

# The ENGINE information system: a reference base of knowledge for EGS in Europe

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and WP2 partners and delegates

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Final Conference, Vilnius, Lithuania, 12-15/02/2008



# Information system partners

> BRGM



> UOR

> GFZ



> GEOWATT

> GEUS



> IGGL

> IGG



> CICESE



# Information system delegates

<b>Clément</b>	<b>Baujard</b>
<b>Stephanie</b>	<b>Frick</b>
<b>Chiara</b>	<b>Giolito</b>
<b>Brynja</b>	<b>Jonsdottir</b>
<b>Evgenia</b>	<b>Kontoleontos</b>
<b>George</b>	<b>Lemonis</b>
<b>Catalina</b>	<b>Mayorga</b>
<b>Vytautas</b>	<b>Puronas</b>
<b>Erik</b>	<b>Simmelink</b>
<b>Angela</b>	<b>Spalek</b>
<b>Sandra</b>	<b>Trifiro</b>



# Summary

- > What is the objective of the information system ?**
- > Who is the information system dedicated to?**
- > What is produced?**
- > How to capitalise the results?**



# Information system objectives

- > **Disseminate general information**
- > **Manage meetings organisation**
- > **Inform about training and education**



# Information system actors and tools

**+ Decision Makers  
& Public**

Proceedings of the meetings  
Newsletters...

**+ Partners  
& Related**

Meetings participation  
Minutes of the committees...

**WP Leaders**

Meetings administration  
Restricted access material...



# Information system production

- > **Communications**
- > **Partners releases**
- > **Meetings management and proceedings**
- > **Web site**



# Newsletters

> 10 issues  
from 01/2006  
to 01/2008

> Next - *and last* - one  
by end April

**ENGINE Newsletter**  
ENhanced Geothermal  
Innovative Network for Europe  
co-ordination action

N°10 – January 2008

<http://engine.brgm.fr>

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ENGINE Final Conference in Vilnius, 12-15/02/2008	4
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**Editorial**  
**The final conference (Vilnius, Lithuania, 12-15/02/2008):  
a milestone towards EGS demonstration projects**

The heat engine of the Earth represents an infinite and renewable source of energy that could potentially satisfy a significant part of our needs. While conventional geothermal resources already cover a wide range of uses for power and heat production in profitable conditions, the development of engineered geothermal systems still requires significant R&D investment. A large scientific and industrial community has been involved for more than 20 years in promoting Enhanced Geothermal Systems (EGS) and has been recently assembled in ENGINE, a Coordination Action of the 6<sup>th</sup> Framework Program, aimed at coordinating on-going actions concerning Unconventional Geothermal Resources. The achievement of this project will be a handbook defining best practices and proposing a road map for future demonstration projects. The main results will be presented during the final conference that will be held in Vilnius, Lithuania (12-15 February 2008).

Vilnius city (Lithuania).

ENGINE Newsletter N°10 – January 2008





# Presentations at

- > **European Geothermal Congress (EGC)**
- > **European Geothermal Energy Council (EGEC)**
- > **Geothermal Research Council (GRC)**
- > **Geothermal Implementing Agreement (IEA-GIA)**



# Partners release

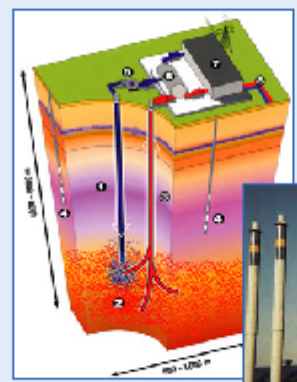
POSTER  
S. Sliampa et al.



**EN**hanced **G**eothermal  
**I**nnovative **N**etwork  
for **E**urope



- [Home](#)
- [Geothermal Field of The Baltic Region](#)
- [Geothermal Data](#)
- [Enhanced Geothermal Systems](#)
- [Green House Geothermal Projects](#)
- [Ongoing Research](#)
- [Other information](#)
- [Links](#)



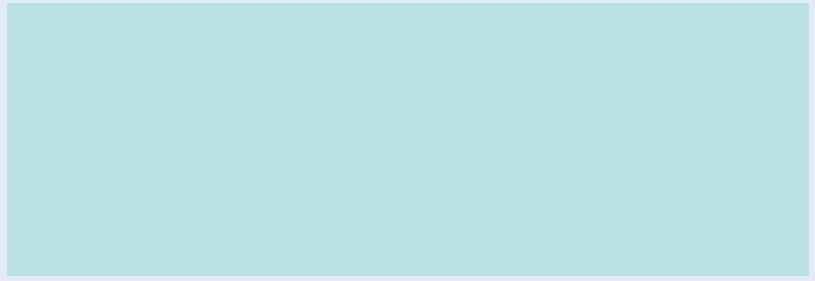
**WELCOME TO LITHUANIA**



**NEWS**

09-12/01/2007 - ENGINE Mid-Term Conference held in Potsdam

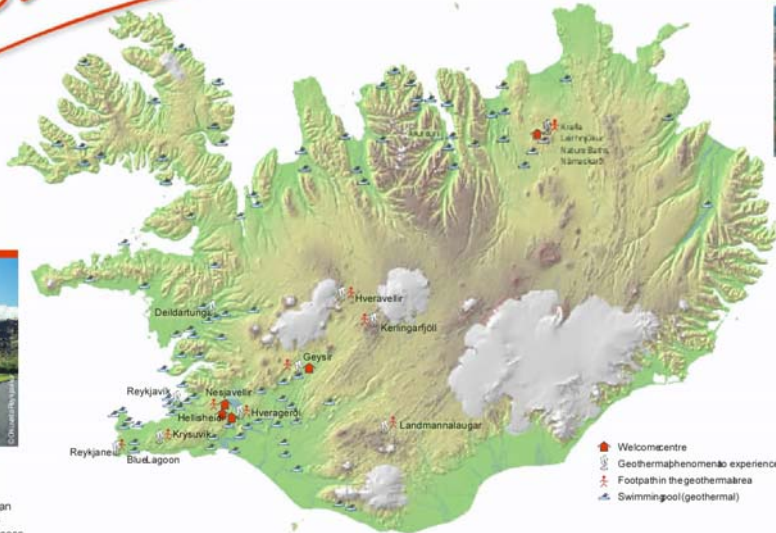
08/01/2007 - this website launched for a preview



# Partners release

**POSTER**  
**B. Jonsdottir et al.**

## ICELAND Geothermal welcome centres



**NESJAVELLIR WELCOME CENTRE**  
At the Welcome Centre in Nesjavellir power station accounts give overview of energy generation from high-temperature geothermal systems as well as the process utilised by the plant and of the Reykjavik district heating system.  
Opening hours: June 31 August Monday to Saturday 10-17 Sunday 13-18 September-May on request  
Free Admission  
For more information Tel: (+354) 480 2408 www.or.is



**HELLISHEIDI WELCOME CENTRE**  
The geothermal power plant at Hellisheidi started to operate in 2006 and will be the largest stage until 2009. The Welcome Centre will be opened in the middle of July 2007.  
Opening hours: from 15 July 2007 Daily 10-18:00  
Free Admission  
For more information Tel: (+354) 516 6100 www.or.is



**KRAFLA WELCOME CENTRE**  
Krafla is a geothermal power plant and at the Welcome Centre you will find information on geothermal energy and the Krafla eruptions, including a short, entertaining film on how geothermal steam is used to generate electricity.  
Opening hours: 1. June - 31. August Monday to Friday 12:30-15:30 Saturday to Sunday 13-17  
Free Admission  
For more information Tel: (+354) 515 9000 www.lv.is



**GEYSIR WELCOME CENTRE**  
Geysir Centre is a museum by the largest geysir in the world where modern multimedia shows combined with plain information enlighten visitors about one of Iceland's amazing natural phenomena and allow them to feel some of the case with the earthquake simulator.  
Opening hours: May-September 10-19 Jan-April/Oct-Dec 11(12)-16(17)  
Cost of Admission: Adult 50, ISK Children 6 years Free, Student 650, ISK Senior 66 years 250, ISK  
For more information Tel: (+354) 480 6800 www.geysircenter.com



**HVERAGERDI WELCOME CENTRE**  
In Hveragerdi geothermal field located in the town centre is harnessing district heating in greenhouses the tourist information centre in the eastern margin of the area information is available on the nature of the geothermal field and the related geological tectonic volcanic activity and microbiology geothermal activity information on boreholes and products is presented.  
Opening hours: June 31 August Monday to Friday 10:30-18 Saturday to Sunday 13-16  
Free Admission  
For more information Tel: (+354) 483 4601/6603905 www.hveragerdi.is

The ENGINE Project Enhance Geothermal Innovation Network for Europe is a co-ordination action supported by the 6th Research and Development framework of the European Union (<http://engine.brgm.fr>). ISOR (Iceland Geo Survey) is a government institution that provides a wide variety of energy research, exploration and development services in contract in Iceland and abroad ([www.isor.is](http://www.isor.is)). The poster is produced by ISOR as part of the promotional activity of ENGINE for furthering the use of geothermal energy with Europe. The welcome centres are independently operated and have not received support from ENGINE.

June 2007 (BSP)



# Partners release

**POSTER**  
**A. Manzella et al.**



## ENGINE Exploration tools

- [Home](#)
- [Methodological](#)
- [Projects](#)
- [Advanced Search](#)
- [Contact us](#)
- [Engine Home](#)

### Engine Exploration tools

Welcome to our page, which is an attempt at collecting a database of the exploration tools used by ENGINE partners for geothermal investigation and exploration. The database is organized on the base of the methodology used for exploration, and lists the equipment, hardware and modelling software that ENGINE partners use.

On this page you can also take a look to the international geothermal exploration Projects that gave important occasion to ENGINE partner to work in the field of geothermal exploration.

- [Home](#)
- [Methodological](#)
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### Methodological

Here you can find info regarding activities, equipment and software used by the different partner institutions. The material is organized on the base of the methodologies that are appropriate for the investigation of deep EGS reservoirs.

- ▣ Geochemistry
- ▣ Geology / Hydrogeology
- ▣ Geophysics
- ▣ Laboratory test
- ▣ Reservoir modeling

#### Reservoir modeling

List of partners providing tools:

- [BRGM](#)
- [CNRS - France](#)
- [GEOWATT](#)
- [IGG - CNR](#)
- [MaSy](#)
- [igem](#)

#### Laboratory test

List of partners providing tools:

- [BRGM](#)
- [CNRS - France](#)
- [ELTE](#)
- [MaSy](#)
- [RWTH](#)

#### Geochemistry

List of partners providing tools:

- [BRGM](#)
- [IGG - CNR](#)

#### Geology/Hydrogeology

List of partners providing tools:

- [BRGM](#)
- [GEOWATT](#)
- [IGG - CNR](#)

#### Geophysics

List of partners providing tools:

- [BRGM](#)
- [CHKS - France](#)
- [ELTE](#)
- [GEE](#)
- [GEMRC](#)
- [IGG - CNR](#)
- [MaSy](#)
- [igem](#)
- [RWTH](#)

#### BRGM

Activities:

- gravity and magnetic
- electrical resistivity imaging (DC and EM method)
- magnetotelluric
- passive seismic
- active seismic (high resolution marine seismic)
- Geothermal resource evaluation
- Temperature distribution

Equipment:

- gravimeters: CG3 & CG3 (Sextant)
- magnetometers: S054 and G-338 (Demeter)
- DC electrical resistivity imaging: Sweil/Fra, Gres 6, M7 4000 (Stetrol)
- for 3DEM measurements: GEP 30 (Zonge)
- Magnetotelluric: 2 MT 5-component stations (Marsoid), 40x36 Amp logger and MTS coils
- Broadband seismology: 7 stations with DM24 data logger and CMG 40T seismometer, 40 x (2.0Hz); 2 340ry/ryphose sensors and Demeteris 32station; 48 ch data recorder

Software:

- Software: IM3D (2D Electromagnetics modelling), WinLink for MT data interpretation and inversion



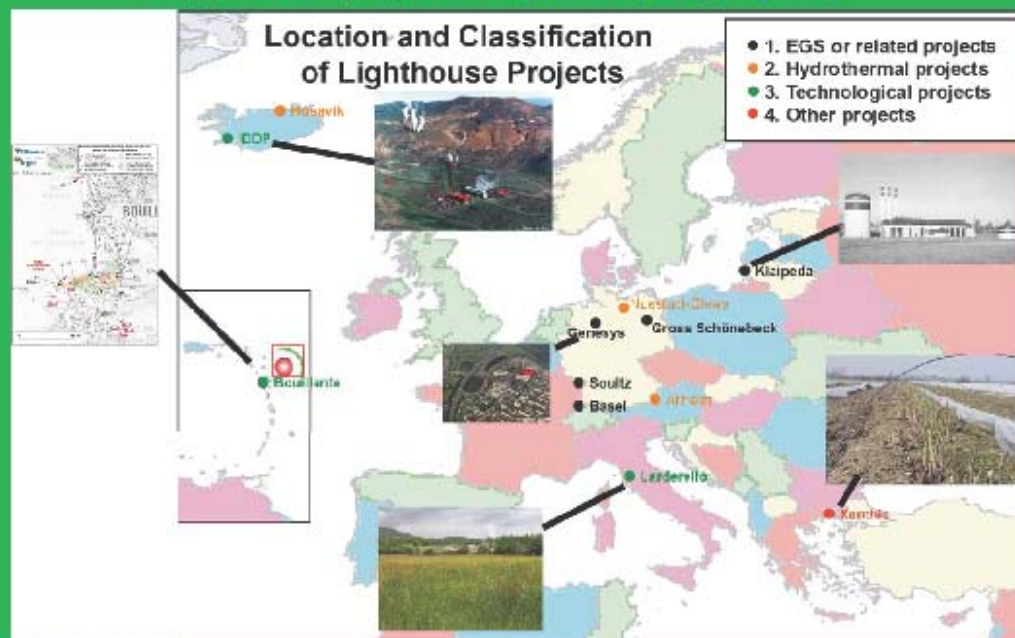


# Partners release

POSTER  
A. Mathiesen et al.

## WP2: Objectives, Information & Dissemination System ENGINE - Geothermal lighthouse projects in Europe

by  
Anders Mathiesen, GEUS ([anm@geus.dk](mailto:anm@geus.dk))  
Philippe Calcagno, BRGM ([p.calcagno@brgm.fr](mailto:p.calcagno@brgm.fr))



<http://engine.brgm.fr>



GEUS

Lighthouse Projects – Status – Jan 2007



# Education and training

**POSTER**  
**M. Rosca**

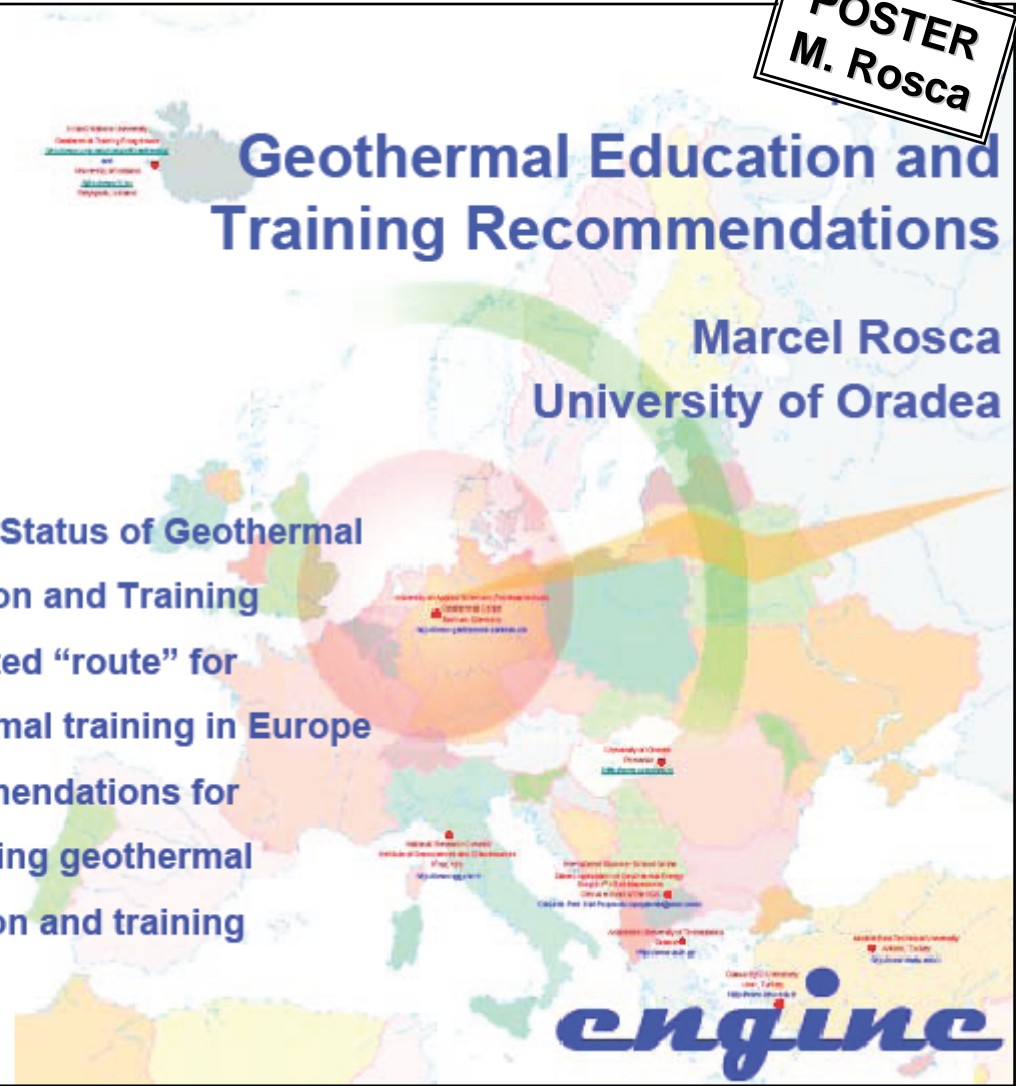


ENGINE  
Final Conference  
12-15 February  
Vilnius  
Lithuania

## Geothermal Education and Training Recommendations

**Marcel Rosca**  
**University of Oradea**

1. Current Status of Geothermal Education and Training
2. Suggested "route" for geothermal training in Europe
3. Recommendations for developing geothermal education and training



# Meetings

> 3 conferences & 7 workshops

> 498 participants

> 714 participations

> 421 contributions







# ENhanced Geothermal Innovative Network for Europe



SIXTH FRAMEWORK PROGRAMME



- ENGINE for beginners
- ENGINE partners
- Conferences & workshops
- Media
- Newsletters
- Minutes
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## The ENGINE Project

The ENGINE project (ENhanced Geothermal Innovative Network for Europe) is a co-ordination action supported by the 6th Research and Development framework of the European Union. Its main objective is the co-ordination of the present research and development initiatives for Unconventional Geothermal Resources and Enhanced Geothermal Systems, from resource investigation and assessment stage through to exploitation monitoring.

Best Paper Award for ENGINE presentation at GRC 2006



The ENGINE co-ordination action is composed of 35 partners representing 16 European and 3 non-European countries and including 8 private companies.

**The ENGINE Final Conference (12-15/02/2008, Vilnius, Lithuania) is now in preparation, if you want to join us please contact us.**

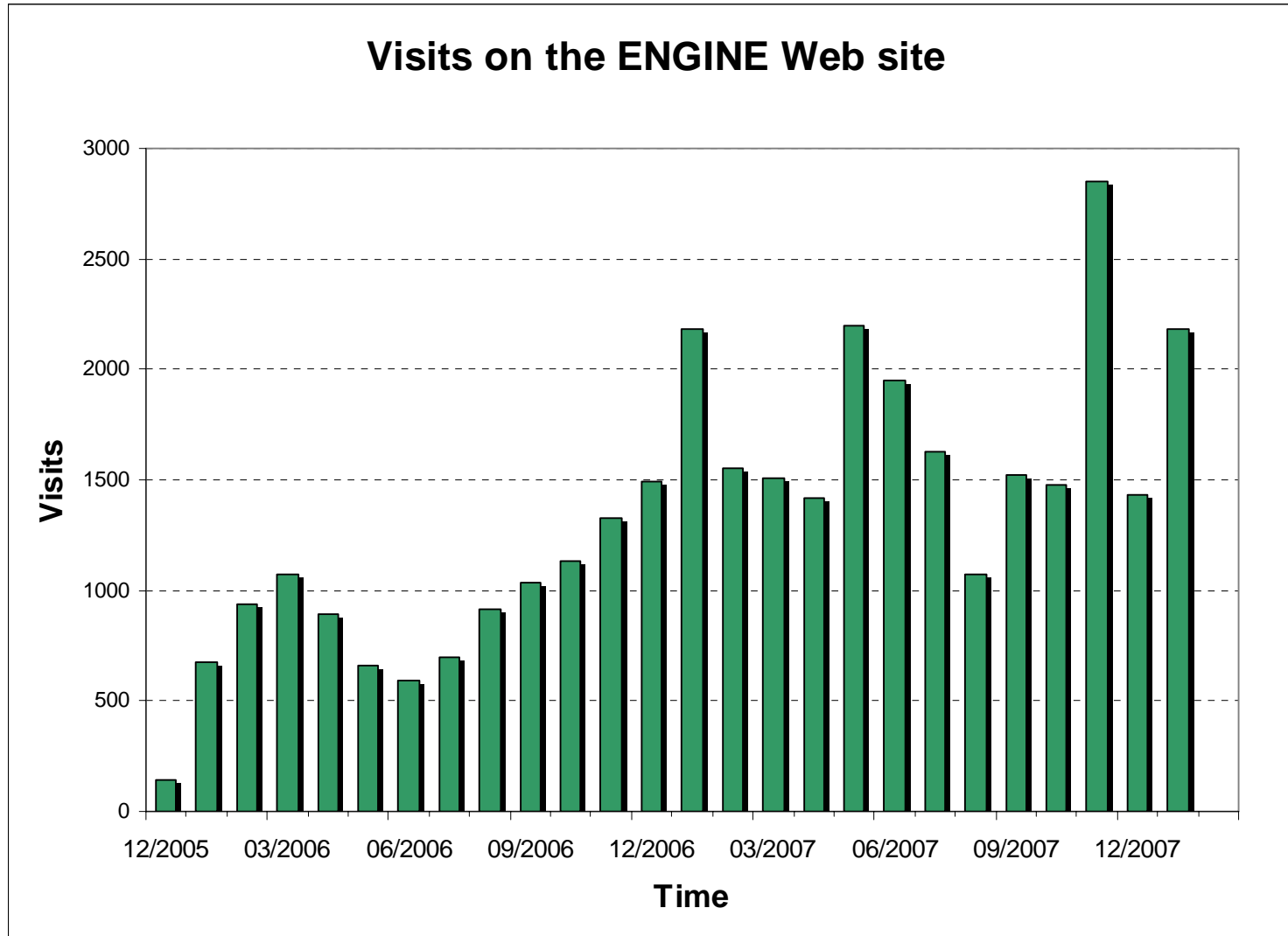
Hosted by :

BRGM - 3, avenue Claude Guillemin - BP 6009 - 45060 Orléans cedex 2 - France

Webmaster







<b>Europe</b>	<b>1370</b>
<b>Northern America</b>	<b>660</b>
<b>Asia</b>	<b>74</b>
<b>Australia</b>	<b>22</b>
<b>Northern Africa</b>	<b>18</b>
<b>Central America</b>	<b>14</b>
<b>Rest of the world</b>	<b>27</b>



# Information system future

Meetings proceedings

Presentations slides & posters

Partners releases

Partners bibliography

Lighthouse projects

Education and training study

**Best practise handbook**

European reference manual

...

**The base of knowledge  
built during ENGINE  
is a reference  
for EGS in Europe**



# Information system future

**Keep the results and material available after the end of ENGINE via the Web site <http://engine.brgm.fr>**

- > For disseminating**
- > To facilitate our network continuation**
- > To help new project proposals**



