Insign Project

Inception Report

(Version 2) – 24th March 2014

Abstract

Insign is a 12 month pilot project, commissioned by the Directorate General for Justice of the European Commission (JUST/2013/RTSL/PR/0015/A4), to improve the communication between deaf and hard of hearing (HoH) persons and the EU institutions.

The overall objective of the Insign project is to create a web based platform based on the concept of Total Conversation, that will deliver a comprehensive communication experience: sign language voice, video, and Real Time Text.

The participation of expert enterprises and organisations and a user based design approach will guarantee the sustainability and full participation of various stakeholders in the development of the project.

In this Inception Report, a detailed timetable for the implementation of the Contract is given. It specifies in detail the tasks of the project and the various work activities.

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Introduction

1.1 Rationale

Insign is a project that plans to develop a web-based service platform, enabling European deaf and hard of hearing (HoH) citizens to communicate independently. The platform will offer assistance from a certified Sign Language interpreter and/or a real-time captioning service with the representatives of the European Institutions. It will empower deaf and hard of hearing (HoH) individuals from all member states, to make the call from their home country or on location, from a European Institution, allowing them to make a more active contribution to the political process. Based on the concept of Total Conversation, and with the innovative use of djanah technology, the platform will deliver a comprehensive communication experience: voice, video, and Real Time Text.

Insign intends to respond to the European Parliament's decision of the 10th-13th of December 2012 for the implementation of a Real-Time Sign Language Application and service. In compliance with the European Parliament, the European Commission, on 7th June 2013, opened invitation to tender JUST/2013/RTSL/PR/0015/A4 – Pilot Project for improving the communication between deaf and hard of hearing persons and the EU institutions

The tender was submitted on 20th August 2014 is in fully in line with the Terms of reference of the Call.

At the present time, there is no easy direct communication access to the institutions of the European Union for deaf citizens including deaf or hard of hearing (HoH) MEPs and administrators that takes the heterogeneity and the specific needs of the end users into account. In order to fill this gap, Insign plans to provide an accessible web based application that can guarantee deaf and hard of hearing (HoH) citizens' full access and direct communication to the European Institutions and representatives.

1.2 Project logo

Final version of the logo

A logo has been designed to help with the project dissemination and to improve the branding of the Insign project. The three circles represent the three actors that take part in the Insign platform: the deaf or hard of hearing (HoH) person, the EU representative and the interpreter, who acts as an intermediary facilitating the communication between them. The triangular layout formed by the circles is a representation of the movements performed when the term the “Insign” is signed.

1.3 Glossary

Abbreviation	Meaning
ACD	Automatic Call Distribution a queuing mechanism that distributes the calls to sign language interpreters
Android	An open mobile phone platform developed by Google and, later, by the Open Handset Alliance.
H.323	A signalling protocol for video communication developed by the International Telecommunication Union
HoH	Hard of Hearing
iOS	A mobile operating system developed and distributed by Apple Inc. released for the iPhone, iPad and iPod Touch.
ICT	(Information and communications technology- or technologies) is an umbrella term that includes any communication device or application, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning
IP	"Internet Protocol" mechanism by which packets may be routed between computers on a network-of-networks. IP allows computers to be connected using various physical media, ranging from modems to Ethernet cabling, fibre-optic cables and even satellite and radio links.
MCU	"Multipoint Call Unit" a server commonly used to bridge videoconferencing connections. The Multipoint Control Unit is an endpoint on the LAN that provides the capability for 3 or more terminals and gateways to participate in a multipoint conference. The MCU consists of a mandatory Multipoint Controller (MC) and optional Multipoint Processors (MPs)
SIP	A signalling protocol for video communication developed by the Internet Engineering Task Force and adopted by the IT Multimedia Subsystem forum.
VRI	Video Remote Interpreting (VRI) uses videoconferencing technology, equipment, and a high speed Internet connection with sufficient S bandwidth to provide the services of a qualified interpreter, usually located at a call centre, to people speaking and/or signing distinctive languages at a different locations.
VRS	Video Relay Service is a form of Telecommunications Relay Service (TRS) that enables persons with hearing disabilities who use their national Sign Language (NSL) to communicate with voice telephone users through video equipment, rather than through typed text. Video equipment links the VRS user with a video sign language interpreter (VI) – so that the VRS user and the VI can see and communicate with each other in signed conversation It is pretty urgent to start collecting these surveys. Because the conversation between the VRS user and the VI flows much more quickly than with a text-based TRS call, VRS has become a preferred and/or natural form of communication for deaf sign language users.

1.4 Description of Consortium and Organisation of the Project team

The Consortium is the association of six well-established organisations from four European member states. Each possesses relevant skills, experience and expertise in their field, in a way that positively complements each other, and benefits the development of each task.

The Consortium have commissioned Octopux, a subcontracted consultancy, which is responsible for project financial setup, provision of a technical and financial helpdesk for Insign and assuring timely implementation of the development and reporting within each project task.

There is no specific consortium agreement relating to clarifying IPR and exploitation issues.

Decision-making process on everyday issues lies with the representatives of Designit (project co-ordinator), which is ultimately managed by EUD.

The overall allocation of responsibilities are monitored daily throughout the term of the contract by project administrative officer of Designit. The task leaders, in turn, are responsible for their specific duties.

Project co-ordinator is responsible for cost accountancy reports, which will be monitored by both EUD and Octopux.

All Consortium members receive a budget, which was approved in the tender. Full transparency is maintained by quarterly budget reporting by the consortium members to the project co-ordinator, which is monitored by Octopux and EUD.

- The **European Union of the Deaf (EUD, Belgium)** is a not-for-profit ENGO comprising National Associations of the Deaf (NADs). It is the only organisation representing Deaf sign language users at European level (the target group). It has an extensive network of sign language users and will be acting as creator of the demand.

- **dnextep consulting s.l. (Designit, Spain)** is a global strategic design firm making innovation happen for the world's most ambitious companies. They have extensive experience in international project management and will act as administrative coordinators, supporting EUD in the day-to-day management tasks and implanting the service design approach.

- **Interactivité Vidéo et Systèmes (IVèS, France)** is the first total conversation software supplier for VRI, VRS, captioning but also e-health and videoconferencing. They developed the djanah technology in which Insign is based, and have a proven track record in several countries (UK, USA, France, The Netherlands, Belgium, Sweden, Japan...). They were technology leader for the French pilot in the previous project REACH112 (Total Conversation).

- **Significan't (UK) Limited (SignVideo, United Kingdom):** Is a British company acting as a VRS/VRI service provider at National level and complementing IVèS expertise. A Deaf led company, it has a proven track record in providing immediate access to online video BSL/English interpreters for local and national governments, health services, private sector companies and financial institutions. It is the UK's leading company in both remote captioning and online video interpreting services.

- **Heriot-Watt University (HWU, United Kingdom):** Participating through the *Department of Languages and Intercultural Communication,* will provide the academic foundation of knowledge required for developing such a service in relation to the Deaf community in all member states and video-mediated communication, delivering the empirical evaluation of the demonstration of the platform and service. HWU has an extensive academic network of interpreters, lecturers and researchers.

- **European Forum of Sign Language Interpreters (efsli, Belgium)**. A not-for-profit ENGO with, currently, 31 full members (national associations of sign language interpreters) and many individual members (interpreting practitioners) from all of the member states. It is the only organisation representing sign language interpreters at a European level and can draw on an extensive network of sign language interpreters, interpreting organisations, training centres and research academics. efsli's particular input will be to ensure that the interpreting service developed by the project is of the highest quality possible.

1.5 Objective an structure of the Inception Report

The objective of this Inception Report is to establish the detailed methodology and timetable for the implementation of the Insign project. It also specifies the tasks of the project and the various work activities.

The structure of this report follows the different tasks to be performed throughout the project. After an introduction of every task in part 2, all tasks will be detailed in the following section as well as its objectives, methodology, deliverables and calendar.

Description of Tasks and Timetable

2.1 Description of Tasks

The Insign project officially started on the 5th December 2013 with the signing of the contract.

The Insign project is divided into six tasks. For each of the tasks, a Task Leader has been designated with the responsibility of compiling and monitoring the technical work. Each task encompasses different objectives, responsibilities and activities. The structure of the Insign project with a brief description of each task is provided hereunder:

2.1.1 Task 1 · Review of current relevant communication practices, VRS / VRI technologies and service provision

Lead by Herriot Watt University (HWU), its main objective is to gather data about the current communication situation and needs of deaf or hard of hearing (HoH) citizens with European and national public institutions in the member states. A review of existing relevant state of the art communication solutions and technologies will be conducted. EUD, Designit, SignVideo and efsli will serve as collaborating partners.

2.1.2 Task 2 · Description of the platform

Led by IVèS, the second task will describe how the platform will provide Total Conversation services (video, audio and real time text) allowing the use of remote sign language interpretation and captioning services in a multi-lingual environment (six sign languages and two spoken languages) regarding the specific aspects of the service detected in the first task. Designit will also take active part in this task, applying the concept of User Centred Design.

2.1.3 Task 3 · Description of the interpretation service

Led by efsli, Task 3 will be to meticulously describe the sign interpretation and captioning component of the platform and how it functions in relation to the technological component. In collaboration with SignVideo, HWU and efsli, the partners will work to ensure that the interpreters and captioners/re-speakers are adequately trained and have the necessary skills to provide a high quality, professional service.

2.1.4 Task 4 · Demonstration of the Platform in the EU institutions

Led by IVèS, Task 4 will involve three key activities in collaboration with all the other partners of the Consortium: demonstration of the platform, evaluation of the demonstration, and user research.

Two demonstration sessions of the platform will be performed under this task, taking place in the European Parliament and the European Commission premises on the 9th April and 24th September 2014 (final September date to be confirmed).

Internal trials, involving deaf and hard of hearing users will be performed with Designit and SignVideo's support. During the demonstrations, information about the usage of

the service will be gathered, analysed and reported by HWU in order to improve communication and usability about the service and platform itself.

2.1.5 Task 5 · Conceptualising a sustainable EU Platform

Lead by Designit, Task 5 will provide a cost benefit analysis of the Insign platform addressing its maintenance and sustainability. The analysis will include requirements of the network, data centres and video services in all member states and EU institutions. It will estimate the cost for five years after the pilot action has been completed. Under this task, partners will identify the main proposals and solutions to potential problems that are likely to occur regarding the service. All the partners will also take part in Task 5, especially during the dissemination phase (Sub-task 5.2). Active diffusion will occur through information exchange, project website implementation, training packages and live presentations of the outcomes of the project. An exceptional “Ambassador’s demonstration” will be held on 15th May 2014 in Athens for deaf European representatives, in the context of EUD’s annual Workshops, Seminar and General Assembly.

2.1.6 Task 6 · Project Management

Lead by EUD and supported by Designit, Task 6 is a critical component of Insign, as six different organisations are involved in this collaborative venture. The purpose of this task is firstly to ensure the quality of tasks and the project activities and secondly, guarantee that the deadlines for the deliverables are met. Three reports will be written in accordance to the requirements of the contract, which are the inception report, an interim report and final report.

2.2 Rationale and structure of Tasks

2.2.1 Interconnectivity between Tasks

The service design process implemented in the Insign project aims to be iterative during the implementation and execution of the project.

The earlier stages of the project will help to specifically define and understand its context. Task 1 will focus in delving into all of the stakeholders' needs, expectations, current routines, behaviours and attitudes towards communication, technology and within and access to the institutions. Also a major survey of relevant previous literature will be held by HWU in order to acquire knowledge about video remote, interpreting and captioning services as well as communication with the Institutions of the European Union.

Gathering this knowledge will allow all the partners to comprehend and prioritise the main points of focus for the following stages. It will be especially useful for the development of Tasks 2 and 3, where the service will be designed considering the surrounding environment, focused on answering stakeholder's needs in order to establish optimal, satisfactory communications between citizens and European institutions. Therefore, these two tasks will always question if they are answering needs found in Task 1, and other needs and insights found in later stages.

With regards to Task 4, live demonstrations to the European Institutions on the 9th April and the 24th September 2014 (September date to be confirmed) and also the *Ambassador's demonstration* to be held in Athens on 15th May 2014, for deaf European representatives will present the work done so far (Tasks 1, 2, 3). Feedback will be received from interactions with potential real users. These demonstrations will also provide knowledge on how to improve and refine the service and platform from both a technical and a qualitative (in terms of communicative evaluation) approach.

Although Task 5 will require specific tasks to be performed at certain moments, the whole project is influenced by the task's direction. Every decision and every task will be developed taking the concept of sustainability into account, with a specific target of delivering a sustainable business model which, furthermore, will be fed throughout the project process.

Task 6, Project Management is an on-going task that supports and manages all other tasks, to ensure the quality of results in all of Insign activities, deadlines and deliverables.

During the course of the project, representatives of EU institutions will be fully consulted especially with the organisational and implementation of the demonstrations. One aspect of the co-operation is to ensure that the information and visibility of the project reaches to all representatives of EU institutions and relevant organisations.

2.2.2 Sustainability of the project

The Insign platform ensures sustainability as it has been devised to have a service design approach. This will connect financial facts and resources with a user driven and highly customised service. Using ICT, the cost of providing qualified sign language interpreters or captioners on site is minimised. The platform, designed to be used in the European Commission and the European Parliament, will allow member states later on in time to adopt the concept for use within their own public and European institutions.

Service Design is the activity of planning and organising people, infrastructure, communication and material components of a service in order to improve its quality and the interaction between service provider and customers.

The backbone of this process is to understand the behaviour of the users, their needs and motivations in order to design methodologies to meet these needs, thus making the service user-friendly and relevant, as well as competitive. Therefore the Insign project will be set up in a way for it to be easy maintainable for the European Commission's own staff after the contract period expires.

Tasks

3.1 Task 1 · Review of current relevant communication practices, VRS / VRI technologies and service provision

3.1.1 Sub-task 1.1 · Desk Reseach

Led by HWU

3.1.2. Objectives

A major survey of all relevant literature, policies and technological reviews that are available in English in relation to the provision of access to information about, and best practices for, video remote interpreting, video relay services, captioning and re-speaking services worldwide. The survey will include an overview of peer-reviewed published research studies, as well as unpublished research reports, organisational policies, governmental reviews and community-led reviews of such services (e.g., via web-based blogs or vlogs).

3.1.3 Methodology

Desk research

3.1.4 Deliverables

The results of the desk research will be compiled into a stand-alone report (a literature review), which will take the following structure:

- Remote interpreting, video relay services, captioning and re-speaking
- Landscape of existing telecommunications relay service provision
- Contexts for telecommunications relay services
- Research findings concerning best practice and user perceptions and experiences
- Policy/Guidelines

This literature review report will also inform the next Sub-task (1b User research).
The stand-alone report will describe the current communication situation and needs of deaf and hard of hearing (HoH) citizens in the European member states with reference to global developments in terms of existing relevant state of the art communication solutions and technologies.

3.1.5 Sub-task 1.2 · User research.

Led by HWU, with Designit, SignVideo and efsli.

3.1.6 Objectives

To identify users' requirements (moments and contexts of use), attitudes towards this type of solution, their perceived obstacles or opportunities. The goal is to collate users' input and develop a better understanding of how an 'access requirement' can be met.

3.1.7 Methodology

A questionnaire instrument will be developed to be delivered online, to collect sample opinions, facts and figures in order to estimate the overall situation in relation to best practices for video-mediated communication across Europe. The focus of this survey will be on general experiences and perceptions in relation to video remote interpreting and video relay services.

The questionnaire survey will be adapted for two different audiences: one for hard of hearing and deaf sign language users, in International Sign and English (HWU) and one in English for interpreters, re-speakers and representatives of European institutions (Designit). Deaf and hard of hearing respondents will be given the opportunity to respond in International Sign if they prefer. HWU will survey at least 10 deaf sign language users from across Europe through face-to-face interviews using the questionnaire tool. Furthermore, the questionnaire tool will be administered online with a view to collating responses from up to 100 deaf people in the UK, France and Spain (the targeted countries in this pilot project). The survey will elicit information that will further complement and enhance the information collected in Task 1a in relation to deaf sign language users' experiences, perceptions, and expectations from a Total Conversation service in EU institutions. Furthermore, the knowledge gathered from the user research will feed into the development of the service model for the Insign project to be demonstrated on 9th April 2014. The results of the surveys will be analysed using statistical analysis packages.

3.1.8 Deliverables

The results of the HWU deaf user survey research will be compiled into a stand-alone report, which will draw on the literature review in Task 1a, and will present the findings of the survey questionnaires and interviews. HWU and Designit will each produce an independent report based on the surveys they have administered. HWU and Designit will then collaborate to produce a joint report that outlines recommendations for an effective, accessible service based on the perspectives of key stakeholders.

The preliminary report for Task 1 user survey research will be complete before the demonstration. As the date of the first demonstration's is earlier than expected initially, when the proposal was first submitted, the timeline has had to be re-adjusted. In order to ensure that the Task 1 results are incorporated into the system implementation in the first demonstration, HWU have organised a presentation on the 7th of March in London to SignVideo, before their training of the interpreters and re-speakers, thus liaising closely with SignVideo about their training based on the survey results.

Furthermore, the analysis of user experiences is on-going throughout the project. At every demonstration and/or dissemination event HWU will be collecting users' experiences and contacting the Sign Language interpreters, hence the need for several reports throughout the project. The final report at the end of the project will take the form of a research report monograph – submitted to the EC.

As a university partner, it is essential that HWU can produce academic publications as a result of this project. The completion of the project academic journal articles will be written (i.e., we will not use EU funding within the lifetime of the project to write up academic outputs), which will benefit the fields of Deaf Studies, Sign Language Interpreting, Video Remote Interpreting and Re-speaking. Any articles prepared for publication will be sent to the European Commission's DG Justice first for approval before submission to any journal.

3.1.9 Calendar

Task/ Sub-task	Activities	Deliverable	Timeline
Task 1.1: Review of current practices	1. Desk research: Literature/ policy/ technological review, European Union provisions 2. User research (surveys): Questionnaire & follow-up interviews in IS with deaf people	Literature review Combined report (lit review & survey findings)	January February -Early March
Task 1.2: User Research	1. Communicative evaluation of demonstration 2. User experience research	1. Task 1a report 2. Task 1b report 3. Demo 1 preliminary report 4. Demo 1 + dissemination report 5. Final report 6. Academic papers	Mid-Feb Early March End April Mid-July Mid-Nov End project

3.2 Task 2 · Description of the Platform

Led by IVèS.

Task 2, led by IVèS will provide Total Conversation services (video, audio and Real Time Text), which will allow sign language interpretation and captioning services in a multi-lingual environment. The platform will include the following features:

- **On demand VRI and pre-booked VRI** enabling deaf and hard of hearing (HoH) citizens' communication access to the European Institutions premises. The platform will be available on Android, iOS, PC and Mac devices. The user will be able to choose between using is own device or one provided by the Institution. Booking of the VRI service will be available through web platform. The Sign Language interpreter will not relay a call but interpret remotely a discussion between the deaf visitor and a EU institution representative who are in the same room

- **On demand demand VRS** online, connected to the EU institutions' website. It will allow deaf and hard of hearing sign language users to contact the European Institution representative and other call centre services through a remote sign language interpreter, being able to choose the language and mode of communication.

- **Captioning services** online, connected to the EU institutions' website. It will allow hard of hearing (HoH) and deaf users to call the European Institution representative and other call centre services and communicate through a captioner

The proposed platform is based on the already-developed djanah technology. It will include six sign languages and two spoken languages. The solution tested by the users will be enhanced in collaboration with Designit. At least 80 days of web and telecom development will be directly spent enhancing the service for the Insign project. In addition, the djanah product will be upgraded every month with new features.

The optimisation and enhancement will mainly be done based on the user experience feedback gathered by Designit. It will be mainly performed on:

- Android and iOS home page in order to ease the service usage to select a language and type of call for VRI or VRS.
- The web based interface dedicated to Insign with EU institution colours and logo and with a clear process to manage the multi language option.
- Video quality improvement according to the Video Codec Autoregulation.
- Tchat user experience, on mobile app enhancement as per user feedback.

Conversation is on-going with the European Commission, in order to provide the webmaster a “href” link that will allow connection to the European Institutions.

On PC and Mac the call will be managed by a plugin (activeX) embedded on the webpage. On Android and iOS Insign app will be launched to handled audio/video/text call.

The next generation platform will be available in 2015, a WebRTC that does not require any installation will replace the plugin and the application. For the moment this technology is not mature enough, and will not be deployed under the Insign project implementation phase.

IVèS’ product development cycle follows the “lean start-up” philosophy, which is a combination of business-hypothesis and driven-experimentation, iterative product releases and “validated learning”. IVèS invests time to iteratively building products or services to meet the needs of early users, to reduce the market risks and avoid the need for large amounts of initial project funding and expensive product launches and failures. With the support of Designit, IVèS will consider customer feedback during product development to be integral to the process, as it will ensure that time is not invested designing features or services that consumers do not want. This implies that users are deeply involved in the development process and the Insign Platform demonstrations must be organised throughout the project. Therefore, the time lapse between the first and the last demonstration must be of five months then for the time between the two. The first one take place on 9th April and last one on 24th September (this last date to be confirmed by the European Commission)

The Consortium wishes to:

- Involve users throughout the development process
- Provide a final version of Insign with as many new features and enhancements as possible

In order to achieve this, two demonstrations will be held in the European Commission and the European Parliament in Brussels, on 9th April 2014 and 24th September 2014 (final dates in September to be confirmed). In these demonstrations, information about the usage of the service will be gathered, analysed and reported by HWU and Designit in order to improve communicational and usability issues about the service and the platform itself.

Also the previous research (defined it Task 1) will be held to gain knowledge about needs and opinions about the service concept, previous experiences and difficulties regarding the usage of video relay communications in particular and interpreting situations in general. All the different stakeholders (deaf users, interpreters, re-speakers/captioners and European Institutions’ representatives) will participate in this research process.

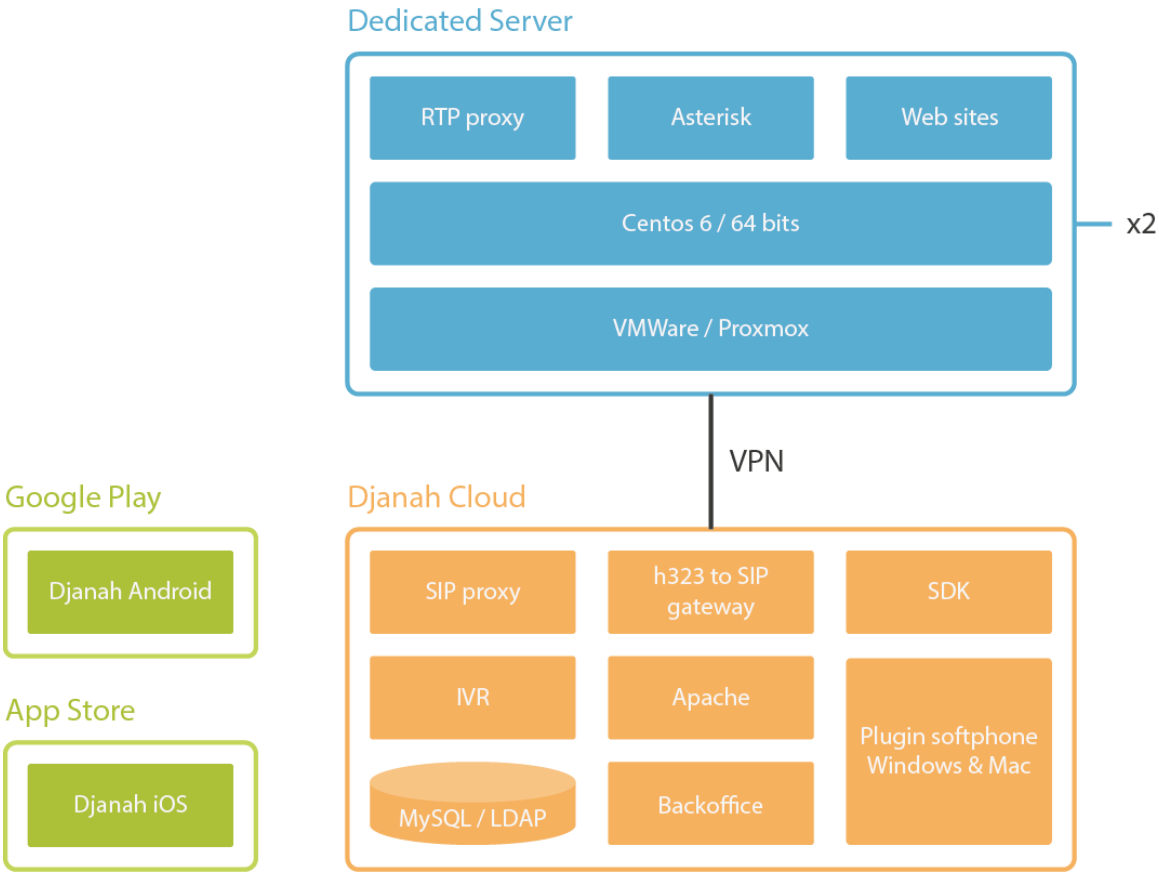
After the first demonstration users will participate again in a workshop held by Designit that will help to enrich the service model and adapt it to an user centred approach.
The time between the first and second demonstration will allow **IVèS** engineers to execute the changes suggested by the users in their active involvement throughout the process, especially taking the summer vacation period of July/August into account.
Another informal presentation, The Ambassadors' demonstration, will be held in Athens, on 15th May 2014 to show the service to European deaf representatives. This demonstration will also be used to gain more information about the users' interaction with the new service.

3.2.1 Sub-task 2.1 Server deployment

Insign service will be supported on a hybrid infrastructure with both dedicated and shared servers fully hosted by IVèS.

- **Shared redundant**: SIP proxy, Databases, Backoffice, softphone licence PC Mac Android iOS, Call centre monitoring, video messaging, post-paid billing, RTP proxy, CDR generator
- **Dedicated redundant**: ACD, Webserver, Websites, SIP trunk

The following diagram describes the technical architecture:



Dedicated servers will be connected to djanah cloud through a VPN.

3.2.2 Sub-task 2.2 · Total conversation Call centre

The Total Conversation Call centre, also called Automatic Call Distribution (ACD), manages audio, video and real time text calls between users and communication agents (interpreters and text agents). Furthermore, it distributes incoming calls to specific interpreters or text agents according to the users' language. A redundant dedicated ACD is deployed to manage Insign calls. This server also generates statistics to measure Service Level Agreements targets, agent activity, detailed records for any call on any queue and more.

The network prerequisites for Insign Total Conversation Platform are as follows:

Bandwidth

Each call requires a minimal bandwidth of 256Kbits

Stream configuration

Following ports need to be opened:

- 5060 (SIP protocol) in UDP and TCP to:
    - ip: 88.191.221.179
    - ip: 87.98.205.4
- 10 000 to 20 000 (RTP protocol) in UDP to:
    - ip: 87.98.205.4
    - ip: 88.191.221.179
    - ip: 87.98.205.11
    - ip: 212.83.152.250
    - ip: 87.98.205.16

For a suitable service quality, SIP and RTP protocols could be prioritized. Note: 5060 port is used for telephony (ring, call, pickup, hang1up) and 10 000 to 20 000 ports are used for voice, text and video.

3.2.3 Sub-task 2.3 · Licensing for mobile app and website pilot

The service will be available on Android, iOS, PC and Mac through a web based interface. Data shows that that internet browsing is 20% done via mobile and 80% via laptop and desktop (c.f StarCounter survey). So, it is vey important to provide the option to access through a PC and/or Mac for the deaf and hard of hearing caller using the VRS through the EU institution's website However a deaf visitor using VRI will mainly use a mobile and/or tablet device to use the service, when accessing the institutions premises.

djanah technology can provide a total conversation app that can be used by android mobiles and tablets (Android 2.3 and later). The highlights are:

- SIP(RFC 3261)
- TCP and UDP over IPv4 or Ipv6
- Real Time Text T.140 (RFC 4103)

- Signalling Compression
- Enhanced Address Book (XCAP storage, authorizations, presence, ...)
- Voice CODEC: G729AB, AMR1NB, iLBC, GSM, PCMA, PCMU, Speex1NB
- Video CODEC: H264, MP4V1ES, Theora, H.263, H.26311998, H.261
- DTMF: RFC 4733
- SIP Session Timers (RFC 4028)
- Calling E.164 numbers by using ENUM protocol (RFC 3761)
- NAT Traversal using STUN2 (RFC 5389)
- Contact list
- Virtual dialler

The VRS and VRI quality of service can be measured through call center parameters. Interpreters and captioners in the perspective of QoS can be considered as a call center agent. Therefore the following counters are giving trends on the QoS:

- Number of calls handled;
- Percentage of answered and unanswered calls;
- Average time to answer the calls;
- Quality of the interpretation (managed in task 5);
- Quality of the text captured (managed in task 5).

These parameters are used by the FCC to measure VRS and quality and reimburse or not calls to licensed VRS if they have a sufficient level of quality. If it is possible the network can handle SIP and RTP packet with a highest priority to optimise QoS. There should also not be network packet loss on the network and a latency of maximum 80ms.

A website will allow deaf and hard of hearing users to access the service from a Web browser. The following functionalities are provided:

- Video mail retrieval;
- User settings (profile, interpreter preferences, call centre preferences);
- Access to Insign Relay Services: VRI, VRS and incoming calls;
- User to user calls with other Insign subscribers and with other users registered in the ENUM database as well as all other European users connected to the IVèS infrastructure;
- Posibility to book an interpreter online.

With regards to the Insign web interface, prior to accessing the VRS service, the User will need to install the IVèS Live Video Plugin that is compliant with the following iOS and browsers. This plugin will be installed automatically upon visit to the web site.

Operating Systems supported:

- Windows XP, VISTA, 7 and 8;
- Mac OS X above 10.6;

Browsers supported:

- Internet Explorer above v7;
- Mozilla Firefox above v2;
- Safari from above v5.x.

A bandwidth tester is included to test connection speed and automatically configure video call consumption. During a call, the user can mute the microphone or the webcam though the following shortcuts:

Backoffice authentication

The back office is an online web service accessible, via http://admin.djanah.com/. It carries out a set of useful features for call centre manager, customer service, billing manager and operation manager.

User Account Management

"Le back office" will enable customer service and operation manager to add/edit/delete subscribers and interpreters' accounts.

Profile and services

A new package can easily be created, that will include a set of services, optionally allowing to define the price for each package.

Billing

Invoice data can be generated with information for each user at the end of the month.

FCC report

The Insign platform is able to automatically generate a report compliant with the FCC requested format, for vertified VRS.

Device provisioning

Thousands of videophone calls can be managed and configured remotely. An operation manager can upgrade a group of videophone (.e.g: firmware upgrade)

Connection states

The list of subscribers can be connected on the SIP proxy (useful for customer service)

Route management

Peering to other VRS, can be added and managed. Add or remove destination to outgoing call (e.g: international destination).

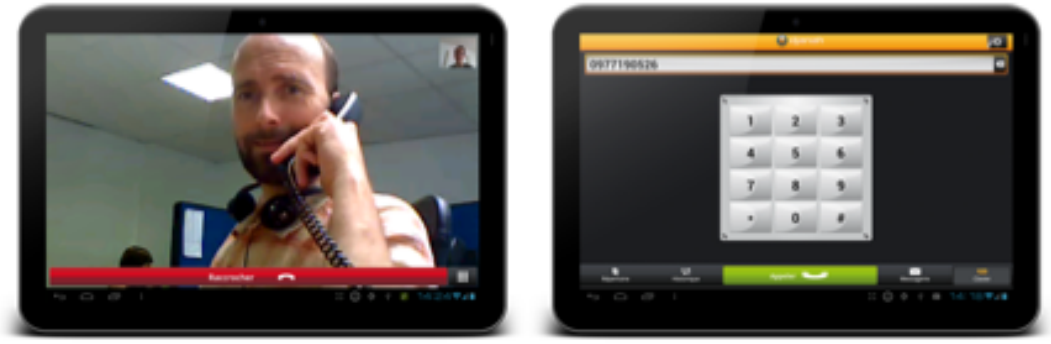
Call viewer

During the call it is possible for the call centre manager to see the video flow. By pressing 1 he can see the interpreter, 2 the caller and 3 hear the audio call. This feature can be deactivated if needed.

Booking management

When a deaf or hard of hearing user books an interpreter for a VRI or VRS the backoffice allows call centre manager to confirm or modify the booking. Both the user and the interpreter will receive an email explaining how to join the virtual meeting room.

Android app on tablet



Android app on mobile

This application is available in the following link on the Google play store:

https://play.google.com/store/apps/details?id=fr.ives.djanah&feature=search_result hl=en

djanah technology provides through the App store a total conversation application compliant with iPhone and iPad:
https://itunes.apple.com/us/app/djanah/id633401749?mt=8

Sharing the same highlights as the Android version.

djanah on iPhone

djanah on iPad

Both the Android and iOS apps will be enhanced, as he participation of Designit ensures the platform will be more user-friendly and sustainable.

3.2.4 Sub-task 2.4 · Maintenance and supervision

Insign service is based on a telecommunication platform hosted on the internet. If this platform crashes during trials, development and demonstrations cannot take place. A good organisation is necessary in order to guarantee the correct support, as it is is determinant all along the process of development, deployment, hosting, trials and demonstrations.
Maintenance and supervision provided for the Insign project is subdivided into three levels, in order to better serve end-users.

Support level 1 - Insign hotline customer service

This is the initial support level responsible for basic customer issues. It is synonymous with first-line support, level 1 support, front-end support, support line 1, and various other headings denoting basic level technical support functions. The goal for this group is to handle 70%-180% of the user problems before finding it necessary to escalate the issue to a higher level.

The demonstration of support level 1 for end users will be managed with the help of interpreters, as it requires being able to speak the same language as the local users.

Support level – Product/Service expert

The technical support provided is more than the one in Level 1, in which the support is performed by experienced and technicians that have knowledge of IVèS products and services. The engineers are responsible for assisting personnel in solving basic technical problems and for investigating elevated issues by confirming the validity of the problem and seeking known solutions related to these more complex issues.

It is however important that the engineer reviews the work, in order to see what the level 1 technician has already accomplished and for how long the technician has been working with the particular customer.

This is a key element in meeting both the customer and business needs, allowing the engineer to prioritise the troubleshooting process and properly self manage time. If a problem is new and/or personnel from this group cannot determine a solution, the engineers are responsible for raising this issue to the level 3 technical support group. IVèS support level 2 is reachable during business hours via e-mail and telephone.


Support level – Developer (bug fixing)

This is the highest level of support in a three-tiered technical support model, responsible for handling the most difficult or advanced problems. These individuals are experts in their fields and are responsible for not only assisting level 2 personnel, but with the research and development of solutions to new or unknown issues. Most of level 3 engineers are also developers working on product and platform. They are competent for fixing the software and releasing new versions. They are also provided emergency support in case of service outage, major service degradation or crisis and can be contacted 24 hours a day and seven days a week.

Service Level Agreement for Support:

Unless a severe situation occurs, all IVèS support actions for the Insign platform will be performed remotely using telephone, e-mail, instant messaging and remote connection tools. If an Incident impacts more that 20% of the Insign platform or causes a loss of calls of more than 20%, IVèS shall restore the service in less than 8 hours. However, this excludes Service Stops caused by planned maintenance Internet outage; or force majeure.

Operation and Maintenance Responsibilities

IVèS maintains and operates the Insign Platform, and also provides hosted Value Added Services:

- Keeping the Value Added Service running with the minimum degradation or unplanned downtime.
- Maintaining all API, provisioning or back office applications;
- Detection and correction of software bugs in the service developed by IVèS or the IVèS Platform.

The Insign platform implements the Total Conversation standards. Any other Total Conversation Video Relay Service system can theoretically be technically connected. Interoperability scope covers: peer-to-peer call between users, call from user to interpreter through VRS.

In the REACH112 project, (http://www.reach112.eu) IVèS participated in interoperability testing with other total conversation solution vendors, making sure that each solution was capable of achieving communication. There are few VRS services deployed all over Europe that are already managing calls from deaf and hard of hearing, thus contributing to effective communication. Thanks to the interoperability between the service and if the national legislation authorises it, Insign is able to transfer VRS calls (not VRI) coming from European Institutions to national VRS calls. At the present moment IVèS is connecting Insign to Dutch KPN Teletolk VRS and Swedish VRS named Bildtelefoni. There are theoretically compliant with total conversation. This will allow the use of available Dutch and Swedish interpreters, permitting Dutch and Swedish deaf and hard of hearing citizens call their European representatives through national VRS.

This is done mainly for three reasons:

- To show that the VRS are interoperable despite the different vendors who provide the service
- To benefit from existing VRS, who are already paying interpreters to manage these calls.
- Do promote and facilitate the use of existing national VRS.

3.2.5 Sub-task 2.5 · Hosting

All the total conversation services developed during the pilot will be hosted in the djanah cloud all along the duration of the pilot project.

This Sub-task includes:

- Shared Service Datapoint, SIP proxy and MCU;
- Dedicated virtual ACD and webserver (redundant).

3.2.6 Sub-task 2.6 · Customisation through Service Design

The main objective of this Sub-task is to ensure that the platform will meet the requirements of all the stakeholders involved in the network of the service. Taking this into account, a visual and interactive design for the platform will be delivered by Designit in collaboration with IVèS. In order to create it, users' expectations, ideas and decisions with regards to specific aspects of the service will be taken into account so as to identify hidden necessities, key moments and valuable settings and features.

In order to achieve a better understanding of the requirements of the service, key moments from the user's point of view will be mapped, and the general conditions of the service will be gathered, emphasising the identification of the main contact points between users and the Insign service. Additionally a hierarchical organisation of the service's specific elements will be generated, in order to address the highest value points and main weaknesses.

A process of user centred design will be applied through different steps. A co- creation workshop with users and different profiles involved in the service production will be

held. This technique requires active participation from profiles engaged in the service production in order for them to contribute with their knowledge, taking the design and implementation into account. It is equally important to engage the members of the core team in order to align the design objectives and reach achievable results. One of the outputs of this workshop will be a Value Proposal Canvas that will outline users' requirements and expectations as well as the objectives, strengths and weaknesses of the business.

The workshop conclusions will help create a conceptual model design. By using diagrams, visual metaphors and other visual thinking techniques, the users' mental model will be synthesised. This will help to shape key decisions to be made in the project.

Finally, a user journey will be designed, arising from one or several representative cases of the service. It will map an overall overview of key moments from the users' point of view. This final service design tool will help research, analyse or define the touch points through which the client experience is developed. This mapping includes and defines tangible elements, known as artefacts, and the mapping creates the desired interaction: web pages, printed material, bills, contracts, signage, sales pitches, mobile apps etc. The user cases allow to describe a service's client experiences through different channels. In order to do this one must identify latent necessities and possibilities for improvement.

This service design will also support the platform's Visual Interaction Design. It will be developed in compliance with the previously depicted scenario. Graphic guidelines and mockups will be developed to establish guidelines for the visual design, through screen simulations (mockups) of some critical elements of the service. With the propagation of design, the guidelines of the graphic design are extended to the totality of the screens of the service and delivered as PSD files (specific graphic format). The different screens will be provided with visual attributes that are consistent to the service objectives for the different screens and contexts.

3.2.7 Methodology

IVèS will designate a person to supervise the project during the execution of the project phases. Two teams of R D Engineers will manage the platform development:

- Service developers for web and mobile application
- Platform developers for new feature on the Total conversation platform

IVèS will plan regular coordination meetings during the project, taking place at least twice a month. During these coordination meetings, IVèS will inform Insign partners of the project status and of arising technical issues, providing updated project planning and deliveries. Coordination meetings with other Insign partners, where the service activation on the production of the platform will be discussed are also foreseen. It is when partners will be able to inform IVèS of technical issues encountered during the test phases or of any technical conditions changes made by Insign partners and any potential legal issues involved.

Once a software delivery or a new platform setup is ready, IVèS shall produce an Acceptance Certificate associated with tests description. The Consortium will review the description and add or modify tests if the proposed tests do not cover all of the functions of the delivery. IVèS can refuse the modification only if the new or modified test is not related to the scope of the delivery, is not technically feasible or if it involves a potential risk for the stability of the services already in operation.

If all tests described in the description are passed, the acceptance is passed and the Insign Consortium will sign the Acceptance Certificate. If one of the tests fails, the anomaly must be qualified in accordance with the following criteria:

- **CRITICAL:** if the function is a core function that is not working at all and the acceptance has failed. IVèS must correct any critical anomaly before the test can be considered to be passed
- **MAJOR:** if the function is not working as expected or is faulting on more than 10% of the tests, the test is passed with reservation. IVèS will correct the anomaly within a week and additional tests will be run;
- **MINOR:** if the function is not in the core or has a small defect, the test is passed with reservation. IVèS shall correct the anomaly before the next release and not more than in delay of one month.

IVèS shall provide a service or a new setup in operation only if the test has been passed

3.2.8 Calendar

At the time of production of this version of the Inception Report, (March 2013) the issues identified for January are already available for consultation, being deployed on the internet. The redundant servers are hosted under the url: insign.visioassistance.net (88.191.227.184 & 87.98.144.159)

Task/ Sub-task	Activities	Deliverable	Timeline
Task 2.1	Server deployment in the cloud	Virtual servers and server software license. SIP trunk (to manage outgoing calls). Database capacity for users (unlimited) and interpreters (up to 10 concurrent calls). ACD, SIP Proxy, MCU, Database, Statistic software and monitoring service hosted in France. Back office access. CDR access.	January
Task 2.2	Total conversation call centre deployment	Redundant standalone ACD hosted in France (active and rescue) Redundant web server hosted in France (active and rescue)	January

Task 2.3	Licensing or mobile app & website	djanah mobile app license	January
Task 2.4	Maintenance & supervision	Support level 2 during business hours (French and Paris time) 24/7 support for crisis situation (service outage, service degraded).	January to December
Task 2.5	Hosting	Server hosting in France	January to December
Task 2.6	Customisation through Service Design	User cases design User journey design PNGs of the platform's main screens. A brief style guide, in order to support the coding of the platform. Rebranded and customised user's website. Enhanced mobile app. Improvement on Captel (text relay) Improvement and customisation according to users feedback (cooperation with Designit).	V1.0 March (week 13) then one release every month from April to August (V2.0)

3.3 Task · Description of the interpretation service

Task 3, led by the European Forum of Sign Language Interpreters (efsli) with the cooperation of Heriot-Watt University and SignVideo, will describe in detail the sign interpretation and captioning/re-speaking service offered and delivered via the Insign video-based platform currently under development.

As a precursor to the development of this description, efsli, together with its academic and service providing partners, will carry out extensive research into the service models and operating standards of remote interpreting and captioning services currently available across the different member states. We know from our contact with our member national organisations of interpreters that the professional standards and practices of sign language interpreters vary greatly across Europe, which implies that deaf and hard of hearing citizens from different European countries do not have equal access to information, services and society at large. For this reason, efsli will develop recommended standards to cover such areas as qualifications of interpreters/re-speakers, levels of service provision, accessibility, ethical/professional considerations and working conditions of practitioners.

The participation of efsli ensures that all the twelve interpreters selected for this project will have the qualifications and relevant experience required to provide a high quality interpreting service between the national signed languages selected for this pilot project (Dutch Sign Language, Hungarian Sign Language, Spanish Sign Language, British Sign Language and French Sign Language) and the corresponding spoken languages from those countries (Dutch, Hungarian, Spanish, English and French). For those deaf sign language users from countries with a different sign language, interpretation into 'international sign' (IS)-English will be provided. In addition, captioners/re-speakers will also have to demonstrate relevant experience and the competence to work in one of the two selected languages for this project, English and French. The interpreters and re-speakers/captioners will be specially trained in how to use of the INSIGN platform, especially considering the technical features of the Insign platform and the specific knowledge related to the European Union institutions. There will be two training events for those involved with the project: one before the first demonstration of the platform at the European Parliament in April and the second immediately before the second formal demonstration in September. (September date to be confirmed).

In addition, two pilot trainings will take place between both demonstrations, in order to trial the training course modified according to the feedback and evaluation carried out after the first run in April. The objective of these pilots is twofold. On the one hand it will allow efsli to trial the new designed training course, adjusting the content and methodology. On the other hand, given the diversity of qualifications and skill levels among sign language interpreters across Europe, besides the standard training package trialled, an enhanced training package will be designed and piloted for interpreters from the countries and regions where formal interpreter training programmes have yet been established. This latter training package will include not only the technical issues involved in using the platform, but will go beyond that to cover the ethical and professional issues regarding the interpretation of dialogues.

This task will also describe in detail the booking system for the reservation of interpretation services, including the necessary notice for advanced reservation, which should allow for as much flexibility as possible. Business models including service cost levels and invoicing systems will also be investigated and defined with the objective of ensuring the sustainability of the service after the end of the project.

Finally, the task leader, in cooperation with the relevant partners, will devise an evaluation tool to be used to assess the professional quality of the sign language interpreters working in the service. This will be designed to allow for regular self-assessment to ensure the continued improvement and development of the service as a whole.

3.3.1. Sub-task 3.1 · Review and redesign of interpreter and captioner standards

Drawing on the overview of remote interpreting services being carried out by Heriot Watt University under Task 1, efsli will conduct further desk research into the interpreter and re-speaker 'standards' currently available. The research will include:

- An overview of current policies and interpreting/communication practices as they affect the interpreters and re-speakers.
- Interpreter and captioner/re-speaker standards/guidelines already in existence.
- A review of published research studies into the effectiveness of remote interpreting practices.
- A review of policies and position papers published by remote interpreting service providers and interpreting organisations (e.g. the findings of the UK's Association of Sign language Interpreters special working group on remote interpreting).

The overviews outlined above will also take into account the findings of HWU and Designit in their joint report outlining recommendations for an effective, accessible service based on the perspective of key stakeholders.

For this purpose efsli will conduct qualitative research amongst its full members (31 national associations of sign language interpreters across Europe) to capture relevant information about the existing European remote interpreting services and providers. In addition, captioners' registers and organisations will be addressed. The issues covered will include, among others, minimum qualifications and experience required, professionalism, working conditions and settings/types of interaction that can be handled appropriately by remote/relay interpreting/re-speaking services.

The information collected will serve as a basis for the first draft of the 'standards', which will be piloted by selected service providers across Europe. With the feedback collected from this pilot, the final standards will be drafted and published as one of efsli's deliverables.

3.3.2 Sub-task 3.2 · Training of interpreters and captioners

efsli, in collaboration with SignVideo, will coordinate the delivery of two training courses for experienced interpreters and re-speakers in the most appropriate and most effective use of the Insign platform. The course will cover both technical and professional issues related to the specific setting, including the use of the technology, interpreting and re-speaking strategies and approaches suitable for remote interpreting situations and interactions, basic trouble-shooting techniques and an examination of the professional issues involved with remotely interpreting and facilitating interactions, e.g. reflecting the intent and goals of the interlocutors, remote communication protocols, politeness, confidentiality and meeting interlocutor expectations in terms of fidelity, communicative experience and service-user satisfaction.

The first of the training 'events' will be delivered by experienced VRI trainers at the SignVideo premises in London and will evaluate the training package already developed and used by SignVideo. Two different courses will be delivered, one for sign language interpreters and the other for re-speakers. The first will target 8 already-selected, experienced sign language interpreters providing services in:

- Dutch Sign Language (NGT) -Dutch
- Hungarian Sign Language (MJNY)-Hungarian
- Spanish Sign Language (LSE)-Spanish and
- International Sign (IS)-English

Four already trained interpreters will work alongside those above for the first demonstration:

- British Sign Language (BSL)-English
- French Sign Language (LSF)-French

The interpreters will work between the signed and spoken languages of their respective countries as it is assumed that users of the service will typically be calling representatives of, or departments that deal with their home countries. For the deaf sign language users from other countries, the IS interpreters will typically work between IS and spoken English. The training in preparation for the first demonstration will be delivered in spoken English.

Four experienced captioners/re-speakers, some of them trained at the University of Roehampton (a world leader in the training of re-speakers) will attend their own training course which will concentrate on using the platform to deliver captioning/re-speaking services in English and French, focusing on familiarisation with the platform, using the technology and trouble-shooting any technical problems Both groups of trainees will come together for one common session on 7th April, during which a UK-based EU representative (Alessandra Vota, still to be confirmed) will brief the participants on EU institutions, roles, terminology and related issues.

After the evaluation of these first training courses the teaching content and methodology, will, if necessary, be revised and/or enhanced by efsli in close cooperation with its Insign consortium partners. This work will also be supported by the efsli 'Committee of Experts' (eCE) which comprises respected academics and experienced practitioners from across Europe.

The revised training package will then be trialled with volunteer groups from two European countries (one with and one without existing remote services or formalised interpreter training) before being delivered to the interpreters and captioners/re-speakers participating in the second formal demonstration of the platform in September. Following the two-day training course (which, it is planned, will be delivered from a remote interpreting facility in Toulouse) and in preparation for the formal demonstration on 24th September (final date to be confirmed), the participants will take part in a one-day testing session from their home bases using the IVéS Total Conversation platform and technology.

3.3.3 Sub-task 3.3 · Developing an educational package

The recommendations on service, professional and quality standards together with the training methodologies and outcomes trialled during the course of the project will be used as a basis for educational packages specifically designed for;

- service providers
- service users
- EU institutions

Common topics covered will include the goals of such services, intercultural awareness and communication in virtual environments.

As well as the comprehensive practitioner-training packages outlined under 3.2 and published under 3.3.1 (above), 'quick-guides' will be developed specifically, service providers, service users and EU institutions. The final outputs will be made available in English and International Sign (IS) in a variety of digital formats for easy and quick access.

The dissemination and promotion of the packages, 'quick guides' etc., will be specifically targeted at service providers, service users, deaf communities, national associations of sign language interpreters and EU institutions.

3.3.4 Sub-task 3.4 · Defining booking and billing systems

In close cooperation with SignVideo and other leading providers of existing remote interpreting/captioning services, efsli will collate information on the viability and effectiveness of a variety of business models (including detailed information on booking and billing procedures) with a view to ensuring the continuation of the remote interpreting and captioning/re-speaking service after the end of the project. efsli will approach services providers and collect information about the existing different business models, including information about how interpreters are paid for their services (hours, type of calls, number of calls, etc.), how these services are funded (e.g. directly by public bodies, individually using public funds, privately, etc.) With the outcomes of this research, efsli, in collaboration with SignVideo will write a report with the different existing business models in Europe with a view to inform DG Justice of the existing practices for the roll out after the pilot. efsli will also gather information on systems and practices from existing online video interpreting services to evaluate the effectiveness and efficiency of their systems and ease of use from both the users' and interpreters' points of view. The outcomes of this research will be collected in a document setting out the pre-requisites for a model booking system and model billing system.

The data collected will be evaluated against the following criteria:

- Reliability (e.g. level of 'tamper-proofing' safeguards in place)
- Accuracy of data capture
    - Originating caller data
    - Called party data
    - ID of the video interpreter who handled the call
    - Call start time
    - Call end time
    - Call length
    - Waiting time for connection
    - Average speed of answer
    - Call drop/termination data and reasons recorded
- Accessibility of the data
    - Data protection policies of the service providers

3.3.5 Sub-task 3.5 · Evaluation of the professional quality of the sign language interpreting service

The professional quality of the sign language interpreting service provided will be monitored and evaluated during and after both demonstrations.

Heriot Watt University (HWU) will be conducting linguistic analyses of the interpreted/relayed conversations during the formal demonstrations, as well as interviews with end-users. Their research will directly measure the quality of the interpreting/relay services provided.

A self-evaluation tool will be designed by efsli to help interpreters and re-speakers to assess their own performance and identify professional development needs. The results and findings generated by this tool will be compared with the more objective findings of the Heriot Watt team's analyses and the self-evaluation tool (or range of tools) will be developed/improved accordingly.

Evaluation reports describing the service successes as well as the areas in need of improvement will be regularly shared amongst the project partners. Each report will describe:

- what was evaluated
- major findings and recommendations
- any other comments or suggestion based on the evaluation results

3.3.6 Deliverables

- Detailed description of the service
- Report outlining agreed service and professional standards
- Training package for sign language interpreters with formal training
- Training package for sign language interpreters without formal training
- A document setting out the pre-requisites for a model booking system and model billing system
- Self- evaluation/professional development tools for interpreters working in the service

3.3.7 Calendar

Task	Description	Collaboration	Timeline
3.1	Research onto current published standards, policies, position papers, etc.	SignVideo, efsli members, efsli eCE	January to May
3.1 Pilot	Pilot first draft of Insign standards with current providers	Members, efsli conference	May
3.2	Research training courses/packs currently available	Service providers, efsli members	February to May
3.2	Devise training for different situations in different countries	efsli members, efsli eCE	June to July
3.2 Pilot	Pilot training for volunteers via efsli workshops in two countries (one with formalised interpreter training, one with no formalised training or register)	efsli members, service providers	July September
3.3	Develop educational package: how to use service, protocols, limitations, etc.	Service providers, HWU, EUD	June to October
3.4	Research and development of model booking and billing systems	SignVideo, other providers, efsli members, EUD	February to April
3.4	Evaluate business models, booking and billing systems	With partners	April to October
Task 3	Full, detailed description of all aspects of service: uses, quality of provision, prerequisites (availability of interpreters / captioners, levels of interpreter / captioner training available), training required, availability of service cover, practitioner / professional issues, working conditions, prerequisites / infrastructure required for sustainable service, possible development of service in each country (potential and limitations of remote / relay interpreting services)	In conjunction with academic (HWU), service provider (SignVideo) and consumer representative (EUD) partners. Technical specifications and requirements to be described by IVèS and Designit	April to October

3.4 Task · Demonstration of the Platform in the EU institutions

Led by IVèS

Task 4 aims to demonstrate the platform during two sessions, evaluate the Demonstration, and perform User research.

Representatives of the European Commission will be regularly consulted about the organisational aspect of the demonstrations.

Two demonstration sessions of the platform will be performed with the selected eight languages (six sign languages and in addition English and French spoken languages) based on the platform deployed.

A first demonstration is booked for the 9th of April 2014, which will allow Designit to collect the users' feedback. After this demonstration, IVèS will work on the development the five following months, in order to enhance the solution. Modifications and improvements of the platform will be presented in September (date to be confirmed) and will take place at European Commission premises. IVèS engineers will update monthly the characteristics and features of the user's website, the interpreter's website, Android app, iOS app and platform features.

The demonstration will be technically based on: servers hosted on the internet, iOS application, Android application, Windows and Mac web-based component and a network connection provided by the EU institutions to connect the client with the server.

To ensure a good performance during the public demonstrations, the testing process is carried out on each component. IVèS Quality Assurance department will carry out tests on a pre-production environment regarding each software module on both servers and clients. Each time a new version of the product is released, a test campaign on each software component is being performed to make sure that the existing features are still working (none regression) and that new ones are working as expected. This process prevents mistakes or defects on Insign products and avoids problems when delivering the software on the production system. Before releasing any application to the users, IVèS will install the application in password protected test environment in order to enable Pre-Production.

Pre-Production is meant to detect bugs or performance issues that are difficult to assess in a development environment, to verify that features and functionality meet the expected requirements.

When the QA department gives validation IVèS support team will plan an intervention to put the new software version from pre production to production. To limit the risk an advance mechanism has been developed and is being used for five years. Allowing in a one line command line to put a new version from preproduction to production.

3.4.1 Sub-task 4.1 · Demonstration

The demonstrations will run at least for 60 minutes each time while the service should be available at least for the full day. The two demonstrations will take place within 6 months, providing time for all Consortium partners to make a good evaluation of the first demonstration and enhance the solution with accordance to the user's feedback. IVèS will also correct errors, bugs and usability problems that may be detected. The first demonstration will take place at the European Parliament on 9th April 2014 and the second one during September (date to be confirmed) will take place at European Commission premises.

The first demonstration will already present all the features defined in Task 2. The second demonstration should present the final version of the prototype that will prove the functionality of the system. The second version will take into account all the comments and the potential suggestions that will emerge from the users after the first demonstration. Both demonstrations will include all the levels of technical support defined in task 2.

Demonstrations will involve connecting the users and the interlocutors via the platform to sign language interpreters and/or captioners based in three different member states (initially UK, Belgium and France) and selected and trained by the contractor for these demonstrations. During the two demonstrations together, the eight selected languages will be used:

- For the VRS and VRI services, the following six sign languages:
    - International Sign (IS)
    - British Sign Language (BSL)
    - French Sign Language (LSF)
    - Hungarian Sign Language (MJNG)
    - Dutch Sign Language (NGT)
    - Spanish Sign Language (LSE)
- Regarding Speech Recognition based captioning, the Insign platform will initially include two spoken languages often used in the EU institutions:
    - English
    - French

3.4.2 Sub-task 4.2 · Evaluation of the Demonstrations

Led by HWU.

Evaluation of the Demonstrations will take a two- pronged approach: In the first one, HWU will lead on the evaluation of the communicative interaction that takes place between deaf people and representatives of the European Institutions through the Insign Total Conversation platform, and in the second one IVèS will lead on the evaluation of the technical aspects of the platform. The criteria for analysis listed refers to both linguistic analysis of the interactions (in both language directions),

3.4.3 Objectives

To adopt a community participatory approach to evaluate the communicative interaction that takes place between deaf people and representatives of the European Institutions through the Total Conversation platform (whether through interpreters or text). To conduct interactional analysis of the conversations that occur during the Demonstrations and to examine the experience of all stakeholders (that is, deaf or HoH people, hearing people and interpreters/ re-speakers and EU representatives), including the processes that occur before, during and after the Demonstrations.

3.4.4 Methodology

The evaluation will involve a multi-method approach, combining ethnographic observations and linguistic interactional analyses:

First Demonstration: Non-participant ethnographic ("observing the situation and interaction, interviews, and following the whole process from start to finish".) observations of the first Demonstration process on 9th April 2014. Field notes will be taken in Brussels where the demonstration will take place, and in the London SignVideo premises where the interpreters will be based, on the process of making calls when participants are pre-arranged and handed devices with the necessary software loaded, and make calls using one of the languages agreed for the pilot project. The conversations that take place via the Insign Total Conversation platform, and discussions that take place post-Demonstration will also be observed. These observations will provide an overview of the social setting in relation to the delivery of communication services, and the roles of all participants. The conversations will also be video-recorded via the IVèS platform for the purpose of linguistic analysis of the interactions, which will be examined for accuracy and communication flow, drawing on existing taxonomies in sign language interpreting studies such as the one below. HWU will also draw on the DG Justice simultaneous interpreting evaluation criteria (DG SCIC criteria for spoken interpretation). for more detailed assessment of the quality and efficacy of the interpretations.

Message transfer

- Equivalence
- Distortions/ omissions/ dilution
- Non/ zero/reduced renditions
- Additions/ expanded renditions
- Register/ terminology
- Precision/ accuracy
- Speed/ flow
- Adequacy of message transfer

Communication dynamics

- Communicative goals
- Communication flow
- Repetition/ clarifications
- Turn-taking
- Pauses (length/ frequency)
- Interruptions
- Information exchange
- Presentation of self (role space)

Ambassador's Demonstration: Non-participant ethnographic (observing the situation and interaction, interviews and following the whole process from start to finish) observations of the dissemination event in Athens on 15th May 2014 (Part of Task 5.2). Field notes will be taken on the process of making calls when participants are representing a wide range of different countries and communicating with EU representatives via International Sign. We will be particularly interested in observing how participants begin the call process ab initio, downloading the necessary software on to their device, and making a call. Combined with the observations and analyses from the first Demonstration, these further observations will provide more ethnographic information on how easy it is for deaf people to use the Total Conversation platform without any preparation, which better reflects the way that deaf people across Europe may engage with this type of service. The results of these observations will be combined with the evaluation results from the first demonstration, to provide a holistic overview of the calling experience. Recommendations will be made on any issues with the communication that can be improved for the final demonstrations.

Second Demonstration: Non-participant ethnographic observations of the final Demonstration process in September (date to be confirmed) will take place at European Commission premises. Field notes will be taken in Brussels where the demonstration will take place, and potentially in a number of locations where the interpreters will be based remotely, on the process of making calls. As with the first demonstration, the conversations that take place via the Total Conversation platform, and discussions that take place post-demonstration will also be observed, and the conversations will be video-recorded via the IVèS platform for the purpose of linguistic analysis of the interactions. The outcomes of these evaluations will also complement and inform Task 4.3 – the User research.

3.4.5 Sub-task 4.3 · User experience research

Led by HWU, with Designit

3.4.6 Objectives

The aim of this Task is to examine the experience of all stakeholders (that is, deaf and hard of hearing (HoH), hearing people and interpreters/ re-speakers and EU representatives) before, during and after calls made using the Insign platform and service, to focus on their real needs.

3.4.7 Methodology

User research will be designed in collaboration between HWU and Designit to create an appropriated semi-structured interview instrument that will be used to conduct follow-up interviews with participants after each demonstration and at the Athens Ambassador's Demonstration. The interviews will be based on the survey questionnaire used in Task 1.b, but will focus on the specific experience and perceptions of participants involved in the demonstrations, and their evaluations of the efficacy of the service. The interviews also will refer back to the observations from the communicative evaluation, and will seek to contextualise the observed behaviours and communicative interactions; to augment information gleaned from the observations; and to ask participants to evaluate their experience of communicating via the Total Conversation platform. HWU will conduct interviews with deaf sign language users in International Sign, and Designit will focus on collecting information from the representatives of the European Institutions, interpreters and re-speakers in English. Interviews will be video-recorded and transcribed/ translated, and content and thematic analyses will be carried out in order to identify any patterns of themes that emerge from the interview data, in relation to participant perceptions of the Demonstration. HWU and Designit will then collaborate to produce a joint report that outlines the stakeholders' perceptions of the nature of communication through the Total Conversation platform.

3.4.8 Deliverables

HWU and Designit will each produce an independent preliminary report based on the User experience data collected. The results will then be combined into the deliverable reports as outlined in Task 4.2 above.

3.4.9 Calendar

Task/ Sub-task	Activities	Deliverables	Timeline
Task 4.1	Demonstrations	Demonstrations	April to September
Task 4.2	Evaluation of the demonstrations	Task 4.2 Report	April to July and September to November
Task 4.3	User experience research	User experience reports	April to November

3.5 Task Conceptualising a sustainable EU Platform

Task 5 will involve describing the strategic model for the project, generating an added value proposal in terms of cost-benefits in order to ensure the sustainability and maintenance of the project. The analysis will estimate the cost for five years after the pilot action has been completed.

All parameters will be described, including the management of the service and technical aspects such as, for example a technical help desk. Based on three possible scenarios for the expected demand (low, medium and high levels), together with an indication of their likelihood, partners will calculate the infrastructural and HR requirements for a sustainable platform. Task 5 will also include dissemination activities to distribute information to the public about this service with the Commission.

Service design and metric measurement techniques will be employed to achieve these goals.

3.5.1 Sub-task 5.1 · Define Business service model

3.5.2 Objectives

The final aim of this stage is to create a defined, replicable and sustainable business and service model. In order to achieve this, the different levels of the service will be described and mapped, so as to visualise the complexity of the interaction involved. This will outline the user's experience of the service, allowing them to describe the touch points between its different channels (telephone, web customer service, etc.) to all the identified stakeholders.

The whole user experience process timeline will be described (before, during and after the usage of the service) as well as all the visible and invisible processes involved.

This description will take into account value based on potential users' demands and needs, as well as business objectives and resources, trying to ensure the best balance between these two sides.

The business and service model will identify and make use of all possible opportunities to develop the business, aligning the Consortium members towards a collective vision of the objectives and basis of the business.

3.5.3Methodology

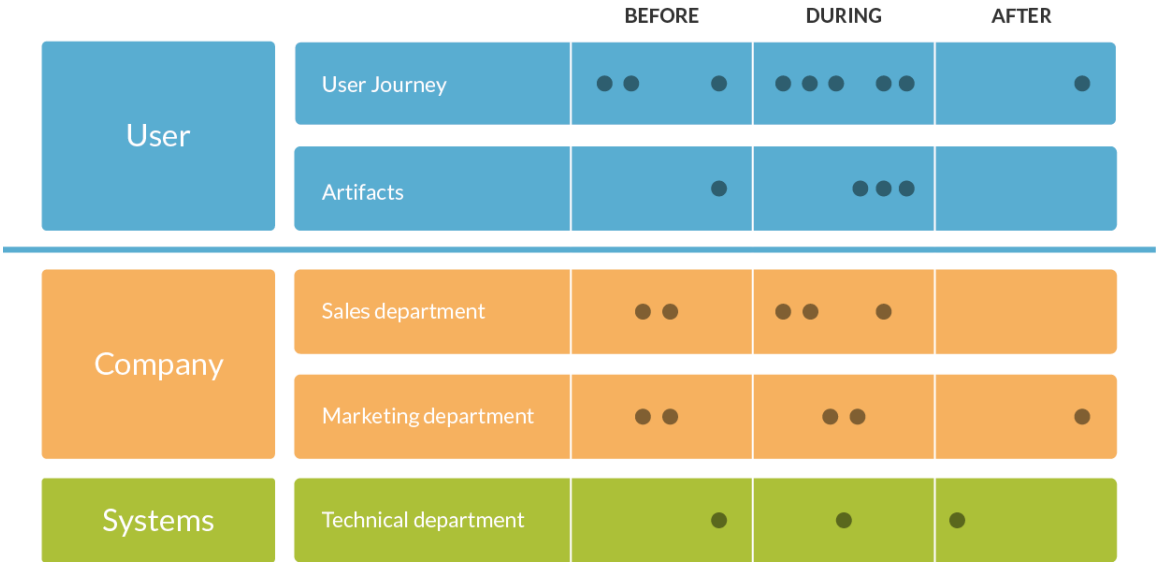
These objectives will be achieved through two specific techniques: Service Blueprint

Blueprint is a tool that helps to line up the user experience with the business objectives. It is also useful to illustrate the different levels of service operations and to describe the complexity of its interactions.

This tool maps

- The user experience throughout the provision of the service.

- Visible interaction between the user and the service provider, including call centre advice, web-based information, sales, etc. also known as touch points.
- All the internal processes of the service provider. It is formed of two parts:
    - The user journey, presenting the user experience before, during and after the service.
    - Service provider processes, both internal and external customer service, newsletters, content production, training, which make the user experience possible.



Business Canva model

Business Canvas Model

This canvas is an iterative tool, which allows the conceptualisation of a first approach to a sustainable business model for the Insign service. The deliverable will be the first concept of the business model for the sustainable Insign platform and service model. This model will foresee different scenarios and its maintenance and sustainability with the required investments estimated for five years.

This model will be developed through a strategic work session with Consortium members representing: the technical, operational and business areas of the new service. In this session, the gathered knowledge about the users, the client, the business objective and the strategies will be used to develop it.

3.5.4 Deliverables

Designit will produce a service blueprint for this subtask. A business model canvas will be also created in collaboration with other members of the Consortium.

3.5.5 Sub-task 5.2 · Dissemination

3.5.6 Objectives

The main objective of dissemination actions is to reach out, inform and empower EU citizens, including deaf and hard of hearing (HoH) people. The participation of EUD in this activity will ensure reaching out and informing a high number of deaf and hard of hearing (HoH) potential users of the Insign platform. Strong dissemination actions are planned to make the deaf and hard of hearing (HoH) communities aware of the new service, including a big dissemination event in Athens on 15th May 2014.

A mid-term objective of this task is to maximise the continuity possibilities of Insign to be extended to other public administrations and political representatives at a national and regional level.

3.5.7 Methodology

Dissemination responsibilities will be shared among all the project partners.

EUD will lead the dissemination activities by informing its members through their social media networks and as well as organising a one day workshop prior to their Seminar and General Assembly (GA) which will be held in Athens, Greece on 15th May 2014 (The *Ambassador's demonstration*). The seminar and GA will be unique in its own right as representatives from each member state (delegate from a National Association of the Deaf) will be present. The diffusion of the Insign platform to the deaf community will be extensive as EUD is the only organisation capable of attracting delegates of this high calibre.

A project website will be created by Designit and IVèS for disseminating news about the Insign project and the new platform in both written English and Sign Language amongst the general public, the deaf and hard of hearing (HoH) communities, staff of the European institutions and the interpreters/captioners all around Europe.

HWU will disseminate findings of the project through the publication of at least two peer-reviewed academic journal articles in deaf related journals such as *Sign Language Studies* (Gallaudet University Press), *Interpreting* (John Benjamins Publishing Co.) and or *Cross-Cultural Communication and Intercultural Competence* (Elsevier).

HWU will further disseminate findings through presentations at academic, community and professional conferences in collaboration with efsli and EUD in various events during the project (International Association of Applied Linguistics conference, ASLI conference, efsli conference...), and after the project is finished (World Association of Sign Language Interpreters conference, World Federation of the Deaf congress, International Association of Translation Intercultural Studies, and Critical Link Interpreting in the Community conference).

All partners will take responsibility of disseminate information about the project in their respective websites, portfolios, conferences and presentations, social media pages, documentation and publications.

Representatives of the DG Justice will be fully briefed before publication.

3.5.8 Deliverables

Besides the Ambassadors' Demonstration that will take place in Athens, on 15th May 2014, Designit and IVèS will create a project website. HWU will disseminate findings through academic articles. All partners will contribute to the general dissemination of the project with different actions (conferences, presentations, social media).

3.5.9 Sub-task 5.3 · Evaluation of impact and metrics dashboard

3.5.10 Objectives

The main objective of this Sub-task is to generate a visual representation on the business success indicators in the context of the conceptualisation of the sustainable EU platform. Once designed, this dashboard will help how to evaluate the impact of the implementation of the new service, monitor it, and identify improvement opportunities to propose iterations and analyse their impact on it.

3.5.11 Methodology

In collaboration with the partners of the project, taking into account the metric provided by the Insign system, a Project Key Performance Indicators (KPIs) dashboard will be designed to help to monitor the service performance and the impact of its implementation, in order to detect and prioritise next steps and improvements. This KPI's will presumably take into account variables such as service usage expenses and time consumed, or overall users' satisfaction.

3.5.12 Deliverables

A visual presentation of the success and business indicators in an organised dashboard will be delivered.

All dissemination measures shall be included in the final report.

3.5.13 Calendar

Task/ Sub-task	Activities	Deliverables	Timeline
Task 5.1	Business service model definition	Service blueprint poster Business model canvas visual representation	July
Task 5.2	Dissemination	Dissemination Event Athens 2014 Project's website Academic journal articles General dissemination of the project	January to December
Task 5.3	Evaluation of impact and metrics dashboard design	Evaluation of impact and metrics dashboard	November

3.6 Task · Project Management

3.6.1 Objectives

Task 6, Project management plays an increasingly important part within the Insign project. Its main objective is to ensure the overall development of the project, by correctly managing all the financial, administrative and legal mechanisms related to the Insign project. Agreed by all members of the Consortium, the management structure is constituted by the following bodies: the General Assembly, the Project Coordinator, the Administrative Coordinator and the Task Leaders.

For a successful project execution and in order to guarantee the whole life cycle of the Insign project a highly coordinated management is required. In order to do so, this Task is lead by EUD who, in collaboration with Designit will manage whilst implementing a Service Design approach, channelling this concept throughout the rest of the partners and of course, the project.

Implementation of the project will be carried out under the general guidance of the Project Coordinator, Mark Wheatley, EUD's Executive Director, who will ensure that all milestones are met and that all reports are prepared in accordance with contractual requirements whilst also securing the cohesiveness and continuity of the project. The Project Coordinator is responsible for maintaining regular communication with the European Commission.

In order to effectively manage these responsibilities and to assist the Project Coordinator, Designit has appointed an Administrative Coordinator, Loreto Galán, who will be based in EUD's offices in Brussels. The Administrative Coordinator's role is to provide daily support with the administrative workflow by organising, supervising, and facilitating as well resolving administrative problems. Operating also as a liaison between the project partners.

As the overall scope of the project is guided by the Service Design approach and in order to maintain its quality and sustainability, Designit has also introduced into the managerial team an Operational Coordinator, Miguel Agustí. Based in Madrid, he is responsible for creating the highest level of efficiency possible with regards to applying the Service Design Approach within the Insign project.

Octopux, a subcontracted consultancy, will also assists the management team in specific moments. Thanks to its experience dealing with EU-funded projects (namely tenders), Octopux Consulting will act as a financial and administrative helpdesk during the project's lifetime, not having factual power in the decision making of the Insign project.

3.6.2 Methodology

All members of the Consortium have agreed the methodology adopted. The Project Coordinator is Mark Wheatley, EUD's Executive Director, responsible for the general management and follow up of the general resources of Insign. The Project Coordinator shall maintain regular communication with the European Commission, being the sole point of contact between the Consortium and DG Justice. Communication shall occur

with through VRS/VRI whenever necessary.

The Management team, as a whole shall make decisions with regards to unexpected events, unforeseen needs or difficulties, keeping a continuous open dialogue and communication channel. The first two months following the Kick-off meeting, the Management team will meet biweekly in the EUD office in Brussels to assure the precise implementation of the project. At the time of printing this report, several meetings has already been held, establishing a flexible calendar for further meetings in Brussels and Madrid.

For Project management tasks, RUP@EC methodology will be used.

The Task Leaders, appointed for each Task have the obligation of steering their and their partner's work, providing reports that monitor the technical work. They must also meet the expected milestones, provide the contents for reports, and generally contribute to the elaboration of the project.

As the Insign project is formed of professionals working collaboratively, the online tool employed for communicating is Basecamp. It allows members to organise and manage tasks, providing basic project management tools (Task list, file sharing, etc.). Additionally, it will allow all Consortium members to be updated about all the work in progress performed by every partner as well as generating discussion about general issues.

3.6.3 Deliverables

Three reports shall be submitted, written in accordance to the requirements of the European Commission.

1. This Inception Report, which determines the activities to be undertaken during the whole life cycle of the project

2. An Interim Report, which will include information about the progress of the work (including reports on the demonstrations, collected data, plan of activities etc.).

3. A Draft Final Report, that will summarise the work carried out for the technical implementation, accompanied by all the deliverables.

The final report will contain a series of technical documentation, which will be RUP@EC specific.

In order to maintain a high level of transparency, through every phase of the project implementation, a Quality Assurance Plan will be developed by the Management Team.

All partners must contribute to a monthly internal report.

3.6.4 Calendar

Task 6, Project Management is a permanent on-going Task. Through the whole of the project, there will be daily interaction and collaboration

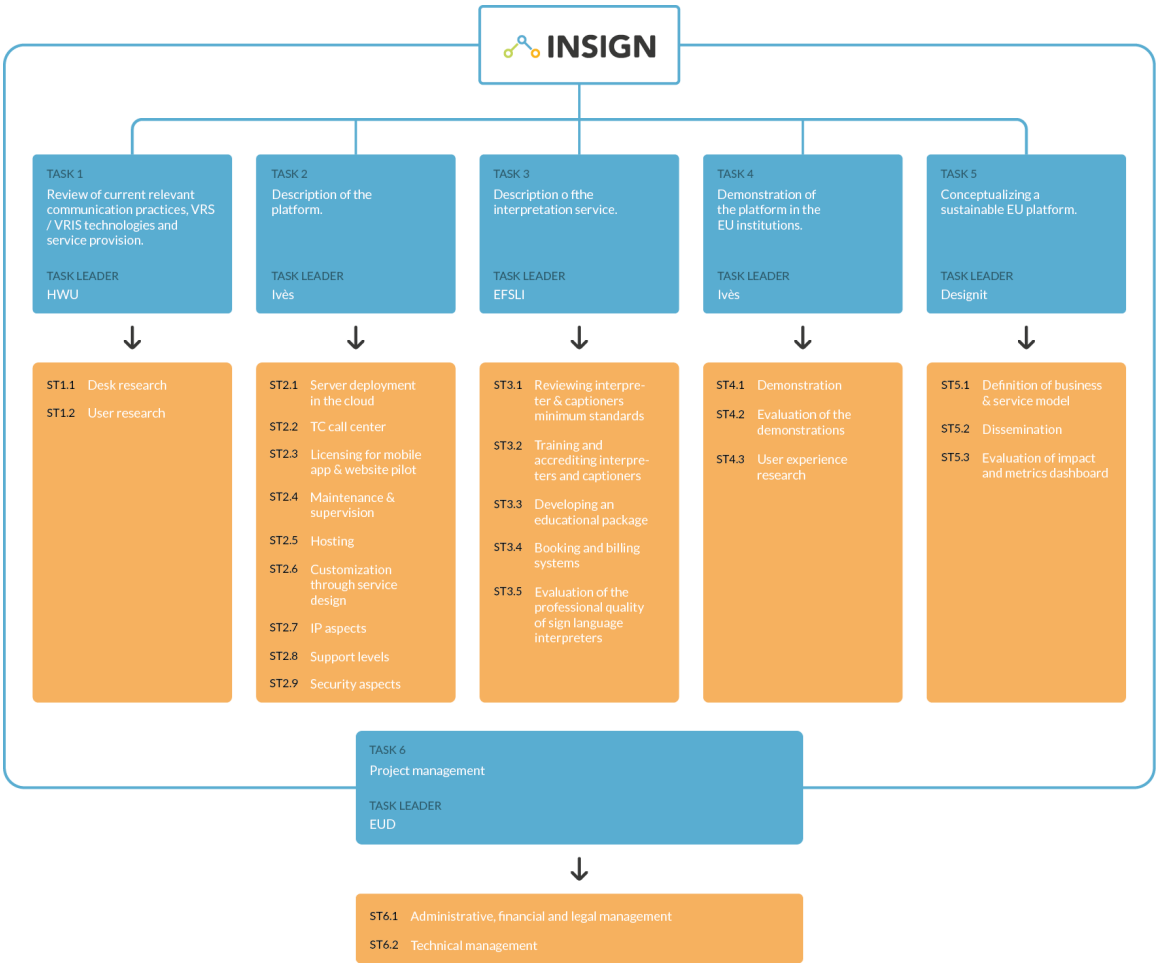
A series of meetings with all the partners will be held, the first one being the Kick-off meeting, held in Brussels, on the 14th January 2014, during Month 1 of the implementation of the project. The second meeting will be held in Brussels on 10th April 2014. The final meeting will be held in Brussels during the end of November.

- First Meeting, Month 1 – Brussels 14th January
- Second Meeting, Month 4 – Brusesls 10th April
- Third Meeting, Month 12 - Date and location to be established

The Management Team will organise bi-weekly meetings in the EUD office, based in Brussels.

Utilising the RUP@EC methodology, the reports requested shall be delivered and assuring it is also included in task 2, for the software development.

Task	Activities	Deliverables	Timeline
Task 6	Consortium meeting 1 Kickoff meeting Management meeting 1 Management meeting 2 Management meeting 3 Management meeting 4 Management meeting 5 Demonstration 1 Consortium meeting 2 Management meeting 6 Ambassador's Demonstration Management meeting 7 Management meeting 8 Management meeting 9 Management meeting 10 Management meeting 11 Management meeting 12 Management meeting 13 Management meeting 14 Demonstration 2 Management meeting 15 Management meeting 16 Management meeting 17 Management meeting 18 Consortium meeting 3 Management meeting 19	Inception Report Interim Report Final Report	January February March April May June July August September October November December


INSIGN
TASK 1
Review of current relevant communication practices, VRS / VRIS technologies and service provision.
TASK LEADER
HWU
TASK 2
Description of the platform.
TASK LEADER
Ivès
TASK 3
Description o fthe interpretation service.
TASK LEADER
EFSLI
TASK 4
Demonstration of the platform in the EU institutions.
TASK LEADER
Ivès
TASK 5
Conceptualizing a sustainable EU platform.
TASK LEADER
Designit
ST1.1 Desk research
ST1.2 User research
ST2.1 Server deployment in the cloud
ST2.2 TC call center
ST2.3 Licensing for mobile app & website pilot
ST2.4 Maintenance & supervision
ST2.5 Hosting
ST2.6 Customization through service design
ST2.7 IP aspects
ST2.8 Support levels
ST2.9 Security aspects
ST3.1 Reviewing interpreter & captioners minimum standards
ST3.2 Training and accrediting interpreters and captioners
ST3.3 Developing an educational package
ST3.4 Booking and billing systems
ST3.5 Evaluation of the professional quality of sign language interpreters
ST4.1 Demonstration
ST4.2 Evaluation of the demonstrations
ST4.3 User experience research
ST5.1 Definition of business & service model
ST5.2 Dissemination
ST5.3 Evaluation of impact and metrics dashboard
TASK 6
Project management
TASK LEADER
EUD
ST6.1 Administrative, financial and legal management
ST6.2 Technical management

General Description of the system

Insign service is based on a client / server architecture. The server and the client software are linked and interconnected. The server software component must be hosted and monitored by a provider such as IVèS. The host responsibilities are:

- To provide hardware servers connected on the internet to connect server to users deployed in the EU institution premises and user deploying client from anywhere in Europe (for VRS calls);
- To manage server scalability according to volume of call;
- To monitor the QoS;
- To fix bugs on the software;
- To enhance the software, in order to fit users' needs.

Currently the software for both PC and Mac are hosted on the IVèS server, whereas iOS is hosted on Apple store and the Android app on Google Play. The solution provided by IVèS is 100% software based.

In order transfer the Insign platform software to the European Commission services, an annual contract to renew solution hosting and maintenance managed by IVèS must be signed. If the European Commission decline to renew hosting and maintenance contract they may request the client and server software up to six months after trial termination. In that case, IVèS will provide a CD containing server and client software and configuration files.

The proposal of a final contract with a purpose of creating a dedicated autonomous platform enabling the EU institution operate the service independently. Which shall include:

- The setup of additional platforms that can operate independently;
- The contact information on technical partners or subcontractors;
- The possibility of transfer of hosting contract, terminal reseller contract, maintenance contract of exiting equipment with third parties.

Project schedule