

Final Report

A. FINAL PUBLISHABLE ACTIVITY REPORT

European Multimedia Repository of Science [EMRS]

Accompanying Measure

implemented as

Specific Support Action

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1. PROJECT EXECUTION	3
1.1 Introduction: project objectives	3
1.2 Project Consortium	4
1.3. Summary of the activities and major achievements	4
1.4 Work performed.....	7
1.4.1 Methodologies and approaches employed.....	7
1.4.2 State of the art	8
1.5 Impact of the project	8
2. DISSEMINATION AND USE	9

1. PROJECT EXECUTION

1.1 Introduction

Progress in life sciences and biotechnology offers opportunities to improve human health, create new business and thus stimulate the economy. Provision of health to the people of Europe is one of the cornerstone activities of Sixth Framework Programme. Integrated multidisciplinary research and public acceptance of new research areas are central themes in the search for useful applications. It has been clearly stated by the European Commission that dialogue and quality information are essential in building up trust in new technologies and the decision making processes. Without this trust, there is little hope of going forward with innovation and increasing the competitiveness of the European Union on the world markets.

Although EU-wide surveys on biotechnology and the life sciences indicate that most Europeans are in favour of medical applications of biotechnology, constructive communication and dialogue efforts are needed to minimise unfounded concerns and maximise public empowerment.

The European Multimedia Repository of Science (EMRS) project aimed to narrow the gap between science and scientists on the one hand and key stakeholders on the other. The EMRS project looked closely at European co-ordinated LifeSciHealth scientific research and its application for health. The objectives of this 60 months long project were to present pan-European health related research in a form that is easily understood and accessible to target groups (stakeholders), that included educators, the general public and media. The stakeholders were reached by using three communication platforms: multimedia DVDs, broadcasters and the internet.

A number of activities were undertaken. These can be divided into five deliverables:

1. Focus Meetings bringing together key stakeholders to discuss practical ways to bridge the gap between science and the society and to bring science to the general public and schools in the most efficient way.
2. Short films on health related issues
3. An internet based multimedia science repository of health related information packages
4. A Rapid Response Science Network (RRSN) for an ongoing dialogue between scientists and the public
5. Evaluation of the dissemination efforts, especially as they relate to school usage of the prepared content

The choice of scientific subjects and the method of presentation was crucial for the project's success, not an easy task. For example information directed to the public must be easily understandable and factual in order to empower, but at the same time it must be "light" and engaging in order to inspire and to lead to a desire to want to know more. A key element of our content activities was to involve scientists in the whole process of content generation: from identifying topics, to discussions about the specific contents for films, to reviewing prepared materials for accuracy. The RRSN served also as a direct link between the scientific community and the public.

1.2 Project Consortium

The EMRS project involved 5 partners:

1. Ludwig Maximilians University Munich, LMU, Germany, HE
2. ProBio, ProBio, The Netherlands, PRIV
3. Visions Unlimited Medien GmbH, Germany, PRIV
4. University of Limerick, ULim, Ireland, HE
5. dialog<>gentechnik, DGT, Austria, PRIV

In total, there are 2 research institutions (LMU and ULim), two SMEs (ProBio and VUM) and one non-profit organization (DGT) involved in the project. The project partnership effectively brought together specialists in food related areas. This approach allowed to make the rapid connection between the scientific data, the means of translating these into understandable content and delivering them to the actual target groups within a short period of time..

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1.3 Summary of the activities and major achievements

Partners held three focus meetings, prepared seven films and three knowledge packages, created and expanded project website services and established a rapid response network to bring scientists in close contact with the stakeholders.

The activities during the five year duration of the EMRS project were divided into eight work packages. There included project coordination work (WP1), focus meetings (WP2), content creation (WP3), internet activities (WP4), creation of the RRSN (WP5), content dissemination (WP6), project impact evaluation (WP7) and reporting of the results (WP8). The activities are summarized below.

WP1 Project coordination

Activities within this WP established the necessary communication links with all the participating organisations, the Advisory Board and target groups for information and dissemination exchanges. The communication efforts included a kick off meeting at the onset of the project, five steering committee meetings and annual project meetings to set the agenda for planned activities and review work carried out. These activities were supplemented with internal project e-updates covering current project issues, developments as well as the project's internet site that contained a password protected area dedicated to project members.

WP 2 Focus meetings

The purpose of organising the meetings was two fold. First, to bring balance to the process of face to face deliberations and second, provide a dynamic and rapid feedback mechanism that deal with project content objectives and methodologies employed. The meeting format relied on active exchange of views, supported by a few key presentations. Each meeting, usually of a one to two day duration, was attended by carefully selected 20 experts. In total over 60 participants attended the meetings, representing various stakeholders. The engaged experts provided important feedback to the project steering committee. Instead of the planned two

individual EMRS focus meetings, a total of four focus meetings were held, together with a sister project MREFS. Two additional meetings were held together with Risk Network and the ComScience projects. Specific emphasis was placed on discussions related to dissemination of the project deliverables to the public and educational sectors. The information generated helped to strengthen the quality of all the project deliverables and gave the impetus to initiate a series. The meeting results are presented on the project internet site at www.eusem.com. The discussions also led to an identification of a series of science communication related topics to be investigated and evaluated within the project. As a consequence, a number of manuscripts are in preparation addressing the communication of science in educational settings using audiovisual means. This work was done as part of the deliverables evaluation in WP7.

WP 3 Content creation- Films

The created content was based on EU sponsored research originating from FP6 projects. For the films, the following topics have been chosen and addressed in the EMRS WP's:

- basic knowledge and its application (the films on stem cell and their application as well as latest research on epigenetics),
- our health (films on blindness in our population) and
- science and governance, including ethical issues, (films on genomic testing)

Our task was to shed light on the whole process, from fundamental knowledge creation to application and exploitation as it relates to the health, safety and general well being of our society. For the chosen topics, a number of sub-activities generated:

- a) short (usually 5 minutes in length) public versions, directed towards the general public via the broadcasting media
- b) longer (usually 10-15 minutes in length) educational versions dealing with a specific aspect of the topic in more detail, directed towards youth through educators
- c) short film clips on specific aspects of the topics being covered
- d) Frequently Asked Questions (FAQs) – in form of interviews with scientists addressing key questions on a specific topic, directed both to the interested public and youth
- e) Background readings – prepared to provide additional readings on the topics raised in the films, directed both to the public and youth and provided also on the internet.

In this complete form, the audio-visual materials represent an equivalent of over 90 minutes of film material. Together with their support information materials, four information (knowledge) packages were prepared (stem cells, eye diseases, genetic testing and epigenetics). These were one of the main deliverables of the project.

Three dissemination platforms were used to bring the deliverables to the target groups: television, DVDs and the internet (the knowledge packages can for example be accessed at www.eusem.com).

WP4-Internet

The project website (www.eusem.com) has been active right from the project start. In order to reach and interest a large number of visitors immediately, it was decided that EMRS information, together with information from two other EU projects should be made available from a single internet site. This cross-pollination has worked very well, especially since the three projects covered complementary content and have been making use of a wider range of support than would have been possible when presented individually. This binding of forces even helped to gain support for a new EU project, "ComScience", where the deliverables will further be exploited and disseminated in a larger range of European countries.

The two other projects that have supported the EMRS project were: "MREFS", covering food related research issues and the "Risk Network" which illustrated how new practices in society require scientific evaluations of risk. These projects have recently been completed and this information is now in the transition of being moved to a new internet site for the ComScience dissemination project. The EMRS content will likewise be transferred and thus given an extended life as information source. The EUSEM site in addition to providing access to the EMRS project deliverables, included background readings, definitions, FAQs, images, a news section and links to other sites providing further resources.

The internet based platform will, through the ComScience project, continue to provide the latest EU health, food and risk related research information to educators and learners across Europe long after the project completion.

WP5 - RRSN

Rapid Response Science Network (RRSN) is an internet based response mechanism allowing interested individuals to ask a pool of experts pertinent questions as they relate to health issues. The idea was that the questions originating from interested individuals (teachers, students, public) would relate to the film material they have seen or background information they may have read on the EMRS homepage. However the number of questions posed was disappointing. It became clear that a more sophisticated approach was needed to engage user groups, specifically in the educational sector. As a result, more efforts were placed in the second half of the project to proactively engage and improve an exchange and cooperation between teachers and students using a newly developed learning- oriented online platform. The online platform has received very positive user reviews.

WP 6 - Dissemination activities

The activities involved planning and implementation of effective dissemination of project deliverables. To this end, a network of users was established through the contacts provided by the project members. Project members used this network to disseminate project deliverables to over 200 organizations across Europe. This included especially school educators and science communicators. Project deliverables were also disseminated at communication fairs and through educational distributors (for more information on this topic see part 2).

WP7. Project impact evaluation

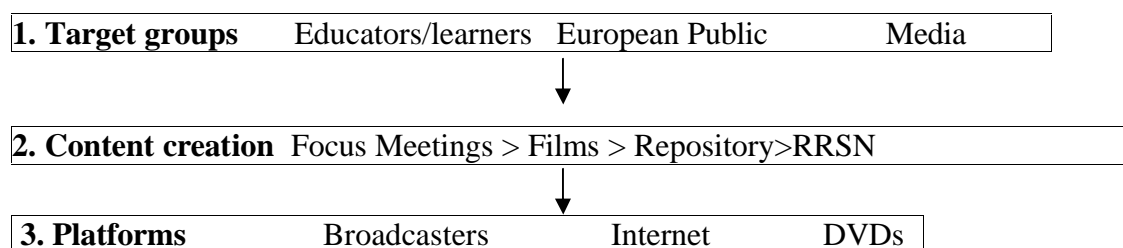
An essential part of the project was the evaluation of the effectiveness and impact of the project deliverables. The quality and usability of the deliverables of the project was assessed based on the quantitative, qualitative and empirical data collected. Evaluated were carried out on the knowledge packages (including films) as well as the internet usage. In summary, the knowledge packages were very well received both by teachers and students. In all cases the content was evaluated to be of high quality and effective in support of the learning process (see annex 1 in year 5 report). The DVD content had, to date, reached over 300 000 students. The project internet site has over 10 000 visits per month. Its layout reflects the need to reach the educational sector as well as the interested public to allow ease of use. The suggestions of the project members and that of the experts present at the focus meetings were deemed to be of great value in adjusting the knowledge package and internet content to the needs of the user groups.

1.4 Work performed

The project objectives and activities carried out have meant that a clear and systematic set of methodological approaches had to be employed. This to assure that the project outcomes provided high quality deliverables and outcomes destined for the various target groups.

1.4.1 Methodologies and approaches employed

The key content deliverable of the project were the knowledge packages. As such other project activities were organized to support the development and dissemination of the packages and to reach the overall project objectives. The project reached its objectives using a three stage methodological process that consisted of the following elements:



First, decide on the different target groups

Second, to create the required content and

Third, to use the appropriate dissemination platforms to reach chosen target groups

A key element in this process were the project focus meetings. They assured effective communication between three key stakeholders, namely: scientists, science communicators and educators. Based on the meeting outcomes, it was possible to prepare the knowledge packages for the different dissemination platforms.

The various phases in the content creation process were:

1. Topic selection phase that included topic identification, topic selection and establishment of contacts to scientists.
2. Research and information collection phase consisting of collection and evaluation of background information, including site visits to groups to be filmed
3. Content development phase that included preparation of information for the development of written information (background readings, FAQs, links, glossaries) for the knowledge packages.
4. Development of treatments for the films
5. Production of the films, that included a lot of logistics related to the actual filming at various locations
6. Post production that included the assembly of the final film products, creation of animations and selection of material for clips and FAQs
7. Integration of the films into the knowledge packages
8. Placement of the knowledge package contents onto the project website
9. Dissemination of the knowledge packages through additional platforms (primarily DVDs)
10. Assessment of the project impact on the target groups

The project created a permanent infrastructure, to be continued and used by the public, the EC, the media, EU funded research projects and various other end users. A wealth of experience had been accumulated to organize and implement complex multidisciplinary

projects that contain a wide range of deliverables that will also be of benefit in future projects of this nature.

1.4.2 State of the art

The EMRS project brought together experts from different fields of expertise. One of the key challenges of this project was to assure functionality of the different project inter-dependant deliverables. This was assured through centralized decision that was still responsive to the needs of the stakeholders. Here again, the focus meetings played a key “bottom up” role. They were the pre-requisite for a successful project outcome. The deliberations led to the identification of key ideas and concepts that reflect state-of the art knowledge in chosen EMRS topics. One of the key challenges was to distil the ensuing discussions into the coherent action plan. The project products, especially the films and DVD thus present latest the knowledge within the scientific community. It was possible to transfer this knowledge within the shortest period of time, sometimes within one year into classrooms. In their entirety, the deliverables represent an innovative, multi-platform and integrative approach to allow far reaching discussions about topics that touch our daily lives, especially in formal and non-formal educational settings. The fact that the deliverables have been taken up by a new EU project for further dissemination shows that the strategy and approach chosen by EMRS had been validated.

1.5 Impact of the project

European Union aim is to create a knowledge based economy through sustainable and responsible policies for life sciences and biotechnology. Open dialogue with our society is essential to ensure responsible development and application of life sciences and biotechnology and a competitive and proactive European presence on an international scene. Moreover, opening and bringing science to the stakeholders should create an environment where concerns are identified and dealt with before they become newspaper headlines and encourage participation of our society in exchange of information, opinions and debates. To that end, the EMRS project aimed to bring the latest advances in genomics and biotechnology research to the attention of key stakeholders and to engage target audiences in the discussion of health related issues.

The expertise of the EMRS project members and their complementing expertises allowed the project to effectively address its objectives. During the 60 months project duration partners organized focus meetings, created high quality films and knowledge content to be presented on different delivery platforms with high impact values, whether it is television, multimedia DVDs or internet. In this respect, the project website had been set up in format that is inviting to the general public as well as the youth.

The EMRS project had its highest impact in formal and informal educational settings. Teachers were especially happy to be offered new, upto date and high quality products for their classrooms. However, the importance of the general public was also acknowledged within the project by preparing content specifically directed towards this target group.

An interesting bonus to the project is the fact that most deliverables will find an extra, future use in a current EU funded project, the ComScience Network: providing added value to EU research dissemination efforts at regional level. Here, deliverables of the EMRS project will be the subject of public meetings in Sweden, Spain, Belgium (French), Germany and the UK.

2. DISSEMINATION AND USE

The project aimed for high impact through well defined and targeted deliverables. The main project deliverables were:

- focus meetings
- audio-visual materials
- internet- repository of scientific information and
- written materials

The dissemination of these deliverables knowledge, as set out in the initial project description, is summarized below. The main target group was the educational sector.

Exploitable knowledge	Exploitable product	Sector	Timetable for commercial use	Patents or their IPR protection	Owner
Manuscripts	Publications	Science Communicators	2009-2010	none	LMU
Audio-visual material	Films	Education sector, broadcasters	2009	copyright	Visions Unlimited Medien GmbH
Internet content	Website	General public, education sector	2009	copyright	ProBio
Written materials	Knowledge packages (DVDs)	Education sector, interested public	2009	copyright	Visions Unlimited Medien GmbH

The exploitable products listed in the above table represent the tangible outcome of the project activities. Together with the owners of the other intellectual property owners, LMU will monitor the use and impact of the products on the target groups over the next two years. For a more detailed examples of the project deliverables and products please visit the project homepage at www.eusem.com.