

DE LA RECHERCHE À L'INDUSTRIE



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IDEAAL

INTERNATIONAL DEVELOPMENT OF GANIL-SPIRAL2

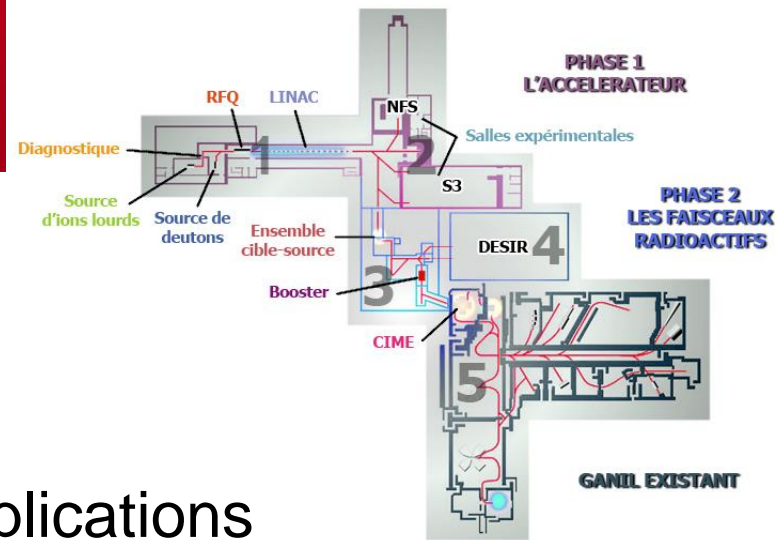
WP4 – T3

INNOVATION AND INDUSTRIES

INCREASE OF INNOVATION POTENTIAL

MANPOWER FOR 3 YEARS: GANIL 6 MM + 18 MM (CDD), DCEPI 6 MM

A. LESERVOT



To identify potential new markets:

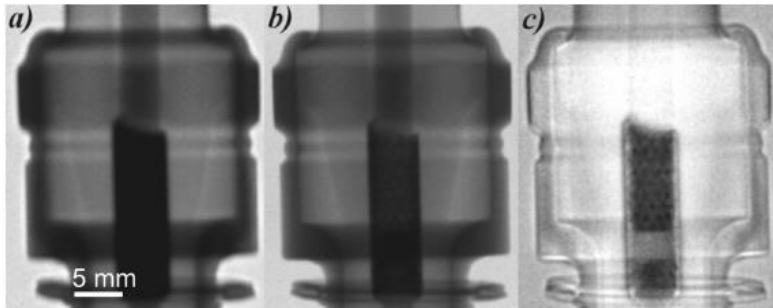
- Extension of already identified applications
- Brain storm on potential market linked to future science (heavy ion application...)

Complementary to existing applications and market (studied in Task 2)

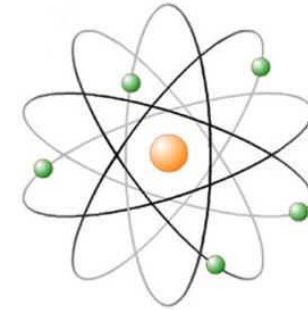
Quantify potential market for each application, and try to foresee some « killer app » (blockbuster application)

Estimate competition on selected foreseen application/market

EXEMPLES: NEUTRONS APPLICATIONS

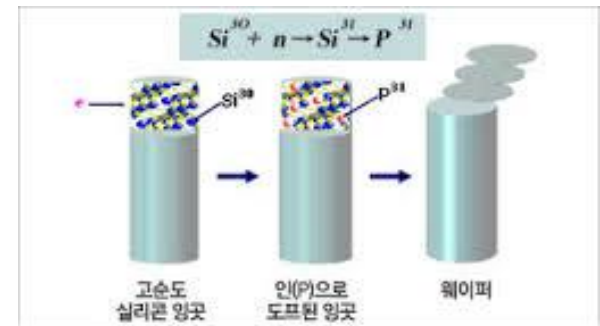
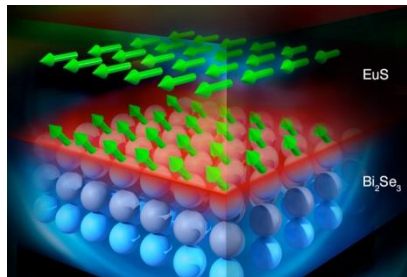


*Neutronography,
material stress...*

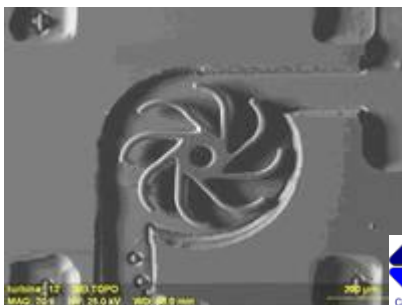


*Radiopharmaceuticals
Mo99...*

*Magnetic
Nanomaterials
analysis...*



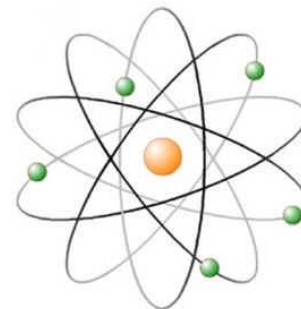
*Ion implantation //
NTD Si doping / Power Electronics*



Proton Writing / lithography



Material Analysis



Radiopharmaceutics

Present RP => Task 2

Future RP (if not included in Task 2) :

- Germanium / Gallium
- Lutetium
- Theragnostics: Cu...
- AlphaTherapy: Pb212, As211...

Targets identification / development

MANY OTHER POTENTIAL APPLICATIONS...

Nanofabrication :

- Biomedical applications (tissue/cell imaging and micro-analysis)
- Advanced biochip fabrication
- Silicon photonics and micromachining
- Micro/nano-photonics and photonic meta-materials,
- Advanced materials characterization
- Fundamental ion beam interaction studies

Industry

- Ion beam : silicon doping, implants...

Defense & security

- DEW (= directed weapons)
- Military defense (Navy SRF...)
- Cargo scanning

=> Those applications should be completed by brain storming to imagine applications linked to science generated by Ganil teams.

YEAR 1

- Identification of possible applications / markets (not studied by Task 2)
- Brain storming on potential applications linked to Ganil science

YEAR 2

- Quantify markets of some selected foreseen applications
- Qualify some application issued of « science to application » brain storming

YEAR 3

- Propose a strategy to adress applications identified in Y1 & Y2.
- Estimate a budget to the proposed strategy

THANKS !