

EC Sixth Framework Programme

CARD Project

A Co-ordination Action on Research, Development and Demonstration
Priorities and Strategies for Geological Disposal

QUESTIONNAIRE FOR POTENTIAL PARTICIPANTS IN A TECHNOLOGY PLATFORM FOR GEOLOGICAL DISPOSAL RESEARCH, DEVELOPMENT AND DEMONSTRATION

This questionnaire was issued to CARD Project partners by the Project Co-ordinator, Dr. Alan Hooper (United Kingdom Nirex Limited) on 15 February 2007, having been developed on the basis of inputs from all partners.

EC CARD Project

Questionnaire on the Development of a European Technology Platform in the Field of Geological Disposal of Radioactive Waste

05 February 2007

The aim of this questionnaire is to obtain inputs from potential participants to assess the value and level of support for the development of a European Framework for networking and co-operation in the field of research, development and demonstration (RD&D) for geological disposal of radioactive waste.

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EC CARD Project

Questionnaire on the Development of a European Technology Platform in the Field of Geological Disposal of Radioactive Waste

Introduction

Aim

The aim of this questionnaire is to obtain inputs from potential participants to assess the value and level of support for the development of a European Framework for networking and co-operation in the field of research, development and demonstration (RD&D) for geological disposal of radioactive waste.

Background

The “Technology Platform” is an instrument devised by the European Commission to provide a framework for co-ordination of European R&D activities in key technical areas with a view to assisting Europe to compete efficiently in the development of advanced and complex technologies, e.g. see website: http://cordis.europa.eu/technology-platforms/home_en.html.

In the context of RD&D for geological disposal of radioactive waste, there is no driver of external competition, but there could still be significant benefits from implementation of a Technology-Platform-like instrument for such RD&D in Europe. Benefits might include: improved focus of RD&D priorities; sharing of RD&D resources and avoiding duplication; increased confidence in RD&D programmes and their overall and joint sufficiency.

The EC CARD (Co-ordination Action on research, development and demonstration (RD&D) priorities and strategies for geological disposal) project has been instituted under the EC Sixth Framework Programme for Management of Radioactive Waste.

The CARD project is aimed at assessing the feasibility of a Technology Platform that would provide a European Framework for networking and co-operation in the field of RD&D for geological disposal of radioactive waste in the EU. The project involves representatives from radioactive waste management organisations (WMO's) in Europe with an active interest in geological disposal.

The study will seek inputs from radioactive waste management organisations (disposal implementers) and other potential participants in the Technology Platform. The project will then analyse these inputs and, if there is sufficient level of support (meaning coherent support for a common proposal), develop a proposal for such a Technology Platform to be implemented in the EC Seventh Framework Programme.

The following section provides a preliminary vision for a Technology Platform in the field of RD&D for geological disposal of radioactive waste; this has been arrived at through preliminary discussions in the CARD project. At this stage, however, little is fixed. The

objective of the CARD project is to consider and assess possibilities, and this questionnaire is to provide input to the consideration and assessment.

Preliminary Vision

We envisage that the conditions for success of a European Framework for networking and co-operation in the field of RD&D for geological disposal will include:

- a shared vision of those participants having national programme responsibilities and a willingness to support a common strategic research agenda, i.e. an agreed set of goals for the RD&D needed to develop geological disposal to the level of practical implementation and time scales for their accomplishment (also see p.6 below);
- sufficient authority and willingness of the disposal implementer participants needed to commit resources to projects;
- active and constructive support of all participants including a range of stakeholders;
- appropriate structure and working methods to realise the general objectives and specific project goals efficiently.

General ground rules and function

If a Technology Platform or Technology-Platform-like instrument is implemented it will be formulated by and under the control of the organisations that participate and be to serve their needs. The EC will take an interest as an observer, offer advice in relation to its experience of similar ventures and provide some support for coordination activities of the platform. Organisations will decide for themselves whether or not to participate, and at what level of commitment, depending on the benefits they see in participation and on their own resources.

The Technology Platform can begin as an information exchange and discussion forum and is expected to develop as a vehicle for practical co-operation in specific RD&D projects. It is not intended to duplicate existing discussion fora (e.g. as provided by the NEA and IAEA) or existing multi-national or bilateral research agreements. Rather, it is to help identify RD&D needs that are common to at least some of the participants and to offer practical solutions by which interested participants can co-operate in meeting those needs.

It is not expected that participants will surrender control of their RD&D resources, rather, where there is a joint benefit, they will pool parts of their resources with others for the purposes of specific projects with joint agreed goals and timescales.

At present in the EU, it is estimated that 5% of funding for RD&D related to radioactive waste management comes via the EC and 95% is committed directly by the waste management organisations (WMOs) responsible for their national research programmes (or, in some countries, partly by national research institutes (NRIs) or public authorities, eg. regulatory bodies). The primary aim of a Technology Platform would be to co-ordinate shared objectives and projects in the work programmes at the command of WMOs (and NRIs having research responsibilities delegated by the WMO) in topics and areas where joint benefit of co-operation was seen. A key element in promoting such advanced co-operation is that views expressed and the direction of projects within the Technology Platform would be taken into account by the EC to further support the implementation of geological disposal in EU-member countries by focussing its funding of RD&D in efficient ways on areas of highest added value to implementation by European cooperation.

Benefits and objectives

In preliminary discussions, the following general benefits or objectives have been identified, which a Technology Platform might seek to realise:

- gaining understanding of who is doing what and for what reason, and thus to learn each others' planning strategy and underlying structure for planning RD&D activities and organising information (e.g. requirements management, knowledge management, strategic resource management);
- having access to information and results from other organisations in very focused, precise areas;
- organising meetings to discuss the different planning strategies (see above) or to establish state-of-the-art in certain areas;
- effective utilisation of resources, e.g. URLs, high activity laboratories, training facilities;
- development and communication of a shared knowledge base;
- identifying and supporting European centres of competence and excellence in specific RD&D areas;
- discussion of RD&D priorities and focus on important common issues, and also on minor but common 'special' issues, e.g. related to particular waste types;
- obtaining consensus and alternative views and perspectives on RD&D topics;
- encouraging forward thinking about RD&D needs and enabling up-stream co-ordination of research programmes;
- for advanced national programmes, supporting the implementation and licensing process (and strengthening the foundation of national safety cases) through discussion on key issues and formulation of focused and efficient RD&D responses, also taking account of views from regulators and other stakeholders;
- for less advanced national programmes, giving advance insight on future requirements through the same processes and giving the opportunity to allocate resources to encourage early solutions and follow developments;
- enhancing public acceptance through demonstrated openness of discussing problems and the RD&D requirements, and developing broadly-based technical consensus on the adequacy of RD&D basis and where uncertainties still remain;
- advising the EC on gaps in RD&D coverage or most relevant topics for wide co-operation within EC programmes;
- up-stream coordination of international efforts and initiatives to avoid duplications and optimise WMO's resource utilisation in international cooperation;
- through the improved dissemination of results and information, more rapid responses to such new information in related RD&D programmes.

However, the nature of the Technology Platform may develop, e.g. starting with "exchange of information" type of work (competence mapping, sharing of databases, position on international cooperation ...) and later extending to identifying key priorities and joint projects.

Structure

The Technology Platform structure must allow a level of access to all participants – to allow open discussion and exchange – but also provide a formal structure for efficient planning, management and reporting of projects or activities.

The basic structure envisaged for a Technology Platform includes:

- a broad forum for exchange of information and discussion of RD&D needs in relation to implementation of geological disposal;
- a working programme controlled by an executive body that is supported by a secretariat.

Within the working programme would be:

- technical working groups with specified mandates related to the Technology Platform;
- collaborative projects and activities following agreed work plans and objectives.

The structure must accommodate the needs and constraints of both:

- potential partner organisations, that is the organisations that are in charge of implementing disposal facilities and/or entrusted by their Government with developing radioactive waste disposal solutions ;
- other potential participants with technical interests and concerns (“Technical Organisations”), for example, regulatory bodies, research institutes and universities; and public authorities including involved municipalities, i.e. with an interest in gaining information from, and influencing, research programmes;

An indication of a possible structure is shown in Figure 1. It must be stressed that this is a simple outline to promote feedback from all interested parties on the principles of the operation of a Technology Platform. Within the working groups and collaborative projects and activities, participation would be determined on the basis of best meeting the specified mandate of each of these.

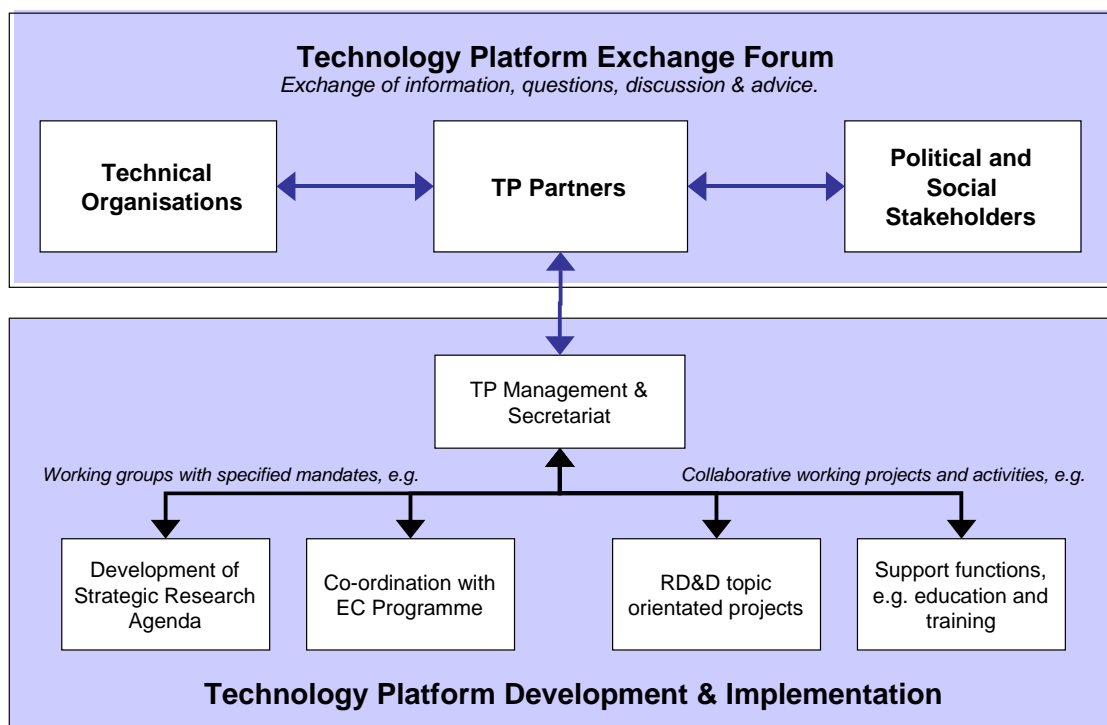


Figure 1: Indication of a possible structure for a Technology Platform in the field of RD&D for geological disposal

Working methods

The Strategic Research Agenda

A key vehicle of other European Technology Platforms is the “Strategic Research Agenda” (SRA). This is a document, arrived at by technical analysis and discussion between research funders and other stakeholders. It lays out RD&D goals within the Technology Platform and time scales for their accomplishment. It forms a focus for ongoing discussion and will be subject to review and on-going development. Once agreed, it forms the high-level guidance for development of proposals and detailed plans of work within the Technology Platform. In the context of a Technology Platform in the area of RD&D for geological disposal, the SRA represents a consensus document outlining the RD&D needs and priorities in support of implementation of geological disposal.

Dialogue and control

Dialogue would be generated primarily within the Exchange Forum, whereas control and monitoring of activities is achieved under the supervision of the Technology Platform management and secretariat, see Figure 1.

The Exchange Forum would use a range of methods to promote dialogue. These could include:

- operation of a website with information on the Technology Platform programme, access to results, and proposals for review and comment (a pilot website will be developed within the CARD project);

- general symposia to discuss RD&D priorities, the SRA and the Technology Platform programme;
- workshops on specific RD&D topics or functions and support activities;

For reasons of management efficiency and to ensure that organisations retain control of their RD&D resources, the implementation of projects within the Technology Platform would be controlled by an executive committee appointed by the Technology Platform partners on the basis of technical competence, covering the complete spectrum of their needs, and strategic-level management competence. This committee, meeting regularly, would commission working groups to develop both the overall SRA and to assess and make technical plans for RD&D projects or development of Technology Platform functions. It would formally open RD&D projects and activities, monitor their performance, and close projects and activities on reaching their goals in accord with the SRA. It would develop reports on the activities and outcomes of the Technology Platform to inform the Exchange Forum and stakeholders and actively seek views, and respond to views, developed by stakeholders, in particular within the Exchange Forum.

The executive management committee would be supported in its duties by a Secretariat, which would also provide support to activities of the Exchange Forum.

Individual RD&D projects and activities would be managed by management groups and methods suited to their structure and objectives, and under the control of participants in the individual RD&D projects and activities.

The Questions

Each organisation is responsible for ensuring that the answers given in the questionnaire properly represent the views of the organisation. It is suggested that responses need to be approved at an appropriate management level to ensure that is the case (e.g. Head of RD&D function or above).

We are seeking specific and well-considered inputs. The responses will be studied and analysed to help shape a proposal for a Technology Platform (TP) that could draw the widest support and provide greatest utility for partners and other participants.

It is important to bear in mind that the aims of the CARD Project are to **assess the feasibility** of, and to **develop a proposal** for, a TP. A decision on whether to proceed to implementation of TP will depend on the level of interest and support that is found. Further, the scope and format of any TP will be arranged to try to meet the expressed wishes of potential participants. Thus, it is important to give input at this stage that clearly expresses both the benefits that your organisation might seek through participation in a TP, and also the problems to be overcome, or constraints that you see, that would impact your organisation's participation in a TP.

In the questionnaire:

- Question 1 asks for information about your organisation and resources.
- Questions 2 to 5 ask about a possible shared vision (benefits, objectives, structure, working methods) for a Technology Platform in the field of RD&D for geological disposal of radioactive waste in the EU.
- Question 6 seeks to identify specific benefits that would need to be delivered and constraints that would need to be observed in order for your organisation to participate and commit resources to such a Technology Platform.
- Question 7 is an invitation to make additional remarks or comments.
- Questions 2 and 3 request the use of importance scales, for clarity:
 - 5 = very important
 - 4 = important
 - 3 = neither important nor unimportant
 - 2 = not very important
 - 1 = no importance

1. Organisation details, national role and RD&D role and resources

Please give the name of the organisation for which these responses are made and the name of the primary contact:

Please give the names of persons making these responses and contact information (in case clarifications are needed):

Please outline (c. 0.25 page) the national role of your organisation (this may be by reference to existing statements and documents):

Please outline (c. 0.5 page) the specific responsibilities and interest of your organisation in RD&D in the field of geological disposal (this may be by reference to existing statements and documents):

With respect to RD&D for geological disposal, please characterise your organisation's role or roles according to the following: (Please choose one or more category that best describes your role(s) or interest)

Organisation's role	Importance
– Funding RD&D	
– Specifying RD&D programmes or assets	
– Managing RD&D programmes or assets	
– Carrying out RD&D work to contract	
– Centre of expertise for specific RD&D	
– Reviewing sufficiency of RD&D programmes and products	
– General interest in sufficiency and relevance of RD&D programmes and products	
– Specific interest only in particular programmes or RD&D topics or applications	
– Other ?	

If applicable, outline (c. 1 page) the RD&D programmes and assets that your organisation

funds, controls or manages (this may be by reference to existing statements and documents). Please indicate, if possible, approximate staff resources and budget allocated to these programmes and assets (by programme/asset or in total):

From where does the budget come to support these RD&D programmes and assets?

What fraction of this budget relies on EC Framework Programmes?

2. Perceived benefits of a Technology Platform and indication of interest

Preliminary meetings and discussions have identified the following possible benefits from the implementation of a Technology Platform in the field of RD&D for geological disposal. Please indicate which, if any, you consider beneficial or important from your organisation's perspective (on a scale "5" *very important* down to "1" *no importance*), plus indicate any other benefits you see. Please expand on the reasons for your judgements if you wish.

<i>Possible benefit</i>	<i>Importance to you</i>
Exchange of information and experience on RD&D planning and management	
Co-ordinated utilisation of Europe-wide RD&D resources & assets	
Effective utilisation of your own or national RD&D resources & assets	
Sharing of RD&D planning (e.g. identification of goals & topics)	
Sharing of RD&D information and results	
Networking among RD&D funders, managers and stakeholders	
Identifying centres of competence and excellence in given topics	
Influence on own national RD&D programmes	
Influence on EC RD&D programmes	
Open process of identifying joint research priorities	
Up-stream co-ordination (longer-term forward planning)	

<i>Other benefits</i>	<i>Importance to you</i>
Significant reasons or preferences underlying your judgements:	
<u>Without commitment</u> , how likely is it that your organisation would participate in a well-formulated Technology Platform in this area?	
<p>Would you consider your role in the Technology Platform primarily as:</p> <ul style="list-style-type: none"> <li>– a potential partner, i.e. the nationally appointed responsible organisation? <input type="checkbox"/> <li>– a stakeholder, i.e. with an interest in gaining information from, and influencing, research programmes ? <input type="checkbox"/> <li>– a technical organisation, ie. with technical interests and concerns? <input type="checkbox"/> <p><i>Please tick one box</i></p>	

3. View on Technology Platform objectives and functions

Preliminary meetings and discussions have identified the following possible objectives and functions for a Technological Platform in the field of RD&D for geological disposal. Please indicate which, if any, you consider important from your organisation's perspective (on a scale "5" *very important* down to "1" *no importance*), plus indicate other objectives and functions that you consider worthwhile. Please expand on the reasons for your judgements if you wish.

<i>Possible objectives and functions</i>	<i>Importance to you</i>
Establishing a forum for discussion of RD&D issues and priorities amongst RD&D funders, managers and other stakeholders.	
Establishing mechanisms for co-ordinating RD&D on topics of shared interest between programmes.	
Establishing mechanisms for co-funding and co-managing RD&D projects of shared interest between programmes.	
Establishing a forum and mechanisms for sharing of RD&D information and results.	
Establishing mechanisms to identify and support centres of competence and excellence in given RD&D topics.	
Providing RD&D funders and managers with a broad range of stakeholder views on RD&D priorities and programmes.	
Providing stakeholders with a window to observe and influence RD&D programmes.	
Up-stream co-ordination (longer-term forward planning)	
<i>Other objectives and functions</i>	<i>Importance to you</i>
Significant reasons or preferences underlying your judgements:	

4. View on Technology Platform structure

The basic structure envisaged for a Technology Platform includes

- a broad forum for exchange of information and discussion of RD&D needs;
- a working programme controlled by an executive body.

Within that working programme would be:

- technical working groups with specified briefs related to the Technology Platform;
- collaborative projects and activities following agreed work plans and objectives.

Figure 1 in the opening text illustrates a possible structure. However, the nature of the Technology Platform may change over time, which will affect both the structure (this question) and working methods (see Question 5).

Please comment on the structure of an Exchange Forum and any particular features you think it should possess:

Please comment on the structure of the Working Programme and any particular features you think it should possess:

Please comment on the management and secretariat provision for the Working Programme and any particular features you think it should possess:

Please make any additional remarks on structure:

5. View on Technology Platform working methods

A wide range of working methods may be employed within the Technology Platform to facilitate communication, discussion, decisions, implementation, control, monitoring and review. These could include:

- operation of a website with information on the Technology Platform programme, access to results, and proposals for review and;
- general symposia to discuss RD&D priorities, the SRA and the Technology Platform programme;
- workshops on specific RD&D topics or functions and support activities.

The Technology Platform could be controlled by an executive committee appointed by the Technology Platform partners. This committee, would commission working groups to

develop both the overall SRA and to assess and make technical plans for RD&D projects or development of Technology Platform functions. The executive management committee would be supported in its duties by a Secretariat, which would also provide support to activities of the Exchange Forum. Individual RD&D projects and activities would be managed by management groups and methods suited to their structure and objectives, and under the control of participants in the individual RD&D projects and activities. See also “Working methods” in the opening text.

Please comment on working methods you would consider should be applied to ensure the effectiveness of the Exchange Forum:

Please comment on working methods you would consider should be applied to ensure the effectiveness of the management of the Working Programme:

Please comment on working methods you would consider should be applied to ensure the effectiveness of communication between the Exchange Forum and the Working Programme:

Please make any additional remarks on working methods:

6. Specific expectations, constraints and level of commitment

Questions 2 to 5 have asked about a possible shared vision (benefits, objectives, structure, working methods) for a Technology Platform in the field of RD&D for geological disposal of radioactive waste in the EU.

This question is to identify any specific benefits that would need to be delivered and constraints that would need to be observed in order for your organisation either to participate in, or commit resources to, such a Technology Platform.

For some organisations, answers to the previous questions will have covered all the issues of interest at this stage, and no further remarks are needed.

For other organisations, there might be quite specific conditions to be fulfilled. This could be due to their official mandate and responsibilities, structure, allowed working arrangements, budget limitations, controls on budget use or other factors.

This is the opportunity to state any such conditions.

Specifically, what are the key benefits and expectations that would encourage your organisation to participate or determine your level of commitment?

Specifically, what are the drawbacks and the associated conditions that would have to be met for your organisation to participate or determine your level of commitment?

Without prejudice, what is the level of RD&D resource commitment (e.g. fraction of budget or specific resources) that you might initially be willing to contribute to a satisfactorily convened Technology Platform?

Without prejudice, what is the level of RD&D resource commitment (e.g. fraction of budget or specific resources) that you might, in the longer term (5-10 years), be able to contribute based satisfactory performance of a Technology Platform?

7. Invitation for additional remarks

Please make any additional remarks or comments you have that you feel are relevant and have not been covered in your answers to the previous questions: