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## PIANOFORTE Partnership

European Partnership for Radiation Protection Research

Horizon-Euratom – 101061037

# D1.3 – Second Periodic Report in accordance with the provisions of the consortium contract – M10 to M21

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## Abstract

This document is the "D1.3-Second Periodic Report" of the PIANOFORTE partnership and describes the work carried out by the consortium from the beginning of March 2023 until February 2024.

During this second period of the project, a large part of the effort has been devoted to all the work related to the first open call of the PIANOFORTE partnership (thanks to the work done in WP1, WP2, WP3 and WP7), including the preparatory work, the publication of the first Open Call for projects, the evaluation process and the negotiations with the coordinators of the selected projects. In addition, and in parallel, the transversal actions concerning the optimisation of the use of research infrastructures in the field of radiation protection on a European scale (WP5) and the actions in the field of education and training (WP4), which took the form of organising courses and awarding travel grants for students and young professionals, were continued.

Furthermore, numerous communication actions (newsletters, presentations at conferences, presentations to national and international organizations, website, social networks, etc.) were carried out around PIANOFORTE, which made it possible to provide much more visibility to all the actions carried out in the different fields covered by the partnership (WP6).

Finally, WP1 of PIANOFORTE ensured the administrative, legal and financial management of the consortium. The work carried out is results oriented, aims at effective project management and quality control of results and deliverables, as well as timely communication with the European Commission.

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## 1. Introduction

The ambition of the PIANOFORTE partnership for radiation protection research is to improve radiation protection of members of the public, patients, workers and the environment in all exposure scenarios and to provide solutions and recommendations for optimized protection according to basic safety standards. Research projects focused on the identified research and innovation priorities will be selected through a series of three competitive open calls. The input to define the research priorities will be based on the priorities defined in the Joint Roadmap (JRM) developed during the H2020 CONCERT EJP but also on the results of ongoing H2020 projects and on the expectations expressed by other actions carried out in other European programs, in particular the SAMIRA action plan or by the European research platforms in radiation protection. A high priority will be given to medical applications, as 1) medical exposures are by far the largest source of man-made exposure of the European population and 2) the fight against cancer is a top priority of the current European Commission. In order to ensure appropriate continuity in research objectives and methodologies, in line with the content of the CONCERT JRM, two additional priorities were identified to better understand and reduce uncertainties associated with health risk estimates for low dose exposure in order to consolidate regulations and improve practices, and to strengthen a science-based European methodology for emergency management and long-term recovery. Once the research priorities are defined, the open call system will promote scientific excellence and broaden participation through a process open to the entire radiation protection community. In addition to the research actions, the selected projects will be able to benefit from the infrastructure sharing and pooling system that will be set up at the European level. This system will be accompanied by education and training programs for health personnel and young scientists in order to increase Europe's research capacity in this field.

A simple structuring of the activities presented above has been proposed, with a limited number of work packages (see the table below).

WP No	Work Package Title
1	Partnership coordination and management
2	Priority setting for R&I calls
3	Stakeholder engagement
4	Education and Training
5	Infrastructure and Data Management.
6	Dissemination, Communication and Impact
7	Open Calls organisation

The present document is the “D1.3-Second periodic report” of the PIANOFORTE Partnership and it describes the work carried out by each of the WPs from March 2023 until February 2024 .

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## 2. WP1 – Partnership coordination and management

### **Work carried out to date**

The tasks of Work package 1 have been implemented successfully. The project is on track and all the activities that were envisaged for the first year have been accomplished so far.

#### **Task 1.1 – Overall legal, contractual, administrative management and financial management (IRSN)**

The main activities of the reporting period in the legal, administrative and financial fields are as follows:

- finalising the drafting and signing of the Consortium Agreement by all the PIANOFORTE partners. In order to take into account the constraints of all the beneficiaries, it was necessary to produce 7 versions of the Consortium Agreement. It was finally signed by all the partners (minus one) in December 2023.
- Preparation of the Call Text for the first call for projects: the drafting of this text, which was handled by WP7, involved preparing all the legal, financial and administrative aspects, which form a major part of the Call Text, which was published in April 2023.
- Following the selection of the 9 projects resulting from the first call for projects, a great deal of work was carried out in order to verify the status of the new entities (third parties, affiliated entities), which led to numerous interactions with the coordinators of the selected projects and with the Commission services.
- Finally, the coordination team gathered all the information needed to draw up the financial report and the technical report for the 18 months reporting period.

#### **Task 1.2 – Executive Board and General assembly meetings (IRSN)**

During the reporting period, the following meetings were organised:

- Sixth Executive Board meeting on 17 March 2023 by VC.
- Seventh Executive Board meeting on 16 May 2023 by VC
- Eight Executive Board meeting on 8 June 2023 by VC
- Ninth Executive Board meeting on 12 June 2023 by VC
- Ordinary General Assembly on 21 June 2023 by VC
- Tenth Executive Board meeting on 6 July 2023 by VC
- Eleventh Executive Board meeting on 7 September 2023 by VC
- Twelfth Executive Board meeting on 17 October 2023 by VC
- Thirteenth Executive Board meeting on 17 November 2023 by VC
- Fourteenth Executive Board meeting on 5 December 2023 in Budapest (Hungary).
- General Assembly (PIANOFORTE Funding meeting) on 6 December 2023 in Budapest (Hungary)
- Fifteenth Executive Board meeting on 19 January 2024 by VC
- Each Work Package organised its own meetings as required.

Meeting agendas of ExB were shared. Meeting minutes were prepared by the project coordination team and distributed to the participants. During the meetings, participants reviewed the latest results and achievements of the different Work Packages, discussed the outcomes of the project, highlighted

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topics of particular interest such as the progress of the first open call preparation. A regular general Assembly took place in June 2023 and a general assembly dedicated to the approval of the first Call selected projects was organized in Budapest (Hungary) in December 2023. .

### **Task 1.3 – Updating the rolling annual work plan (AWP)**

Work on the AWP for the third year of PIANOFORTE (M22-31) was co-ordinated by IRSN and the 3rd AWP submitted.

### **Task 1.4 – Negotiation of projects to be funded through open R&D calls**

As explained in part B of the PIANOFORTE partnership, and on the basis of the ranked list of eligible projects provided by WP7, the coordinator, with the help of the ExB, has drawn up a list of projects selected for funding, taking into account the available budget (13 M€ in total). This list was submitted to a General Assembly meeting held on 5 and 6 December 2023 in Budapest (Hungary). The General Assembly approved the list, which enabled the coordination team to begin negotiations with the coordinators of the 9 selected projects. At the time of writing, all the Funding Agreements have been sent to the projects coordinators, and some have already been signed by both parties. All projects should have started by 1 April 2024.

### **Task 1.6: Funding decision process for integration activities listed in the approved annual work programme**

Funding decisions on integration activities were made in the field on education and training based on recommendations of WP4.

### **Milestones and Deliverables**

MS1(“negotiations with successful applicants of the first PIANOFORTE open research call finalised and grant signed”) has not yet been reached because, to date, the majority of funding agreements between IRSN and the coordinators of the selected projects have not been signed; however, all difficulties have been resolved and no additional difficulties are expected.

- D1.3: Second periodic report to the EC in accordance with the provisions of the consortium contract (present report) (M22)
- D1.4: Annual work programme for year 3 (M22)

## **3. WP2 – Priority setting for R&I calls**

### **Work carried out to date**

#### **Task 2.1 Set up the research priorities for 3 open calls**

The major objective of Task 2.1 is to set up research priorities based on which the research topics of PIANOFORTE Open Calls can be assembled. These research priorities have to be defined in a way to reflect the views of POMs, European radiation research platforms and the PIANOFORTE Stakeholders and Advisory Board (SAB), agreed by various stakeholders and in line with HORIZON EUROPE and EURATOM research policies.

PIANOFORTE (PIANOFORTE) set as a major priority to launch the first open call as soon as possible, within 10 months from the start of the project (by end of March 2023 at latest). Task 2.1 assembled a list of 17 research topics based on the CONCERT Joint Roadmap game changers reflecting the research priorities of the six European platforms on radiation protection research. After several feedback rounds by platforms, stakeholders and POM's, task 2.1 ranked the topics into very high, high, moderate and low priority. This allowed PIANOFORTE Executive Board to choose three topics, to be included in the first PIANOFORTE open call. These topics were approved by the PIANOFORTE General Assembly as well. The whole process was done within the time limits set in the Grant Agreement, the final prioritisation process made by WP2 and WP3 was sent to the PIANOFORTE Executive Board in the beginning of December 2022, PIANOFORTE Executive Board decided on the topics to be chosen for the first call on 13 December 2022, while the final approval of the General Assembly was obtained at 17 January 2023. The deliverable describing the whole process and the results was finalized in March 2023.

The preparations for the prioritisation of research topics for the 2<sup>nd</sup> PIANOFORTE open call were started in early February 2023. Based on lessons learned from the prioritisation process for the 1<sup>st</sup> Open Call, and in agreement with WP3 we first set the steps to follow during the prioritisation and a tentative schedule for each step was defined. First we reformulated all the topics not selected for the 1<sup>st</sup> Call based on the comments received from POMs, SAB and other external stakeholders. Next, two templates were prepared to suggest new topics and new prioritisation criteria of the topics. Next, POMs and SAB were asked to suggest new topics (maximum 2) or revise/merge the list of topics. Also they could suggest new/revise old criteria for topic prioritisation. The resulting list of research topics were sent to platforms for comments. Platforms also had the possibility to suggest new topics and to suggest/revise prioritisation criteria. Task 2.1 and WP3 selected prioritisation criteria proposed by partners in the previous steps and shortened the list of topics to 7 applying the selected prioritisation criteria. The list was accepted by platforms and a further topic was included. Therefore, a list of 8 topics was sent to POMs, platforms and SAB and asked to rank them in numerical order (1 to 8, from highest to lowest priority). Based on the received ranking and using a dedicated program (Socrates), a final ranking was assembled, based on which PIANOFORTE Executive Board proposed 4 topics to the General Assembly for voting to be included in the 2<sup>nd</sup> call. The four topics were: 1) Define how the temporal and spatial variations in dose delivery affect the risk of health effects; 2) Ensure readiness and scientific knowledge to support Environmental Impact Assessment and emergency preparedness and response for novel nuclear technologies; 3) Development of techniques and methods to go beyond effective dose in case of internal exposure following a nuclear or radiological emergency; 4) Implementation of new and optimized radiation therapy approaches for better targeting to protect healthy tissues better against detrimental effects of ionising radiation. During the GA meeting held in Budapest 5-6 December 2023 PIANOFORTE General Assembly members voted to replace actual topic 1) with the topic Developing a knowledge base for a better understanding of disease pathogenesis of ionising radiation-induced cancer to improve risk assessment since this topic was underrepresented among the projects funded by the 1<sup>st</sup> Call.

### **Task 2.2 Update of the Joint Roadmap**

In January 2020 a first edition of the Joint Roadmap was published (CONCERT Deliverable 3.7). This



document was sent for consultation to CONCERT beneficiaries and LTPs, the 6 MEENAS platforms, the CONCERT Stakeholder Group, the coordinators of research projects funded within CONCERT, the EC and to organisations involved in radiation protection (research) all over the world. The aim of the consultation was to collect comments on the Joint Roadmap for improvement, and to provide a ranking of the Game Changers defined in the Joint Roadmap. The results of this consultation was analysed as a first step in this task, and the outcome will be taken into account to update the Joint Roadmap within PIANOFORTE.

### **Task 2.3 Scientific follow up and integration of the research projects**

In Task 2.3, documents and tools to prepare for the start of the scientific projects were finalized. In particular, a tool for evaluating project's scientific output, impact and integration of social sciences and humanities was completed and implemented as an online questionnaire, and it was distributed to project coordinators in early 2024. At the same time the preparations for the workshop of project coordinators started. The workshop will be held in spring 2024, and it aims to foster interproject cooperation and dissemination activities. Guidelines for inclusion of social sciences and humanities to research projects was prepared earlier, and it was used as a guideline in the first call round in summer 2023.

### **Task 2.4 Integration of Artificial Intelligence in Radiation Protection**

The following activities have started for Task 2.4 and are underway for the fulfilment of deliverables and milestones that are due later in the project.

- A literature review is being performed on AI and big data technologies applications in all radiation protection domains (sub-task 2.4.1), to prepare Deliverable 2.8 “Review of AI and big data implementations in RP” which is due for month 54 of the Project (11/2026)
- Preparations have started for the organisation by NCSR D of a Workshop on “Artificial Intelligence and Radiation Protection” (sub-task 2.4.2) which is due for month 24 of the Project (5/2024) as milestone 12. The workshop is actually scheduled for 18-19/4/2024 in Athens. Invitation has been sent to Radiation Protection Platforms and PIANOFORTE WP leaders to propose speakers from the various sectors of RP. The speakers will present the state-of-the-art of AI applications in the RP sector of their expertise and stimulate round-table discussions on future research directions, with the perspective of formulating topics regarding AI applications in RP to be funded under the 3rd PIANOFORTE Open Call. In addition, AI experts outside the RP domain will provide a general overview of the most recent developments, to identify novel methodologies with a potential for a future implementation in RP.

### **Milestones and Deliverables**

- D2.1 Research priorities for the first open call (M10)
- MS5 Finalisation of the second prioritisation procedure for the second open call to be launched (M19)

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## 4. WP3 – Stakeholder engagement

### **Work carried out to date**

#### **Task 3.1 International partners and partnership priority setting**

European radiation protection organisations and advisory bodies as well as international organisations in the field of radiation protection have been approached in terms of the 2<sup>nd</sup> Open Call and WP3 supported the process of research priority setting. In view of expanding the stakeholder network and to open up a collaboration for radiation protection in space, PIANOFORTE initiated exchanges with HERCA, ICRP, EURAMET, with the European Space Agency (ESA) and the National Aeronautics and Space Administration (NASA) with the aim of creating synergies between funding programs and priority setting mechanisms. In the frame of the research priority setting process of the 2<sup>nd</sup> Open Call, WP3 analysed the acquired feedback/ranking from several stakeholder groups, including the Stakeholder and Advisory Board and the external stakeholders, with the aim to gather as much knowledge as possible on the needs of the radiation protection community (D3.2). The results of the analysis were transferred to WP2 for the integration in the overarching prioritisation process.

#### **Task 3.2 Partnership Projects**

General stakeholder recommendations for PIANOFORTE which built upon the experience of the EJP CONCERT have been developed in the first project year and were submitted as D3.4. The T3.2 activities of monitoring and linking the PIANOFORTE call projects to the overall stakeholder engagement actions will commence once the projects from the 1<sup>st</sup> Open Call start in February/March 2024. As a first step, meetings between WP3 and the coordinators of the call projects will be held.

#### **Task 3.3. Stakeholder Engagement Planning and Management**

In 2023, the number of radiation protection experts within the Stakeholder and Advisory Board (SAB) was increased from 8 to 10 persons. The SAB held regular meetings and was involved in the research priority setting process also for the 2<sup>nd</sup> Open Call as one pillar within the overall priority setting process. The SAB delivered a coordinated feedback and a ranking of the shortlisted topics which have been proposed by WP2. The SAB feedback on the 1<sup>st</sup> Open Call was summarized in a milestone document and submitted to the coordinator/EC (MS15). The routines of stakeholder engagement which have been developed in the Stakeholder Engagement Plan (SEP) have been disseminated at the European Radiation Protection Week in Dublin in October 2023 to radiation protection community including most of the PIANOFORTE participants.

#### **Task 3.4 Direct Stakeholder Engagement**

The data of the PIANOFORTE e-survey aiming to explore public views on radiation protection issues has been further analysed in addition to the results described in the corresponding deliverable D3.8. The supplementary analysis has been brought to effect in a scientific paper authored by several WP3

participants and is ready for submission probably in February/March 2023. The second series of stakeholder consultation aka “Topical Online Meetings” (TOM) was organized, according to the main objective, to discuss and gather input from external stakeholders regarding the proposed research topics and subtopics for the organisation of the 2<sup>nd</sup> Open Call within PIANOFORTE. The meetings were held online, on 24 October 2023, with a joint first session followed by two separate meetings, with different groups of stakeholders which have expertise and interest in the particular research topics proposed. The shortlisted topics for the 2<sup>nd</sup> Open Call were presented and discussed with external stakeholders divided into the following two sessions:

- Break-out session 1: Radioecology, RP workers and public, Emergency and preparedness, Societal aspects of RP – to present and discuss topics C2, E3, G2 and H3.
- Break-out session 2: Health effects of radiation exposure-radiobiology, Dosimetry, Medical use of IR - to present and discuss topics A2, A3, B1 and D3.

The session topics were created in advance, based on information from registration where stakeholders could mark their main topic of interest in radiation protection and their field of activities. After the meetings, stakeholders were asked to provide their ranking and comments on identified and proposed research topics. The received inputs were compiled, analysed and communicated to colleagues in WP2 for further integration and work on the final research topics prioritisation process. The main approach and the feedback obtained from stakeholders in course of the TOMs has been presented in milestone MS20 and deliverable D3.2.

### **Task 3.5 Addressing stakeholder interests of DG Health: radiation protection and proton therapy (PT)**

Following the report on the status of proton therapy in the EU which has been presented as D3.7, task 3.5 has focussed on the organisation of the workshop on clinical data in modern proton therapy. The workshop “Towards a European database - strengthening cooperation and data exchange between Proton Therapy centres” was implemented in Kraków in November 2023. It brought together some 28 representatives of the major European proton therapy centres and further experts for an exchange on national solutions of clinical data storage and to discuss perspectives of a common European proton therapy database. The national perspectives from the workshop participants countries on how patient registries and databases are handled along with evidence from clinical trials and further a potential European perspective provided by ESTRO/EPTN have been obtained and outlined in the workshop conclusions (D3.9). The drafting of a position paper on the topic of an “European database - cooperation and data exchange between proton therapy centres” has been initiated and is work in progress.

### **Milestones and Deliverables**

- MS15 SAB feedback to the first research prioritization process for the first open call (M13)
- MS20 Second series of topical online meetings (consultations before Open call) (M18)
- D3.2 Stakeholder comments on Exeboard suggestion for call topics & criteria from connected entities, SAB and online consultations of target groups for second call (M20)
- D3.9 Conclusions from the Proton Therapy workshops (M20)

## 5. WP4 – Education and training

### Work carried out to date

#### **Task 4.1: Support of targeted courses to promote knowledge, skills and competences of MSc/PhD students, early career researchers and professionals**

A call for training courses was launched in November 2022 with application deadline of 2022 12 31. The received course applications are listed in table 4.1 below. All were found to be eligible for funding.

Table 4.1. List of targeted courses approved for funding during March 2023 – February 2024

Name of applicant(s)	Employment	Country	Course title	Course dates
Nina Chobanova	NCRRP, Sofia	Bulgaria	Emergency and recovery preparedness and response	13-17 March 2023
Martin Bucher; Ursula Oestreicher	BfS	Germany	Application of Biological Dosimetry in Radiation Protection and Radiation Research - BIODORA	26th June - 14th July 2023
Kremena Ivanova	NCRRP, Sofia	Bulgaria	Building protection against radon: measurement, prevention and corrections measures	27-31 March 2023
Giorgio Baiocco	University of Pavia	Italy	BioMod - "Models" in biomedical physics and radiation protection research: from in vitro cell systems to population studies	19-23 June 2023
1) Siamak Haghdoost 2) Jaques Balosso	University of Caen	France	Cellular, molecular and organs effects of particle irradiation with focus on healthy tissue effects (CANTATA)	26-30 June 2023
1) Protti Nicoletta 2) Yann Perrot 3) Lovisa Lundholm	1) University of Pavia 2) IRSN 3) Stockholm University	1) Italy 2) France 3) Sweden	PROtecting while TREATing: from the basic principles of the biological effects of ionizing radiations up to their use in neurodegenerative diseases (PRO_TREAT)	18-22 September 2023
1) Ian Postuma 2) Mario Pietro Carante	1) INFN 2) University of Pavia	1) Italy 2) Italy	XI International Geant4 School	14-19 January 2024

#### **Task 4.2 -- Support of mobility for MSc/PhD students and early career researchers**

During the reporting period, applications for travel grants could be submitted five times: 31/03/2023, 30/06/2023, 30/09/2023 and 31/12/2023. All applications were reviewed by the members of the task group.

Tables with lists of submitted applications are given below. Approved applications are **marked green**. Rejected applications are **marked red**. Not eligible applications are marked **grey**.

Table 4.2 List of applicants for the MSc/PhD students and early career researchers travel grants. . Approved applications are **marked green**. Rejected applications are **marked red**. Not eligible applications are marked **grey**.

### Application deadline: 31/03/2023

Name of applicant	Employment	Country	Position
Dan Baaken	IMBEI, University Medical Center Mainz	Germany	PhD student
Margot Vanheukelom	SCK CEN	Belgium	PhD student
Martin Hjellström	Sahlgrenska University Hospital	Sweden	PhD student
Nona Movsisyan	Center for Ecological-Noosphere Studies of NAS RA	Armenia	PhD student
Prabodha Kumar Meher	Stockholm University	Sweden	Researcher
Angeliki Gkikoudi	National Technical University of Athens	Greece	PhD student
Cansu Özcan Kilcan	University of Tartu	Estonia	PhD student
Cristina Ratero	SCK CEN (trainee)	Spain	Master student
Daan Schoefs	Hasselt University & KU Leuven	Belgium	Master student
Elia Prades-Sagarra	Maastricht University	Netherlands	PhD student
Ghizela-Ana Maria Salagean	Topmed medical centre Targu Mures	Romania	PhD student
Isabeau De Bie	SCK CEN /Ghent University	Belgium	PhD student
Jessica Ribeiro	SCK CEN	Belgium	PhD student
Mostafa Karimi Roshan	Stockholm University	Sweden	Post doc
Stefan Schmidt	University Hospital in Heidelberg	Germany	PhD student
Valeria Pascali	Pavia University	Italy	PhD student
Victor González González	Hospital Universitario Puerta De Hierro, Madrid	Spain	Resident in-house radiophysicist (master degree)
Deepak Shamvedi	School of Science & Engineering, Univ. of Dundee	United Kingdom	Lecturer
Christina Neofytou	Karolinska Institutet	Sweden	PhD student
Rose Ile obase	Fortescue Future Industries	Cameroon	PhD student
Abhisek Verma	Sorbonne University	France	PhD student
Abdolrasoul Habibipour	Botnia Living Lab	Sweden	Senior lecturer
Xiaoyong Yang	Uppsala University	Sweden	Post doc

**Application deadline: 30/06/2023**

Name of applicant	Employment	Country	Position
Anna Bianchi	Laboratori Nazionali di Legnaro - INFN	Italy	Post doc
Élia Prades-Sagarra	Maastricht University	Netherlands	PhD student
Maria Karampiperi	Lund University	Sweden	PhD student
Michelle Andersson	SCK CEN	Belgium	PhD student
Mostafa Karimi Roshan	Stockholm University	Sweden	Post doc
Andrius Puzas	Center for Physical Sciences and Technology	Lithuania	PhD student
Eugeni Luca	Politecnico di Torino	Italy	Master student
Ibtisam Yusuf	County council Östergötland	Sweden	PhD student
Robert Frost	Department of Physics and Astronomy, University of Uppsala	Sweden	Researcher
Valeria Pascali	University of Pavia	Italy	PhD student
Ivana Coha	Ruđer Bošković Institute, Zagreb	Croatia	Post doc
Abigail Millar	University of Canterbury	New Zealand	Master student
Cristina Ratero	SCK CEN	Spain	Master student
Dawid Wiecki	University of Wrocław	Poland	Master student
Eleftherios Papalannis	Uppsala University	Sweden	Research assistant
Felix Lehner	?	Germany	Doctoral researcher
Gabriele Auriemma	Politecnico di Milano, INFN	Italy	Master student
Johannes Enkono	?	Namibia	
Katherine Hardgrave	Trinity College Dublin	Ireland	Master student
Krunoslav Ilic	Institute for Medical Research and Occupational Health	Croatia	PhD
Mounia Messouli	National Centre for Nuclear Energy, Sciences and Technology, Rabat	Morocco	PhD student
Mustafa Najim	UK Health Security Agency	United Kingdom	Master student
Olympia Apokouto	Hellenic Pasteur Institute	Greece	Staff scientist
Vianney Andrew Yiga	Royal Technical Institute - KTH	Sweden	Post doc

**Application deadline: 30/09/2023**

Name of applicant	Employment	Country	Position
Ana Cravo Sá	Instituto Superior Técnico	Portugal	Ass. Prof., researcher
Ana Rita Melo	University of Coimbra	Portugal	Researcher
Bill Wells Kamtchou	University College Dublin	Ireland	PhD student
Jessica Ribeiro	SCK CEN and Ghent University	Belgium	PhD student
Karolina Kulis	Silesian University of Technology in Gliwice	Poland	Master student
Joan Serra Ventura	University of Barcelona	Spain	PhD student
Roberto Salis	?	Italy	?
Sita Pinasti	SCK CEN	Belgium	PhD student
Yi Xiang Tay	Singapore General Hospital	Singapore-Dublin	PhD student

**Application deadline: 31/12/2023**

Name of applicant	Employment	Country	Position
Federica Panzarella	SCK CEN	Belgium	PhD student
Fernando Miguel Costa	Centro Hospitalar e Universitário de São João Oporto	Portugal	PhD student
Léa Dasque	IRSN	France	PhD student
Praisyl Evangelina S	?	India	Masters student
Masha Ahoba Buah	University of mines and technology -Tarkwa - Ghana	Ghana	Lecturer
Payel Bhattacharjee	Norwegian University of Life Sciences at Ås	Norway	Post-doc

**Task 4.4: Development of sustainable early career researchers and professionals networking to facilitate training and career upgrades**

An application was submitted and approved for funding to organize the 1<sup>st</sup> European RP Young Scientists Networks Meeting. The aims of the event are:

- To identify ECRs in the field of radiation protection and familiarize them with career opportunities in radiation protection.
- To ignite an ECR network uniting all the ECR groups within European projects, associations, and platforms.
- To establish a BFS network of Young Researchers.

The organisers are: German Federal Office for Radiation Protection, Germany; Tampere University, Finland; University of Hasselt & SCK EN, Belgium.

Organiser contact name: Ämilie Degenhardt (BFS), Jad Abuhamed (Tampere University), Nazanin Love (UHasselt&SCK EN)

Event date and timing: 13<sup>th</sup> and 14<sup>th</sup> of May 2024.

**Milestones and Deliverables**

- D4.3 First report on the received applications, evaluation, consultation with PIANOFORTE beneficiaries and final decision of the calls, including financial reporting of task 1, 2, 3 and 4.1.(M16)

**6. WP5 – Infrastructures and data management for radiation protection research**

**Work carried out to date**

WP 5 is focused on the maintenance of sustainable infrastructure capabilities and expertise relevant

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to radiation protection research (RPR) issues across the EU, with the aim to foster the availability, use, sharing and optimization of existing state-of-the-art infrastructures and data management systems at the European level and beyond, and by conducting education and training activities.

During year 2, work under task 5.1 -Establish an infrastructure oversight committee, has focused on how the group will support the objectives of the WP including on training and intercomparisons, with key input on this elucidated through several face to face or online meetings of the WP 5 participants. Most notably, the highly successful Infrastructures workshop, which took place at the end of January 2024, has allowed the WP 5 leads to develop a plan for the dedicated infrastructure funding for access, training and intercomparisons, with input from stakeholders including representatives of small and large infrastructures across Europe.

Under task 5.2, cross national access to infrastructures, work has continued in relation to collation of data and identification and evaluation of key infrastructures, in support of task 5.2.1 - Promoting the use of key existing RPR infrastructures, in support of task 5.2.1., specifically around collation of data evaluating and identifying key infrastructures. In addition, input gathered during the Infrastructures workshop has given stakeholder led direction to the development of training materials about different infrastructures and their role in the RPR research landscape, in support of the wider Task 5.2.3., Developing and promoting training in the use of key RPR infrastructures.

A large amount of work has also been undertaken with input from all participants towards analysis of current intercomparisons and development of standardisation in this area, in support of Task 5.3.1. Development of a system for funding inter-comparisons to promote standardization (identify tools and funding framework). Following this, key protocols are under development in support of task 5.3.2. Development of Standard Operating Procedures (SOP) for key protocols to promote standardization, with the eventual aim to use this data in support of development of a framework of guidelines to promote best practice for sustainable RPR infrastructures within a harmonized European context (Task 5.4.2. Guidelines of best practices for sustainable, harmonized RPR infrastructures). Work has also continued on sharing with the community the availability and utility of the STOREDB for genuinely open and FAIR science. Proposed specific training on STORE was welcomed by the community and this is now planned as a key output of the Infrastructures workshop (task 5.5.2. Promoting and training on available data storage platform (STOREDB)).

Collaboration with NRT-01-12 project OFFERR continues at a high level, with regular sharing of information and calls between the projects, and continued representation of OFFERR on the WP5 IOC.

WP5 leaders and task leads, and the whole WP5 group including the IOC, are meeting regularly. In conclusion the work of WP5 is progressing as planned, and no problems or delays are anticipated.

### **Milestones and Deliverables**

- MS24 Recommendations to infrastructures for PIANOFORTE open calls (M12)
- MS25 Working document with definitions of RP research infrastructures and their classification, continuous update of infrastructures list (M18)



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## 7. WP6 – Knowledge management, communication, dissemination and impact creation

### **Work carried out to date**

With the start of the research projects selected in the call 2023, the internal rules for projects communication has been prepared by SÚRO and IRSN. These rules have been distributed to project coordinators and will be also implemented in the external communication plan. The objective is the anchoring of the rules for communication and dissemination of the project results using existing tools available within the project so far. Each research project will have its own webpage, where publication of achieved results, organized meetings and seminars, involvement of students, presentations at the conferences, etc. will be posted. Project logos and templates for information dissemination (Power point templates for oral and poster presentations) have already been distributed to project coordinators. External communication plan will be updated appropriately.

Best practices developed in other European projects were compared and some suggestions for knowledge management were selected for implementation by PIANOFORTE partnership (**Task 6.1: Knowledge management**).

In the frame of the **Task 6.2: Communication and dissemination**, the whole consortium has been motivated in communication activities by providing input into regular Newsletter. Seven issues of Pianoforte Newsletter have been issued during last year. With respect to increasing number of subscribers, email distribution of the Newsletter will be replaced by automatic distribution to subscribers mailing list.

Number of scientific communications have been presented by partners from different institutions. During the European Radiation Protection Week (ERPW, 9<sup>th</sup> – 13<sup>th</sup> October 2023, Dublin, Ireland) project coordinator Jean-Christophe Gariel moderated plenary Pianoforte Special Session:

- Interrelation between research platform works under the MEENAS umbrella and the PIANOFORTE partnership (Christoph Hoeschen)
- Priority setting for the 2nd PIANOFORTE open call for research projects (Filip Vanhavere)
- Benefits and impacts of PIANOFORTE in Europe (Catherine West)
- Broadening perspectives: guidelines for integrating social sciences and humanities in radiation protection research (Catrinel Turcanu)
- Stakeholder Outreach: the PIANOFORTE electronic survey and further plans (Florian Rasuer / Jelena Popic)
- Proton therapy and radiation protection: an update on PIANOFORTE activities (Florian Rauser / Pawel Olko)
- Enhancing the competence in radiation protection: E&T activities of PIANOFORTE (Andrzej Wojcik)
- Infrastructures and FAIR data management (Liz Ainsbury / Omid Azimzadeh)
- Communication, dissemination and impact creation by PIANOFORTE partnership (Marie Davidkova).

The objectives of the project were also presented to RP professionals:

- Annual meeting of the Nordic Society for Radiation Protection, Malmö, Sweden, June 5 – 9 2023. PIANOFORTE - the European Partnership for Radiation Protection Research, Jean-Christophe Gariel, Radia Tamarat, Florian Rauser, Mandy Birschwilks, Filip Vanhavere, Andrzej Wojcik\*, Anne von Euler, Simon Bouffler, Elizabeth Ainsbury, Marie Davidkova, Jolanta Drozd, Hanna Sroczynska; Christoph Hoeschen;
- 20th Meeting of the European IRPA Associate Societies, Wien, Austria, 23rd October 2023, PIANOFORTE partnership, Marie Davidková on behalf of PIANOFORTE partners;
- 13th Symposium of the Croatian Radiation Protection Association, 18th-21st April 2023, European Partnership in Radiation Protection Research – PIANOFORTE, what is it in reality? I. Prlic, L.Pavelic, S.Kobesca.

Some presentations and seminars were also organized at national level by consortium members (e.g. Marie Davidková – Days of Radiation Protection, Tábor, Czechia, November 2023, Almudena Real - VII Conference on R&D in Radiation Protection in CIEMAT, Madrid, Spain, December 2023).

The communication team motivated the entire consortium to participate in various internal and external communication activities.

**On-line communication tools (Task 6.3)** were exploited to present partnership news and communicate general information and call documents (Call Text, Guidelines for applicants, Auxiliary Proposal Template, Auxiliary Financial Excel Sheet, CV template) and later results of the first call for research projects. Online communications including social media include 2 videos published on Youtube, 49 posts on X network, 52 posts at LinkedIn, 24 news on PIANOFORTE website. Reports from training courses and travel grants (WP4) are also published on PIANOFORTE website.

Our efforts to effectively and transparently communicate are reflected by significant increase of followers and viewers of the Partnership (390 on LinkedIn, 128 on X network, 179 views of videos on Youtube channel and about 13 thousand website visitors).

Key activities of the **Task 6.4: Impact creation** during M10-M21 were:

- First estimations of project impact via stakeholders, international RP organisations, national RP offices and organizations and
- Organization of the information meeting for EU researcher groups about projects funded within the first open call.

PIANOFORTE partnership organized 4 important partnership events: Call 1 online infoday (10<sup>th</sup> May 2023), online General Assembly meeting in June, in person General Assembly meeting in Budapest on 5<sup>th</sup> December 2023 and Presentation of winning research projects on 6<sup>th</sup> December 2023.

The Centre for Energy Research (Budapest, Hungary) was the local organiser of this successful PIANOFORTE Event hold on 5th and 6th December 2023. The Event has been presented both on our website (<https://www.ek.hun-ren.hu/en/2023/12/06/europes-leading-radiation-protection-experts-convene-in-budapest/>) and official X ([https://x.com/ek\\_cer\\_hu/status/1732316757547798922?t=HuMkkQrzloiKV\\_dzTt1RQQ&s=35](https://x.com/ek_cer_hu/status/1732316757547798922?t=HuMkkQrzloiKV_dzTt1RQQ&s=35)) and Facebook accounts (<https://www.facebook.com/EnergiatudomanyiKutatokozpont>). A Hungarian journalist was also invited from a major web-based news outlet, who showed particular interest in the selected projects dealing with nuclear resilience.

As part of its activities in the field of stakeholder engagement, BfS has met and exchanged with several (European/international) organisations and initiatives which play a role in radiation protection,

e.g. ICRP, HERCA, ESA, COSPAR, NASA and EURAMET. Aside from the specific meeting topics these meetings and exchanges have been used to communicate on the objectives and activities of the PIANOFORTE partnership in general and on the PIANOFORTE Open Calls, for example. Further, BfS informed German Third Parties applying to the Open Call on the aims and the framework of the partnership. Similar activities have been performed by partner institutions in other countries (IMROH, CIEMAT, SURO, etc.).

### **Milestones and Deliverables**

- D6.4 : Information on projects selected for funding (initially planned M17):The results of the Call 1 have been approved by PIANOFORTE General Assembly in December 2023 (M18). The statistical information about the research projects submitted within the first call and detailed information about winning projects is available. The deliverable D6.4 will be prepared by SÚRO and the submission of the deliverable is expected in M22.

## 8. WP7 – Organisation and management of PIANOFORTE R&I Open Calls

### **Work carried out to date**

In March 2023 (M10), all call documents were finalized, leading to the announcement of the first PIANOFORTE Open Call on April 26th.

The Call was implemented as a one-step submission procedure. An electronic submission portal was adapted to PIANOFORTE call procedures. As NCBR faced major difficulties in obtaining a written contract with a provider of the submission system – DLR-PT, the final day to start the system was set on the 6th of June 2023. Despite initial obstacles, all applicants were able to start preparing their applications on the provided templates and forms which could be easily transferred at a later stage to the system.

As approved by the Call Steering Committee (CSC) and the Call Coordinator, the deadline for submitting applications via the system was set on July 26, 2023, at 15.00 CEST. All interested parties were able to submit their applications on time. As the outcome of the first 2023 Call, 24 collaborative multinational consortia applied. The proposals' consortia included 109 organizations/institutions from 27 countries.

It should be mentioned that from April to July 2023, one of the main tasks of NCBR under WP7 was to serve as the Call Secretariat (CS) and respond to incoming inquiries from potential grantees. Another important and demanding task from M12 to M17 was to build up the pool of external experts who would participate in the evaluation process and PRP meetings. After careful search of potential candidates, from May to November 2023 NCBR sent dozens of invitations to scientists from around the world. As a result 16 internationally renowned experts, recognized for their expertise in the field, participated in the evaluation process, meeting the criteria outlined by the Call.

The eligibility check was performed by the CS and approved by the CSC, resulting in all 24 proposals being considered eligible. As a next step, the CS assigned three external experts to each of the 24 proposals to provide a written review. To ensure complete transparency and fairness throughout the evaluation process, NCBR diligently conducted Conflict of Interest (CoI) checks and requested all participating experts to sign confidentiality statements.

The final scientific evaluation of all proposals was conducted by an international Peer Review Panel (PRP) consisting of the members mentioned above. NCBR organised the PRP meetings which were held on Tuesday 14.11.2023 (14.00 – 18.00) and Wednesday 15.11.2023 (14.00 – 18.00). Both meetings were held online, with PRP members and the Independent Observer attending the meeting virtually. The agenda and the links to join the meetings were provided well in advance by the CS.

The Peer Review Panel met to discuss the proposals and established a common ranking list of all the proposals. The Panel decided to keep the initial score for 11 proposals, while the final score was changed for the rest (13) proposals (increased for 6 and decreased for 7). The PRP discussed all proposals individually for an average of 10-15 min. The final ranking list included 14 projects recommended for funding and 10 projects not recommended for funding.

The Consensus Report (CR) of each proposal was then finalized by the rapporteur (until November 22, 2023). The CRs, containing statements on behalf of the PRP reflecting the main project's principal strengths and weaknesses, with respect to the goals of the PIANOFORTE Call 2023, and the evaluation criteria, were approved by PRP. Following the two PRPs' meetings, the coordinators of the proposals - rejected and recommended for funding - were informed about the outcome of the evaluation by the CS. The Consensus Reports (CRs), written by the rapporteur, were made available to the applicants. The applicants were also informed about the final decision of the funders (selected / not selected).

The list of projects recommended by the PRP for funding includes a total of 14 proposals: 2 under Topic 1, 8 under Topic 2, and 4 under Topic 3. Based on an available budget, in December 2023 the GA decided to fund 9 out of the 14 eligible proposals. The overall success rate is around 38% in relation to the total number of proposals.

In parallel with finalizing the first Call, preparations for the second Call have already begun. In December 2023, the General Assembly (GA) made decisions regarding the topics for the upcoming call in 2024. Four topics were chosen as follows:

- 1) Developing a knowledge base for a better understanding of disease pathogenesis of ionising radiation-induced cancer to improve risk assessment
- 2) Ensure readiness and scientific knowledge to support Environmental Impact Assessment and emergency preparedness and response for novel nuclear technologies;
- 3) Development of techniques and methods to go beyond effective dose in case of internal exposure following a nuclear or radiological emergency;
- 4) Implementation of new and optimized radiation therapy approaches for better targeting to protect healthy tissues better against detrimental effects of ionising radiation

Based on the Lessons Learned from the first Call, NCBR started working on the documentation for the

second Call in January 2024. This includes the Call Text, application documents, and evaluation forms. The aim is to finalize all these documents by the end of February 2024.

### **Milestones and Deliverables**

- D7.1: Call documents: governance of the Call and evaluation document, Call Text, Guidelines for applicants, proposal templates, for the PIANOFORTE open Call 1 (M11)
- D7.2: Ranked list of eligible projects to be funded from the joint international peer review of full proposals for the PIANOFORTE open Call 1 (M19)
- MS39: 1st PIANOFORTE open research call announced (M11)
- MS40: Submitted proposals to 1st call evaluated (M18)