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<tr>
<th>Project Acronym:</th>
<th>SemanticHEALTH</th>
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<td>Semantic Interoperability Deployment and Research Roadmap</td>
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<tr>
<td>Authors:</td>
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- Egészségügyi Stratégiai Kutatóintézet - National Institute for Strategic Health Research
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Introduction

This document provides a detailed dissemination plan according to WP 8 of the SemanticHealth project. SemanticHEALTH aims to develop a European and global roadmap for deployment and research in health-ICT, focusing on semantic interoperability issues of e-Health systems and infrastructures. The roadmap will be based on consensus of the research community, and validated by stakeholders, industry and Member State health authorities.

The objectives of WP 8 (Dissemination and Liaison) are to:

- provide a comprehensive, integrative knowledge resource on e-Health semantic interoperability issues
- facilitate coordination and cooperation amongst the research community and stakeholders in this field, and to thereby contribute to the creation of a European and global e-Health Research and Innovation Area
- coordinate all work in this project and cooperate with Member States and other involved national Health Care Authorities
- feed the results and insights of this project back into national, European and international policy processes and to relevant actors,
- make results and insights of this project available to the wider public.

WP8 encompasses the following deliverables:

- D8.1: Launch of the project web site
- D8.2: Project presentation
- D8.3: Dissemination Plan
- D8.4: Dissemination report

This dissemination plan presents the goals, target audience, strategy and planned and performed activities for the diffusion of knowledge gained during the project. The gradual update of this document will lead to the preparation of the final dissemination report (D8.4)

Goals

The overall goal of the dissemination plan is to achieve the best possible utilization of the results of WP 1-7. To achieve this it is necessary:

A) To raise public awareness to the work during the run of the project, get as many contributions, comments, critical remarks as possible. Beyond the expertise of the project members it is absolutely important to collect views and opinions outside of the project consortium. This especially includes:

1. experts and project teams of similar ongoing projects, especially RIDE
2. European experts, especially from new member states, and those states that expected to join during the curse of the project (Romania, Bulgaria)
3. Non-European experts from the most developed areas, especially North America and Australia

B) Raise awareness of the result of the project (i.e. the interoperability roadmap), in order to speed up development and avoid traps of development. This includes governments of the member states, and associated countries. The ultimate goal is to achieve co-ordinated actions amongst those governments to
improve European health and to increase international competitiveness of EU health informatics enterprises.

The most appropriate stage to act in that direction is the eHealth Working Group, recently called i2010 Subgroup on eHealth. A series of common workshops should be organised to achieve common vision and understanding among the project team members and representatives of the responsible ministries of member states, who form the i2010 Subgroup.

C) For the same reason it is also important to raise awareness of the recommendations of the project amongst all stakeholders:

- health informatics industry,
- health care providers (e.g. hospital associations, HOPE European Hospital and Healthcare Federation)
- health insurance agencies
- public health authorities
- health related civil organisations

**Target audience**

- Ministries/ governments of member states.
  Bbeing eHealth a borderline discipline, in various Member States of the European Union and Accession States it lies in responsibility of health and/or social ministries or ministries responsible for information and telecommunication and/or research.

- EU organisations (DG INFSO, eHealth WG, DG SANCO, Health Systems Working Party)
  Organisations of the European Union play a crucial role in supporting EU-wide and cross-border eHealth interoperability solutions. European organisations include, first of all, the European Commission, particularly the General Directorates involved with health issues and related support activities that is Information Society and Media, Health and Consumer Protection, Enterprise, Regio as well as Employment, Social Affairs and Equal opportunities. Furthermore, the Committee of the Regions, the Economic and Social Council, and also the European Parliament will be targeted.

- International organisations
  World Health Organisation plays an increasingly important level in strategic planning, development and implementation of eHealth interoperability solution, realising that the 'digital divide' is a threat of right for equal health of people all over the world.
  Other international organisations will be explored and considered during the curse of the project

- Scientific and professional communities (EFMI and its member associations) IMIA, EHTEL
  At European level the European Federation of Medical Informatics (EFMI) – as a regional organisation of International Medical Informatics Association (IMIA)
plays and outstanding role in facilitating co-operation or experts in health and medical informatics in the whole WHO Euro-region. Its member associations – the national organisations of the countries – often have strong relation to their ministries and scientific community, including other scientific association working in various fields of computer sciences and info-communication.

EHTEL is a European organisation that brings together stakeholders in eHealth, governmental organisations, information service and solution providers, and users of health information.

- **Medical and ICT industry**
  Their role in successful implementation of eHealth solutions is out of question. This is a difficult group to address since their competitive situation that do not always make easy to convince them about the importance of interoperability.

- **Hospital Associations**
  Hospitals play a central part of the healthcare systems in all European countries. In many European countries there is a strong need to reorganise the hospital sector to reduce the cost that is usually close to 50% of the total health expenditure. The possible solutions are often related to eHealth implementation. This fact underlines the importance of the hospital sector. Instead of trying contact a number of individual hospitals, it is more efficient to address their associations at national and European level.

- **Further potential target groups**
  - Patients groups and organisations
    The real beneficiaries of the whole health care sector – including eHealth solutions are the patients. It is absolutely important to provide appropriate information for civil organisations, patient groups. Informed consumers can better articulate their needs, and help to move towards a direction that is acknowledged by the whole society.
  - Publishers
    Publishers of electronic and printed media can effectively contribute to dissemination of messages addressed to the public audience. They can play a key role in addressing the former group, since they are often not really well organised and hard to reach.

### Dissemination strategy

The dissemination strategy should be flexible in order to find the most effective ways of dissemination and making liaisons, since eHealth is a rapidly changing environment, including not only the fast development of the technology but often the change of the actors.

For that reason a roll-planning strategy is selected instead of printing the plan in the stone. A flexible strategy assumes fixed variable elements that can be used as "lego brick" for quick composition of electronic and – if necessary – printed documents. Key elements of this set of tools are the followings:
1.1. Logo – visual identity

The logo of the SemanticHealth project was selected from a number of proposed designs by the consortium considering that it should be easily used in printouts, projected slides and on the web. It should be in harmony with the logo of IST, it should be noticeable.

After a long discussion the finally chosen logo is presented on Figure 1

![SemanticHEALTH logo](image)

Figure 1

SemanticHEALTH logo

1.2. Project website

A key aspect of dissemination is the establishment of a web presence. Besides general information on this SSA, its activities and results, building a knowledge base on e-health semantic interoperability will be a core element. Documents and other information will be assembled on national, trans-European and global e-health semantic interoperability research issues, needs and priorities. Access and presentation structures will allow for retrieval from national, research-domain and structural perspectives. Links with related other FP6, national and global activities and projects will be included. Support will also be provided to assist all project participants and participating experts in dissemination activities, and on stimulating the actors involved in this support process to exploit the results achieved at the national and global level.

Website with registered domain name ([www.semantichealth.org](http://www.semantichealth.org)) is already running.

The website is to be used in the following ways:

- Internally to upload and download documents, to place document templates. Internal communication is based mostly on a simple mailing list, that is – according to the experience from other projects – is more effective than sophisticated portal solutions.
- Externally to publish all public material (presentations, written documents) that later on will be organised into a knowledge base. The public site should support bidirectional communication through the website:
  - In general any comments, critical remarks are welcome and should be processed in an appropriate way.
  - Specifically: Certain documents are to be distributed in a "request for comment" section.

An analyser will be implemented to create statistics about the usage of the website. Based on this results actions can be taken towards specific directions if we do not see sufficient interest.

More about the website could be found in deliverable 8.2. The opening page of the site is shown in Figure 2
Template for PPT presentations and written documents (excluding those that are to be created according to fixed format specifications, e.g., scientific papers) is created and uploaded to the private part of the website. It enables uniform appearance, ensures to provide basic information about the project. The PPT template contains a copyright notice that encourages reuse any of our slides provided that some simple requirements are followed. (See Figure 3)
Copyright Notice
Usage of semanticHEALTH public presentations

You are encouraged to use slides from this collection for your presentations on the condition that:

- Each slide is copied\(^1\) exactly as it is presented by the speaker. This means with the same colors and backgrounds, and including all headers and footers.
- It is not allowed to add any items including your styles and logos without written permission of the author(s).
- Your presentation should acknowledge the author(s) of the semanticHEALTH public presentation

\(^1\): In Powerpoint 2002 and up, choose ‘Keep source formatting’ after pasting the slide. In older versions or other products you must transform the slide in an image first.

Figure 3
Copyright notice for PPT presentations

A simple, easy to use document template is to be used mostly for the official deliverables. The uniform header enables to follow up of the development of each document version. (See Figure 4)

1.4. Flyer
A flyer is a traditional but still useful means to put forward short messages, raise awareness. It can be disseminated at various events, workshops, conferences, exhibitions. However it is not a tool to carry important contents, it is just used to point to the website where the essential content is to be placed. The flyer is to be created electronically and printed only in the necessary number. (See the Project flyer in Annex 1)
1.5. Workshops and face to face meetings

The most effective tool to raise awareness of the project is personal, face to face communication at various meetings, conferences and specially organised workshops.

1.6. Events for which active participation is needed:

<table>
<thead>
<tr>
<th>Events</th>
<th>Place and date</th>
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<tbody>
<tr>
<td>Semantic Mining Conference on SNOMED CT;</td>
<td>Copenhagen 1 Oct 2006</td>
</tr>
<tr>
<td>High level eHealth Conference,</td>
<td>Malaga 10-12 May 2006</td>
</tr>
<tr>
<td>EU eHealth Working Group workshop,</td>
<td>Brussels, 8 March 2006</td>
</tr>
</tbody>
</table>

This table is to be maintained continuously.
1.7. Events where at least presence is needed

<table>
<thead>
<tr>
<th>Event</th>
<th>Date and place</th>
</tr>
</thead>
<tbody>
<tr>
<td>eHealth Working Group</td>
<td>Luxembourg 2006 06 21-22</td>
</tr>
<tr>
<td>IST conference 2006, Networking session</td>
<td>Helsinki 20061122</td>
</tr>
<tr>
<td>MIE conference of EFMI</td>
<td>Maastricht 2006 09 27-30</td>
</tr>
</tbody>
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This table is to be maintained continuously.

The main focus is the eHealth Working Group of EU (from the mid of 2006 it is called i2010 subgroup on eHealth) that consists of experts and responsible representatives of Ministries (both health and information) of member states. Special workshops are to be organised to discuss terminology and semantic interoperability issues. The main benefit of these workshops is the immediate feedback from the audience. People who are less motivated in providing feedback in any written form including simple e-mails can easily react to our presentations, can explain their needs and expectations.

1.8. Electronic newsletter

After the first year of the project a quarterly newsletter is planned that will be available on the net and sent to a mailing list that collects mail addresses of experts and actors in the field.

1.9. Paper based publications

Paper based publications are worthwhile in the second phase of the project, when more stable results will emerge. It is necessary to provide appropriate publications for all different target groups. At least two main categories are identified:

Scientific papers

SemanticHealth is not a purely academic project, and its result cannot be measured by some scientometric method, even simply be the number of scientific publications. But it is quite obvious that the outcome of the project lies in the interest of the scientific community. One summarising paper to be published in a high quality peer reviewed scientific paper has to be considered. Successful presentations at various conferences are also could be considered to be published in journals as well.

General papers

Since the general public, patient and health related civil organisations are difficult to addressed directly, perhaps the most effective way to put forward messages is the use of general media including public journals or newspapers. The most appropriate ways has to be investigated, and a careful selection of the content of such communications has to be defined.

1.10. Informal contacts

All events that any of the project team members participate offers good occasion to contact relevant people all over the world. These contact situations are used for bidirectional communication, not only to raise awareness and disseminate the results but – especially in the early phase of the project – to collect reflections, discuss critical
points and most importantly to collect failure cases in the area of semantic interoperability, since ordinary publications usually report success stories only.

1.11. **Language issues**

All products and documents of the project will be created in English. We will encourage any interested parties to translate freely any public documents to any official European language. An electronic copy of translated document should be sent to the consortium and will be uploaded to the public part of the Semantic Health Portal.

### Activities

1.12. **Setting up web side**

It is done at M3. and described in D8.1

1.13. **Liaisons**

Liaison is a key concern of all activities of this SSA. All contractors and all WPs will perform and contribute to this activity. This concerns the EC/FP6 execution and FP7 strategies, Member State Health Care Authorities/Ministries of Health as well as the research community at large, stakeholders etc. as it is shown on Figure ##

![Diagram of SSA activities and stakeholders](image)
Target groups and communities are the followings:

**Research communities:**
- the general e-health research community (including liaison with projects like e-Health ERA, I2-Health, SYMBIOMATICS, INFOBIOMED, Health GRID and others)
- the specific semantic interoperability and ontology research communities (including projects like RIDE, SemanticMining, ARTEMIS, Semantic GRID, Semantic Web and others)
- related research fields which also cope with semantic interoperability issues, in particular e-government research, but also fields like e-business, e-science
- global experts, many of which have already agreed to participate in the planned activities of this SSA (for details, see section 9.1.3.1.3)

**Health policy and stakeholder communities:**
- Member State, ACC and EEA country health ministries/health care authorities (HCA) through close liaison with the e-health ERA project and its Steering Commit-tee of representatives from more than 25 countries
- WHO as a partner in this project who will integrate its Collaborating Centres, Health Metrics Network, media channels and its liaison to the global member state community of WHO
- various stakeholder groups, particularly also industry and standards development organisations

1.14. **Raising public participation and awareness by WHO channels**
WHO as a partner in this project will integrate its Collaborating Centres, Health Met-rics Network, media channels and its liaison to the global member state community of WHO.

1.15. **Education**
The project consortium involves universities, international organisations and research institutes which have close contacts and interrelationships with universities and other teaching institutions. In addition, most of the international experts to become involved have also teaching obligations. This assures synergies with the educational system and transfer of generic project methodologies and results not only into the wider European and global research community, but also directly to teaching activities.
Furthermore, several project staff members are directly involved in lecturing activities on e-Health issues at teaching, educational or training institutions, at national and international scientific and educational conferences and workshops. Thus the experience and outcomes of this SSA will - to the extent that this can meaningfully be accomplished - become integrated into lectures and presentations and will thereby become diffused to the wider scientific community, students and researchers beyond the dissemination, outreach and liaison activities of this project.
1.16.  **Exploring the wider societal implications**

As detailed above in the sections on dissemination and liaison, this action has as a key objective to spread information on e-Health research, roadmapping and global activities in the domain of its topic. As a consequence, data and information will become available and will be actively promoted for dissemination beyond the FP6 arena. Also, research and clinical application issues beyond a closely defined research and policy arena will be visited, and various stakeholder groups involved, e.g. through workshops. This will not only help to spread awareness and knowledge, but also to stimulate and support all concerned to better respond to e-Health systems (research) needs.

**Measurement of effectiveness of the dissemination**

It seem to be ambitious to define target values of indicators that demonstrate the success of the dissemination activity. Anyway we define some objective parameters that – at least by comparison – will tell us something about the outcome and success. These could be the followings:

**Webstatistics**

_A statistical analyser will count_

The number of visitors will be counted hourly, daily and monthly by domains. The amount of downloaded information also will be measured. Analysis of these data will show week and strong points. The statistics will rank the documents by the number of downloads that also gives an orientation for us.

**Number of e-mails received from outside of the consortium**

The website offers contact the consortium directly. The number of e-mails received (responses to 'request for comments' etc.) indicates the interest of outside community.

**Number of contributions from external experts**

External experts will be contacted personally and asked to contribute to various workshops and events. The number of experts willing to do so and the number of their contributions will reflect the openness of the approach.

_A literature search of documents that reflect to our work (GoogleScholar and Medline search)_

In the early stage, when mature document will be not ready this indicator cannot be used. The search will be done twice, first at month 15 and at month 24.
Annex 1 Project Flyer

**semanticHEALTH**
Semantic Interoperability Deployment and Research Roadmap

SemanticHEALTH aims to develop a European and global roadmap for deployment and research in health-ICT, focusing on semantic interoperability issues of e-Health systems and infrastructures. The roadmap will be based on consensus of the research community, and validated by stakeholders, industry and Member State health authorities.

**Objectives of the project**
The Semantic aspects of interoperability have only recently been recognised as the major enabling factor for the safe and sensible communication of patient data. Health language is very large and diverse, and as such not equally well understood by all professional languages. The delivery of safe and effective health care is a challenge, particularly as the extent of medical errors is becoming apparent. The U.S. Institute of Medicine report "To Err is Human'' has estimated that 100,000 US citizens die each year through medical errors, though there is no hard evidence on the exact role played by the lack of available adequate clinical documentation on patients. It is assumed the effect is substantial, and for the greater part avoidable.

**Project Description**
To efficiently implement e-Health to meet the rising needs of mobile citizens, patients and providers, the fragmented interoperability initiatives now distributed throughout different EU and Member State programmes must come together. They must be coordinated with the increasing need to link clinical data to information from basic biological sciences and evidence of best clinical practice.

Considering the need for interoperability at the Member State and cross-border level of the European Union – as expressed in the EU e-Health Action Plan – and for global interoperability – as represented by WHO – it is necessary to embark on a process that will prompt the divergent initiatives to join forces for the benefit of all citizens.

This SemanticHEALTH ISA develops a European and global roadmap for deployment and research in health-ICT, focusing on semantic interoperability issues of e-Health systems and infrastructures. The roadmap will be based on consensus of the research community, and validated by stakeholders, industry and Member State health authorities.

- Identifies key short-term (2-3 years) and medium-term (4-10 years) needs to achieve semantic interoperability of e-Health systems (including issues of nomenclatures presently in use, classifications, terminologies, ontologies, EHR and messaging models, public health and secondary uses, and decision support, their relationships, mapping needs, limitations)
- Analyses unresolved issues arising in the context of realistic approaches to priority clinical and public health settings (reflecting on models of use, benefits expected, concrete application experience and lessons learned, reference of open source models)
- Takes account of the impact of non-technological (health policy, legal, socio-economic) aspects
- Reflects and integrates results of related FP6 (eHealth ERA, EU4Health and others)
- The consortium and associated experts represent centres of excellence from four continents and the WHO.
Expected Results & Impacts

"The holy grail of connectivity is the transformation of the current paper-based medical record into an electronic medical record that is accessible to all necessary providers and possibly to the patient. Web-enabled the EMR, expands the potential users and uses of..."

To indeed realize this vision interoperability is mandatory. Interoperability not only at the technical and syntactic level, but particularly at the semantic level. Semantic interoperability is vital in the seamless flow of data and consistency in meaning on patients medical and health conditions globally which will form the very foundation upon which future global health research, patient care and public health management evaluation can be effectively and competently carried out.

Technical and semantic standardisation is a key problem to interoperability and the exchange of data amongst health sector actors. Similarly they have been identified as crucial issues for any National and Regional e-Health Roadmap. Furthermore, standards should be an explicit complement of regulations from one side, and implementation guidelines and certification on the other side. Consequently it is to be expected that this ISA will have also a positive impact on much needed semantic standardisation in the health domain by identifying relevant priority issues and needs for actions for the near and medium-term future.

As a by-product of our project, the context for the development of standards will become more clear and explicit, and the relationship between research issues, standardisation activities and industry will be made more effective.

Directly or indirectly, the proposed action will also impact on:

- Creating an "Internal Market" in e-Health research
- Supporting the Lisbon strategy of Europe becoming the most competitive and dynamic knowledge based economy until 2010
- Stimulating innovation and economic growth and hence the creation of qualified new jobs.