



PIANOFORTE : A European Partnership for Radiation protection research

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What is a Partnership?

- *“European partnerships are initiatives where the EU, national authorities and/or the private sector jointly commit to support the development and implementation of a programme of research and innovation activities”*
- Partnerships will:
 - **address complex challenges** outlined in Horizon Europe.
 - **support the achievement of EU priorities**, such as the European Green Deal,....
 - **be impact-driven by deploying a broad range of R&I activities**, from concept to demonstration and validation to **regulatory and societal uptake**.
 - contribute to a stronger European Research Area (ERA) by avoiding **the duplication of efforts**, and **enhancing synergies between programmes**
- In Horizon Europe, a total of 49 Partnerships have been selected (3 within EURATOM : Eurofusion, EURAD and **PIANOFORTE**)

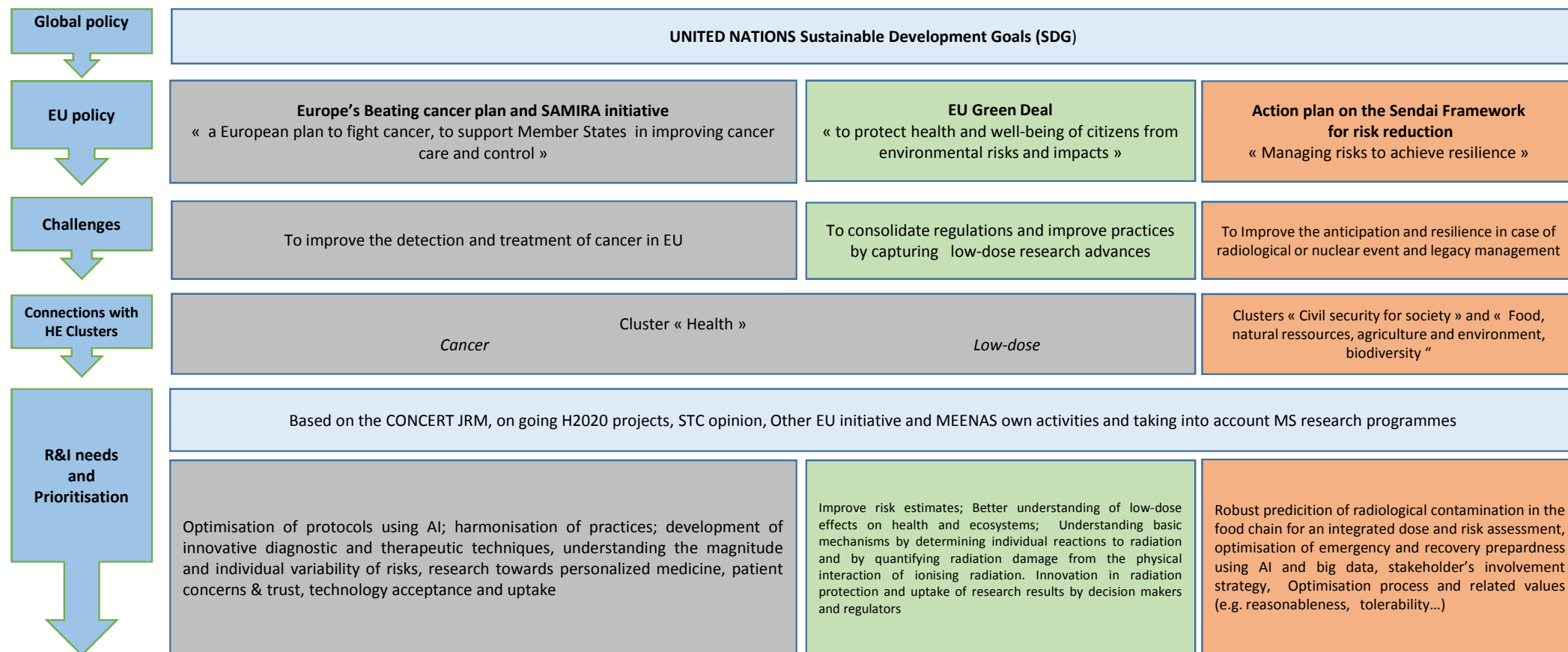
Work program EURATOM 2021-2022 : NRT-01-09 Expected outcomes

- Establishing improved risk estimates for the justification of practices and optimisation of radiological protection of the members of **the public, patients and workers**
- Advancing state-of-the-art understanding of the link between exposure characteristics (radiation quality, dose and dose-rate) and the **cancer and non-cancer effects**
- Developing a knowledge base and analytical tools for the major features of **variability in the radiation response**
- **Advancing integrative radiobiology** from basic mechanisms to clinic and epidemiology, including **human and social sciences** -
- Providing a scientific basis and establishment of **priorities for medical applications** of ionising radiation, taking a broad approach to the public health impact.
- Providing a scientific basis to recommendations, procedures and tools for **improving radiation protection of workers and of the general public**
- Providing a scientific basis to recommendations, procedures and tools for assuring and improving **preparedness for nuclear and radiological emergency** response and recovery
- Reinforcing **training through research** in the field of radiation protection and encouraging continuous training and career upgrades
- Facilitating access to **research infrastructure** and promoting the integration of data, FAIRisation processes
- **Improving public engagement** and the understanding of public perception

Work program EURATOM 2021-2022 : NRT-01-09 Scope

- Implementation of this Partnership would require a cooperation of the entire **European research community** concerned in order to exploit synergies between different scientific disciplines.
- The Partnership would need to take account of present state of knowledge and priorities identified in the Strategic Research Agenda of **MELODI (low dose radiation)**, **ALLIANCE (radioecology)**, **EURADOS (dosimetry)**, **NERIS (nuclear emergency preparedness)** and **EURAMED (medical exposures)**, **SHARE (social sciences and humanities)** and **SNETP (sustainable nuclear energy technology platform)**.
- “....**citizens should continue to be involved** by supporting open and participatory approaches to research and innovation in the field of radiation protection.”
- “the Partnership would build on and further develop the research priorities identified by **the European Joint Programme CONCERT**”
 - The Partnership will address the identified research and innovation priorities topics through the launching of **several Open Calls**.
 - Other **synergies across programmes such as Horizon Europe Health programme and the EU Mission Cancer** will continue to be explored, through dedicated working groups.
 - The Partnership will ensure the availability of and facilitate **access to state of-the-art research infrastructures**
 - Proposals could pool the necessary financial resources from the participating national (or regional) research programmes with a view to **implementing joint calls for transnational proposals resulting in grants to third parties**

Intervention logic of the Pianoforte partnership



PIANOFORTE objectives

General Objective : To improve radiological protection of members of the **public, patients, workers and environment** in all exposure scenarios and provide **solutions and recommendations** for optimised protection in accordance with the BSS. This objective will be reached by **multidisciplinary research, innovation and citizen involvement activities** in a collaborative approach of scientists, regulators and stakeholders. Research projects focusing on identified research and innovation priorities will be selected through **competitive open calls**.

To innovate **in ionising radiation based medical applications** combating cancer and other diseases by new and optimised diagnostic and therapeutic approaches improving patient health and safety and supporting transfer of the R&I outcome to practice.

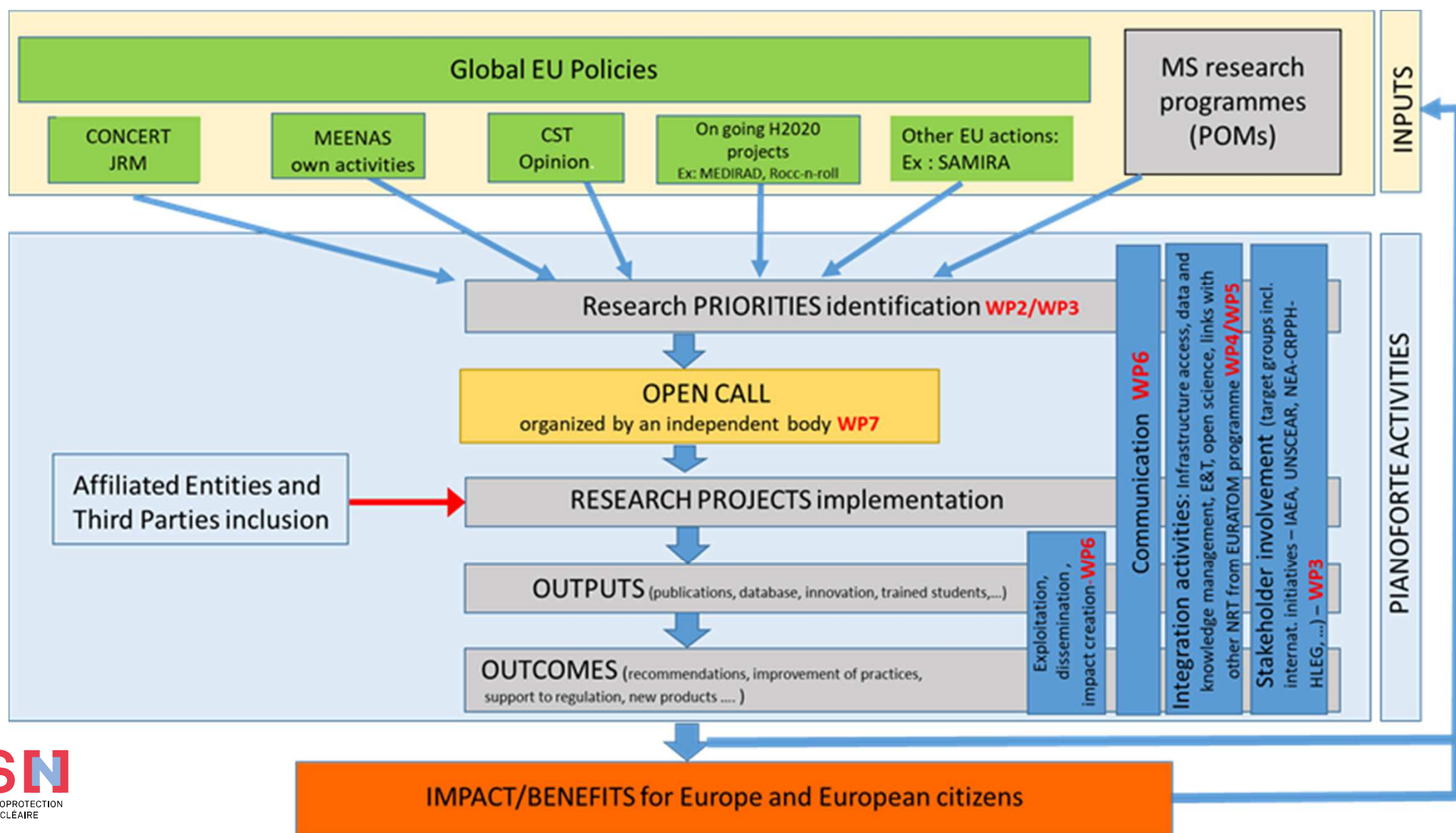
To improve scientific **understanding of the variability in individual radiation response** and health risk of exposure

To support regulations and implementation of the BSS and improve practices in the domain **of low dose exposures of humans and the environment** by better understanding and reducing uncertainties in risk estimates.

To provide the scientific basis to recommendations, procedures and tools for assuring **better preparedness to response and recovery from a potential radiological event** or nuclear accident and to improve the know-how to manage legacy sites.

To maintain a sustainable expertise capability on radiation protection issues across the EU by fostering the availability, the use, and the **sharing of existing state-of-the-art infrastructures** at European level and beyond, and **conducting education and training activities**.

To involve all the relevant stakeholders at the different stages of the implementation of research projects and assure efficient dissemination, knowledge management and uptake of results



PIANOFORTE Identity card

- Co-funded Partnership at a global rate of 65% (EC) / 35% (MS)
- Starting date : 1st June 2022 (kick-off meeting at IRSN headquarters in Fontenay-aux-Roses on June 14&15)
- Duration : 5 years (possibility of a 2 years extension)

59 partners (39 beneficiaries)

including the 6 RP platforms, 5 Associated partners, 15 Affiliated Entities)

24 countries

30 +16 M€/5 years

Coordination IRSN/France	Research & Innovation SCK-CEN/Belgium	Stakeholder Engagement BFS/Germany	Education & Training Stockholm U. /Sweden	Infrastructure PHE/UK	Dissemination & Impact SURO/ Czech Republic	Open Calls organisation and selection NCBR/Poland
All platforms involved	All platforms involved	All platforms involved	All platforms involved	All platforms involved		

Governance :

- ExB : WP leaders + one representative of MEENAS
- General assembly : All beneficiaries including 6 platforms representatives (39 members)
- Stakeholder and Advisory Board

Organisation of at least 3 **open** research calls (2023, 2024, 2025)

Who will be able to participate to the Open Calls and co-funded by EC budget?

- 1) The beneficiaries with the exception of organisations involved in the organisation of Calls and in the selection process.
- 2) The Affiliated Entities to the beneficiaries (contributing or not to the integration activities of PIANOFORTE)
 - *An entity is affiliated to a beneficiary if it exists a legal link (for example a collaboration agreement) between the two parties*
- 3) All other EU organisations (Third parties). However, they will have to demonstrate that they have a complementary funding from their country of origin.

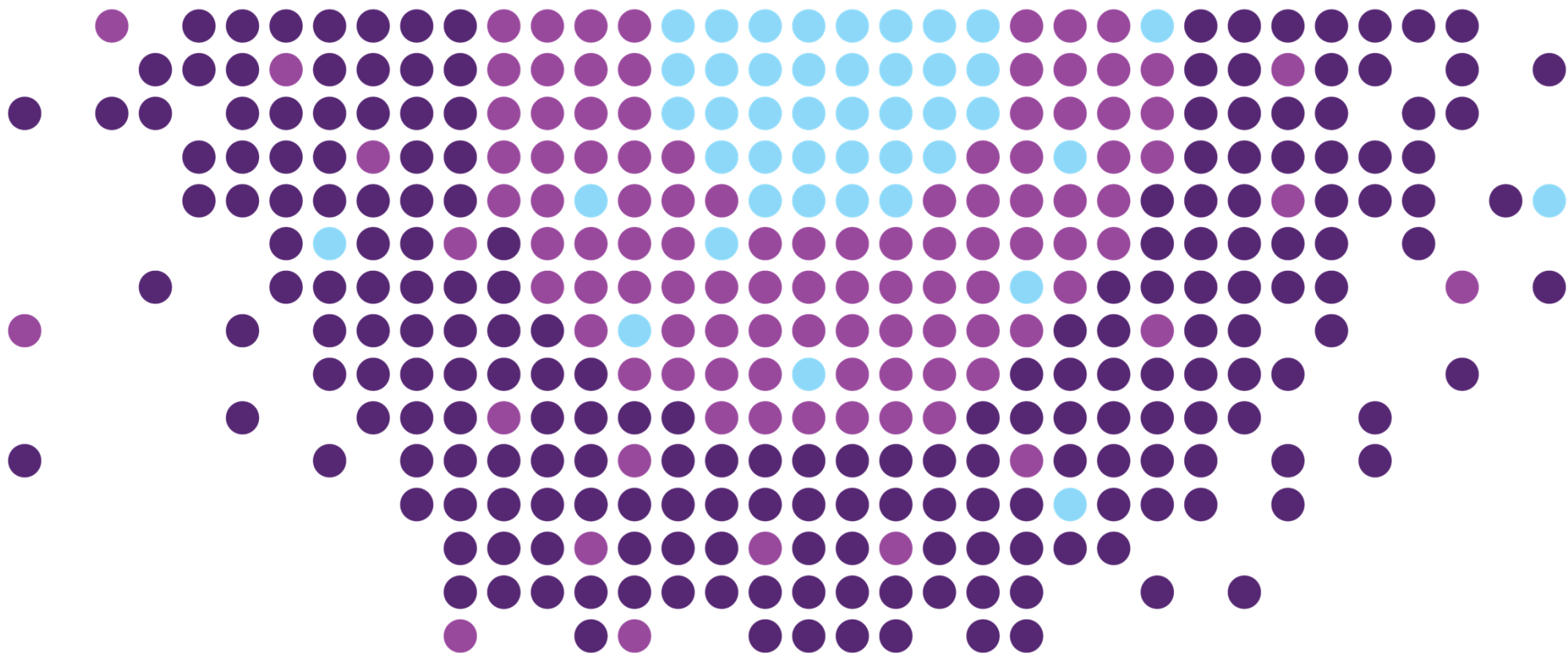
CONCLUSION

« The proposal has the potential for ground-breaking R&I advancing parts of radiation protection beyond the state-of-the-art » (taken from the Evaluation Summary Report », february2022)

It's up to us to allow the potential to become reality!

« The approach adopted for the implementation of PIANOFORTE is based on equity, transparency, openness, multi- and inter-disciplinarity and excellence (taken from the PIANOFORTE proposal, october2021)

This is the commitment of the coordinator and the ExB!



sck cen
Belgian Nuclear Research Centre

Filip Vanhavere

PIANOFORTE: priority setting for R&I calls

MEENAS Webinar 6 May 2022 - European radiation protection: from EJP-CONCERT to the PIANOFORTE partnership and beyond

PIANOFORTE: Work Packages

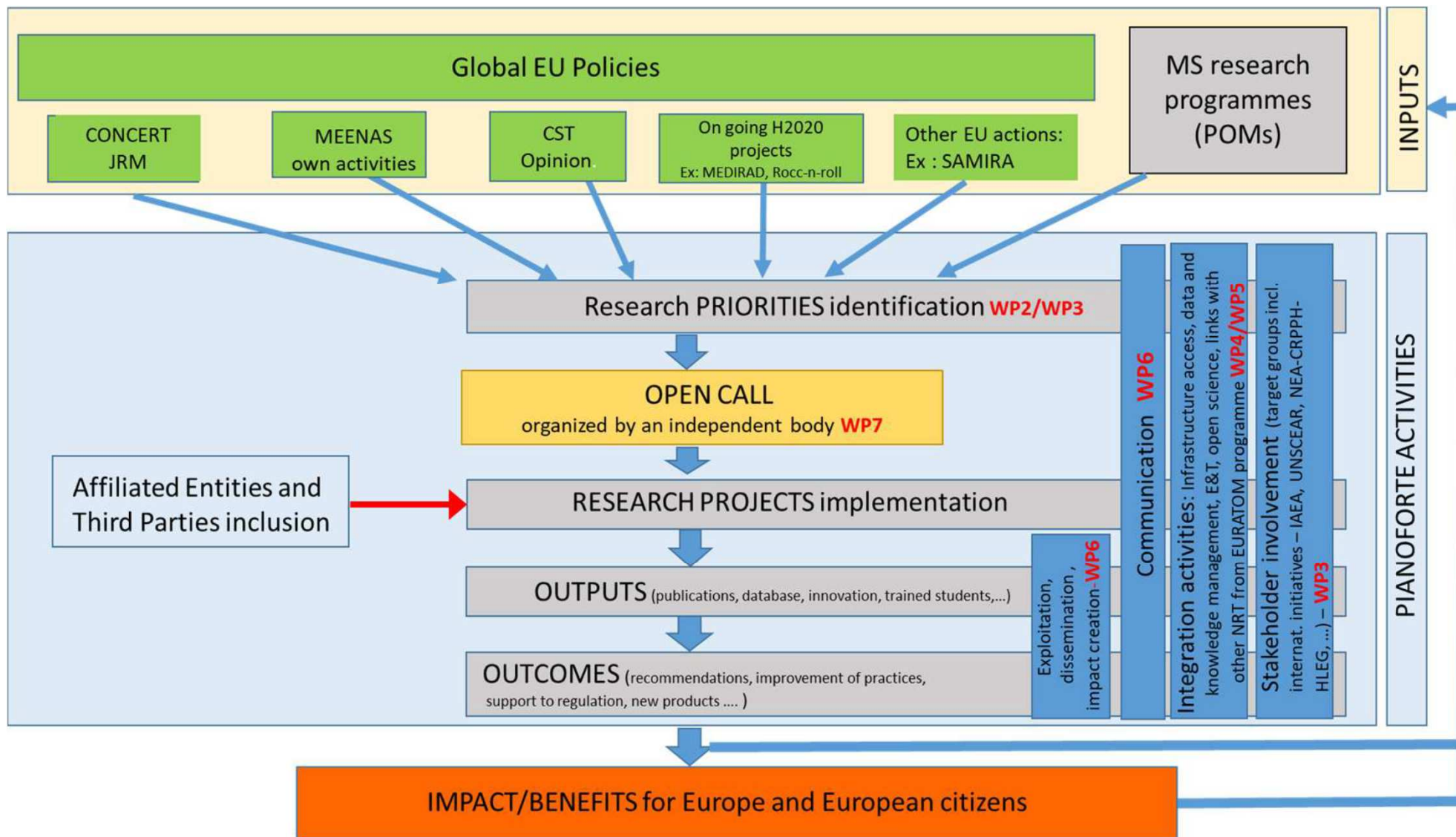
	Title	Lead	
1	Management & Coordination	IRSN	J-C. Gariel
2	R&I Calls	SCK CEN	F. Vanhavere
3	Stakeholder engagement	BfS	F. Rauser
4	Education and Training	SU	A. Wojcik
5	Infrastructure and Data Man.	DH-PHE	S. Bouffler
6	Diss., Comm., Impact	SURO	M. Davidkova
7	Open Calls organisation	NCBR	J. Makocka

Workpackage 2: Research and Innovation Calls

- Major part of the PIANOFORTE budget for Research and Innovation projects: **core of PIANOFORTE!!**
- This scientific and technological advancement will form the bases of all improvements in radiation protection.
- **IMPORTANT:**
 - Open calls
 - Competitive call system
 - Research priorities based on the objectives from PIANOFORTE
 - Independent organisation of open calls: WP7
- 3 calls with the 5 years of PIANOFORTE
- WP2 major task: defining research priorities, with input from WP3 (stakeholders input)

Set up the research priorities for 3 open calls

- Lead NNK (Katalin Lumniczky), Partners: CIEMAT, SSM, SCKCEN, all POMs, all Platforms
- Main input :
 - **CONCERT Joint Roadmap**
 - **Strategic Research agenda's of the 6 platforms of MEENAS**
 - **POM input: priorities should be aligned with the priorities from participating Member States**
 - **Input from EURATOM Scientific and Technical Committee (STC)**
 - **Alignment with EURATOM and H2020 projects and initiatives (SAMIRA, MEDIRAD, ...)**
 - **Radiation Protection stakeholder input (through WP3 and Stakeholder Advisory Board)**
- Calls must reflect a multidisciplinary and transnational approach
- Priorities should integrate global EU policies
- Should be aligned with the 3 pillars defined by Horizon Europe: excellent science, industrial leadership, societal challenges
- Coordination between WP2, WP4 and WP5 will assure harmonization among research activities, E&T and infrastructural guidelines



Steps for prioritisation

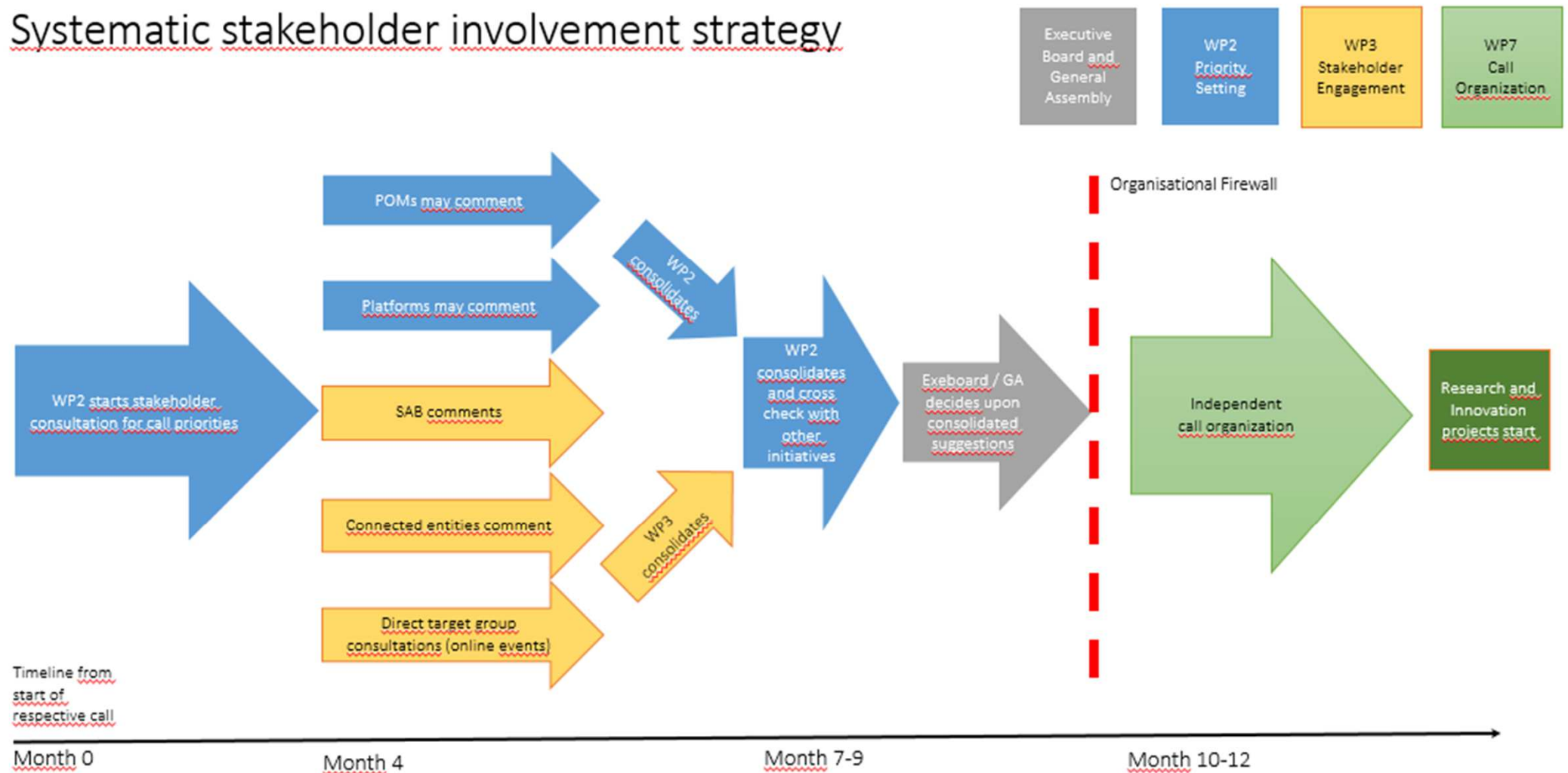
- a) A first synthesis based on: Joint Roadmap, Horizon Europe priorities, EURATOM STC input, EURATOM call priorities
- b) A feedback round with the 6 European Radiation Protection Platforms (SRA input)
- c) Direct stakeholder involvement with the stakeholder advisory board

WP3: online target group consultations and points of contact to related entities and organisations

- d) Input from POM's
- e) Cross check with international initiatives and on-going and planned European projects and actions
- f) Finalisation of the research priorities by the Executive Board and the General Assembly of PIANOFORTE**

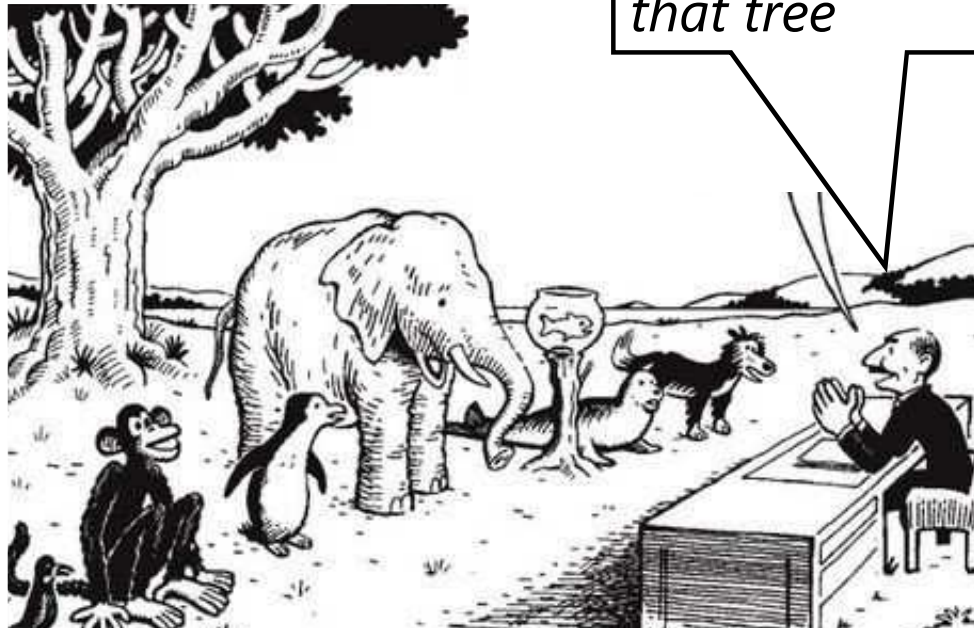
PIANOFORTE: concept

Systematic stakeholder involvement strategy



Prioritisation: difficult and sensitive task...

All **important**
topics / SRAs



Priority
call topics

After each call: evaluation of process

- Lead: CIEMAT (Almudena Real Gallego); Participants: NNK, SSM
- An evaluation of the prioritization procedure of each call will be performed after the close of each call procedure
- Document and analyze feedback received from all interested partners
- Summarize the main conclusions and lessons learned

Scientific follow up and integration of the research projects

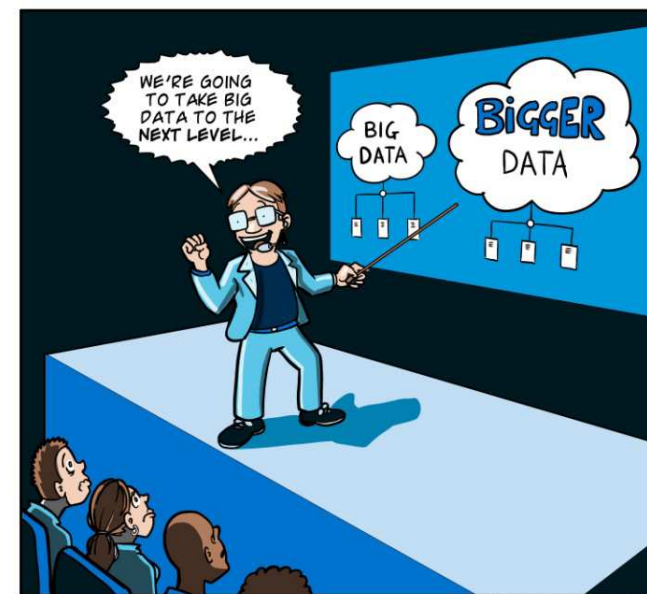
- Lead STUK (Teemu Siskonen); Participants: SCK CEN, CEA, INSERM, NCRPP, ISS, U. Exeter
- Goal in PIANOFORTE: to have **focused calls**
 - Different calls can focus on different sub-priorities
 - Not every time same broad call text
 - So some selected projects will work on different aspects of the same priority
- Synergies between projects need to be managed
 - to avoid overlap and to maximise the projects' impact: topical workshops
- A systematic follow-up and analysis of project outcomes will be carried out: monitoring of scientific progress
- Capture the innovation and development and steer towards application: applications and recommendation forming
- Particular attention will be given to the integration of social sciences and humanities in funded projects.

Other WP2 tasks: update of Joint Roadmap

- Lead: SCK CEN (Nathalie Impens), Participants: JSI, ENEA, EK, all Platforms
- By end of PIANOFORTE: update JRM taking into account scientific progress and evolution of societal needs
 - Analysis of stakeholder feedback on the 1st edition of the Joint Roadmap
 - Identification of changes affecting the Joint Roadmap including the update of platform SRAs
 - Drafting of the updated Joint Roadmap for radiation protection research (M48)
 - Review of the draft and publication through stakeholder consultation through a questionnaire and live/online events
 - Second edition of the Joint Roadmap for radiation protection research

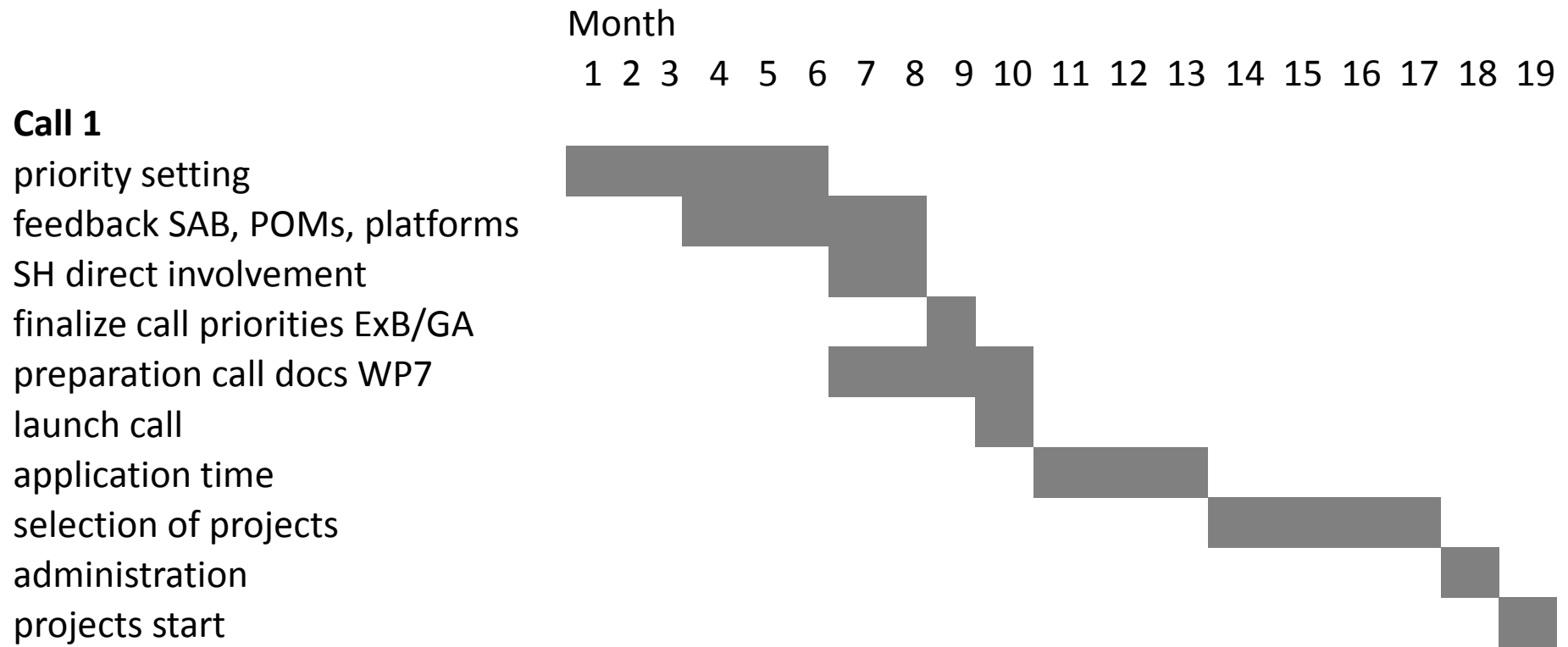
Other WP2 tasks : Integration of Artificial Intelligence in Radiation Protection

- Lead NCSRD (Spyros Andronopoulos), Partners: NCSRD, IRSN, OVGU, UExet
- This task will coordinate, harmonize and stimulate activities related to the application of Artificial Intelligence (AI) and big data approaches in radiation protection topical fields.
 - Review on AI implementations in RP
 - Interaction with scientific communities specializing in AI
 - Promoting the uptake of AI in R&I calls
 - Ethical challenges of AI



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Call 1 timeline: as fast as reasonably achievable

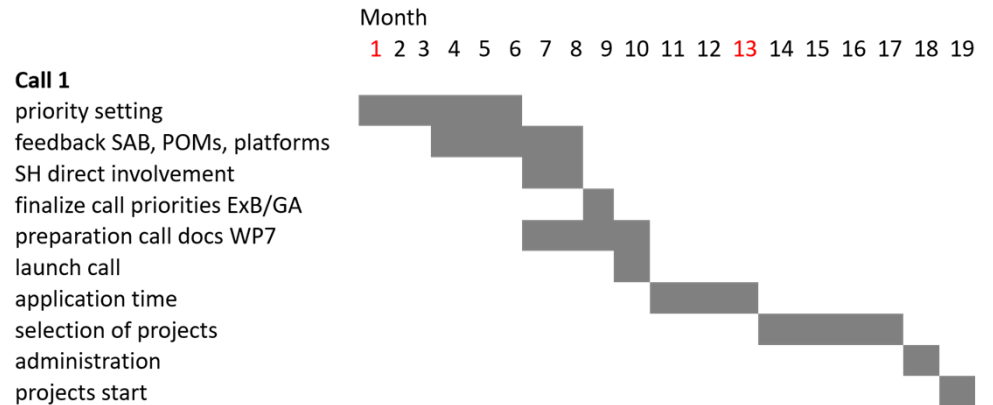


Calls timeline: in absolute time....

- Start PIANOFORTE: June 2022
- Launch call: **March 2023**
- Deadline application: June 2023
- Start project: **December 2023**

□ **We will try to be faster if possible...**

- Next calls:
- Call 2:
 - Launch: **March 2024**
 - Deadline application: June 2024
 - Start project: **November 2024**
- Call 3:
 - Launch: **March 2025**
 - Deadline application: June 2025
 - Start project: **November 2025**
- PS: research can run until after official end of 5 years from PIANOFORTE



WP 7: Organisation and management of R&I Open Calls

- The aim of WP7 is to organize and manage three international open research calls
- This WP and the call process is designed to achieve the highest level on major ethical issues:
 - Ensuring transparency, whilst maintaining confidentiality of processed information,
 - Preventing the occurrence of conflicts of interest,
 - Ensuring equal treatment of the applications made in response to its calls,
 - Taking decision on the sole basis of scientific quality and expected implementation performance and impact with respect to PIANOFORTE's overall objectives.
- ***The team involved in WP7 will not respond to the open research calls.***
- Partners: NCBR (Poland), UEFSCDI (Rum), MUR (Ita)
 - Task 7.1: Setting up a Calls Secretariat and Call Steering Committee (CSC)
 - Task 7.2: Preparation of the Open Call documents and launch of the calls
 - Task 7.3: Implementation of the open calls
 - Task 7.4 Quality management of open research calls procedures

Conclusion...

Wish us good luck to bring all radiation protection aspects together in widely accepted priority topics...

