking part of the T&Tnet app. Moreover they have Android modules for the service side of the system, for interacting with the accounts and processed data of SmartTracker and also, an Android app which can be used by secondary users to configure and monitor the tracking service and logic. For developing Android applications, Tellu have a data framework which enables advanced and robust data synchronization between client and server. And we have an application framework for high-level application functionality such as server-side configuration of the user interface.

MyLife is an AAL system developed by Tellu which also have components that may be relevant to T&Tnet. The system consists of an Android touchscreen client app and a server with database and web interface for account management and configuration. It includes functional modules such as calendar/appointment management and contact function.

Tellu is currently involved in two commercial endeavours, and see potential for exploitation of T&Tnet results in both of these. Primarily they are developing and running their SmartTracker platform for sensor-based services. This platform is in the marketplace through partners who use it to provide services to their customers; they so far have such service providers in Norway and the Netherlands. Tellu is also working with Chinese partners and local governments for use of SmartTracker in China.

This SmartTracker platform will be used and further developed in the T&Tnet system. Functionality added to the platform to meet T&Tnet requirements will be added to the commercial version when mature enough, and we hope to be able to exploit developments made in the project, such as adding routes to the core logic, for future commercial services.

Tellu's other venue for exploitation is in the AAL field, developing services for the elderly. Together with their partner Karde and one other partner, the company MyLife Products that was formed at the start of 2013 to commercialise the results of another AALJP project

called Mylife. Tellu provides the technological solutions. The first product, based on the results of the AALJP project, is an ICT system focusing on wellbeing and time orientation for elderly with beginning dementia. Mylife Products hopes to expand with more products targeted at elderly users, and T&Tnet results would be a clear candidate for this. Tellu is especially interested in tying together the Mylife and SmartTracker services in a larger service ecosystem for the elderly, with a special focus on cognitive impairment.

From the tracking side (SmartTracker), there is a large potential market for tracking of elderly with cognitive impairment. Tracking can provide a safety net which allows more people to move about independently, and this is a focus for Tellu. At the same time, they need to provide more than just tracking for these users, to add to the usability and get a competitive edge in the market. The primary users are the elderly themselves, and the system should also provide functionality directly useful to them when moving about, such as navigation guidance and an easy way to contact a carer. Here Tellu see great potential for exploiting the work in T&Tnet.

**KARDE** will gather knowledge to support elderly with monitoring- and care-related tasks and to design feedback mechanisms concerning their mobility patterns and usability preferences. KARDE will also use experience from the project to further development of its knowledge base on the elderly's needs for ICT-support, also in the context of well-being and self-service. This knowledge will be fed back to service and technology development activities. Summarizing this points it is possible to identify the main objectives:

- To contribute to mobility in particular and better ageing in general among the elderly population through the use of new technology in innovative and easy-to-use services, with special focus on elderly persons with cognitive decline.
- To develop further Karde's expertise on usability, accessibility and usefulness aspects of assistive technologies for senior citizens, and through this, to develop our R&D and consultancy services.
- To build a network of equally-minded colleagues in Europe for mutual learning, development of new solutions, dissemination and finally exploitation.

**REPLY** will exploit the results of the project on a commercial basis by enhancing its existing Social Network platform and by developing new services that can be further marketed towards existing and new customers, such as the e-government area within the Public Administration. T&Tnet could come as an extension of recent works within projects in the fields of Assisted Living, smart environments, tele-monitoring and Social Networking.

The main stakeholders identified interested in the outcomes of the T&Tnet system are the following :

- *Business/Service Provider* : Telbios and Tesan are two of the stakeholders identified by Reply, working in the field of Telecare and social e-inclusion may be interested in the T&Tnet application, services and benefits that the system will provide.
- *Government* : The Regione Emilia Romagna and the Provincia di Milano, active in the sector of smart cities and involved in the e-inclusion for elderly, are aware about the T&Tnet project.
- *Researcher, Academics and Scientists* : The INRCA (National Institute of Health and Science on Aging) may be interested in a mechanism of knowledge sharing to improve their expertise.

### **6.3.2. Research Partners:**

The exploitation objectives for the research partners follow a different pathway because they will be focused mostly on the integration of the technical improvement and the knowledge acquired into their teaching curricula and others research project, giving them competitive edge on the market against other research institutes. They will make sure that all these innovations will be used in future national and international projects going to develop further the services and the technology of T&Tnet and other relevant projects. Moreover, the Researcher partners will increase their international visibility by publishing new papers attracting the best students and professionals all over the world.

**ITA** has two locations, one in Zaragoza and other in Walqa (Huescac), both of them including two singular buildings with the most modern facilities and laboratories; an investment of about 3 million euros in state-of the art equipment was made last year. One

of those laboratories includes a usability lab which will help ITA to create very friendly applications to be used by elderly people.

The current list of services in development stage are :

- *Multimodal Trip Planner*: The multimodal trip planner will allow the end-users to evaluate the best pathway between two points taking into account the personal preferences selected; the preferences will vary from the route mode selection (e.g. walking, wheelchair, biking) or general route preferences (e.g. maximum walking distance, number of transfer).
- *Navigation System*: This service will provide information about the directions to follow, on how to move around, which modes must be used and the global scheduling.
- *Social Routes Planner*: When two end-users, willing to share a part or the total pathway they going through, select this service, it will compute the route for both allowing them to share their trip experience as desired.
- *Routes Synchronization*: This service will allow two people to make them meet up in one transport stop and to continue their routes together with no diversions.

The stakeholders identified during the process with the related exploitation chance, based on the T&Tnet outcomes, are the following:

- *Project Partners*: ITA found relevant partners working on other projects that may be interested in acquiring some knowledge in the research field T&Tnet is working on.
- *Government*: ITA is in contact with the DGA - Gobierno de Aragon and Zaragoza City Council which can be interested in acquiring the services developed for T&Tnet in order to promote the elderly inclusion and the active ageing tackling this social issue. Moreover, both will gain important information to improve the public transportation service.
- *Research Institute*: ITA have relevant relation with other research institute (e.g ZLC - Zaragoza Logistics Center, UPC - Universidad Politecnica de Catalunya, ALIA - Asociacion Logistica Innovadora de Aragon, University of Zaragoza) that may be

interested in a knowledge sharing and transfer mechanism to improve their current research projects and plan the development of new one.

**CURE**, as a non-profit organization (NPO) does not exploit results and technologies that emerged from the T&Tnet project for commercial purposes. Thus, CURE focuses its exploitation mainly on scientific dissemination and knowledge transfer to other related ongoing and future projects. The knowledge and know-how CURE gained within the T&Tnet project directly influences CURE's current ongoing and future research activities that can be seen as alternative exploitation actions.

### **6.3.3. End-Users Partners:**

The **SN**, as a representative for the senior users, will share all its experience in the sector with all the partners and will act as a relevant testing arena. The main objective to pursue, therefore, is the practical employment and diffusion of the T&Tnet application all among the users part of the community. Therefore it is possible to summarize this overall objective in three main points:

- Contribute to mobility in particular and better ageing in general among the elderly population through the use of new technology in innovative and easy-to-use services.
- Offer to their members the opportunity to take part in a European project and thereby influence the development of a useful application for our target group.
- Share their experience with the partners and act as a testing arena within the project, and through this build a European network from which we can learn.

The (**ZGZ**) Zaragoza City Council is strongly committed to the development of the project and to undertake the necessary actions that drive the project through citizens wishes.

The **ZGZ** main role in the project regards the involvement of final users all along the project life and after the project; the city council will also offer the city infrastructures and public transport real time data to create and test the services created within the project. Therefore the main objective for the city council is:

- to gain data and information about its transportation system in order to improve it and to promote the social inclusion and the active ageing.
- to ease the data accessibility by supporting transport public operators
- to listen to the voice of the street that requests innovative solutions for the citizens.
- to continue to make the city of Zaragoza more accessible and smarter.

The **AP-HP** research concerning usability, accessibility and user experience ensures that the user needs and end-user acceptance will be properly addressed throughout the T&Tnet project.

## 7. Monitoring for effectiveness and efficiency and Feedback System

All the activities performed for the dissemination and the exploitation will be monitored to guarantee the maximum return in term of objectives defined. The main concept to efficiently monitor the activities performed, that will be followed by the whole consortium, is related to the external communication structure previously identified (5W+H system).

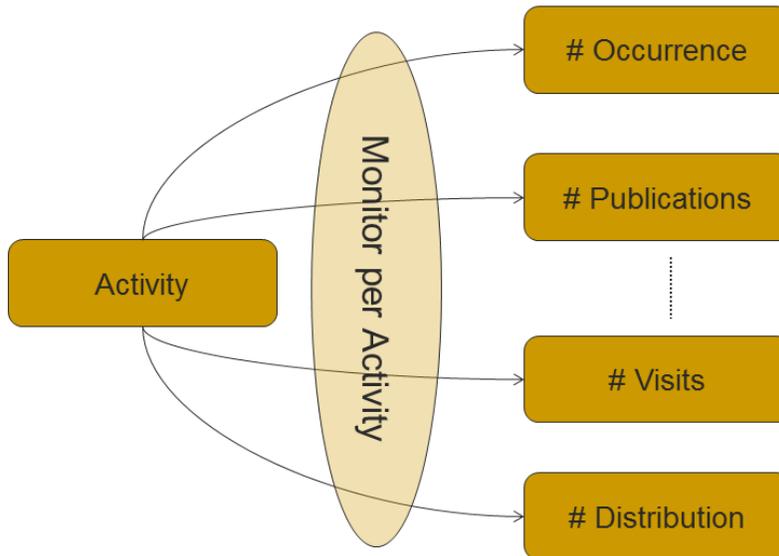


Figure 7 - How to monitor the activities

Although the activities identified are different by kind they have some common characteristics (e.g. objectives, audience, etc) that will be used to monitor their efficacy and efficiency; therefore, for easiness, every activity will be identified by two different kind of macro-monitor-flag:

- *Primary Monitor Flag*: This flag will be the particular one chosen to evaluate the performance between the same type of activity and the cross-performance between different kind of activity and will give direct information feedback.
- *Secondary Monitor Flag*: The secondary flag it will be less specific for the activity and will be used to evaluate the general performance between the overall set of

activities performed by the consortium. This flag will provide indirect information feedback.

The monitor flags will be evaluated and chosen starting from the objectives identified all over the three different strategic layers pinpointed (Operational, Tactical and Strategic). Since the primary objective, in the Operational and Tactical Layer, is the construction of the T&Tnet Image and the Awareness generation, the primary flags will be related to the peculiar characteristics that will give meaningful information to understand if the process planned is working at its best while the secondary will be used to collect information aimed to complete the global set of feedbacks.

Moving towards the Strategic Layer, where the main objective is the gap reduction between the T&Tnet image and its Perception, the primary monitor flag will be used mostly, not to evaluate the single performance of the activity performed but as a direct feedback to test the T&Tnet Awareness and to adjust the strategy. The secondary monitor flag, instead, will be used to collect information that on one side will complete the primary set of feedback and on the other side will launch the basis to plan a future strategy for both, the dissemination and the exploitation.

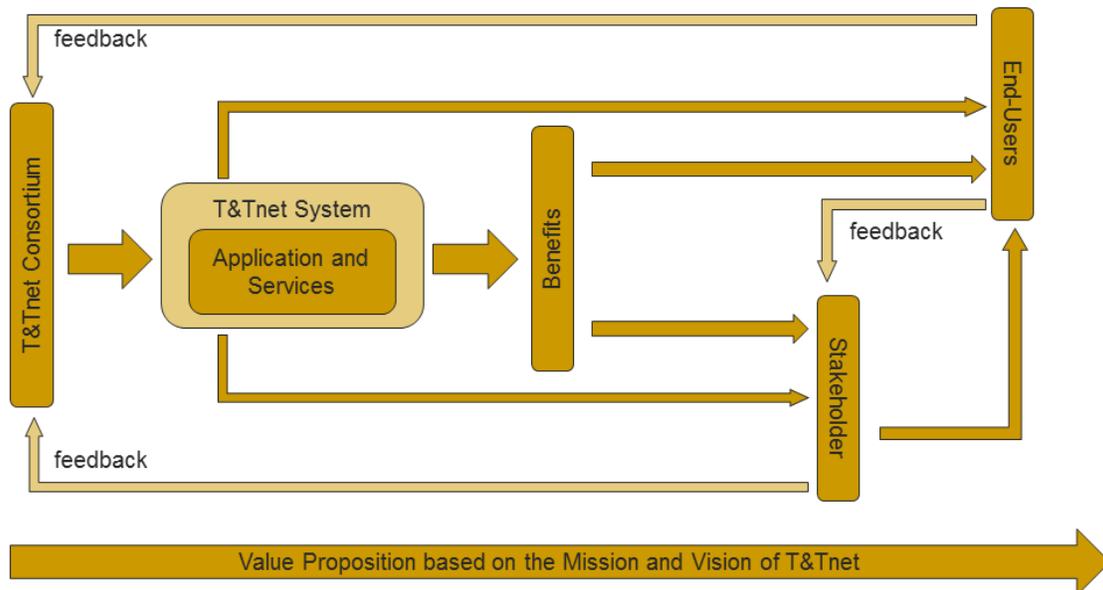


Figure 8 - Feedback System

Thought as presented, the mechanism of monitoring the activity can be seen as a powerful feedback system that will be used all along the strategic dissemination and exploitation process and that will give useful information from both, end-users and stakeholders allowing the consortium to better adjust the strategy chosen.

The feedback system will give information, thanks to the monitor flag chosen, on three different level:

- *Technical*: This layer represent mostly a quantitative feedback collected from the stakeholders; it will give information about the technology used to develop T&Tnet. This point will be useful, during the first phase of development, to better address the market needs and during a secondary phase to understand the future market needs.
- *Functional*: The functional feedback will be both, qualitative and quantitative; on one side, the End-users will give information about the features and services developed in T&Tnet from a personal point of view giving qualitative feedback about their direct experience and practical needs; moreover, this feedback will be useful during a second phase of development of T&Tnet to understand possible end-users future needs. On the other side, the stakeholders will give quantitative feedbacks based on their technology knowledge and experience; again their feedback will be used to evaluate new possible market strategy.
- *Practical*: The end-users will give feedback from a qualitative point of view allowing the consortium to collect information about the efficiency and the efficacy of the entire T&Tnet system. The stakeholders will collect direct users experiences from the market translating them in a quantitative feedback.

As intended the feedback system will collect feedbacks from two difference sources:

- *End Users*: the end-users will give a direct feedback to the consortium and an indirect feedback to the stakeholders both as a direct experience with T&Tnet system.
- *Stakeholders*: the stakeholders will collect direct end-users experience acting like a filter letting the consortium get some indirect end-user experience; moreover the

stakeholders will give some direct feedback based on their interaction with T&Tnet and the exploitation market.

All these pathways identified for the feedbacks will come back to the consortium, that will elaborate the results obtained in order to better address the right services on the market and to enhance the strategy; moreover, this process can be extended in the identification of two different kind of information:

- *Future Needs*: trying to anticipate the market demand and developing new services and features that can be then exploited with a lower chance of failure.
- *Premium Services*: the feedback process both, direct and indirect, will allow the consortium to understand which services are intended as basic, and so as free for the community and which one can be identified as premium where the community is ready to pay a fee to use them.

Following the list of the main activities with the chosen flags:

Activity	Primary Monitor Flag	Secondary Monitor Flag
Web-Site	Web-Site Activity	Number of Visits
Interactive Training Session	Level of Satisfaction Reached	Audience and Number of Participants
Scientific Publications	Objectives Reached	Number of Publications
Official Presentation	Level of Understanding	Audience and Number of Events
Technical Fair	Involvement Level of Audience	Number of Events

Table 7 - Activity Monitor Flags

## **8. Conclusions**

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## 10. Templates

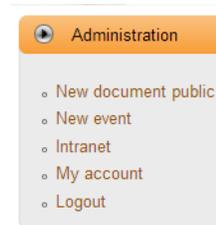
### 10.1. Web-Site



Templates 1- Home Image



Templates 2 - Web-Site Menu Structure



Templates 3 - Web-Site Administration Menu



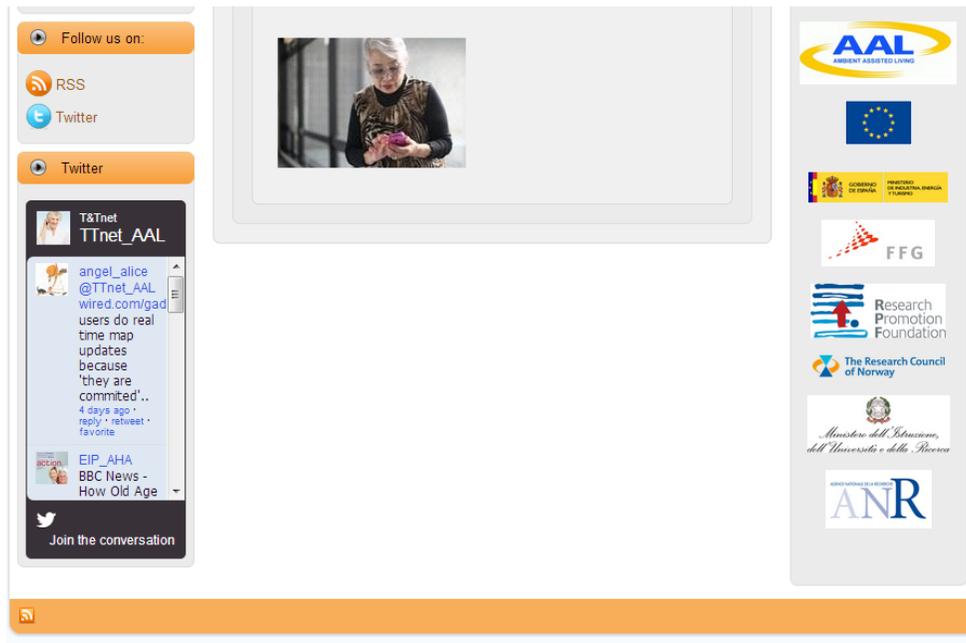
Templates 4 - Web-Site Social



Templates 5 - Web-Site Twitter



Templates 6 - Web-Site Home Page



Templates 7 - Web-Site Home Page



## 10.2. Posters, Leaflets and Brochure

Templates 10 – Poster 1

Templates 11 - Poster 2

Templates 12 - Leaflet\_Front

Templates 13 - Leaflet\_Back

<p><i>"Primary Users: are the person who is actually using an AAL product or service, a single individual, 'the well-being person'. This group directly benefits from AAL by increased quality of life"</i></p> <ul style="list-style-type: none"> <li>• Mobility and navigation solution tailored to primers users' needs.</li> <li>• Mobility and wayfinding is facilitated</li> <li>• Social inclusion</li> </ul> <p><i>"Secondary Users: are persons or organizations directly being in contact with a primary end-user, such as formal and informal care persons, family members, friends, neighbors, care organizations and their representatives. This group benefits from AAL directly when using AAL products and services (at a primary end-user's home or remote) and indirectly when the care needs of primary end-users are reduced."</i></p> <ul style="list-style-type: none"> <li>• Increased activity, thus better health</li> <li>• More independence</li> </ul> <p><a href="http://ttnet-aal.eu">http://ttnet-aal.eu</a></p> <p><b>@TTnet_AAL</b></p>	 <p>Coordinator Contact:          Victor Sánchez (Innovation and Technology department director).          Email: <a href="mailto:vsanchez@isoin.es">vsanchez@isoin.es</a>          Mobile: <a href="tel:+34685483912">+34 685 48 39 12</a>          Phone: <a href="tel:+34954219013">+34 954 21 90 13</a>  <a href="http://www.isoin.es">http://www.isoin.es</a></p>	<h1>T&amp;Tnet</h1> <p>Travel &amp; Transport solutions through emotional-social NETworking</p> <p>The AAL JP is a funding activity that aims to create better condition of life for the older adults and to strengthen the industrial opportunities in Europe through the use of information and communication technology (ICT). It carries out its mandate through the funding of a cross-national projects that involves small and medium enterprises (SME), research bodies and user's organizations (representing the older adults).</p> <p>T&amp;Tnet is a 30-months project submitted for the AAL-JP (Ambient Assisted Living – Joint Programme) Call 4 "ICT-based Solutions for Advancement of Older Persons' Mobility".</p>  <p><i>"Partially funded by the EU commission, the ambient assisted living joint programme and the national funding agencies of Spain (MINETUR), Norway (RCN), France (ANR and CNSA), Austria (FFS), Cyprus (RFF) and Italy (MIUR)."</i></p>
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Templates 14 - Brochure Front

 <p>The main idea of T&amp;Tnet is to provide to elderly people:</p> <ul style="list-style-type: none"> <li>• personalized context-based multimodal and multi-national social journey planning with effective capabilities,</li> <li>and an</li> <li>• easy to follow adaptive real time guidance making use of artificial reasoning based on an information manager.</li> </ul> <p>This solution will allow elderly to carry out and solve movement tasks and problems independently in a totally new way by offering a service of navigation and orientation adapted to the user preferences in real time. This process of personalization will be done thanks to meta-services:</p> <ul style="list-style-type: none"> <li>• Transport information.</li> <li>• Real Time emotions.</li> <li>• Collaborative Evolutionary Platform.</li> </ul> <p><b>HOW DOES IT WORK</b></p> <p>Maria has been given for her 73th birthday a new dress but it doesn't fit her because it's too small and she wants to change it. The dress was bought in a shop located in a new shopping center in the south of Vienna.</p>	<p>She can't drive and she doesn't want her daughter to take her by car to the shopping center, so Maria decides to use public transport. She has never been there before and she doesn't know exactly how to reach it.</p> <p>Additionally, she needs to pass by a pharmacy to buy medicine without deviating much from her main route. That's why she uses the T&amp;Tnet web site to calculate the best route.</p>  <p>The shop is open until 12.00h and she wants to arrive at least one hour before the closing time to have time enough to decide. She introduces 12.00h as the desired arriving time.</p> <p>The application gives her several routes with different combinations of public transports and walking stretches and Maria selects the desired route.</p> <p>She follows the indications as usual. She gets off one bus at 11:00 and walks to the pharmacy. The bus she has to take at the station will arrive in 30 minutes (11:30) so she has time enough to buy the medicine. When she is about to arrive to the pharmacy the application detects that the bus is delayed by 30 minutes and fires a sound alarm to advise Maria. The application offers her an alternative route which suggests taking a different bus line and arriving to the shopping center at 12.10h. She accepts the new route. After buying the medicine, she goes to the bus station, gets into the bus and arrives to the shopping center at 12.10h instead of 12.00h.</p>  <p>Once Maria has changed the dress, she wants to go back home but she is very tired. She feels sick and unable to return home by her own. She needs her daughter's help so she fires an alarm in T&amp;Tnet, her daughter receives it with the address where Maria is and then Maria's daughter takes her car, drives up to the shopping center and carries her back home. Upon the arrival, T&amp;Tnet asks Maria for feedback.</p>	<p>In order to gain knowledge about content, interaction and the user's mental model, exploration of users' personal experiences, opinions and wishes is required, because the added value of a product is not proportional to the amount of functionality that it includes; the user should be able to understand without much effort and use effectively the functionality provided to complete his tasks. Otherwise, unnecessary complexity can reduce the benefits of the application by overwhelming the user.</p> <p>For this purpose, different types of platforms, interaction techniques and a variety of use cases, initially suggested according to the T&amp;Tnet project idea, have been proposed to users by focus groups and questionnaires.</p> <p>The T&amp;Tnet application assumes a good level of mobility and capability of using mobile technology; therefore it is designed on the needs of relatively healthy and independent older individuals: thus the secondary users do not have the role of the carer, but are mostly engaged in mutual social interactions with the primary users, are interested in their well-being and available to support them if needed. Such users can be identified in family members, friends and relatives of the target users as well as organizations which support seniors' well-being and mobility (e.g. travel agencies organizing trips for seniors).</p> 
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Templates 15 - Brochure Back

### 10.3. Presentations

**T&Tnet**  
Travel & Transport solutions through emotional-social NETWORKING

ISOIN  
tell.u  
core  
Karde AS  
Geo  
ita  
Reply  
santer  
Seniornett  
Zaragoza  
ASSISTANCE HÔPITAUX PUBLIQUES DE PARIS

**WP#: T.##. Task Title**

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**T&Tnet**  
Travel & Transport solutions through emotional-social NETWORKING

Entity & Place  
Date (mm/dd/yyyy)

[Templates 16 - Presentation Home](#)

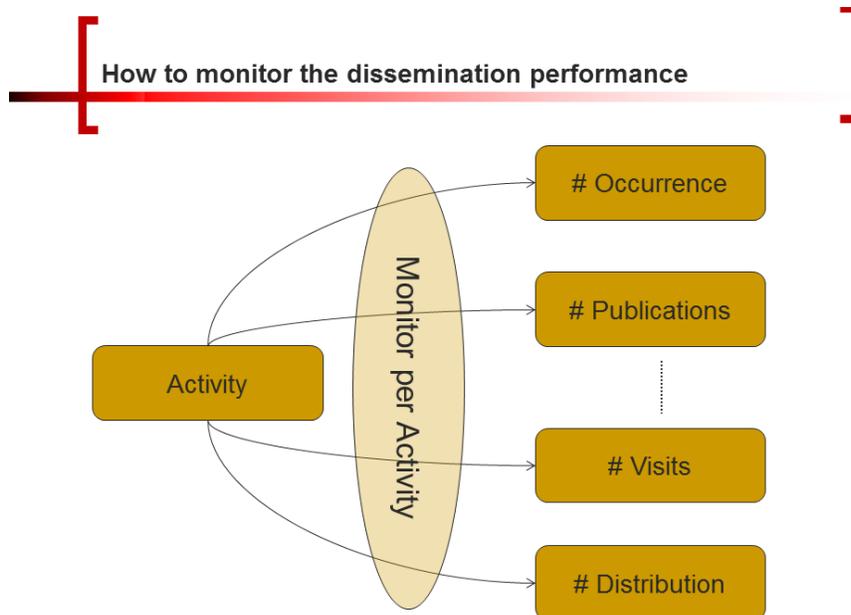
## TABLE OF CONTENTS

1. First Point
2. Second Point
3. Third Point
4. Fourth Point

## Change Topic



### Templates 18 - Presentation Change Topic



### Templates 19 - Presentation Content Slide

## 10.4. Others

### 10.4.1. T&Tnet Logo



Travel & Transport solutions through emotional-social NETworking

Templates 20 - T&Tnet Logo

### 10.4.2. T&Tnet Deliverable



**T&Tnet: Travel & Transport solutions through emotional-social  
NETworking**

AAL-4-032

<b>Deliverable</b> <Dx.x>
<deliverable_name>

<dissemination level>

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Templates 21 – T&Tnet Deliverable

## 11. Annexes

### 11.1. Contact Points

Company Name	Country	Company Logo	Contact Point	Telephone Number	E- Mail
ISOIN	Spain		Víctor Sánchez Martín	+34 954219013	<a href="mailto:vsanchez@iso.in.es">vsanchez@iso.in.es</a>
			Alejandra Ortiz González		<a href="mailto:alejandra.ortiz@iso.in.es">alejandra.ortiz@iso.in.es</a>
TELLU	Norway		Lars Thomas Boye	+47 90572929	<a href="mailto:lars.thomas.boy@tellu.no">lars.thomas.boy@tellu.no</a>
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GEO	Cyprus				
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			David Escuín	+34 976011888	<a href="mailto:descuin@ita.es">descuin@ita.es</a>
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			Nicola Bottone		<a href="mailto:n.bottone@reply.it">n.bottone@reply.it</a>
SN	Norway		Helge Klitzing	+47 90019343	<a href="mailto:helge.klitzing@seniornett.no">helge.klitzing@seniornett.no</a>
ZGZ	Spain				
AP-HP	France				

Table 8 - Contact Points

## 11.2. Abstracts

### 11.2.1. Seniors navigation

#### **Seniors navigation: Understanding their needs as to create an adaptive smartphone application**

*Victoria Cristancho-Lacroix, Angeliki Angeletou, Riitaa Hellman, David Escuin , Helge Klitzing, Fernando Benavides, Victor Sanchez and T&Tnet consortium.*

**Background** Navigation applications are nowadays widely available in mobile devices. Despite the variety of scopes used for their development, to best of our knowledge, seniors' needs, and requirements are not addressed by any navigation application, at least at a commercial level. Nevertheless, there is evidence that a navigation application for senior citizens would be increasingly valuable. Engaging in social activities is cited as one aspect that would improve quality of life [1]. Thus, the aim of T&Tnet project is to provide a personalized context-based multimodal and multinational social journey planning with affective capabilities, and an easy to follow adaptive real time guidance making use of artificial reasoning based on an information manager (filtering and combining). Identifying the needs according to the lifestyle of the target population is a crucial preliminary stage to develop an adapted social navigation application.

**Objective** The aim of this exploratory study is to evaluate the navigation needs, wishes, and opinions of older populations in four countries (France, Austria, Norway and Spain). The results of this study T&Tnet Consortium (European AAL Project) will establish the first mock-ups and technical requirements of the application.

**Methods** Four countries participated in this exploratory study following the same methodological protocol. The recruitment was based on a clear definition of end-users (seniors having some experience with mobile devices). A total of 49 participants accepted and signed the consent to participate in the focus groups and fill in a questionnaire. Each focus group session was moderated by one researcher and observed by one or two researchers and the number of participants ranged between countries from six to sixteen. The focus group included a discussion, a brainstorming phase, and a brief

evaluation of ideas generated both by the T&Tnet Consortium and end-users during the brainstorming phase.

**Results** Different navigation profiles are identified due to the city's infrastructure and external conditions, which determine the choices and personal preferences of navigation. Social encounters, going for a walk, groceries and other everyday tasks are the main motivations behind seniors' mobility, according to French and Spanish participants. Their needs for route planning are very limited, as they visit places already known. Inside their cities, public means of transportation are preferred over private vehicles (taxi, relative's vehicle, own car) in Spain, Austria, and France; the use of private cars is on average limited to 1-2 times per week. On the contrary, in Norway, possibly due to climate, landscape and urban infrastructure, transportation with own car seems to be the norm, scoring the highest use ('almost every day') among other means; metro, bus, tram and transportation with relative's vehicle follow in preference with a frequency of use around 1-2 times per week. It is important to note that all participants need more information regarding public means of transportation. Accessibility information is also highly appreciated by Spanish, French, and especially Norwegian users.

**Future directions** The T&Tnet services will considerably facilitate end-users everyday journeys encouraging them to maintain their active participation in society. The system will improve mobility and autonomy of the target population by providing assistance for traveling and by stimulating their reasoning and perceptual abilities in everyday life.

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- [14] <https://developers.google.com/transit/gtfs/>