3 PUBLISHABLE SUMMARY

3.1 REACH112 Summary

REACH112 (Responding to all citizens needing help) is a three-year pilot project in five countries with 22 partners partially funded by the European Commission under the ICT PSP CIP programme. The project has created a new Total Conversation infrastructure (text/voice/video communication simultaneously and in real time) to allow thousands of disabled users to communicate in video, voice and text simultaneously, without obstacles. The project offers access to relay services to connect users with different abilities to the community as a whole and will also provide access to emergency services.

The European emergency number 112, is currently not accessible to the majority of disabled people. REACH112 now will pilot the systems to allow direct access to emergency services, a potentially life saving feature.
Users will be able to call each other in video, voice and text, across national boundaries and roaming across Europe will be tested.

The REACH 112 challenge is to manage all call scenarios and to be inclusive of all legacy operations in each country. That is, solutions will include real time text use (for hard of hearing users) as well as video telephony for sign language users.   Tests will also be carried out with those with learning disabilities, with elderly people and those with speech disabilities.
The outcome will provide a model for Member States of the European Union where telephony access issues are only beginning to be addressed.
REACH112 has a wide remit on dissemination and will offer a model for sustainability which can be implemented in other countries.

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This report focuses on the objectively verifiable goals achieved as well as the consultative and cooperation-preparation demanded of such a wide ranging multi-agent telecommunications project.

3.2 Project Overall Objectives

REACH112 has been set up as a pilot project in five countries: France, The Netherlands, Spain, Sweden and the UK. Its primary aim is to implement interacting telecommunications infrastructure across these countries using the same standard of Total Conversation (TC) – allowing video, text and voice simultaneously in the call. REACH112 has three components:

(a) deployment of hardware, software and mobile solutions to allow person to person calling in TC to reach target numbers in each country.

(b) Implementation of and/or integration with relay services which support TC functionality in order that disabled users can contact and be contacted by the community at large.

(c) Installation of TC in PSAPs and cooperation with PSAPs in regard accepting TC-enabled calls to 112.

The project main objectives are identified in the DoW as follows:

OB1 **Validate the technical and operational deployment of Total Conversation and RealTime Text services for person to person communication with the possibility to call between different users, terminal types and service implementations in different countries**

This objective validates the deployment and usability of Total Conversation. Scenarios which are being validated include communication in sign language, lip reading, face recognition as a support to conversation, real-time text for typing a conversation and voice for spoken conversation. The components of this are:

- Users are provided with terminals and call each other. ('terminals' here includes fixed line devices, mobile devices and software installed in computers)
- Users are provided with terminals of different makes, in different countries, and are customers of different providers and call from country to country and use all media provided the Total Conversation standard has been implemented.
- Users are alerted to incoming calls even if they have a sensory disability.
- Users of text-only services have calls in text with users of Total Conversation.
- Where differences in implementation of the standard occur, these are negotiated and communication verified
- The organisations setting up the services are expected to continue to deploy the service.
- There is provision for technical and operational support to the users.

OB2 **Validate technical and operational deployment of Total Conversation and Real-Time text in calls via Relay services for text and sign language (Relay parts of pilot setup in WP3 and 4)**

This objective represents the bridge between the disabled users and the community at large.vRelay operators using Total Conversation are able to mediate communication between the disabled user and the able-bodied, hearing user. In this

case the endpoint for the hearing user may be a voice telephone and not a TC-enabled device.

The project therefore ensures that calls can be made to and from the users of the relay services and that business plans for sustainability of the relay services are established.

OB3   Validate technical operational and ICT-organisational deployment of Total Conversation and Real-Time text access to 112 emergency services with and without Relay service support

This objective deals with access to 112 emergency services. Scenarios which include relay services and scenarios of direct connection are being investigated. The project

- has shown that the emergency services can receive the calls in an operational environment and will demonstrate that this facility can continue beyond REACH112
- works to ensure that TC users obtain a similar priority as other emergency service callers.
- is creating a system to enable the emergency services receive appropriate and sufficient detail on the call.
- is set to verify that calls-back to the users are possible and that they can be handled with the same media and conversational modes as the initial emergency call.

OB4   Validate efficiency, usability and user satisfaction for Total Conversation and Real-Time text for person-to-person and Emergency calls

This objective concerns the user response to the facilities created by REACH112 and the effectiveness of support to these users. REACH112 will

- Verify the model for the supply of services and support to an agreed number of users.
- Verify that the users in 5 pilot sites find the services to be of value to them, and to explore the capacity to pay a subscription for a continued service.
- Verify that the services can meet established service standards for reliability and response latency for each service component.

OB5   Validate sustainability and replicability of Total Conversation and Real-Time text services for person-to-person and emergency calls

This objective relates to the business plan and sustainability model and its presentation in a form which can be implemented elsewhere in the EU. REACH112 will

- Verify that there are providers prepared to deploy terminals, real-time text services and Total Conversation services.

- Verify that there are providers prepared to deploy relay services and that funding for these services are arranged or about to be arranged.
- Verify that emergency service organisations are prepared to include the services in the continuing emergency service provision.
- Determine whether there is political preparedness to arrange financing of the centralised services as a complement to user subscription
- Ensure that there is an understanding among the service providers that interoperability is essential, so that any plans for modifications in service provision is accompanied with plans for interoperability tests, and standardisation proposals whenever applicable.

OB6   Investigate and validate methods for distributing emergency alerts to groups of users

This objective concerns the possibility to provide emergency information to the users by reversing the process described in the above objectives i.e. to send messages from PSAPs.

3.3 Project Objectives for the reporting period

During the first period (M1-M12), the project had planned the achievement of the following objectives:

- Establish all the management procedures for the coordination of activities and the reporting to the Project Manager and, consequently, to the EC.
- Benchmark the current status of the available services on all sides of the addressed service chain, i.e. (1) the existing services supporting people with disabilities in their communication needs (2) availability and organisation of relay services and (3) the availability and the existing constraints in the provision of 112 service to citizens with disabilities. Such activity should lead to the identification of a set of requirements for the service to be specified.
- Initial Specification of the Total Conversation platform to be later deployed at the pilot. Such objective insisted on the integration of the existing services and in the identification of the standards to be adopted, with the execution (after the implementation of the needed adaptations) of interoperability tests between platforms.
- Definition of an Ethical Guidance Document to be adopted at each pilot for the recruitment of users and the future running of the pilot.
- Identification of users at each pilot, aiming at verifying the achievability of the quantitative targets set out in the Dow (Appendix 7)
- Verification of the actual availability of PSAP managers to have the pilots deployed at their Emergency Rooms, including the identification of training needs and legal responsibilities.
- Awareness creation and dissemination of the project at the widest level.

3.3.1 Recommendations from the Interim review after M6

Further to the interim review carried out on the project advance at Month 6, the following recommendations were raised by the reviewers:

R.1. The pilots subproject in Spain should be much better defined, in advance of the big challenge ahead for the piloting stage. In particular the consortium should clarify the partners' roles in Spain in term of piloting responsibilities

R.2. The deliverables should be stronger in term of content (compared to the richer presentations at the review meeting) and conclusions. This should be already corrected regarding the actions to be taken in order to get the real users involvement and the organisation of the 112 real calls' experimentation. The deliverable D3.1 should include a final chapter about standards. More details are still required on technical infrastructure and services (there is no information about the technical impact in the PSAPs side).

R.3. As piloting activities are crucial, the project should focus on a service deployment plan (and how to tackle mobility) and more details are requested on the piloting roadmap, common template to assess results. A grid to summarise the local objectives should be done to enhance the users' response country by country in order to surely address any challenge in the area. More clear specifications on a common approach should be provided for all the pilots of the project in the Management Handbook. There should be a common report template for the pilots (for example indicative common points to be addressed and presented per pilot in the future would be: User Involvement, Key roles per partner, Risk involved, Equipment to be used, Users to be involved; and Expected outcomes) and it should be used for reporting next time.

R.4. The dissemination plan should be more specific.

R.5. The surveys haven't been done for all the countries involved in the pilots (D2.1) and this should be remediate.

R.6. The consortium should provide a full range of metrics and evaluation criteria to compare the results from one pilot to another.

R.7. Business model should be delivered in anticipation to the business plan, as earliest piloting activities demonstrate differences between countries. A first analysis - prior the 30th month as stated in the initial Work Plan (WP8, D8.2) – is expected to start ASAP and progress to be reported as appendix of every periodic report.

R.8. As accessibility of calling emergency services becomes mandatory for Members States, and in order to be successful, the project should (i) verify that standards coverage to ensure interoperability is complete, report about it and initiate or participate in relevant actions if needed, and (ii) provide practical implementation guidelines.

They have set additional objectives to the project, that have been address during the reported period as detailed in the following sections.

3.4 Work performed during the period and main results achieved (M1-M12)

Activities in year 1 can be divided into five areas:

- project management (and in-country management arrangements),

- user needs evaluation,

- platform specification and inter-operability tests,

- user identification, installation and support,

- dissemination and business planning.

1. **Project management** has been confirmed by the issuing of a management handbook (D1.2) and by the planned occurrence of partner meetings. There have been 6 partner meetings (Brussels, Stockholm, Madrid, London, Grenoble) and several (about 50) in-country meetings of partners. There are in addition, online meetings of the project management board. We also estimate that there have been more than 10 bilateral meetings of partners. All notes from meetings and partner contributions are available on the project management site (http://wikireach.org). Partners prepare quarterly management reports and these are collected by the management team. Partners have also responded to additional request for information from the project officer concerning relay services and pilot reports have been represented. Finance claims have been collected and submitted.

   Work package management is delegated to individual partners and their responsibility lies in ensuring the timely delivery of reports and actions. Pilot working is delegated to the in-country partnerships.

   Deliverable D1.1 – Management Handbook – has been completed and updated version of the project presentation has been realised and is under translation into the different languages (at least the project ones).

2. **End-users and PSAPs** have participated in an analysis of the user experiences in contacting emergency services by people with communication disability (see deliverable D2.1). The work done has also described how contacts from such people are presently being handled by both emergency and relay services. in order to provide a firm basis for proposing and/or developing improved access solutions. The user requirements and needs are reported in D 2.1 "Current status and availability of Total Conversation systems, aspirations of users; Legal requirements and structures of emergency services in each participant country". Information on current level of accessibility of emergency services and examination of relay services characteristics has been collected and analysed. The report produced has been used as a basis for the development of the next stage of the project. This report has been revised and re-submitted.

3. **Platform and Inter-operability**
Technical progress has been made in the refinement of the hardware and software applications. A draft platform specification was presented to the review in March 2010 (D3.1) and this is now being updated. All partners will adhere to the platform specification. Initial inter-operability testing of the national implementations has been carried out in the lab and field trials are to follow shortly. Milestone D3.1 was passed and Milestone D3.2 has been reached but has not yet been passed for all interacting partners.

4. In each pilot, **users** have been identified. As expected the pilot sites are progressing at a different pace and are at different stages of user trialling. Both Sweden and The Netherlands are close to the number of target users envisaged. In the UK, there is an upward trajectory in line with expectations albeit somewhat delayed from the original plan. Building the user base has been slower than expected in France and has only just begun in Spain. The Risk analysis (Appendix 10 of the DoW) has been redone to reflect the changing economic climate and the changes to partner circumstances.

   As an example, UK progress from a zero user base has been significant and there is now an online registration, download and support service available. Connections to legacy devices is advanced as is user engagement. However, it seems likely that self-imposed milestones for user recruitment (Appendix 7 of the Dow) will be passed later than planned in the UK and in other pilot sites.

   Deliverable D4.0 on Ethics has been completed and submitted to the March 2010 review. This document informs partners on their dealings with users.

5. **Dissemination** activities have been considerable with conference attendance and reports prepared. There is a project central website (www.reach112.eu) and national sites (e.g.www.reach112.co.uk and www.reach112.es). These carry information in different languages and in sign language. An initial proposal on business planning and models for the REACH112 has been provided.

The main achievements (against the objectives – section 3.2) are listed in Table 1.

Ob. No	Project overall objectives	Related WP and activity stream	Activity performed and results achieved (M1-M12)
OB1	Validate the technical and operational deployment of Total Conversation and RealTime Text services for person to person communication with the possibility to call between different users, terminal types and service implementations in different countries	Pilot set up in WP3 and 4	User to user testing has been completed in France, UK, The Netherlands and Sweden. Interoperability lab tests have been carried out among partners. T140 text (real time text) is validated and video has been proven between UK and Sweden. The common platform described in D3.1 is in place in UK and Sweden, is in test mode in France, and is implemented for text in The Netherlands. Implementation of text applications is at an early stage in Spain. Draft version of D3.2 (the platform implementation) is available internally.
OB2	Validate technical and operational deployment of Total Conversation and Real-Time text in calls via Relay services for text and sign language	Relay parts of pilot setup in WP3 and 4	Relay services have been identified (if not already included in the consortium) and the project needs and expected deployment scheme discussed. Technical implementations have started and will be at the core of the next period of the project.
OB3	Validate technical operational and ICT-organisational deployment of TC and Real-Time text access to 112 emergency services with and without Relay service support	WP5	Deliverable D2.1 provides emergency service input in the description of the challenges for deployment inside call centres. Requirements related to ICT have been identified and will be further elaborated (and answered) in the months to come. UK has installed TC in the Police emergency call centre and has demonstrated its functionality in remote interpreted calls.
OB4	Validate efficiency, usability and user satisfaction of TC and Real-Time text for person-to-person and Emergency calls	Pilot trials performed in WP6 and WP7	Data on use and appropriateness for users will be systematically collected in years 2 and 3 of the project. Formal trialling and data collection protocols have been prepared inside the consortium

| OB5 | Validate sustainability and replicability of TC and Real-Time text services for person-to-person and emergency calls. | Business plan and other activities in WP8 | Extensive dissemination activities have taken place and there are continuously updated plans (Deliverable D8.2). The central project website has been set up and is regularly updated. There are also UK and Spanish websites with pilot specific information. A project newsletter has also been produced and will be delivered regularly along the duration of the project.

Exploitation and sustainability has been discussed by partners but change in the partner responsible have delayed the draft business plan. This is primarily an activity of year 2 and year 3. |
| OB6 | Validate feasibility to introduce accessible methods for distributing emergency alerts to groups of users. | Carried out in WP 5.1 | This is to be achieved through national websites and by push services to users of Total Conversation. This is to be trialled in year 2. |

Table 1 - Project Achievements in Period 1

Progress in each pilot site is summarised in

Summary of the activities performed and results achieved (M1-M12) in the project pilot sites				
Pilot site	Technical progress	User involvement	PSAP and relay operators involvement	Dissemination
UK	Status of the TC solution: we have a functioning hardware and software solution which has been tested in a range of contexts. We have a complete working network infrastructure supporting P2P TC conversation, videomail, relay service (multi-part TC interaction) and implementation of ENUM and user registration. We have a complete back-office solution for monitoring of calls, billing and managing a range of user services. Integration activities performed: with the other project pilots inter-operability tests have been carried out with Sweden and France. Person to person communication: This is verified and considerable person to person traffic is being observed.	Monthly meetings of UK partners identifying their individual contributions and actions and creating the basis for our cooperation. CDS and RNID staff are users of TC and influence the progress directly. We have provided person to person TC equipment into the homes of deaf people and carried out tests on call quality and usability and video mail. We have also managed the interface to news services. From December to June, we have made considerable progress in making the software available through download (www.myfriendcentral.com) and have completed the online interface for registration and online help in sign language. We have identified other hearing service users and also deafblind users with whom we have had useful discussions. Major increase in user numbers is due in year 2. There are periodic and ongoing workshops for users to feedback and request development of the service, software and hardware.	We have had several meetings of partners inside the command and control centres of police and fire; we have examined the logistics of integration and developed a model for implementation which will allow the pilot to run without disturbing current national services. We are actively discussing the training needs for call takers and relay operators who will provide the service.	The project was publicly launched with live demonstrations of all aspects of the value chain, in April 2010. Presentations and demonstrations have been given in a wide range of settings to stakeholders and decision-makers. There are bimonthly workshops for user groups. Information and support is provided on-line in English and in BSL – see www.reach112.co.uk and www.myfriendcentral.com

Pilot site	Technical progress	User involvement	PSAP and relay operators involvement	Dissemination
NL	Features currently supported by the installed platform include: user to user RTT call with AnnieS BlackBerry device; user to user RTT call with any Internet standard SIP device; user to user RTT call with AnnieS Internet text phone; user to user RTT call with DTMF (analogue) Text Phone; User relayed call using RTT with voice carry over (provide by KPN); Relayed Incoming call from hearing persons to deaf user (provided by KPN). Improved user interface (better flashing and vibrating)	Involvement of the user group and inclusion of as many peers as we can outside the user group. We do this by giving free invite accounts to the users and try to motivate public and commercial services to create peer to peer availability for the user group. We have 1.000 users in the pilot. Around 750 of the current users are eligible for inclusion in the pilot. Secretary of state economics promised legislation on relay service for text and video We have around 750 AnnieS Mobile users that are eligible to participate in the pilot (last month 30 extra)	Testing performed with our PSAP (KLPD). Real-time text discussions continues with other local PSAPs. After exchange with a live relay service in the Netherlands, the relay service is in place. In 2009 we had already 60.000 user to user calls (not all successful) In 2009 we had around 9.000 user to relay calls (not all successful) In 2009 we had around 10 (08008)112 calls (successful)	Range of activities have been carried out: Articles on the need for TC, presentation at World Deaf Day in Bergen-op-Zoom CCR Summit Home visits Walk in sessions Details are reported in Appendix
SW	The TC platform currently supports the following features: TC calls user-user; Calls user-relay (video + audio + SIP Message); RTT only calls user-user; TC calls user-legacy V.21 integrated in the platform. In house testing of calling by number via ENUM has started, current platform analyzed with regards to project demands, fall back equipment purchased (routing server etc), and 3G gateway and MCU purchase considered. Lab interoperability tests successfully performed with Ivés and AuPix	Informing and seeking new users where possible e.g. a workshop with the Stockholm deaf community on October 14th 2009 and by seeking new markets. About 200 installations have been made within the project. Installations include training.	Several coordination meetings have taken place with SOS Alarm. On the basis of these meeting outcomes an installation at the PSAP is expected soon.	User workshop held at Stockholm deaf club. Users informed at the SIAT ID-days.

Pilot site	Technical progress	User involvement	PSAP and relay operators involvement	Dissemination
FR	The French implementation architecture for the service was created. First tests of inter-operability were successfully completed with Sweden and with The Netherlands and UK. The implementation status includes now: •The existing SIP proxy and ACD platforms serving the Video Relay Center operated by Websourd. This was available at the beginning of the project. •An updated visio08 service that can use standard colour T.140 and allows users to dial SIP URI to be able to call outside IVèS SIP domain. •A new dedicated platform that includes an Asterisk server for ACD purpose and Orange MCU for multi party call handling. •Modification on SIP proxy to enable ENUM lookup remains to be done. We have also exchanged technical interface specification with IES to plan the integration of JIXTEL as part of the PSAP agent interface for the project. This include the definition of a HTTP and Javascript interface to mashup both IVeS REACH 112 Web interface and JIXEL interface into a single sign on application.	A study to inform recruitment of the users was carried out. Each French partner has a target of 500 users to bring into the pilot. In April 2008, French government issued a decree stating that a National Relay Center will be created to receive and dispatch calls from hearing impaired people needing to reach an emergency service. In February 2010, Grenoble CHU, was designated to host this national relay center and a steering committee has been set, at government level, to gather all stakeholders. The group of end users is composed of "primary users" (those for whom communication through visual means is a necessity, cf. DoW), but also with some others disabled or mainstream users (experimenting the accessibility for all).	There are ongoing discussions with the emergency service providers to ensure the installation of TC in the PSAP. Local PSAPs need minimal information to be able to provide the right response: Priority information: the place (where it happened), the problem (proper elements of description) Eventually: name of the person. As soon as these information are noticed, the request must be dispatched to the right service (medical team, firemen, and police) to allow them to launch the proper intervention and to evaluate the degree of emergency. PSAPs usually handle calls from users. They will have to be properly informed of the eventuality of receiving calls from a REACH112 platform.	A detailed description of dissemination activities is included in Appendix 1 on the French pilot.

Pilot site	Technical progress	User involvement	PSAP and relay operators involvement	Dissemination
ES	Status of the TC solution: A re-evaluation of the existing platform led to a rethink on the implementation of TC in the Spanish context. A new development of Asterisk has been put in place and successful trials have been conducted using SIPcon1. Integration activities performed: SERTEL and AXEGA have committed the necessary hardware and communication infrastructure for carrying out the pilot. On-going work includes installation of the RTT software and the integration module that will be provided by SIS, and completion of the integration task. Person to person communication: RTT components ready for interoperability testing. successful tests for person to person communication	An initial survey and then a more in-depth survey have been carried out to establish user needs. We have created a consultative body of users. At the moment, we have identified 30 potential users of the system, who registered on the Spanish pilot website. Regarding the ethical issues we have translated all relevant information into Spanish, included the pilot description and informed consent form.	112 Galicia is engaged in the pilot, as a consortium partner (AXEGA). We have established a working partnership for the Spanish pilot and have included the specification of work for the sub-contractors. D4.0 was circulated by e-ISOTIS, and also circulated by Siemens so all partners are aware of it and adhere to it. SERTEL, as project partner and responsible for the operation of the Spanish Relay Center (Centro de Intermediación Telefónica), will take this role in the pilot and will also give support to users. They will be supporting 112 service with voice and RTT.	Several dissemination actions have been completed: press releases, intranet news and internet links to reach112 project. We hosted the General Assembly in December 2009 in Madrid, including a visit to 112 Toledo PSAP. We also set up an informative accessible website. www.reach112.es

Table 2 - Progress in each pilot site during Period 1

3.5 Expected final results, potential impact and use

The overall result of the project will be the implementation and evaluation of a pilot service offering Total Conversation with Real-Time text as an extended and accessible telephony service for people who use voice, sign language, text and other visual expressions in person to person communication.

The Total Conversation service will be validated for access to emergency services (making the 112 number accessible for all across the pilot sites). Services have to be replicable in other settings and other countries. However, the key target is interoperability and assessment of cost effectiveness and user acceptance of the provided services.

Impact will be measured quantitatively (by collecting data on traffic related to particular purposes, by examining the uptake of users and groups within each pilot site, by the demonstrated training of relay operators and call takers, and by the numbers of call to emergency services which are recorded) and qualitatively (by user responses to direct questioning, through spontaneous reactions on the websites dealing with the project, and by group-task-related trialling, examining progress in community interaction).

Impact will also be measured by the interaction with statutory telephony services, legacy systems and other Internet–based communication systems. By using published standard, the work of REACH112 will integrate with and invite cooperation of other major players in networking and communication. Targets for use have been set in the workplan and partners are working towards these by identifying individuals and groups to take part and by offering online support and guidance. The ultimate goal is a transnational Total Conversation telephony system which offers access to all. We set these out below in terms of targets and designated objectives.

3.5.1 Target outcomes and characteristics for Total Conversation (OB1, OB2)

REACH112 addresses all components of the ICT PSP Work Programme by installing standards-compliant P2P TC capacity in pilot countries (involving identification of users, provision of existing and proven technological components, training of users, ongoing support) and through trials and then a series of overlapping pilots. By 'overlapping' we mean that in each country, REACH112 is responsive to local conditions and will emphasise different degrees of incorporation into existing systems – in Sweden and The Netherlands, the emphasis is on call handling integration; in the UK and France, the emphasis is on all elements of the chain but with a parallel TC call handling, TC enabled PSAPs and significant attention to the user base and user ongoing support; in Spain, the emphasis is on platform integration. In all cases, real time text, legacy integration and TC will be available. These variations make the approach particularly valuable and instructive on a European stage.

At each step, the process is subject to evaluation and to integration with existing procedures and technology in text telephony, and call management and to interpreter practices). The TC development is to be offered across national boundaries and will explore the implementation of this service on mobile (3G & HSPA) carriers. The project is subject to rigorous management,

risk analysis and reporting in order to ensure that the basis for a Europe-wide implementation is put in place.

There are several overlapping stages: identification and installation of the user base and technical infrastructure; the proving of the real-time text inter-operability functions and integration with legacy devices; the provision of a full multimedia service; the implementation of the relay service and emergency service in TC; and the support for the full-scale pilot TC service in five countries.

3.5.2 Target outcomes for Emergency Services (OB3)

REACH112 addresses all components of the ICT PSP Work Programme, by implementing an emergency service in TC. The communication with emergency services allows the user to call 112 to reach either the emergency service directly or via a relay service. The relay service translates between a mode of communication that the user wants to use and the speech of the emergency service operator.

The pilots implement different modes of terminal communication. In two pilots the priority will be real-time text, while the others will implement full Total Conversation. Not only does this offer direct access to those who would not have been able to achieve this contact in the past, but it will also raise awareness for what can in future, be a mainstream service for all. We will observe and report on the relative importance, success and resource usage for handling emergency calls with Total Conversation and real-time.

The project also gives an opportunity for emergency services to start observing the effects of bringing more media into the control centres. This allows the trial of a future mainstream service. Technical developments in user position information within IP calls, both in mobile and fixed networks will be incorporated within the Total Conversation pilots, thus ensuring their full integration as the services develop.

3.5.3 Expected impact for Total Conversation (OB1, OB2)

In simple terms, the implementation of TC will create huge social change in the target user group and has potentially enormous implications for the whole of the telephony system in Europe. As telephony providers move their infrastructure to IP, they open up a completely new array of possibilities for multimedia telephony. TC is the first major shift in telephony in over 100 years. The fact that it has a strong base in European standards, that REACH112 is supported by major international companies in the telecoms field indicates its significance and potential for change.

In terms of the target users, who have had limited access to voice telephony, there are enormous benefits in terms of health, employability and social interaction. In line with the trials which have already been undertaken, we expect to see major shifts in the communication patterns of these users and a significant improvement in their contribution to society and reduction in the cost to health and care services overall.

REACH112 offers the target group a 'voice' and improves their 'reach' (to be able to be in contact at a distance) – in much the way that the development of the telephone impacted on mainstream society, over 100 years ago.

These impacts are being quantified in the project by user involvement (at the advisory level), by data collection on structured user feedback, by traffic analysis and is built into the milestones and deliverables of the project.

As the project progresses, the benefits of Total Conversation will become obvious to the general public. From this, the application of TC and mobile real-time text become feasible, and more mainstream.

3.5.4 Expected impact for Emergency Services (OB3)

The project is a step towards meeting user expectations for emergency services accessibility. It will also mean less fatal effects of injuries and other emergencies.

Data collected in REACH112 will be a significant resource for the spread of TC and the opening up of access for disabled users.

3.6 Conclusions

REACH112 is designed to test a concept of inclusion for people who have had limited telephony experiences and who cannot easily communicate at a distance. All partners have made significant steps towards that goal and there are grounds for optimism in the eventual sustainability of the system proposed.