



Business options for establishing an ERDO

Work Package 1

Basic Assumptions

- Objective: to review and recommend organisational **option(s)**
 - for development phase (ERDO)
 - for implementation phase (ERO)
- Reference technical scenarios identified
 - inventory, design, encapsulation, number, transports, timing etc.)
- Multinational concept established
 - cooperation scenario

Basic Assumptions

- European countries need not decide at an early stage between the options of a national or a multinational disposal programme
- Keeping both options open in a “dual track” strategy is a prudent route. This approach can be followed for a long time.
- During this long period the options are:
 - to wait and see what possibilities emerge
 - to start an extended national development programme
 - or to participate in a multinational effort (while maintaining an adequate level of national expertise in waste management)
 - or to combine the latter two (a so-called “dual track” approach).

Basic Assumptions

- Potential Partners in a European Repository
 - National governmental waste management (WM) bodies
 - National private WM bodies – this would require government endorsement.
 - Industrial enterprises and concerns could be direct customers of a regional repository, or even partners.
 - It could be advantageous if the EC and/or other international organisations take a direct role in running or overseeing a European regional repository or storage facility.

Basic Assumptions

- A single organisational form may not be most suited to all phases of the multi-year implementation process
- Most emphasis is on assessing the different options for a body that would manage the work over the coming several years
- A range of potential organisational and legal forms is to be examined and a limited set proposed as options put before participants
- The requirements on the internal structure and staffing of a repository development organisation are also discussed

ERDO and ERO

- ERDO ([European Repository Development Organisation](#)): the initiating, non-profit organisation
- Objective is to establish the systems, structures and agreements and carry out all the work necessary for putting in place shared waste management solutions including geological repository (or repositories)
 - This work would continue through the investigation of potential sites and up to the point of license application to begin the construction of a repository
 - It is assumed that this takes about 10+ years. At this point the ERDO may decide to transform into or separately establish the ERO.

ERDO and ERO

- ERO ([European Repository Organisation](#)): the implementing organisation for waste disposal
- The ERO would be the license holder for the repository and responsible for all subsequent operational activities
- The form for the ERO will be chosen at a future date by the members of the ERDO, assuming that they come to the conclusion that the ERDO organisation needs to be altered
 - The choice will also be strongly influenced by the preferences of the country or countries that have been identified as repository hosts
 - The ERO could be either non-profit or commercial in structure.

ERDO Tasks 1/2

- Interact with national governments and waste owners from partners and from all other potential repository user, transfer and host countries
- Review, develop and assess design concepts for European geological repositories
- Evaluate and publish strategic environmental and economic impacts
- Identify the most suitable organisational type, staffing levels, location and budget for the ERO, including establishment of transparent and equitable financing schemes for the construction and operation phases

ERDO Tasks 2/2

- Agree and publish siting criteria and requirements
- Prepare a platform for negotiations with potential hosts on benefits packages
- Establish a budget for the ERO including a robust mechanism for estimating and updating repository development costs;
- Establish and implement a siting programme – culminating with agreement on a site or sites for which a repository construction license is to be sought.

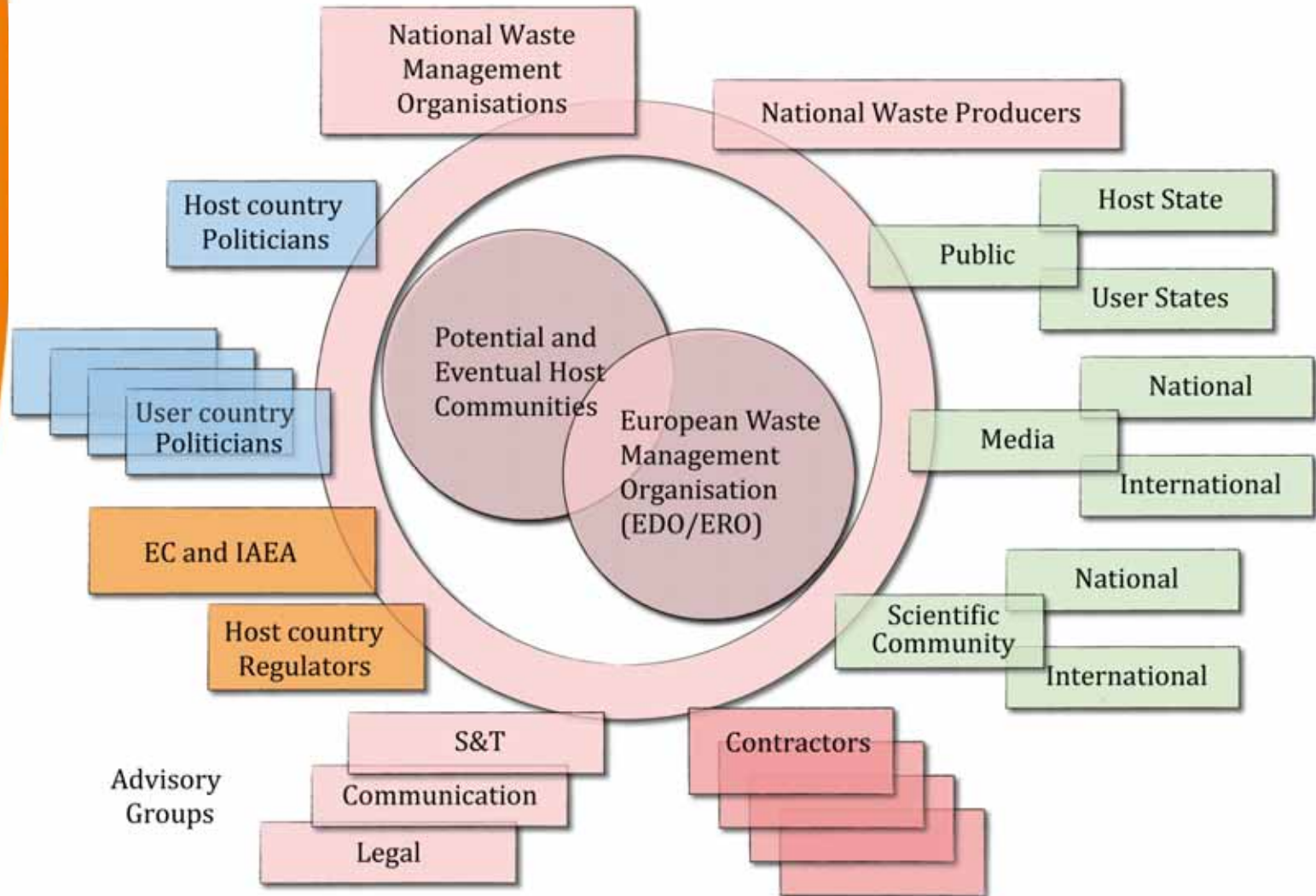
ERDO Model - possible characteristics

- Agreed mechanisms for later accounting for total investments up to ERO formation
- Direct support and possibly seed funding from EC
- Legal structure allowing transformation to another form at time of siting
- 'Neutral' European domicile that does not prejudice siting (e.g. Luxembourg, Brussels, Strasbourg, Switzerland)
- Staffing: board, administration and project staff may be by delegation from Members

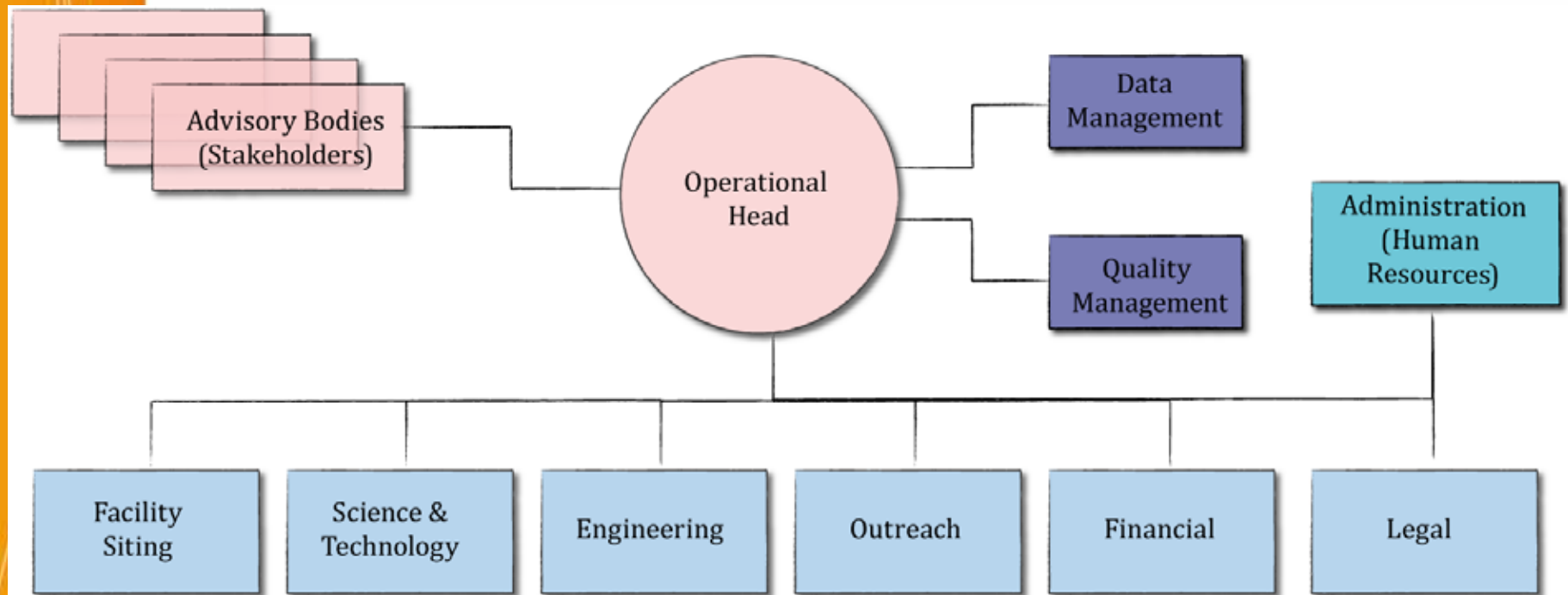
ERDO Model - possible characteristics

- Not-for-profit; common aims and objectives
- Equal voice for all Members; open to new participants beyond founders
- Members are only the potential user and host countries (i.e. representative organisations from those)
- Suppliers of services and others can be part of an Interest Group
- Funding mechanisms to be agreed – e.g. equal contributions for all members, contributions according to potential waste inventories or economic status weighted contributions

A small ERDO: but with complex interactions



Potential Organisational Structure of ERDO



Potential legal forms for an ERDO

- Association
- Cooperative
- European Economic Interest Grouping
- Intergovernmental Organisation (IGO)
- Joint Technology Initiative (JTI)
- Consortium
- Joint Venture (JV)
- Corporation or European Company

| Advantages | Drawbacks |
|--|---|
| Association | |
| Easily established. Commonly known. Very adaptive. Precedent exists (Arius) | Too informal: may not be attractive to governments of potential member countries |
| Cooperative | |
| Demonstrates clearly “self-help” intentions of a group of countries. Serves directly and mainly the need of its members. Little capital needed. Legal regulation on European level exists. Relevant precedent exists (Nagra) | The one member-one vote rule, which is fixed in many national laws, may inhibit control and administration according to financial contribution and/or interest. |
| European Economic Interest Group (EEIG) | |
| Legal regulation on European level exists. No capital requirements. Relevant precedent exists (HADES project) | May be more suited for cooperation in research than to a development project. Membership of non EU States not possible. Unlimited financial liability of members. |

| Advantages | Drawbacks |
|---|---|
| Intergovernmental Organisation (IGO) | |
| <p>Many well-known precedents. Positive image. Adaptive, no standardised rules.</p> | <p>Requires intergovernmental agreements already at time of start-up (an EDO would not necessarily need these until the time of siting)</p> |
| Joint Technological Initiative (JTI) | |
| <p>Allows mixing of public and private funding and national and EC funding</p> | <p>Restricted to participation in EU's 7th Research Framework Programme.. Principally aimed at coordinating R&D across Europe rather than at eventually implementing facilities</p> |
| Consortium | |
| <p>Flexible Relevant precedent (EUROCHEMIC)</p> | <p>No own legal subject. No defined structure. If established as a EU <i>Joint Undertaking</i> model, it requires not only the blessing of the EU, but a formal (hence unanimous) approval by the Council</p> |

| Advantages | Drawbacks |
|---|---|
| Joint Venture | |
| <p>Flexible Best suited for a single project</p> | <p>No own legal subject. No defined structure. If established as a EU <i>Joint Undertaking</i> model, it requires not only the blessing of the EU, but a formal (hence unanimous) approval by the Council</p> |
| Corporation or Shareholding company | |
| <p>Clear legal structure. Limited financial liability of members/shareholders. Many precedents. Legal regulation on European level exists for a SE.</p> | <p>Interest of members/shareholders is mainly financial, not achievement of a common objective. Public and political distrust may be engendered by a premature attempt to establish a purely commercial venture</p> |

Summary

- A for-profit **corporation or shareholding company** or a full business oriented **Joint Venture and Consortium**
 - too commercial; too soon
 - Joint Venture and a Consortium organised as a European Joint Undertaking that requires unanimous EC approval could encounter problems from countries that are opposed in principle to multinational solutions.
- EU instruments, **EEIG and JTI**
 - more suited for research initiatives
 - Membership of non-EU countries is not possible, or only under certain conditions
- An **Association**
 - might appear to be too informal to be attractive to governments, although it should not be ruled out entirely at this stage.

Summary

- The options (IGO, Co-operative and not-for-profit Consortium) appear most feasible.
- The governmental level commitments needed to initiate an IGO may make the process longer and more complex, although the final result may be the most acceptable politically and publicly
- The flexible options of a consortium may be more attractive than the more rigid requirements on the structure and membership rights of a co-operative but the clearer legal rules on co-operatives provide for more confidence and sureness
- Both are worth further consideration; the EDRO-WG will decide!

Later decisions

- The form of the ERO will be chosen at a future date by the members of the ERDO
- The choice will also be strongly influenced by the preferences of the country or countries that have been identified as repository hosts
- Members of an ERO may differ from the ERDO
 - National governments may prefer not to be direct partners if a commercial form is chosen for the ERO
 - The government of the host country may have to distance itself from the ERO in order to demonstrate that there is no conflict of interest with its regulatory functions
- Given all of these unknowns, it is clearly premature to identify a definitive ERO structure.

The End

ERO Model 1, Non-profit - proposed characteristics

- Not-for-profit, for Members use only; no non-user members
- Based on binding intergovernmental agreement(s) or private agreements with governmental approval
- Cost sharing according to planned waste inventories
- Potentially accounting for contributions in former ERDO
- Domiciled in host State
- Agreed benefits packages to host State and community
- Safety and security primarily being subject to the legislation of the host country and international standards (such as IAEA, EC)
- Insight and full information guaranteed for user country regulators
- IAEA as overview trustee
- Host country majority on board or with veto rights
- Permanent dedicated staff

ERO Model 2, Commercial - proposed characteristics

- Commercial aims and objectives as well as common aim of members/owners
- Members may be host and user countries as well as third parties
- Commercial disposal service offered to members and third parties
- Preferential rates, accounting for contributions in former EDO and/or profit sharing for members/owners
- Host State negotiates benefits for the State and also for the host community
- Founders always retain majority shareholding (may be difficult to execute)
- Host country majority on board or with veto rights
- Based on binding intergovernmental agreement(s) or private agreements with governmental approval.
- Safety and security primarily being subject to the legislation of the host country and international standards (such as IAEA, EC)
- Domiciled in host State
- IAEA as overview trustee
- Permanent dedicated staff

Joint Technological Initiative/Joint Undertaking

Joint Technology Initiatives' (JTIs) are legal entities which are proposed to be set up under Article 171 of the Treaty as a new way of realizing public-private partnerships in relevant industrial R&D field at European level.

The article allows the European Community to set up any structure necessary for the efficient implementation of a JTI, among which the most prominent is a *Joint Undertaking*

Joint Technological Initiative/Joint Undertaking

The European Commission has set out a number of identification criteria for JTIs, including:

- inability of existing instruments to achieve the objective*
- strategic importance of the topic*
- existence of market failure*
- concrete evidence of European Community value added*
- importance of the contribution to broader policy objectives including benefit to society*

Joint Venture

A Joint Venture (JV) is an entity formed between two or more parties to undertake economic activity together. The parties agree to create a new entity by sharing **revenues/expenses** and control of the enterprise. The venture can be for one specific project only, or a continuing business relationship. JV is conceptually a *business-oriented association*.

Joint Venture

Main Reasons for forming a JV:

- *Spreading costs and risks*
- *Improving access to financial resources*
- *Economies of scale and advantages of size*
- *Access to new technologies and customers*
- *Competitive goals*
- *Influencing structural evolution of the industry*
- *Pre-empting competition*
- *Creation of stronger competitive units*
- *Strategic goals*
- *Synergies*
- *Transfer of technology/skills*

Dedicated International Organisation (within Europe, but not necessarily within EU)

An international organization, or more formally an intergovernmental organization (IGO), is an organization with sovereign states or other IGOs as members.

A possible organization within Europe is an *European Space Agency-like* organization. (ESA, established through a Convention in 1975, is an intergovernmental organization dedicated to the exploration of space, currently with 17 member states). From the stated mission: *“Today space activities are pursued for the benefit of citizens, and citizens are asking for a better quality of life on earth [...] They want greater security [...]”*. ESA operates common research centers and launch sites.

Members of this agency might be national Organizations for Waste Management and R&D Institutions for WM (ESA model).

A reminder of the ESA Model

ESA is an entirely independent organisation although it maintains close ties with the EU through an ESA/EC Framework Agreement.

The ESA Council is the Agency's governing body and provides the basic policy guidelines within which the Agency develops the European space programme. Each Member State is represented on the Council and has one vote, regardless of its size or financial contribution.

ESA's mandatory activities are funded by a financial contribution from all the Agency's Member States, calculated in accordance with each country's gross national product.

New members can enter ESA by accession to the Convention

Company/Consortium

A consortium is an association of two or more individuals, companies, organizations or governments (or any combination of these entities) with the objective of participating in a common activity or pooling their resources for achieving a common goal. Can be implemented in several ways.

Eurochemic was a 1957 Consortium of 13 governments then members of European Nuclear Energy Agency (which become OECD NEA in 1972). Set up as an international shareholding company, yet open to participation by industry. *Conceived for needs not very different from those for a regional repository.*

Eurochemic carried out a highly innovative research programme at its site at Mol in Belgium, trained large numbers of specialists, and built an industrial pilot plant, commissioned in 1966, to process a wide variety of fuel types.

Who can be the founders

How an EDO can initially be established is strongly linked to the organizational model.

An EU *Joint Undertaking-like* model: requires not only the blessing of the EU, but a formal (hence unanimous) approval by the Council.

An Agency (*ESA-like* model) or a Consortium/Shareholding company (*Eurochemic-like* model): a number of governmental agencies (a kind of *core group*) decide to constitute the Agency for implementing a shared repository. The Agency is open for new members.

Note: *an European Supply Agency model is not suggested, since it would require a modification of the Euratom Treaty.*