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in a Scientific and Cultural Context

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Publishable final activity report

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PP	Restricted to other programme participants (including the Commission	
RE	Restricted to a group specified by the consortium (including the Commission	
CO	Confidential, only for members of the consortium (including the Commission Services)	

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EU FP6 Project MEYPS SC2 Publishable final activity report

This report concludes the MEYPS SC2 project by summarising the project objectives, the achievements obtained, the main outputs and the resources spent. It covers the period of the entire project from January 1st 2007 to March 31st 2009.

It demonstrates that the MEYPS SC2 project operated successfully during the entire project through numerous events engaging the public, young people, stakeholders and scientists with science. This report analyses these various science events and identifies areas for potential improvement to facilitate better public engagement. Some conclusions and recommendations are presented in the second part of this report. Finally the dissemination activities and materials are presented.

1. Project execution

1.1 Background

Communicating science and technology to the public has become an essential enterprise for research universities, government agencies, science museums, and other non-profit scientific organisations and corporations. Europe, governments and the scientific community are keen to improve the engagement of the general public with science promoting scientific understanding across society. The scientific community believes that a lack of knowledge about science and technology is a major obstacle to the development of the society. Another commonly held view is that lack of science literacy is a major factor in discouraging pupils and students from choosing science studies and then science or technology careers.

In this context, a wide range of institutions in Europe initiated science communication programmes for the public since they believe that increased knowledge of organisation's role in advancing research improve the institution's reputation. Finally, many public and science technology communication programmes, especially those conducted by government laboratories and universities, are grounded in the principle of the public's right to know.

The aim of these programmes is the participation of the public in a mature debate about the issues that affect science and society, improving public confidence and directing research. Science events are organised all over Europe leading to an increasingly popular way of reaching large and broad public audiences. Their aims are to excite the public about the wonder of science and technology, to harbour this interest to provoke curiosity about scientific progress and to help the public to relate science to their lives. Recent years have seen the focus of promoting science activities shift from encouraging public understanding of science to engagement with science. This led to a shift from deficit approach assuming widespread ignorance about scientific issues to a dialogue based-approach.

For both Europe and governments, science festivals are excellent events to attract people from across the diverse spectrum of social groups including ethnic minorities, economical deprived groups, and woman, those who do not take an active interest in science.

1.2 Objectives of the project and expected results

To advance the state of the art, the project proposed varied scientific events involving a large number of stakeholders: scientists, artists, pupils, students, teachers, media, etc. This Specific Support Action multiplied opportunities for exchange and cooperation among researchers who work in the field of public communication of science, research and technology. The innovative aspect of the project was the exchange of young people at the transnational level and the use of Art to bring science closer to the citizens. It especially intended to facilitate these interactions on a European basis. Both participants with the observers from 5 other European countries (Bulgaria,

Italy, Portugal, Romania, Poland) intended to assess the achievements of the project in order to find the best synergy among the various aspects of the relationship between science and public, in particular young people.

Through numerous and varied methodological approaches, the public confidence and engagement in science was achieved and science becomes more accessible to a wider public. This was undertaken by:

- offering events to widen public participation with an increase of the public awareness of science and promotion of science and technology in Europe;
- providing high quality events and maintaining the celebratory, fun atmosphere such as playful scientific experiments, arts, music and spectacles in a challenging and exciting environment;
- getting science “out of the laboratory” and closer to the public by the organisation of events in non traditional places (cultural centres, heart of town, theatres, etc) which touch all social categories;
- improving communication channels between public, scientists and policymakers;
- promoting an interest in science and technology, amongst school children and the public at large, especially those such as parents and grandparents who might influence young people in their career choice, specially girls ;
- involving young people in the diffusion of scientific knowledge;
- inspiring visitors of all ages and levels of knowledge as well as all social categories, specially economically deprived groups (free events) ;
- developing strong art/science collaborations;
- increasing the mobility of young people and researchers at transnational level;
- initiating close cooperation between stakeholders and participants are at the regional, national and European levels;

It also includes effort to involve media. The media coverage enables to engage a wide audience with science.

The expected results are

- Strong exchanges at European level of young people and scientists in a science communication;
- Raising public awareness on science and its influence in the development of the society;
- Embark young people to scientific studies and scientific careers in future;
- Intercultural exchange of methodologies and strategies in Science Communication at the European level in order to create at the end of the project a Network of European Universities on Science Communication.

Diagrammatically, the key thread of the MEYPS SC2 approach is shown following:

- Combination of materials from the participants;
- Development of varied pedagogical approaches;
- Dissemination and exchanges between scientists, artists with the public at large;
- Create longer-term collaborations.

1.3 International scope

The two European participants and the European observers who participate to the project are listed below.

Table 1: The consortium

Participant role	Participant number	Participant name	Participant short name	Country
CO	1	Université des Sciences et Technologies de Lille	USTL	France
CR	2	Université Libre de Bruxelles	ULB	Belgium

Table 2 : The European expert group

Observer number	Institution name	Contact person	Country
1	Institute of Mathematics and Informatics Bulgarian Academy of Sciences	Evgenia SENDOVA	Bulgaria
2	Agorà Scienza Centre for the diffusion and the communication of the scientific culture, University of Turin	Isabella SUZA	Italy
3	Department of Physics, University of Algarve	Carla SILVA	Portugal
4	Department of Electricity, Solid State and Theoretical Physics, Faculty of Physics, "Al. I. Cuza" University	Ovidiu CALTUN	Romania
5	University of Lublin	Wieslawa KORCZAK	Poland

The University of Maribor (Brigita Horvat, Milan Marcic, Slovenia) left the project at the end of 2007. They were replaced by the University of Lublin indicated in the table above.

CO and CR mean Coordinator and Contractor respectively.

This European expert group participated to all the events organised within the entire project. Their mission was to discuss with the stakeholders, the public at large, the pupils and teachers from schools, as well as the organisers. They gave feedback and produced assessment reports. This panel of experts was also established with the objective to create at the end of the project a European Network of Universities on Science Communication.

1.4 The work performed and the main achievements

MEYPS SC2 has made significant progress towards its objectives using varied pedagogical approaches according to the target audience. This chapter is devoted to the activities undertaken in order to fulfil the objectives reported above.

1.4.1 The Magiphy activities: workshops in schools, exchange days and the Jousts

- The first objective was to arouse the taste of pupils in science (from 13 to 18 years old).

The achievement was the organisation of science workshops in French and Belgian secondary schools involving teachers, pupils and researchers from Universities. Enthusiastic students prepared their work and were interested by their work, paying attention to all comments that researchers and teachers made.

- The second objective was to develop an original method of approach to learn using a scientific methodology.

The achievement was the organisation of science workshops in 19 schools (14 in France and 5 in Belgium) involving 109 students of which 25% of girls. With the help of teachers and researchers, pupils from these secondary schools chose their scientific subject and worked as a researcher: bibliography search, working hypothesis, scientific experiments for checking these hypothesis, analyses of the experimental results, etc. During these workshops, pupils filled laboratory books including all the steps of the work and their achievements. Students were encouraged to develop attitudes upon which scientific investigations depend, such as curiosity, honesty, persistence, critical mind, tolerance of uncertainty and acceptance of the provisional status of scientific knowledge. It has been also shown to them the importance of the research and the important role of Europe in research. The students were in strong collaboration of their science teachers and received help from University's researchers.

- The third objective was to compete at a European Level.

The achievement was the organisation of two scientific Jousts, called Magiphy's Jousts, on 16th of May 2007 and 21st of May 2008. Belgian and French secondary schools students presented their research work done at schools in front of an international Jury (France, Belgium, Portugal and Bulgaria in 2007 and France, Belgium, Italy, Romania in 2008) composed of teachers, researchers and secondary school students. For each joust, two winners were selected and all the students who participated to the jousts received prizes. These jousts allowed French students shared their experiences with the Belgian students and vice versa. Besides, these events allowed them to meet public in person and by means regional mass media, and to know scientists from other countries who share scientific interests like them. The winners of the jousts were ambassadors of their country at European level and presented their work the French science weeks held on 12th to 14th October 2007 and 21st to 23rd November 2008. It allowed students to disseminate their knowledge to public at large as well as primary and secondary schools.

- The fourth objective was the exchanges between French and Belgian pupils

The achievement was the organisation of exchange days.

At the beginning of the project, the two French winners of the Magiphy Joust 2007, organised in France before the MEYPS SC2 project, went to the Festival "Printemps des Sciences" (Spring of science) at Brussels (19th and 23rd of March 2007). They explained their experience in Magiphy activity to the inexperienced Belgian secondary school students. Then the Belgian students started their research work in the schools (see the second objective above) in order to prepare the Magiphy's Joust which occurred on 16th of May 2007.

After this Joust, the winners, one Belgian school and one French school participated to others exchange days during the second year of the project: 8th February 2008, 13th and 14th March 2008. They handed on their knowledge on Magiphy activities to French and Belgian schools not involved in this activity.

In addition the French winners of the Magiphy Joust 2007 presented their experimental work to primary and secondary French schools at the end of the project (25th November 2008) with the same concept explained previously.

The Belgian winner of the Magiphy Joust 2008 created Junior Achievement called Picazix which is a non-profit youth organisation. The main objective is to help pupils from secondary schools to develop entrepreneurship and to teach young people important skills to help them become economically empowered.

Another Belgian group presented their Forum Meteo at the Atomium at Brussels from 3rd to 9th November 2008.

The Belgium and French partner will continue to collaborate altogether for the Magiphy activities. The observer in Romania created the Magiphy activities in his country. The first Romania joust will occur on 16th May 2009.

For more information see the following deliverables:

D1.1 Title: List of the schools and the scientific subjects

Outline: The aim is to give information about the schools involved in the Magiphy's activities. The titles of the scientific subjects chosen by the pupils in agreement with their sciences teachers have been also reported.

D1.2 Title: CD or DVD of capitalisation

Outline: A DVD is created including all the activities done within the Magiphy activities (Jousts, exchange days, dissemination activities, etc)

D1.3 Title: Assessment on the activities

Outline: It includes all information regarding the assessment of the Magiphy activities: statistics in particular of gender issue, assessment grid of the Magiphy's Jouts, the Jury's members, and the procedure of evaluation during the Joust. The observers' reports are also reported.

D1.4 Title: Report on the activities

Outline: The aim is to present the work done during the first year of the project in schools, the content of the exchange days and the Magiphy's Joust.

1.4.2 An original approach of discovery of sciences: the artistic events

Artistic activities are very popular for the general public and can be used to demystify science and to stimulate discussion. This method of approach is an interesting interface between the citizens and the scientific community. It is in this context that several methods like scientific theatre show dance, conference – dance, readings occurred in different places: theatres, science and cultural centres.

- The first objective was to illustrate a scientific phenomenon or a discovery by pupils using artistic methods.

The achievement was the organisation of 3 literary contests and 1 literary science café involving secondary schools as well as artistic workshops in 14 primary and 9 secondary schools. All these activities occurred in Belgium.

Regarding the literary contests, the secondary school students were invited to give their opinion about the role of science in the society. Through a text of one page, each student stated one's cases and defended its point of view. A selection of the best contributions was done by a Jury composed of scientists and writers. The winners groups presented their literary work to the public during the festivals "Printemps des Sciences" (Spring of Science) (24th March 2007, 19th March 2008, 12th April 2008) and defended their opinions. The pupils themselves have highlighted the specificity of the subject proposed.

They considered that, despite they were suspicious at the very beginning of the activity, they realised that the approach that has been proposed with this activity helped them to clarify many questions they were dealing at the personal level. The discussions undertaken were very rich and helpful at a moment of their lives where many questions must be answered before the choice of studies and carriers.

In parallel to these literary contests, another original approach has been developed by the Belgian partner. A science café has been organised involving artists who presented at the beginning of the events a conference – dance about human evolution entitled "Eve contre Lucy".

Most of the pupils were interested by the topic of the event: the biological evolution. However, the global appreciation is not particularly positive. The most relevant and questioning point is the fact that the show did not motivate the pupils to pursue the debate about the topic. Taking in account the free comments added by the pupils to the questionnaires, the initiative of this Science café with an artistic introduction is positive but the spectacle chosen was not adapted to this goal.

Regarding the artistic workshops in primary and secondary schools, pupils created scientific plays with the help of their teachers. Pupils created themselves the scenario, the costumes and the scenery with the help of their teacher. Pupils developed creative expressions. They were encouraged to experiment with different dramatic forms and express themselves in a theatrical context. They increased their scientific knowledge. All schools presented their play to a Jury composed of scientists and artists during the artistic contest "Science en Scène" (Science on Stage). The plays invited in a funny way people to make a reflection about important scientific subjects, often in relation with the society development.

The pupils were enthusiastic about performing in the event and the Jury has been surprised by the quality of their work. This experience plays an important and positive role in the global development of pupils as they had to engage in a presentation to a numerous public, certainly different from the usual public present during end-of-year school performances.

The idea to give a special prize to every group (prize for the best casting, for the best scientific subject, etc) was essential to avoid deception in the children. 4 primary and 4 secondary schools were selected at the first stage of the contest. Then, an artist helped these selected schools to improve the play. A second selection was also done in Belgium with a European Jury (France, Belgium, Italy in 2007 and France, Belgium, Romania in 2008). Finally 2 schools (one at primary level and one at secondary level) were selected as winner. These final competitions occurred on 24th March 2007 and 12th April 2008.

The winner schools then presented their play in France during the artistic festive days occurring on 21st November 2007 and 26th November 2008 and organised by the French participant.

In 2007, after their performances, Belgian primary school pupils as well as their parents also met an actress who presented readings about the different facets of the Einstein's life. This artist interacted with the spectators reading the artistic text "If I will be young again ..." ("S'il m'était donné d'être à nouveau jeune..."). The artist told the story of the Einstein life through the letters exchanged by him with philosophers, scientist, students, pupils and personalities of his times. The public discovered others facets of Einstein personality and the profound implication of Einstein in the society's life. The public became aware about scientists implication in the development and evolution of the world.

In 2008, after their performance, Belgian secondary school pupils exchanged about light and electricity with the scientific association "Les Atomes Crochus".

- The second objective was to allow the public to discover the science and its history through artistic events.

The strong collaboration between the scientists involved in this project, theatres and cultural centres as well as the artists was achieved by the organisation of 4 artistic events with varied pedagogical approaches: readings, dance, play and conference - dance. Various scientific subjects have been developed: gravity, space, voice, researcher work, involvement of woman, human evolution, etc.

These artistic events occurred in France during the French Science Weeks (October 2007 and November 2008) and the festival Arphystic within the European Science Week (November 2007).

The events were judged innovative and original with a lot of ideas. The artists, charged with emotion, performed outstandingly on the technical point of view. The mixture between dance, dialogue and videos has been appreciated. The stage of the events was judged excellent. Finally the performances were of great quality with a real artistic research. The audience thought that the subjects were original. For example, the travel through the space in the play "Valentina bien au dessus des nuages" (Valentina well above the clouds) was well imagined and the woman emancipation was well evoked. Using a mixture between dream and real life, the play provided food for thought on the politics and the future of the Earth.

For more information see the following deliverables:

- D2.1 Title: List of schools, secondary schools, universities and subjects
Outline: The purpose is to give information about academic institutions who participated to the artistic activities: plays and contests. A list of the schools involved and the title of the plays are given.
- D2.2 Title: List of artistic events ensured by professional artists and associations
Outline: The purpose is to give information about the artistic events which have been organised within the French Science Weeks and the festivals (Arphystic 2007, "Printemps des Sciences" (Spring of Science) 2008, etc).

D2.3 Title: Assessment of the activities

Outline: The purpose of this deliverable is to give results about the assessment of the artistic activities. It includes all information regarding statistics in particular of gender issue, audience feedback, assessment tools, procedure of evaluation and Jury's members for "Science en Scène" (Science on Stage) and Literary contests as well as the enquiry forms. The observers' reports are also reported.

D2.4 Title: Report on activities

Outline: The purpose is to report in details the content of the artistic activities.

1.4.3 The discovery of sciences through playful exhibitions workshops and citizens debates

- The first objective was to raise awareness of the public and young people to the impact of research and the necessity of the acquisition of knowledge in society.

The achievement was the organisation of exhibitions, workshops, conferences and science cafés within scientific festivals and French Science Weeks. All these events were connected to current research.

Regarding the Belgian festivals "Printemps des Sciences" (Spring of science) of March 2007 and March 2008, students from the scientific faculties of Université Libre de Bruxelles and other Belgian high schools presented their "end of university studies project" at the exhibition from 19th to 25th March 2007 and 10th to 16 March 2008 at Brussels under a tent: more than 120 projects were presented to schools (primary and secondary levels) and to the public at large. During these exhibitions, students from the university were evaluated by their teachers about the quality of the project and of the presentation. Some scholars from high schools having realised a yearly project in strong collaboration with researcher (by the intermediate of the Infosciences group at the Université Libre de Bruxelles) also exposed the results of their project at the exhibitions, having at the same time the occasion to make a contact with the university world. These research projects were related to the daily life of people in many fields like medicine, environment, physics, and mathematics. The choice of attractive subjects helped in the interaction between visitors and students presenting the projects.

Regarding the exhibition (22nd-25th November 2007) organised within the Arphystic festival (in France), the achievement was the discussion between the public and the stakeholders of the exhibition about the role of physics and technology in through arts. Various experiments were proposed by French and Belgian stakeholders (Universities, research institutes, private companies, science centres, museums, artists, etc). It's explained the important role of physics in the analysis of painting, the 3D screen, the music, the photography, the bridges, the teleportation, the holography, the shape memory alloys discovered through sculpture from a Swiss artist, etc. More than 20 stands were presented by researchers but also by many French students showing through playful experiments that physics is everywhere in the everyday life and plays a major role in the progress of the society.

Additional French participating events, conference and science cafés, related to the subject of the exhibition, dealt with subject connected to current research: restoration and analyses of art objects and the technological development of means of spatial transport (space lift for example). In 2008, due to the non organisation of a scientific festival, a conference and two science cafés were organised within the French Sciences Week 2008. It concerned a conference about housing radioactivity. During the science cafés the public got the opportunity to discuss with scientists, policymakers, architect, etc about climate change and energy.

At the end of the project another exhibition, called "Sciences à l'Hosto", was organised by the French partner. The exhibition was composed of stands located in the hall of the hospital Provo at Roubaix. In addition workshops in rooms of the hospital occurred for sick children. The stands and

the workshops were run by student and permanent staff (engineers, technicians, researchers) of the Université des Sciences et Technologies de Lille.

For all exhibitions presented above, students and scholars of high schools were strong motivated in making their scientific work understandable to everybody, often by the use of small experiments. Students acquired the sense of responsibility in communicating the results of research and their enthusiasm in experiencing the communication to a public different from their scientific community. The requested type of communication induced the university students to develop a reflection about the role of science for the society and about how to structure communication to a non specialised public. The exhibitions, the conferences and the science cafés gave to the public and young people the possibility to discuss with the “producers” of research and be informed about current research projects in their country. The exhibitions were the occasion for children to experience science in a funny way, far from the usual didactics of science in schools.

- The second objective was to highlight the European dimension of the scientific culture

Regarding the exhibition done during the Belgian festival “Printemps des Sciences” 2007 (Spring of Science), the achievement was the presence to the exhibition of two groups of students from the Université des Sciences et Technologies de Lille (France) having the occasion to share instructive and intense moment with their Belgian colleagues. Moreover, many projects had been developed in collaboration with other European countries. Most of the students presenting the projects at the stands were able to express themselves in English.

Regarding the exhibition done during the Arphystic festival (in France), the European dimension was also highlighted on a number of occasions. There was an official representative of the European commission (Ms Laura Lauritsalo) who addressed the public in French at the opening ceremony. The presenters (students and researchers) would speak English with the international observers and it was clear that they knew well the relevant terminology. Another idea of European dimension was to demonstrate the impact of the educational principle “learning by doing and exploring” which becomes a factor of a great importance when educating citizens for the knowledge/creativity based society. Another point of the European dimension was the demonstration of experiments coming from both participants: France and Belgium. Moreover, there was a lot of foreign visitors coming from north of Europe (Great Britain, Netherlands, Germany and so on).

Regarding the French exhibition “Sciences à l’hosto”, experiences from the Belgium partner were used. It was also envisaged to ask to the Belgium school who won the science on stage in 2008 to present their scientific play. Unfortunately, it was not possible for them to be present due to the examination period in Belgian secondary schools.

- The third objective was to inform the public and the young people on the scientific and technical jobs in science.

Regarding the exhibition done during the project, this objective was achieved in an indirect way as the public, and particularly young people could ask questions to young researchers and felt by their answers the passion for the research job. For scholars from high schools, the exhibition represented the final event of a real research project developed by the class with the help of researchers at the University. They could feel in advance the atmosphere of university studies and discuss in a non formal way with science University students, in a period of their life susceptible of vocational choices. The exhibition offered the possibility to discuss about scientific subjects strongly related with the current research and often also with the daily life. This gave to the teachers the occasion to discuss about how interesting is to work as a researcher, resulting in a positive influence on the choice of a scientific faculty by pupils.

Regarding the exhibitions, conferences and science cafés, the visitors raised their awareness of the important role of the scientists thanks to the numerous applications exposed and sometimes the (future) jobs connected with them. Moreover, the public and young people discussed with world

recognised scientists. By communicating with scientists in an informal way was contributed a lot to the understanding of the young people and to the audience as a whole that the job of the researchers is very exciting and that they enjoy the possibilities of sharing their love for science in an approachable way. A leaflet about the Jobs in Physics was available at the exit of the exhibitions allowing the public and young people to get more information about jobs. Moreover European leaflets about Young and Science and Woman and Science were diffused to pupils from secondary schools and the public at large.

For more information see the following deliverables:

- D3.1 Title: List of schools who visited the exhibitions
Outline: It gives information about the schools who visited the exhibitions.
- D3.2 Title: List of stakeholders who were involved in the exhibitions, conferences and science Cafés
Outline: It includes a list of the stakeholders involved in the exhibitions, workshops, conference and Science Cafés. Additional information about the content of these events is given.
- D3.3 Title: List of the events and the places where they take place
Outline: It reports the list of all the events occurring within the two festivals “Printemps des Sciences” (Spring of Science) and Arphystic, the French Science Week 2008 and the exhibition “Sciences à l’hosto” 2008.
- D3.4 Title: CD or DVD of the “Spring of Science”
Outline: It consists on the description of the CD-ROM which includes all the documents regarding the two festivals “Printemps des Sciences” (Spring of Science) (posters, activities, photos, press documents, public opinion, etc).
- D3.5 Title: Assessment of the activities
Outline: The purpose is to give results about the assessment of the activities which were done: exhibitions, conferences and Sciences Cafés. It includes all information regarding the assessment: statistics in particular of gender issue, feedback from the audience (public, stakeholders), quality and the efficiency of the activities and enquiry forms. The observers’ reports are also reported.
- D3.6 Title: Report on activities
Outline: It is reported in details the progress of the activities: exhibitions, workshops, conferences and Science Cafés.

1.4.4 Communication activities

- The first objective was to disseminate information about the events.

The achievement was the design of communication materials (posters, flyers, publicity inserts, leaflets) and their distribution through different network of communication in Belgium and France in public place (science centre, museums, theatres, etc) and schools. Moreover a project web site was developed and linked to the web sites of the two participants. Information about research and jobs in Europe and in particular in France has been also given to young people and professors during their exhibition visits. The science festivals “Printemps des Sciences” (Spring of Science) and Arphystic described above were launched with the presence of policymakers. Policymakers were also present during the Magiphy Jousts. In addition, during the launch of the festival Arphystic, two artists made performances (readings and dance) in presence of teachers, scientists, and also policymakers.

- The second objective was to have good media coverage of the media.

It was achieved by numerous press clippings, TV and radio announcement and interviews.

- The third objective was to have a European coverage of the project.

It was achieved by the media coverage in both countries of the participants. The project results were also disseminated in European events (congresses, European Science Weeks, Researcher's Night, science events, etc) not organised by the project's participants.

For more information see the following deliverables:

D4.1 Title: Communication actions and materials

Outline: It includes all the materials and actions of communication done by the two participants themselves but also some materials done by others institutions or the participants within partnerships and subcontracting.

D4.2 Title: European leaflet on the objectives of the programme and the possibilities on scientific careers and mobility offered at the European level

Outline: It contains two leaflets done by the European Commission about science and young and women.

D4.3 Title: Evaluation report of the communication actions

Outline: It gives results about the assessment of the communication actions done before, during and after the activities.

D4.4 Title: Project presentation

Outline: It presents the project (summary, information, action lines, project abstract, main objectives, methodology employed, major expected achievements, coordinator details, consortium members, observers)

D4.5 Title: Internet web site project

Outline: It gives information about the content of the public web site and the private communication platform.

D4.6 Title: Plan of Using and Disseminating Knowledge

Outline: The aim is to give an overview of the dissemination and exploitation activities within the project.

1.5 Impact

The citizens judged the experiments interesting, accessible to everybody and the original combination between Art and Science had been appreciated. The public was very often surprised that art and science can be approached together. The events enabled the public to understand and to increase their curiosity in Science. The public appreciated very much the connection between the science and their applications related to their own environment. It was also interested in the direct dialogue with students already engaged in science academic studies, researchers, teachers, members of scientific associations and scientific museum. All initiatives were considered to be very interesting, and constituted an excellent sensitivity which gives desire for knowing some more. The public appreciated also the free fees of the events.

The pupils were filled with enthusiasm by the scientific demonstrations shown through exhibitions and done by themselves within schools activities. The mixing between Art and Science led the pupils to take retreat and to imagine. They enriched their knowledge, they were cultivated and they took pleasure to work. All these positive steps changed the orientation of some pupils towards the

academic studies of science. Others pupils, which remain on their decision to continue their own academic studies, appreciated the cultural dimension of our step.

The sciences teachers had got pleasure to collaborate with artists in the Belgian primary school artistic activities. They noted with satisfaction, and even with astonishment, the good quality that the pupils could invested themselves. This phenomena has been observed to pupils who "were not inevitably bitten" of science and did not intend themselves for scientific careers at the beginning. Pupils who obtained insufficient results in traditional teaching, felt developed when they become actors. Through some events, some pupils became organisers, felt stimulated by their comrades, exceeded their difficulties and withdrew satisfaction from it having achieved a difficult mission. The stakeholders of all the events were judged by the public to be excellent, interesting, teaching and constructive.

In the following table is reported the audience size for all types of event:

Type of event	Pupils involved in the event	Public (teachers, parents, citizens)
The Magiphy activities: workshops in schools, exchange days and the Jousts		
Jousts (1 in 2007 and 1 in 2008)	106	20
Exchange days (2 in 2007 and 4 in 2008)	35	1650 pupils
Stands during the French Science Weeks (1 in 2007 and 1 in 2008)	30	4000
An original approach of discovery of sciences: the artistic events		
Science on stage (1 in 2007 and 1 in 2008)	375	2000 mainly pupils
Literacy contests (1 in 2007 and 2 in 2008)	65	50 mainly pupils
Festive days (1 in 2007 and 1 in 2008)	42	140 mainly pupils
Artistic science café (1 in 2008)	0	120 pupils
Artistic events done by artists (6 in 2007 and 1 in 2008)	0	300 mainly general public
The discovery of sciences through playful exhibitions workshops and citizens debates		
Festivals "Spring of Science" (1 in 2007 and 1 in 2008)	600	12910 pupils 4902 general public
Festival Arphystic 2007	30	703 pupils 4433 general public
Exhibition "Science à l'hosto" 2008	30	590 pupils 1700 general public
Conferences and Science Cafés (3 in 2007 and 3 in 2008)	0	122 general public
TOTAL	1313	18463 mainly pupils 15177 general public

1.6 Coordinator contact details and web sites

Nathalie Lebrun

Université des Sciences et Technologies de Lille
UFR de Physique – Bât. P5
Cité Scientifique
59655 Villeneuve d'Ascq Cedex

Email : nathalie.lebrun@univ-lille1.fr
Fax : 33 3 20 43 40 84

Web site of the project: www.meyps.univ-lille1.fr

Other major web sites: www.physifolies.fr, www.magiphy.org and www.ulb.ac.be/inforsciences

2. Conclusion and recommendations

The aim of MEYPS SC2 is to contribute to the diffusion of the scientific culture into the society and to promote science and scientific careers near the youth. To estimate the impact of that kind of project is extremely difficult since the influence of the actions developed, necessarily during a short time, on decisions that will be taken by young people in a future not necessarily near is not predictable. Furthermore, it is impossible to isolate the impact of the actions undertaken during the project from all the effects, positive or negative, coming from the entire society during the lifetime of young people.

Therefore, only a continuous and coherent effort on science communication, for a long period, can put science into the centre of society priorities and expect to win the challenge of creating in Europe a science based economy. The researchers work is in the heart of such a strategy, even when scientific mediators are implicated into the communication with the public. Despite there is a general agreement with these statements, little is effectively done to help researchers to invest their know-how and creativity in the field of science communication without putting their scientific career in danger.

Consistent with the analysis above, we recommend that:

- To take into account the actions of science communication for the evaluation of the researchers career and consider them as one of the missions of the researchers;
- To recognize the role of science communication into the scientific training of the students and researchers;
- To include the valorisation of scientific communication actions into the dissemination plan of the financed projects could stimulate the implication of new communicators: to make the deliverables describing the actions accessible to the scientific community could be a simple way to reach such a goal;
- To promote the implication of cities authorities to ensure the continuity of actions developed by the universities;
- To recognize the role of university researchers as science makers and therefore communicators of the growing science;
- To promote projects conjugating science with humanities to reduce the gap of scientific culture of the society;
- To promote projects based in the dissemination of inquiry based learning strategy, especially for primary school teachers training;
- To encourage the dissemination of scientific culture via channels adapted to the public (for example, to touch the youth, paper documents and newspapers are almost useless).

MEYPS SC2 is a project promoting the exchanges between young people of different countries.

Discrepancies between the scholar agenda of the two countries involved into the project make it a difficult goal to reach.

3. Dissemination and use

3.1. Introduction

Dissemination has been a core activity in MEYPS SC2 project and effectively supported the project in order to enhance the widest possible participation of schools and general public from the participant's countries.

The project's public communication strategy was through its web sites, its participation to EU events, the organisation of events including in the work packages of the project, the contact with media through a press agencies and the distribution of communication materials. The project results were also presented in 15 events (congress, French and European Science Weeks, Researcher's Night, Science events) not organised by the project's participants.

Within the project, the two participants disseminate knowledge of science through different types of activities: conferences, Science cafés, hands-on workshops, workshop exhibitions, plays, dance show, quiz, CD ROMs, scientific films, etc. In addition, an article was published in the eStrategie Journal on June 2008.

All details about the plan of using and disseminating knowledge are reported in the next section.

3.2. Exploitation of knowledge and its use

MEYPS SC2 is a Specific Support Action (SSA), and as such does not perform Research and Development work, that might have lead to commercially-exploitable results. Nevertheless, the project produced materials which may be considered as being potentially exploitable by the participants of the project, or by others stakeholders. So this is listed here for information.

It provides an overview, per exploitable result, of how the knowledge could be used in further science communication activities (if relevant).

Being an SSA project, technical knowledge is not acquired from the project that will be subsequently exploited commercially in the traditional way, through patents (as is expected from STREPs and IPs). Nevertheless, the materials produced within this project are important for the scientific community on science communication and the general public, in particular young people. In this sense, the results of the project's activities have been exploited through the improvement of disseminating materials. These disseminating materials continue to be used by the two participants of the project in University, but also in science centres and Internet web sites.

The next table gives an overview of the knowledge with potential plan of exploitation, i.e. the use and non commercial exploitation of materials created during the project.

Exploitable knowledge	Exploitable product(s) or measure(s)	Sector(s) of application	Copyright protection	Owner and other Participants (s)involved
Virtual science exhibition from the festival « Printemps des sciences » (Spring of Science) in 2007 and 2008	2 CD-ROMs and slide set on web site	The material can be used by institutes in science education in particular training courses on science communication for students. The knowledge is useful for students in universities and the public at large in science centres.	Yes	ULB

Exploitable knowledge	Exploitable product(s) or measure(s)	Sector(s) of application	Copyright protection	Owner and other Participants (s)involved
Workshops conceived for Spring of Sciences	Documents describing the workshops at the scientific and pedagogical point of view.	The material can be used for training of primary school teachers or scientific activities organised for children during holidays	No	ULB
Quizzes on Physics and arts	2 quizzes on Physics and Art, and on Lasers	As above	Not yet	USTL
Magiphy	1 CD ROM	The material can be used by the secondary school level in classroom or extra-curricular activities.	Yes	USTL/Magiphy
“The Shadow Mission” andd “the spatial lift”	Films	This material illustrates the relation between scientific necessities of space and architecture, but also it shows how the last discoveries in fundamental sciences (physics, chemistry) change the future of space exploration. It interests students but also general public.	Yes	USTL and Olivier Boisard Conseil

Since there is no commercial use, the column “Timetable for commercial use” is not included in the table above. “Patents or other IPR protection” is replaced by “Copyrights protection”.

3.2.1 Virtual Science exhibitions “Sciences Extrêmes” and “Terre à terres” from the festivals « Printemps des sciences » (Spring of Science)

The science exhibitions presented by the students of the faculties of Sciences and Applied Sciences of the Université Libre de Bruxelles, join together the contributions of more than 600 young scientists during the Spring of Sciences in 2007 and 2008. For that, they prepared experiments and elaborated posters to support their communication with the public. The exhibition stayed for one week, but represented a tremendous effort done by the students, which are worth of valorisation.

Furthermore, the scientific information produced and presented in these documents was very interesting for the teachers, pupils and general public.

For these two reasons, Infosciences collected all the posters produced for the exhibition and compiled them in its website as a virtual exhibition.

In order to give a higher visibility to the virtual exhibition, a number of copies (typically 1000 per CD ROM) were transferred to two CD supports, which was distributed to the students who have participated to the science exhibitions, as a souvenir, and to the teachers who collaborated with Infosciences, to the journalists and the University authorities. During the project, two CD-ROMs have been created and diffused: one in 2007 and one in 2008.

All the work, excluded the printing of the CDs, was done by the stakeholder Infosciences.

The statistics of frequentation of the Infosciences website showed that the virtual exhibitions were visited by the people from all the countries of French language (Belgium, France, Québec and North Africa).

3.2.2. Workshops for the training of the primary school teachers

During the two Spring of Science Festivals, some workshops designed for the primary school pupils have been conceived and presented by the students of the pedagogical school Jules Ferry, with the help of Infosciences.

After their experience during the Festivals, these future teachers went to different schools to continue their training and they presented there the scientific workshops prepared before. The documents describing these workshops at the scientific and pedagogical point of view are now available to be used by other students or primary teachers.

3.2.3. Scientific activities for the holidays

School pupils use to have much more holidays than working parents. Therefore, different solutions are proposed to the parents by the local political authorities in order to keep the children busy during holidays with interesting and funny activities. Scientific activities are still not usual in the panel proposed by local communities, basically because the young people that take on the holiday activities do not have enough scientific background for that. Taking advantage of the workshops prepared for the Spring of Science Festivals during the last few years, Infosciences organised several sequences of scientific activities and trained the young people who presented them to the children.

Till now, three sequences of one week each are available.

3.2.4 Quizzes (Physics and Art, Lasers)

The objective of these quizzes was to propose a funny way to discover the importance of physics in the everyday life, thanks to an interactive multimedia game. The subject of these two quizzes realised by the French participant (USTL) was “Physics and Art” (painting, sculpture, architecture, cinema, photography, etc) and “Lasers” (used in medicine, analyse of painting, etc). The player answers 10 questions (chosen randomly in a database of 50 questions for the quiz on “Physics and Art” and 72 for the quiz “Lasers”). He has the choice between 3 propositions. Each question and each answer consist in a video movie where two animators are filmed with scenery illustrating the question. The quizzes were realised by the participant with the help of the stakeholder association Physifolies and in collaboration with the video service of the Université des Sciences et Technologies de Lille.

These quizzes will be used in future events, some of them organised after the MEYPS SC2 project. It also will be available on the web, in particular on the www.physifolies.fr.

3.2.5 Magiphy DVD

A DVD including all the activities regarding the Magiphy activities has been created in collaboration with the multimedia service of the Université des Sciences et Technologies de Lille. It includes texts, videos, photos and documents related to these activities: exchange days, Magiphy jousts and the contribution of MEYPS SC2 to the two French Science Weeks in 2007 and 2008.

This pedagogical material will be diffused after the project in the participating schools to Magiphy activities and policymakers.

3.2.6 Films

In the scope of the Arphystic festival, two computer-animated short films have been produced with the film director Olivier Boisard. The aim was to show the relationship between the scientific necessities and restrictions of a spatial environment, and the architecture. The two films, which are about five minutes long, also showed that the recent discoveries in fundamental sciences will probably deeply change in the future of spatial exploration and exploitation.

A first film described what could be a mission destined for deviating a near-earth asteroid from a earth-collision probability. The film showed how the so-called Shadow mission could take advantage of the Yarkoski effect to deviate the asteroid, just putting it permanently in the shade of a large set of solar sails.

A second film showed how could be designed a spatial lift linking earth to a geosynchronous spatial station. It brought up in particular the problem of the energy source and of the counterweight of the cable.

The two films, produced by the French participant (USTL) and the stakeholder association Physifolies within the MEYPS SC2 project, are part of a larger project about architecture and space. Next short films could be about a spatial hotel and space plane. The final size of the movie could be a 52 min.

The short films should be broadcasted in a near future on the Physifolies web site and on the tvSciences.com webtv.

3.3. Dissemination of knowledge

3.3.1 Overview table of dissemination activities

The next table reports all dissemination activities done by the two participants of the project. Some of them have done within collaboration with:

- the press agency Cabinet Alquier (a), Lille Plus newspaper (b), Danse à Lille Theatre (c), Forum départemental des Sciences (d), Espace Culture and Communication services at the Université des Sciences et Technologies de Lille (e), communication high school ISCOM (f) for the French participant (USTL)
- the Communauté Française de Belgique (g) for the Belgium participant (ULB).

Planned/ Actual dates	Type and title	Type of audience	Country addressed	Size of audience	Participant responsible /involved	
Year 2007						
March 2007	Project's press releases	"A Bruxelles, les sciences extrêmes sont extrêmement proches »	Journalists	Belgium, France	10	ULB
May 2007		"Joute Magiphy"	Journalists	France	10	USTL
October 2007		"Le festival Arphystic"	Journalists	France	153	USTL (a)
September 2007	Press conference	"Erase-E(X)"	Journalists, representative s of spectacles	France	40	USTL (c)
September 2006	Articles in magazine	Inforscience n°7	Schools, teachers, researchers, journalists	Belgium	5000	ULB
July/August 2007	Press clippings in newspapers	Magazine Le Nord	General public	France	1099000	USTL
May and November 2007		Nord Eclair	General public	France	2 x 70000 + 30000	USTL (a)
May and November 2007		La Voix du Nord	General public	France	11900 + 108000	USTL (a)
November 2007		Le Courrier de l'Escaut	General public	Belgium	25000	USTL (a)
November 2007		20 minutes	General public	France	65000	USTL (a)
November 2007		Lille Plus	General public	France	80000	USTL (a)
March 2007	Advertisements in newspapers	A daily Belgian newspaper	General public	Belgium	3 x 120,000	ULB
March 2007		weekly newspaper - Vlan (Brussels section)	General public	Belgium	1 x 300000	ULB
November 2007		newspaper Lille Plus	General public	France	3 x 60000	USTL
November 2007		newspaper 20 minutes	General public	France	2 x 70000	USTL

Planned/ Actual dates	Type and title	Type of audience	Country addressed	Size of audience	Participant responsible /involved	
Year 2007						
November and December 2007	Agenda in newspapers	La Voix du Nord	General public	France	3 x 11500 + 3 x 108800	USTL (a)
November and December 2007		Nord Éclair	General public	France	3 x 30000	USTL (a)
November and December 2007		Lille Plus	General public	France	80000 + 60000	USTL (a) (b)
November and December 2007		Sortir	General public	France	2 x 80000	USTL (a)
November 2007		Croix du Nord	General public	France	11000	USTL (a)
October 2007		Lille Magazine	General public	France	96000	USTL (a)
November 2007	Announcements on web sites	www.cityvox.com www.lillemetropole.fr www.lavoixletudiant.fr www.lille.sortir.eu www.pays-du-nord.fr www.forumdessciences.fr	General public	World	Open	USTL (a) (d)
February and March 2007		www.printempsdessciences.be	General public	World	Open	ULB (g)
From September 2007		www.physifolies.fr	General public	World	Open	USTL
From January 2007		www.magiphy.org	General public	World	Open	USTL
September to December 2007	Announcements in artistic and cultural magazine	“Erase-E(X)”	General public	France, Belgium	5000	USTL (c)
October and November 2007		“Valentina bien au-dessus des nuages”	General public	France, Belgium	10000	USTL (e)
March 2007	Radio and TV announcements	TV news - Brussels local TV / Festival “Printemps des sciences”	General public	Belgium	Open	ULB
March 2007		TV news - Television TL Bruxelles / Festival “Printemps des sciences”	General public	Belgium	Open	ULB
March 2007		Radio RTBF / «Festival « Printemps des sciences »	General public	Belgium	Open	ULB (g)
November 2007		Radio RFM-Lille / Festival Arphystic	General public	France	Open	USTL (a)
November 2007		Mona-FM Lille / Festival Arphystic	General public	France	Open	USTL (a)
November 2007		Radio Galaxie / Festival Arphystic	General public	France	Open	USTL (a)

Planned/ Actual dates	Type and title	Type of audience	Country addressed	Size of audience	Participant responsible /involved	
Year 2007						
May 2007	Radio and TV interviews	TV news - France 3 – Lille Métropole television / Joust Magiphy	General public	France	Open	USTL
May 2007		Radio Bleue Fréquence Nord, Live Ch'ti baladeur / Joust Magiphy	General public	France	Open	USTL
November 2007		Television news on France 3 – Lille Métropole television / Festival Arphystic	General public	France	Open	USTL (a)
November 2007		« C'est l'heure » on Canal 9 television	General public	France	Open	USTL (a)
From March 2007	Web sites	meyps.univ-lille1.fr	Researchers	World	Open	USTL, ULB
From January 2007		www.physifolies.fr	General public	World	Open	USTL
From January 2007		www.ulb.ac.be/inforscienc es	General public	World	Open	ULB
From January 2007		www.magiphy.org	General public	World	Open	USTL
February / March 2007	Leaflet	Festival « Printemps des sciences »	Schools, teachers, researchers, journalists	Belgium	14000	ULB (g)
January 2007		Presentation of the project MEYPS SC2	Researchers	Europe	30	USTL, ULB
May 2007	Brochure	« Les jeunes et la science en Europe »	Schools, teachers, reseachers	France	100	USTL
November 2007		Women in Science (European leaflet done by the European Commission)	Schools, teachers, general public	France	500	USTL
November 2007		Young people and science (European leaflet done by the European Commission)	Schools, teachers, general public	France	500	USTL
March 2007	Flyers	Festival « Printemps des Sciences » (Spring of Science)	Schools, teachers, general public	Belgium	14000	ULB
October and November 2007		Festival Arphystic	General public	France, Belgium	35000	USTL
September 2006	Letters	Contest « Science en scène »	Primary schools	Belgium	500	ULB
May 2007		Contest « Joute Magiphy »	Policymakers	France, Belgium	130	USTL
November 2007		Festival Arphystic	Policymakers	France, Belgium	15	USTL / ULB

Planned/ Actual dates	Type and title		Type of audience	Country addressed	Size of audience	Participant responsible /involved
Year 2007						
February 2007	Invitation card	For the exhibition within the Festival « Printemps des sciences »	Schools, teachers, researchers, journalists	Belgium	1200	ULB
November 2007		Launching of the Festival Arphystic	Teachers, Researchers, Policymakers, Journalists	France, Belgium	450	USTL
January 2007	Posters	Festival « Printemps des sciences »	Schools, teachers, researchers, journalists, general public	Belgium	2175	ULB (g)
April / May 2007		Magiphy Joust	Schools, general public	France, Belgium	1500	USTL
October / November 2007		Festival Arphystic	Schools, general public	France, Belgium	1140	USTL, ULB
From September 2006 to March 2007	Newsletters	Newsletters 1, 2, 3, 4, 5, 6, 10, 11	Schools, teachers, researchers, General public	Belgium	1200 electronic addresses	ULB
November 2007		Newsletter 1	Teachers, researchers	France	30	USTL
November and December 2007		Newsletter Forum départemental des Sciences on web site	General public	World	Open	USTL (d)
August 2007	Conference presentation and talks about the content of the project	E2phy congress (Strasbourg, France); Round table “Young and Europe”	Teachers, researchers	France, Germany, Italy	200	
September 2007		STEPS EUPEN congress (Sant Feliu de Guixol, Spain); poster	Researchers	Europe	100	EUPEN team / USTL
September 2007		Researcher night (Lille, France); quiz and videos	General public	France	500	USTL / USTL, ULB
October 2007		French Science Week (Lille and Dunkerque); experiments	Schools, general public	France	2000	FdS / USTL, ULB
November 2007		Final of the European Science Week (Lisbon, Portugal); poster, slide show and power point	Teachers, researchers, General public	Europe	2000	CV / USTL, ULB
November 2007	Giant video screen	Exhibition of the festival Arphystic; ten movies and programme	General public	France	Open	USTL
November 2007	Banners	Exhibition of the festival Arphystic; around the tent	General public	France	Open	USTL
November 2007	Digital hoardings	City of Lille; programme of the festival Arphystic	General public	France	Open	USTL

Planned/ Actual dates	Type and title	Type of audience	Country addressed	Size of audience	Participant responsible /involved	
Year 2007						
March 2007	Launching event	Festival "Printemps des sciences"	Teachers, researchers, policymakers	Belgium	150	ULB
November 2007		Festival Arphystic	Teachers, researchers, policymakers	France, Belgium	60	USTL
November 2007	Conference	"Des scientifiques au musée, quand Lavoisier rencontre Léonard de Vinci" during the festival Arphystic	General public	France	15	USTL
November and December 2007	Science cafés	"De la Terre à la Lune : à la voile ou en ascenseur ?" and "La Science-Fiction : objet de science ?" at the festival Arphystic	General public	France	25	USTL
November and December 2007	Artistic events	Play "Valentina bien au-dessus des nuages", show dance « Erase-E(X) » and festive day at the festival Arphystic	General public	France	380	USTL / ULB
21 st November 2007		Festive day : theater "La Terre ...Ouf! Quel caractère" and "S'il m'étais compté d'être à nouveau jeune"	General public, schools	France	100	USTL
March 2007	Exhibitions	« Sciences extrêmes » at the festival « Printemps des sciences »	Schools, general public	Belgium	8312	ULB / USTL*
November 2007		Arphystic at the festival Arphystic	Schools, general public	France	4776	USTL / ULB*
March 2007	Contest	Literary type entitled "Jusqu'où ira la science?" during the festival "Printemps des Sciences"	Schools, parents	Belgium	15	ULB
March 2007		Artistic type "Science en scène" during the festival "Printemps des sciences »	Schools, parents	Belgium	800	ULB
May 2007		Scientific type Magiphy Joust	Schools, General public	France	84	USTL / ULB
October 2007	Readings	"Crise de voix" and "le vin de Mai" done by artists	General public	France	60	USTL
Year 2008						
February 2008	Project's press releases	Announcement of the Brussels programme of the Spring of Science Festival	Journalists	Belgium	60	ULB
February 2008		Announcement of the J. Attali conference	Journalists	Belgium	40	ULB
May 2008		Magiphy Joust	Journalists	France	10	USTL
November 2008		"Science à l'hosto"	Journalists	France	40	USTL (a) (f)
February 2008	Press conference	Announcement of the J. Attali conference	Journalists	Belgium	40	ULB

Planned/ Actual dates	Type and title	Type of audience	Country addressed	Size of audience	Participant responsible /involved
Year 2008					
March 2008	Articles in magazine	Announcement in Esprit Libre (ULB magazine)	General public, ULB alumni, journalists	Belgium	18 000 ULB
2 nd and 10 th March 2008	Press clippings in newspapers	Passe-partout	General public	Belgium	2 x 4 200 000 ULB
4 th and 17 th March 2008		Nouvelle Gazette	General public	Belgium	Unknown ULB
2 nd April 2008		Charleroi Magazine	General public	Belgium	100 000 ULB
17 th March 2008		Le Soir en ligne	General public	Belgium	Open ULB
10 th March 2008		La Dernière Heure	General public	Belgium	Unknown ULB
13 th March 2008		La Tribune de Bruxelles	General public	Belgium	70 000 ULB
April 2008		Victoire	General public	Belgium	Unknown ULB
3 rd March 2008		Métro	General public	Belgium	30 000 ULB
22 nd May 2008		Nord Eclair	General public	France	70000 USTL
5 th December 2008		Echo du Thelle	General public	France	3500 USTL
January 2009		Magazine Le Nord	General public	France	60000 USTL (a)
January 2009		Advertisements in newspapers	Ciel et Espace	General public	France
March 2008	Agenda in newspapers	EOS Magazine	General public	Belgium	20 000 ULB
5 th March 2008		7 sur 7	General public	Belgium	Open ULB
November 2008		Minibili	University staff	France	2800 USTL (e)
November – December 2008		Newspaper Lille Plus	General public	France	60000 USTL (a)
November – December 2008		20 minutes	General public	France	65000 USTL (a)
November – December 2008		Lille Métropole Info	General public	France	Open USTL
March 2008	Radio and TV announcements	TV news - Brussels local TV / Festival "Printemps des sciences"	General public	Belgium	Open ULB
March 2008		Radio news- RTBF / Vivacité/«Festival « Printemps des sciences »	General public	Belgium	Open ULB (g)
December 2008		Radio Energie « Science à l'hosto »	General public	France	Open USTL
December 2008		Radio Chérie FM « Science à l'hosto »	General public	France	Open USTL

Planned/ Actual dates	Type and title	Type of audience	Country addressed	Size of audience	Participant responsible /involved	
Year 2008						
12 th March 2008	Radio and TV interviews	TV news - TV Bruxelles, Interview of M. Labbé, Dean of the Faculty of sciences / Youth and science	General public	Belgium	Open	ULB
14 th March 2008		TV News- TL-Sambre- Interview of K. Zouaoui/ Spring of Science	General public	Belgium	Open	ULB
7 th March 2008		Radio news- RTBF Première interview of P. Marage and MJ Gama : Spring of Science	General public	Belgium	Open	ULB
10 th March 2008		Radio news- RTBF Première interview of Pr. A. Prétat, the Year of the planet and Spring of Science	General public	Belgium	Open	ULB
May 2008		Radio Bleue Fréquence Nord, Live Ch'ti baladeur / Joust Magiphy	General public	France	Open	USTL
From January 2008	Announcements on web sites	www.printempsdesscienc es.be www.ulb.ac.be/inforscienc es	Schools, teachers, researchers, journalists, general public	World	Open	ULB
April – May 2008		www.lillemetropole.fr www4b.ac-lille.fr www-udp.univ-lille1.fr www.nordpasdecalais.fr	General public, schools, teachers	World	Open	USTL
October to December 2008		www.forumdepartemental dessciences.fr www.lavoixdunord.fr	General public	World	Open	USTL (a)
From September 2008		www.physifolies.fr	General public	World	Open	USTL
From March 2008		www.magiphy.org	General public	World	Open	USTL
2008		Web sites	meyps.univ-lille1.fr	Researchers	World	Open
2008	www.physifolies.fr		General public	World	Open	USTL
2008	www.ulb.ac.be/inforscienc es		General public	World	Open	ULB
2008	www.magiphy.org		General public	World	Open	USTL
December 2007	Leaflets	Literary contest "Adherez à la Confrérie des Eveillés" – J. Attali	Schools and teachers in the Charleroi Region	Belgium	100	ULB
January 2008		Festival « Printemps des sciences »	Schools, teachers, researchers, journalists	Belgium	14000	ULB (g)
February 2008		Family Day leaflet (Spring of Science)	Family League members	Belgium	2000	ULB
March 2008		Literary contest "Adherez à la Confrérie des Eveillés"- final event	Schools, teachers, journalists and general public	Belgium		ULB

Planned/ Actual dates	Type and title	Type of audience	Country addressed	Size of audience	Participant responsible /involved	
Year 2008						
May 2008	Brochure	« Les jeunes et la science en Europe »	Schools, teachers, researchers	France	100	USTL
May 2008	Documents	Attestation for the participation to the Joust Magiphy	Students	France, Belgium	80	USTL / ULB
March 2008	Postcards	Festival « Printemps des Sciences » (Spring of Science)	General public	Belgium	2000	ULB
September 2007	Letters	Contest « Science en scène »- invitation to participate	Primary schools	Belgium	500	ULB
March 2008		Invitation to the launching event of the Spring of Science	Schools, teachers, journalists, policymakers	Belgium	300	ULB (g)
May 2008		Contest Magiphy Joust	Policymakers	France, Belgium	15	USTL / ULB
April 2008	Invitation card	Invitation to the final event of "Science en Scène" contest	Schools, teachers, researchers, journalists, policymakers	Belgium	1200	ULB
January 2008	Posters	Festival « Printemps des sciences »	Schools, teachers, researchers, journalists, general public	Belgium	2343	ULB (g)
April 2008		Magiphy Joust	Schools, general public	France, Belgium	1200	USTL
October – November 2008		« Science à l'hosto » exhibition	Schools, general public	France	200	USTL / ULB
From September 2007 to March 2008	Newsletters	Infosciences Newsletters 8, 12 and 13	Schools, teachers, researchers, General public	Belgium	3600 electronic addresses	ULB
November and December 2008		Newsletter Forum départemental des Sciences on web site	General public	World	Open	USTL (d)
March 2008	Banners	Exhibition of the Spring of Science festival; at the entries of the ULB Campus	General public	Belgium	Open	ULB
13 th March 2008	Launching event	Festival "Printemps des sciences"	Teachers, researchers, policymakers	Belgium	600	ULB
13 th March 2008	Conferences	S. Schiffmann "Drugs action"	Secondary school pupils	Belgium	250	ULB
19 th March 2008		J. Attali / "La confrérie des éveillés"	General public and secondary school pupils	Belgium	400	ULB
6 th November 2008		"La radioactivité s'invite à la maison"	General public	France	30	USTL

Planned/ Actual dates	Type and title	Type of audience	Country addressed	Size of audience	Participant responsible /involved	
Year 2008						
November 2008	Science cafés	Debate about climate change, Atomium, 5th Forum de la météo	General public and secondary school pupils	Belgium	35	ULB
November 2008		Debate about biological evolution , "Eve contre Lucy"	Secondary school pupils	Belgium	120	ULB
18 th and 25 th November 2008		"Le futur énergétique dans notre région : vers une évolution de l'habitat" and "Climat : Coup de chaud sur la planète... et sur la région ?"	General public	France	52	USTL
November and December 2008	Artistic events	"Eve cotre Lucy", theatre, introduction for a science café about evolution.	Secondary school pupils, teachers	Belgium	120	ULB
26 th November 2008		Festive day: theater "Allo la Terre" and experiments done by the association "Les Atomes Crochus"	General public, leisure centres	France	218	USTL
22 nd November 2008		"Palabres", conference - dance about the human evolution	School, general public	France	80	USTL
March 2008	Exhibitions	« Terre à terres » at the festival « Printemps des sciences »	Schools, general public	Belgium	2000	ULB / USTL*
November 2008		"Climat exhibition at Atomium (5th International Meteo Forum)	Schools, general public	Belgium	unknown	ULB
2 nd to 7 th December 2008		"Science à l'hosto"	Schools, general public	France	2294	USTL*
March 2008	Workshops	83 different workshops for primary and secondary pupils during the Spring of Science	Primary and secondary schools	Belgium	5667	ULB
March 2008	Contests	Literary type entitled "Adhérez à la Confrérie des Eveillés"	Schools, parents	Belgium	400	ULB
April 2008		Literary type entitled "Quelle science pour notre terre?"	Schools, parents	Belgium	31	ULB
April 2008		Artistic type "Science en scène" during the festival "Printemps des sciences »	Schools, parents	Belgium	800	ULB
21 st May 2008		Scientific type Magiphy Joust	Schools, General public	France	80	ULB / USTL

FdS: Forum départemental des Sciences

SV: Cienca Viva

*: the list of the stakeholders is given in the deliverable D3.2.

This table does not include some dissemination actions done by stakeholders within partnerships between them and the participants of the project. All details are reported in the deliverable D4.1.

The Project web site, to be developed under WP4, is considered both as a tool for dissemination of the project content and its results. The website has been set-up at <http://meyps.univ-lille1.fr>. It provides information about the MEYPS SC2 project at various levels. The section presentation provides concise information about the project. The reader can have more information through a PDF document which is made available for download. The consortium section provides information about the project team - institutions and persons involved together with links to the websites of the respective universities. In the section activities detailed information about the work-packages (referring to the content of the Technical Annex) is provided. The agenda section provides short summary of the events organised within the project. The agenda and contribution sections provide announcements of the events and the dissemination activities. The press section contains information for the media. The contacts and the policymakers who support the actions have also indicated. Details are reported in the deliverable D4.5. Links to the local web sites developed by each participant of the project were done. The MEYPS SC2 is mainly dedicated to the description of the project. The events organised within this project, with the target audience the public at large, are briefly presented on this web site. Links to the French participant (USTL) and the Belgium participant (Université Libre de Bruxelles) websites were done. These two French speaking web site were preferred for the publicity of the events.

The **newsletters** address as a main target the events organised in the work packages 1, 2 and 3.

In order to inform a greater number of people **flyers and leaflets** have been distributed to the public through various way of diffusion.

The MEYPS SC2 project was to be advertised in the Cordis web site (Programme Science and Society) within the European Science Week.

The **brochure** on “La science et les jeunes “ gives information about various websites on science for young people and the Erasmus information.

Posters have been developed to disseminate the activities of the project. They have been designed to be graphically in accordance with all other dissemination material to attract audience attention. The **media materials** and the **launching events** are discussed in the section 3.3.

The content of the events organised within the festivals “Printemps des sciences” (Spring of Science) and Arphystic, Magiphy activity and “Science à l’hosto” exhibition are developed in the deliverables D1.3, D2.4 and D3.6.

3.3.2 Participation to public events organised by stakeholders apart from the MEYPS SC2 project

The objectives and first results of the MEYPS SC2 project have been presented in many conferences and have been introduced to a large number of scientists and researchers. In addition, the project’s participants were involved in science communication events not organised by them in order to spread the knowledge of the project.

There is a wide variety of conferences for researchers and events for the general public related to science communication. The selection of those that MEYPS SC2 was represented was not an easy task as the project needs to make a strong appearance on the international scientific forum while respecting the limits the travelling and living budget imposes.

3.3.2.1 E2Phy congress (27th to 30th August 2007, Strasbourg, France)

The national Physics school E2Phy was held in Strasbourg from 27th to 30th August 2007 in France. It aimed in bringing teachers from secondary schools and researchers together by allowing them to get in touch with up-to-date recent research developments in physics with the objective to

use them in secondary schools courses. This school occurs each year and in 2007 the subject was Physics and Europe.

The agenda contained a variety of topics like physics applications in health, energy, climate, ecology and new technologies. Speakers presented these subjects through conferences. A round table discussion about Young people and Europe took place involving two leaders in this field:

- Guillaume Fusai in charge of European affairs at the Commissariat de l'Energie Atomique (Saclay, France) ;
- Michel Spiro, Director of the Institut National de Physique Nucléaire et de Physique des Particules.

The organisers of this school asked to the project manager to be the third leader in this round table and to present concrete experience about the involvement of secondary school students in science communication activities. The MEYPS SC2 project and the different activities within European programmes involving young people in secondary schools were shown.

The school was attended by approximately 200 people. About 120 of them were coming from secondary schools. There is no need to further report on this school as it has already been reported in the specific deliverable D4.1. The participation of a member of the MEYPS SC2 project to the round table allowed spreading its experience and formed a good feedback for secondary school teachers who would like to start science communication activities in schools.

3.3.2.2 STEPS EUPEN 9th General Forum (6th to 8th September 2007, Sant Feliu de Guixol, Spain)

The Stakeholders Tune European Physics Studies (STEPS) initiative by the European Physics Education Network (EUPEN) is a Thematic Network (TN) Project, funded in the frame of the SOCRATES programme by the E.C.'s Directorate General, Education and Culture (DG EAC). In addition to make civil society aware of huge impact of physics in everyday life, one of the main objectives of this network is to encourage school pupils to take interest in physics; hence to improve future supply of physicists and teachers. This is in this context that a researcher from the Université des Sciences et Technologies de Lille, involved in this network, asked the project coordinator to present results on the exchange of young people at European level in the activities developed within the MEYPS SC2 project. A poster was presented including results on Magiphy activities and the festival "Printemps des sciences" (Spring of Science). The Forum held at Sant Feliu de Guixols on 6th to 8th September 2007 in Spain. It was a successful event with more than 100 participations: physicists, representative of European associations, universities, and research institutes in Physics.

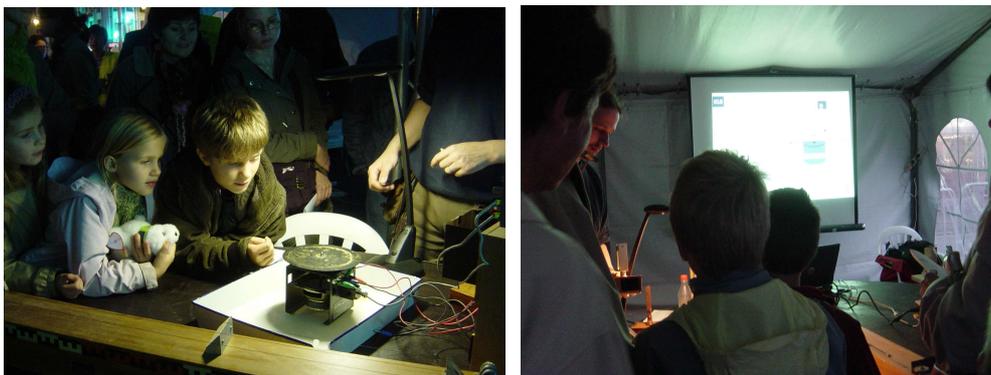
Reduced fees were provided and made easier the presentation of the project in this event.

3.3.2.3 Researcher Night (28th September 2007, Lille, France)

The Researcher Night is organised by the Université des Sciences et Technologies de Lille. The second edition was conducted in one of the major squares in Lille, Place Rihour, at the end of week of September (28th of September) 2007. It is established as an annual event, which take place simultaneously in Europe. This year, it offered an exhibition under a tent. A great number of stands provided explanations and demonstrations about research in science. Major research institutions of the North of France presented playful experiments in their fields of research. The audience was composed mainly from students, researchers, and the general public. Visitors had the opportunity to move around the market of knowledge and experiment at leisure some 15 stands related to physics, chemistry, biology, environment, mathematics, etc.

At this event, the MEYPS SC2 members have provided varied pedagogical approaches. It presented a quiz about the role of physics in our daily life (French participant USTL, stakeholder association Physifolies) and experiments on music (Belgium participant, stakeholder Infosciences). A leaflet was produced and distributed showing the science and its history in physics as well as the objectives and the expected results of the MEYPS SC2 project. A film,

created by a member of the French participant (USTL) and the video service of the Université des Sciences et Technologies de Lille, presented the festival Arphystic organised later on November 2007.



Some photos about the Researcher Night in Lille



Some photos about the Researcher Night in Lille

3.3.2.4 French Science Week (12th to 14th October 2007, Lille and Dunkerque, France)

The French Science Week is an event that is organised on an annual basis by the French Ministry of Research in France at National level and by the science centre Forum départemental des Sciences in the North area of France. It is an event that provides to scientists an opportunity to present their work on a local basis through poster presentations and exhibition booths. The focus of this French Science Week, held on October 12th–14th 2007, was for pupils and public at large to become aware of the role of science in the society knowledge. The thematic was about the frontier of knowledge including the scientific instruments and the discovery of space.

MEYPS SC2 was present in two science exhibitions at Lille and Dunkerque (France), where posters were presented and dissemination material was handed to the visitors (leaflet about the content of the experiments and the MEYPS SC2 project). This event has served not only as a major dissemination event for the MEYPS SC2 project but also was an opportunity to strengthen the MEYPS SC2 link with secondary schools for the activities Magiphy.



Some photos about the exhibition at Lille

It was also the opportunity to present the activities to policymakers since were present at the Lille's exhibition:

- The chief administrative officer of the education authority of North of France;
- The locally-based education inspector from Physics and Chemistry;
- The regional head of the French Ministry of Research;
- The regional head of the National Centre of Scientific Research;
- The prefect of the North of France.

It was the ideal exhibition for showing the impact of science in society to the schools and the general public since it was well adapted to our communication process. This science exhibition ranged from simple game-like presentations to elaborate scientific concepts through laboratory experiments. The members of the project had got three booths at the Lille exhibition and one booth at Dunkerque's exhibition. In both places, the French and Belgian secondary school students presented in the same booth their experimental work done within the activity Magiphy included in the MEYPS SC2 (activity of the work package 1). Details on the participation of these students to these two exhibitions are indicated in the deliverable D1.4. In addition booths were also presented by the two participants of the project as well as the stakeholders association Physifolies and Expérimentarium (Université Libre de Bruxelles). Scientists from the Experimentarium presented numerous experiments showing the limits of physics in the understanding of the world. Students from the Université des Sciences et Technologies de Lille and the stakeholder association Physifolies presented experiments on infrared spy satellite (from the Laboratoire d'Optique Atmosphérique), the discovery of planets outside our Solar system through gravitational mirages. A quiz about Physics and Art allowed young people and the public to discover the important role of physics in arts (painting, sculpture, cinema, building restoration, etc).

This event was the opportunity to distribute flyers about the festival Arphystic which occurred after the French Science Week, i.e. on November 2007.

Reduced fees were provided and eased the presentation of the project in the event.

3.3.2.5 Final of the European Science Week (24th November 2007, Lisbon, Portugal)

This year's the Final of the European Science Week took place from 19th to 25th November at the Pavilhão do Conhecimento of Lisbon (Portugal). The European Commission decided that the MEYPS SC2 project presents their results since this project is funded within the Science and Society programme (6th Framework). Consequently, two members of MEYPS SC2 could participate to the Final on 24th November 2007 thanks to the European Commission who paid the travelling and living fees. A poster and a slide show presented the activities of the MEYPS SC2 project. In addition small experiments on vacuum were also shown to the Portuguese families. In parallel, one of the member also participated to the Jury who awarded prizes for the "best presentation ideas", for the "greatest engagement" of the presenters and for the "most advanced science" presented. It was a complete success since more or less 2000 people visited the exhibition. A lot of teachers and families visited our booth.

3.3.2.6 - Participation to the "Dimanche des Sciences" (Science Sunday) (27th April 2008, science centre of Charleroi, Belgium)

The different materials produced during the festival "Printemps des Sciences" (Spring of Science) 2008 have been reused for the 11th edition of Science Sunday occurring at the cultural and scientific centre at Charleroi. Small tents were installed on the garden of the science centre where associations devoted to the diffusion of the scientific culture presented demonstrations for a family public. Infosciences participated to this event presenting demonstrations about the environment protection: evidence of the role of CO₂ on the greenhouse effect, exhibition about the controversy on the anthropic origin of the mean temperature increase, the new energy resources. More or less 850 individuals visited the centre during this sunny Sunday. Most of them visited the Infosciences tent and participated to the demonstrations.

3.3.2.7 FTEM2008 congress (16th-17th May 2008, Iasi, Romania)

FTEM is a national conference on Physics and Technology of Modern Education. It was held in Iasi from 16th to 17th May 2008 in Romania. It aimed in bringing teachers from secondary schools and researchers together by allowing them to get in touch with up-to-date recent research developments in modern physics with the objective to use them in secondary schools courses. This school occurs each year.

The person in charge of the organisation of the conference asked to the two partners of MEYPS SC2 to present results about the project. An oral contribution has been done in front of 70 teachers from secondary schools and university. The slides presented during the conference mentioned above are given in the Work Package 4.1.

The congress was attended by approximately 100 people.

3.3.2.8 Participation to PAMO/JSM 2008 (Lille, France, July 2008)

The congress « Physique Atomique, Moléculaire et Optique (PAMO) / Journées de Spectroscopie Moléculaire (JSM) » was held in Lille from 7th to 10th July 2008 in France. This congress is driven by the Division Physics of atoms and Molecules, Optics of the French Physical Society. The target audience is researchers working in atomic and molecular physics and optics field. This congress occurs each two years.

The agenda contained a variety of research topics including plenary sessions and workshops. A special session was dedicated to Communication, Popularisation and Teaching of science, in particular physics. An oral talk was done by the Director of Communication of the CNRS department "Mathematics, Physics, Planet and Universe" followed by presentation of posters. The MEYPS SC2 project has presented 3 posters on the thematic: Magiphy, Physics on Art, and exhibition of Physics.

The congress was attended by approximately 260 people.

These three posters are given in the Work Package 4.1.

3.3.2.9 Participation to JMC11 (Journées de la Matière Condensée) (Strasbourg, France, August 2008)

A session around teaching science was organized on JMC11 in Strasbourg and we have presented all our action of an international dissemination of knowledge within MEYPS SC2 program in an oral presentation.

The audience was the researchers in Solid State physics field. The presentation is presented in the Work Package 4.1.

The congress « Journée de la Matière Condensée (JMC) » was held in Strasbourg from 25th to 29th August 2009 in France. This congress is driven by the Division of Condensed Matter of the French Physical Society. The target audience is researchers working in solid state physics field. This congress occurs each two years.

The agenda contained a variety of research topics including plenary sessions and workshops. A special session was dedicated to pedagogical innovation in Physics teaching and popularization of Physics. An oral talk was done by the MEYPS SC2 project manager.

The congress was attended by approximately 700 people. About 30 persons participated to the workshop dedicated to pedagogical innovation in Physics teaching and popularization of Physics

The slides presented during the workshop mentioned above are given in the Work Package 4.1.

3.3.2.10 STEPS EUPEN 10th General Forum (4th to 6th September 2008, Poiana Brasov, Romania)

As already mentioned above, the STEPS-EUPEN initiative is a Thematic Network supported by the E.C.'s Directorate General, Education and Culture (DG EAC). In 2008, the thematic was Physics Studies – Global Views – Local Needs. A researcher from the Université des Sciences et Technologies de Lille, involved in this network, asked the project coordinator to present results on Magiphy activities developed within the MEYPS SC2 project. A poster was presented. The Forum held at Poiana Brasov on 4th to 6th September 2008 in Romania. It was a successful event with more than 90 participations: physicists, representative of European associations, universities, and research institutes in Physics.

Reduced fees were provided and made easier the presentation of the project in this event.

3.3.2.11 Participation to "Voir l'invisible"(See the invisible) (25th and 26th September 2008, Château de Seneffe , Belgium)

The Domaine du Château de Seneffe (Walloon region - Hainaut) organises each year a scientific festival, which pretends to connect Art with Science.

At the 2008 edition, Infosciences presented several activities about the music: how to see sounds at work. Physics experiments were proposed to the school groups: 34 groups of primary school pupils participated to the Infosciences activities during the two days. The materials used during this event were developed for the Research Night 2007 where the project MEYPS SC2 was present.

3.3.2.12 Researchers Night (26th of September 2008, Brussels, Belgium)

The aim of this initiative is to diffuse the results of European Research and allow the general public to get familiar with the researchers and the way they work.

The Université libre de Bruxelles uses to participate to the Researchers Night. The 26th of September, very different areas of human sciences and natural sciences were pooled into an event, where the scientific projects were mixed with music and theatre. Infosciences was in charge to coordinate the participation of the Faculty of Science projects. Four domains have been represented during the event: Volcanoes and



volcanologists, ethology of the social insects and the way the scientists study their behaviour with the help of tiny robots, the effect of electromagnetic waves on plants growth as indicators of effects on living beings in general and competition between man (the visitor) and a machine (computer). Furthermore, a stand presented by Inforsciences was axed on the history of science in Belgium, proposing the visitor to vote to elect for the most important Belgian scientist, an activity promoted in connection with EOS magazine. All the materials used were developed during the festival “Printemps des Sciences” (Spring of Science) 2008 within the MEYPS SC2 project. Moreover, the French partner loaned the levitation train to the Belgian partner.

3.3.2.13 French Science Week (17th to 23rd November 2008, Roubaix and Dunkerque, France)

As already presented above, the French Science Week is an annual event that is organised on an annual basis by the French Ministry of Research in France at National level and by the science centre Forum départemental des Sciences in the North area of France. For its 17th edition, the French Science Week had a European dimension due to the French presidency of the European Union. The focus of this French Science Week, held on November 17th–23rd 2008, was for pupils and public at large to become aware of the role of science in the society knowledge. The thematic was about the evolution of science and technology in the society.

MEYPS SC2 was present in two science exhibitions at Roubaix and Dunkerque (France), where posters were presented and dissemination material was handed to the visitors (leaflet about the content of the experiments and the MEYPS SC2 project).

Ambassadors of Magiphy were present on the two sites.

Lille science village: the 22th November 2008, the Belgian winners of the Magiphy Joust 2008 presented the experiments about mirages. The 21st and 23rd November, the French winners of the Magiphy Joust 2008 presented experiments on the carbon dioxide.

Dunkerque science village: During all the three days, French students from the secondary school Jean-Bart (Dunkerque, France) presented experiment on hydrodynamics.

In parallel, the MEYPS SC2 project was presented through two exhibition stands. The Expérimentarium from ULB presented a great diversity of experiments on the physics of music. The Physifolies allowed students from the Université des Sciences et Technologies de Lille to present experiments on mirages and measurement of hydrocarbon in the ocean.

One of the observers was also present during this event.



Students from USTL (mirage simulation)

French Magiphy ambassadors 2008



Belgian Magiphy ambassadors 2008



Students from USTL (hydrocarbon detection)



Experimentarium stand exhibition

It was also the opportunity to present the activities to policymakers since were present at the exhibition:

- The chief administrative officer of the education authority of North of France;
- The locally-based education inspector from Physics and Chemistry;
- The regional head of the French Ministry of Research;
- The regional head of the National Centre of Scientific Research;
- The prefect of the North of France;
- The mayor of the town Roubaix.

It was the ideal exhibition for showing the impact of science in society to the schools and the general public since it was well adapted to our communication process. This science exhibition ranged from simple game-like presentations to elaborate scientific concepts through laboratory experiments. The members of the project had got three booths at the Lille exhibition and one booth at Dunkerque's exhibition. Unfortunately, no Belgian secondary school students were present at the science village of Dunkerque. Details on the participation of students from Magiphy to these two exhibitions are indicated in the deliverable D1.4.

This event was the opportunity to do some publicity about the exhibition "Science à l'hosto" which occurred later (beginning of December).

Reduced fees were provided and eased the presentation of the project in the event.

3.4 Communication strategy

This section focuses on the implemented communication actions from the project's participants to increase public participation and awareness in science.

3.4.1 Participant 1 (USTL)

Three major events were organised in France: the Magiphy Jousts (16th May 2007 and 21st May 2008) and the Arphysitic Festival (from 21st November to 13th December 2007) and the exhibition "Science à l'hosto" (from 2nd to 7th December 2008). All the communication materials are shown in the deliverable D4.1.

3.4.1.1 The Magiphy Jousts

All details and feedbacks about these events and the schools involved in these activities are reported in the deliverables D1.1, D1.2, D1.3 and D1.4.

Before the events, communication actions (posters, letters) were done to:

- The Belgian and French schools by the distribution of posters;
- The policymakers through letters of invitation;
- The media (press release).

These events were described briefly on the project's web site with a link to the web site www.magiphy.org where the event was described in details in French language.

Before the events, several contacts with journalists (newspapers, radio, TV) have been taken to advertise the jousts. A press release informed the journalists about the jousts, the role of Magiphy association and the objective of the European Project MEYPS SC2.

As results, four press clippings were obtained during the project. An interview of one member of the MEYPS SC2 project was done by the local TV France 3 Lille Métropole in 2007. Secondary school pupils explained around their experimental work in a live broadcast of the Radio Bleue Nord Radio during the two jousts (2007 and 2008). The news of the local TV France 3 Lille Métropole gave coverage of the Joust after the event in 2007.

During the events, the participant USTL distributed a document entitled "les jeunes et la science" including web sites addresses on science for young people.

All the materials discussed here are shown on the deliverable D4.1.

Policymakers came to the joust during the presentation of the experimental work by pupils and to the ceremony award.

For 2007: One deputy from the "Conseil général du Nord" (Regional Council of North of France) came as well as the director of the research department of the "Conseil Régional Nord Pas de Calais" (Regional Council of Nord – Pas de Calais region). The chief administrative officer of the education authority of North of France was represented by three locally based education inspector in Physics and chemistry. The vice-president of university training came also and represented the President of the Université des Sciences et Technologies de Lille.

For 2008: One representative officer of the "Conseil général du Nord" (Regional Council of the North of France) came as well two representatives from the Mayor of Villeneuve d'Ascq, one officer of the educational district and one vice-president from the Université des Sciences et Technologies de Lille.

3.4.1.2 The Arphystic Festival

The festival included one launch event, one exhibition, one festive day, one conference, two science café and two artistic events. All details and statistics about these events are given in the deliverables D2.1, D2.2, D2.3, D2.4, D3.1, D3.2, D3.3, D3.5 and D3.6.

THE LAUNCHING EVENT

A communication event has been organised in order to launch the festival. The objective was to associate institutional representatives and public. The launch event mixed official speeches and artistic shows:

- an improvisation of the choreograph Thomas Lebrun,
- a reading by the actor Eric Beauchamp of texts about science from the American director Woody Allen and the French humorist Raymond Devos.

Institutional representatives were:

1. Mr Michel Cucheval, deputy major of Lille, responsible of researcher and education domain, who was the main contact with the city hall for the festival;
2. Mrs Laura Lauritsalo, project officer of the MEYPS SC2 project at the European Commission;
3. Mr Bodiot, deputy major of the Lille district “Vieux Lille”, where the tent was installed.

Several letters were sent to the policymakers from regional councils, ministry of research, the CNRS (Centre National de la Recherche Scientifique) and education, the administrative officer of the education authority of the North of France. They sent letters of apologize to the French partner of the project. The launching event occurred during a large strike. Some of these policymakers are on the warpath for city elections and they are not allowed to give public speeches.

The whole launch event was relayed on the both giant screens outside the tent.



Some photos about the launch event

THE COMMUNICATION POLICY

The communication policy was based on 3 main lines:

- To the public;
- To the schoolchildren;
- To the press.

The USTL participant has chosen to use only one type of visuals, based on the Einstein face and the Mona Lisa, during the whole period of the festival. The objective was to mark the spirit of the people with characteristic visuals. That's why the USTL participant have communicated on the festival without creating others specific posters and flyers for the events of the festival.

COMMUNICATION TO THE PUBLIC

The action consists overall on advertisements in the free newspapers “20minutes” and “Lille Plus” during the exhibition and on a diffusion of the flyers before and during the festival.

A partnership has been created with Lille Plus and a special advertisement during the week before the dance show has been done with a play to win 4 places for the show. There were more of 150 calls to the editorial staff of the newspaper in only one hour.

Furthermore, flyers were distributed using the distribution network of the agency Melinite in cultural, institutional and commercial points in France and Belgium. In addition, students were employed on short-time basis and distributed flyers and posters in markets and shops during 3 days (before and during the exhibition) in the centre of the town Lille. The students were dressed with a jacket with the “colours” of Lille Plus, within a partnership.

Others flyers have been diffused through other partnerships as the theatre Danse a Lille, the science centre Forum départemental des Sciences and the council authority Conseil général du Nord.

The next table gives details about the distribution campaign of the flyers:

Flyers	Melinite agency	Festival	13000 flyers : 1/11/2007-13/12/2007: - 10000 flyers in 300 points in North region (France) - 3000 flyers in 30 points in Belgium (3 border cities+ Brussels)
	Students	Festival	13000 flyers : 18,23,25/12/2007 during the exhibition and on 2 big markets of Lille
	Partners and informal opportunity	Festival	7000 flyers Partners : Danse à Lille, Forum départemental des sciences, Conseil général du Nord.
	Receptionist	Festival	2000 flyers : 22-25/12/2007 during the exhibition

A few posters have been placed in the shops around the location of the exhibition. 15 posters (40 x 60 cm) have been distributed. The organisers have not used the hoarding sites in centre of towns (as JC Decaux), because of too expensive cost and the impossibility to create a partnership.

On the web, the site www.physifolies.fr gave many details on the programme, whereas the project’s web site (meyps.univ-lille1.fr) presented a brief summary of the festival. Also the Université des Sciences et Technologies de Lille and the Centre National de la Recherche Scientifique (National Centre of the Scientific Research) advertised on their site about the festival and the programme. Events were also announced on the electronic message boards of the city of Lille during November.

During the exhibition:

- Postcards (made for the World Year of Physics in 2005) and leaflets about the place of the women in the science or about the young people and the science have been distributed. These two leaflets were created by the Research direction of the European commission.
- 3 receptionists especially employed for the exhibition, also distributed flyers to people entering the exhibition.
- Two giant video screens (3m x 2m) showed approximately ten short movies about the sciences and arts, in relation with the objectives of the festival. These screens were located outside the tent, directly on the street, so that the movies were attracting the passers-by.
- 3 banners (3m x 1m) and 1 giant banner (4m x 1m) were put around the tent.
- A restaurant chef has created a dessert with the name Arphystic especially for the occasion

Detail about the number of people is given in the deliverable D3.3 as well as the assessment of the exhibition. Almost 5 000 visitors went to the exhibition from 22nd to 25th November 2007.

Not additional diffusion about the festival events were done during the conference, science cafés and artistic events after the exhibition of the Arphystic festival. More than 340 spectators participated to the festive day and the artistic events. 40 people went to the conference and the two science cafés. Details are reported on the deliverables D2.3 and D3.5.



Photos: Video screens and banners outside the tent

COMMUNICATION TO THE SCHOOLCHILDREN

The USTL participant contacted first one of the education inspector in Physics and chemistry, responsible of science awareness in schools in the North of France. An email has been sent to all secondary schools of the North of France area. In parallel, an announcement was done the leaflet of the Université des Sciences et Technologies de Lille within a partnership between the university and 20 secondary schools in the Lille and its suburbs. At first, only few schools registered to the exhibition. Consequently, letters were sent by the USTL participant early in November 2007 to the 85 secondary and primary schools of the city of Lille. This letter gave a description of the activities of the exhibition and the programme. After this initiative, a lot of schools registered to the exhibition and the organisers were obliged to refuse schools.

In parallel, posters were sent to 617 secondary schools of the North region of France with the help of the regional education authority ("Académie de Lille").

A phone switchboard at the Physic department of the French university was created to accept the registration.

Detail about the number of registered schools is given in the deliverable D3.1. More than 700 pupils from primary and secondary schools visited the exhibition on 22nd and 23rd November all the day and 24th November morning.

COMMUNICATION TO THE MEDIA (NEWSPAPER, RADIO, TV)

This action requires a lot of time and a specific knowledge of the press community. That's why the USTL participant preferred to bring in a press agency, the "Cabinet Alquier". It's an attaché press agency, who has already worked for scientific events.

This attaché press has redacted a press release at the end of October 2007, sent to 153 journalists of the written press and the broadcasting press of France and Belgium. The journalists have been contacted regularly to remain of the events.

Just before the beginning of the festival, a press pack was redacted and sent to the interested journalists. A personal invitation was sent for the press visit, organised the 22nd November 2007. An invitation for their family was also sent, to discover the exhibition.

This visit was organised between the press agency and the organisers, particularly the people, who are dealing with the communication and the press relations. It enables to outline essential messages of the exhibition before to let the journalists interviewing the people or the organisers.

During the whole period of the festival, a permanent contact was kept, by telephone or mail. A reminder mail was sent the day before each event.

The results are the coming of 3 journalists of the written and broadcasting press at the press visit. The absence of a lot of journalists is due to the period of strike in France, which took place in many Medias. The national TV TF1 and France 2 managed to come to the festival but they cancelled their coming because of the train strikes.

However, the organisers could count 34 allusions in the written and broadcasting press. They also have got in particular a TV live broadcast programme with organiser as guest on a regional TV channel and a report on another regional TV channel

Category	Title of the section	Website / Media / Newspaper	Date in 2007
Press on line:			
Advert of the organisers	Place Louise de Bettignies	www.cityvox.com	5 th November
Article	Festival Arphystic	www.lillemetropole.fr	12 th November
Article	Quand « La Physique » et « L'Art »...	www.lavoixletudiant.fr	15 th November
Article	ArPhystic	www.lille.sortir.eu	16 th November
Article	ArPhystic	www.pays-du-nord.fr	19 th November
Article (follows an interview)	Arphystic	www.lille.sortir.eu	23 rd November
Article	Bar des sciences	www.lille.sortir.eu	28 th November
Article	Pièce de théâtre	www.pays-du-nord.fr	29 th November
Belgian written press:			
Article (follows an interview)	Un physicien derrière chaque artiste	Le Courrier de l'Escaut	19 th November
French regional written press:			
Article in the monthly magazine of Lille about festival	Artphystic festival	Lille Magazine	October
Article in a weekly newspaper about festival	Salon Arphystic	Croix du Nord	16 th – 22 nd November
Article in a weekly newspaper about exhibition	Expositions	Sortir Week-end	21 st – 27 th November
Article in a daily about festival	L'art et la physique	Lilleplus	21 st November
Article in a daily about festival	Arts et sciences	20 Minutes – Lille	22 nd November

Category	Title of the section	Website / Media / Newspaper	Date in 2007
French regional written press:			
Article in a daily about festival	Aujourd'hui	La Voix du Nord – Métropole Lilloise	22 nd November
Article in a daily about exhibition (follows the press visit)	La physique c'est fantastique !	Nord Eclair – Lille Métropole	23 rd November
Article in a daily about exhibition (follows the press visit)	Festival « Arphystic »	Nord Eclair – Week end	23 rd November
Article in a daily about exhibition (follows the press visit)	Expériences	La Voix du Nord – Métropole Lilloise	23 rd November
Article in a daily about the conference	Loisirs et spectacles	La Voix du Nord – Villeneuve	27 th November
Article in a daily about theatre	En bref	La Voix du Nord – Villeneuve	27 th November
Article in a daily about the conference	Envie de sortir	Nord Eclair – Lille Métropole	27 th November
Article in a daily about theatre	Théâtre	Lilleplus	27 th November
Article in a daily about theatre	Loisirs et spectacles	La Voix du Nord – Métropole Lilloise	29 th November
Article in a daily about theatre	Envie de sortir	Nord Eclair – Lille Métropole	29 th November
Article in a weekly newspaper about a bar des sciences	Conférences	Sortir Week-end	5 th – 11 th December
Article in a daily about a bar des sciences	Envie de sortir	Nord Eclair – Lille Métropole	9 th and 10 th December
Article in a daily about bar des sciences	Loisirs & spectacles	La Voix du Nord – Villeneuve	9 th and 10 th December
Article in a daily about show dance	Spectacles du jour	La Voix du Nord – Temps Libre	13 th December
Article in a weekly newspaper about show dance	Danse	Sortir Week-end	12 th – 18 th December
Regional broadcasting press:			
Advertisement on radio four times a day		Radio Galaxie	12 th November
TV live broadcast programme with organiser as guest	C'est l'heure	C9 Télévision	22 nd November
Advertisement on radio once	Annonce	RFM – Lille	22 nd November
TV broadcast in the regional news	19/20	France 3 – Lille Métropole	23 rd November
Advertisement on radio once	Sortir Week-end	Mona FM – Lille	24 th November

3.4.1.3 The Exhibition Sciences à l'hosto

All details and statistics about the exhibition are given in the deliverables D3.1, D3.2, D3.3, D3.5 and D3.6.

THE COMMUNICATION POLICY

Some communication was done towards the public, the schools around the hospital and the press. As the exhibition was located inside the hospital, the preference was given to a specific public.

The visual was based on the Einstein caricature, to keep the same thread than for the previous events. Banners were created and placed at the entrance of the Hospital hall.

COMMUNICATION TO THE PUBLIC

The action consists overall on advertisements in the newspapers “La voix du Nord, Lille Plus, 20 minutes, Lille Metropole Info Ciel et Espace, Roubaix Mag” and an internal letter in the University Minibili.

On the web, the site www.physifolies.fr gave details on the programme. Some announcements were done in specific websites.

During the exhibition, postcards (made for the World Year of Physics in 2005) have been distributed.

Detail about the number of people is given in the deliverable D3.3 as well as the assessment of the exhibition. Almost 2 500 visitors went to the exhibition during the six days.

COMMUNICATION TO THE SCHOOLCHILDREN

Contacts were taken with the schools (primary and secondary) around the hospital in Roubaix. The program was rapidly full after phone contacts with the teachers. The visits were organised on Tuesday, Thursday and Friday.

Detail about the number of registered schools is given in the deliverable D3.1. More than 600 pupils from primary (450) and secondary (150) schools visited the exhibition.

COMMUNICATION TO THE MEDIA (NEWSPAPER, RADIO, TV)

For budget reasons, the French partner did not employ a press agency. Due to good contact with the Cabinet Alquier, this press agency worked with the French partner and followed the progress of two students from the communication school ISCOM. A press release was sent to 40 journalists and regular contacts occurred with the media.

The results are the coming of 1 journalist from the magazine “Le Nord”.

Category	Title of the section	Website / Media / Newspaper	Date in 2007
Press on line:			
Article	Les sciences sans bobo à l'hôpital Provo	La voix du Nord Roubaix	4 th December
Article	Avec Sciences à l'hosto, un labo dans le hall de l'hopital	La voix du Nord Roubaix	1 st December

Category	Title of the section	Website / Media / Newspaper	Date in 2007
French regional written press:			
Article in a daily about exhibition	Einstein est super cool	Lilleplus	3 th December
Article in a monthly departemental newspaper	Opération "Sciences" à l'hôpital.	Magazine Le Nord	January 2009
Internal newsletter	Sciences à l'Hosto	Minibili (Université Lille1)	17 th November
Infonews	Sciences à l'hosto du 2 au 7 décembre	Forum Départemental des Sciences -	December
Regional broadcasting press:			
Advertisement with interview	News	NRJ	2-4 th December 2008
Advertisement on radio in news	News	Cherie FM and France-Bleue Nord	2-4 th December 2008

3.4.2 Participant 2 (ULB)

The "Printemps des Sciences", Spring of Science is a science festival organised every year during one week, in the French part of Belgium. The event involves many actors and the co-ordination of them is ensured by the Universities. In Brussels, the contributions of all the participants involved are co-ordinated by Infosciences (ULB). Spring of Science is the most important event for science communication in Belgium (French region). The list of the stakeholders who participated to the festival in 2007 is indicated in the deliverable D3.2. A complete description of the festival is reported in the deliverable D3.6 and the corresponding statistics and feedback are shown in the deliverable D3.5. All the communication materials are depicted in the deliverable D4.1.

The communication for such a festival is developed at two levels:

COMMUNICATION ORGANISED BY THE COMMUNAUTE FRANÇAISE DE BELGIQUE

It deals with general information, which concerns all the actors of the French speaking part of Belgium. La Communauté française de Belgique produces some tools like the program of scientific activities and the web site.

The distribution in the primary and secondary schools of the programme leaflets (+/- 8000 per year) has been done by the Communauté française de Belgique.

A general website has also been built: www.printempsdessciences.be. This website announced the program of all scientific activities and displayed the formula for the inscription to the activities proposed.

Furthermore, the Communauté Française de Belgique managed some partnerships with media - newspapers and radio - that diffused general announcements about this festival.

COMMUNICATION ORGANISED BY INFOSCIENCES (UNIVERSITE LIBRE DE BRUXELLES)

It focused on the specific very rich program proposed by the actors of Brussels region.

In a first time, Infosciences diffused the activities program towards his own contacts, mainly schools, teachers, associations, journalists and policy makers (+/- 6000 leaflets per year).

The usual communication tools of Infosciences were used to promote these festivals. These tools include: the annual Infosciences review, Infosciences monthly newsletters. Newsletters 10 and 11 announced the participation of ULB to the Arphystic festival. An article about the Spring of Science has been published by MJ Gama (Infosciences) in "Esprit libre", the newspaper of the ULB. Announcements were also present in the ULB website (www.ulb.ac.be) and in the Infosciences website www.ulb.ac.be/infosciences.

Infosciences negotiated particular partnerships with media for specific announcements of the Brussels program. Two partnerships with written press: Vlan (once, 300 000 ex.) and La Libre Belgique (six announcements, 120 000 ex each).

During three days (for each festival), TV Brussels diffused 21 times/day a 20" spot.

Furthermore, the excellent relations between the Université Libre de Bruxelles and regional authorities made it possible to spread posters all over the town: 70 posters Decaux size per year (120x180 cm) and 305 posters per year (40x60 cm). Almost all the 19 "communes" of the Brussels region published short articles about the Spring of science and put announcements in their website.

4. Established contacts beyond the consortium relevant to the dissemination of project

Press			
First name	Name	Name of the structure	Function
Participant 1 : USTL			
Mathieu	Millecamps	Nord-Eclair	Freelance journalist
Marie	Van de Kerkove	La Voix du Nord	Freelance journalist
Alexandra	Pigny	Journal du Conseil Départemental du Nord	Journalist
Bérangère	Dunglass	TV FR3 Lille Métropole	Journalist
Annick	Bonhomme	Radio Bleue Fréquence Nord	Journalist
Jean-François	Dautremepuis	Conseil Régional Nord Pas de Calais – Web service	Responsible of the web site of the regional council
		Echo du Thelle	Journalist
Antoine	Platteel	Magazine Le Nord	Journalist
Virginie	Grandclaude	NRJ and Chérie FM	Press relation
For the Aphystic festival, all the press contacts were managed by a press attaché agency, the Cabinet Alquier, who communicated with more than 150 journalists.			
Press			
First name	Name	Name of the structure	Function
Participant 2 : ULB			
Patrice	Goldberg	RTBF- Matière Grise	Journalist and producer
Véronique	Thiberghien	RTBF -Radio	Journalist
Philippe	Jourdain	Tele-Bruxelles	Chief editor and news manager
Alexandre	Wajenberg	Radio - Campus	Journalist
Adeline	Weckmans	Radio- campus	Journalist
Julie	Matteoni	La Libre Belgique	Journalist
	Chryslin	Passe - partout	Chief editor
Vanina	Lotte	Nouvelle Gazette	Journalist
Pascal	De Maeseneire	Charleroi Magazine	Chief editor
Marie	Adam	La Dernière Heure	Journalist
Janine	Lambotte	Victoire	Journalist

Scientific community			
First name	Name	Name of the structure	Position
Participant 1: USTL			
Michel	Chatrix	Local authority of the town Wattrellos	In charge of the scientific culture
Claire	Demuynek	Université des Sciences et Technologies de Lille	Member of the STEPS EUPEN
Peter	Rebernik	WONDERS	Manager of the project WONDERS
Bijan	Saghai	Physics school e2Phy	President of e2Phy
Daniel	Hennequin	PAMO	Local board of the congress
Patrice	Cacciani	JSM	Local board of the congress

Scientific community			
First name	Name	Name of the structure	Position
Isabelle	Kraus	JMC11	In charge of the workshop "Pedagogical innovation in Physics teaching and science vulgarisation"
Ovidiu	Caltun	FTEM	In charge of the organisation
Participant 2: ULB			
Jean-François	Claeskens	Institut d'Astrophysique et de Géophysique de Liège	Researcher
Claudine	Buess	Faculty of Science, Université Libre de Bruxelles	Director of the laboratory about chemistry
Nathalie	Vaeck	Faculty of Science, Université Libre de Bruxelles	Scientist
Dimitri	Leemans	Faculty of Science, Université Libre de Bruxelles	Scientist
Pasquale	Nardone	Faculty of Science, Université Libre de Bruxelles	Scientist
Marc	Hou	Faculty of Science, Université Libre de Bruxelles	Scientist
Jean- Christophe	De Biseau	Faculty of Science, Université Libre de Bruxelles	Scientist

Artistic community			
First name	Name	Name of the structure	Position
Participant 1: USTL			
David	Gadenne	Theatre Le Prato at Lille	non-executive director and artist
Gilles	Defarcque		executive director
Catherine	Dunoyer	Theater Danse à Lille at Roubaix (Gymnase)	executive director
Marius	Moulin		communication
Françoise	Pointard	Espace Culture at the Université des Sciences et Technologies de Lille	Executive director
Maud	Piontek	Condition Publique de Roubaix	In charge of the communication
Richard-Emmanuel	Eastes	Les Atomes Crochus	President of the association
Michel	Hallet Eghayan	Compagnie de Danse Hallet Eghayan	Choreograph
Participant 2: ULB			
Yves	Larec	Theatre Théâtre du Parc	Director
Brigitte	Mounier	Compagnie des Mers du Nord	Director

Hospital Staff			
First name	Name	Name of the structure	Position
Participant 1: USTL			
Benoît	Lorsin	Victor Provo hospital	Executive director Communication
Valérie	Van den Hende		Secretary Communication
Sophie	Dillief	Victor Provo hospital	Health staff in the paediatric service

Other institutions			
First name	Name	Name of the structure	Position
Participant 1: USTL			
Yves	Roques	Science Centre Forum départemental des Sciences	Executive director
Brigitte	Duval		Non-executive director
Colette	Cazin		Communication
Odile	Mobihan		In charge of the French Science Week

Other institutions			
First name	Name	Name of the structure	Position
Catherine	Lefrançois	Université des Sciences et Technologies de Lille	In charge of the organisation of the Researcher's Night
Michel	Cucheval	Local authority of the town Lille	deputy major, responsible of researcher and education
Faustin	Aissi	Local authority of the town Villeneuve d'Ascq	deputy major, responsible of researcher and education
Pierre-Jocelyn	Huyghe	Local authority of the town Villeneuve d'Ascq	deputy major, responsible of environment
Didier	Manier	General Council of the North area of France	Deputy of Villeneuve d'Ascq
Cathy	Buquet	Region Council of the North area of France	Director of Research and High Education
Unknown	Unknown	Education authority area	In charge of the European exchange
Participant 2 ULB			
Unknown	Unknown	Local authorities (19 members)	In charge of the culture

5. Publishable results

Two articles have been published within the project:

eStrategie Journal, June (2008)

By organising festivals and activities on science for the public at large, the MEYPS SC2 Project is primarily a transnational exchange of best communication science practices. It involves the Universities of Lille and Brussels as well as a top-level panel of external experts from Europe

Science reaches out to embrace a new generation

Europe, governments and scientific communities feel the need to improve the awareness of the general public for science by promoting scientific understanding across society. The aim is the participation of the public in a debate about the major role of science in society, improving public confidence and directing research. Science-focused events are a popular way of reaching large and broad public audiences from across a large spectrum of social groups. Their aim is to excite the public about the wonder of science and technology, to provoke curiosity about scientific progress and to help the public to relate science to their daily lives. These promotional activities shift from encouraging public understanding of science to engagement with science. It favours the dialogue based approach.

What is MEYPS SC2 project?
The overall aim of the MEYPS SC2 project is to offer free events to wide public participation with the promotion of science and technology. These are high quality events that provide a fun atmosphere and include playful scientific experiments, arts, music and demonstrations in a challenging and exciting environment. By this method, science is getting "out of the laboratory" and closer to the public in non-traditional ways. MEYPS SC2 wants to raise the awareness of science among school children and the general public, especially people like parents and grandparents who might influence young people in their career choice, especially girls. MEYPS SC2 is also interested in intercultural exchanges of methodologies and strategies in communicating science, based on strong stability at the European level of young people and scientists.

How to approach science?
Some examples of Arts and Science
All around us, art is meeting science. Art is also a potent tool to allow the public and young people to become interested in scientific knowledge while expressing their emotions, hopes and fears regarding the place of science and technology in society. Several initiatives were developed by the two partners of the MEYPS SC2 project.

A crucial condition for the further impact of this project remains the ongoing support of researchers and lecturers who sacrifice their time and efforts to sensitise young people to embark scientific studies and a scientific career in future

In France, a scientific festival, called *Arphysic*, was organised by the University of Sciences and Technologies of Lille with the help of the association *Physifolies*. It took place in November/December 2007 at Lille (France). Its main objective was to show to the public many examples of art and science interacting. Under a tent, a 400 m² workshop exhibition showed more than 20 interactive experiments coming from French and Belgian research laboratories, scientific associations, museums and science centres. Over four days, more than 700 pupils from primary and secondary schools and 4,200 French and foreign citizens had the opportunity to talk to scientists (student, researchers) and make simple experiments on various topics (including analysis of paintings, holography, music instruments, teleportation by Star Trek, Spaghetti Bridge, levitation in comic books, etc. Thanks to collaboration with a private company specialising in 3-D screen, a citizen presented the use of solar sails in the derivation of an asteroid. A Swiss artist presented two sculptures based on shape memory alloys, materials that are largely used in industry, for example in mobile phones. Beside this major event, science cafes and conferences were organised. It

gave the opportunity for the public to debate with scientists and artists on the role and influence of physics in the restoration of art objects, the new means of transport in space and science fiction books. Another example of strong collaboration between scientists and artists are demonstrations. MEYPS SC2 had also the opportunity to collaborate with a theatre and a cultural centre and plan demonstrations showing how physicists and artists have worked together. All these events highlight the numerous similarities between the arts and science, such as the need for inspiration, creativity and the willingness to experiment.

Two others initiatives are currently being developed in Belgium. "Sciences on scene" is an annual event coordinated by the CAL (Centre d'action laïque) and

several associations of parents and teachers from the Official Education Network of the French Speaking part of Belgium (Communauté Française de Belgique) with the help of Infosciences (Université Libre de Bruxelles). Pupils are invited to illustrate scientific phenomena, discoveries and problems through a 10-minute presentation (theatre, song, dance, mime...). Primary schools were involved in the 2007 event while, in 2008, secondary schools were at work. Altogether, 20 schools participated in this experience in the frame of MEYPS SC2 project. After a two-level selection, the winner of each contest is invited to present his play during the Festival day organised at the Forum des Sciences (Lille).

Another approach is the literary competitions organised by Infosciences (ULB). Teenagers are given the opportunity to write about topics like the ethics of scientists, the role of science for sustainable development and many others. The authors of the best texts defend their opinions and discuss them with an audience composed of scientists and the general public.

Feedback from citizens, Teachers, children, students
The *Arphysic* festival demonstrated that an audience appreciated how complex science phenomena could be explained in simple terms with concrete examples. The pedagogical approach was judged original, well adapted and professional. People appreciated the "hands-on" approach to creating experiments and were interested in the role of science and technology in society and their daily lives. The audience thinks that this approach should be repeated

in a bid to encourage young people to embark on studies in science. The intervention with Art was also appreciated. Teachers present at the event judged the initiative important for the pupils, as it allowed them to approach science in a more playful way than in the classroom. Additionally, the pupils had useful direct contact with students and researchers involved in science studies. For teachers, it is always interesting to see the application of science demonstrated outside the school. This initiative allows pupils to change their perception about science.

Some comments from students who presented experiments during the workshop exhibition included these: "During this event I learned that it was much harder to explain than to understand, and that we have sometimes to take roundabout ways to make an idea easily understandable". "The best award is when people are looking very interested and ask more questions!" and "I think that when I'm a teacher, I will limit on the concrete aspect of physics lessons!"

Regarding the theatre and literary competitions, pupils particularly appreciated the opportunity they had to express themselves. Teachers and the general public also enjoyed these initiatives, since they demonstrated that there are many reasons to be confident in young people and their involvement in science and society.

Evgenia Seadova, Associate Professor from the Institute of Mathematics and Informatics, Bulgarian Academy of Sciences, said of the MEYPS SC2 project: "The MEYPS SC2 project is a good example of how science could be made understandable and attractive not only for students, but also for the general public."

Building of a bridge using spaghetti by students during the Arphysic festival

At a glance

Project Title
MEYPS SC2
Mobility of European Young People and Scientists and a Scientific and Cultural Context

Contact
Please contact the coordinator of the project:
Dr. Nathalie Lebrun
Project Coordinator,
Physics Department - University of Sciences and Technologies of Lille
Nathalie.lebrun@univ-lille.fr
nlebrun@univ-lille.fr

Partners
Université Libre de Bruxelles, Belgium
Dr Marie-Josée Gams
University of Sciences and Technologies of Lille, France
Dr Nathalie Lebrun
Egypers
Institute of Mathematics and Informatics, Bulgaria
Associate Professor Evgenia Seadova
Agora Science, University of Turin, Italy
Science coordinator Dr Isabella Susa
Department of Physics, University of Algarve, Portugal
"Al. I. Cuza" University, Faculty of Physics, Romania
Professor Dr. Ovidiu Carban

Nathalie Lebrun
Project Coordinator

Nathalie Lebrun obtained her PhD in Medical Science from the University of Lille (France) in 1994. In addition to its research and teaching activities, she is involved in various communicating science activities. Formerly the coordinator of the World Year of Physics in the North of France in 2005, she is presently taking part in the European project MEYPS SC2 as Coordinator. She aims to raise awareness on science and technology for the public and especially young people.

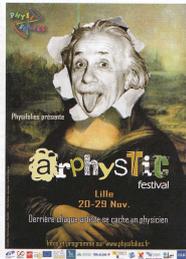
MEYPS SC2

www.tntinipublishers.com

Reflets de la physique (October 2008)

Le festival Arphysitic

Daniel Hennequin (daniel.hennequin@physiolies.fr)
Laboratoire PHLAM, Bat. P5 - Université de Lille 1, 59655 Villeneuve-d'Ascq Cedex



Affiche de l'exposition

Du 22 au 25 novembre 2007, l'immense chapiteau de 600 m² dressé dans le Vieux-Lille ne passe pas inaperçu ! Près de l'entrée, deux gigantesques écrans diffusent des images où se mêlent futurisme et onirisme. Juste à côté, une toile géante proclame « Arphysitic festival ». La presse locale titre : « Ce week-end, commencez absolument vos enfants au festival Arphysitic ! ». Dans un des petits restaurants près du chapiteau, le chef crée un dessert « Arphysitic ». Et dans le chapiteau, c'est près de 5000 personnes qui se pressent pendant 4 jours. Mais qu'est-ce donc

que ce festival *Arphysitic* qui attire les foules en cette fin d'automne ? Un festival de musique ? De cinéma peut-être ? Ou de théâtre ? Eh non ! C'est un festival de physique ! Comme son nom l'indique, le festival est un ensemble d'événements qui s'étalent sur une période restreinte (deux semaines dans notre cas) sur un thème précis, traité du point de vue de la physique. En 2007, nous avons choisi de décliner « Physique et Art » au fil de conférences, bars des sciences, pièces de théâtre, spectacles de danse et surtout, point d'orgue du festival, l'exposition du Vieux-Lille.

Dialoguer avec le grand public

En 2004-2005, pour l'Année Mondiale de la Physique, la section locale de la SPF crée l'association Physiolies dans le but de regrouper autour d'un projet commun tous les acteurs de la physique dans le Nord-Pas de Calais : enseignants du secondaire et du supérieur, chercheurs, étudiants, associations... L'année est un succès : nous décomptons 30 000 visiteurs sur environ 120 événements. Parmi ces événements, les quatre expositions organisées à la Maison Folie Wazemmes accueillent à elles seules 12% du public. Les « Physiolies » regroupent des expériences de physique interactives et ludiques. Chaque stand est animé par un physicien – étudiant, technicien, ingénieur, chercheur ou enseignant – et c'est donc le dialogue entre le physicien et le public qui est privilégié. De plus, située dans un quartier populaire de Lille, la Maison Folie Wazemmes nous permet de toucher un public qui ne

Dernière chaque artiste se cache un physicien. C'est ce que proclamait l'affiche d'Arphysitic, un festival de physique qui se tenait dans la métropole lilloise en novembre 2007. Organisé par Physiolies, une action de la section locale de la SPF, il s'articule autour d'une exposition montée sous un immense chapiteau dans le Vieux-Lille. L'événement fut un énorme succès. Ce fut aussi pour les membres de la section locale une expérience extrêmement enrichissante. L'occasion de découvrir l'univers de l'événementiel et d'y appliquer le résultat de leurs réflexions sur la valorisation de notre discipline.



1. La façade du chapiteau - 2. L'entrée du chapiteau et l'expose « Hologrammes » - 3. Le chapiteau en démontage - 4. Le minic. face à la chambre noire, ne manque pas d'attirer l'attention. Sa projection dans la chambre noire est... surprenante !

Physique et art

fréquent pas en général les lieux de science. La plupart des visiteurs entrent par hasard, mais restent typiquement deux heures dans l'exposition : l'intérêt soulève et maintient.

Fin 2005, nous décidons d'organiser tous les deux ans un festival de Physique centré sur une telle exposition. Après avoir trouvé un financement, qui est venu essentiellement de l'Europe¹, il nous restait à définir le thème : Physique et Art a été retenu pour son côté porteur et parce que nous avions déjà un peu d'expérience dans ce domaine.

Attirer le public

L'objectif du festival est de faire découvrir la physique à ceux qui ne la connaissent pas. Nous voulons capter un public qui ne se rendra pas spontanément à une manifestation scientifique. Il nous faut donc investir un lieu de passage important, et attirer suffisamment la curiosité du passant pour qu'il fasse les quelques pas qui le séparent de l'exposition.

Un nom et une affiche

On peut douter de l'utilité d'annoncer un tel événement au grand public : dans une métropole comme Lille, l'annonce d'un festival de physique va passer inaperçue au milieu des dizaines d'événements organisés chaque week-end. Il nous faut donc un nom accrocheur – ce sera « Arphysitic » – et un visuel qui se remarque – le portrait d'Einstein le plus célèbre, sur fond de journaux, a bien rempli son rôle. Pour le reste, rien d'extraordinaire : dossier de presse envoyé à tous les médias et pleine page de publicité dans des quotidiens gratuits.

Un lieu central et une scénographie recherchée

Le choix du lieu est primordial. Malgré un succès important, nous optons pour un chapiteau dans le Vieux-Lille. Dans ce quartier historique et commerçant, le montage du chapiteau de 600 m² ne passe pas inaperçu (c'est une promesse !). En insérant dans la façade du chapiteau deux écrans géants diffusant en permanence des films de science choisis pour leur valeur esthétique, nous ne pouvons pas manquer d'attirer les foules.

Garder le public

Piquer la curiosité du promeneur est une chose, le retenir suffisamment longtemps pour lui montrer notre passion de la physique et lui donner envie de revenir en famille quelques heures plus tard en est une autre. Ses premiers pas dans l'exposition doivent lui donner envie de voir le reste. Et bien sûr, les sujets abordés doivent être passionnants, et suffisamment variés pour toucher tous les âges et toutes les cultures.

Une scénographie accueillante

Un chapiteau est initialement un peu froid, et le rendre accueillant est notre premier souci. Nous cloisonnons partiellement l'intérieur du chapiteau afin de casser l'aspect « foire » tout en conservant une impression d'espace. Le cloisonnement permet aussi de guider le visiteur sur un circuit sans jamais l'imposer. Des éclairages de couleurs différentes, tout en rendant le chapiteau plus chaleureux, contribuent aussi à délimiter des zones en jouant sur un code couleur. Le visiteur entre d'abord dans une zone sombre et fermée abritant une exposition

itinérante du Musée de l'Holographie² : une trentaine d'hologrammes, un diaporama pédagogique, et un physicien pour ceux qui voudraient en savoir plus. Pour sortir de cet espace, le visiteur écarte un rideau et arrive dans la zone d'exposition proprement dite. Face à lui, l'écran géant qui diffuse les mêmes films qu'à l'intérieur, mais véritablement son regard. Puis la découverte peut réellement commencer.

Physique et art créés artistes

Certains stands privilégient le côté artistique. C'est le cas du stand « Alliances à mémoire de forme », construit autour de deux sculptures monumentales d'Étienne Krahenbühl³. Etienne est un sculpteur suisse travaillant le métal. Il doit sa maîtrise des alliances à mémoire de forme à sa rencontre avec Rolf Goehardt, un physicien de l'EPFL (Lausanne). Etienne met à profit l'hypéresticilité de ces alliages pour créer des sculptures dynamiques à taux de relaxation extrêmement lent⁴. Au-delà de la dimension visuelle, les éléments métalliques qui s'entrechoquent génèrent de longues mélodies aux sonorités harmonieuses. Ces œuvres attirent inégalement petits et grands. Des animateurs sont là pour répondre à leur envie de comprendre, et en profitent pour montrer les autres propriétés étranges de ces alliages.

Physique et art créés enfants

Les enfants aussi s'amuse à *Arphysitic* ! Par exemple, avec des spaghetti, en essayant de construire un pont suffisamment solide pour faire passer une boule de pétanque. Ou encore, en participant à un concours de dessin un peu particulier... puisqu'il faut d'abord fabriquer les gouaches à partir de pigments !



4. Autour d'une sculpture d'Étienne Krahenbühl, une étudiante-animatrice explique à des enfants les propriétés des alliages à mémoire de forme - 5. Les adultes aussi s'amuse...

« Pas besoin de matériel sophistiqué pour faire découvrir l'analyse spectrale ! Une toile, un crayon au graphite, et un peu de vernis achetés au magasin de loisirs du coin, un caméscope et une lampe UV à 4€... et le tour est joué. »

Accessible aux enfants mais destiné à tous les publics, un quiz multimédia interactif tourné pour l'occasion reprend tous les thèmes abordés dans l'exposition. Constitué de petits sketches filmés donnant prétexte à une question, il permet de « réviser » tout en s'amusant...

Physique et art côté physique

Qu'est-ce que le son ? Comment fonctionne un instrument de musique ? Quels sont les différents procédés de capture de l'image ? Comment peut-on analyser une œuvre d'art ? Qu'est-ce que la datation au carbone 14 ? Comment fonctionne un appareil photo ? Comment fonctionnera la télévision en relief ? Qu'est-ce que la lévitation ? Autant de stands abordant la physique de l'Art. Prenons, par exemple, l'analyse des œuvres d'art. Pas besoin de matériel sophistiqué pour faire découvrir l'analyse spectrale au grand public ! Une toile, un crayon au graphite, de la gouache et un peu de vernis achetés au magasin de loisirs du coin, et le tour est joué. Le plus dur est de trouver quelqu'un capable de nous faire un dessin au graphite acceptable, puis de le scanner d'une peinture à la gouache tout aussi acceptable. Venir partiellement le tableau n'est pas un problème... Le caméscope de l'association, en position *night/low*, nous permet de voir dans l'obscurité ce que nous avons dessiné derrière la peinture. Et une lampe UV à 4€, destinée initialement à détecter les faux billets, révèle les zones vernies. Le public est ravi... Autre exemple : comment fonctionne un appareil photo ? Il faut bien sûr remonter à la source, c'est-à-dire la chambre noire. Et expliquer la propagation de la lumière à travers une petite ouverture et l'inversion de l'image sur l'écran. Le plus simple est de le montrer. Donc, nous avons construit une chambre noire pouvant contenir les visiteurs, et placé devant l'ouverture un mince bande éclairé qui, en plus, mettrait de l'animation sous le chapiteau. Résultat : une animation sous l'entrée de la chambre noire.

Des étudiants enthousiastes

Dernière chaque stand, un physicien, le plus souvent un étudiant de fin de licence ou en master (30 étudiants se sont relayés pendant les 4 jours). C'est, bien sûr, leur enthousiasme communicatif qui fait le succès de cette exposition : les visiteurs découvrent une physique passionnante et des jeunes physiciens passionnés et passionnés. Ils passent en général plus d'une heure et demie sous le chapiteau et, à la sortie, en redemandent...

De la danse et du théâtre

Si l'exposition est l'événement phare du festival, elle n'est pas le seul : en plus des traditionnels bars des sciences et autres conférences, le festival propose des événements artistiques à connotation physique plus ou moins appuyées. Citons par exemple la chorégraphie « Erase-E(s) » illustrant les écoulements réfléchis du scientifique, ou « Valentin bien au-dessus des images », qui évoque l'histoire de la première femme photographe.

Une expérience réussie

Avec près de 5000 visiteurs, dont 800 scolaires, uniquement pour l'exposition, cette première édition du festival *Arphysitic* a largement dépassé nos objectifs les plus optimistes et place d'emblée ce festival de physique parmi les plus gros événements culturels de la métropole lilloise. Les nombreux articles parus dans la presse écrite régionale et transfrontalière, ainsi que les deux reportages télévisés diffusés sur France 3 et une chaîne locale, ont encore accru notre impact.

Arphysitic est donc un succès, et nous avons d'ores et déjà programmé la seconde édition du festival en novembre 2009. Le thème retenu cette fois, Année Mondiale de l'Astronomie oblige, est Physique et Astronomie, et le projet a déjà été labellisé AMA09. Rendez-vous donc en 2009, pour « réviser » et comprendre l'Univers » ■

(1) La Maison Folie Wazemmes est une des nombreuses maisons culturelles créées en 2004, dans le cadre de Lille, capitale européenne de la culture.
(2) « Physiolies » agit à l'origine le nom des expositions qui nous avons organisées à la Maison Folie Wazemmes. Depuis 2006, nous préférons ce nom pour toutes nos manifestations.
(3) Projet MEYPS SC2 : <http://meyps.univ-lille.fr/>
(4) Musée de l'Holographie, Paris : <http://museeholographie.com/>
(5) Voir www.ah.fr/
(6) Bureau-état, Étienne, de décrire les extraordinaires mécanismes de ses œuvres par des termes aussi triviaux !

PHYSIOLIES, LA PHYSIQUE AUTREMENT

Physiolies est une action de la section locale Nord-Pas de Calais - Picardie de la SPF. Elle est animée par un bureau de 6 personnes. Chacun s'investit sur tous les aspects de l'organisation du festival, souvent bien au-delà de sa mission initiale :

- Maxime Beaugois (communication), Patrice Cauciant (communication), Bruno Capoen (conférences et bars des sciences), Jean Costéus (expositions), Marie-Cristine Goussier (événements artistiques), Daniel Hennequin (expositions et site web), Georges Wlozardac (événements artistiques) et notre présidente Nathalie Lebusin (recherche des budgets).

Les partenaires suivants ont également participé à l'élaboration des stands de l'exposition *Arphysitic* : l'URF de Physique de l'université de Lille 1, le laboratoire PHLAM (UMR 8523), la cellule vidéo du service multimédia de l'université de Lille 1 (SRMAD), le forum départemental des Sciences, Technologies, Université Libre de Bruxelles, le musée de l'Holographie (Paris), Michel Charry (maître de Wattemol), Thierry Teyssou (société Belbelief), Bernard Collin et Marc Rigby (lycée Don Bosco de Roubaix, Belgique), Olivier Botsard (collaborateur), Étienne Krahenbühl (scolaire).

Des partenaires financiers nous aident depuis le début de l'aventure : l'Union Européenne, le Conseil Régional Nord-Pas de Calais, les Conseils Généraux du Nord et du Pas-de-Calais, la Ville de Lille.

Plus d'informations sur www.physiolies.fr

Others are under preparation and will be published after the project.