

# EF4 - Conclusions and way forward



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# Major achievements to date (1)

- Vision / SRA / DP
- 2009 -2013 In line with the SRA Key topics and DP
  - 13 of 16 Joint Activities already launched
  - 8 EU project launched (54,7 M€ EC contribution 25,6 M€)
- 2013 Major achievements
  - Active Working Groups: Cement, Monitoring, CMET, NKM
  - On tracks: Uncertainty handling in safety cases
  - Established liaisons with Sitex and SNETP
  - Contacts with EESC starting
- 2013 EF 4
  - 150 attendees in Prague → networking is at work
  - Preparation of future work



# Major achievements (2) to date

- Reinforcement of IGDTP internal organisation with a medium/long term visibility based on :
  - A stable organisation with clear management till 2017
  - The yearly publication of the Master Deployment Plan to follow-up advances in reaching the vision
  - A first tentative planning and budget till 2025
  - Consideration of IGD-TP priorities by the EC in the FP7 and future EC calls
  - SRA as a living document
- But :
  - Still expecting additional WMOs from NMS at the EG



# Suggestions / open questions

- Interest for Joint Factsheets SNETP / NUGENIA / IGDTP
  - ✓ Need for disposal, ...
- Need for continuing RD&D acknowledged
  - ✓ How to implement this beyond IGDTP's vision (2025)
- Place of fundamental research within IGDTP
  - ✓ Not in the SRA does not mean of no interest for WMO's
  - ✓ Continuous spectrum, artificial division
- Euratom programme
  - ✓ 15% budget FP7 on disposal
  - ✓ Representative of the challenge at hand
  - ✓ Critical mass for justifying EJP



# Suggestions / open questions

## ➤ EESC

- ✓ Be open towards external world!
- ✓ European Energy Dialogue where IGDTP is welcome

## ➤ INSOTEC look at IGDTP

- ✓ Risk of becoming a close club
- ✓ Resources for stakeholders ?
- ✓ Efforts towards engaging a larger group of stakeholders are welcome (EESC, ...)
- ✓ Lack of clear strategy of reaching stakeholders (Why?)
- ✓ Bridging the gap local / project → European / TP remains a challenge

## ➤ Synergies between all initiatives on stakeholder involvement?



# Suggestions / open questions

## ➤ NMS'

- ✓ Driving forces / barrier to an increased participation in Euratom
- ✓ Lack of national coordination
- ✓ Lack of HR is the major concern for increased participation
- ✓ Moving towards regional repositories
- ✓ Low level of knowledge of TP within NMS' → prerequisite for further engagement
- ✓ Participation in EG as a entrance vehicle to Euratom

## ➤ WG dissemination:

- ✓ needs aligned to SRA + need on support on infrastructure and process information required for EC Directive (e.g. inventory, R&D programme set up)
- ✓ Implementation ideas considered.



# Suggestions / open questions

- KM tool to be evaluated
  - ✓ One universal content search tool for all publicly available reports (and content) from IGD-TP members
- Proposal for TSWG on remaining issues for crystalline rocks (SafeRock) to be evaluated



# WG 1 - Cement

TITLE

- Discussions within TSWG and with WMOs on cement issues over the last year resulted in a mature project basis
- Cement WG agreed upon the basis for a potential project covering
  - Interactions influencing transport properties
  - Radionuclide retention
  - Thermodynamics and modeling
- WMOs will formulate questions to be answered in the project
- Potential partners will review the information and provide input where to contribute
- Planning meeting in March 2014 at KIT defining priorities (Representatives from WMOs and R&D Orgs.)
- In addition: proposal for a TSWG meeting on Organics - radionuclides - cement interaction (Representatives from WMOs and R&D Orgs.) (spring 2014)



- **Based on SRA and Master Deployment Plan**
  - Aimed to Performance Confirmation
  - Focused on operational phase (but taking into account other phases)
  - Also Integrating Communication and Stakeholder involvement issues (Euradwaste 2013 conclusions)
  
- **Following results and recommendations from MoDeRn**
  - Starting point: “Call for ideas” exercise (June 2013) → confirmed by the WG
  - Refined and screened in the Working Group

# WG2 – Monitoring (2)

## Future project should include activities on:

- **Strategy aspects**

Identification of requirements and critical parameters. Definition of response plans. Approaches for the different phase repositories.

- **Technology development**

Sensors, wireless, long term power supply

- **Practical implementation**

Development of specific monitoring concepts. Demonstration of integrated systems. Feedback to Safety Case and repository design.

- **Communication & Stakeholder involvement**

Stakeholder engagement and expectations. Information exchange methods (to be integrated in previous tasks)

Next step: Building up a consortium to prepare a proposal on Monitoring, according to the EC call terms (Jan 2014)



# WG3 – New waste types (SNETP<sup>TITLE</sup>)

- **1 – Strategy and vision:**

The link between the two platforms is important : to identify the common ground

The IGD-TP should consider two different time scales (< 2025, >2025)

- **2 – The graphite issue:**

Research collaboration efforts are needed; some urgency is indicated

- **3 – Suggested collaborative projects:**

**CarboSOLUTIONS**

We should start now to optimise waste forms from Gen IV : materials (ex : MIDAS and “pyrowastes”)



## WG4: - RD&D TSO's Needs: the view of SITEX → Potential Areas of Interaction Between SITEX and IGD-TP

TITLE

- Sitex outcomes on R&D issues are coherent with SRA
- Possibility for collaboration and willingness to find common areas of interest
  - Basic science (microbial processes and corrosion)
  - Fundamental interpretation of basic principles
  - Strategic issues
- Need for some concrete examples to start with:
  - Passive safety and geology
  - Reversibility & retrievability
  
- Need for transparent and published “groundrules”

- WG-5 noted that the SRA lacks representation of microbial processes and indication of uncertainties caused by microbial processes
- WG-5 noted the absence of established network on microbiological issues

- WG-5 proposes that a technical and scientific working group (TSWG) on biological processes should be opened to:
  - Network
  - Review past and present research and models.
  - Understand uncertainties in the safety case caused by microbial processes.
  - Evaluate how knowledge about microbial processes can be merged into present safety models and concepts.
  - Identify gaps in knowledge and suggest research needs.
  - Define a scope of a proposal to be submitted to an EC call or a specific project co financed by the WMOs.



# Improving EF

- 2 days is good amount of time
  - Right number of working groups right number (~5) with 20-30 in each → OK for a good discussion
  - Next Exchange Forum topics may depend on the outcome of EF IV Working Groups
  - Other recommendations and comments to [Secretariat@igdtp.eu](mailto:Secretariat@igdtp.eu)
  - All presentations from EF IV will go on project place
- EF is becoming a place where we do not only discuss but also construct



# Way Forward for IGDTP

- Discuss these proposals and issues at the next Executive Groups (31 October, Feb 2014)
- Keep the momentum
- Manchester 24-26 June 2014 for scientific update on all SRA topics
- Keep you informed
  - ☐ All presentations will be available on our web site tomorrow





# Way Forward for IGDTP

- Thanks to :
  - Hosting organisation : SURAO
  - All speakers
  - Rapporteurs
  - The Secretariat
  - all of you!



# SEE YOU AT EF 5! SWEDEN, October 28-29, 2014

