e-KNOWNET

LLP Application – Call EAC/61/2006

Transversal Programme / Key Activity 3: ICT / Networks

NETWORK FOR ICT-ENABLED NON-FORMAL SCIENCE LEARNING

Kick-off Meeting, 15-17 January 2008, Athens
EUGENIDES FOUNDATION

Education and Culture
Lifelong learning Programme

EACEA
Education, Audiovisual & Culture Executive Agency

Policy context

LIFELONG LEARNING PROGRAMME

Overarching priority

- To reinforce the contribution made by **education and training** to achieving the **Lisbon goal** of making the EU the most competitive knowledge-based economy, with sustainable economic development, more and better jobs, and greater social cohesion.

Policy context / LLL P

Transversal Programme - Key Activity 3: ICT (promotion of ICT for learning)

Main objectives

- Addressing ICT teaching and learning needs across two or more sectors of the sectoral programmes Comenius, Erasmus, Grundtvig and Leonardo (school education, higher education, vocational training, adult educational and other educational pathways)
- **Key Activity 3 is NOT about technology but about HOW learning can be enhanced through ICT** (learning issues which cannot be taught otherwise, e.g. simulations; discovery learning; attracting drop-outs back to learning; enabling learning outside the school environment; flexible lifelong learning to bridge the digital gap, etc.).
- Focusing on the **potential of ICT as a catalyst of social and educational innovation and change.**
- Projects **should build upon existing work and results from Community-funded research, from Community education and training programmes, from national and regional initiatives, and from the private sector,** and should include a clear plan for dissemination and application of the results of the project.

Policy context / LLL P/ Key Activity 3: ICT

NETWORKS

Priority is given to networks aiming at designing and implementing knowledge-sharing schemes, which

- Are run by European networks, associations, public authorities, public-private partnerships, etc.,
- Support **contacts and exchanges of good practice**
- Widen their activities **from information-gathering to knowledge-sharing** between specific learning communities.

At a glance

Main objective of the e-KNOWNET

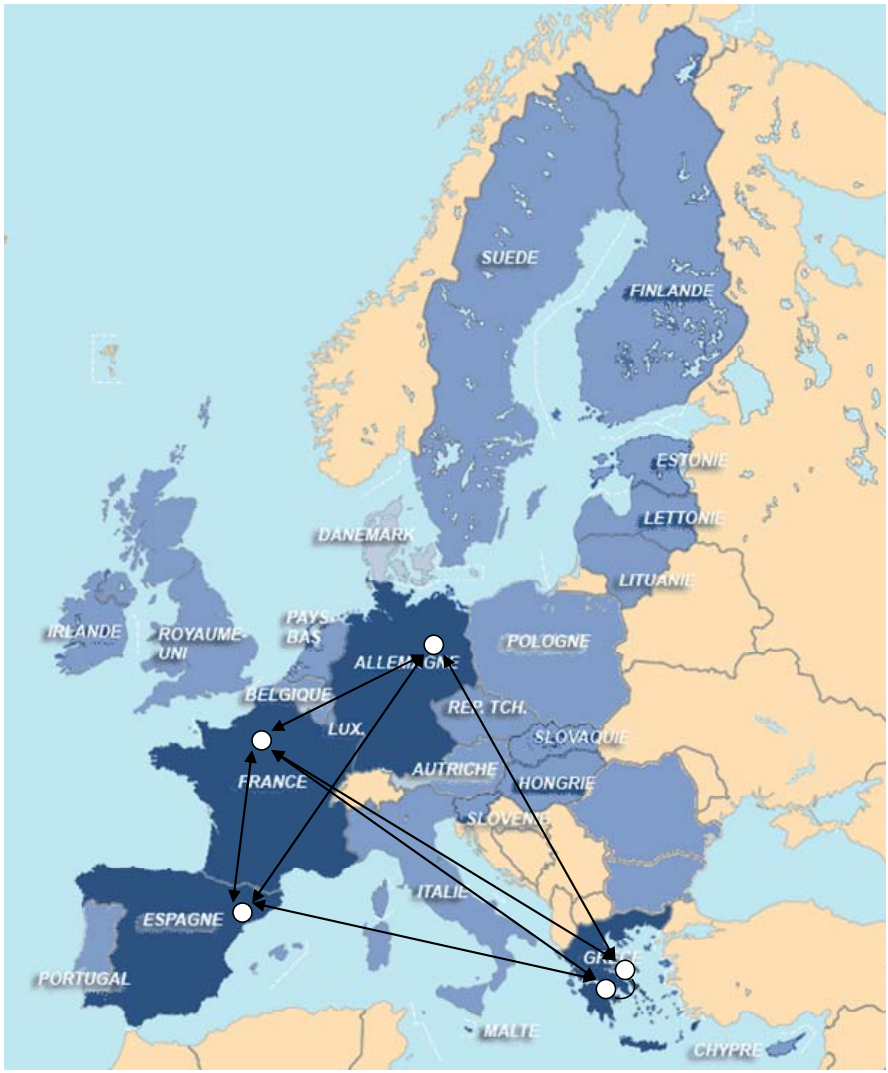
- To develop an innovative and viable ICT-enabled mechanism (routines, methods and practices) able to accelerate the communication of new scientific knowledge towards the non-expert public, in forms suitable for non-formal learning.

At a glance

- **Start date**: January 2008
- **Duration**: 36 months
- **Community funding**: 75%
- **Leader:** Eugenides Foundation - GR

The partenariat: 5 partners from 4 European countries

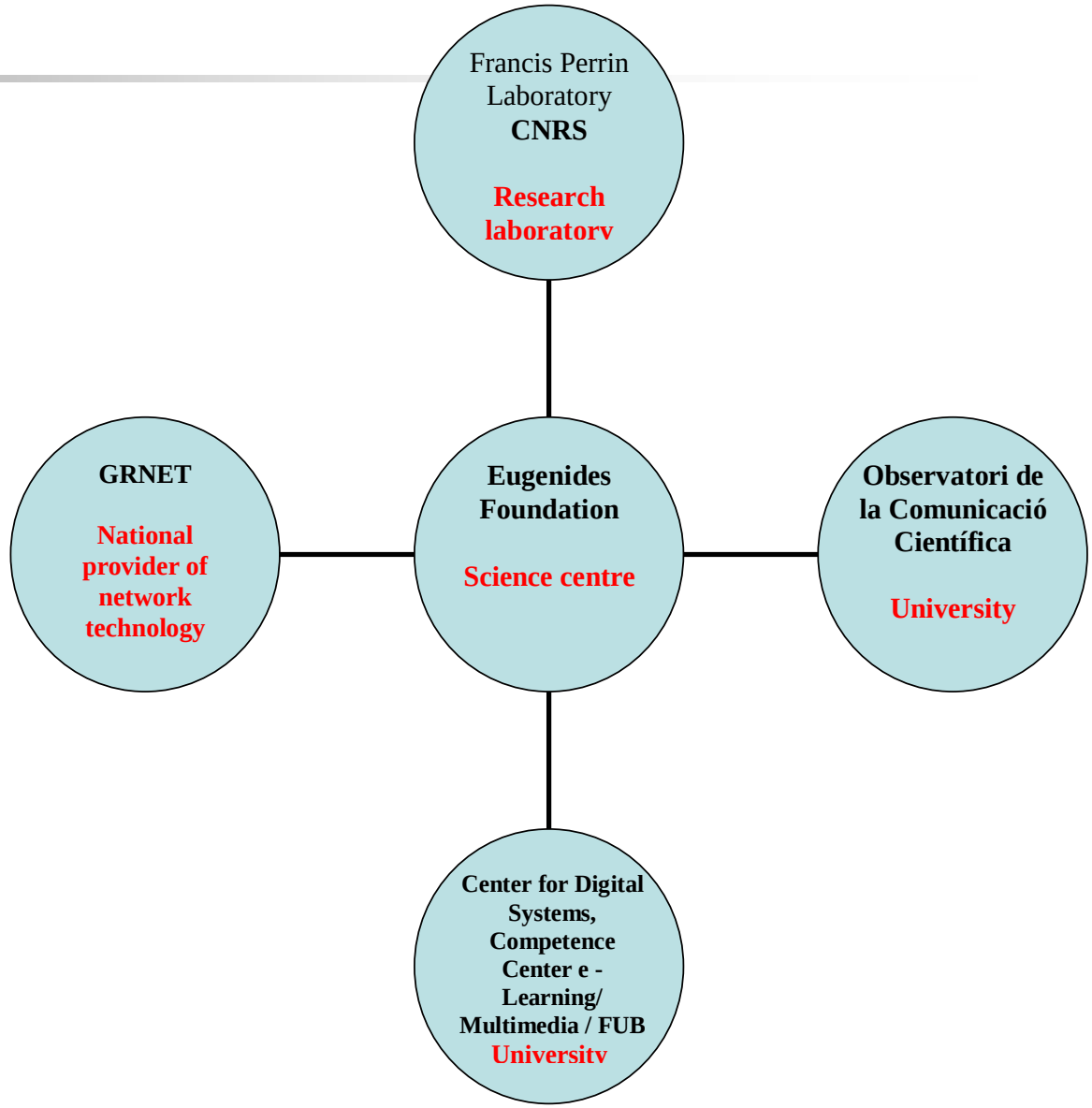
- Eugenides Foundation – GR
- Greek Research and Technology Network - GR
- Freie Universität Berlin - Center for Digital Systems, Competence Center e-Learning/Multimedia - DE
- Centre National de la Recherche Scientifique (CNRS) / Francis Perrin Laboratory – FR
- Universitat Pompeu Fabra / Observatori de la Comunicació Científica, OCC - ES



The partenariat

Feature in common

•Relation to **science knowledge - science learning** (producing, distributing, popularizing, and/or utilizing scientific knowledge as learning resources).

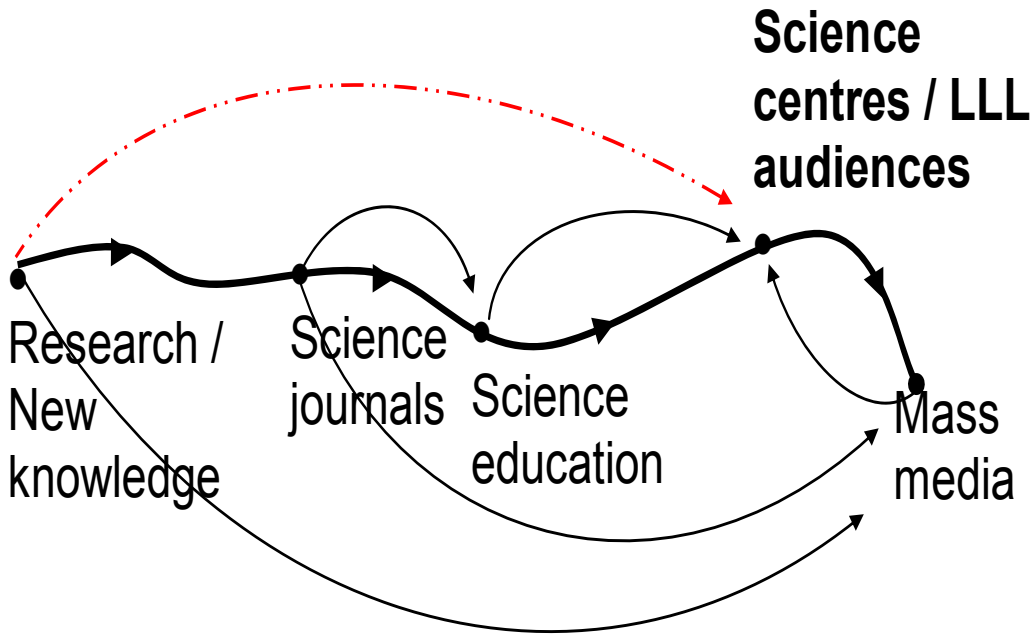


The point of departure (1)

- **Information flow** from traditional loci of science knowledge production (e.g. research centers, universities, sites of industrial research) to non-expert segments of society can take as long as **two decades.**

The point of departure (1)

The “adventures” of new science knowledge before it reaches the non-expert



Scientific “language”

Public “language”

The point of departure (1)

- There is evidence that 15-20 years intervene between the moment of a scientific discovery and the peak of its representation in the mass media[1].

(about 20 year lagging for nuclear energy issues, 12-15 year for informatics, 8-10 for biotechnology)

1. Rudig W. (1990), Anti-nuclear movements: a world survey of opposition to nuclear energy, London, Longmans. Wright, S. (1986), Recombinant DNA technology and its social transformation 1972-1982, Osiris, 2, pg.303-360.

The point of departure (1)

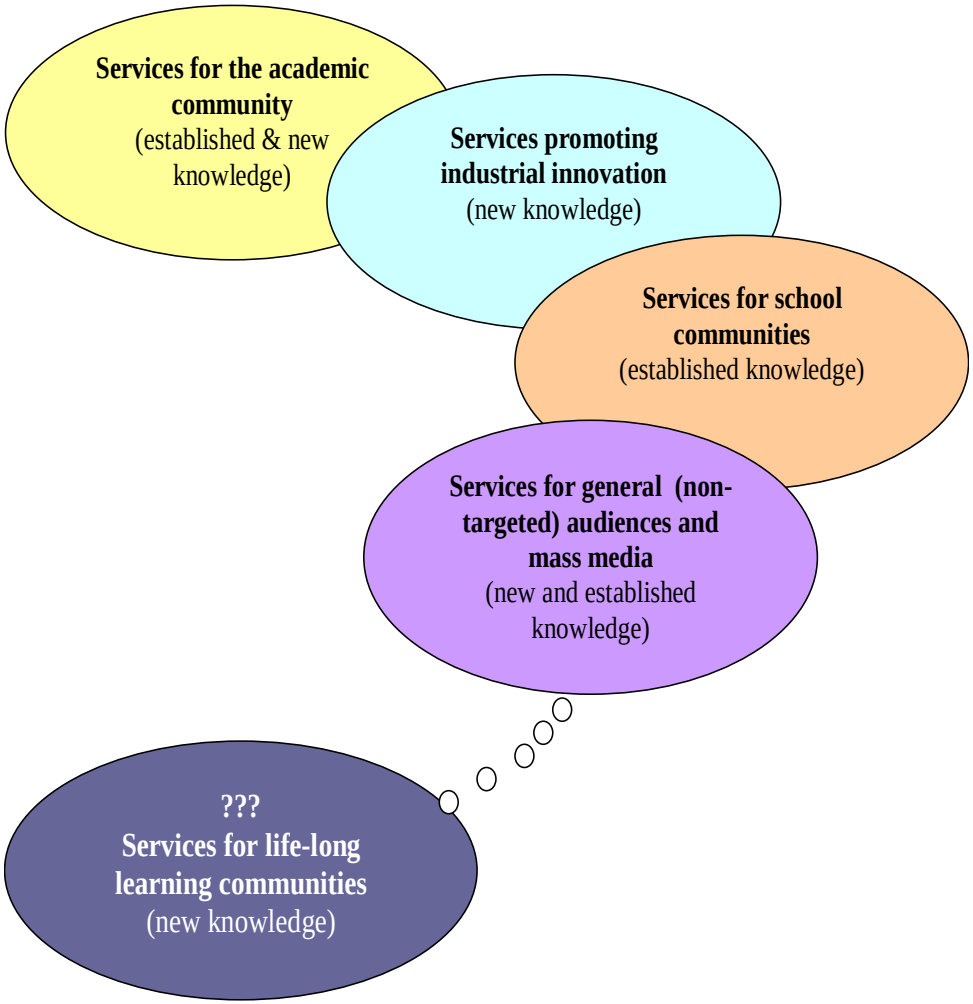
Table: Time lag between technological and scientific innovation and their peak coverage in the mass media

Technology	Invention	Innovation	Peak coverage in the mass media
Nuclear	**1942** First nuclear chain reaction	**1955-6** First plants for nuclear energy production	End of ’70s
Informatics	**1943** ENIAC (Electronic Numerical Integrator and Computer) **1947** Transistor	**1965** electronic calculator **1975** First PCs	Mid ’80s
Biotechnology	**1944** DNA **1973** rDNA	**1975** Establishment of the first companies producing biotechnology products	Early ’90s

Source: *Rudig, W. (1990), Anti-nuclear movements: a word survey of opposition to nuclear energy, London: Longmans; Wright, S. (1986), Recombinant DNA technology and its social transformation 1972-1982, Osiris, 2, σσ.303-60.*

The point of departure (2)

- Intermediary organizations and structures facilitating the circulation of new research results information (EU-funded Innovation Relay Centres, R&D liaison offices, dedicated sites etc) **focus on industry, academia and other expert audiences.**



The point of departure (2)

ICT-MEDIATED SERVICES (with relevance to the e-KNOWNET)

Audience type	**New knowledge** (non-popularised)	**New knowledge** (popularised)	**Established knowledge** (non-popularised)	**Established knowledge** (popularized)
Academic community and expert audiences	**EXAMPLES** Specific projects, e.g. http://www.darenet.nl/en/page/language.view/dare.start http://europa.eu/sinapse/sinapse/index.cfm Academic sites Academic e-journals	**EXAMPLES** http://cordis.europa.eu/marketplace/home.html	**EXAMPLES** Various university sites	
Industry	**EXAMPLES** Innovation Relay Centres **http ://www.innovationrelay.net/** R&D liaison offices sites	**EXAMPLES** EU http ://cordis.europa.eu/marketplace/home.html		
School community				**EXAMPLES** **European School Network** http://www.eun.org/portal/index.htm Various school networks
Life long learning communities		??????		
General audiences (not targeted) and mass media		**EXAMPLES** Mass media/communication portals http://www.alphagalileo.org		**EXAMPLES** ECSITE http://www.ecsite.net/new/ Science centres sites http://www.sciencemuseum.org.uk/ http://www.tryscience.org/

The point of departure (2)

- Important players in the field of non-formal science learning, such as **science centres**[1], often rely on the mass media to stay updated about state-of-the-art research and technological developments.

- The mass media tend to select their content following the criterion of newsworthiness and public attractiveness and less often that of real scientific value or innovative quality[2].

[1] Special Eurobarometer 224 “Europeans, Science & Technology” Report, June 2005
[2] A Blueprint for a new approach, Science, Technology and Innovation in the Media (STIM), Ministry of Flanders, Science and Innovation Administration, Crete - March 27, 2003.

Decoding the picture

Restriction of new scientific knowledge within isolated “islands”, which

- hinders innovation
- holds back the potential of societies to advance their learning environments, and improve their information and educational resources and practices.

The e-KNOWNET

Aims and objectives

- Produce an **innovative model of a European knowledge-sharing network**
- Trigger **new dynamics in ICT-enabled life-long learning,** through linking up fields that traditionally have been working in isolation, i.e. scientific research institutions, communities of pedagogical science experts and science centres.
- Use **ICT tools to promote knowledge-sharing,** collective thinking and networking.
- Promote the **educational role of ICT in non-formal environments and encourage digital literacy**, across the lines of gender mainstreaming.
- **Enhance the quality of educational services provided in non-formal environments**, such as the science centre/museum.
- Offer **new incentives in science learning** (on selected topics of Physical Chemistry)
- **Promote equal opportunities in informal learning for the disadvantaged**

THE THEMATIC FIELD: Physical Chemistry

The e-KNOWNET

The target groups of the e-KNOWNET addressed in the short-term

Secondary education audiences

- **New incentives** for science teaching to disinterested students;
- Offer **enhanced ICT-related possibilities for learning** (activities for “physical” manipulation, otherwise impossible, offer opportunities for simulating laboratory environment and laboratory work where students have no access to, illustrate phenomena and processes that might be too slow or fast to do in the school lab; offer access to non-existing entities (no friction environments).

Adult audiences

- Opportunities for science learning to adults with no previous knowledge or interest in science;
- Learning opportunities to early school leavers;
- Opportunities for social interaction through the web or locally in the science centre;
- A “safe” context for exercising life skills.

Science centres and museums

- Remain updated in terms of state-of-the-art science content
- Offer innovative ICT-enabled services and thus increase their positive impact to the public.

The e-KNOWNET: A dual concept

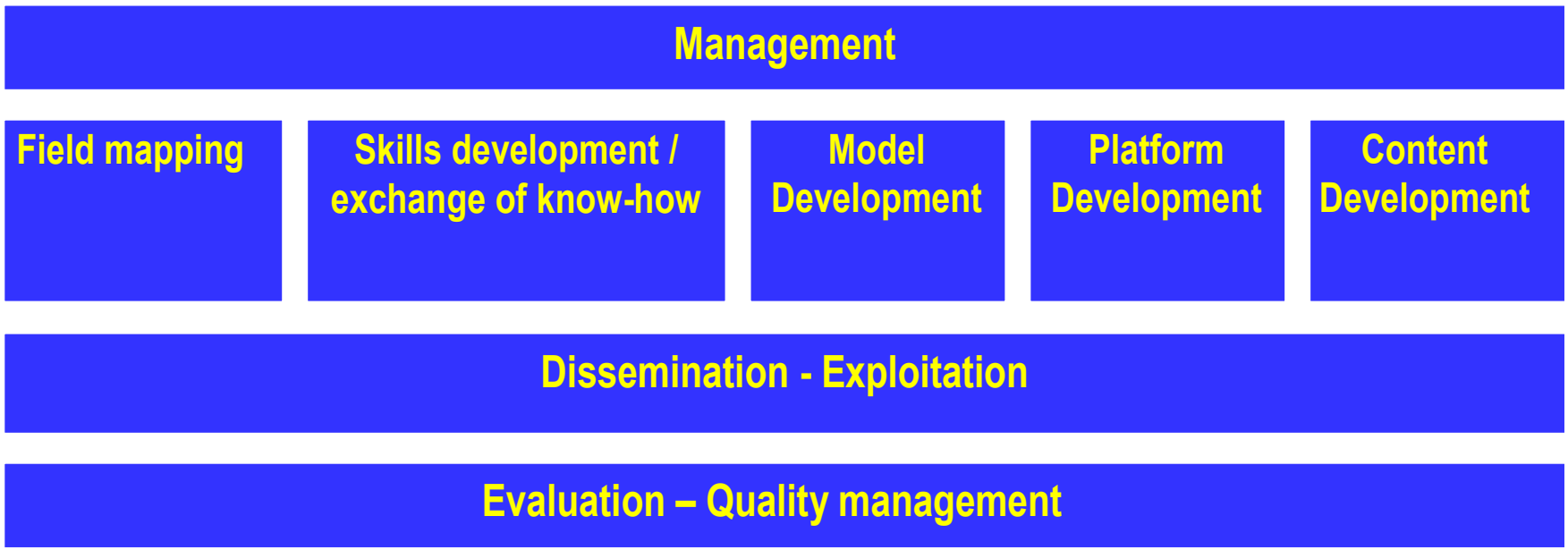
THE HUMAN NETWORK DIMENSION: E-KNOWNET: a network of institutions, partners, stakeholders and LL - LEARNERS!

- Study visits between partner organizations
- Peer-training workshops on the production of material suitable for ICT supported life-long learning.

THE ICT DIMENSION: The e-KNOWNET portal will be the test bed of the knowledge - sharing network.

The platform will be a virtual depository and a hub for redistributing popularized new science knowledge, available in resourceful forms beyond the conventional, with the use of participatory media (blogs, wikis, RSS, tagging and social bookmarking, music-photo-video sharing, mashups, podcasts, etc).

The e-KNOWNET building blocks



Work Packages

WP1: Project Management Activities

WP2: Cooperative study in the field of ICT-enabled diffusion of scientific knowledge in Europe

WP3: Modelling a Viable Knowledge-Sharing Network

WP4: Preparation and Design of Educational Products in the field of Physical Chemistry

WP5: Awareness raising and exploitation activities

WP6: Evaluation of the project

A last word

Wishing the consortium

“every success”

and a lot of inspiration!