



Engaging Civil Society in European Research on Radioactive Waste Management ?

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Gilles Hériard Dubreuil
Director of Mutadis, NTW

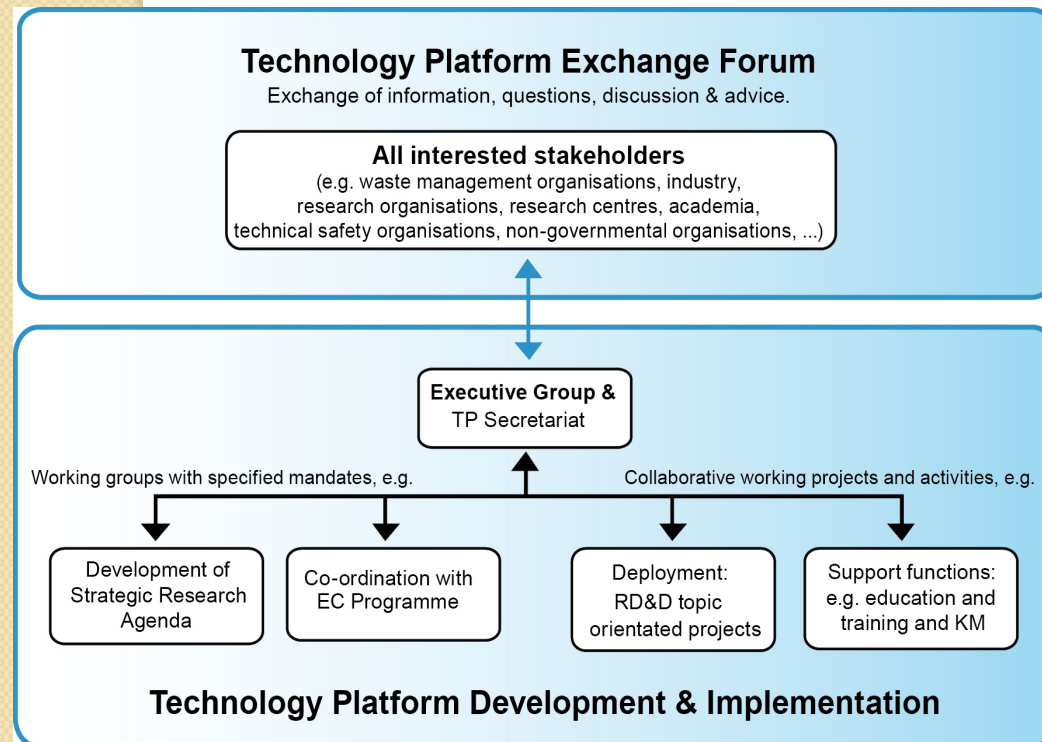
MUTADIS



Transformation of the European Landscape of RD&D

- **Reengineering governance of EU research (2007):** the European Technology platform (ETPs)
- Integrating public & private research to improve the added value at European level and to increase the leverage of EU investment in research
- **And at the same time...**
- “favour an informed engagement of citizens and civil society on research and innovation matters by [...] developing responsible research and innovation agendas that meet citizens' and civil society's [...] expectations and by facilitating their participation” (Horizon 2020)

Implementing Geological Disposal – Technological Platform (IGD-TP): a WMOs-led platform



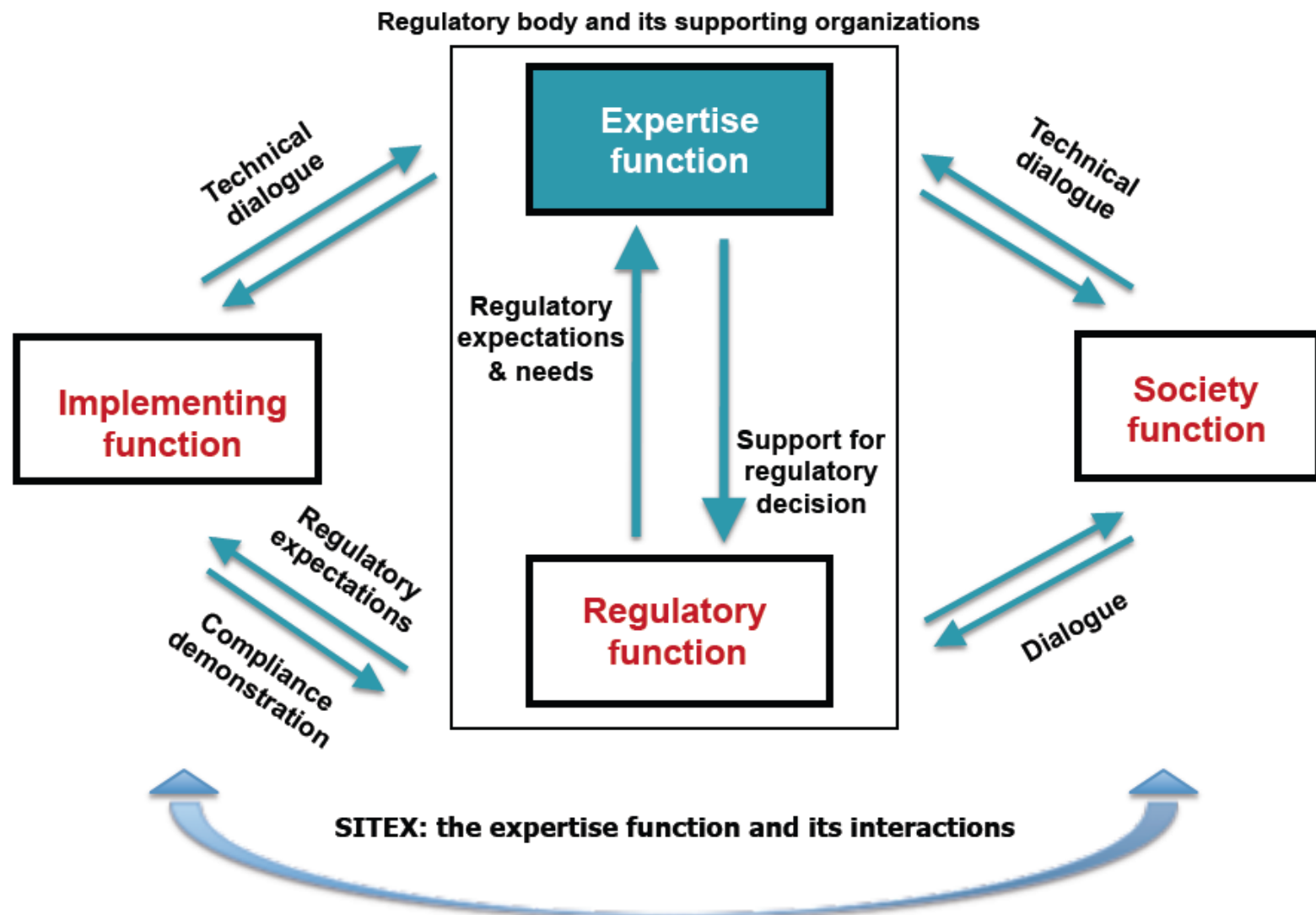
- **But...**
- “Vision” (2009) drafted essentially by operators
- Executive group mainly composed of WMOs
- Modes of interactions with TSOs not established (mirror group considered as unsatisfactory)
- Frustrating experience of participating NGOs...

- 2009: Vision report
- July 2011: final version of the SRA
- June 2012: Deployment Plan 2011-2016

SITEX (2012-2013): TSOs & Regulators to develop their own Platform ?

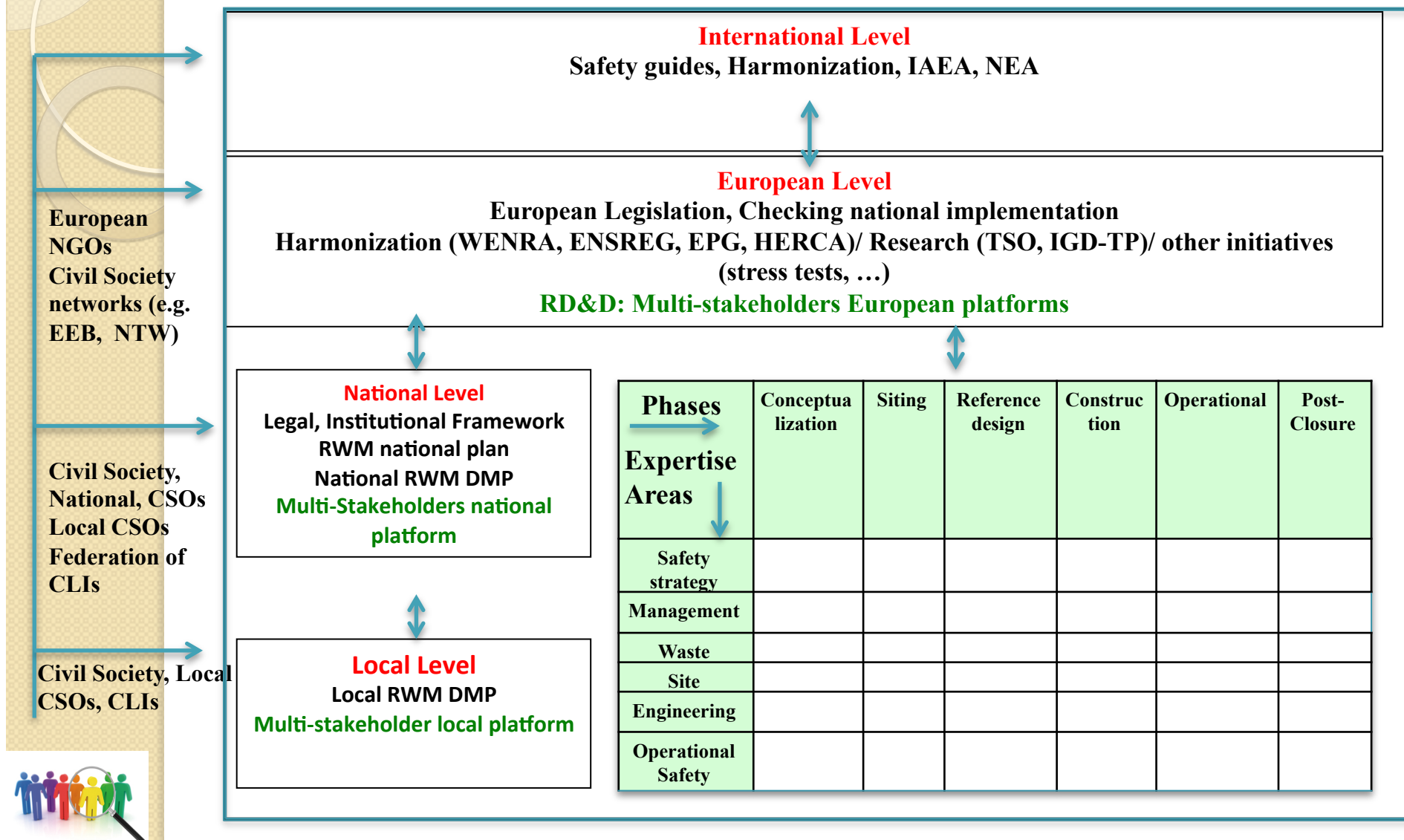
- National TSOs & Regulators involved in RWM gathering in order to :
 - Develop & implement RD&D on RWM
 - Maintain access to EURATOM Funding
- Some 20 TSOs, Regulators & Research Entities
- Examining the opportunity for a sustainable European network gathering TSOs & regulators
- Investigating potential interactions with Civil Society

SITEX vision of Safety Culture

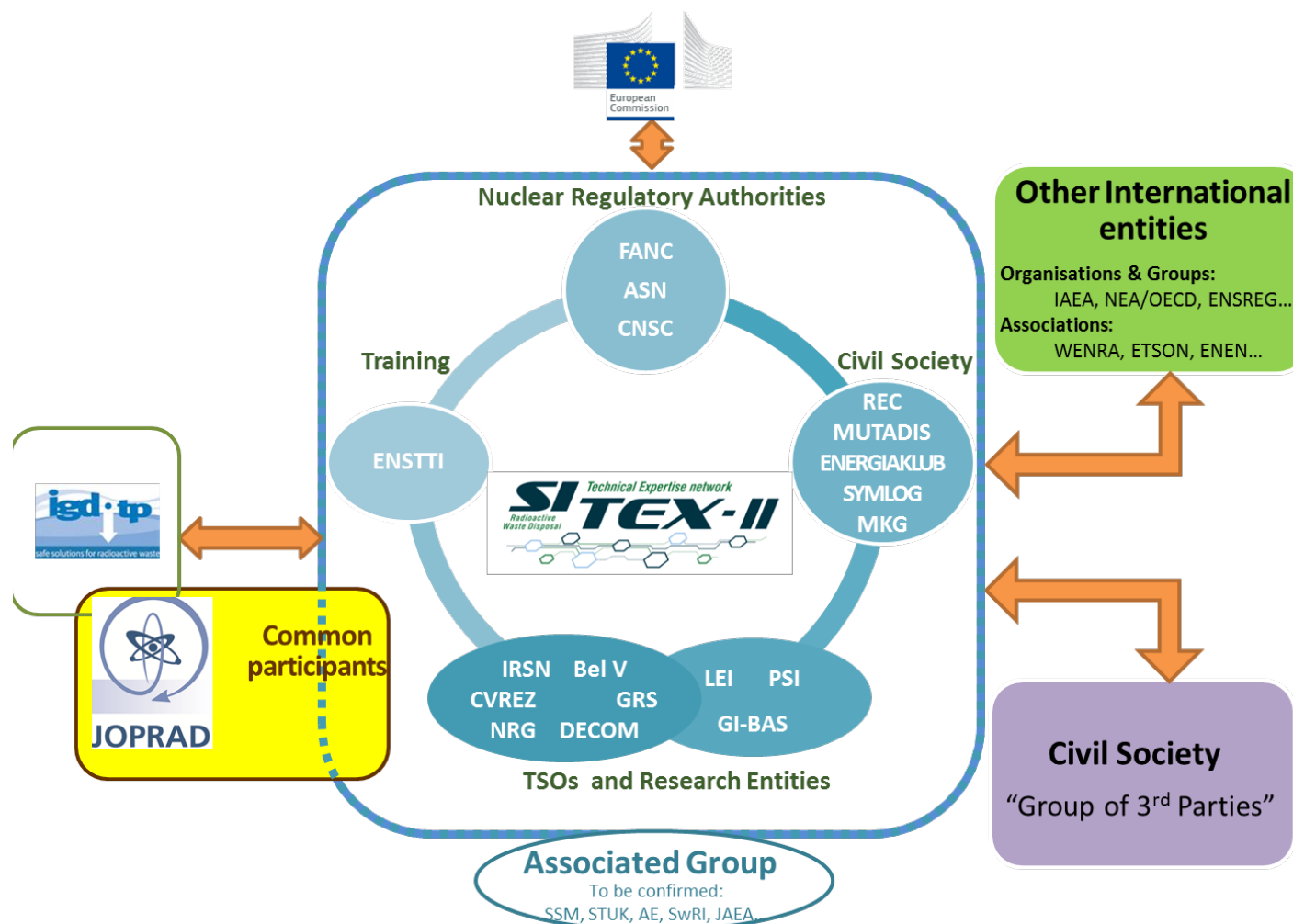


v. 2013-04-26

SITEX vision: a CS multi level contribution to RWM



SITEX-II (2015-2017) Implementing a sustainable network





SITEX-II testing a new format for interacting with Civil Society

- A group of representative of European CSOs:
 - involved in the follow up of RWM activities at EU or national level
 - 35 organisations from 18 countries in Europe
 - Linked the NTW RWM working group
- Interacting with SITEX along the project through CS experts involved as members of the project.
- Regular workshops allowing interactions of Institutional (TSOs), CS experts and CSOs.



JOPRAD (2015-2017): Towards a Joint Programming at EU level ?

Examining the conditions and content of a Joint research Programming (JP) on **Radioactive Waste Disposal**

- Waste Management organisations (“WMOs”),
- Technical Support Organisations (“TSOs”),
- National Research Entities involved RWM (REs)
- While interacting with the Civil Society in order to:
 - Identify key research areas that Civil Society would like to see included in R&D,
 - Establish Views of Civil Society on JP Governance



CS Review of Joint R&D program

- CSOs perspective cannot be reduced to providing input for R&D on Geological Disposal without considering the overall RWM strategy,
- Overall priority of CSOs is the comprehensiveness and consistency of the R&D agenda as a whole (beyond mixing the priorities of each parties of the EJP).
- Identification of R&D issues not covered by the Programme Document
- Overview of the selection process of R&D issues.



Key Technical Research Areas for Civil Society

Quality of data (consistent and complete inventory analysis, taking into account characterisation, conditioning and allotment of uncertainties)

Techno-scientific issues of importance for safety-case review (various issues from corrosion through geological and hydrological to security issues)

Siting (safety case related issues, including criteria for the choice of areas or the choice of geological structures, assessment of geological stability)

Issues regarding methods for disposal (methods for the choice of disposal concept, the role of retrievability, etc.)

Fundamental principles for evaluation of safety case (practical use of concepts like the precautionary principle, best available principle...)

Issues regarding societal development (justification of RWM strategies regarding the balance of risks, cross-evaluation of scenarios, monitoring...)

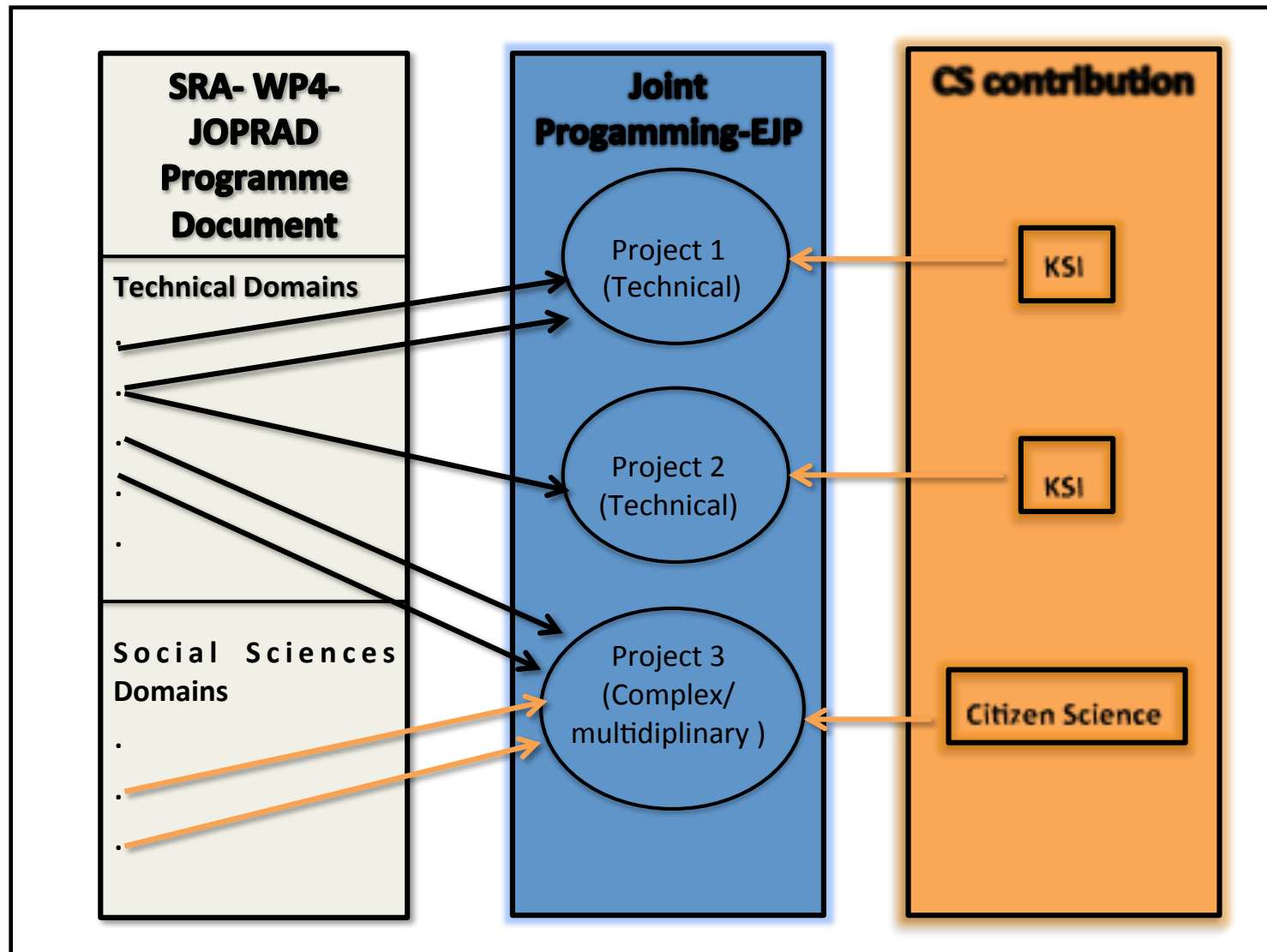


Need for addressing the complexity of GD

Makes it necessary to bring into R&D

- **Social sciences** to address properly societal dimensions attached to the long-term picture of GD governance.
- **Citizen Sciences** also known as networking science, civic science or crowd-sourced science, volunteer monitoring, “public engagement” in scientific RD&D.

JOPRAD project

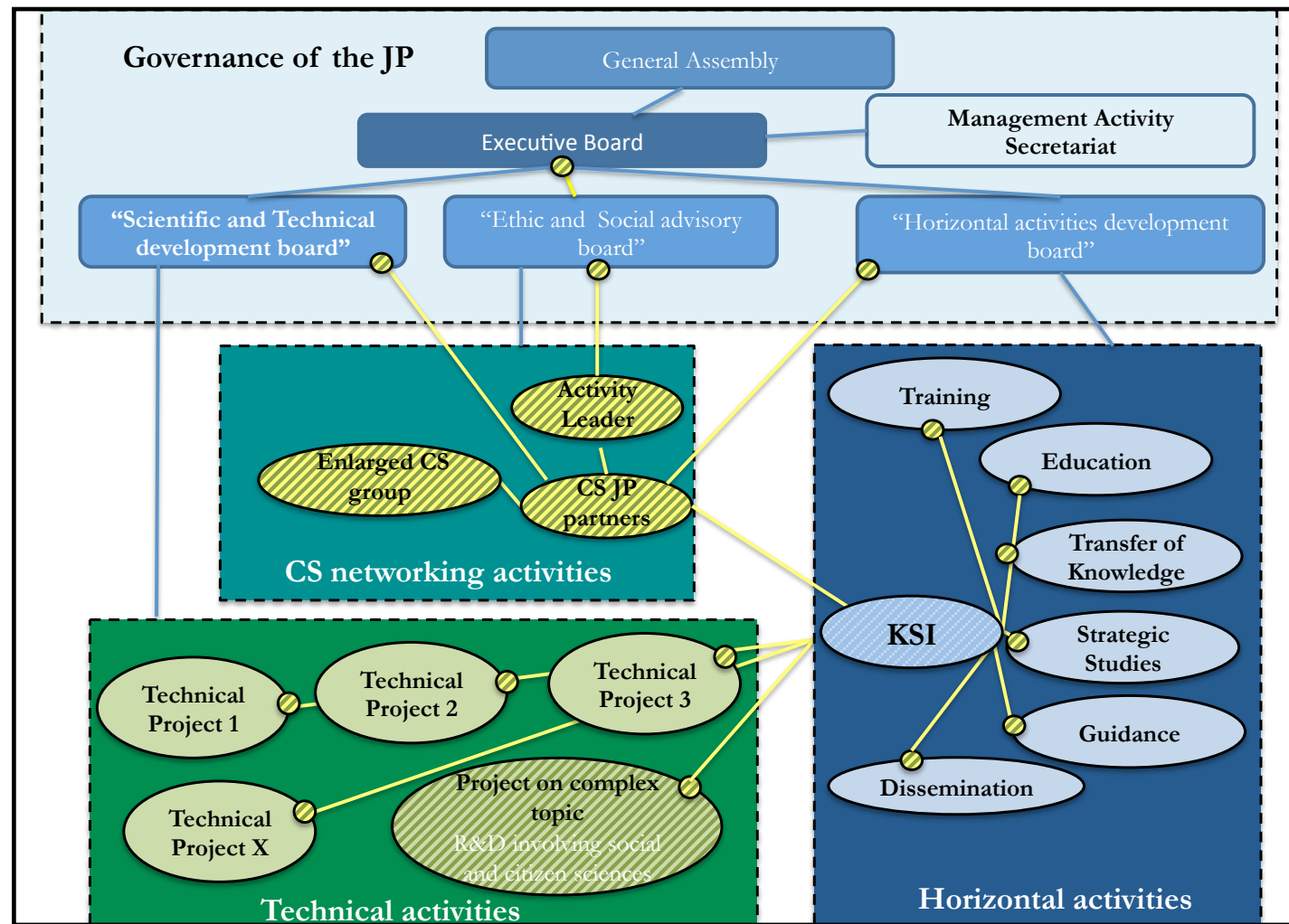




Exploring Complex Research Topics

1. Final operation licence (before full commissioning)
2. Intergenerational governance of the GD operational phase
3. Conditions for closure
4. Design optimisation, based on operational experience
5. Shared safety culture
6. Site characterization & siting process

Proposal for EJP governance





Towards CS engagement in a RWM EJP ?

Pros ?

- Get an in depth understanding of available knowledge, of uncertainties involved,
- Understand key stakes of Safety Case Review,
- Promote a realistic understanding of the complexity multidimensionality of RWM
- Contribute to a Sustainable Inclusive Safety Culture
- Enable CS expertise capacities rooted in RD&D

Cons ?

- Trapped into a narrow “option led” research ?
- Lost into the technicity of RD&D ?
- Loosing independence ?