



**Enabling an Intelligent Natural Language Based Hub for the Deployment
of Advanced Semantically Enriched Multi-channel Mass-scale Online Public Services**



VI Framework Programme Duration: 2004-2006

Total Value: € 5,988,003 (founding € 3,135,163)

CSI-Piemonte Quota: € 308,050 (€ 154,324) Municipality of Turin Quota: € 224,000 (€ 109,600)

www.comune.torino.it/hops

HOPS is a European three-year project focused on the deployment of an **advanced technological platform**, enabling European citizens to access Public Administration services using their own voice.

The principal aim is the mass-scale development of **new on-line services** with a higher accessibility such as **voice channels** (both mobile and land telephone), that are the most useful communication instruments used by European citizens. New and advanced technologies make it possible to create automatic services, that maintain a higher level of quality and acquire new functions.

The project is based on voice technologies (**ASR**, voice automatic identification and **TTS**, from text to voice) integrated with **Natural Language Process technologies**, as well as **Semantic Web** Technologies implemented ad hoc for the specific PA services.

The general approach follows a systematic structure to set up operative prototypes that will be verified and approved by the three Local Authorities involved in the project.

As natural extension, the complete architecture will be able to support different channels (non-voice) always using the functions of natural language elaboration and semantic web.

The involvement of CSI-Piemonte in the project, for which it is leader for the activities concerning local development and integration of the prototypes in the three Municipalities, mainly concentrates on:

- knowledge and competence development in the framework of voice recognition and experimentation of world level advanced technologies;
- completion, by the end of the project, of a platform to create and offer large scale services to its customers.

CSI-Piemonte deals with:

- the implementation of the voice processing prototypes;
- the interface of these prototypes with the service support platforms used by the PAs.

Partners:

Municipality of Barcelona, Spain – Coordinator

TALP-UPC, Spain

Municipality of Turin, Italy

CSI-Piemonte, Italy

CSP, Italy

University of Turin, Italy

Sun Microsystems, Spain

ISOCO, Spain

Loquendo, Italy

Amsterdam University, Netherlands

Runtime Collective, United Kingdom

IT Deusto, Spain

London Borough of Camden, United Kingdom



Process Identification and Clustering for Transparency in Reorganizing Public Administrations



VI Framework Programme Duration: 2006-2008

Total Value: € 3,546,933.32 (founding € 2,279,560.83)

CSI-Piemonte Quota: € 392,800 (€ 194,755) Municipality of Turin Quota: € 137,000 (€ 62,210)

www.picture-eu.org

PICTURE aims at developing a decision support system that can **measure the potential impact of ICTs on back-office processes in municipal PA**, as the re-organisation of processes through ICT is the point of departure for the modernisation of the European PA.

PICTURE is a tool based on the Web aimed at developing successful long term investment strategies and it consists of two central modules: the Process Landscaping Module and the ICT Impact Measurement Module.

The project analyses the basic ICT components which are necessary for the back-office reorganisation and which influence many processes. Some examples are workflow management systems, documental management systems or optical archives.

The impact will not be determined on the basis of single back-office processes but rather on a consistent view on all public services and their underlying processes. In order to cope with the complexity of ICT and the large number of processes in PA two abstraction layers will be introduced: structural analogies and common elements of the processes which result in so called process building blocks. The functionality of basic ICT components will be consolidated to groups of ICT functionality and the potential impact will be determined by matching ICT functionality groups on process building blocks and expressed in a qualitative, a quantitative and a monetary dimension.

CSI-Piemonte is involved in the **communication and promotion activities** of the project, approved by the European Commission, for which it also has to coordinate the contribution of other partners.

Its specific tasks are:

- drawing up the communication and promotion plan for the initiative;
- creating the information and editorial material;
- preparing the newsletter;
- creating the Internet site of the project www.picture-eu.org;
- coordinating the participation to seminars, workshops and meetings;
- organizing the yearly meetings for the project.

Partners:

SAP AG, Germany – Coordinator

CSI-Piemonte, Italy

European Research Center for Information Systems Università di Muenster, Germany

FileNet Ltd, United Kingdom

University of St. Gallen, Switzerland

Planet SA, Greece

University of Lodz, Poland

Municipality of Amaroussion, Greece

Municipality of Lodz, Poland

Municipality of Muenster, Germany

Municipality of Turin, Italy

Municipality of Winterthur, Switzerland



DIADEM

Delivering Inclusive Access for Disabled or Elderly Members of the community

VI Framework Programme, 5th Call - eInclusion Duration: 2006-2008

Total Value: € 3,208,529 (founding € 1,950,000)

CSI-Piemonte Quota: € 402,875 (€ 203,638) Municipality of Turin Quota: € 158,200 (€ 80,300)

DIADEM's vision is to enable older people, and others, **to overcome the reduction of cognitive skills and remain active and independent members of society.**

People with physical disabilities can decide how to personalise the computer interface for themselves but those with cognitive disabilities need assistance with the personalisation process itself. DIADEM is based on the hypothesis that Expert Systems (ES) technology can be used to monitor user input and personalise the assistive behaviour to meet the user's needs.

CSI-Piemonte is involved in the coordination of the implementing and evaluating activities of the applications that were identified during the initial phase.

Its specific tasks are:

- streamlining the services to be used in the evaluation process in Italy, Norway and United Kingdom, in compliance with the needs of the involved Public Administrations;
- developing the Web services according to the transactions model elaborated for DIADEM users;
- carrying out tests and evaluations on the developed system, to optimise the performances and to identify possible standards.

Partners:

Brunel University, United Kingdom – Coordinator

Norsk Regnesentral, Norway

Bluegarden AS, Norway

Municipality of Sheffield, United Kingdom

More Optimised Registration Elements AS, Norway

CSI-Piemonte, Italy

Municipality of Turin, Italy

Municipality of Riga, Latvia



LUNA

Spoken Language UNDERstanding in multilinguAI communication systems

VI Framework Programme, 5th Call Duration: 2006-2008

Total Value: € 3,901,080 (funding € 2,609,280)

CSI Quota: € 413,496 (€ 209,748)

LUNA addresses the problem of **real-time understanding of spontaneous speech telephone applications**. In today's commercial applications based on voice recognition, the quality of human-to-computer interaction is far from being enjoyable and ineffective. To improve the usefulness and acceptability of automatic dialogue systems, one solution is the improvement of the intelligence level up to **Spoken Language Understanding (SLU)**.

From the point of view of the technology, the objective of LUNA is that of proposing new methods, algorithms and tools for a quick development of solid SLU components for Multilanguage telephone services. To this aim, LUNA will address a set of challenging scientific issues, focusing on five objectives:

1. Language Modelling for Speech Understanding;
2. Semantic Modelling for Spoken Language Understanding;
3. Automatic Learning (including Active and On-Line Learning);
4. Robustness issues for SLU;
5. Multilingual portability of SLU components.

The specific tasks of CSI-Piemonte are:

- collecting telephone conversations from its call centre to set up a voice data base in Italian, to be used in experimentation on semantic recognition;
- developing a prototype language recognition tool, integrated with the market voice platform, already used by its call centre.

Partners:

Loquendo, Italy - Coordinator

RWTH University Aachen, Germany

University of Avignone, France

CSI-Piemonte, Italy

University of Trento, Italy

France Telecom R&D Division S.A., France

Polish Academy of Sciences, Poland

Polish-Japanese Institute of Information
Technology, Poland



SemanticGov

Providing Integrated Public Services to Citizens at the National and Pan-European level with the use of Emerging Semantic Web Technologies

VI Framework Programme, 4th Call Duration: 2006-2008

Municipality of Turin Quota: € 240,000 (€ 120,000)

SemanticGov aims at building the infrastructure (software, models, services, etc) necessary to enable the offer of **semantic web services** by the Public Administration (PA).

SemanticGov addresses issues that the PA has been trying to solve for a long time, for example: improving the interoperability amongst PA both within a country as well as amongst countries, easing the discovery of PA services by its customers and the execution of complex services.

SemanticGov, moreover, wishes to become a tool to **reengineer PA service provision** and to propose a paradigm shift of today's modus operandi. The project - in line with the European Interoperability Framework and with the developments of the EU IDABC Programme – aims at capitalizing on the Service Oriented Architectures paradigm, implemented through Semantic Web Services technology and supported by rigorous and reusable PA domain analysis.

CSI-Piemonte did not take part to the project directly, but it collaborated with the **Municipality of Turin** to obtain the project and it provides its help to the Municipality from the technological point of view.

The Municipality of Turin has to identify the services that can be used as use cases and is responsible for the quality evaluation of the whole project.

Partners:

Centre of Research and Technology – Informatics and Telematics Institute, Greece - Coordinator

Ireland National University – Digital Enterprise
Research Institute, Ireland

University “La Sapienza” of Rome Department
of Systems and Computer Science, Italy

SAP, Germany

ALTEC, Greece

Region of Central Macedonia, Greece

Leopold-Franzens University of Innsbruck,
Germany

Ministry of the Interior, Public Administration
and Decentralization, Greece

Ontotext, Bulgaria

Capgemini, The Netherlands

Municipality of Turin, Italy



IM Enabled

A Service to Facilitate the IM Enabling of eGovernment Services

eTEN Programme Duration: 2006-2008

Total Value: € 13,130,789 (funded € 1,310,438)

Municipality of Turin Quota: € 182,400 (€ 91,200)

This project will undertake a market validation of a trans-European service for eGovernment service providers called Instant Messaging Information Service (IMIS).

IMIS lets eGovernment providers **present their eServices over several Instant Messaging (IM)** provider networks, enabling service provision over a new cost effective communications channel.

The IMIS system has broad applications across the European economy, but to support initial market validation of the technology the project team focuses on validation with eGovernment service providers, to improve the effectiveness and efficiency of public administrations.

CSI-Piemonte is not involved directly in the project, but it collaborated with the **Municipality of Turin** to identify the project opportunities, drawing up the proposal and supporting its award.

The tasks of Municipality of Turin are:

- carrying out the verifications of the IMIS service to make many of the present e-government services available, through IM;
- promoting the service through the channel it already has at its disposal (for example the Web site);
- collaborating with Fullsix to ensure the validation of the service by the end users.

Partners:

Waterford Institute of Technology (WIT), Ireland – Coordinator

Aceno Mobile Services Ltd, Ireland

Fullsix, Italy (& France)

ICPP, Germany

PSI, Germany

Municipality of Turin, Italy

Municipality of Lomme, France

Municipality of Waterford, Ireland



Health and Environment Network

VI Framework Programme, 4th Call – Coordination Action Duration: 2006-2010

Total Value: € 3,217,508.10 (funded 100%)

Piedmont Region Quota: € 25,150

The project aims at **contributing to the development of the environmental and health integrated information system of the European Environment and Health Action Plan (2004-2010)**, with a coverage up to 2010.

HENVINET collects, evaluates and validates present day scientific knowledge and the state-of-the-art instruments in the environmental and health sectors; moreover it provides an overview –through workshops and conferences- on European projects on this subject.

Knowledge, best practices and management support instruments will be validated, for wider use by relevant stakeholders and also by policy makers.

The project will lead to the setting up of a **dynamic Web portal** to collect data, projects, instruments and best practices, concentrating on four priority diseases: asthma and allergies, cancer, neurodevelopment disorders and endocrine disruption.

CSI-Piemonte did not take part to the project directly, but it collaborated with the **Piedmont Region** to identify the project opportunity, draw up the proposal and once the project was awarded.

Moreover the Consortium supports the Region in defining, together with the other European partners, best practices and guidelines to support the European Action Plan.

Partners:

Norwegian Institute for Air Research, Norway – Coordinator

Norwegian Veterinary Institute, Norway

United Bristol Healthcare NHS Trust,
United Kingdom

Central Science Laboratory, United Kingdom

Institute for Food Bioresources, Romania

European Center for Environment and Health
WHO EURO, Italy

Netherlands Organisation for Applied Research
(TNO), The Netherlands

European Commission - Joint Research Centre

URM – Utvar rozvoje hlavniho mesta Prahy
City Development Authority of Prague,
Czech Republic

University of Umeå, Sweden

Faculty of Chemical and Food Technology,
Slovak Technical University, Slovakia

University of Stockholm, Sweden

Wageningen University, Section Toxicology,
The Netherlands

University of Oslo, Norway

Stichting Ecobaby, The Netherlands

Public Health Services Gelderland Midden,
The Netherlands

Slovak Medical University, Slovakia

Ente per le Nuove tecnologie, l'Energia
e l'Ambiente, Italy

University of Hertfordshire, United Kingdom

Finish Meteorological Institute, Finland

Piedmont Region, Italy

Inst for Medical Research and Occupational
Health, Croatia

University Children Hospital
Paediatric Oncology, Slovakia

ProdMed – NVH, Norway

University of Southern Denmark, Denmark

National Centre for Scientific Research
“Demokritos”, Greece



**Interreg III A Alcotra (Cross-Border Alpine Cooperation)
Community Initiative Programme Duration: 2006-2008**

Total value: €1,864,919

Piedmont Region Quota € 250,000 (€ 50,000)

The project, that falls within the scope of measure 5 - WI-PIE internationalization activities, promotes technological innovation and reduction of the digital divide of Italian and French cross-border areas through the experimentation of technologies that provide an alternative to traditional DSL, and more specifically, Wireless technologies (Wi-Fi, Wimax, Hiperlan, Satellite, etc.) or through PLCs (PowerLine Communication).

The objectives of the project are the creation and development of advanced services such as those to inform citizens (e-Government), remote training, remote medicine (especially aimed at elderly people), terrestrial digital services (t-Government) and environmental monitoring. The initiative sees the involvement and the participation of the local population that will be informed on the advantaged offered by such technologies and will be informed on their correct use.

CSI-Piemonte collaborated to the preparation of the project documentation on behalf of the Piedmont Region and it will carry out the project activities as implementing body of the Region.

The progress of the project will be monitored by a technical and a political workgroup, that will meet during the years to compare the different partners experiences on the creation of the Cross-Border Network.

Partners:

Liguria Region - Coordinator
Assemblée des Pays de Savoie
Conseil Général de la Savoie
Province of Savona

Province of Imperia
Valle d'Aosta Autonomous Region
Piemonte Region



Twinning Project on “Local Government Budget Management System” for the Finance Ministry of Poland Duration: 16 months

Total Value: € 750,000
CSI-Piemonte Quota: € 80,000

The project aims at promoting the development of public financial management by the local Polish government through the development of the Local Government Budget IT Management System (LGBMS).

The project activity involves a consultancy to support the Polish project group consisting of representatives on the territory of the local institutions relating to the Finance Ministry, in carrying out an economic, financial and technical analysis of the issues connected to the present system, leading to the definition of the specifications for a financial data reporting system from the local institutions to the central systems (data harmonization and sharing).

CSI-Piemonte actively contributed to the preparation of the project dossier and it presented a group of 4 resources as Short Term Experts.

CSI-Piemonte contributed to valorising the Italian candidature for the project thanks to its experience on public local finance ICT systems, which complemented the competences of the other members of the Italian group.

Partners:

Formez (coordinator)

Italian Interior Ministry

Italian Ministry for Economy and Finances

UPI

ANCI

CSI-Piemonte



Consultancy project for the Office of the Premier of the Province of KwaZulu-Natal, South Africa Duration: 2 months

Total Value: € 61,000

The project for the Province of KwaZulu-Natal (Republic of South Africa) falls within the scope of the consultancy activities carried out by CSI-Piemonte with SAS Institute on Business Intelligence.

The consultants of CSI-Piemonte carried out an assessment of user requirements and availability and quality of the data necessary to create a centralised Data Warehouse, as a preliminary activity for the development of a reporting and monitoring system of the political activity for the Office of the Premier.

Simultaneously, CSI also carried out a system inventory of all the Government Departments to map the applications presently used by the Departments of the Province. These activities have been carried out both remotely from Italy, and on site at the offices of the Province.

The project was acquired thanks to the extensive experience of CSI-Piemonte in Business Intelligence developed for the Piedmont Region, the Municipality of Turin and the Province of Turin.

This project is a first important step of a larger project of the Province of KwaZulu-Natal and it aims at laying the foundations for further collaborations in reorganizing the data of the various Departments of the South African Province.