WORKPACKAGE 1 & 6 - FINAL REPORT

Grant Agreement number:	**269 905**
Project acronym:	**LUCOEX – WORK PACKAGE 1 & 6**
Project title:	**Large Underground Concept Experiments**
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Period covered:	**2010-10-24 to 2015-09-30**
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EUROPEAN COMMISSION

Community research

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(GRANT AGREEMENT: 269905)

DELIVERABLE D1.21

Final Report LUCOEX – WP1 and WP6

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Project co-funded by the European Commission under the Seventh Euratom Framework Programme for Nuclear Research &Training Activities (2007-2011)		
Dissemination Level		
PU	Public	**PU**
RE	Restricted to a group specified by the partners of the LUCOEX	
CO	Confidential, only for partners of the LUCOEX project	

EURATOM

Publishable Summary

Four advanced waste management programmes in Europe have as part of their step-vice development of repository concepts for long-lived radioactive waste come together in the LUCOEX project with the common objective to demonstrate the technical feasibility of certain vital deposition sequences for a safe and reliable disposal of radioactive waste in geological formations.

This demonstration has been done by executing four parallel experiments at different underground research laboratories ;all designed for the specific purpose of developing these kind of underground facilities. Each experiment has focused on different concepts and different geological and technical/legal pre-conditions and all experiments have been executed with a focus on openness and willingness to share the knowledge gained to support the development of safe and reliable repositories throughout themember states of the European Union and Switzerland.

A key component of the LUCOEX project has been the dissemination of our findings. This has been done through a) making it possible to visit the experiments at underground research laboratories , b)presenting our results and findings through scientific articles and presentations at conferences, c)producing movies from the different experiments, d)hosting conferences and workshops, and finally e) having a scholarship programme to give external parties the possibility to participate both in hosted events and on site during the experiments. All these activities have been executed to our satisfaction and in accordance with the plans. A disappointment, however, is that our ambition to organize a tailor-made dissemination of results to individual member state with research on similar topics as LUCOEX did not meet any interest.

Contents

1 Final publishable summary report WP1 and WP6

1.1 Context and Objectives

This Final Report covers both WP1 and WP6 which includes the "*Coordination and Integration*" and "*Management and dissemination"* of the LUCOEX project.

1.1.1 WP1 – Coordination and integration

This WP1 was purely focused on the coordination of the project and the integration between the other work packages. TheWP1 consists of 11 different tasks according to the list below.

1. Task 1.1 Coordination of management meetings
   This task included the management of the Steering Committee Meetings (SCM), Project Progress Meetings(PPM) and the Expert Group. The purpose was the continuous assessment of the status of the project and ensuring that the necessary decisions are made to ensure the successful completion of the project.

2. Task 1.2 Integrated planning
   The LUCOEX demonstration activities have during all phases of development shared information. Each WP Leader was responsible for the integrated planning and collaborate execution of work within her/his WP while the overall integration was managed through the development of the Project Plan.

3. Task 1.3 Risk assessment
   The project´s risk exposure was to be repeatedly assessed during the course of the project.

4. Task 1.4 Communication Action Plan
   A master plan for how, and by whom, the project will communicate information about the project, its progress and results to the scientific community as well as to the general public should be developed.

5. Task 1.5 Networking and dissemination of results
   The project was required to host a number of networking events including a Mid-term Workshop and a Large Workshop in conjunction with the PPM by the end of the project.

6. Task 1.6 Training programmes and training activities
   The project was to perform training events aimed at post-docs or students from Universities in the member states of the European Union and Switzerland (least two 2-week training events one about mid-term and one at the end of the project).

7. Task 1.7 Scholarships
   The LUCOEX project had in total budget for 20 scholarships that were made available for students, post-doc and engineers in member states of the European Union and Switzerland. The scholarships supported participation at 2-week training events, On-site training events, Participation in Mid-term and Large Workshops and WP-specific workshops.

8. Task 1.8 Planning of programme on secondment of staff
   Opportunities for staff secondment was provided and the programme was based on the matching of interest from the LUCOEX partners to send and host staff.

9. Task 1.9 European added value
   An analysis was to be performed on the existing European concepts with a focus on those features that have a connection to what is studied in the LUCOEX project and that may have a potential benefit from the knowledge developed in LUCOEX.

   The project was also to invite other European Union organisations to seminars to discuss, the technical progress in LUCOEX and the possible benefits the latest results may have to other European concepts.

10. Task 1.10 Final reporting of WP1
    This report.

11. Task 1.11 Summarising and reporting of LUCOEX results
    Each WP was expected to produce results which could be of interest to share with world-wide experts and WP1 is responsible for summarizing the results by the end of the project. In addition each WP leader was to address this issue by publishing one paper per work package.

1.1.2 WP6 – Management and dissemination

This WP6 was purely focused on the day-to-day management of the LUCOEX project. The WP6 consisted of 5 different tasks according to the list below.

1. Task 6.1. Setting up and operating the organisation for coordination of LUCOEX.
   Setting up of the project management office and the guiding documents for the project.

2. Task 6.2 Project Presentation
   A general project presentation is to be created in accordance with the Commission´s guidelines.

3. Task 6.3 Newsletter
   Four newsletters are to be published during the course of the project.

4. Task 6.4 Web-site portal
   A project internal web-site is to be setup.
   A public website is to be setup.

5. Task 6.5. Support for Production of necessary documentation regarding LUCOEX
   includes the periodic and final documentation for the project.

1.2 Results

The WP1 and WP6 have not produced any direct scientific or technical findings. Below we have instead focused on our fulfilment of the tasks and deliverables set forth in the Grant Agreement.

1.2.1 WP1 – Coordination and integration

1. Task 1.1 Coordination of management meetings
   The steering committee (SC) was formed during the grant agreement negotiations and Erik Thurner from SKB was elected to chair it. The SC has during the course of the project had 9 official meetings. The final meeting was held at the end of the project. Five of these meetings are listed in the

milestone plan (M1.8, M1.14, M1.17, M1.22 and M1.28). Minutes from the meetings have been posted to the project´s internal website.

A technical Expert Group consisting of four “internal” and four “external” experts, appointed by the SC, has been given the mission to serve the project with reviews, cross-WP examinations and advices related to technical plans, achievements and dissemination activities. The group has met on numerous occasions; both onsite at the experiments and in the offices of Nagra and Andra. Two reports (D1.7 and D1.11) are published at the time of writing and the third is planned to be published in August 2015 (D1.14).

2. Task 1.2 Integrated planning
   A project plan was initially developed as planned. It was sent in as a deliverable (D1.1), and has since been updated as an internal document during the course of the project.

   Five PPMs have been performed in accordance with the mile stone plan (M1.7, M1.13, M1.18, M1.21 and M1.27) during the course of the project where the progress of each of the Work Packages have been discussed. We have also discussed key risks at these meetings that were then forwarded to the SC. Minutes from these meetings have been published both internally and on the external homepage as project deliverables (D1.6, D1.8, D1.10, D1.12 and D1.20).

3. Task 1.3 Risk assessment
   The project´s risk exposure has been repeatedly assessed by the project management office and the chair of the SC during the course of the project. The risk assessment of the project management office (PMO) has also been raised at Project PMs the SCMs during the course of the project.

4. Task 1.4 Communication Action Plan
   The communication efforts within LUCOEX have been divided into internal and external communications.

   LUCOEX internal communication activities have included:
   - 5 PPMs held on different sites giving all members the opportunity to get impressions of the different sites and experiments. Each PPM has been combined with a workshop focusing on certain topics relevant to the project:
     - PPM1 (SKB’s main Office Sweden)
       Theme: Project planning, Risk management and Cross reviewing of plans.
     - PPM2 (on site at Olkiluoto, Finland)
       Theme workshop: Horizon2020, Tunnel and disposal cell excavation.
     - PPM3 (in site at Bure, France)
       Theme workshop: Instrumentation.
     - PPM4 (on site at Mont Terri)
       Theme workshop: Bentonite block/pellet manufacturing and installation.
     - PPM5 (on site in AEspoe, Sweden)
       Theme workshop: Installation and sealing of drifts.
   - Projectplace.com website was setup for the storage and sharing of documents. This has been fulfilling its purpose. Additional functions for project planning etc. has not been used. Based on feedback from the Expert Group it has become apparent that some support in the usage earlier in the project would have been good.
   - All individual WPs have invited both the other partners and the Expert Group to visit and participate in their individual experiments.

- Information has also be shared between the members by the means of email, face-to-face meetings and through the external communication channels like the newsletters and workshops

Project External communication has primarily been handled through:
- The workshops arranged by LUCOEX in conjunction with the PPMs.
- The Mid-term Workshop held in conjunction with the Clay conference in France in 2012.
- The Large workshop at AEspoe in 2015.
- LUCOEX external website was set up (www.lucoex.eu) and includes general information and all project deliverables.
- Scholarship programme open for students and professionals from all the members states and Switzerland.
- Training programme where young professionals have been offered the opportunity to during a minimum of two weeks participate in the full scale tests on-site.
- Publication in technical magazines and journals.
- Presentations at specific seminars/conferences.

Technical Expert Group
The Expert Group has performed an independent review of the individual work packages and feedback was given to the project. The feedback has also been published openly on the LUCOEX homepage.

European value activities
See “Task 1.9 European added value”

Newsletter
Four newsletters were published in accordance with the plan and both published on the homepage and distributed through E-mail to concerned parties.

General public
The general public was primarily informed through the LUCOEX website, during visits on-site at the different underground research laboratories and through the partners´ presentation of our findings at open conferences.

5. Task 1.5 Networking and dissemination of results
The project has hosted
   - Four Workshops were held in conjunction with the PPMs where we have had representatives from numerous European countries participating.
   - Mid-term Workshop was held in conjunction with the Clay conference in France in 2012 where we had participants from 13 European countries plus Japan.
   - Large Workshop was held at AEspoe in 2015 with roughly 80 participants from 15 European countries plus representatives from Japan and China.

   The project has in addition to the hosted events also presented the work being performed in the project at over 15 external conferences and published over 30 articles on the experiments performed.

6. Task 1.6 Training programmes and training activities
The project has performed nine training event by offering external post-doc/students/experts the opportunity to participate in the on-site work which were all co-financed through the LUCOEX scholarship programme.

7. Task 1.7 Scholarships

The LUCOEX project originally had a total budget for 20 scholarships which were made available for students, post-doc and engineers in European Union Member States and Switzerland. By the end of the project we have been forced to cancel 4 scholarships because of limited interest during the start of the project but were still able to perform a total of 28 scholarships supporting 2- and 4-week training events on-site, participation in mid-term and large workshops and participation in the WP-specific workshops.

Event	Time of Event	Designated WP Leaders	Comment	Next Action
Mid-term 2/4-week scholarship	2012-11-01	Jacques Morel /Andra	Awarded	Awarded to Victor Serri
Mid-term 2/4-week scholarship	2014-11-01	Hanspeter Weber/Nagra	Awarded	Awarded to Lucie Hausmannova
Mid-term 2/4-week scholarship	2014-10-01	Hanspeter Weber/Nagra	Awarded	Awarded to Jan Smutec
End-term 2/4-week scholarship	2014-09-01	Magnus Kronberg/SKB	Awarded	Awarded to Alba Mon Lopez
End-term 2/4-week scholarship	2014-09-01	Keijo Haapala/Posiva	Awarded	Awarded to Pasi Båtsman
On-site 2/4-week training Bure	2014-06-16	Jacques Morel/Andra	Awarded	Awarded to Ionut Florea
On-site 2/4-week training Mt Terri	2014-06-01	Hanspeter Weber/Nagra	Awarded	Awarded to Acacia Naves
On-site 2/4-week training AEspoe	2013-06-01	Magnus Kronberg/SKB	Awarded	Awarded to Jere Knuuttila
On-site 2/4-week training Onkalo	2013-06-01	Keijo Haapala/Posiva	Awarded	Awarded to Pasi Båtsman
Mid-term workshop	2012-10-25	Project Coordinator	Awarded	Awarded to Heini Laine/Reijonen
Mid-term workshop	2012-10-25	Project Coordinator	Awarded	Awarded to Ville Koskinen
End-term workshop	2015-06-02	Project Coordinator	Awarded	Awarded to Dalia Grigaliuniene
End-term workshop	2015-06-02	Project Coordinator	Awarded	Awarded to Acacia Navez
Theme-specific workshop	2012-03-01	Keijo Haapala/Posiva	Cancelled	No interest was shown
Theme-specific workshop	2012-03-01	Keijo Haapala/Posiva	Cancelled	No interest was shown
Theme-specific workshop	2012-09-01	Jacques Morel/Andra	Cancelled	No interest was shown
Theme- specific workshop	2012-09-01	Jacques Morel/Andra	Cancelled	No interest was shown
Theme-specific workshop	2013-06-01	Hanspeter Weber/Nagra	Awarded	Awarded to Jan Smutec
Theme-specific workshop	2013-06-01	Hanspeter Weber/Nagra	Awarded	Awarded to Christian Hoffman
Theme-specific workshop	2014-04-01	Magnus Kronberg/SKB	Awarded	Awarded to Paulina Nieścior
Theme-specific workshop	2014-04-01	Magnus Kronberg/SKB	Awarded	Awarded to Wioleta Olszewska
Theme-specific workshop	2013-06-01	Hanspeter Weber/Nagra	Awarded	Awarded to Heini Laine
Theme-specific workshop	2014-04-01	Magnus Kronberg/SKB	Awarded	Awarded to Darius Justinavicius
Theme-specific workshop	2014-04-01	Magnus Kronberg/SKB	Awarded	Awarded to Orlando Silva
Theme-specific workshop	2014-04-01	Magnus Kronberg/SKB	Awarded	Awarded to Dean Gentles (NDA)
End-term workshop	2015-06-02	Project Coordinator	Awarded	Awarded to Jan Smutek
End-term workshop	2015-06-02	Project Coordinator	Awarded	Awarded to Jutta Peura
End-term workshop	2015-06-02	Project Coordinator	Awarded	Awarded to Ville Sjöblom
End-term workshop	2015-06-02	Project Coordinator	Awarded	Awarded to Kevin O´Donoghue
End-term workshop	2015-06-02	Project Coordinator	Awarded	Awarded to Rob McLaverty
End-term workshop	2015-06-02	Project Coordinator	Awarded	Awarded to Marius Iordache
End-term workshop	2015-06-02	Project Coordinator	Awarded	Awarded to Kalman Benedek
End-term workshop	2015-06-02	Project Coordinator	Awarded	Awarded to Thorsten Hörbrand

8. Task 1.8 Planning of programme on secondment of staff

We have not been able to execute secondment of staff where personnel have participated in the other experiments during an extended period of time but the information exchange and visits, especially between partners with the same geological pre-requisites (Clay vs Hard rock) , have been extensive.

9. Task 1.9 European added value

Our plan was to assess the existing research programmes on management of high-level waste in different member states together with respective responsible waste management organisation (WMO) and to select which activities in LUCOEX that would be of interest for them to follow in detail. An invitation was sent out to all WMOs, but only a few responded. The answeres clearly showed the interest to share information and results, but only by LUCOEX public channels: newsletters, reports, participation in workshops and visits to the respective underground research laboratory.

Instead we initiated an analysis performed by a master thesis student, who studied the status within the existing European programmes for management of spent fuel and mapped what is

studied in the LUCOEX project with the needs of the different programmes. These findings have been reviewed by the participants and presented at a number of conferences.

10. Task 1.10 Final reporting of WP1
    This report.

11. Task 1.11 Summarising and reporting of LUCOEX results
    The project has summarized the reporting in accordance with the table of content included in the Grant Agreement.

1.2.2 WP6 – Management and dissemination

This WorkPpackage was purely focused on the day-to-day management of the LUCOEX project. The WorkPackage consisted of 5 different tasks according to the list below.

12. Task 6.1. Setting up and operating the Organisation for coordination of LUCOEX
    A Project management office was setup within SKB for the management of the project. Work include the support and follow-up of the individual work packages including activities like:
    - Writing a project handbook
    - Developing and distributing templates for deliveries and reporting
    - Support reporting and the distribution of information through the homepage.

13. Task 6.2 Project Presentation
    A general project presentation was originally created in accordance with Commission´s guidelines. This presentation has since been extended numerous times with specific slides matching the needs of a specific conference or audience.

14. Task 6.3 Newsletter
    Four newsletters have been published during the course of the project.

15. Task 6.4 Web-site portal
    A project internal web-site was setup during the start of the project using projectplace.com. The project has chosen to only use the information sharing functions for documents. Applications for project planning and control have not been utilized.

    A public website was setup early in the project. It got a large overhaul during 2012 to ensure compliance with web-standards and proper operation with mobile devices. The homepage will remain operational until 2020.

16. Task 6.5. Support for Production of necessary documentation regarding LUCOEX
    This includes work with the periodic reporting and the final documentation for the project. The first periodic reporting was cumbersome and took a long time for all involved parties. The project partners and the PMO learned from those experiences and setup a good system of templates and instructions for the following reporting which proved beneficial.

1.3 Impact

The LUCOEX project has been successful in sharing the knowledge and experiences from the project both between the project partners and to external stakeholder. This has both been done through project hosted events and participation at conferences and through the publication of our findings.

The long lasting impact of this project is also to a large extent the legacy which has been past to all the visitors and scholarship recipients who took the opportunity to visit and participate in the experiments on-site.

2 Acknowledgement

The LUCOEX project has received funding from the European Union's EUROATOM-research programme (FP7) under Grant Agreement 269905 – LUCOEX.

APPENDIX I - SCIENTIFIC PUBLICATIONS

Work package 1 and 6 has not published any scientific publications.

APPENDIX II - DISSEMINATION ACTIVITIES

List of all dissemination activities (publications, conferences, workshops, web sites/applications, press releases, flyers, articles published in the popular press, videos, media briefings, presentations, exhibitions, thesis, interviews, films, TV clips, posters).

These tables are cumulative, which means that they should always show all publications and activities from the beginning until after the end of the project.

TEMPLATE A2: LIST OF DISSEMINATION ACTIVITIES

NO.	Type of activities[1]	Main leader	Title	Date/Period	Place	Type of audience[2]	Size of audience	Countries addressed
1	*Web*	*SKB*	*www.lucoex.eu*	*2011-2020*	*online*	*Open to all*	*--*	*International*
2	*Workshop*	*SKB*	*Project Planning, Risk management and Cross reviewing of plans*	*Mar 14th -15th 2011*	*SKB's main office Stockholm*	*Project partner organizations*	*≈ 20*	*Project partner organizations*
3	*Workshop*	*Posiva*	*Excavation methods for drifts and HLW cells*	*2012 Mar 14-15*	*Olkiluoto, Finland*	*Scientific community and open for all*	*≈ 40*	*Europe*
4	*Workshop*	*Andra*	*Instrumentation of Full scale emplacement experiment*	*2012 Oct 25-26*	*Montpellier, France*	*Scientific community and open for all*	*≈ 60*	*Europe*
5	*Workshop*	*Nagra*	*Bentonite Block/Pellet manufacturing and installation*	*2013 Sep 30th-Oct 1st*	*on site in Mont Terri*	*Scientific community and open for all*	*≈ 60*	*Europe*
6	*Workshop*	*SKB*	*Installation and Sealing of drifts*	*2014 May 13th-14th*	*AEspoe, Sweden*	*Scientific community and open for all*	*≈ 60*	*Europe*
7	*Mid-term Workshop*	*SKB*	*Achievements within the LUCOEX project*	*Oct 25th -26th 2012*	*Montpellier, France*	*Scientific community and open for all*	*≈ 40*	*Europe*
8	*Large Workshop*	*SKB*	*Multiple presentations on various subjects. All available on the LUCOEX homepage.*	*2015 June 2-4*	*Oskarshamn, Sweden*	*Scientific community and open for all*	*≈ 80*	*Europe*
9	*IGDTP – Geodisposal 2014*	*Andra, Nagra, SKB, Posiva*	*4 presentations on Full scale disposal cell demonstrators in clay formation and crystalline rock*	*2014 June 24-26th*	*Manchester, UK*	*Scientific community and open for all*	*≈ 400*	*Europe*
10	*Euradwaste '13*	*SKB/Nagra/Andra/Posiva*	*LUCOEX – Demonstrating the technical feasibility of disposal of spent nuclear fuel in geological formations*	*2013 Oct 14-16*	*Vilnius, Lithuania*	*Scientific community and open for all*	*≈ 400*	*Europe*

[1] publications, conferences, workshops, web, press releases, flyers, articles published in the popular press, videos, media briefings, presentations, exhibitions, thesis, interviews, films, TV clips, posters, Other.

[2] Scientific Community (higher education, Research), Industry, Civil Society, Policy makers, Medias, Other ('multiple choices' is possible).

30	*Newsletter 1*	*SKB*	*LUCOEX – Newsletter*	*2012 Mar 8th*	*online*	*Open to all*	--	*International*
31	*Newsletter 2*	*SKB*	*LUCOEX – Newsletter*	*2013 Feb 1st*	*online*	*Open to all*	--	*International*
32	*Newsletter 3*	*SKB*	*LUCOEX – Newsletter*	*2014 Jan 25th*	*online*	*Open to all*	--	*International*
33	*Newsletter 4*	*SKB*	*LUCOEX – Newsletter*	*2015 Aug 31st*	*online*	*Open to all*	--	*International*

APPENDIX III – CONFIDENTIAL INFORMATION

The applications for patents, trademarks, registered designs, etc. shall be listed according to the template B1 provided hereafter.

The list should, specify at least one unique identifier e.g. European Patent application reference. For patent applications, only if applicable, contributions to standards should be specified. This table is cumulative, which means that it should always show all applications from the beginning until after the end of the project.

TEMPLATE B1: LIST OF APPLICATIONS FOR PATENTS, TRADEMARKS, REGISTERED DESIGNS, ETC.					
Type of IP Rights[3]:	Confidential Click on YES/NO	Foreseen embargo date dd/mm/yyyy	Application reference(s) (e.g. EP123456)	Subject or title of application	Applicant (s) (as on the application)

[3] A drop down list allows choosing the type of IP rights: Patents, Trademarks, Registered designs, Utility models, Others.

Part B2

Please complete the table hereafter:

Type of Exploitable Foreground[4]	Description of exploitable foreground	Confidential Click on YES/NO	Foreseen embargo date dd/mm/yyyy	Exploitable product(s) or measure(s)	Sector(s) of application[5]	Timetable, commercial or any other use	Patents or other IPR exploitation (licences)	Owner & Other Beneficiary(s) involved

In addition to the table, please provide a text to explain the exploitable foreground, in particular:

- Its purpose
- How the foreground might be exploited, when and by whom
- IPR exploitable measures taken or intended
- Further research necessary, if any
- Potential/expected impact (quantify where possible)

[6] General advancement of knowledge, Commercial exploitation of R&D results, Exploitation of R&D results via standards, exploitation of results through EU policies, exploitation of results through (social) innovation.

[5] NACE nomenclature: http://ec.europa.eu/competition/mergers/cases/index/nace_all.html

APPENDIX IV – EC QUESTIONAR

The following questions will assist the Commission to obtain statistics and indicators on societal and socio-economic issues addressed by projects. The questions are arranged in a number of key themes. As well as producing certain statistics, the replies will also help identify those projects that have shown a real engagement with wider societal issues, and thereby identify interesting approaches to these issues and best practices. The replies for individual projects will not be made public.

A General Information

Grant Agreement Number:	**269905**
Title of Project:	**LUCOEX**
Name and Title of Coordinator:	**Jan Gugala, Project Manager SKB AB**

B Ethics

1. Did your WP undergo an Ethics Review (and/or Screening)? • If Yes: have you described the progress of compliance with the relevant Ethics Review/Screening Requirements in the frame of the periodic/final work package reports? Special Reminder: the progress of compliance with the Ethics Review/Screening Requirements should be described in the Period/Final WP Reports under the Section 3.2.2 *'Work Progress and Achievements'*	***NO***
2. Please indicate whether your WP involved any of the following issues (tick box) :	***NO***
RESEARCH ON HUMANS	
• Did the work package involve children?	*no*
• Did the work package involve patients?	*no*
• Did the work package involve persons not able to give consent?	*no*
• Did the work package involve adult healthy volunteers?	*no*
• Did the work package involve Human genetic material?	*no*
• Did the work package involve Human biological samples?	*no*
• Did the work package involve Human data collection?	*no*
RESEARCH ON HUMAN EMBRYO/FOETUS	
• Did the work package involve Human Embryos?	*no*
• Did the work package involve Human Foetal Tissue / Cells?	*no*
• Did the work package involve Human Embryonic Stem Cells (hESCs)?	*no*
• Did the work package on human Embryonic Stem Cells involve cells in culture?	*no*
• Did the work package on human Embryonic Stem Cells involve the derivation of cells from Embryos?	*no*
PRIVACY	
• Did the work package involve processing of genetic information or personal data (eg. health, sexual lifestyle, ethnicity, political opinion, religious or philosophical conviction)?	*no*
• Did the work package involve tracking the location or observation of people?	*no*
RESEARCH ON ANIMALS	
• Did the work package involve research on animals?	*no*
• Were those animals transgenic small laboratory animals?	*no*
• Were those animals transgenic farm animals?	*no*
• Were those animals cloned farm animals?	*no*
• Were those animals non-human primates?	*no*
RESEARCH INVOLVING DEVELOPING COUNTRIES	
• Did the work package involve the use of local resources (genetic, animal, plant etc)?	*no*
• Was the work package of benefit to local community (capacity building, access to healthcare, education etc)?	*no*
DUAL USE	
• Research having direct military use	*no*
• Research having the potential for terrorist abuse	*no*

C Workforce Statistics

3. Workforce statistics for the work package: Please indicate in the table below the number of people who worked on the work package (on a headcount basis).

Type of Position	Number of Women	Number of Men
Scientific Coordinator	1	3
Work package leaders		
Experienced researchers (i.e. PhD holders)		
PhD Students		
Other	1	1

4. How many additional researchers (in companies and universities) were recruited specifically for this work package?	**0**
Of which, indicate the number of men:	

D Gender Aspects

5. Did you carry out specific Gender Equality Actions under the work package?

☒ Yes
○ No

6. Which of the following actions did you carry out and how effective were they?

		Not at all effective				Very effective
❑	Design and implement an equal opportunity policy	○	○	○	○	○
❑	Set targets to achieve a gender balance in the workforce	○	○	○	○	○
❑	Organise conferences and workshops on gender	○	○	○	○	○
❑	Actions to improve work-life balance	○	○	○	○	○
☒	Other:	Prioritized female applicants for scholarships, internships, presentations etc. to raise the interest for the work we are doing.				

7. Was there a gender dimension associated with the research content – i.e. wherever people were the focus of the research as, for example, consumers, users, patients or in trials, was the issue of gender considered and addressed?

○ Yes- please specify

☒ No

E Synergies with Science Education

8. Did your work package involve working with students and/or school pupils (e.g. open days, participation in science festivals and events, prizes/competitions or joint work packages)?

☒ Yes- please specify: Scholarship programme was executed to raise awareness and interest among students for the area we are working with and to increase the understanding for what we are doing.

○ No

9. Did the work package generate any science education material (e.g. kits, websites, explanatory booklets, DVDs)?

○ Yes- please specify

☒ No

F Interdisciplinarity

10. Which disciplines (see list below) are involved in your work package?

☒ Main discipline: Project Management & Financial control

○ Associated discipline:

○ Associated discipline:

CLASSIFICATION OF SCIENTIFIC DISCIPLINES ACCORDING TO THE FRASCATI MANUAL

1. NATURAL SCIENCES

1.1 Mathematics and computer sciences [mathematics and other allied fields: computer sciences and other allied subjects (software development only; hardware development should be classified in the engineering fields)]

1.2 Physical sciences (astronomy and space sciences, physics and other allied subjects)

1.3 Chemical sciences (chemistry, other allied subjects)

1.4 Earth and related environmental sciences (geology, geophysics, mineralogy, physical geography and other geosciences, meteorology and other atmospheric sciences including climatic research, oceanography, vulcanology, palaeoecology, other allied sciences)

1.5 Biological sciences (biology, botany, bacteriology, microbiology, zoology, entomology, genetics, biochemistry, biophysics, other allied sciences, excluding clinical and veterinary sciences)

2 ENGINEERING AND TECHNOLOGY

2.1 Civil engineering (architecture engineering, building science and engineering, construction engineering, municipal and structural engineering and other allied subjects)

2.2 Electrical engineering, electronics [electrical engineering, electronics, communication engineering and systems, computer engineering (hardware only) and other allied subjects]

2.3. Other engineering sciences (such as chemical, aeronautical and space, mechanical, metallurgical and materials engineering, and their specialised subdivisions; forest products; applied sciences such as geodesy, industrial chemistry, etc.; the science and technology of food production; specialised technologies of interdisciplinary fields, e.g. systems analysis, metallurgy, mining, textile technology and other applied subjects)

3. MEDICAL SCIENCES

3.1 Basic medicine (anatomy, cytology, physiology, genetics, pharmacy, pharmacology, toxicology, immunology and immunohaematology, clinical chemistry, clinical microbiology, pathology)

3.2 Clinical medicine (anaesthesiology, paediatrics, obstetrics and gynaecology, internal medicine, surgery, dentistry, neurology, psychiatry, radiology, therapeutics, otorhinolaryngology, ophthalmology)

3.3 Health sciences (public health services, social medicine, hygiene, nursing, epidemiology)

4. AGRICULTURAL SCIENCES

4.1 Agriculture, forestry, fisheries and allied sciences (agronomy, animal husbandry, fisheries, forestry, horticulture, other allied subjects)

4.2 Veterinary medicine

5. SOCIAL SCIENCES

5.1 Psychology

5.2 Economics

5.3 Educational sciences (education and training and other allied subjects)

5.4 Other social sciences [anthropology (social and cultural) and ethnology, demography, geography (human, economic and social), town and country planning, management, law, linguistics, political sciences, sociology, organisation and methods, miscellaneous social sciences and interdisciplinary , methodological and historical S1T activities relating to subjects in this group. Physical anthropology, physical geography and psychophysiology should normally be classified with the natural sciences].

6. HUMANITIES

6.1 History (history, prehistory and history, together with auxiliary historical disciplines such as archaeology, numismatics, palaeography, genealogy, etc.)

6.2 Languages and literature (ancient and modern)

6.3 Other humanities [philosophy (including the history of science and technology) arts, history of art, art criticism, painting, sculpture, musicology, dramatic art excluding artistic "research" of any kind, religion, theology, other fields and subjects pertaining to the humanities, methodological, historical and other S1T activities relating to the subjects in this group]

G Engaging with Civil society and policy makers

11a Did your work package engage with societal actors beyond the research community? *(if 'No', go to Question 14)*	○ ☒	Yes No

11b If yes, did you engage with citizens (citizens' panels / juries) or organised civil society (NGOs, patients' groups etc.)?

- ○ No
- ○ Yes- in determining what research should be performed
- ○ Yes - in implementing the research
- ○ Yes, in communicating /disseminating / using the results of the work package

11c In doing so, did your work package involve actors whose role is mainly to organise the dialogue with citizens and organised civil society (e.g. professional mediator; communication company, science museums)?	○ ○	Yes No

12. Did you engage with government / public bodies or policy makers (including international organisations)

- ○ No
- ○ Yes- in framing the research agenda
- ○ Yes - in implementing the research agenda
- ☒ Yes, in communicating /disseminating / using the results of the work package

13a Will the work package generate outputs (expertise or scientific advice) which could be used by policy makers?

- ☒ Yes – as a **primary** objective (please indicate areas below- multiple answers possible)
- ○ Yes – as a **secondary** objective (please indicate areas below - multiple answer possible)
- ○ No

13b If Yes, in which fields?

Agriculture		**Energy**		Human rights	
Audiovisual and Media		Enlargement		Information Society	
Budget		Enterprise		Institutional affairs	
Competition		**Environment**		Internal Market	
Consumers		External Relations		Justice, freedom and security	
Culture		External Trade		Public Health	
Customs		Fisheries and Maritime Affairs		Regional Policy	
Development Economic and Monetary Affairs		Food Safety		**Research and Innovation**	
		Foreign and Security Policy		Space	
Education, Training, Youth		Fraud		Taxation	
Employment and Social Affairs		Humanitarian aid		Transport	

13c If Yes, at which level?

- ☒ Local / regional levels
- ☒ National level
- ☒ European level
- ☒ International level

H Use and dissemination

14. How many Articles were published/accepted for publication in peer-reviewed journals?	**0**
To how many of these is open access[6] provided?	
How many of these are published in open access journals?	
How many of these are published in open repositories?	
To how many of these is open access not provided?	
Please check all applicable reasons for not providing open access:	
❑ publisher's licensing agreement would not permit publishing in a repository ❑ no suitable repository available ❑ no suitable open access journal available ❑ no funds available to publish in an open access journal ❑ lack of time and resources ❑ lack of information on open access ❑ other[7]: ……	

15. How many new patent applications ('priority filings') have been made? *("Technologically unique": multiple applications for the same invention in different jurisdictions should be counted as just one application of grant).*		**0**
16. Indicate how many of the following Intellectual Property Rights were applied for (give number in each box).	Trademark	**0**
	Registered design	**0**
	Other	**0**
17. How many spin-off companies were created / are planned as a direct result of the work package?		**0**
Indicate the approximate number of additional jobs in these companies:		

18. Please indicate whether your work package has a potential impact on employment, in comparison with the situation before your work package:

❑	Increase in employment, or	❑	In small & medium-sized enterprises
❑	Safeguard employment, or	❑	In large companies
❑	Decrease in employment,	❑	None of the above / not relevant to the work package
❑	Difficult to estimate / not possible to quantify		

19. For your work package partnership please estimate the employment effect resulting directly from your participation in Full Time Equivalent (*FTE = one person working fulltime for a year*) jobs:	*Indicate figure:*
Difficult to estimate / not possible to quantify	❑

[6] Open Access is defined as free of charge access for anyone via Internet.
[7] For instance: classification for security project.

I Media and Communication to the general public

20. As part of the work package, were any of the beneficiaries professionals in communication or media relations?

○ Yes ☒ No

21. As part of the work package, have any beneficiaries received professional media / communication training / advice to improve communication with the general public?

☒ Yes ○ No

22 Which of the following have been used to communicate information about your work package to the general public, or have resulted from your work package?

❑	Press Release	❑	Coverage in specialist press
❑	Media briefing	❑	Coverage in general (non-specialist) press
❑	TV coverage / report	❑	Coverage in national press
❑	Radio coverage / report	❑	Coverage in international press
❑	Brochures /posters / flyers	☒	Website for the general public / internet
❑	DVD /Film /Multimedia	❑	Event targeting general public (festival, conference, exhibition, science café)

23 In which languages are the information products for the general public produced?

☒	Language of the coordinator	☒	English
❑	Other language(s)		