EUROPEAN JOINT PROGRAMME FOR THE INTEGRATION OF RADIATION PROTECTION RESEARCH
CONCERT

Radiation Protection Research in Euratom H2020 perspective:

European Joint Programming, National Alignment, and Joint Roadmap for Radiation Protection Research

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Aim of European Joint Programming projects in H2020 (in general)

- **European Joint Programming = EJP**
- **Radiation Protection Research = RPR**
- **EJP aim = tackle societal challenges (like RPR)**
- **Project objectives are in line with Lund declarations**
  - **Political Commitment: alignment** of Natl. and EU programmes by **co-funding, avoiding fragmentation of efforts**
  - **Frontier research:** excellent scientific base, world-class infrastructure, attract young researchers
  - **Connect within EU and outside:** some challenges need even global cooperation
  - **Achieve impact:** through commitment of end-users

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EJP's intended beneficiaries are "POMs":

- **P**rogramme **O**wners (**PO**): responsible for **defining, financing or managing national/regional programmes,**
  i.e. typically national ministries/regional authorities
- **P**rogramme **M**anagers (**PM**): i.e. research councils or funding agencies or other entities that **implement national or regional research** under supervision of PO,

  like SCK•CEN **.**
- **Other actors in EJP are** involved through **national coordination**

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CONCERT as European Joint Programming project

- Umbrella structure coordinating radiation protection research (RPR)
- Organisation of open research calls
- Integrative activities, e.g.
  - priority setting on and short & long term,
  - E&T,
  - infrastructure
  - stakeholder involvement in and outside EU

http://www.concert-h2020.eu/en

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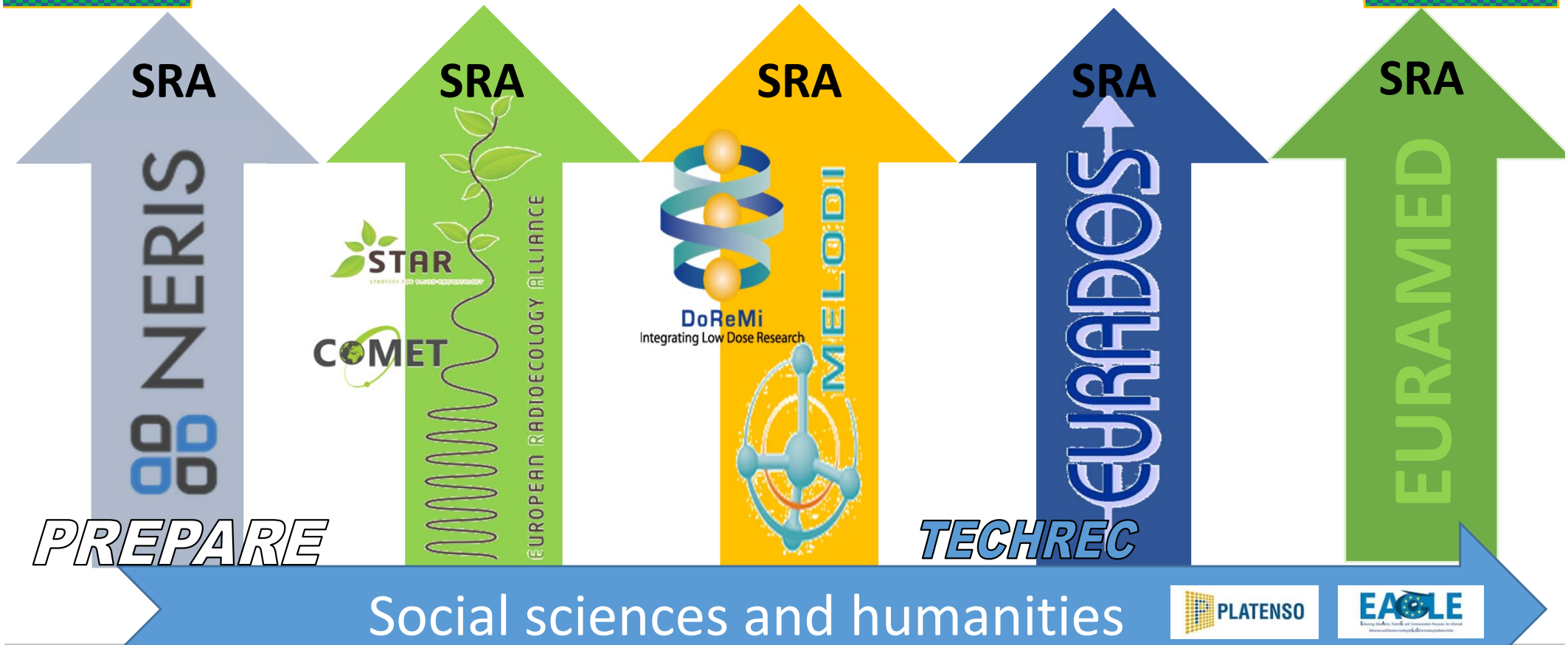
CONCERT = Umbrella project for RPR, based on permanent efforts from radiation protection research platforms



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CONCERT as European Joint Programming project

European and national programming incl SRAs, individual roadmaps,

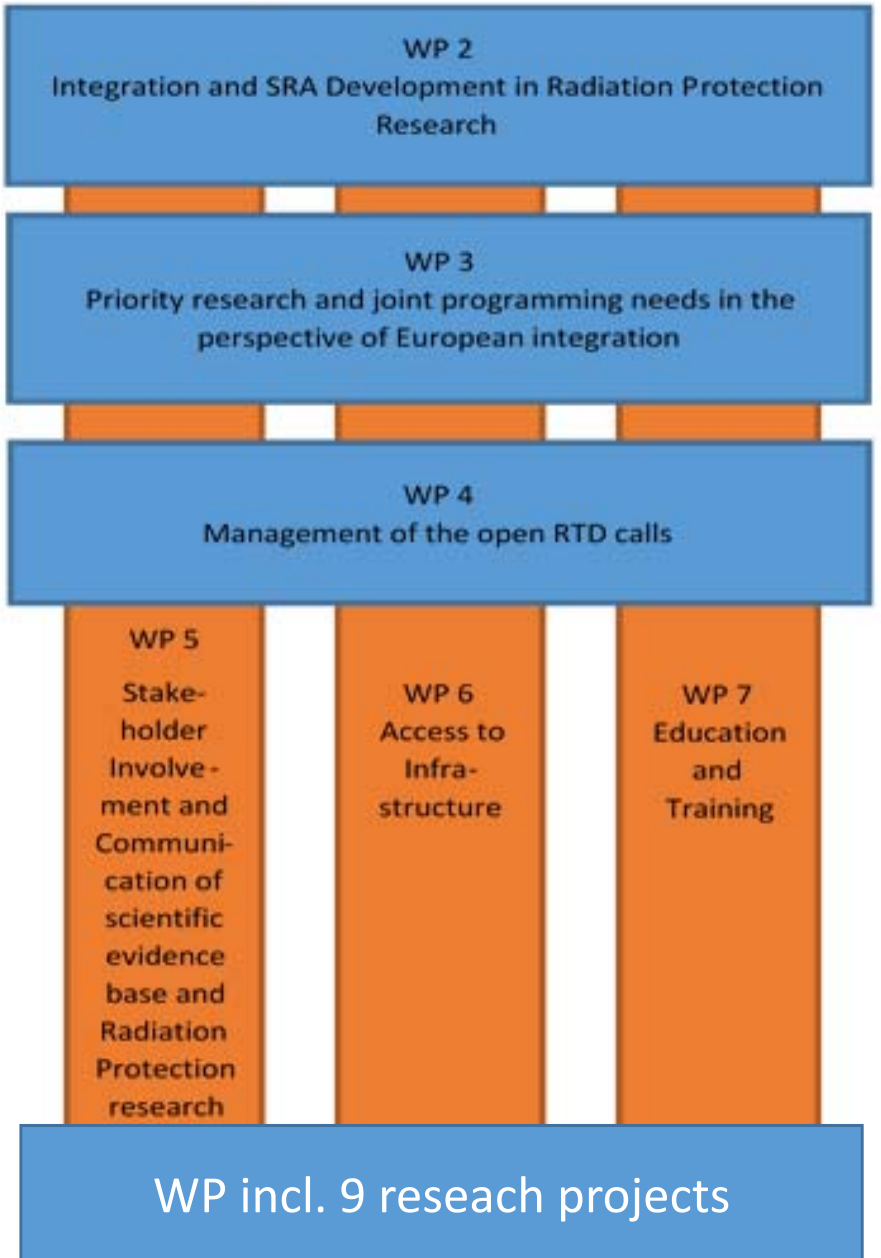
Call priorities

Joint roadmap for radiation protection research

Open research calls

Integrative cross-cutting activities, e.g. priority setting on and short & long term, E&T, stakeholder involvement

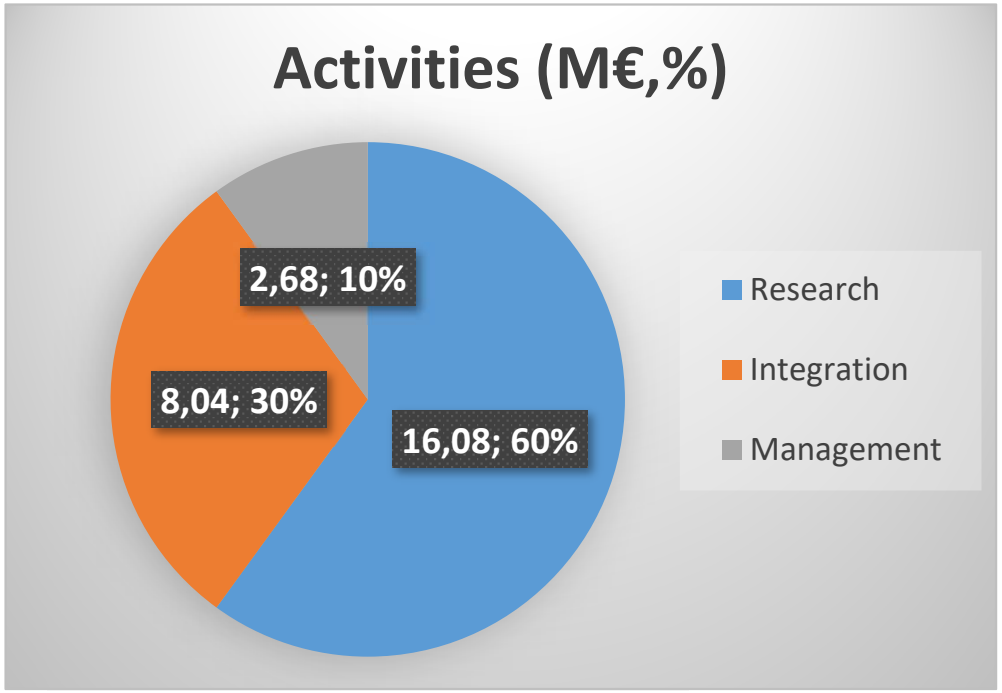
Research activities

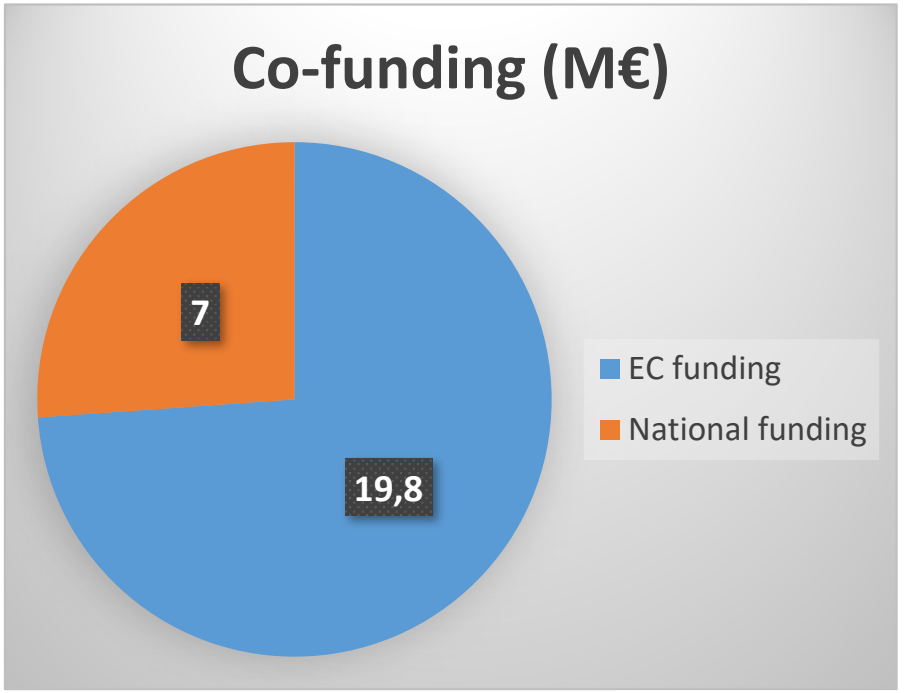


This project has received funding

CONCERT facts and funding principles

- Duration: 5 years, started on 1st of June 2015
- Open research calls (2016+2017) → 9 funded research projects





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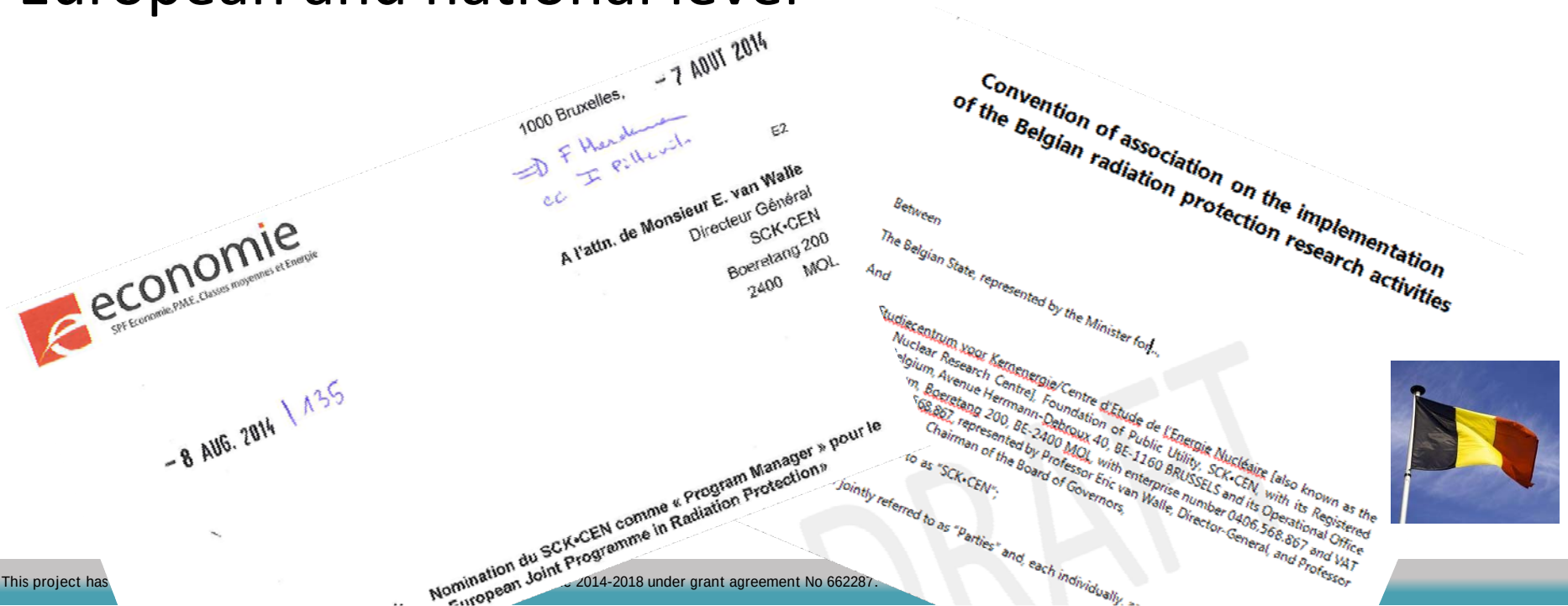
SCK•CEN = Belgian Programme Manager in CONCERT, and helps coordinate Belgian activities

- SCK•CEN involved in most WPs of CONCERT, some leading roles, a.o. WP3: Joint roadmap for RPR
- SCK•CEN = Belgian Implementing Agent of Belgian Convention for Radiation protection research, mandated to setup national coordination and act as link between European and national level



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Belgian Convention for Radiation Protection research

- 4 Core Entities: FOD-Economie, FANC, SCK•CEN, BEL V
- 10 research members (university/institute groups active in RPR)
- Setup of Belgian work programme and roadmap
- Attract universities / other actors involved in RPR
- Implement research

Inauguration of the Belgian Convention in Radiation Protection Research

Workshop

5 May 2017

FANC offices, Ravenstein Street 36, Brussels

Rooms 501/502

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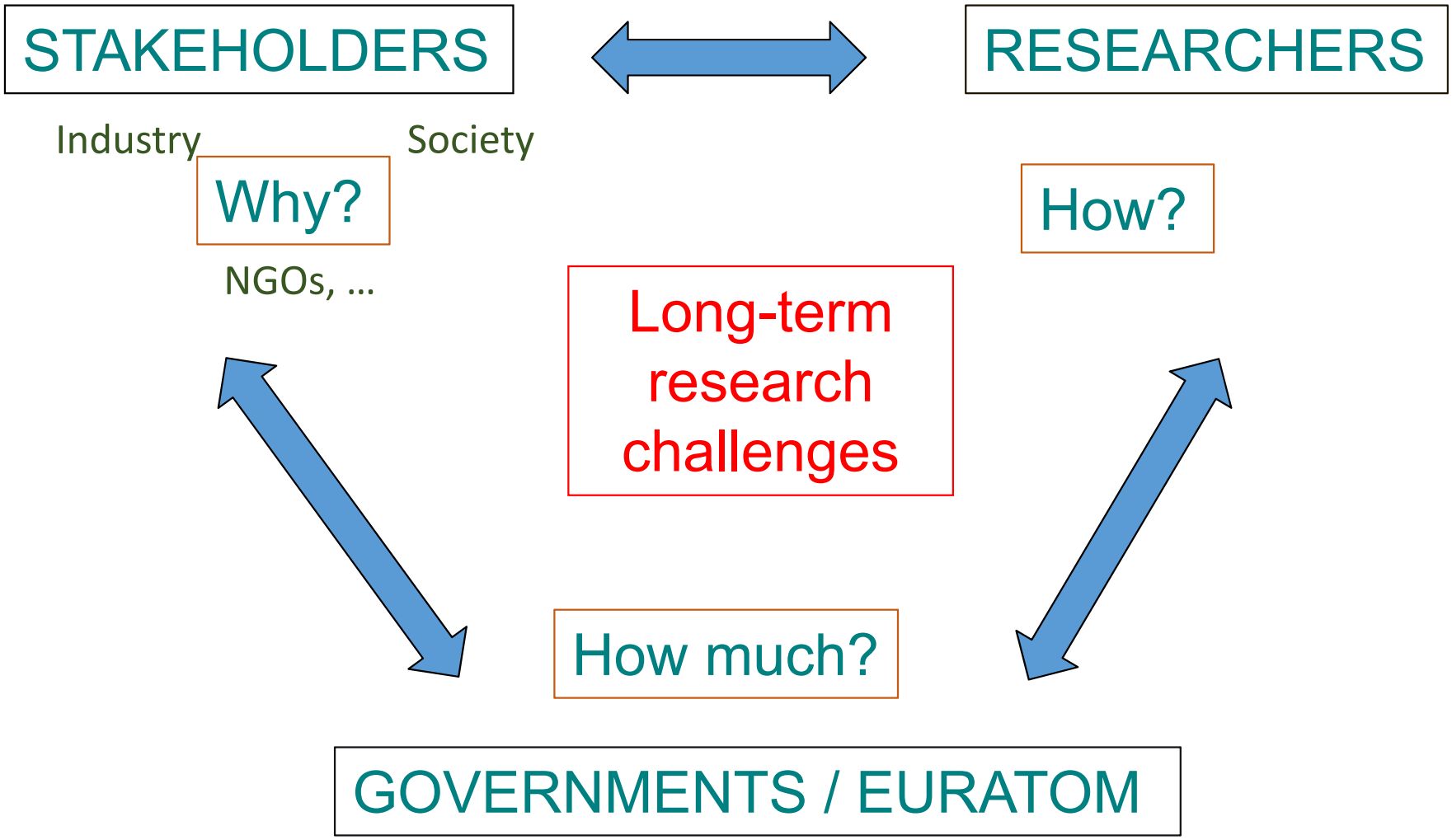
Back to EU level: Joint roadmap for RPR WHY ?



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WHY do we need a joint roadmap?

- To identify common research challenges
- To enable planning over a longer term
- Including financing & other resources
- As high-level communication document between research, end-users and governments (more detailed info in individual roadmaps)
- To better structure/coordinate the research activities in EU (and beyond?)
- To get support from EC + national representatives, with appropriate funding for a long-term call planning

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Joint roadmap for RPR: start from reality

Radiation protection in various exposure scenarios	Sources giving rise to exposure of humans and the environment (under planned, existing or emergency exposure situations)			
	Anthropogenic sources of ionising radiation			Natural sources
n° 4 Contexts→ 7 Scenarios ↓	Human activities related to **medical therapy and diagnosis** using radionuclides and ionising radiation	Human activities related to **nuclear applications and applications of ionising radiation** not related to medical applications	Human activities **using natural resources containing naturally occurring radionuclides (NORM/TENORM)**	**Natural background radiation:** telluric and cosmogenic, and natural events leading to radionuclide emissions

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Scenario groups as basis to define specific scenarios of interest on national levels / enduser field towards defining research needs/challenges

1. Patients exposure regarding medical applications of X-rays, electron or particle radiation including the use of radiopharmaceuticals
2. Exposure of the general public and the environment as a consequence of industrial applications of ionising radiation and the use of NORM in normal operation conditions
3. Exposure of workers in normal operation conditions
4. Exposure of the general public and the environment with regard to legacy
5. Exposure of the public and the environment to the natural radiation environment
6. Exposure of the general public, workers and the environment following a major nuclear or radiological accident or incident including long term consequences
7. Radiation protection of the public, workers and environment as a consequence of a malevolent nuclear or radiological act including long term consequences

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From exposure scenarios towards research challenges: open for discussion

A. Understanding radiation related human health effects
B. Improving the concept of effective dose and other quantities
C. Studying the biological and ecological effects on biota
D. Optimized radiation protection in medical applications of ionising radiation
E. Improving radiation protection for workers
F. Integration and optimization of environmental exposure assessment for ionising radiation and other stressors
G. Optimizing emergency and recovery preparedness and response
H. Enhanced integration of radiation protection science with society

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Roadmap state of the art

- Starting from exposure contexts + scenarios
- a 1st set of Joint Research Challenges is proposed
- Draft roadmap: http://www.concert-h2020.eu/-/media/Files/Concert/News/_Lists_Deliverables_Attachments_47_D23_CONCERT_D3_4_First-Joint-Roadmap_04012018_approved.pdf

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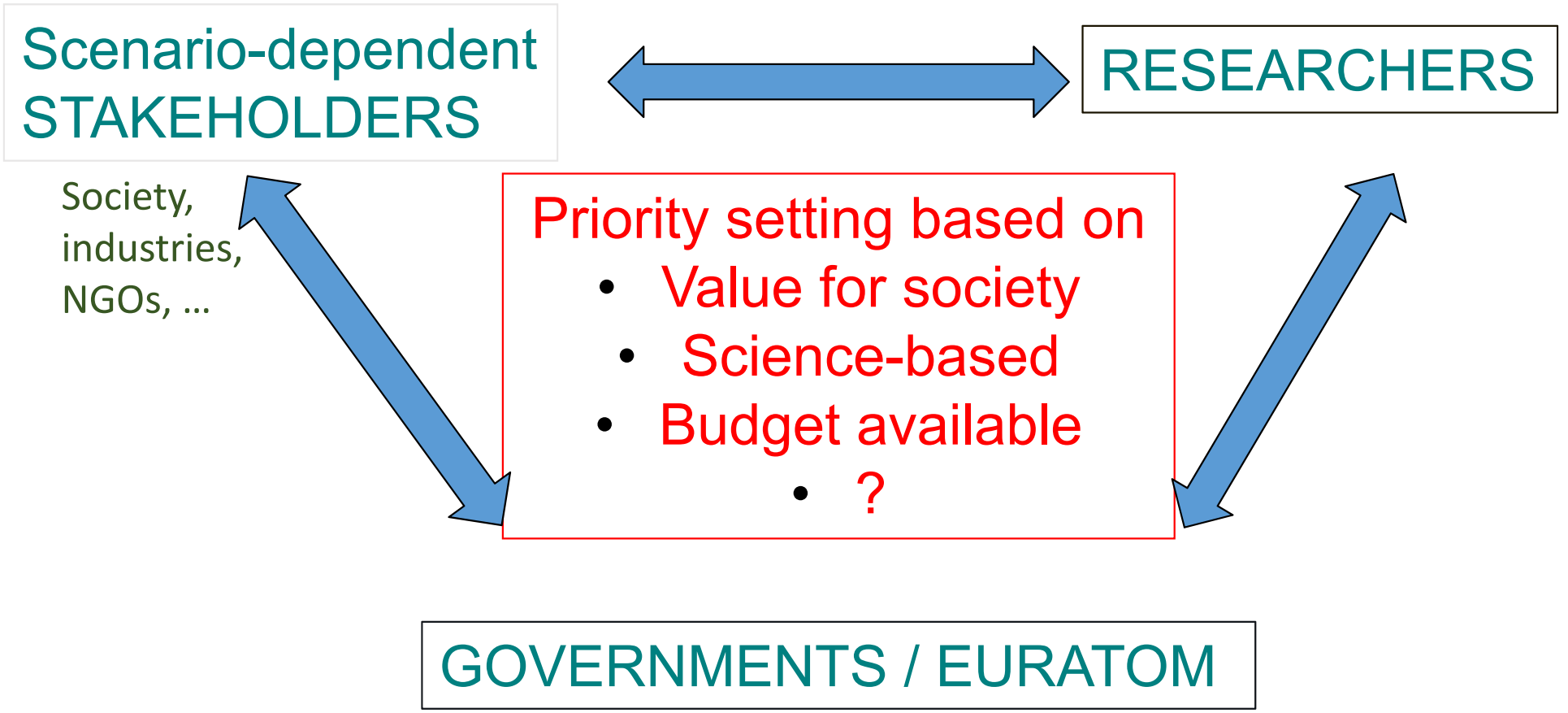
How to setup priority criteria?



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Further development of joint roadmap through stakeholder consultation

- Research community through RPR platforms (MELODI, EURADOS, NERIS, ALLIANCE and EURAMED) as well as SSH experts
- Programme Owners and Programme Managers
- Selected stakeholder groups per discipline / country, e.g. **BVS** members

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TIMELINE of joint roadmap preparation

- 1st joint roadmap version publicly available since end 2017
- Currently collecting comments (till end 2018, EJP-CONCERT-SCK@sckcen.be)
- Updated version of roadmap expected in May 2019
- In discussion with OECD-NEA CRPPH as basis for global approach

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Thank you for your attention!

Your input is welcome

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