

These slides are the ones that have been presented in the webinar on 19 January 2023 – A new version of the slides including answers to questions asked in the chat will be issued early February.

EURAD-2 public webinar #1

Towards EURAD-2

19/01/2023

EURAD-2 public webinar #1

The Core Group



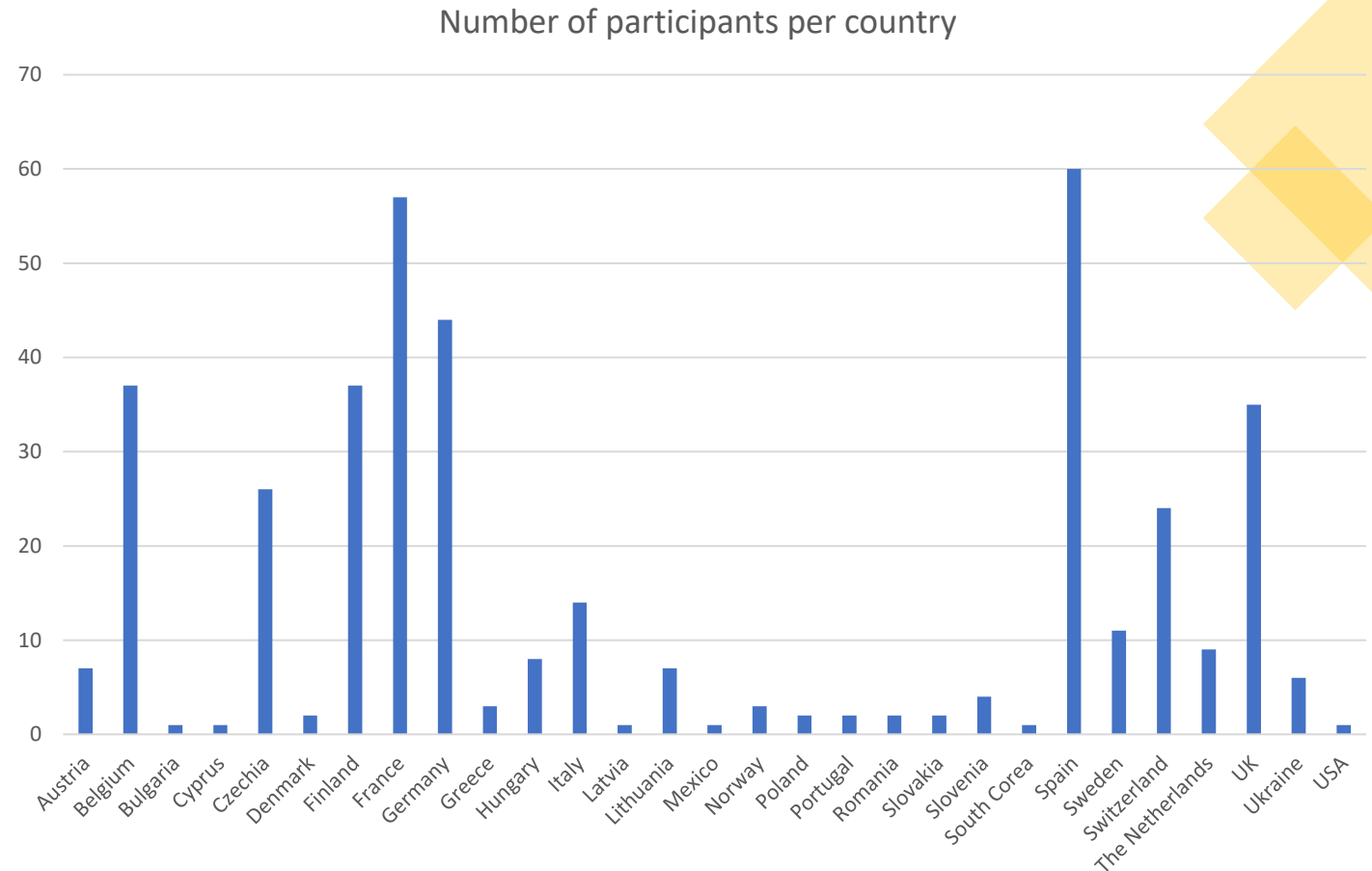
COORDINATOR	Louise Théodon (ANDRA – France)
Waste Management Organisations - WMO COLLEGE - via IGD-TP	Ingo Blechschmidt (NAGRA – Switzerland) Astrid Göbel (BGE – Germany)
Research Entities - RE COLLEGE - via EURAD-Science network; which also includes supply chains and companies	Christophe Bruggeman (SCK CEN – Belgium) Lara Duro (AMPHOS 21 – Spain)
Technical Support Organizations - TSO COLLEGE - via SITEX.Network; which also includes civil society and regulator views	Erika Holt (VTT – Finland) Nadja Železnik (EIMV – Slovenia)

Agenda

- **09.00-10.00 Background from EC and existing programme/project**
 - EURATOM Call and participation rules
 - EURAD
 - PREDIS
- **10.00-10.30 Moving forward EURAD-2 scope**
 - Role of the Core Group
 - Presentation of the general timeline and participation rules
- **10.30-10.45 Break**
- **10.45-11.30 Implementation of EURAD-2**
 - EURAD Strategic Research Agenda
 - Process for the development of work packages
 - Presentation of work package template
- **11.30-12.00 Frequently Asked Questions**

Foreword

- **412 participants registered from 29 countries**
- **Questions will be answered only in the last section of the meeting - They can be asked in the chat – they will be answered either at the end of the meeting during the FAQ or added in the slides after the meeting**



Key terminology

- **Colleges** : refers to platforms that gather a number of organisations depending on their role in radioactive waste management, i.e EURADSCIENCE (for Research Entities), SITEX.Network (for Technical Support Organisations) and IGD-TP (for Waste Management Organisations)
- **Bureau**: refers to a governance structure in EURAD-1 that operates as the accompanying body to the General Assembly. It is composed of 3 representatives per Colleges.
- **Roadmap**: refers to the EURAD-1 Goals Breakdown Structure Roadmap, which is a generic roadmap structured according to phases of implementation for geological disposal.
- **WP Preparation Teams**: refers to a group of 3 persons (one per College) who will be the main contacts for the development of the EURAD-2 workpackages

Background from EC and existing programme/project

19/01/2023

EURAD-2 public webinar #1



#Euratom

EURAD Public Webinar Euratom Call and participation rules

19 January 2023

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EC DG RTD

Research and
Innovation



Outline

- The Horizon Europe Programme
- The Euratom Work Programme 2023-25
- Past and on-going projects on radioactive waste management
- Upcoming events and deadlines

The Horizon Europe Programme



“



With Horizon Europe, we step up our ambition for a sustainable future. The programme will maximise its impact by strengthening our scientific and technological bases, boosting our innovation capacity, driving the green and digital transitions and supporting an inclusive recovery.

Mariya Gabriel

Commissioner for Innovation, Research, Culture, Education & Youth

”



European
Commission

Horizon Europe

The ambitious EU research and innovation framework programme (2021-2027)



to strengthen the EU's scientific and technological bases and the European Research Area (ERA)



to boost Europe's innovation capacity, competitiveness and jobs



to deliver on citizens' priorities and sustain our socio-economic model and values

Budget of around €95.5 billion for 2021-2027 (current prices)

HORIZON EUROPE

EURATOM

SPECIFIC PROGRAMME: EUROPEAN DEFENCE FUND

*Exclusive focus on
defence research
& development*

Research
actions

Development
actions

SPECIFIC PROGRAMME IMPLEMENTING HORIZON EUROPE & EIT*

Exclusive focus on civil applications



Pillar I EXCELLENT SCIENCE

European Research Council

Marie Skłodowska-Curie

Research Infrastructures



Pillar II GLOBAL CHALLENGES & EUROPEAN INDUSTRIAL COMPETITIVENESS

Clusters

- Health
- Culture, Creativity & Inclusive Society
- Civil Security for Society
- Digital, Industry & Space
- Climate, Energy & Mobility
- Food, Bioeconomy, Natural Resources, Agriculture & Environment

Joint Research Centre



Pillar III INNOVATIVE EUROPE

European Innovation
Council

European Innovation
Ecosystems

European Institute of
Innovation & Technology*

WIDENING PARTICIPATION AND STRENGTHENING THE EUROPEAN RESEARCH AREA

Widening participation & spreading excellence

Reforming & Enhancing the European R&I system

Fusion

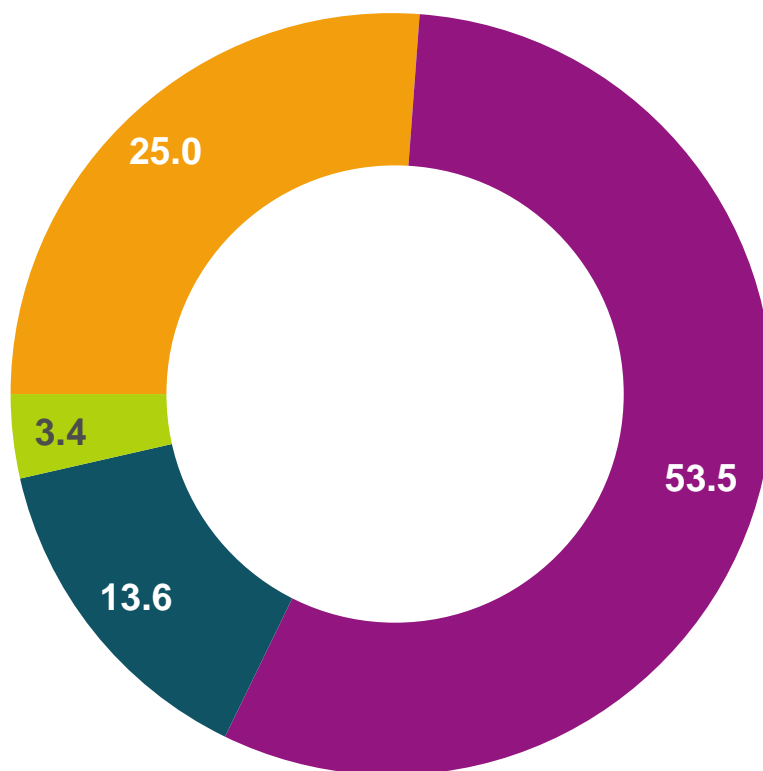
Fission

Joint
Research
Center

* The European Institute of Innovation & Technology (EIT) is not part of the Specific Programme

Horizon Europe Budget: €95.5 billion (2021-2027)

(including €5.4 billion from NGEU – Next Generation Europe – programme of EU for Recovery from COVID-19 crisis)



Political agreement December 2020

€ billion in current prices

- Excellent Science
- Global challenges and European ind. comp.
- Innovative Europe
- Widening Part and ERA

The Euratom Research and Training Programme



The Euratom Research and Training programme

What is it?

- Research and Training (R&T) programmes implemented by the European Commission (EC), under the provisions of the European Atomic Energy Community (Euratom) Treaty, in which all European Union (EU) Members States participate.

What is its role?

- To supplement and coordinate MS' programmes to perform joint and/or coordinated cutting-edge research, to support knowledge creation and knowledge preservation. To avoid duplication and achieve critical mass if needed.

How is it implemented?

- By Multi annual Framework Programmes (FP), 5 years +2 since FP7 and annual / biannual Work Programmes;
- Projects of up to five year duration are funded after calls for proposals evaluated by independent experts.

Euratom Programme 2021-2025



The financial envelope for the implementation of the new Euratom Programme 2021-2025 shall be **€1.382 billion in current prices.**

€583 million for indirect actions in fusion research and development

€266 million for indirect actions in nuclear fission, safety and radiation protection

€532 million for direct actions undertaken by the Joint Research Centre

Euratom WP 2021-22 Topics	EUR million EC contr./prop	Total Budget (indicative)	Proposals (indicative)
1 Safety of operating Nuclear Power Plants and Research Reactors (RIA).....	3.0	18.0	6
2 Safety of advanced and innovative nuclear designs and fuels (RIA).....	3.0	13.5	4
3 Multi-recycling of spent nuclear fuel from Light Water Reactors (RIA).....	6.0	6.0	1
4 Advanced structural materials for nuclear applications (RIA).....	8.0	8.0	1
5 Safety of High Temperature Reactors (RIA).....	3.0	3.0	1
6 Harmonization of licensing procedures, codes and standards Fi/Fu (CSA).....	2.5	2.5	1
7 Development of tritium management in fusion and fission facilities (RIA).....	3.0	3.0	1
8 Towards an aligned harmonized regulatory framework RWM and DECOM (CSA)...	3.0	3.0	1
9 European Partnership for research in radiation protection (COFUND).....	30.0*	30.0*	1
10 Safe use and reliable supply of therapeutic radionuclides (RIA).....	3.0	3.0	1
11 Cross-sectoral synergies and new applications of nuclear technologies (IA).....	2.0	10.0	5
12 European Facility in Nuclear Research (CSA).....	9.0	9.0	1
13 Towards a European nuclear competence area (CSA).....	7.0	7.0	1
14 Socio-economic issues related to nuclear technologies (CSA).....	1.5	1.5	1
15 Support to Euratom National Contact Points (CSA).....	0.25	0.25	1
16 Support to the Sustainable Nuclear Energy Technology Platform (CSA).....	0.6	0.6	1
Other Actions: GIF, FISA2022/EURADWASTE'22 ...Eurofusion (COFUND 537*)....		0.7 .. 537 (fusion)	1
Overall Euratom Fission 2021-22 Call indicative budget (* include budget from years 2023-25 fission (20), fusion (343))		99.6 (fission)	28

Horizon Europe Euratom Call 2023-25: Overview Schedule

Event	Date
Publication of the WP 2023-25	End January 2023
Submission Call open.....	Spring 2023
Deadline	Autumn 2023
Evaluations	End 2023
Communication of outcomes	Early 2024
Negotiations/Finalisation of Grants	Spring 2024
Grant Agreement signature.....	Mid 2024
First projects expected to be launched	Mid 2024

EC Funding and Tenders portal

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home>

Some important points to take into account

- Gender balance among researchers can decide funding for equally-scored proposals
- Gender Equality Plan: eligibility criterion for public bodies, research organisations and higher education establishments from Member States and Associated Countries, self-declaration requested at proposal stage
- Third countries associated to Horizon Europe: check status of association agreements, see up-to-date [List of Participating Countries in Horizon Europe](#)

General guidance and resources

- F&T portal <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/support/support>
- HE WP General Annexes
- [HE Programme Guide](#)

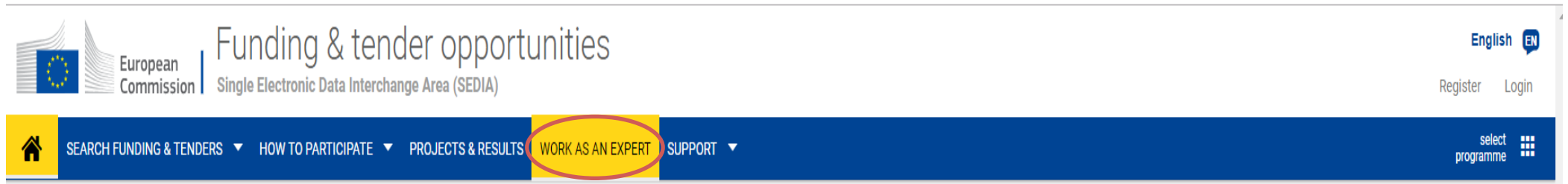
The screenshot displays the 'Funding & tender opportunities' portal under the 'Single Electronic Data Interchange Area (SEDIA)'. The header includes the European Commission logo and a navigation bar with links: 'SEARCH FUNDING & TENDERS', 'HOW TO PARTICIPATE', 'PROJECTS & RESULTS', 'WORK AS AN EXPERT', and 'SUPPORT' (highlighted in yellow). A left sidebar lists support resources: 'Support overview', 'Guidance & Manuals', 'FAQs', 'Helpdesk & Support Services', and 'Support videos'. The main content area, titled '11 items found', features several informational cards. The first card, 'General Process Flow', shows a diagram of the business process flow. The second card, 'How to enable 2-step verification for your EULogin account', is under the 'HORIZON EUROPE CYBERSECURITY' banner. The third card, 'Roles and Access Rights in the Funding & Tenders Portal', is under the 'FUNDING & TENDERS PORTAL' banner. The bottom row includes cards for 'How to assign Legal Signatories (LSign) & Financial Signatories (Fsign) for your organisation' and 'How to assign Project Legal Signatories (PLSign) & Project Financial Signatories (PFSign) for your project/contract', both under the 'HORIZON EUROPE EXPERTS' banner. A final card, 'How to evaluate Open Science', is also visible.

We are looking for new experts!

**Not
applying?**

**Become an
evaluator or
rapporteur!**

Sign up now

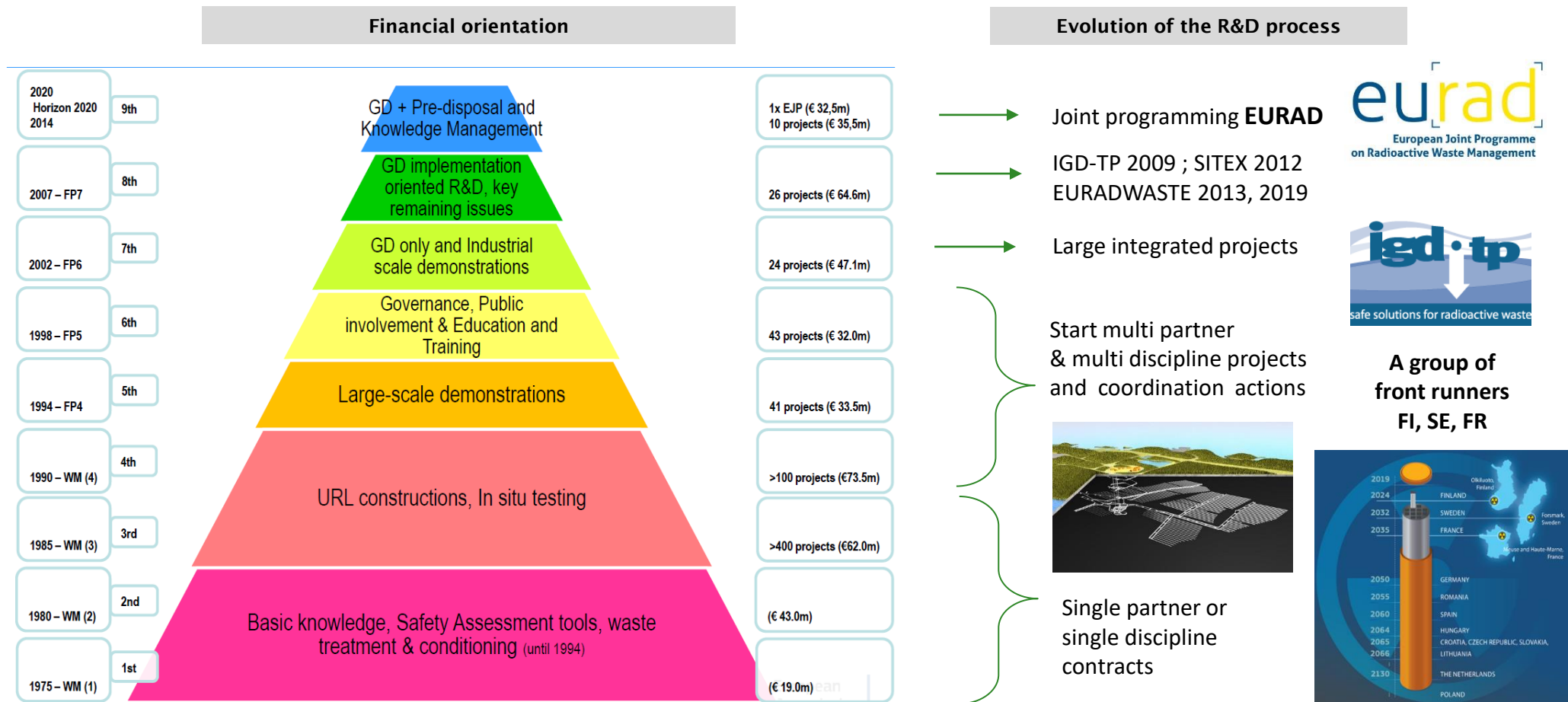


Past and on-going projects on radioactive waste management



Waste Management and Geological Disposal

Strong effort of EC to support R&D on radwaste since more than 40 years and an evolution to federate all the actors, in an holistic view and including all types of radwaste



Programme/projects on RWM

European Joint Programme



- Establishment of the IGD-TP in 2009
- Creation of the SITEX Network in 2012
- The 3 year JOPRAD project launched the preparatory phase for a first European Joint Programme in 2015
- A governance system of the future EJP built around the 3 colleges (REs, TSOs, WMOs)
- EURAD started in June 2019

<https://www.ejp-eurad.eu/>

PREDIS project



- Developing pre-disposal activities identified in the scope of EURAD
- Focus on conditioning processes for metallic and organic waste streams and monitoring of waste packages
- Signed MoU to foster cooperation & communication EURAD/PREDIS
- Joint dissemination, joint stakeholder engagement

<https://predis-h2020.eu/>

FISA 2022 - EURADWASTE'22 conferences

- The FISA 2022 – EURADWASTE'22 Conferences were successfully organized during the French Presidency from 30th of May to 2nd of June 2022 in Lyon, with CEA. Proceedings of the conferences will be published early 2023

European Commission, Directorate-General for Research and Innovation, *FISA 2022 – EURADWASTE'22 : book of abstracts*, Publications Office of the European Union, 2022,
<https://data.europa.eu/doi/10.2777/662189>
<https://data.europa.eu/doi/10.2777/652455>



Upcoming events and deadlines



Future events and key deadlines

Decommissioning

- End Jan. Publication of the WP 23-25
- 23-27 Jan. [Final demonstration of the MICADO project](#)
- 25 Jan. [Lunch & Learn HARPERS](#)
- 15-19 May: Dedicated session at the [IAEA conference on decommissioning](#)
- Oct. INNO4GRAPH final workshop at the EDF demonstrator

<https://www.ejp-eurad.eu/events?page=0>

<https://predis-h2020.eu/events/>

Radioactive Waste Management

- 19 Jan. [Public webinar](#)
- 23 Jan. [Lunch & Learn \(Cost assessment and financing schemes\)](#)
- 25-27 Jan. [NucCon conference](#)
- 6-10 Feb. [Training on geochemical and reactive transport](#)
- 14-16 Feb. [Training on uncertainty management](#)
- 28 Feb. - 4 Mar. [WM symposium](#)
- 16-19 Mar.: [EURAD 3rd annual event](#)

Publications – CORDIS (EC R&D Information Service)

**View all H2020 Euratom projects summaries
and public deliverables on CORDIS**

<https://cordis.europa.eu/>

H2020 Euratom projects (All)

[https://cordis.europa.eu/search?q=contenttype=%27project%27%20AND%20\(programme/code=%27H2020%27%20OR%20programme/code=%27H2020-Euratom%27\)%20AND%20\(%27euratom%27\)&p=1&num=100&srt=Relevance:decreasing](https://cordis.europa.eu/search?q=contenttype=%27project%27%20AND%20(programme/code=%27H2020%27%20OR%20programme/code=%27H2020-Euratom%27)%20AND%20(%27euratom%27)&p=1&num=100&srt=Relevance:decreasing)

... Latest relevant projects summaries !

Follow us and keep up to date via:

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Horizon Magazine: @HorizonMagEU

Horizon Europe website: <http://ec.europa.eu/horizon-europe>

European Innovation Council: <http://ec.europa.eu/research/eic>

European Research Council: <https://erc.europa.eu/>





Thank you!

HorizonEU

Euratom

<http://ec.europa.eu/horizon-europe>

<https://ec.europa.eu/programmes/horizon2020/en/h2020-section/euratom>



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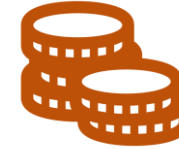
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EURAD Overview



5 years
2019-2024



Budget: 59,9 M€
55 %EC
contribution

Support EU Member-States in developing and implementing their national RD&D programmes for the safe long-term management of their full range of radioactive waste, taking into account the various stages of advancement of national programmes and in accordance with the Waste Directive(2011/70/Euratom).

Objectives :

- Implement a robust and sustained state-of-the-art **Science and Technology Programme**
- Identify and elaborate upon complex issues by bringing together interested actors to jointly conduct

Strategic Studies

- Consolidate efforts across Member-States, organisations and generations on **Knowledge Management**
- Foster **mutual understanding** and **trust** between participants (incl. from Civil Society) and other stakeholders

EURAD participants



115 organisations



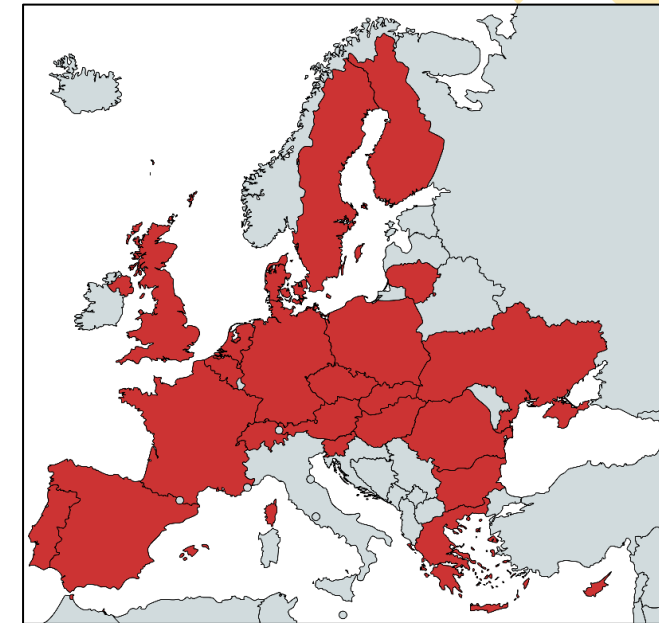
~ 900 individuals



110+ PhD/post-doc/master students

Ministries from 23 European countries recognising their role of directing RD&D at the national level, provided mandates to **51 organisations** acting as Beneficiary within EURAD:

- Waste Management Organisations (WMO)
- Technical Support Organisations (TSO)
- Research Entities (RE)
- ... with **60 linked third parties** & **3 international partners** also participating



EURAD work packages



10 R&D WPs

- Source term, engineered barriers, nearfield
- Geosphere barrier, perturbing effects and clay material barriers
- Methods, models, interactions and tools



2 Strategic Studies

- Waste management ROUTES (cradle to grave)
- Uncertainty management



3 Knowledge Management WPs

- State-of-Knowledge
- Guidance
- Training and Mobility

Background from PREDIS project (Predisposal management of radioactive waste)



47 partners
17 countries
25 End User Group members
(2/3 of partners are also in EURAD)



Total budget 23.7 M€
EC contribution of 14 M€



**Aim: Identify, develop and improve
innovative technologies in pre-disposal
radioactive waste management**



4 years
Started Sept 2020

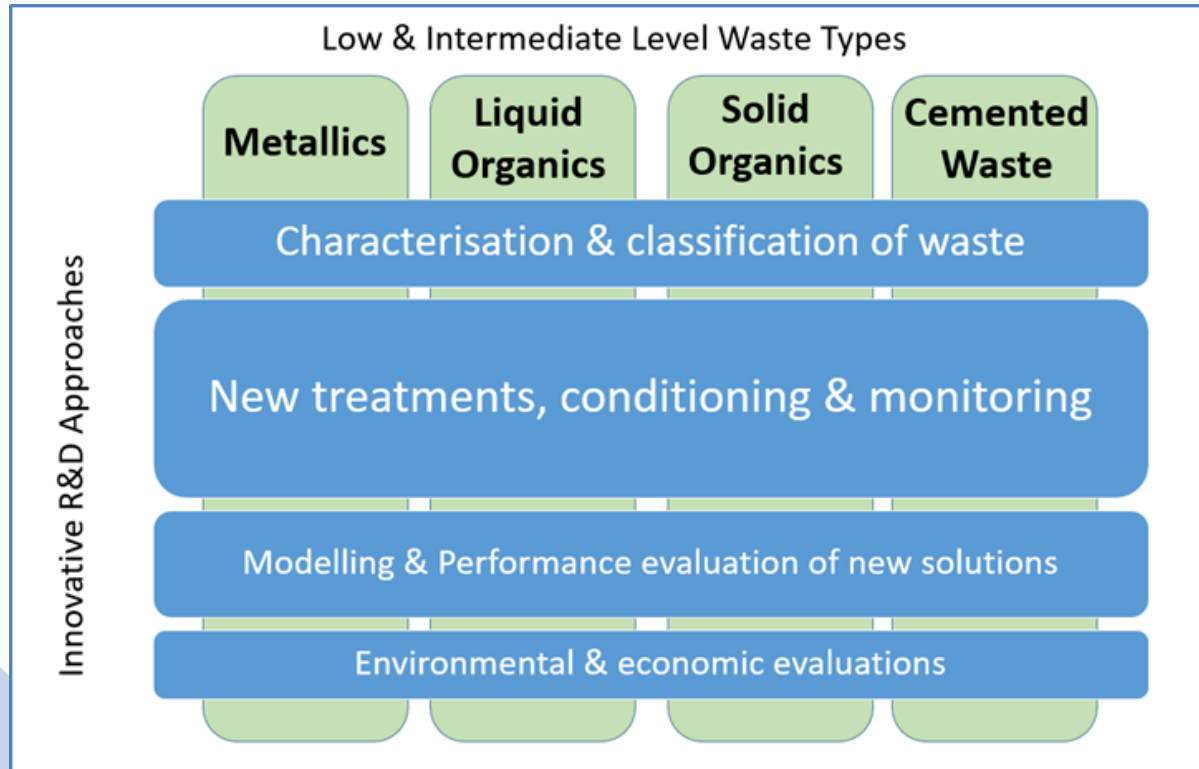


Endorsement and close interaction
with SNETP-Nugenia, IGD-TP, IAEA,
NEA, EURAD



Detailed info:
<https://predis-h2020.eu/>

PREDIS – Project objectives and ambition



- Develop solutions (methods, processes, technologies and demonstrators) for future treatment and conditioning of waste across a number of Member States, for which no industrially mature or inadequate solutions are currently available, improving safety during next waste management steps
- Improve existing solutions with safer, cheaper or more effective alternative processes where they bring measurable benefits to several Member States
- Analyse criteria, parameters and specifications for materials and packages with associated Waste Acceptance Criteria (WAC) for pre-disposal and disposal activities, supporting homogenisation of waste management processes across Europe
- ~70% budget towards R&D, 10% Strategic studies, 10% Knowledge Management, 10% Project Management

Continuous collaboration between EURAD and PREDIS

- Signed MoU to foster cooperation & communication
- Collaboration on Roadmap Theme n°2 on Predisposal
 - including associated KM documentation
- Linking and alignment of KM
 - including joint statement, alignment of training programmes and rates for mobility grants
- Joint stakeholder engagement and dissemination (workshops, papers, presentations and posters)
 - Joint webinar on Digital Twins in RWM, invited EURAD and PREDIS presentations on WAC, KM
- Sharing of Best Practices

Moving forward EURAD-2

19/01/2023

EURAD-2 public webinar #1

Role of the Core Group – 1/2

Based on

- Discussions at the EURADWASTE workshop (May 2022) where EURAD, PREDIS, EC and Member States were present
- Feedback from EURAD-1 preparation
- June communication to Colleges to establish a Core-Group

Represent the Colleges

- Members are mandated by the Colleges, they do not decide, they make proposals to the Colleges to be validated
 - Do not act as representatives of their organisation, not a prefiguration of Bureau / PMO
 - Selected to respect diversity and balance (countries, stage of advancement, PREDIS project)

Role of the Core Group – 2/2

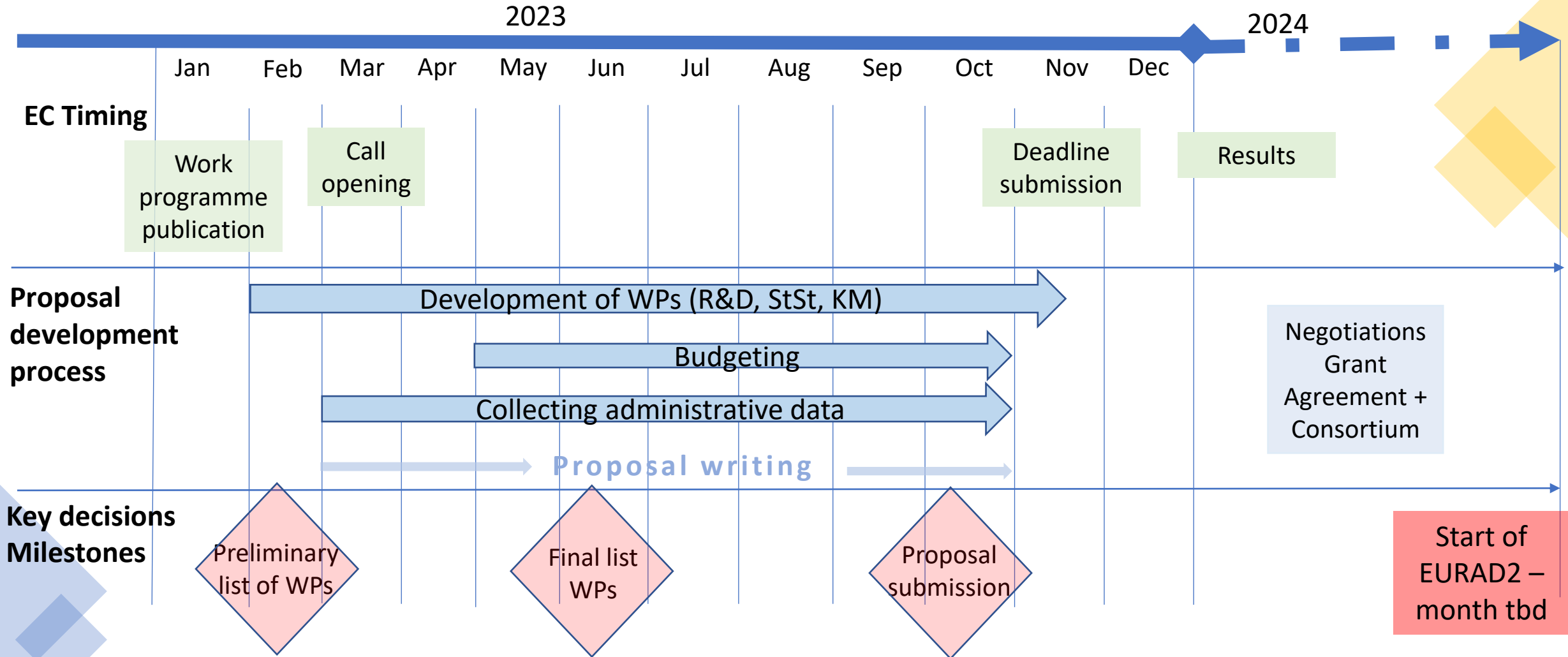
Build EURAD-2 proposal

- Steer the activities to be carried out until the submission of the proposal
- Plan and coordinate the actual setting up of the programme
 - Discuss and propose content of the founding documents
 - Coordinate the technical content
 - Prepare comprehensive communication documentation
 - Previous and future communications are available on [EURAD](#) and [PREDIS](#) websites

EURAD-2 scope

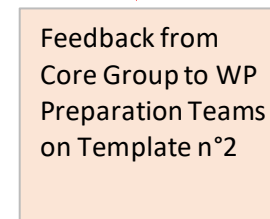
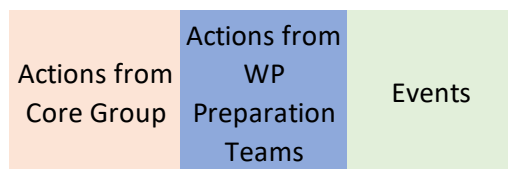
- All types of disposal (RWM activities from cradle to grave – except decommissioning) and full range of radioactive waste (from VLLW to HLW)
- Based on the same documents : EURAD [Vision](#), [Roadmap](#) and [updated SRA](#) (to be available early February)
- Same objectives and type of activities:
 - Develop, maintain and consolidate the scientific and technical basis of radioactive waste management ⇒ **R&D WPs**
 - Address important & complex issues and enable expert networking ⇒ **Strategic Studies WPs**
 - Enhance KM and transfer between organisations, MS and generations ⇒ **KM WPs**

Moving forward EURAD-2 – Timeline – 1/2



Moving forward EURAD-2 – Timeline – 2/2

	2022	2023									
	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct
Development of first ideas	Publication Template n°1		Template n°1 to Colleges (2 pages max)	FF event - pitch ideas							
Consolidation of ideas into WPs					Publication Template n°2	Template n°2 to Core Group (5-10 pages)	Updated Template n°2 to Colleges	EURAD-2 Public webinar n°2			
Development of WPs								Final list of WPs Publication Template n°3		Template n°3 to Core Group	Submission of the proposal



Participation rules – 1/2

- All partners will need to be part of a College (RE, TSO, WMO)
 - **Mandated Actor** by the Ministries
 - Template to request mandate will be provided by the Core Group once the call is published
 - **Affiliated Entity** (new term for Linked Third Party)
 - Legal links to be an affiliated entity must be pre-existing and must last longer than the duration of EURAD-2 and have a larger scope
- **Associated Partners:** participating at their own costs – No EC funding
 - UK and Swiss partners
 - International partners
- For organisations providing research, an umbrella mechanism allowing an easier affiliation is currently explored
- EURAD-2 will be a flexible and inclusive programme, it is anticipated that only part of the budget will be allocated at the start of the programme (**2 waves principle**) – the remaining will be provisioned under coordinator's budget
 - 1st wave of WPs launched at the start of the programme (defined by Summer 2023)
 - 2nd wave of WPs launched during the course of the programme (defined in 2025-2026)

Participation rules – 2/2

- Partners need to embrace **EURAD Vision and principles**
 - Positive participation, maintenance of independence, transparent governance, scientific excellence, balanced programme, added value, inclusiveness, equitable financing, complementary participation and tangible results
- EURAD-2 will be a **co-funded partnership**
 - Commitment to provide the co-financing. Each partner must be able to bear the costs that are not funded by the EC
 - Co-financing will vary depending on the type of activity
 - Partners will actively participating to the work (different from end users)



Break

19/01/2023

EURAD-2 public webinar #1

45

Implementation of EURAD-2

19/01/2023

EURAD-2 public webinar #1

EURAD SRA UPDATE

EURAD-2 Proposal preparation • January 19th, 2023

Valéry Detilleux, on behalf of EURAD GA Bureau

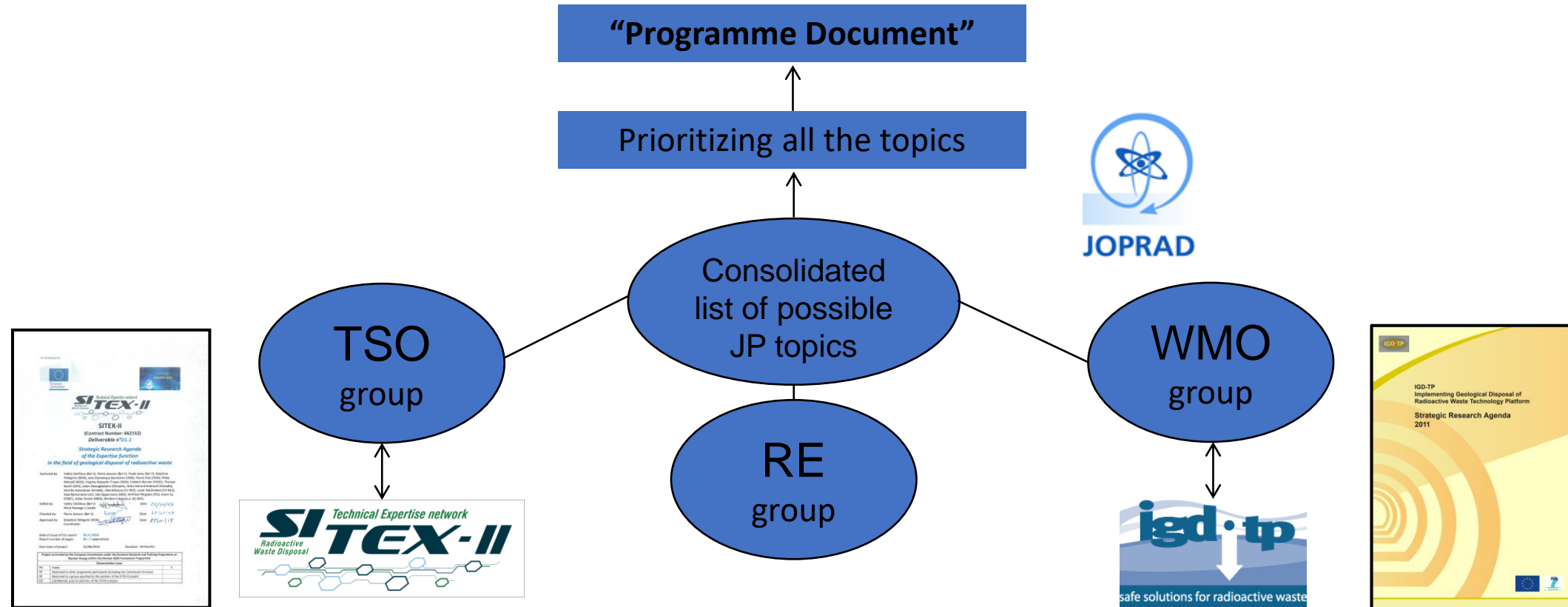


This project has received funding from the European Union's Horizon 2020 research and innovation programme 2014-2018 under grant agreement N°847593

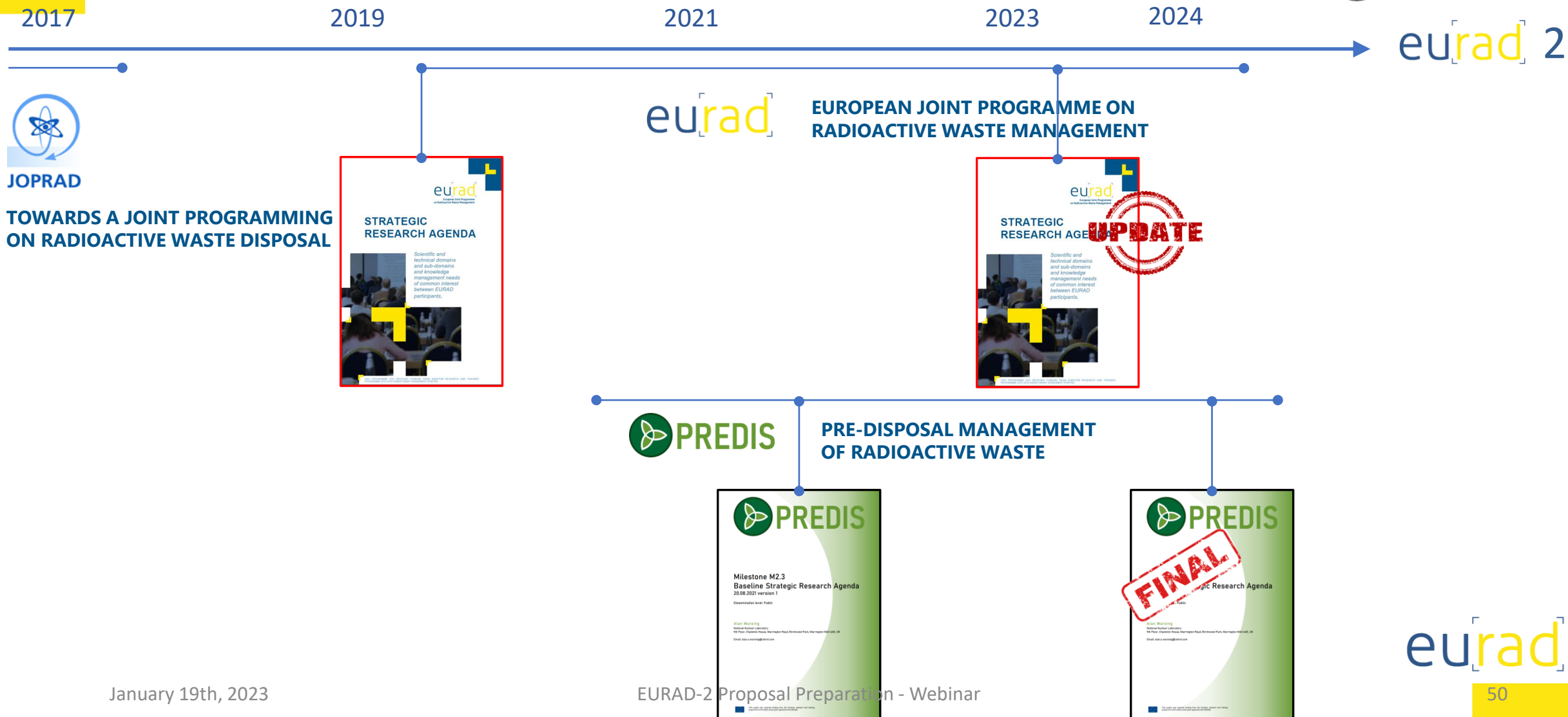
WHAT IS THE EURAD SRA ?

- **SRA = Strategic Research Agenda**
- **What are the objectives?**
 - Document domains of common interest for further EURAD activities
 - Between the different types of actors involved in the EURAD joint programme
 - Considering the EURAD objectives and “boundary conditions”
 - Considering what is done outside of EURAD
 - With the objective to support MS in the implementation of their national programmes
- **For what is it used?**
 - To disseminate current EURAD domains of interest for the next 10 years
 - It provides a common basis to identify, discuss, propose and develop new EURAD activities
 - Promote interactions between colleges and thus benefit from the EURAD multi-actors dimension

START OF THE STORY: JOPRAD



FROM JOPRAD TO EURAD SRA



EURAD SRA UPDATE: THE LANDSCAPE



Input from other projects,
networks...



EURAD Colleges
(TSO, WMO and RE)
needs and priorities

EURAD External Advisory Board
(EAB)



Views from Nuclear licensees
(waste generators)



How to update ?

We need shared goals, scope and process.



Views from Civil Society





GOALS OF THE SRA UPDATE

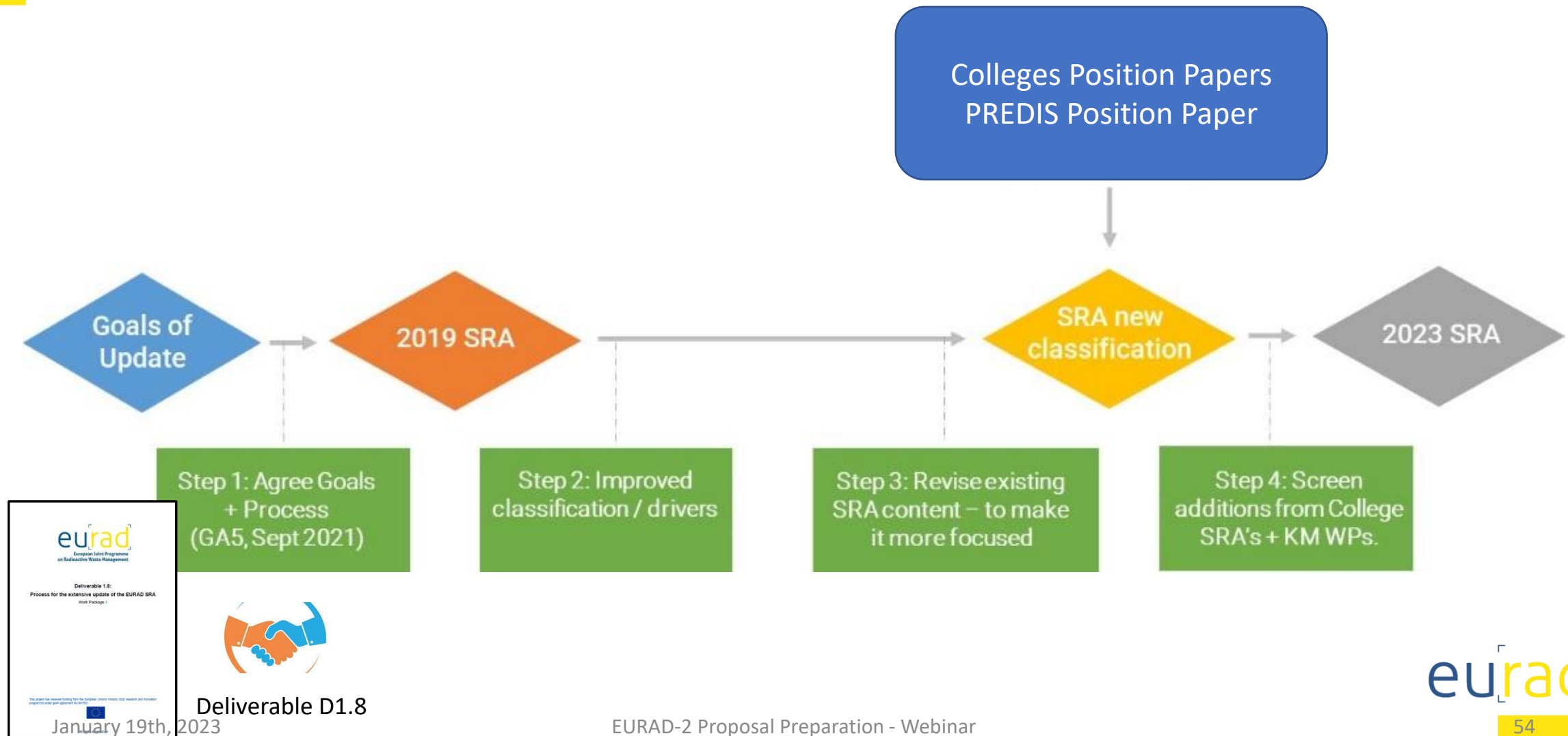
- **Identify new SRA needs & priorities emerging**
- **Covering R&D, Strategic Studies and Knowledge Management activities**
- **Classify SRA needs with a new methodology, based on drivers.**
- **Activities of common interest for next 10 years**
- **Align SRA with EURAD Roadmap and ensure a systemic view**



SCOPE OF THE SRA UPDATE

- **Scientific and technical activities on radioactive waste management from cradle to grave (excluding dismantling and decommissioning of nuclear facilities):**
 - Radioactive waste characterisation and processing (including treatment, conditioning and packaging);
 - Interim storage and transport of radioactive waste; and
 - Disposal solutions – mainly geological disposal of spent fuel, high-level waste (HLW) and long-lived intermediate level waste (ILW).
- **The scope of the update will consider the following main inputs:**
 - The EC PREDIS project (aligns mainly with SRA Theme 2), bringing in views from waste generators
 - Updated SRA / Position papers from EURAD Colleges
 - Views from Civil Society will be brought in by TSO Updated SRA / Position papers.
 - KM priorities from EURAD (+PREDIS) KM Work Packages
 - Input from EURAD Strategic Studies

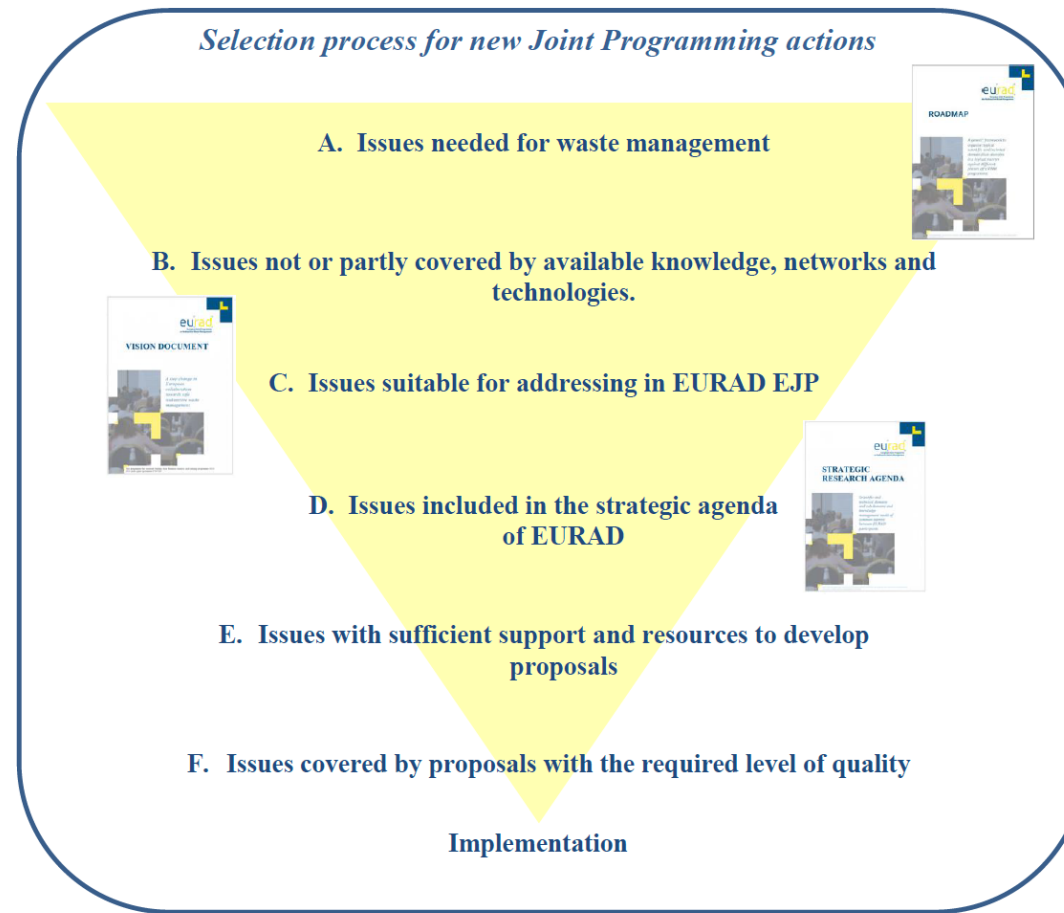
AGREED SRA UPDATE PROCESS: 4 STEPS



STEP 2 - IMPROVED CLASSIFICATION: DRIVERS

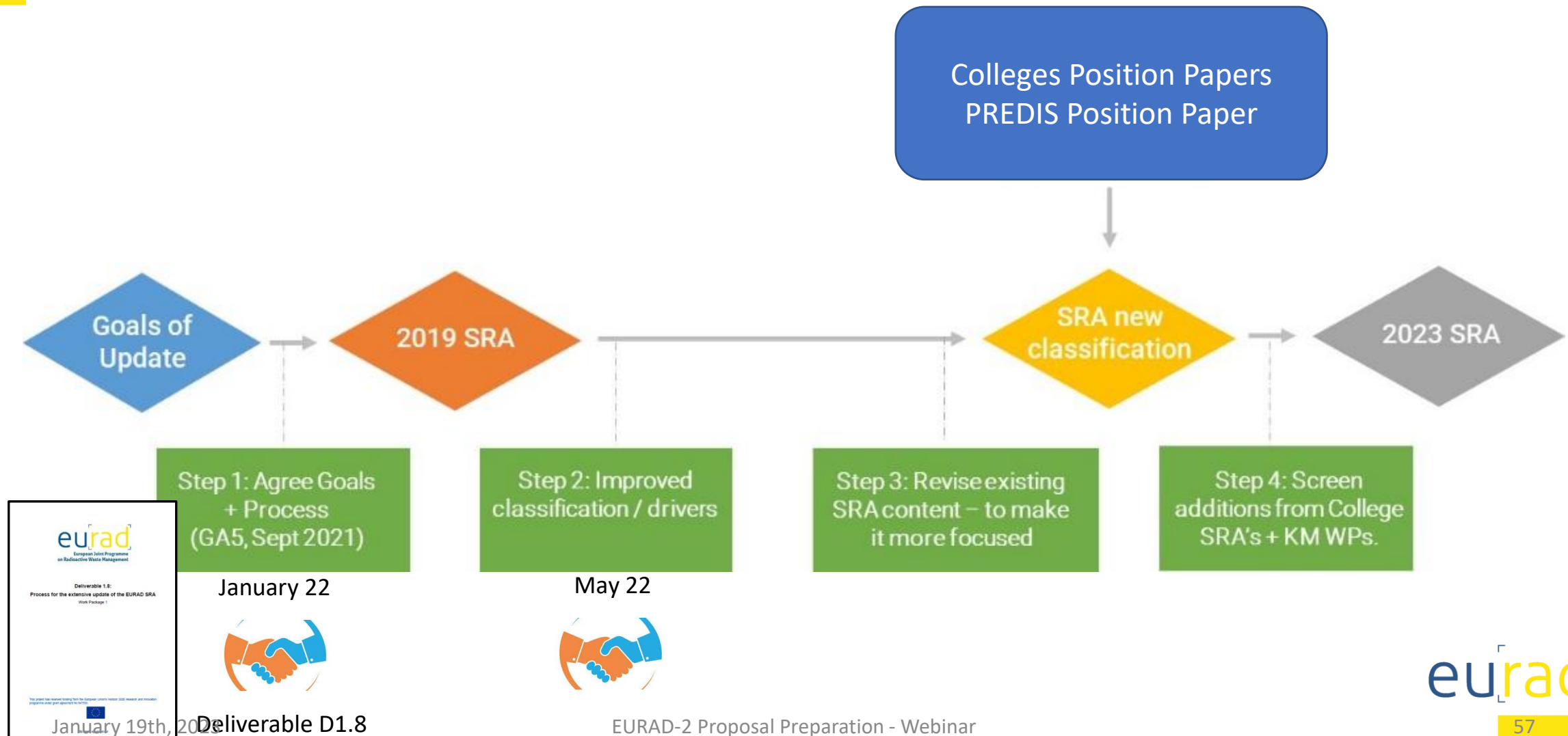
Driver Shorthand	Driver Explanation
Implementation Safety	Contributing to the safe construction, operation and closure of DGRs (and other disposal facilities), ensuring long-term safety.
Tailored Solutions	Supporting the development of tailored solutions for the management of various radioactive waste types in Europe: <ul style="list-style-type: none">• Working together on scientific, technical, managerial, societal and regulatory issues of common interest and considering the full range of potential disposal solutions and waste groups accounting for IAEA's graded approach and taking economic aspects into consideration.• Increasing robustness of approaches by addressing cross-correlations, path dependencies and potential pitfalls in the RWM strategy.
Scientific Insight	Advancing state of the art science in waste management and disposal throughout the waste management chain: <ul style="list-style-type: none">• Exploratory research in areas with significant uncertainty or in areas with high potential to improve knowledge.
Innovation for Optimization	Supporting RWM innovation for optimization: <ul style="list-style-type: none">• Continuously managing uncertainty, improving robustness, reducing complexity and costs and optimizing RWM routes and advancing technology and solutions to meet the needs of Member States.
Societal Engagement	Helping to engage with and maintain mutual trust with stakeholders, and awareness in RWM: <ul style="list-style-type: none">• Addressing issues emerging from regulatory and societal concerns, fostering transparency and fruitful interactions with Civil Society along all stages of a RWM programme.
Knowledge Management	Enhancing knowledge management and transfer between organisations, Member States and generations: <ul style="list-style-type: none">• Capturing, maintaining, and efficiently developing skills, knowledge and infrastructure, in view of the long lead-times and the intergenerational dimension associated to RWM.

STEP 2 - ROLES OF DRIVERS



EURAD SRA-DRIVERS

AGREED SRA UPDATE PROCESS: 4 STEPS



STEP 3 - FIRST UPDATED SRA VERSION (VERSION 1.1)

- **Developed**

- by extracting all the needs (RD&D, SS and KM) from the 2019 EURAD SRA
- re-organizing them using the EURAD roadmap goals breakdown structure
- Proposing drivers (from step 2) for each of the SRA needs

- **Result:**

- draft updated SRA
- Without new needs
- But with current needs aligned with EURAD Roadmap (improved consistency within EURAD strategic documents)

- **Shared with Colleges and PREDIS on 4th of July 2022 for review**

- of the new structure
- of the current SRA content (what as changed, what should be added?)
- of the proposed drivers

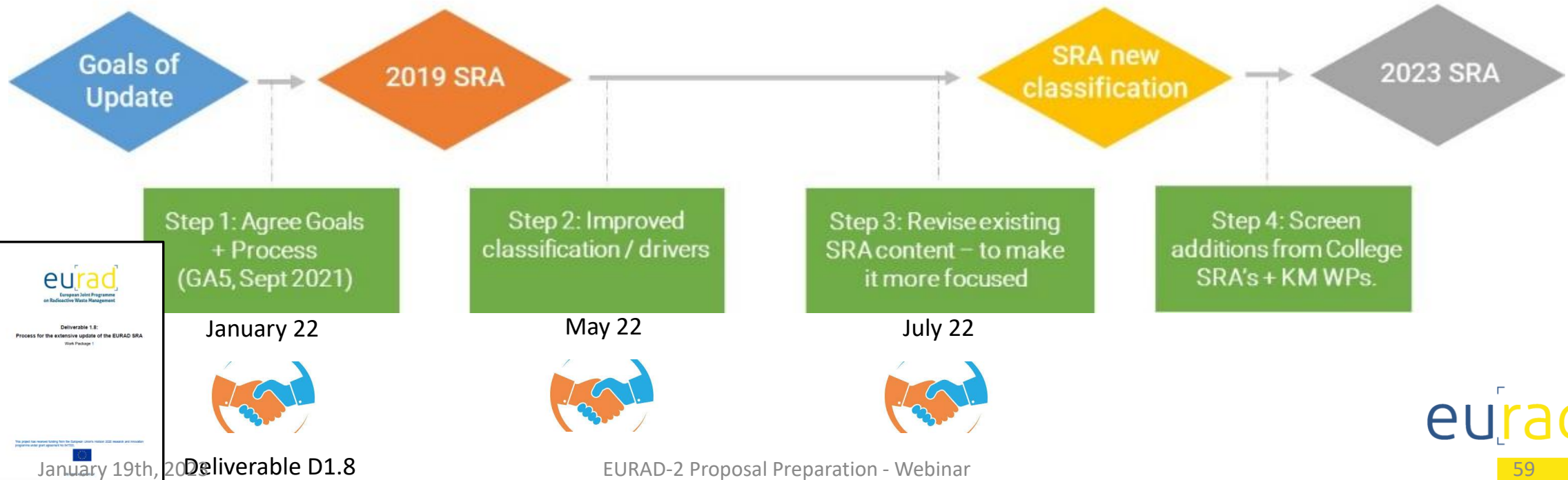
AGREED SRA UPDATE PROCESS: 4 STEPS



October 22



Colleges Position Papers
PREDIS Position Paper

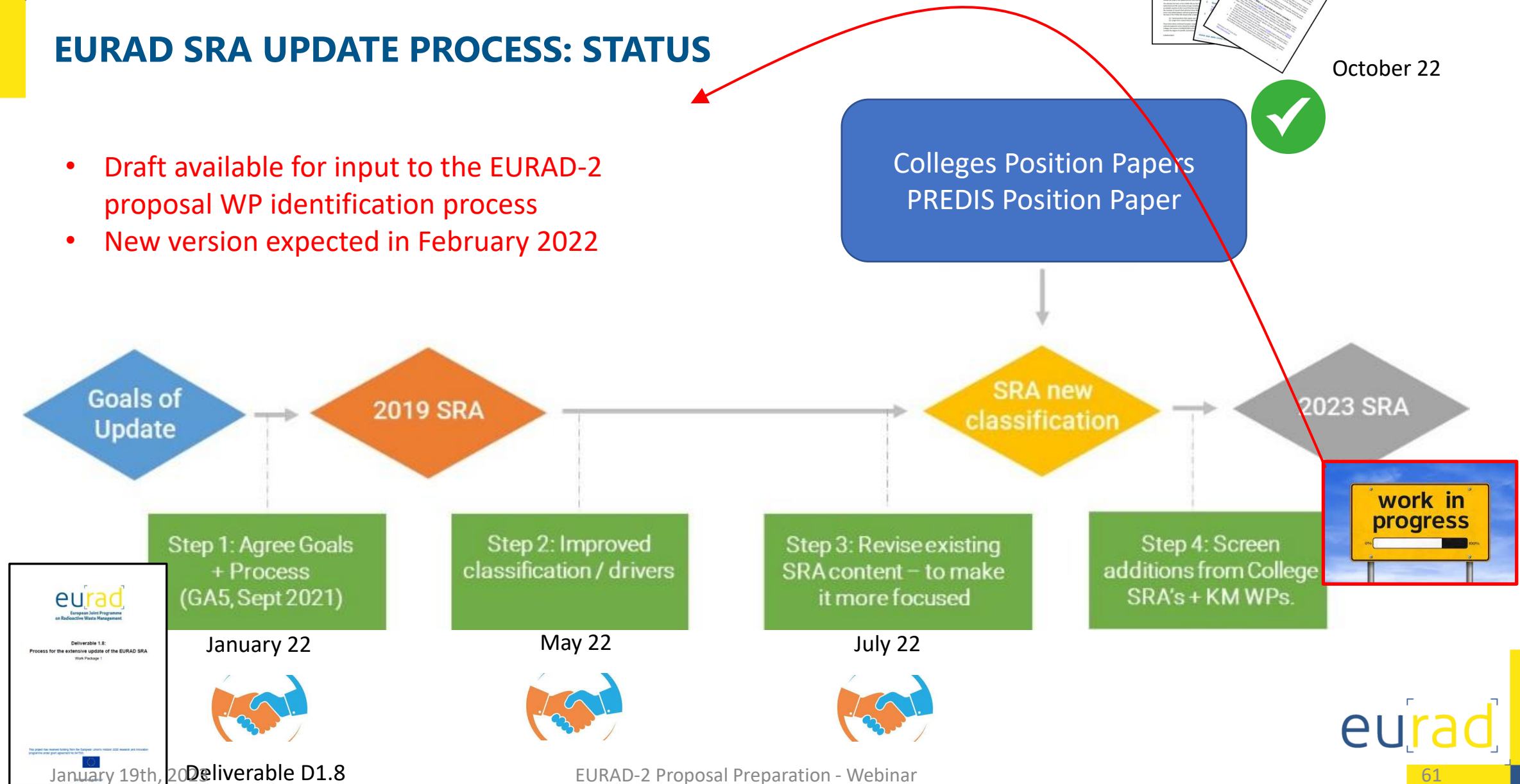


STEP 4 - SCREEN ADDITIONS FROM COLLEGES / PREDIS

- **Colleges and PREDIS proposed**
 - some (light) improvement of the drivers wording
 - to group some current SRA topics
 - changes in the proposed drivers selection for the SRA topics
 - new topics to be considered in the SRA / current topics on which the attention should be emphasized
- **Based on this input a new draft SRA update**
 - Was developed and sent to the Colleges in early January 23
 - For review
 - To be used as a first input for the EURAD-2 proposal WP identification process
- **A new version of the updated SRA is in preparation, considering the received reviews and will be made available in February 23.**

EURAD SRA UPDATE PROCESS: STATUS

- Draft available for input to the EURAD-2 proposal WP identification process
- New version expected in February 2022



Process for the development of work packages – 1/3

February

(deadline to be fixed by each College)

- Submission of proposals (EURAD-2 WP description template) to Colleges via the identified contact person:

RE: euradscience@sckcen.be

TSO: valéry.detilleux@belv.be

WMO: secretariat@igdtp.eu

28 February

- Colleges submit to Core Group the list of WPs they want to support - submission of EURAD-2 WP description template

March

- Core Group makes a suggested grouping of WPs (finding synergies between the different proposals) and invites key persons for pitching the ideas at the Focus Funnel event in Cyprus
- Based on the outcomes of the Focus Funnel, Core Group makes a new proposal of grouping to Colleges

Process for the development of work packages – 2/3

April

- Colleges nominate 1 representative for each WPs (definition of WP Preparation Team)
- Template n°2 (previously agreed by the Colleges) is provided by Core Group to WP Preparation Team

May

- WP Preparation Teams send Template n°2 completed to Core Group
- Core Group give feedback to WP Preparation Team

June

- WP Preparation Team send updated Template n°2 to Colleges
- Colleges give final feedback to Core Group

Process for the development of work packages – 3/3

July

- Final list of selected wave-1 WPs is issued to get detailed proposals (Template n°3)

From July to September

- Development of WPs (Template n°3) by WP Preparation Teams

End of September

- Template n°3 final version sent to Core Group

End of October

- Proposal submission

Presentation of WP template

- **WP template n°1** is available in the December communication (can be found on both [EURAD](#) and [PREDIS](#) websites)
 - Word version : available from College representatives
- Proposals should **not exceed 2 pages**
- Ideas to be forwarded **to the Colleges** (no need at this stage to have a proposal supported by more than 1 College – further step)
- **Boundary conditions:**
 - Co-funding
 - Inclusivity : final WP idea need to be supported by at least 5 different Member States - **not needed for WP Template n°1**
 - Recommendation of **max total budget** per WP :
 - 5 million € for a R&D work package
 - 2 million € for a Strategic Study work package
 - Do not disclose any confidential or sensitive information

2 pages WP Template

Title			
College	<input type="checkbox"/> RE	<input type="checkbox"/> TSO	WMO
Type of activity	<input type="checkbox"/> R&D	<input type="checkbox"/> Strategic Study	<input type="checkbox"/> Knowledge Management
Links with EURAD SRA / Themes (if multiple choices indicate the primary link in bold)	<div style="background-color: orange; color: white; text-align: center; padding: 20px;"> <h2>WHAT?</h2> <p>Main info link with SRA and Roadmap</p> </div>		
Links with EURAD Roadmap Domains (if multiple choices indicate the primary link in bold)			
SRA drivers ¹			
Objective (What) – 1 sentence			

¹ The draft SRA will be available at the provided link early January.

² Implementation Safety: Contributing to the safe construction, operation and closure of DGIs (and other disposal facilities), ensuring long-term safety.

Tailored Solutions: Supporting the development of tailored solutions for the management of various radioactive waste types in Europe. Working together on scientific, technical, managerial, societal and regulatory issues of common interest and considering the full range of potential disposal solutions and waste groups accounting for IAEA's graded approach and taking economic aspects into consideration. Increasing robustness of approaches by addressing cross-correlations, path dependencies and potential pitfalls in the RWM strategy.

Scientific Insights: Advancing state of the art science in waste management and disposal throughout the waste management chain. Exploratory research in areas with significant uncertainty or in areas with high potential to improve knowledge.

Innovation for Optimisation: Supporting RWM innovation for optimisation: Continuously managing uncertainty, improving robustness, reducing complexity and costs and optimizing RWM routes and advancing technology and solutions to meet the needs of Member States.

Societal Engagement: Helping to engage with and maintain mutual trust with stakeholders and awareness in RWM. Addressing issues emerging from regulatory and societal concerns, fostering transparency and fruitful interactions with Civil Society along all stages of a RWM programme.

Knowledge Management: Enhancing knowledge management and transfer between organisations, Member States and generations: Capturing, maintaining, and efficiently developing skills, knowledge and infrastructure, in view of the long lead-times and the intergenerational dimension associated to RWM.

Justification: impact / innovation / added-value (Why) – bullet points or short paragraph	<div style="background-color: orange; color: white; text-align: center; padding: 20px;"> <h2>WHY & HOW?</h2> <p>Short justification and Work Description</p> </div>
Short description: outcomes / tasks (How) – bullet points or short paragraph	
(Optional - Explain what is out of the scope ?)	
List of preliminary interested organisation in the College	
If applicable - links with previous projects / work packages	<div style="background-color: orange; color: white; text-align: center; padding: 20px;"> <h2>WHO?</h2> <p>Interest and contact information</p> </div>
Main contact (name, email, phone number)	
Additional information	
Do you plan to attend the EURAD-2 Focus Funnel event – or can you indicate someone who could attend to represent this proposal?	

Links:

EURAD Roadmap: <https://www.ejp-eurad.eu/roadmap>

EURAD SRA: to be available early January 2023 under this section of this EURAD website:
<https://www.ejp-eurad.eu/publications>

1st page – WHAT ?

Title	Mechanical Ageing of Cementitious materials exposed to coupled disturbances		
College	<input checked="" type="checkbox"/> RE	<input type="checkbox"/> TSO	<input type="checkbox"/> WMO
Type of activity	<input checked="" type="checkbox"/> R&D	<input type="checkbox"/> Strategic Study	<input type="checkbox"/> Knowledge Management
Links with EURAD SRA / Themes (if multiple choices, indicate the primary link in bold)	<input type="checkbox"/> Programme Management (Theme 1) <input type="checkbox"/> Pre-disposal (Theme 2) <input checked="" type="checkbox"/> Engineered Barrier Systems (Theme 3) <input type="checkbox"/> Geoscience (Theme 4) <input type="checkbox"/> Disposal facility design and optimisation (Theme 5) <input type="checkbox"/> Siting and Licensing (Theme 6) <input type="checkbox"/> Safety Case (Theme 7)		

If a proposal is already supported by more than 1 College, please submit it to each College

Consult the SRA, mark all options applicable and indicate in bold the primary link to the SRA

1st page – WHAT ?

Links with EURAD Roadmap Domain Insights (if multiple choices, indicate the primary link in bold)	3.3.2. Backfill		
SRA drivers ²	<input checked="" type="checkbox"/> Implementation Safety	<input type="checkbox"/> Tailored Solutions	<input checked="" type="checkbox"/> Scientific Insight
	<input checked="" type="checkbox"/> Innovation for Optimisation	<input type="checkbox"/> Societal Engagement	<input checked="" type="checkbox"/> Knowledge Management
Objective (What) – 1 sentence 1 sentence	Get an improved and shared understanding of chemical and mechanical ageing of cementitious materials exposed to different disturbances in the near-field system (from the waste package to the backfill/massive plug of the disposal facility)		

Consult the Roadmap, if more than one DI, indicate in bold the primary one

Drivers described in SRA

2nd page – WHY and HOW? Short justification and work description

Justification: impact / innovation / added-value (Why) – bullet points or short paragraph	Work focused on: <ul style="list-style-type: none">• Cement-based as backfill materials. Further understanding required to Support its use of longer-lived wastes• Low-pH concrete as sealing material: option retained by several MS to limit swelling clay disturbance. NO sufficient Knowledge available• Cementitious materials as conditioning matrices. Long-term behaviour, stability under irradiation, leaching performance are needed for their use as conditioning matrix.
Short description: outcomes / tasks (How) – bullet points or short paragraph	<ul style="list-style-type: none">• Development of lab and in situ exp. Aimed at identifying mechanical behaviour of concretes due to varios stresses• Development of multi-scale models• Improved quantification and understanding of cement based material evolution...• Provide opportunity to all actors to develop a common approach, methodology and result sharing
(Optional - Explain what is out of the scope ?)	

2nd page – WHO? Interest and contact information

List of preliminary interested organisation in the College	CIEMAT, GRS, NRG, VUJE, SURO
If applicable - links with previous projects / work packages	CEBAMA
Main contact (name, email, phone number)	Mr/Ms. X Email phone
Additional information	Do you plan to attend the EURAD-2 Focus Funnel event – or can you indicate someone who could attend to represent this proposal?

List only organisations who have participated and given consent in the writing of this proposal.

First within your College and if applicable within another College.

The number of organisations listed will not be considered at this stage as a criteria for ranking the proposals.

Frequently Asked Questions

19/01/2023

EURAD-2 public webinar #1

FAQ – Extract from December public communication – 1/2

How do I get info on EURAD-2?

We invite you to check the communications from Core Group and to follow EURAD-PREDIS web pages for future communications.

What if the WP topic I want to pursue is not in the SRA?

All WPs need to show linkage to the EURAD-1 SRA and Drivers. The SRA update has been ongoing via the Colleges for all of 2022.

Who do I contact to go forward for being involved?

The single-entry point are the College representatives. All participants voice their views via the Colleges, who communicate to the Core Group.

When does it start? How long does it go?

The process of defining EURAD-2 is ongoing, with the WP selection expected in spring 2023 (see Core Group communication October 2022 for more detailed information and time schedule). EURAD-2 programme will start in autumn 2024 and will be running for 5 years.

FAQ – Extract from December public communication – 2/2

Where do I send my WP idea to?

WP ideas are collected separately by the 3 Colleges in January-February 2023. The template and instructions are provided in the [December communication](#). It is important to talk with your other College members to gain sufficient support of ideas.

How detailed a plan do we need for the WP idea now due in February 2023 to the Colleges?

The template and instructions are provided in the [December communication](#), targeting 1-2 pages max. More detailed WP descriptions will be developed for the top ideas in spring/summer 2023.

What if I have extra questions?

You can email any Core Group member or your College representatives for clarifications. All questions will be added to the FAQ list, to be addressed in future Core Group communications.

FAQ – Introduction (A)

A-1 - Will there be the same system of EURAD-1 with mandated actors and linked third parties (called Affiliated Entities in EURAD-2 draft call)?

This can only be answered after the EC call publication, and will be described by the Core Group governance protocols by April 2023. Mandates would be needed by the National Programme Owners, following a prescribed template from the Core Group.

A-2 How and from who can I get a mandate? From who? When?

The Core Group will provide a template to solicit from your national Programme Owner a mandate to participate in EURAD-2 as a beneficiary. Signed letters are needed around April 2023. If you do not know the contact point, the EURAD and PREDIS coordinators can assist you.

A-3 What happens to potential partners from Switzerland and UK?

This is defined by the EC (https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf). In general these parties can be providing “in-kind” contributions, and further info to be provided by the Core Group in spring 2023.

A-4 How can I participate if I am outside of Europe?

These parties are most welcome, with “in-kind” contributions having added value to the WP.

FAQ – Scope (B)

B-1 How many WPs are there going to be? How many partners and size?

We anticipate about 20-25 WPs total, over the 5 years duration. We expect in the order of about 65% of budget towards R&D, which is about 16 WPs total over 5 years, at a total budget of 5 M€ each (EC contribution 50%). Strategic Studies could be approximately 12% of the budget, which is about 4 WPs total over 5 years at a budget of 1-2 M€ each. Another 12% of the budget will be towards Knowledge Management, and 10% towards management. It is anticipated that not all WPs will commence from the start (2 wave principle).

B-2 Who will pay for me and how much will I get?

EURAD-2 is a programme based on co-financing. We anticipate that the EC budget covers 60% of the total programme. The Core Group recommends rates so that R&D WPs will require 50% co-financing, to be arranged by the partner themselves and have commitment prior to the programme starting (autumn 2024). Strategic Studies, Knowledge Management and Programme Management are recommended to be funded at 100% (direct cost). The budgets will be approved by the Colleges (summer 2023). Reminder that a typical R&D WP may have a budget of 5 M€ and roughly 20-30 partners.

FAQ – Participation (C)

C-1 What if I am not selected to contribute to a WP? (due to scope and budget focusing cuts)

Participation will be based on qualification criteria, defined by the EC requirements and Core Group guidance. Selection is based on “value-for-money” principle supporting the WP goals. If not selected to be in a WP, it is always possible to follow EURAD-2 via the Stakeholder group. There will be the option for new WPs in the wave 2, to which everyone is again eligible.

C-2 Can I join later? What if I cannot get in at the start?

Yes, EURAD-2 strives to continuously engage new potential contributions. New partners can come in during wave 2.

C-3 What if I just want to follow the project but not contribute work?

Welcome to register to a Stakeholder community for access to public events, newsletters and discussion groups.

FAQ – Implementation of WP (D)

D-1 Who will decide the first WPs (wave 1)?

The Colleges make the decisions. The CG will make a suggested grouping based on the first ideas from the Colleges. This will then be iterated by the Colleges, to reach consensus on which WPs go forward. This will be an important topic for the Focus Funnel (FF) event in Cyprus March 16 afternoon-March 17. Final decision of the wave 1 WPs by June 2023.

D-2 Who will decide the WP partners and budgets?

The overall amount of WPs and budget per WP category is approved by the Colleges. Each WP will have a WP Preparation Team (with 1 appointed representative from each college) for planning. The Preparation Team will solicit ideas for contribution, assess added value, plan tasks and deliverables and distribution of budget per tasks and partners. The Core Group will provide support and guidance to the WP Preparation Teams for this process. The WP Preparation Teams will make a recommendation of the WP for approval of the Colleges.

D-3 Even if I am not leading a WP, how do I make sure that I can contribute?

Be sure to follow the development of the WP topics within the College, where you have clear value proposition of what you would like to contribute. Once the WPs are selected (June 2023), be in contact with the WP Preparation Teams.

FAQ – Other (E)

E-1 When are we going to hear more?

Each month the Core Group meets and publishes a communication with a week. These are distributed to EURAD and PREDIS partners. Additional communications are occasionally made public via the project web pages.

FAQ – Other (E)

E-2 Will it be possible to use funding from EURAD WPs to pay for the Colleges' fee? The Universities pay platforms fees but not Colleges. Thank you. (Isabel Paiva, Portugal)

EURAD-2 eligible costs of partners are for work provided to the WPs and described in the Grant Agreement.

Colleges organisations (WMOs via IGD-TP, TSOs via SITEX.Network, REs via EURAD-Science) are set up as independent registered associations, and their individual internal funding models of these 3 College organisations is up to their own organisational charter.

It is not yet decided by the Governance plan of EURAD-2 about funding allocation from the Project Management Office (PMO) to College activities that support the partnership implementation, such as in the Bureau roles.

FAQ – Other (E)

E-3 Concerning the Affiliated entity: ...must be pre-existing and must longer than the duration of EURAD-2. The agreements, collaboration agreements can't be longer than 4 years, then how can be demonstrated that one of them started, i.e in 2023 will last beyond 2027? (Farias Seifert, Joaquín. Spain)

Guidance will come from the Core Group about how to arrange Affiliations for interested parties who do not yet have a pre-existing link or for durations that span the whole EURAD-2 duration. This guidance will come in April.

We recognize that not all organisations have such pre-existing links, but EURAD-2 strives to have inclusiveness for all. As long as the organisations can demonstrate the recurrence over time of the collaboration, then this has been accepted by EURAD-1 and the EC. The final approval about the Affiliation is decided by the EC.

Conclusion

19/01/2023

EURAD-2 public webinar #1

Summary and next steps

- **Slides will be available by early February on EURAD and PREDIS websites**
- **Stay tuned:**
 - EURAD-2 Focus Funnel (in-person event) – 16-17 March 2023 in Larnaca, Cyprus
 - EURAD-2 public webinar #2 (online event) – 11 July 2023
- **Get familiar with the draft EURAD SRA– to be released by February 1st on [EURAD](#) and [PREDIS](#) websites**
- **Register to your Colleges to have all information**

Click here to
Register –
EURAD-2 FF

Click here to
Register – Public
webinar #2

Who to contact ?

	EURAD-1 College Leadership	EURAD-2 Core Group Members
Coordinator		Louise Théodon (ANDRA – France), louise.theodon@andra.fr
Waste Management Organisations, WMO college - via IGD-TP	secretariat@igdtp.eu Johanna Hansen (General Secretary) Johanna.Hansen@Posiva.fi	Ingo Blechschmidt (NAGRA – Switzerland), ingo.blechschmidt@nagra.ch Astrid Göbel (BGE – Germany), Astrid.Goebel@bge.de
Research Entities, RE college - via EURAD-Science network; which also includes supply chains and companies	Christophe Bruggeman euradscience@sckcen.be	Christophe Bruggeman (SCK CEN – Belgium), christophe.bruggeman@sckcen.be Lara Duro (AMPHOS 21 – Spain), lara.duro@amphos21.com
Technical Support Organizations, TSO college - via SITEX.Network; which also includes civil society and regulator views	Valéry Detilleux valery.detilleux@belv.be	Erika Holt (VTT – Finland), erika.holt@vtt.fi Nadja Železnik (EIMV – Slovenia), Nadja.Zeleznik@eimv.si



Thank you for your attention

19/01/2023

EURAD-2 public webinar #1