IDEAAL Work Package 4

Innovation and Industries
WP4 Tasks

- **Task 1**: Access provision to research teams from industries and involvement of industrial users (GANIL - MH Moscatello/X.Ledoux)

- **Task 2**: Industrial Applications and Technology Transfer (NE-NUCLEOPOLIS - N.Renard)
  
  Sub-Task 2.1 – Provide industrial application tools to GANIL
  Sub-Task 2.2 – Operational implementation (*General Case*)
  Sub Task 2.3 – Operational implementation: Support for the technology transfer of the beam profile monitors
  Sub-Task 2.4 – Operational implementation: Innovative radioisotope production

- **Task 3**: Increase of innovation potential (CEA/DRF - A.Leservot)
Access provision for research teams from industries and involvement of industrial users - GANIL

M. Kurzyp – X. Ledoux - MH. Moscatello

STATUS
- 2 experiments scheduled in 2019
- 1 experiment scheduled in 2020
- Survey on the industrial needs in terms of beam time for the next 6 years
- Proposal of a business plan for the development of R&D on membranes at Ganil (in collaboration with a research team expert in chemical etching) and irradiations of electronic components

IN PROGRESS:
- Deliverable D4.1 almost completed: Business plan for the industrial application activities at GANIL
TASK 2

Applications and Technology Transfer - Normandie Energies / Nucleopolis

M.Grar – MH.Moscatello – N.Renard (until August 31st 2020)/G.Zolnowski –P.Rouxel

Sub-Task 2.1 – Provide industrial application tools to GANIL

STATUS:
- Mapping of existing potential: meetings and interviews with most of the groups at GANIL (~ 40 meetings occurred) report completed in July 2018
- Market research outsourced to ERDYN Company
- Communication tools in collaboration with GANIL WP5

IN PROGRESS:
- New transfer to industry: Patent on Aluminium Flanges to be transferred to a company (Ganil)
- Deliverable D4.2 in progress (to be finalised): Report on the technology transfers identified and developed in the framework of the project
SUB-TASK 2.2 – Operational implementation (General Case)

STATUS:
- Exchange of good practices with GSI laboratory:
  - Meeting in GSI in November 2017 (practices for technology transfer, meetings with companies)
  - Meeting with GSI on September 24th 2020
- Participation in WNE 2018 with Nucleopolis (June 26th to 28th Paris Nord Villepinte)
- Participation to the ENSAR2/NUPIA Workshop in October 2018 (Varsovie)
- Organisation of a workshop with companies on GANIL know-how on February 5th 2019
- (ion sources, beam diagnostics, vacuum technologies, mechanics, radioisotopes)
- Participation to the ENSAR2/NUPIA Workshop in November 2019 (Sevilla)
- Sub-Task completed

SUB-TASK 2.3 – Operational implementation: Support for the technology transfer of the beam profile monitors

STATUS:
- Transfer contract signed in December 2017 and transfer to Pantechnik in progress
- Collaboration contract signed in January 2020
- MS9 on Month 9: delayed to Month 37
- Sub-Task completed
Sub-Task 2.4 – Operational implementantion: Innovative radioisotope production

STATUS:
- Study and proposals of possible methods for transfer with the M2 trainee - January to June 2017 (GANIL/Nucleopolis) – MS10 at Month 30: OK

⇒ 211At and 212Pb

- ARRONAX collaboration: presently on stand-by, but multilateral collaboration within the frame of the ANR REPARE
- TRISKEM : possible collaborations have been identified (meeting in December 2019)
- ORANO MED: meeting in January 2020 at GANIL -> OM not willing to be involved in this R&D in the next few years
- Sub-Task completed
Task 3

Increase of innovation potential - CEA/DRF

A.Leservot - MH.Moscatello - M.Kurzyp

Study the possibilities of increasing the innovation potential of the GANIL laboratory:

- Identify new applications with heavy and light ions beams, in order to replace the reactor technology with the accelerator technology, for as many applications as possible.
- Identify new R&D subjects that might lead to innovative technologies and application
- Identify the necessary technical developments to adapt the facility to these future and new applications

STATUS:
- General study during the first 2 years
- 2 subjects investigated in details from 2018:
  • Membranes & filtration– deliverable almost completed (D4.1 and D4.3)
  • Electromagnetic Isotopic Separation: completed
- Deliverable D4.3 in finalisation step
# Milestones and Deliverables

<table>
<thead>
<tr>
<th>Milestone number</th>
<th>Milestone name</th>
<th>Due date</th>
<th>Means of verification</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS9</td>
<td>Beam profile monitors: Licence contract and R&amp;D collaboration contract with the company</td>
<td>Months 6, DELAYED to Month 37</td>
<td>Report</td>
</tr>
<tr>
<td>MS10</td>
<td>Report on the methodology for the technology transfer for radioisotope production</td>
<td>Months 30</td>
<td>Report</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Deliverable Title</th>
<th>Due date</th>
</tr>
</thead>
<tbody>
<tr>
<td>D4.1</td>
<td>Business plan for the industrial application activities at GANIL</td>
<td>M51</td>
</tr>
<tr>
<td>D4.2</td>
<td>Report on the technology transfers developed in the framework of the project</td>
<td>M51</td>
</tr>
<tr>
<td>D4.3</td>
<td>Report on the increase of innovation potential study</td>
<td>M51</td>
</tr>
</tbody>
</table>
Thank you for your attention