

**COMPETITIVENESS AND INNOVATION FRAMEWORK PROGRAMME
ICT Policy Support Programme (ICT PSP)**



**European Thematic Network
on Assistive Information and Communication
Technologies**

PROJECT FINAL REPORT

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Project Overview

The ETNA Thematic Network was aimed at facilitating and co-ordinating – over a period of three years – the implementation of a **European Web Portal** able to provide information on **ICT-based assistive products** and **e-Accessibility solutions** which are available in Europe, and on related organisations and services. The intended audience includes various stakeholders, such as end-users, professionals, manufacturers/suppliers, researchers/developers and policy-makers.

Assistive technologies (ATs), especially those based on Information and Communication Technology (ICT), are a powerful driver for inclusion and quality of life for people with disabilities and elderly people, by providing compensation for functional limitations or allowing access to mainstream products or services. ATs play an increasingly central role in equalising opportunities for people with disabilities in all aspects of life, as they help to cope with barriers in all types of environment.

However, ensuring access to ICT assistive equipment, systems and services is not straightforward: information is patchy, not well distributed or simply absent; knowledge and expertise are unevenly distributed in Europe and often scattered among highly specialised Centres; the ICT AT market is still a niche dominated by highly specialised small or medium enterprises (SME). In this context, communication between different environments plays a fundamental role, both for improving knowledge exchange among the various stakeholders – especially taking into account the end-users' views – and for a wider circulation of information on the products available, in a more transparent and easily accessible way.

In order to tackle this issue, the **ETNA network**, in collaboration with the **ATIS4All network**, worked on the creation of a **European Web Portal** able to connect and disseminate all information and expertise in this field.

In the course of both projects, as tangible results gradually took shape, technical considerations and thoughts related to future sustainability led to the decision of having **two distinct but coexisting Portals**, communicating with each other:

- an **Information System** – a search engine that aggregates information from various providers and repositories all over Europe and beyond – to be **developed by the ETNA network** and later **taken up by the EASTIN Association** (the European Assistive Technology Information Network);
- a **Community** – connecting all stakeholders through a collaborative portal – to be **developed by the ATIS4All Network** and later **taken up by Technosite** (the ATIS4all coordinator).

According to the ETNA Exploitation Plan, the **Information System** is going to take over the previous EASTIN Information System, which has been online since 2006, and will inherit its name, brand and Internet domain www.eastin.eu. At the time of production of this Report, it is available in Beta version at the provisional address <http://test.etna-project.eu>. The migration to the EASTIN environment requires some technical work by the EASTIN Association, which is scheduled to be completed in spring 2014.

The ETNA network involved **23 European leading Organisations in 13 Countries**, each with acknowledged commitment in the ICT and in the AT area. It was coordinated by the CITT (Centre for Innovation and Technology Transfer) of the Don Carlo Gnocchi Foundation (Milano, Italy).

Objectives

The specific objectives of the ETNA Thematic Network can be summarized as follows:

- Make information on available AT products and e-accessibility solutions more transparent and easily available to everybody, so that it contributes to the **empowerment** of citizens with disabilities (in relation to the knowledge and the choice of assistive technologies) and to the advancement of the **AT market** (which will have to respond to a wider audience of informed, demanding and responsible consumers across the whole European Union);
- Connect developers, providers and suppliers of AT solutions from all over Europe, by improving exchange of knowledge, ideas and open source tools, overall contributing to the **advancement of R&D** and help **companies** to benefit from a wider market potential;
- Connect researchers, developers, professionals, and end-users of AT. In this way, the network will help inject the users' viewpoint, and also help improve **public service delivery systems** by making transparent across Europe the variety of regulations, standards and procedures, and bringing to light best practices that can be adopted and localized;
- Support **mainstream developers** in the development of ICT products intended for the general public, enabling them to find information and useful resources for creating more accessible products, or products that are compatible with current and future AT products.



The ETNA Consortium in Linz, July 2012



Also with the ATIS4all partners, in Milano, February 2013

Project History

A live network of committed partners

During the three years of the project, all Consortium partners were involved in an extended and valuable exchange of ideas, knowledge and expertise, which contributed to the achievement of all planned results within deadline, and eventually led to the implementation of the ETNA **Information System**. This involved – in order to facilitate the flow of relevant information among differently indexed sources – the creation of common language (*the ETNA taxonomy*) able to describe and classify the web resources related to AT products and e-accessibility solutions.

Key events in **2011** were the **first** and the **second workshops**, held respectively in Milan, Italy (24-25/03/2011) and in Maastricht, The Netherlands (29-30/08/2011).

The **first workshop** investigated the information needs of the various stakeholders, and set the ground for the achievement of the **1st ETNA milestone** – the **map of information needs** (described in the public **Deliverable D2.2** “*Synopsis of the information needs*”).

The **second workshop** explored the web resources available in Europe in relation to ICT AT products and e-accessibility solutions, and addressed the work that led to the achievement of the **2nd ETNA milestone** – the **map of resources** (described in the public **Deliverable D3.2** “*Synopsis of the existing resources*”).

In the course of **2012**, all partners’ involvement was quite demanding, as the project focus moved to implementation issues involving inter-disciplinary dialogue and complex technical decisions. The **ontology** issue (how to describe this domain of knowledge in such a way to be properly managed by an information system) was the main subject of **the third** and the **fourth workshops**, held respectively in Taastrup, Denmark (25-26/01/2012) and in Linz, Austria (9-10/07/2012).

The **third workshop** included lectures, plenary discussions and team-work aimed at identifying common methods to classify the key features of ICT AT products and e-accessibility solutions. It was understood that a **taxonomy** (identifying / naming concepts and arranging them into classifications) was sufficient to describe the ETNA domain model and inform the design of the Portal search engine. It was the opportunity to look at the theme from different viewpoints and start a consensus-building procedure that created the basis for further elaboration.

Once the roadmap was clearer – thanks to several internal consultations and dedicated technical meetings – and some original assumptions in the ETNA Description of Work had been reformulated, the foundations of the taxonomy were refined in the **fourth ETNA workshop**. In order better to achieve the overall ETNA objectives within deadline and within the planned resources, the workshop re-defined the scope of two Work packages – whose title was changed from “*Ontology of products*” and “*Ontology of components*”, respectively into “*Taxonomy of resources*” and “*Taxonomy management tools*” – and started the consensus process that led (through several iterations) to the achievement of the **3rd ETNA milestone**. Accordingly, this milestone was re-named **Taxonomy of resources** (it is described in the



public **Deliverable D4.2** “*Taxonomy of resources*”).

The two workshops held in **2013** were organised jointly with ATIS4all network, thus responding to the EC request to strengthen collaboration between the two networks.

The **fifth workshop** was held on February 21-22, 2013 in Milano, Italy at Don Gnocchi Foundation; it was meant to present the first prototypes of the ETNA Information System and of the ATIS4all Collaborative Portal, and to discuss the modality of uploading resources involving information providers (from the ETNA side) and attracting key-actors in the community (from the ATIS4all side). Furthermore, working groups were organized, in order to discuss methods for the Portal assessment and validation, and to investigate the most effective strategies in meeting the stakeholders’ expectations, from different perspectives.



The **sixth and last ETNA Workshop** was held on September 17-18, 2013 in Vilamoura, Portugal, in conjunction with the AAATE 2013 Conference. It was devoted to the public launch of the two Portals – although in a test version – and to a discussion on the roadmap towards their effective technical implementation, scheduled for the end of December.

The production of the various deliverables usually proceeded by e-mail circulation of drafts in several iterations, with collection and discussion of all partners’ feedback until achieving consensus. Besides the workshops, interaction among the partners was strengthened by **15 Educational Webinars** that gave each of the partners the opportunity to illustrate in detail to the whole Consortium their activities, projects and achievements in the sector, and establish mutual collaboration. The Webinars held in 2013 were also aimed at reaching out to possible external partners and exchange information and best practices with other AT databases of non-EU countries or similar projects. The last webinar was devoted to the conclusive meeting of the ETNA Consortium, sealing the end of the project. The “*virtual room*” of the webinar platform was also used for several management meetings and technical meetings.

A network actively communicating with the external world

In relation to dissemination, each partner carried out public activities to spread information on the project and its results at national or local levels, according to a planning agreed with the project coordinator, as described in detail in the **Dissemination Plan (Deliverable D1.13, “Draft dissemination Strategy”)**.

Since the beginning of the project, the **dissemination material** was conceived so as to deliver a public image of a single cluster with the parallel network ATIS4All. Therefore a single leaflet was produced, advertising both networks, sharing the same design, layout and contents. Following the project developments and the joint decision of creating two distinct but coexisting Portals



communicating with each other (the ETNA Information System and the ATIS4All Collaborative Portal), in September 2013 a new brochure was published, keeping the same concept of advertising both Portals. The final brochure takes into account this new vision, carefully weighting the wording, having in mind the overall goal of the two networks as a whole, then specifying the single role of each of them within the cluster.

The brochure also clearly indicates the distinct results of the joint effort: on the one hand the launch of the new ATIS4all Collaborative Portal, on the other hand and the upgrade of the EASTIN Portal, which is due to inherit the ETNA Information System.



The final version of the dissemination brochure – outer side



The final version of the dissemination brochure – inner side

The **ETNA institutional website**, www.etna-project.eu, was first published in March 2011; since then, its contents (progress of the project initiatives, detailed description of the workshops, the partners' presentations, the webinars recordings and official documents) were constantly updated. A final updated version was released in December 2013 which included contact details of each partner and all documents produced during these three years. The ETNA institutional website **will be kept on-line** after the end of the project.



The institutional ETNA website: www.etna-project.eu



The institutional ETNA website: an internal page

The Web Portal gradually takes shape

The foundation stone towards the establishment of the ETNA Information System was laid at the end of 2011 with the deployment of two components which were published along with the second

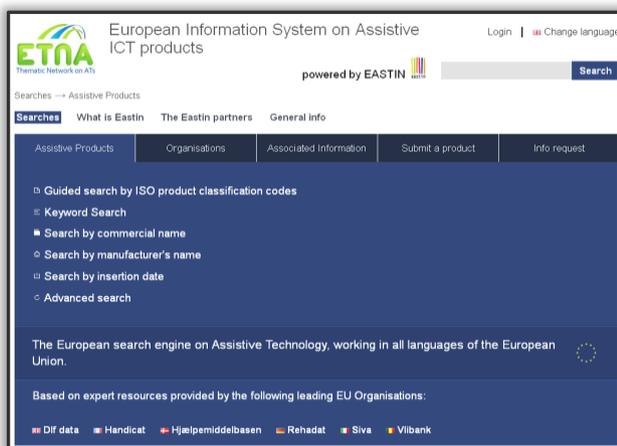
release of the institutional website:

- a newly re-engineered EASTIN *search engine* (developed in collaboration with the ICT PSP project “EASTIN-CL” and with the EASTIN Association), and
- the first prototype of a *user ratings and comments tool* (developed in collaboration with ATIS4All) intended to allow end-users from the “virtual community” to review the products retrieved through the search engine.

These components represented the first steps of the hard work that followed and gradually led – at the end of 2012 – to the implementation of the *first prototype of the ETNA Information System* (published in January 2013 at <http://test.etna-project.eu>), marking the achievement of the *5th ETNA milestone* – the *Thematic Network Web Portal 1st Release*.

The findings of work-packages WP2 (*Mapping info needs*), WP3 (*Mapping existing resources*) and WP4 (*Taxonomy of resources*) inspired the specifications of this first release, which was created by extending and improving the newly re-engineered EASTIN search engine. Major changes were carried out in the *domain model* (internal data representation) – extended to encompass the new categories of resources identified by WP3, and to deal with the new taxonomy created by WP4 – and in the *search interfaces* – improved and extended so as to deal with the new datasets, and to include new search functionalities meeting the information needs of the various stakeholders as identified within WP2.

This led to the release of the *second prototype of the ETNA Information System* – described in *Deliverable D1.8* (“*Search engine and interface 2nd release*”) which therefore replaced the previous *Deliverable D1.6* – thus achieving the *6th ETNA Milestone (MS6)*. This new prototype improved the first one by adding new functionalities (regarding the *advanced search* and the *product review and comments tool*), according to the specifications defined in *D1.5* “*Search engine and interface specifications*”, and taking into account a preview of the *validation* findings.



The ETNA Information System - Second Release

The validation process was rescheduled to start one year earlier, in July 2012, following the suggestions coming after the first Annual Review. A concept of the Validation Plan was thus developed and shared during the ETNA Workshop held in Milano, Italy, in February 2013. Tools and methods to be used were then included, consisting of focus groups and semi-structured interviews addressed to target groups listed in the stakeholders categories provided by *Deliverable D2.2*.

The test / validation activities, described in *Deliverable D7.1* (“*Validation Plan of the TN Portal*”), were focused on three components of the ETNA Information System: the *search*

interface, the *data upload tool* and the *user rating and comments* tool. Attention was given to the additional improvements introduced to the system by the ETNA project, rather than on the facilities that had been just inherited without modification from the EASTIN system.

The results of the tests and the recommendations are reported in detail in *Deliverable D7.3*, “*Validation of the TN portal*” which outlined different aspects for each component (web portal, upload tool and rating and comments tool). From these findings, the *Information System* was eventually published in its final release on <http://test.etna-project.eu>, refined according to observations gathered during the validation activities and ready to take over the current EASTIN system, thus achieving the *7th ETNA Milestone (MS7 - Thematic Network Portal, final release)*.

The system fully exploits some unique features of the EASTIN system, such as the **full multi-lingualism** and the ability to integrate an unlimited number of different information systems even if based on different technological platforms. The system is designed to accommodate for an unrestricted number of different **language interfaces**: currently the ETNA Information System is available in all languages and linguistic cultures of the European Union. The graphic appearance is quite similar to the previous EASTIN system, which has been judged by the Consortium functional and effective for both the purposes and the audience of the Information system.

In order to achieve a wide coverage of the Internet resources to be encompassed by the ETNA search engine, linking strategies were identified, according to **Deliverable D3.2** (“*Synopsis of the existing resources*”). Two schemes were implemented:

- Partners operating web-based databases and technically able to deploy **web services** compliant with the ETNA specifications (described in **Deliverable D7.4** “*Partners’ webservices Final release*”) are requested to link their databases to the ETNA search engine through automatic procedures. These partners have been called **providers type A**. Currently this linking method has been successfully implemented for seven National Databases (those of the Full Partners of the EASTIN Association) and for three thematic repositories (Oaeg, Oatsoft and Essediquadro).
- **Providers type B** - represented by all EASTIN Associate Partners i.e. the National Contact Organisations for the other EU Countries¹ - are requested to manually upload their resources onto the central database of the ETNA Information System, via a purposely developed **online upload tool**.

Within work-package **WP6** “*Unified access to all resources*” the coverage was extended, encompassing **over 15.000 products in the ICT field**, and related information on **products** (both **AT products** in strict sense and **e-accessibility solutions**), as well as **organizations** (*companies, projects, and service providers*) and **associated information** (*articles, case descriptions, ideas, FAQs, Forums, News, and Regulations*).

Information is indexed according to the already-mentioned **ETNA taxonomy**. For each type of resource, the taxonomy includes a **basic dataset** (i.e. the minimum amount of data that are needed to uniquely identify a resource; to understand what it is about; and to make it retrievable by the search engine). For **products**, the taxonomy also includes a **detailed dataset** that describes technical and functional characteristics in detail. As the detailed dataset will be evolutionary in itself – due to the fact that the assistive technology domain continuously evolves, especially in the ICT domain – the detailed dataset will need continuous maintenance. To this purpose, a **Taxonomy management tool** was developed in December 2013, thus achieving the **4th ETNA Milestone (MS4)**.

¹ The Associated Partners of the EASTIN Association include:

- European University Cyprus, Dept Education Sciences, Nicosia - CY
- Astangu, Tallinn - EE
- CIST, Sofia University St. Kliment Ohridski, Sofia - BG
- Disability Now, Athens - GR
- National Office For Rehabilitation And Social Affairs, Budapest - HU
- Ministry of Welfare of the Republic of Latvia, Riga - LV
- Centre of Technical Aids for Disabled People (Ministry of Social Security and Labour), Vilnius - LT
- ADAPTH, Bertrange - LU
- Citizens Information Board, Dublin - IE
- Norwegian Labour and Welfare Service, Oslo - NO
- Fundatia Alpha Transilvană, Târgu Mureş, RO
- Technical University of Košice, Košice - SK
- University Rehabilitation Institute Rep. Slovenia, Ljubljana - SI
- CEAPAT, Ministry Social Affairs, Madrid - ES
- National Institute For Welfare And Health, Helsinki - FI

A clear exploitation strategy

The maintenance of the Portal in the long run is clarified in **Deliverable D1.9** (“*Exploitation Plan*”): considering that after the end of the project the ETNA information system will be taken up as an evolution of the EASTIN system, and will maintain its brand and address www.eastin.eu, the sustainability strategy is envisaged in a structure embodied in the current EASTIN association, with proper adaptations and various possible levels of membership.

Following the EASTIN Technical Meeting in February 2013, consensus was reached: long-term sustainability will be ensured by a network of stable active partners, based on a **three-level membership** that includes **full**, **associate** and **external** partners. The financial sustainability of the Information System will be guaranteed by full partners through the payment of an annual membership fee. In the EASTIN AGM (Assembly of Partners) held in London in June 2013 this scenario was officially adopted in the new EASTIN Strategy Paper 2014-2016².

² <http://www.eastin.eu/it-IT/generalInfo/download/document-233>

The project's outcome

Overview of the Web Portal

Over a period of three years, the ETNA Thematic Network has developed an on-line information system providing information on assistive products based on e-accessibility solutions which are available in Europe, and on related organizations and services.

It has been designed to meet the information needs of five categories of stakeholders: *end-users* of assistive technology and e-accessibility solutions (persons with disabilities, their families and primary caregivers), *professionals* (in health care, assistance, and education), *manufacturers and suppliers*, *researchers and developers*, and *policy makers*.

It hasn't been developed from scratch: it has evolved from an already-existing Web Portal – the European Assistive Technology Information Network (EASTIN) – and has further exploited some unique characteristics of this Portal, such as the multi-lingual user interface and the ability to address not only ICT products but all domains of assistive technology.

Since the beginning, ETNA has worked in close collaboration with the parallel network ATIS4all (European Thematic Network on Assistive Technologies and Inclusive Solutions) belonging to the same cluster. The initial vision was that of a single joint Web Portal including both the information system (which is responsibility of the ETNA project) and the community (which is responsibility of the ATIS4all project). In the course of both projects, as tangible results gradually took shape, technical considerations and thoughts related to future sustainability led to the decision of having two distinct but coexisting Portals, interacting with each other at three levels:

- reciprocal *links* in the headers of the portals' WebPages;
- *feeds* from the ETNA Information System to the ATIS4all Collaborative Portal;
- a facility allowing members of the ATIS4all community to *rate and comment* assistive products retrieved from the ETNA Information System.

In comparison with the previous EASTIN system, the ETNA System has a much higher potential, thanks to the introduction of new advanced features:

- an improved *architecture*, able to aggregate an unlimited number of information providers communicating automatically through web services (called *providers type "A"*);
- additional ways to collect information, by means of a *data upload tool* that allows information providers who don't communicate via web services (called *providers type "B"*) to upload data manually onto a new central repository;
- more relevant and accurate *contents*, especially in relation to ICT assistive products and e-accessibility solutions, thanks to an improved domain model based on new taxonomies;
- a *taxonomy management tool*, for maintenance and future developments of the taxonomy;
- improved *search engines*, especially in relation to ICT assistive products and e-accessibility solutions;
- increased ability to deal with *other resources* rather than just product information (organizations, such as companies, projects and service providers; associated info such as literature, regulations etc.);
- increased *multi-lingual abilities* (based on controlled vocabularies and taxonomies) so as to accommodate for all languages/cultures of the European Union.

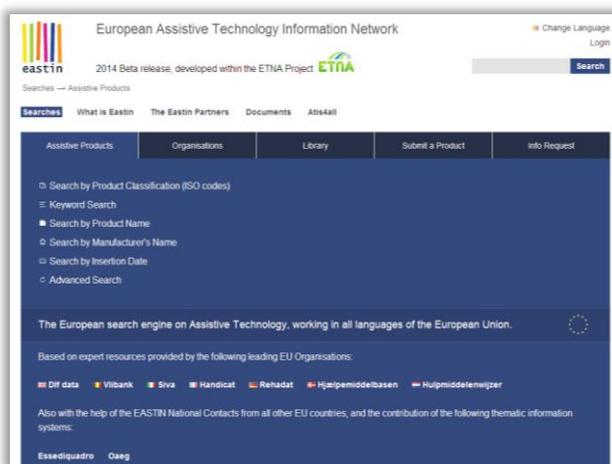
The search engine

Starting from the *home page*, three different kinds of searches can be carried out:

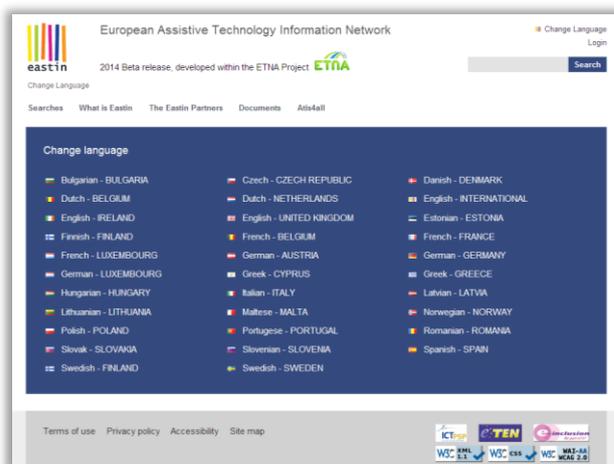
- **Assistive Products**
- **Organizations**
- **Library**

The Portal also offers the possibility:

- to **submit a product** that isn't known to the Portal yet, and
- to post **information requests** for expert advice (in every Country there is a National Contact Organisation able to provide answers or further contacts).



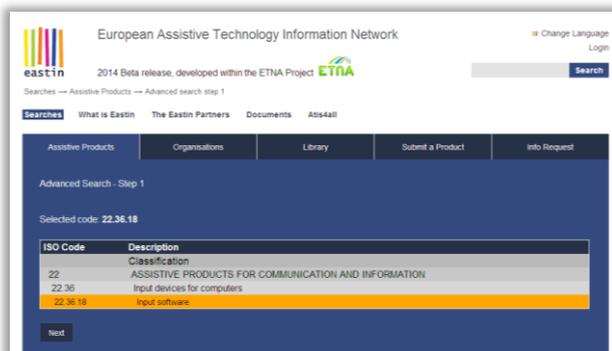
The Web Portal homepage



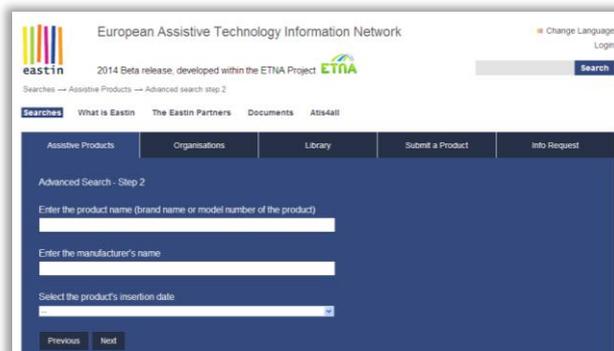
The Portal works in 32 languages/cultures, self-adapting to the user's browser language

Assistive Products can be retrieved by means of six search criteria:

- **Guided Search** by product classification codes (based on the ISO 9999:2011 standard);
- **Keyword Search**;
- Search by **product name**;
- Search by **manufacturer's name**;
- Search by **insertion date**;
- **Advanced search** (combining all the above criteria, plus detailed technical features of ICT assistive products).



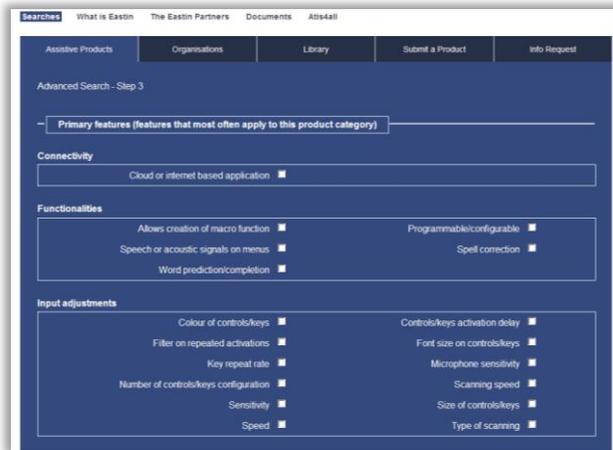
Products advanced search - Selecting a classification item



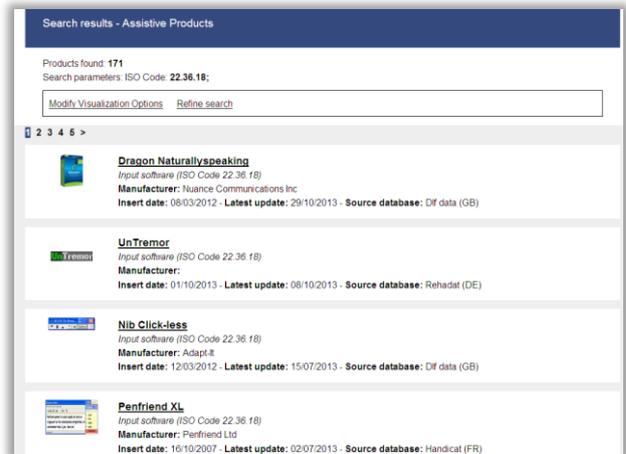
Products advanced search - Restrict to the search to a given

(according to the ISO 9999 standard) at 1st or 2nd or 3rd level

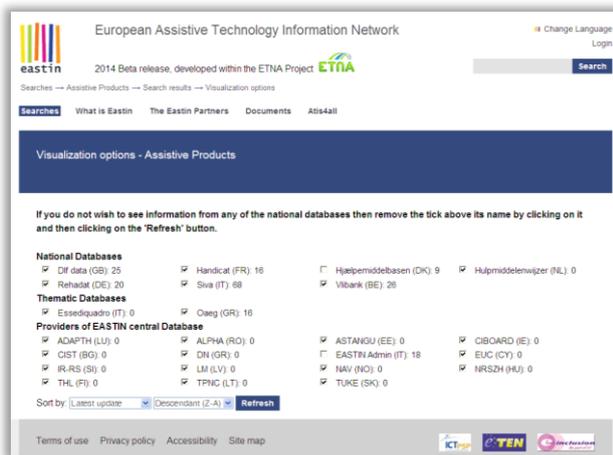
brand or manufacturer, or to more recent products



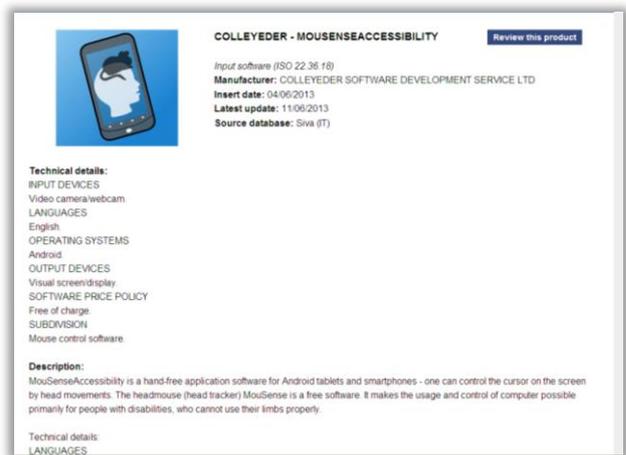
Products advanced search – Select specific technical features



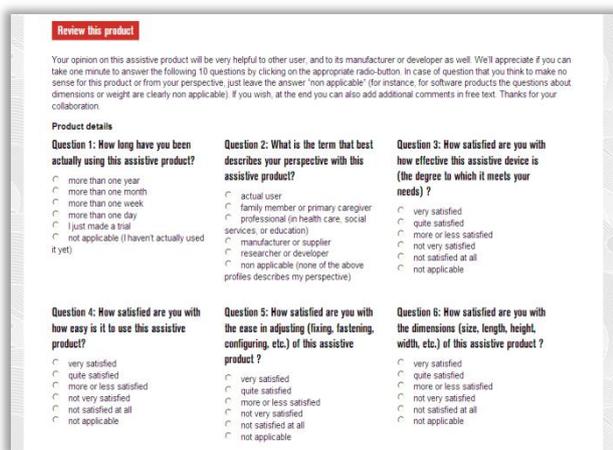
Products search – List of results



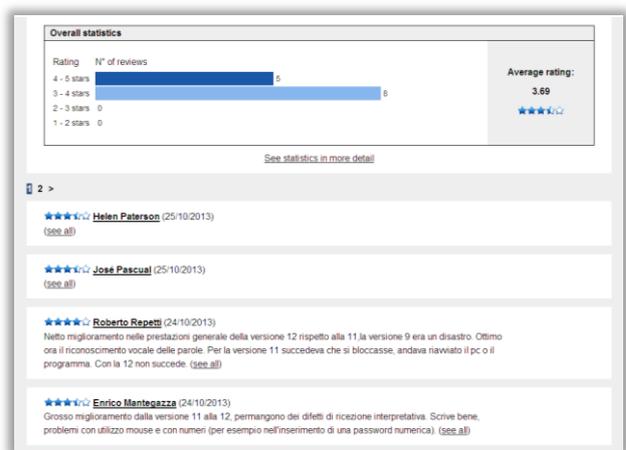
The search results can be sorted in many different ways



Products search – Full details of a product



By clicking on “Review this product”, a rating questionnaire opens on the ATIS4all collaborative portal



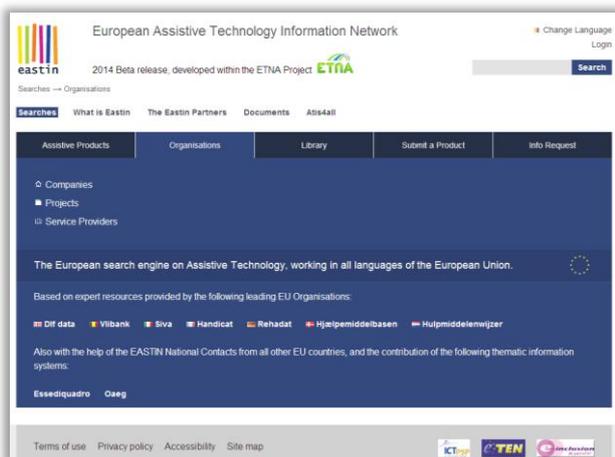
All the reviews (stored in the ATIS4all Portal) can be read within the product record in the ETNA Portal

New contents and search criteria have been introduced in the section formerly addressed only to “companies”. This narrow scope has been broadened to a more comprehensive definition of

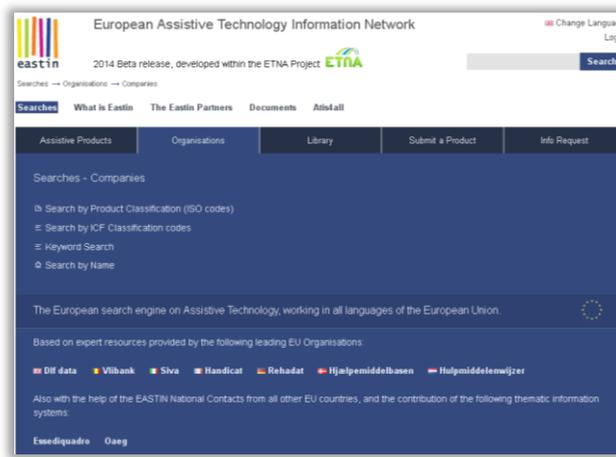
“organizations”, which now includes *companies*, *projects*, and *service providers*.

Organizations can be searched by means of four criteria:

- Guided Search by **ISO product classification** codes;
- Search by **ICF classification** codes (the International Classification of Disability, Functioning and Health of the World Health Organisation);
- **Keyword** search;
- Search by **name**.



Organisations search – Selecting the type of organisation



Example of Companies search

The **Library** includes a wide range of items, including:

- Articles;
- Case descriptions;
- Ideas;
- FAQs (Frequently Asked Questions);
- Forums;
- News;
- Regulations;

These can be found by means of six search criteria:

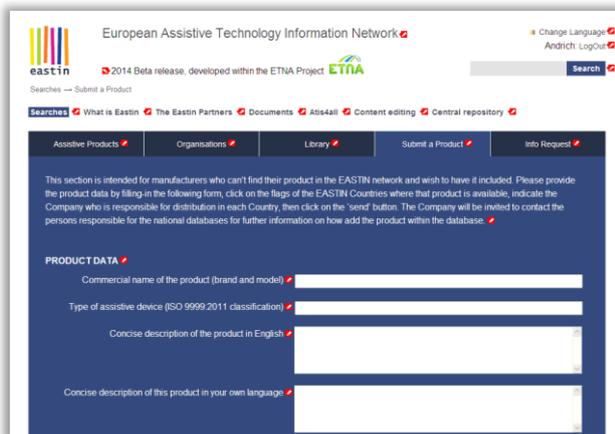
- Guided search by **ISO product classification** codes;
- Search by **ICF classification** codes;
- **Keyword** Search;
- Search by **title**;
- Search by **author**;
- Search on all **documents**.

The administrative tools

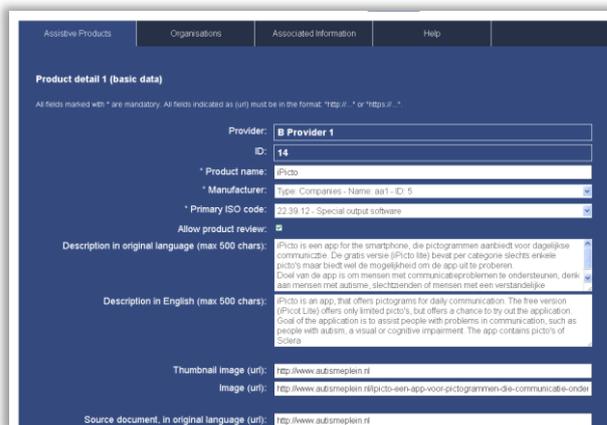
The Portal also includes a set of password-protected administrative tools that allow performing certain data management tasks depending on the authorisation level. The main tools are:

- A **contents editor**, allowing localisation of all static textual information appearing on the Portal web pages in each language / culture;

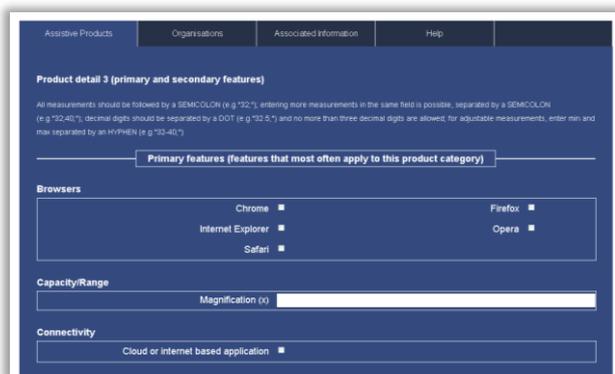
- A **data upload tool**, allowing authorised “providers type B” to manually enter information on products, organizations or associated info;
- A **taxonomy management tool**, allowing the system administrators to carry out updates, modifications or extensions – subject to appropriate rules – to the taxonomy that drives the product descriptions. It also allows the collection of expert views in relation to the relevance of each taxonomy item for a given category of products.



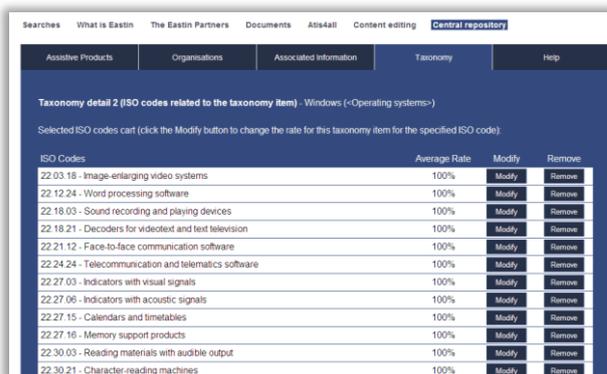
Online contents editing: each static text appearing on the web pages can be modified by clicking on the red flag on the side



Data upload tool: editing the basic dataset of a product



Data upload tool: editing the detailed dataset of an ICT product



Taxonomy Management Tool: assigning relevance ratings of a taxonomy item to each product category

The Portal contents

At the time of production of this Report, the ETNA Portal encompasses about **70.000 products** (precisely 68974 on Dec 31, 2013), about **1700 Organisations** (mainly manufacturers of assistive technology products and accessibility solutions – precisely 1677 on Dec 31, 2013) and about **600 library documents** (mainly articles, ideas and case descriptions – precisely 606 on Dec 31, 2013).

The great majority of these resources come from **providers type A** i.e. from the databases dynamically connected to the Portal search engine by means of webservices (this is the reason why the exact number of search results may vary from day to day, depending on the updates carried out in these databases). These providers include:

- **Portale SIVA**, the Italian national AT Portal (www.portale.siva.it);
- **Rehadat**, the German national AT Portal (www.rehadat.de);

- **Hjaelpemiddelenbasen**, the Danish national AT Portal (www.hmi-basen.dk);
- **DLF-data**, the English national AT database (www.dlf-data.org.uk);
- **Handicat**, the French national AT Portal (www.handicat.com);
- **Vlibank**, the Flemish national AT Portal (www.vlibank.be);
- **Hulpmiddelenwijzer**, the Dutch national AT Portal (www.hulpmiddelenwijzer.nl);
- **Essediquadro**, the thematic database on educational software of the Italian National Research Council (www.sd2.itd.cnr.it);
- **Oaeg**, the thematic database on e-accessibility solutions resulting from the EU *Aegis* project.

At the time of production of this Report, two other databases were almost ready to connect to the ETNA search engine, with the final deployment foreseen in spring 2014:

- **Catalogo Ceapat**, the Spanish national AT Portal (www.catalogo-ceapat.org);
- **Oatsoft**, the thematic database on free and open source assistive software and e-accessibility solutions resulting from previous international projects, currently managed by SU-DART (www.oatsoft.org).

Agreements had been achieved also for connecting the American national AT database *Abledata* (www.abledata.org); unfortunately it was not possible to proceed with implementation because their funding authority – at the time of funding renewal (September 2013) – decided to grant the Abledata contract to another Organisation.

At the time of production of this Report, the contribution of *providers type B* was still minimal: 51 products, 30 organisations and 12 library document. The actual contribution of these providers will start after migration of the ETNA system in the EASTIN environment (spring 2014). The reasons are that 1) the policy for selecting the “providers type B” has been defined only in the last stage of the project, having in mind the need to ensure data quality, and 2) considerable time was spent in the last stage of the project with trying out the data upload tool with fake data, in order to ensure that the candidate providers become familiar with the system and with data quality requirements.

On Dec 31, 2013 the number of product encompassed in each products category was the following:

ISO Class	Description	# of products
04	assistive products for personal medical treatment	6.480
05	assistive products for training in skills	1.382
06	orthoses and prostheses	4.950
09	assistive products for personal care and protection	10.819
12	assistive products for personal mobility	13.636
15	assistive products for housekeeping	2.560
18	furnishings and adaptations to homes and other premises	12.214
22	assistive products for communication and information	10.232
24	assistive products for handling objects and devices	2.858
27	assistive products for environmental improvement and assessment	168
28	assistive products for employment and vocational training	1.398
30	assistive products for recreation	2277

This statistics includes any kinds of assistive technology. However, the number of *ICT-based assistive products* can be easily estimated. They are mainly concentrated in class 05 of the ISO Classifications (where most assistive software for the educational setting can be found) and class 22 (where most assistive products for personal autonomy can be found, whether hardware or software or e-accessibility solutions for mainstream ICT products and services). Furthermore, a substantial number of ICT-based assistive products can be also found in class 12 (e.g. electronic control systems for mobility devices) and 24. Thus the overall number of ICT-based products and e-accessibility solutions currently encompassed by the Portal can be estimated in the range of 15.000.

The project's impact

Internal impact

The ETNA Thematic Network had significant internal impact within each partner Institution. It helped exploit the internal expertise and human capital, and initiated a mutual enrichment process that led to a well-established collaboration, willing to continue even after the end of the ETNA project.

In particular, the ETNA project affected the partners of the network, supporting them in:

- linking up with organizations dealing with ICT AT and fostering collaboration;
- achieving a stronger position regarding funding sources, both nationally and internationally (for instance, in relation to EU projects);
- standing in a leading position in Europe in the field of disability and assistive technologies;
- outlining a “best practice approach” in AT information services, fostering their effective use within AT service delivery;
- focusing on the importance of improving information in the ICT AT field, and raising awareness e-accessibility and e-inclusion issues;
- increasing business opportunities with added-value services that can be generated around an AT information system (educational / training initiatives, publication / selling of educational material etc.).



Here are some statements by the partners highlighting these points:

“... the steady contacts and exchanges with partners coming from leading institutions in assistive solutions and e-accessibility represented a really valuable experience, in terms of food for thought that is raising new reflections, bringing new skills, and providing state-of-the-art knowledge.” (FDGCO, Italy).

“... ETNA has provided AIAS the opportunity to strengthen its presence in Europe and to link up with relevant stakeholders in many European countries” (AIAS Bologna, Italy).

“... The lessons learned are a set of errors and successes that the leader and the project team have been able to manage and overcome during the project” (CERTH / HIT, Greece).

“... The regular contacts and exchanges with



partners from leading institutions in assistive ICT were, and continue to provide an extremely valuable experience and tool for collaboration. One example of this ‘external impact’ is the contact between DLF and ACE Centre. As part of the project DLF and ACE Centre exchange information about alternative and augmentative communication (AAC) aids, such as the availability of existing products and any addition of new products in DLF’s database or ACE Centre’s Speechbubble website” (DLF, UK).



“... The ETNA portal has a high potential to serve as a reference portal with respect to the methodologies used, influencing other FTB projects concerned with the development of information portals. For example, the methods and tools used for network communication in the ETNA project may also serve as a model for future project-activities of FTB as a coordinating project partner. Furthermore, the co-operation of the participating network partners in the field of assistive ICT is expected to loom and facilitate further collaborative activities in the future” (FTB, Germany).

“... The project has brought European ICT AT professionals closer to each other” (THL, Finland).

External impact

The guiding idea of the ETNA project is to grant every citizen with disabilities access to AT knowledge at the desired level in relation to his or her information need, in a user-friendly and affordable way. In pursuing this vision, the project contributes to the EU social objective of equal opportunities in the Information Society.

Empowerment of people with disabilities falls within the core mission of most partners. Making accessible all information available in Europe to people with disabilities and stakeholders in the field is instrumental to empowerment. The ETNA Information System is offering a powerful opportunity by:

- providing a single multi-lingual access point from more information systems;
- improving the citizens’ awareness of what assistive products and e-accessibility solutions are available on the European market;

- stimulating companies – and also researchers and developers – to expand their AT products’ offer in terms of both product quality and response to people’s needs;
- providing information on AT products in such a way to allow for comparisons;
- stimulating communication and exchange of knowledge among end-users, industry and professionals.

Dissemination activities

According to the ETNA Dissemination Plan, detailed in *Deliverable D1.13*, three main targets were addressed: those who make use of the information contained in the Portal (*users*), those who feed the Portal with contents (*providers*), those who can take advantage of the results of the ETNA project on a wider scale (*EU-wide actors*).

Target audience group 1 - Users

The prospective users of the portal range over a wide variety of actors, dealing at various levels with ICT AT: end-users, family members and primary caregivers; professionals in health care, social services and education; assessment centres, agencies and officers involved in service provision; researchers and developers; manufacturers and suppliers; policy makers.

Target audience group 2 – Information providers

Information providers are organizations or communities able to upload relevant information, or make their internet resources available to the Portal search engine. They include:

- “Providers type A”: institutions operating web sites or databases in the assistive technology or e-accessibility domain, whether in the European Union or outside, that are willing to make available their resources to the ETNA search engine by means of automatic procedures (*web services*);
- “Providers type B”: organizations also availing relevant resources but preferring to upload them manually through the ETNA *upload tool* instead of developing web services.

Target audience group 3 – EU-wide actors

Dissemination efforts were addressed also to EU-wide actors, such as European Commission Bodies, EU projects and networks, EU-wide user or professional organizations who have a voice in the development of EU policies.

Results achieved

The dissemination strategy was implemented through a *three-steps approach*, by addressing the above mentioned target audience groups first at a wider level (*raise awareness*), then more in depth for those who show specific interest (*inform*), and eventually establish structured agreements with those who are willing to collaborate (*engage*) (Table 1). Each step involves a number of dissemination objectives (DO), as detailed in *Deliverable D1.13* (“*Draft Dissemination Strategy*”).

Raise awareness	Inform	Engage
Let the public know about the project outcome	Provide thorough information to those who show specific interest	Establish structured collaboration with interested parties

Table 1 – A three-step dissemination strategy

From 2011 to 2013, especially in the last year, there were many occasions where to spread information and disseminate visual material about the project at meetings, conferences and workshops dealing with ICT AT thematic areas. Indeed the partners were very committed in participating to key events, mainly national, much more than expected. At international level, three major scientific events deserve mention: the two **AAATE Conferences** (Maastricht, The Netherlands, in September 2011; Vilamoura, Portugal, in September 2013) and the **ICCHP Conference** (Linz, Austria, in July 2012). The project was also presented at different Assistive Technology Fairs, the major one being REHACARE in Düsseldorf (DE), attended every year.

All partners were also very active in publishing periodic announcements on the ETNA project in their websites and in circulating information in other specialized blogs, forums, websites and online communities. Although press releases were fewer than foreseen, many events were attended by media, and probably many more articles have been published in addition to those which we were able to track. A further wave of attention by the media is expected once the migration to the *eastin.eu* domain is fully completed.

As far as **information providers** are concerned, appropriate **Partners Agreements** were prepared, following a consultancy by a specialised legal Agency. As soon as the migration of the ETNA Information System to the official EASTIN environment will be achieved, these Partner Agreements will be signed by the **Providers Type A** (the seven Full Partners of the EASTIN Association and three thematic repositories - OAEG, OATSOFT and SD2), and by the **Providers Type B**.

The following table (Table 2) lists the main performance indicators agreed within the Consortium, along with the suggested reasonable threshold – for the whole Consortium – beyond which the dissemination efforts can be considered satisfactory.

DO	Indicator	Description	Success Threshold	Done by Dec 2013
DO1	IN1.1	# of key events at national or local level in which significant communication is provided to the public on the project (e.g. boots in exhibitions, invited talks, papers in Conferences etc.)	70	194
	IN1.2	# press releases on general media	30	14
	IN1.3	# of submissions to scientific papers related to the project results	8	12
	IN1.4	# of posts (news, announcements, etc.) on specialized blogs, forums and websites	30	32 (est.)
	IN1.5	# of announcements related to ETNA on the partners websites	30	50 (est)
DO2	IN2.1	# prospective information providers directly contacted	30	25
DO3	IN3.1	# of key events at international level in which significant communication is provided to the public on the project	3	3
	IN3.2	# of advertorials in international journal targeted to EU-wide policy-makers	3	2
DO4	IN4.1	# average visits/months in the future Portal (as monitored by Google Analytics) after one year of public availability (i.e. end 2014)	To be defined	Not applicable
	IN4.2	# of search engine referrals from the three main search engines (as monitored by Google Analytics) after one year of public availability (i.e. end 2014)	To be defined	Not applicable
DO5	IN5.1	# of prospective providers involved	25	25
DO6	IN6.1	# of National Contacts organization involved	25	23
DO7	IN6.1	# of Partner agreements signed for providers type A	12	0 (11 exp. in 2014)
	IN7.2	# of Partner agreements signed for providers type B	13	0 (14 exp. in 2014)

Table 2 – Performance Indicators

Deliverables produced within the project

Del. no.	Deliverable name	Description
D1.1	Early Dissemination Brochure	Brochure intended for disseminating information on the start of the ETNA project and its general objectives
D1.2	TN website, 1 st release	First release of the ETNA Institutional Website, published after having registered the etna-project.eu domain
D1.3	1 st Year Report	Internal Technical / Administrative Deliverable
D1.4	TN website, 2 nd release	Second release of the Thematic Network Portal. It also includes a first user rating and comments prototype, resulting from the joint work of the ETNA and the ATIS4All networks.
D1.5	Search engine and interface specifications	Internal Technical Deliverable
D1.6	TN Portal – Search engine and interface 1 st release	Description of the interfaces and functionalities of the first prototype of the ETNA Information System, released at the provisional address http://test.eastin.eu/ . This prototype was designed according to the specifications defined in D 1.5 “Search engine and interface specifications”.
D1.7	2 nd Year Report	Internal Technical /Administrative Deliverable
D1.8	TN Portal – Search engine and interface 2 nd release	Description of the interfaces and functionalities of the second prototype of the ETNA Information System, released at http://test.etna-project.eu . This prototype improved the first one by adding new functionalities and taking into account a preview of the validation findings. (It replaces deliverable D 1.6 “TN Portal - Search engine and interface 1 st release”).
D1.9	Exploitation Plan	Internal Technical Deliverable
D1.10	Final Dissemination Brochure	Brochure conceived jointly by the ETNA and the ATIS4all Thematic Networks for disseminating information at the final stage of both projects.
D1.11	TN Portal – Search engine and interface Final release	Final version of the ETNA Information system. It upgrades the previous release, based on the findings of validation, and adds a set of new functionalities.
D1.12	3 rd Year Report	Internal Technical /Administrative Deliverable
D1.13	Dissemination Strategy	This deliverable was not foreseen in the original Dow. Later it was decided to have a deliverable describing the dissemination strategy, detailing objectives, target groups, channels, actions and performance indicators
D2.1	Proceedings of WP2 workshop	The first ETNA Workshop was held in Milan at Fondazione Don Carlo Gnocchi Onlus on March, 24-25, 2011. This workshop was the first occasion for all the ETNA partners to meet face-to-face and work together, thus giving a tangible feeling of the network and its capability of live collaboration.
D2.2	Synopsis of information needs	The map of information needs is the first milestone of the ETNA project. Mapping the information needed by the various actors allows discovering the type, depth and format of the data that should be provided by the Portal, as well as the types of information it should contain in order to be effective and useful.
D3.1	Proceedings of WP3 workshop	The second ETNA Workshop was held in Maastricht, The Netherlands, on August, 29-30, 2011. The workshop was devoted to analysing web resources and discussing methods to classify them, assess their reliability and reason about the possible way to link them to the future Portal.
D3.2	Synopsis of the existing resources	The map of resources is the second milestone of the ETNA project. The objective was to create an inventory of public Internet resources – including databases of AT products, software repositories, online advice

		services, assessment centres, and virtual communities – that would feed the knowledge base of the Portal.
D4.1	Preparatory material for the definition of the ETNA ontology	Internal Technical Deliverable
D4.2	Taxonomy of resources	The ETNA taxonomy defines the domain model of the ETNA information system, i.e. the way in which all Internet resources falling within the scope of the project should be described, in order to be visible from, and searchable, through the Portal.
D5.1	Preparatory material for the taxonomy management tool	Internal Technical Deliverable
D5.2	Taxonomy management tool	Description of the online tool for maintaining the taxonomy, associating taxonomy items to their ISO 9999 categories and localising the terminology in all languages, according to authorisation levels established by the Consortium.
D6.1	Partners' web services – 1 st release	Internal Technical Deliverable
D6.2	Partners' web services – 2 nd release	Internal Technical Deliverable
D6.3	Proceedings of the WP6 Workshop	The fifth ETNA Workshop was held in Milano, Italy, at the Fondazione Don Carlo Gnocchi on February, 21-22, 2013. It was the first event in conjunction with the ATIS4all network, in order to share the progress of the two projects and present the first operational steps towards the Portal implementation
D7.1	Validation Plan of the TN Portal	Internal Technical Deliverable
D7.2	Proceedings of the WP7 Workshop	The sixth and last ETNA Workshop was held in Vilamoura, Portugal, on September, 17-18, 2013, as a satellite event of AAATE Conference 2013. It was devoted to the public launch of the last test version of the two Portals, and to a discussion on the roadmap towards their effective technical implementation, scheduled at the end of December.
D7.3	Validation of the TN portal	The validation of the ETNA Information System was focused on the effectiveness of the system in meeting all information needs of the intended audience, and produced a set of recommendations for possible improvements to be implemented in the final release.
D7.4	Partners' web services – Final release	Final upgrade of the partners' web services based on the findings of the validation tests.
D8.1	Archive of the ETNA webinars	List of educational webinars intended to provide information on partners organizations' activities and key thoughts in the ICT AT area
D8.2	Archive of the ETNA webinars	List of educational webinars held during 2012
D8.3	Archive of the ETNA webinars	List of webinars 2013, aimed at reaching out to possible external partners and exchange information and best practices with other AT databases of non-EU countries or similar projects.

The ETNA Consortium at a glance



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