### The European Commission's science and knowledge service

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### Joint Research Centre

de.





### Infrastructure and International Cooperation in Research and Knowledge Transfer:

### Supporting Access to key Infrastructures and Pan-European Research Lessons Learned

**Concetta Fazio** 

Pitesti, Romania. 4-7 June 2019



### Outline

- Introduction
- TALISMAN
- NUGENIA Plus
- GENTLE
- Conclusion and suggestions
- Outlook
- Acknowledgments



### Introduction: different access schemes

**I-3 projects (pooling facilities/ topic centered)**: 1) networking; 2) transnational access; 3) joint research initiatives

**R&D projects (research area / topic centered)**: main focus on research activities with task/WP on mobility grants

**E&T projects (people centered)**: 1) courses for students; 2) training for professional development; 3) mobility schemes





### Introduction: different access schemes

- I-3 projects (pooling facilities/ topic centered): TALISMAN
- **R&D projects (research area / topic centered)**: NUGENIA+

E&T projects (people centered): GENTLE









## Network of competences and pooling of infrastructures for actinide science

- Supporting transnational access to the infrastructures
- Performing joint research activities
- Promotion of training and education





**Involved** infrastructure



E



Proposals were evaluated and ranked\* by the Project Scientific Advisory Committee

### 1) CALLS

Calls for proposals were published twice a year

### 3) GRANTS

During the three years project 107 proposals were submitted and <u>91</u> of them granted and work accomplished



\* Ranking criteria: originality, skills of the teams, relevance of the facility



Scope 1) Actinides chemistry for separation



Scope 2) Actinides in the geological environment

Scope 3) Actinide materials







Countries of origin of the research teams proposing projects to access infrastructures





### NUGENIA+ (research area / topic centered : Gen II/III Reactors)

## Support NUGENIA Association in EU research on safety of Gen II/III Reactors

- Coordination and Support Action and Collaborative Project
- Mobility Grants:
  - i. Short training periods (< 1 months) for post-doc students and researchers
  - ii. Long training periods (> 1months, max 3 months) for more experienced staff



### NUGENIA+ (research area / topic centered : Gen II/III Reactors)



\* Evaluation criteria: topic within NUGENIA roadmap; training related to the infrastructure; quality of application and requested funding



### NUGENIA+ (research area / topic centered : Gen II/III Reactors)



Hosting organisations





**Coordinate E&T programs in the field of nuclear fission technology** 

- Student Research Experience (facilitate access to laboratories)
- Inter-semester courses for graduate and post-graduate students on specialised topics\*
- Professional course (resulting in a MOOC)

\*fuel, safeguards and security, waste management, nuclear data, etc.





\* Evaluation criteria: scientific quality; availability of equipment, staff and materials at the hosting institute; training benefit of the applicant; impact in the research field





**Hosting Organisation** 



RP=REACTOR PHYSICS; ND=NUCLEAR DATA; SA=SEVERE ACCIDENTS; NF=NUCLEAR FUEL; NW=NUCLEAR WASTE; PA=PARTICLE ACCELERATORS; MSR=MOLTEN SALTS REACTOR; CLAD=CLADDING; FPC=FUEL PERFORMANCE CODE; THYD=THERMAL HYDRAULICS; An=ACTINIDES; NSteel=NUCLEAR STEELS; **EXP**=EXPERIMENTAL; **MOD**=MODELLING



Share between experimental and modelling projects granted





## Conclusions and suggestions

Access to infrastructures schemes have been implemented around "pooling facilities/topic" "Research Area/topic" or "people". In all case, successful implementation and accomplishments have been reported.

#### • LESSONS LEARNED

- Administrative, financial and scientific rules an harmonised approach desirable?
- Advertisement and reaching out to the European nuclear community.

#### • SUGGESTIONS

- Blending mobility grants at pooled facilities (ACTINET, NUGENIA, ESNII, VELLA) with people oriented schemes (GENTLE, ENEN+).
- Organisation of open access schemes through one entity:
  - Harmonisation of administrative, financial and scientific issues
  - Coordination of the various topical areas and pooled facilities / connecting to people.



## Outlook

### Access to all Joint Research Centres Infrastructures (including nuclear).

- <u>https://ec.europa.eu/jrc/en/research-facility/open-access</u>. The JRC open access aims: promote innovative R&D; dissemination of knowledge; improve methods and skills; training of researchers and technicians and collaboration at European level.
- Administrative Arrangement JRC/RTD (last H2020 call) support access of European research teams, students and SMEs to the nuclear JRC infrastructures.





### Acknowledgments

- C. FAZIO, K-F NILSSON, D. MANARA (GENTLE), A. PLOMPEN, A. BUCALOSSI, European Commission, Joint Research Centre
- S. BOURG, Commissariat à l'énergie atomique et aux énergies alternatives, CEA/DEN/MAR/DRCP, Bat 400. CEA Marcoule, BP 17171. 30207 Bagnols sur Cèze. (TALISMAN)
- RIK-WOUTER BOSCH (°) AND JEAN-CLAUDE BOUCHTER (°°), (°)Belgian Nuclear Research Centre, SCK-CEN, Boeretang 200, 2400 Mol, Belgium, (°°)Commissariat à l'énergie atomique et aux énergies alternatives, CEA Saclay, France (*NUGENIA* +)
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and Gérard COGNET for his review and very valuable suggestions





### Any questions?

