



Individual Research Project

Developing, implementation and analysis (the role) of the advanced web based platform and communication technologies for stimulating the growth of the European eHealth Research and Industrial sectors with continuous assessment and monitoring of the International eHealth trends and opportunities

www.ehealthnews.eu

www.ehealthdirectory.eu

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1. General information

Individual research project “**Developing, implementation and analysis (the role) of the advanced web based platform and communication technologies for stimulating the growth of the European eHealth Research and Industrial sectors with continuous assessment and monitoring of the International eHealth trends and opportunities**”

Proposed project will be conducted at the international level with a special focus on European Union countries and in special in a strong linkage with:

- European Commission’s research Programme on eHealth¹;
- The European eHealth Action Plan²
- European Commission Health Strategy³

1.1 Project Applicant

First name, surname, academic title:

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Employment status (time-limited contract):

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¹ http://ec.europa.eu/information_society/activities/health

² http://ec.europa.eu/information_society/activities/health/policy_action_plan/index_en.htm

³ http://ec.europa.eu/health/ph_overview/strategy/health_strategy_en.htm

Developing, implementation and analysis (the role) of the advanced web based platform and communication technologies for stimulating the growth of the European eHealth Research and Industrial sectors with continuous assessment and monitoring of the International eHealth trends and opportunities

1.2 Topic

Identification and analysis of the web based platforms and communication technologies role in stimulating the growth of the European eHealth Research and Industrial sectors with continuous monitoring of the International eHealth trends and opportunities.

1.3 Scientific discipline and field of work

The proposed research project is focused on eHealth domain (Medical Informatics, Health Informatics, Healthcare ICT, Health IT, etc.) with main tangencies on eHealth web based platforms and communication technologies.

1.4 Scheduled total duration

Proposed project duration: **36 months**.

1.6 Summary

eHealth, generally described as ICT-enabled solutions to health and healthcare sector, has been recognized as a key factor for the modern and cost efficient healthcare system with advanced benefits to all citizens and enrolled healthcare players.

Current research project⁴ is starting with a solid background by coming directly from the core of the eHealth area and is proposing to identify and demonstrate the role of the web based platforms and communication strategies in stimulating the growth of the European eHealth Research and Industrial sectors.

Project will implement in practice a novel web based “Know how” platforms and communication approaches applied to the entire eHealth domain which have been already explored in the frames of the eHealthNews.EU Portal. Additionally it will study the importance of the proposed strategies/activities in advancing the European eHealth Research and Industrial sectors.

Close to the continuous assessment and monitoring of the International eHealth trends and opportunities unique research results are expected which will **not be only described but as well implemented in practice**.

⁴ Proposed project will be conducted at the international level with a special focus on European Union countries and in special in strong linkage with: European Commission’s research Programme on eHealth, The European eHealth Action Plan, European Commission Health Strategy.

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2. State of the art, preliminary work

2.1 State of the art

State of the art could be resumed first of all in the frames of the European Commission activities, special attention in this context requires bellow statement “European Community research programmes have been supporting eHealth for the last fifteen years. The co-financing allocated since the early 1990s has reached €500 million, with a total budget about twice that amount. Many research results have now been tested and put into practice. This has put Europe in a leading position in the use of electronic health records in primary care and deployment of health (smart) cards. These developments have contributed to the emergence of a new “e-Health industry” that has the potential to be the third largest industry in the health sector with a turnover of €11 billion. By 2010 it could account for 5% of the total health budget. At present, the e-Health industry in Europe - mainly made up of small- and medium-sized enterprises - has a competitive advantage, **but it still needs to enjoy a more favourable business environment.**”⁵

Recent evidence suggests that the **health ICT industry has the potential to be the third largest industry in the health sector** with a global turnover of €50-60 billion, of which European activity could represent one third. By 2010, a double digit growth rate in the industry of up to 11% is foreseen.⁶

eHealth will enable higher-quality, effective healthcare that is safe, empowering, and accessible for patients, and cost-effective for governments. **A reliable organisational and technical framework will also support a growing market for European industry.** To provide Europeans with a continuity of healthcare that is accessible across borders, high-quality and efficient, the European Union will build on existing national and regional healthcare systems and services.⁷

Proposed research project has as a background the developed web based platforms and advanced web based communication strategies (eHealthNews.EU Portal and eHealth Directory EU) which continuously are contributing to the growth of the European eHealth research and industry sectors.

“We need to work together on win-win strategies for all eHealth stakeholders - national and regional authorities, industry, and especially citizens. Only then will we succeed. **Our mutual goal must be to accelerate the uptake of eHealth throughout Europe**” mentioned

⁵ COMMUNICATION FROM THE COMMISSION TO THE COUNCIL, THE EUROPEAN PARLIAMENT, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS, e-Health - making healthcare better for European citizens: An action plan for a, European e-Health Area, Brussels, 30.4.2004.

⁶ Datamonitor 2007- Trends to watch: Healthcare technology

⁷ 17 April 2007: eHealth Conference 2007 Declaration

Developing, implementation and analysis (the role) of the advanced web based platform and communication technologies for stimulating the growth of the European eHealth Research and Industrial sectors with continuous assessment and monitoring of the International eHealth trends and opportunities

Viviane Reding, European Commissioner, Information Society and Media in the Foreword of the “eHealth priorities and strategies in European countries” Publication⁸.

2.2 Preliminary work, progress report

- Preliminary work contains an impressive amount of data and information reflecting more than five years of enrolment and activities in the European eHealth sector. As the starting points could be mentioned the **Tempus Individual Mobility Grant** (IMG-MOL3005-2003) and **DAAD Scholarship** (10 months Research Project), both frames directly contributed for the ulterior development of the **eHealthNews.EU Portal**⁹, a detailed overview is presented in Section 2.2.1 followed by a short description of the **eHealth Directory Project**¹⁰ (Section 2.2.2).
- RIDE “A Roadmap for Interoperability of eHealth Systems in Support of COM 356 with Special Emphasis on Semantic Interoperability”¹¹ and in special the Deliverable D.4.2.1 - Trends and Opportunities represents one of the elaborated publications and conducted activities in the frames of the European Commission research projects.

2.2.1 eHealthNews.EU Portal at a glance

eHealthNews.EU Portal (www.ehealthnews.eu) seeks to advance the European eHealth Industrial and Research sectors, promote awareness of the latest trends, achievements and technology in the field.

Policy Context

The European Union’s Member States are committed to sharing their best practices and experiences to create a European **eHealth Area**, thereby improving access to and quality of healthcare at the same time as **stimulating growth** in a promising new industrial sector. The European eHealth Action Plan plays a fundamental role in the European Union’s i2010 strategy. Work on this initiative involves a collaborative approach among several parts of the Commission services.



In this context eHealthNews.EU Portal has demonstrated that European eHealth web based network/auditorium could be created and in special it should be used/explored in the field of stimulating the growth of the European eHealth Industrial and Research Sectors.

⁸ http://ec.europa.eu/information_society/activities/health/docs/policy/ehealth-era-full-report.pdf

⁹ <http://www.ehealthnews.eu>

¹⁰ <http://www.ehealthdirectory.eu>

¹¹ <http://www.srdc.metu.edu.tr/webpage/projects/ride/>

Developing, implementation and analysis (the role) of the advanced web based platform and communication technologies for stimulating the growth of the European eHealth Research and Industrial sectors with continuous assessment and monitoring of the International eHealth trends and opportunities

Multi-channel issues

eHealthNews.EU Portal actively explores online delivery methods, as distribution channel a daily news alert message is used (implemented on the top of the Google Group Interface). For further information, please visit - <http://groups.google.com/group/eHealthNewsEU/>

Impact, innovation and results

As quantitative evidence we would like to mention only some indicators. The first is the visitors statistics, so far eHealthNews.EU portal has more than 500 unique daily visitors (600-1000 daily visits), an impressive amount for a 'niche portal'.

Qualitative evidence is based on the web links (back links) to our articles, unfortunately due to a huge amount of the web links and references all of them could not be mentioned (more than 1000), nevertheless as example I will present at least few of them:

<http://ec.europa.eu/idabc/en/document/6764/5941>

<http://ec.europa.eu/idabc/en/document/6697/5939>

http://ec.europa.eu/information_society/activities/health/links/index_en.htm

<http://www.epractice.eu/cases/2276>

etc.

Innovation

eHealthNews.EU Portal represents itself a state of the art and innovational web project which demonstrated that European eHealth Research and Industry sectors could be described, analyzed or explored by publishing and distributing eHealth related news articles.

Nevertheless, eHealthNews.EU Portal is not limited only by publishing and distributing news articles, on addition the leading European eHealth Publications are listed and currently a new section has been created which is focused on reflecting the latest eHealth related White Papers.

Why news articles?

News articles represent **the main indicator of the research and industrial sectors growing and development**; additionally they are an advanced marketing tool not only for the industrial sector but as well for the research achievements dissemination.

Management approach

The management approaches explored by the eHealthNews.EU Portal are openness and continuously partnerships development. Some very impressive partnerships have been implemented/explored, and in special with:

- eHealth Industrial sectors (AGFA, SIEMENS, ICW, PHILIPS, etc. in special press/media departments);
- eHealth Research sectors (The International Society for Telemedicine & eHealth, European Federation for Medical Informatics(EFMI), and many FP6 research projects)
- EC ICT for Health Unit¹² and CORDIS News Service¹³ (eHealthNews.EU Portal has been granted with republication license)

¹² http://ec.europa.eu/information_society/activities/health/index_en.htm

¹³ http://cordis.europa.eu/news/home_en.html

Developing, implementation and analysis (the role) of the advanced web based platform and communication technologies for stimulating the growth of the European eHealth Research and Industrial sectors with continuous assessment and monitoring of the International eHealth trends and opportunities

- many European SMEs (for more information please visit "Industry News" section from www.ehealthnews.eu)

Lesson learnt

European eHealth Research, Industry and Educational sectors have to be actively promoted at the European/International levels in special by using modern and state of the art approaches, platforms and solutions.

“e-Health should be supported by the widespread dissemination of best practices. These should include the impact on access to healthcare and on its quality, assessments of cost benefits and productivity gains, as well as examples of addressing liability in telemedicine services, reimbursement schemes, and accreditation of e-Health products and services.”¹⁴

2.2.2 eHealth Directory EU (short overview)

The main goal of the eHealth Directory EU (<http://www.ehealthdirectory.eu>) is to be the most comprehensive directory of the eHealth (in special European) quality web sites. This initiative has been developed as well as a promotion tool for the European eHealth competence and realizations.

Currently eHealth Directoy has more than 300 web resources and 10 main categories as follow:

- Associations and Societies;
- Conferences;
- Education;
- EU Institutions and Services;
- Free and Open Source;
- Governmental Bodies;
- Industry;
- News and Media;
- Research;
- Terminologies and Classifications.

Each main category has many sub-categories, as example “Industry” category has:

- Communication Systems
- Consultancy
- Consumer Products
- Data Bases
- Electronic Health Record
- Healthcare Branches
- Identity Cards
- Image Processing and Archiving

¹⁴ COMMUNICATION FROM THE COMMISSION TO THE COUNCIL, THE EUROPEAN PARLIAMENT, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS, e-Health - making healthcare better for European citizens: An action plan for a, European e-Health Area, Brussels, 30.4.2004.

Developing, implementation and analysis (the role) of the advanced web based platform and communication technologies for stimulating the growth of the European eHealth Research and Industrial sectors with continuous assessment and monitoring of the International eHealth trends and opportunities

- Software Companies
- Software for hospitals
- Telemedicine
- Trademarks®

In this context eHealth Directory EU is a unique web platform collecting all European eHealth related web resources and making them accessible for a wide international Internet audience. As result included web links are disseminated and awareness of the European eHealth area is implemented in a simple, practical but powerful web directory interface.

Developing, implementation and analysis (the role) of the advanced web based platform and communication technologies for stimulating the growth of the European eHealth Research and Industrial sectors with continuous assessment and monitoring of the International eHealth trends and opportunities

3. Goals and work schedule

3.1 Goals

The proposed research project goals and related activities are combined in four major topics, and in special:

I - Technical/Maintaining

II - Collaboration/Networking/Dissemination

III - Research/Web Analytics

IV - European eHealth Research and Industry Sectors Studies

I - Technical/Maintaining

- continuous support for the eHealthNews.EU Portal and eHealth Directory EU web platforms maintaining (**NB!** Mentioned platforms do not require to be developed, both platform have already a well established and promoted web presence);
- assuring the continuity (on daily bases) of the content collection, content assessment and content publishing (news articles, news releases, publications, white papers, web links, etc.);
- media/dissemination support for the all European eHealth events (conferences, workshops, congresses, exhibitions).

II - Collaboration/Networking/Dissemination

- continuous dissemination activities by spreading news alert messages to the interested in registered members (**NB!** News alerts system has been implemented on the top of the Google Group interface¹⁵ and currently more than 300 registered members are receiving daily news alert messages)
- eHealthNews.EU Portal Digest mails elaboration and distribution through other mailing list and networking platforms;
- media partnerships with leading European eHealth events (**NB!** eHealthNews.EU Portal is one of the official media partners of (but not limited to) the World of Health IT 2007 Congress and Exhibition¹⁶ (Vienna), Med-e-Tel 2007/2008 Congress and Exhibition¹⁷ (Luxemburg), MEDNET 2007 International Congress¹⁸ (Leipzig), etc.

III - Research/Web Analytics

Web Analytics Reports elaboration is the main core of the proposed research project and a powerful tool in underlining the eHealth trends and opportunities. eHealthNews.EU Portal and eHealth Directory EU will be regularly analyzed (every 3 months) for a period of 36

¹⁵ <http://groups.google.com/group/eHealthNewsEU/>

¹⁶ <http://www.worldofhealthit.org>

¹⁷ <http://www.medetel.lu>

¹⁸ <http://www.mednet2007.com>

Developing, implementation and analysis (the role) of the advanced web based platform and communication technologies for stimulating the growth of the European eHealth Research and Industrial sectors with continuous assessment and monitoring of the International eHealth trends and opportunities

months and a final report will be elaborated (by using modern and advanced web statistics tracking tools).

In total 12 detailed reports (named **Web Analytics**) are expected which will contain bellow information:

1. **Visitors Overview** - How many people came to the site and how extensively did they interact with the published content? This traffic overview allows to drill down and view the characteristics of different visitor segments and examine the different factors that make up visit quality (i.e. average pageviews, time on site, and bounce rate).
 - 1.1 **Map Overlay** – allows to visualize volume (visits, pageviews) and quality (pageviews per visit, conversion rates, per visit value, etc) metrics by geographic region.
 - 1.2 **New versus Returning** – allows to see how frequently visitors return
 - 1.3 **Network Location** - this report allows tracking the internet service provider (ISP) domains to which the user resolves. The domain is determined by the internet service that owns the user's internet protocol (IP) identifier.
 - 1.4 **Visitor Recency** - visitors are categorized according to the number of days that have elapsed since their last visit.
 - 1.5 **Depth of Visit** - Depth of visit is a measure of visit quality. A large number of high page views per visit suggests that visitors interact extensively with web content.
2. **Traffic Sources Overview** - This report provides an overview of the different kinds of sources that send traffic to eHealthNews.EU Portal and eHealth Directory EU web pages.
 - 2.1 **Direct Traffic** - How do the people who clicked a bookmark to come to the web site or typed the site URL into their browser compare to the "average" visitors data?
 - 2.2 **Referring Sites** - How do the people referred from other sites compare to the "average" visitor to the web site?
 - 2.3 **Search Engines** - How does search engine traffic compare to traffic as a whole to the web site?
 - 2.4 **All Traffic Sources** - This report lists all of the kinds of traffic the web site receives.
 - 2.5 **Keywords** - report able to represent overall trends from the keywords perspective.
3. **Content Overview** - This report provides an overview of page view volume and lists the pages (Top Content) that were most responsible for driving page views.
 - 3.1 **Top Content by Title** - Which are the most commonly viewed groups of pages on the web site (grouped by title), and how are they used? This report provides the "Top Content" report, but aggregated by title tag value.

IV - European eHealth Research and Industry Sectors Studies

Proposed studies (focused on EU countries) will be conducted using a combination of different information gathering techniques in order to underline the metrics and indices which afterwards will be applied to the eHealthNews.EU Portal and eHealth Directory EU Web Analytics reports (12 reports are expected). In total 6 studies are proposed, one study per

Developing, implementation and analysis (the role) of the advanced web based platform and communication technologies for stimulating the growth of the European eHealth Research and Industrial sectors with continuous assessment and monitoring of the International eHealth trends and opportunities

year describing European eHealth Research (3 studies in 36 months) and European eHealth Industry sectors (3 studies in 36 months).

Mentioned information gathering techniques will include:

- analysis of secondary sources of related research material available in published form or via web searches
- synthesis of information provided through networking with eHealthNews.EU subscribers and partners such as:
 - o EC representatives
 - o governmental representatives
 - o trade/industry associations
 - o professional organizations and associations
 - o citizen/patient associations
 - o industry representatives
 - o end user associations/groups
- primary research carried out by interview with selected target groups (representative of the eHealth Research and Industry Sectors) and synthesis of information provided through networking with eHealthNews.EU Portal subscribers and partners such as:
 - o web questionnaires
 - o letter/email questionnaires
 - o telephone interviews
 - o face-to-face meetings

Proposed studies will respect the bellow general format:

1. Objective of the Study (European eHealth Research or Industry Sectors)
2. Description of the European eHealth Industry and eHealth Research sectors
3. eHealth Industry or eHealth Research Metrics
 - Size estimates (current and future)
 - Growth estimates (current and future)
4. Competitive Analysis (applicable to eHealth Industry)
5. Web Analytics reports applied to the eHealth Industry or eHealth Research Metrics.

3.2 Work schedule

Research project goals and related activities according to the previously described topics	Implementation period or month
I - Technical/Maintaining	On daily basis during the whole project implementation (1-36 month)
II - Collaboration/Networking/Dissemination	On daily basis during the whole project implementation (1-36 month)
III - Research/Web Analytics	Every 3 rd month.

Developing, implementation and analysis (the role) of the advanced web based platform and communication technologies for stimulating the growth of the European eHealth Research and Industrial sectors with continuous assessment and monitoring of the International eHealth trends and opportunities

	In total 12 Web Analytics reports.
IV - European eHealth Research and Industry Sectors Studies	Every year, but separate studies for Research and Industry Sectors (as result 2 studies per year). In total 6 studies.
Final Research Project Evaluation Report	