

Contract Number: 622177

## Deliverable n°6.1

# Plan for the dissemination and exploitation of the project's results

Work Package 6

Project Acronym	Modern2020
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Dissemination Level		
PU	Public	
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the partners of the Modern2020 project	
CO	Confidential, only for partners of the Modern2020 project and EC	X

History chart			
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**Reviewed by**

Modern2020 Consortium

**Approved by**

Modern2020 Executive Board



## Abstract

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The Modern2020 Plan for the dissemination and exploitation of the project's results (Deliverable 6.1) is a strategic document that aims to ensure maximum impact of Modern2020 during its lifetime, to achieve a high-level of engagement, and sustainable benefits after the project ends. The dissemination plan describes internal and external communication. More specifically, this document establishes the dissemination/exploitation strategy as well as the concrete actions planned in the framework of the project, to provide the various target audiences with high-quality information about Modern2020, ensuring that this information is shared with appropriate audiences on a timely basis and by the most effective means. The dissemination and exploitation is a four-step process:

1. Providing a clear description of the project's mission and its goals (cf. Project overview);
2. Addressing the target audiences with the right message through the appropriate channels by
  - o defining target audience,
  - o identifying exploitable results of the project,
  - o selecting suitable dissemination tools and channels;
3. Engaging stakeholders and motivating them to participate actively in the project activities (especially within WP5);
4. Following the Dissemination/Exploitation activities.

This deliverable will be regularly updated and submitted to EC as an attachment to periodic reports at months 18, 36 and 48. This document will allow the EC to assess the impact of the project.



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## Project overview

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Long-lived radioactive waste must be safely isolated and contained for long periods. Current radioactive waste management programmes are focused on disposal of long-lived waste in geological repositories as the most appropriate strategy for ensuring long-term safety of people and the environment.

A successful strategy for the management and disposal of spent fuel and long-lived radioactive waste should address both technical and societal needs, and **monitoring** has the potential to contribute to both of these needs.

**Definition of monitoring**<sup>1</sup>: “continuous or periodic observations and measurements of engineering, environmental, radiological or other parameters and indicators/characteristics, to help evaluate the behaviour of components of the repository system, or the impacts of the repository and its operation on the environment – and thus to support decision making during the disposal process and to enhance confidence in the disposal process.”

Monitoring can underpin a repository safety strategy; it can contribute to verification of the performance of the disposal system and can contribute to demonstration of compliance with regulatory requirements. Monitoring can provide better understanding of components evolution and thus allow to appreciating the optimization possibilities. Monitoring can contribute to public and stakeholder understanding of processes occurring in the repository, and hence, it can respond to public concerns and potentially be used to build confidence in geological disposal. Monitoring is expected to play an important role in enabling waste management organisations to progress towards a safe and accepted implementation of geological disposal of radioactive waste.

### **Modern2020 objectives**

Based on the recommendations from previous international collaborative efforts, including the outcomes of the MoDeRn Project, the overall objective of the Modern2020 Project is to provide the means for developing and implementing an effective and efficient repository operational monitoring programme, that will be driven by safety case needs, and that will take into account the requirements of the individual Member State’s national contexts (including inventory, host rocks, repository concepts and regulations) and public stakeholder expectations (particularly those of local public stakeholders at (potential) disposal sites).

**Definition of the ‘safety case’**: A safety case is a formal compilation of evidence, analyses and arguments that quantify and substantiate a claim that the repository will be safe. An initial safety case can be established early in the course of a repository project. Such a preliminary safety case then evolves into a more comprehensive safety case as a result of work carried out, incorporating experience gained and information obtained throughout the stepwise evolution of the project including any pre-closure monitoring phase.

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<sup>1</sup> Modern Synthesis report, 2014

The work in the Modern2020 Project will address the following topics:

- i) Strategy: development of detailed methodologies for screening safety cases to identify needs-driven repository monitoring strategies and to develop operational approaches for responding to monitoring information;
- ii) Technology: carry out research and development (R&D) to solve outstanding technical issues in repository monitoring, which are related with wireless data transmission technologies, alternative long term power supplies, new sensors, geophysics, reliability and qualification of components.;
- iii) Demonstration and Practical Implementation: enhance the knowledge on the operational implementation and demonstrate the performance of state-of-the-art and innovative techniques by running full-scale and *in-situ* experiments;
- iv) Societal concerns and Stakeholder Involvement: develop and evaluate ways for integrating public stakeholders concerns and societal expectations into repository monitoring programmes.

Modern2020 will focus on monitoring of the near-field during repository operational phases.

**Definition of the 'near field' and 'far field'**: The near field is defined as the portion of geologic repository for nuclear waste that contains the waste form and other components of the engineered barrier system (EBS), as well as a volume of immediately surrounding host rock that is significantly affected by repository construction and waste emplacement.

The far field, on the other hand, includes remaining host rock that separates the near field from the biosphere. The far field is for all intents and purposes unaffected by repository construction and waste emplacement.

### **Modern2020 work plan**

To accomplish the Project objectives, the Modern2020 Project work plan is structured into six work packages (WPs), out of which two (WP1 and WP6) are supporting work packages, related to project management and dissemination.

#### **WP1 – Coordination and management of the Consortium**

WP1 will focus on the overall administrative and financial management, scientific coordination, and internal communication and Consortium meetings, within the Modern2020 Project. The management structure of the project includes the General Assembly, responsible for major decisions, the Executive Board, which oversees the effective and efficient implementation of the Project, the Coordinator, who acts as the intermediary between the partners and the European Commission, WP Leaders, who co-ordinate work under each WP, Task Leaders, who co-ordinate specific work activities, and Deliverable Leaders, responsible for production of the Deliverables.

#### **WP2 – Monitoring programme design basis, monitoring strategies and decision-making**

A good understanding exists of what could be monitored during repository operations, but work is needed now to understand what *should* be monitored within the frame of the wider safety case, and



research, development and demonstration (RD&D) programmes. Work is also required to understand how monitoring information can be used to support decision-making and to plan for responding to monitoring results.

The objectives of work under WP2 are:

- Describe specific objectives for monitoring of the barrier system in different national programmes, based on consideration of the safety case.
- Evaluate high-level monitoring strategies (e.g. pilot facility, monitoring of emplacement region, well defined batch experiments, and use of dummy canisters) and describe the potential implementation of these strategies for a range of repository designs and geological environments.
- Identify the range of decisions to be made during repository implementation that will require information from monitoring, and the monitoring information / data required to underpin the decisions.
- Understand and consider the range of stakeholders (e.g. WMO staff and regulators) making decisions / interested in monitoring data, and the functions responsible for using monitoring data.
- Develop approaches for screening preliminary parameter lists for different national monitoring contexts.
- Identify the parameters that should be monitored in practical (implementable) programmes.
- Describe the expected evolution of the disposal system during the monitoring period, as it relates to the monitoring parameters identified.
- Identify monitoring results that would require action to be taken, and set out the types of response actions that could be considered for these results, in the context of decision making.
- Identify approaches (methods, tools, workflows) for using monitoring data in decision making

### **WP3 – R&D of relevant monitoring technologies**

Previous R&D activities demonstrated that technologies exist for monitoring the near-field. However, existing technologies have limitations, which must be addressed before repository monitoring could be fully implemented. The additional R&D to be done includes the adaptation of the existing technologies to specific monitoring objectives, host rocks and repository concepts, the development of new technologies for the monitoring of specific parameters, and the improvement of the long-term performance of the monitoring components.

The specific objectives of WP3 are:

- To improve wireless monitoring technology including the combination of high-frequency and low-frequency systems.
- To research on alternative power supplies capable of extending the expected life time of monitoring components and of wireless devices in particular.
- To develop new sensors to measure relevant parameters when suitable ones do not exist or do not comply with the required performance to refine and further improve the most promising geophysical methods for non-intrusive monitoring.
- To establish a common methodology for qualifying the components of the monitoring system.

#### **WP4 – Demonstration of monitoring implementation at repository-like conditions**

Preparing for implementation of repository monitoring requires demonstration of monitoring technologies at full-scale and under the *in-situ* conditions that will be present within the repository environment. Demonstration requires the consideration of the application of individual technologies and systems utilising several technologies designed at integrated monitoring of multiple parameters using multiple techniques.

The objectives of WP4 are:

- To demonstrate new technology developments under *in-situ* conditions in the Finnish, Swedish, French and Swiss concepts.
- To demonstrate the development of a monitoring system design utilising multiple technologies and linked to a specific safety case.
- To utilise existing experience in near-field monitoring to provide guidance on monitoring system design, e.g. by examining whether existing monitoring technologies can provide information on the required parameters, at the required frequency and accuracy.

#### **WP5 - Effectively engaging local public stakeholders in R&D on monitoring for geological disposal**

Repository monitoring is a subject of interest to a wide-range of stakeholders. In particular, public stakeholders may expect monitoring to provide continued information on repository performance. As such, early involvement of public stakeholders may improve their confidence in the monitoring programme. We focus specifically on the challenge of involving local public stakeholders, that is to say, people in concerned communities (either potential repository host communities, or communities hosting an underground research laboratory (URL). They represent the most directly concerned public, but are often the furthest away with regard to RD&D activity and the development of the technology with which they will eventually be confronted.

The objectives of WP5 are:

- To engage local public stakeholders in repository monitoring RD&D, and to analyse the impact this has on both the participating stakeholders' and the project partners' understanding of, and expectations regarding, repository monitoring.
- To define more specific ways for integrating public stakeholder concerns and expectations into specific repository monitoring programmes.
- To develop ideas on how to ensure accessibility and transparency of monitoring data (of the type gathered through *in-situ* monitoring) to public stakeholders.
- To learn lessons on how local stakeholder groups could be engaged effectively with RD&D programmes and projects at an EU level.

This Work Package involves cross-cutting work, and will be facilitated by close collaboration with work undertaken in WP2, WP3 and WP4. The ambition is to actively engage local public stakeholders in the strategy and RD&D work of the Modern2020 Project.



### **Expected outcomes**

By developing practical monitoring strategies, technologies and stakeholder involvement strategies, the work will allow advanced national radioactive waste disposal programmes to design monitoring systems suitable for deployment when repositories start operating in the next decade.

The work will also support less advanced radioactive waste disposal programmes and stakeholders by illustrating how the national context can be taken into account in designing dedicated monitoring programmes tailored to their national needs.

### **Expected impacts**

- Increase the mutual understanding of what can realistically be achieved by repository monitoring and the presentation of monitoring data;
- Resolve the key issues with respect to monitoring to support licensing and implementation of underground repositories;
- Contribute to resolve technical key issues in monitoring for the implementation of geological disposal;
- Maintain and enhance knowledge and competences in the field of repository monitoring;
- Consolidate and foster the cooperation amongst EU Member States on monitoring topics;
- Increase the engagement of local public stakeholders at an early stage in the development of monitoring strategies and monitoring technology;
- Identify the potential to increase the democratic quality of the overall process of implementing geological disposal as a long term management strategy.

### **Modern2020 consortium**

The Modern2020 consortium brings together 28 organizations from Europe and Japan that are committed to the common goal of promoting a targeted and innovative cooperation and synergy in the field of monitoring and responding in an efficient way to major issues and challenges of developing and implementing monitoring activities into the safety case.

- Eight radioactive waste management organisations (Andra, ENRESA, NAGRA, ONDRAF/NIRAS, Posiva, RWM, SKB, SURAO);
- Five organisations undertaking research in their respective country on radioactive waste management (DBETEC, ENEA, NRG, RWMC and VTT)
- One technical support organisation (IRSN)
- Four organisations with specialist technical monitoring expertise (AITEMIN, EURIDICE, AREVA, EDF-DTG);
- Eight academic research institutions in the field of applied sciences (CTU, USTRAT, XLIM, TUL, UMONS, ETH) and social sciences (UA, UGOT);
- Two specialist consultants (GSL, NID).



## 1. Dissemination/exploitation strategy

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The Plan for the dissemination and exploitation of the project's results (Deliverable 6.1) aims to formalise the dissemination/exploitation strategy as well as the concrete actions planned in the framework of the project, to provide the various target audiences with high-quality information about Modern2020, ensuring that this information is shared with appropriate audiences on a timely basis and by the most effective means.

The Plan for the dissemination and exploitation aims to ensure maximum impact of Modern2020 during its lifetime, to achieve a high-level of engagement, and to ensure sustainable benefits after the project ends. It has four objectives:

- The first objective is to effectively communicate project activities and results to the Modern2020 consortium, to the European Commission and to other scientific and technical stakeholders;
- The second objective is to make information available that allows to actively engage stakeholders in a way that Modern2020 partners can learn from their specific knowledge, perceptions, expectations, concerns etc. regarding monitoring strategies and its use for decision-making in the geological disposal of radioactive waste.
- The third objective is to make project activities and outcomes available to a wider public interested in the role of monitoring in geological disposal.
- The fourth objective is to maintain competence and knowledge in the field of monitoring.

The implementation of the Modern2020 Plan for the dissemination and exploitation is a five-step process:

1. Providing a clear description of the communication goals;
2. Identifying the key messages from the Modern2020 project's activities;
3. Addressing the target audiences with the through the appropriate channels:
  - Target audience,
  - Exploitable Results of the project,
  - Dissemination tools and channels;
4. Engaging stakeholders and motivating them to participate actively in the project activities (within WP5);
5. Updating regularly the Dissemination/Exploitation activities.

## 2. Target audience

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Modern2020 dissemination activities will be mainly targeted to the radioactive waste management community and wide stakeholders. Target audiences can be divided in three target groups:

- Scientific and technical stakeholders: Modern2020 Consortium, IGD-TP, Waste Management Organisations, SITEX, Technical Support Organisations, Research and innovation projects, universities, Master and PhD Students, early career scientists/engineers, engineering

companies, international experts, IAEA, NEA, European Technology platforms, EC, national decision makers, etc..

- Local Stakeholders engaged in WP5: Specific attention will be paid to make sure that the research and communication actions not interfere with communication plans and any other activity from the concerned national waste management agencies as regards to the issue of deep geological disposal.
- A wider public interested in understanding the role of monitoring in geological disposal.



### 3. Exploitable results

The table below gives the public deliverables that will be produced during Modern2020 (main Modern2020 results)

Deliverable Title		Diss. Level	Description
D2.1	Decision-making Requirements, Monitoring Strategies and Methodologies for Screening the Preliminary Parameter List	PU	This report will identify decision making steps, engineering decisions and generic requirements on monitoring data; discuss the implications of different monitoring strategies; and will describe methodologies that can be used to screen the preliminary parameter list to identify the list of parameters to be included in a monitoring programme. The report will also provide cross-comparison and generic lessons from consideration of the work as a whole.
D2.2	Monitoring Parameter Screening: Test Cases	PU	Application of screening methodologies to concepts in seven national programmes to identify the parameters that could meet the requirements of the national context. The report will document the screening methodologies applied in each national programme and the outcome of their application. The report will reflect the impact of the maturity of the national programme on the ability to define an actual monitoring programme, and discuss the benefits of developing a monitoring programme at different stages of implementation. Where feasible, the report will provide guidance on what aspects of a monitoring programme should be developed at each stage of implementation.
D2.3	Decision Making, Performance Measures and Response Planning	PU	This report will describe decision making approaches, the development of performance measures and potential responses for the monitoring programmes considered in WP2.
D3.1	Synthesis report on relevant monitoring technologies for repository	PU	It will inform about the progress obtained thanks to the R&D carried out but made from a wider perspective, including the update of SOA and current Readiness Level of most relevant technology.
D3.2	Wireless data transmission systems for repository monitoring	PU	This document will report on the specific progress made in relation with the development of integrated solutions for repository monitoring using wireless devices.
D3.3	Long term power supply sources for repository monitoring	PU	This document will report on the specific progress made in relation with the development of power supply sources to extend the lifetime of repository monitoring components.
D3.4	New sensors for repository monitoring	PU	This document will report on the specific progress made in relation with the development of new sensors or sensing techniques intended for repository monitoring.
D3.5	Geophysical methods for repository monitoring	PU	This document will report on the specific progress made in relation with the development of geophysical techniques for repository monitoring.
D3.6	Qualification methodology for repository monitoring equipment	PU	This document will report on the specific progress made to agree on a common multi-stage qualification methodology applicable to each component of the repository monitoring system
D4.1	Full-scale In Situ Systems Test (Finland)	PU	This report will contain the following parts: (1) assessment of (advanced) EBS monitoring technologies; (2) development and design of a monitoring plan.
D4.2	HA Industrial Pilot Experiment (France)	PU	This deliverable will consist of two partial deliverables: i) D.4.2a Development of monitoring plan; this report will contain an updated monitoring design plan considering the results from the work performed in WP2 (parameter list



			screening) and WP3 (assessment of the sensor technology) [Month 24] ii) D.4.2.b Implementation and first results: the field implementation, together with the first data reports (including an assessment and interpretation of the physico-chemical sensors)
D4.3	LTRBM (IRSN, France)	PU	This deliverable will consist of the field realization of the LTRBM set-ups (including design and as-built reports); essential parts of this deliverable are also the first data reports, including a discussion of the performance of the innovative sensor technologies
D4.4	FE and TEM results (Switzerland)	PU	This deliverable will be based on the field realisation of the FE test, complemented with the test results (e.g. actual versus expected behaviour). Special attention will also be paid to the performance of the innovative sensor technologies (distributed fiber optics and TDR sensors).
D4.5	Good practices for implementing a monitoring strategy	PU	Based on the experience gained from the demonstrator tasks, and also based on the assessment of the other selected cases, a set of recommendations or "good practices" is proposed for implementing a monitoring strategy into a monitoring plan for an actual repository; it contains suggestions specific for the different safety cases and related monitoring strategies, as well as considerations on the perspectives for the application of the different (advanced) monitoring technologies (fiber optics, wireless techniques,...) based on the experiences obtained through the R&D work (WP3) and through the implementation at the different field tests.
D5.1	Monitoring the underground: specific challenges for engaging concerned stakeholders as compared to environmental monitoring	PU	This document reports on the research into how stakeholders' concerns and expectations may or may not be taken into account in monitoring programmes for specific infrastructures and underground facilities
D5.2	Repository monitoring in the context of repository governance	PU	In the ideal situation, this deliverable consists of a comprehensive overview document for local public stakeholders on repository monitoring technology. If this goal is eventually not achieved, this deliverable will be a report describing the process of attempting to draft such a handbook and reflecting on the lessons learnt, on what did work and what did not
D5.3	Engaging local citizen stakeholders in R&D at the European level: the case of monitoring for geological disposal	PU	This document reports on the lessons learned on developing monitoring programmes, on communicating monitoring data, and on how this fits into a broader repository governance perspective. A section will also be dedicated to widen these insights and provide more general lessons from the case of monitoring for GD on how to organise EU research projects/programmes on RWM in such a way that they allow for engagement of concerned parties at a local level.
D6.1	Plan for the dissemination and exploitation of the project's results	PU	This document will be produced at month 6 to identify key messages to be delivered, target audiences, method and the timing of dissemination. It will also detail strategy and concrete actions for the protection and exploitation of the project results. It will then be updated during the project.
D6.2	Modern2020 public website	PU	A dedicated Modern2020 website will be set up at the start of the project and will be regularly updated.
D6.3	Proceedings for international conference on repository monitoring	PU	This deliverable will synthesise the conclusions from discussions and presentations held during the conference. It will also record detailed conference programme, a list of registered participants as well as full abstracts for each of the oral and poster presentations.
D6.4	Report on the Training Session	PU	This deliverable will synthesise the outcomes of the training session. It will present the objectives of the training, the complete programme with details on lectures and speakers, as well as the feedback from the students through a questionnaire.
D6.5	Project synthesis	PU	This report will be the synthesis of research undertaken in the Modern2020 project. It will present the key results and conclusions from the project.
D6.6	Modern2020 Video	PU	A 20 min summary video will be produced and will introduce and illustrate objectives of the Modern2020 project and the main results obtained in order to explain to a wide audience what the research carried out within Modern2020 is about. The video will illustrate both technical aspects and stakeholder approaches.



#### 4. Specific objectives of dissemination for each target group

The table below gives the outlines of the dissemination strategy, defines for each target audience the main objective of the dissemination and details the dissemination/communication tools and channels that will be used. Dissemination tools/channels are described in Section 5).

Target Audience	Subgroups	Main objectives of the dissemination activities	Dissemination tools and channels
Scientific and technical stakeholders	Modern2020 consortium	Provide with an effective and efficient blueprint to follow the work and outcomes of the project.	<ul style="list-style-type: none"> <li>• Emails/ Internal meetings (incl. General Assemblies)</li> <li>• Projectplace</li> <li>• Project deliverables (PU and CO)</li> <li>• Quarterly reports</li> <li>• Modern2020 Website</li> <li>• Newsletters</li> </ul>
	European Commission	Inform about the progress of the project progress and significant results	<ul style="list-style-type: none"> <li>• Progress reports and deliverables</li> <li>• Modern2020 Website</li> <li>• General Assemblies</li> <li>• Newsletters</li> <li>• Project presentations during scientific event</li> <li>• Modern2020 International Conference</li> <li>• Project deliverables (PU and CO)</li> </ul>
	Broad scientific and technical stakeholders	Present the objectives and progress of the Modern2020 project, on the work performed within WP2 (Monitoring Strategies), WP3 and 4 (RD&D works) and WP5 (Engaging local stakeholders).	<ul style="list-style-type: none"> <li>• Modern2020 Website</li> <li>• Newsletters</li> <li>• Project presentation and leaflets</li> <li>• Project deliverables (PU)</li> <li>• Project presentations during scientific event</li> <li>• Modern2020 International Conference</li> <li>• Publications in peer reviewed journals</li> </ul>
	Early career scientists/engineers	Maintain competence and knowledge in the field of monitoring	<ul style="list-style-type: none"> <li>• Modern2020 monitoring training school</li> </ul>
Local Stakeholders engaged in WP5 (Local community groups)	Enhance the participation of the WP5 stakeholders by providing them with pre-meeting material.	<ul style="list-style-type: none"> <li>• Modern2020 workshops</li> <li>• Specific documentation (e.g. pre-meeting material for the workshops)</li> <li>• Projectplace</li> <li>• Modern2020 Website</li> <li>• Newsletters</li> </ul>	



		<ul style="list-style-type: none"> <li>• Project deliverables (PU)</li> <li>• International Conference</li> <li>• Site visits</li> </ul>
Wider public	<p>Present the objectives and progress of the Modern2020 project.</p> <p>Explain how monitoring informs the disposal process, responds to regulatory requirements, feeds the decision making process and contributes to enhancing confidence in and acceptance of geological disposal of radioactive waste.</p> <p>Inform about monitoring technologies' development and demonstrations.</p>	<ul style="list-style-type: none"> <li>• Modern2020 Website</li> <li>• Project presentation and leaflets</li> <li>• Newsletters</li> <li>• Project deliverables (PU)</li> <li>• Modern2020 video</li> </ul>



## 5. Dissemination/exploitation tools and channels

The dissemination of the activities, results and outcomes of the Modern2020 project will take several forms and use a variety of media, which are described below.

### 5.1 Modern2020 logo

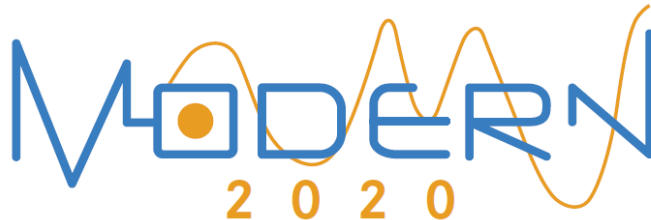
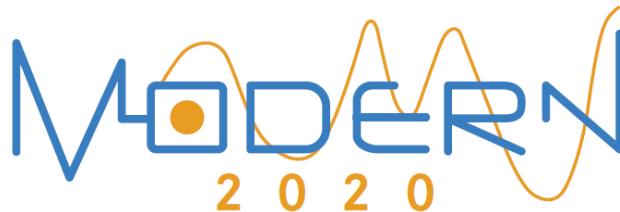


Figure 1- Modern2020 logo



*Development and Demonstration of monitoring strategies  
and technologies for geological disposal*

Figure 2- Modern2020 logo with text

### 5.2 Visibility of EU funding

According to Grant Agreement Article 38 PROMOTING THE ACTION - VISIBILITY OF EU FUNDING 38.1 Communication activities by beneficiaries, "The beneficiaries must promote the action and its results, by providing targeted information to multiple audiences (including the media and the public) in a strategic and effective manner."

All communication and dissemination activities will acknowledge support of the HORIZON2020 Euratom programme by displaying the EU emblem and by including the following text: *This project has received funding from Euratom research and training programme 2014-2018 under grant agreement No 662177*".



EU high-resolution emblems can be found here

<http://europa.eu/about-eu/basic-information/symbols/flag/>



## 5.3 Modern2020 website

A dedicated Modern2020 website [www.modern2020.eu](http://www.modern2020.eu) provides initial information on the project (presentation, scope, partners, work packages, etc.) for a wide audience. The website is regularly updated with on-going activities, public reports, publications, etc. Events (workshops, conferences) will also be publicised on the website.



Figure 3 – Modern2020 website

The Modern2020 website is structured as following:

- Homepage (Introduction, news and coming events, latest documents, logos...)
- About Us
  - About Modern2020
  - Project activities overview
  - Partners
- Activities

- WP2 Strategy
- WP3 R&D
- WP4 Demonstration
- WP5 Local citizen engagement
- News & events
- Publications
  - Modern2020 Deliverables
  - Modern2020 publications
  - Modern2020 presentations
  - Other documents of interests
- Contact
- Useful links

The Modern2020 website is designed to be informative with clear language to ensure wide communication with all categories of stakeholders and wide audience.

Website hits, page views and deliverables/documents' downloads will be monitored in order to measure the impact of the website.

A specific document detailing how to contribute to the Modern2020 website will be prepared by Andra and sent to the Consortium.

## 5.4 Projectplace

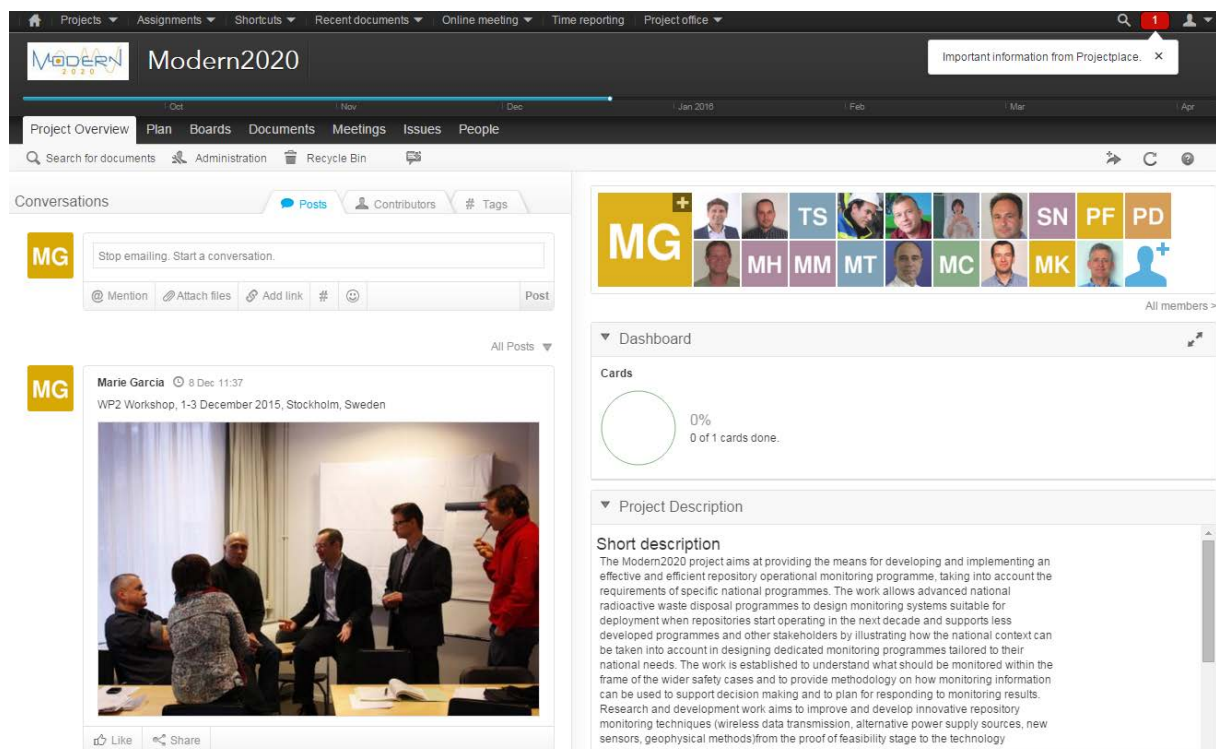


Figure 4- Modern2020 Projectplace

Projectplace is a web-based project management tool (Extranet) which provides secure document storage and sharing. This tool is used for the internal purpose - to support the Modern2020 project management; all members of the consortium have an access to Projectplace - but also for external

purpose – the potential mandated actors and Civil Society representatives that will be involved in the Modern2020 discussions will have a specific access to Projectplace.

URL: [www.projectplace.com](http://www.projectplace.com)

Projectplace is also accessible from the Modern2020 website, by clicking on Extranet (top right).

## 5.5 Other websites

### 5.5.1 Institutional websites of the project partners

Partners are encouraged to publish project-related information (descriptions, news and events, etc.) on their institutional website, and to provide a link towards the official Modern2020 website.

### 5.5.2 IGD-TP website

As this project is under the umbrella of IGD-TP, Modern2020 results will also be disseminated through the IGD-TP website ([www.igdtp.eu](http://www.igdtp.eu)) and newsletters (general information, news and events). Modern2020 results will also be presented during the annual IGD-TP Exchange Forum and during IGD-TP Executive Group meetings.

## 5.6 Modern2020 workshops

Workshops/meetings are the main dissemination means, at internal and external levels.

### 5.6.1 Internal meetings

Internally, Modern2020 partners will regularly organise WPs' meetings to discuss and deliberate project related matters and findings (Coordination meetings).

Local public stakeholders involved in Modern2020 will participate in WP2, WP3 and WP4 workshops as part of the WP5.

### 5.6.2 Public Modern2020 events

#### **Modern2020 international conference on repository monitoring**

At the end of the project, Modern2020 partners will organise an international conference to present and discuss the results of the project and also to learn from other groups by inviting external contributors to participate in the event. This conference will provide a forum for discussion on how monitoring informs the disposal process, responds to regulatory requirements, feeds the decision making process and contributes to enhancing confidence in and acceptance of geological disposal of radioactive waste. A specific organisation committee will be set up in order to organise this conference.

#### **Modern2020 monitoring training school**

A training activity for early-career scientists/engineers in the field of monitoring in relation with geological disposal will be organised the last year of the project. The scope of this training session would be:

- Main regulations that applies, i.e. the Directive 2011/70 EURATOM establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste;

- Principal socio-technical challenges for monitoring geological disposals (particularly long term monitoring);
- Main technologies used for repository monitoring;
- Methodologies to elaborate a monitoring system for a specific disposal design/environment;
- Stakeholder involvement;
- Considerations on the use of monitoring data and decision-making;
- Data archive management.

A specific organisation committee will be set up in order to organise this training school.

## 5.7 Presentation during external conferences and events

Personal contacts and presentations through attendance at relevant workshops, conferences, and events are important channels for the dissemination of project results. Networking remains a crucial way to exchange, give information about the project, and keep informed about the latest developments and outcomes.

Non-exhaustive list of external events:

- IGD-TP events (Exchange Forum, etc.)
  - IGD-TP EF6 – 3-4 November 2015, London, UK
  - IGD-TP EF7 – Autumn 2016
- NUCLEAR
- European Nuclear Energy Forum (ENEF)
- International Conference on Nuclear Engineering (ICONE)
- EURADWASTE
- IAEA Events
- NEA events
- Annual Waste Management (WM) Conference
- Conference on Clays in natural and engineered barriers for radioactive waste confinement (Clay conference)
- National and local events
- Etc. (this list will be regularly updated)

## 5.8 Printed materials

Printed materials, such as flyer, brochures, posters, rollups, factsheets etc. will be produced to provide our audiences with an attractive and written project overview. These materials will be available online (Modern2020 website and Projectplace) and displayed and/or distributed during workshops, conferences or congresses.

A template for presentation is also available on Projectplace.

## 5.9 Modern2020 project synthesis

A synthesis document will be produced during the last year of the project. It will analyse and integrate project results into a comprehensive report. An abstract for a wider audience will also be produced.



## 5.10 Modern2020 video

A summary video will be produced and will introduce and illustrate objectives of the Modern2020 project and the main results obtained in order to explain to a wide audience what the research carried out within Modern2020 is about. The video will illustrate both technical aspects and stakeholder approaches. The contours of this video (audience, content, format, etc.) have to be developed further within the project.



## 6. Reporting and follow-up of dissemination activities

All dissemination activities done in Modern2020 will be continuously reported. The list of dissemination activities will be regularly updated and available for Modern2020 partners on Projectplace (under WP6 – Dissemination). This list will also be submitted to EC at month 18, 36 and 48 as an attachment to the Modern2020 Periodic and Final reports.

Modern2020 List of Dissemination activities

No	Type of activities	Main Leader	Title	Date	Place (place, organisation) or publication	Audience					Size of audience	Countries addressed	
						Scientific Community	Industry	Civil Society	Policy makers	Medias			Other
1	Publication	-	Geo.Rep.Net – Market Analysis of Long Term Repository Monitoring Technologies, J2750	21/09/2015	<a href="http://www.georepnet.org/">www.georepnet.org/</a>	X	X						
2	Oral presentation to a scientific event	Andra	Overview of the technological development inside the Modern2020 EC-project	12-14/10/2015	GeoRepNet meeting	X							
3	Oral presentation to a scientific event	UA	Trading in imaginaries of repository safety and underground monitoring	15-16/10/2015	Liege, Belgium	X					20		
4	Oral presentation to a scientific event	Andra	Modern2020 Development and Demonstration of monitoring strategies and technologies for geological disposal	04/11/2015	IGD-TP Exchange Forum 6, London, UK	X	X		X		160	EU, US, JP	
5	Web sites/Applications	Andra	Modern2020 Website ( <a href="http://www.modern2020.eu">www.modern2020.eu</a> )	20/12/2015	<a href="http://www.modern2020.eu">www.modern2020.eu</a>	X	X	X	X	X	6	Global	
6													
7													
8													
9													
10													
11													
12													

Figure 5 – Modern2020 list of dissemination activities

