

The Icéel Carnot Institute effectively uses synergies between its 26 laboratories, technical centres (CRT, CTI) and technology transfer structures to offer a controlled approach to engineering that provides manufacturers and territories with added value. Its partnership commitment is to respond to societal challenges linked to energy and the environment.

[www.iceel.eu](http://www.iceel.eu)

## DESIGN, DEVELOPMENT AND VALIDATION OF INNOVATIVE SOLUTIONS

### 4 thematic R&D axes for our work on our platforms and technical centres



#### **The Industry of the Future**

Modular, intensified and clean factories / Additive manufacturing / Intelligent sensors / AI and connected objects / Augmented – Virtual Reality / Intelligent manufacturing and robotics, cobots / Environment, man and machines / Technology management, competitive intelligence, societal support



#### **Materials and Process Engineering, Resources and Recycling**

New materials / Assembly / Surface processing and functionalization / Circular economy, recycling, waste processing / Ecodesign, LCA / Process engineering and safety / Innovative processes (development, manufacturing, transformation) / Mineral resources and critical metals



#### **Bioeconomy**

Sustainable use of agroresources (food and non-food) / Functional ingredients, biomolecules, biomaterials, biological fibres / Agromining / Integrated biorefinery (chemistry and energy) / Bioenergies / Management and valorization of wood, biomass and territorial sustainability



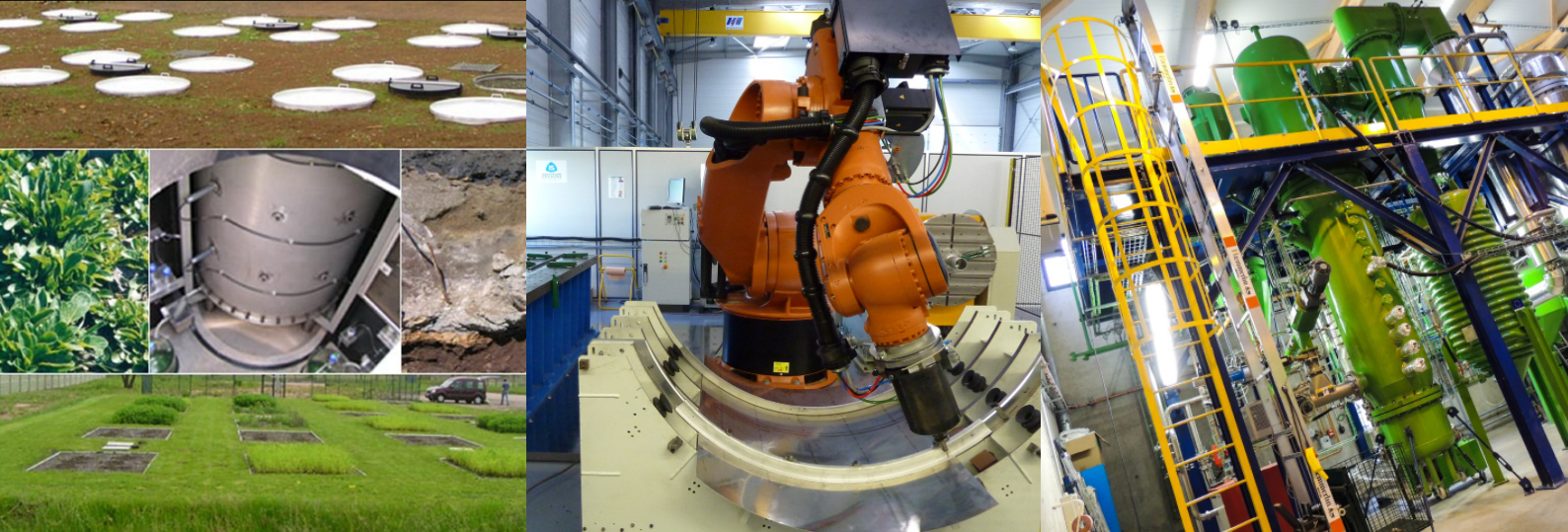
#### **Energy and Ecological Transition**

Energy efficiency for industry and in buildings, smart grids / Energy storage (vectors, regulation, self-supply) / New energy vectors (H<sub>2</sub>, NH<sub>3</sub>, biomethane) / CO<sub>2</sub> capture, storage and recycling / Maintaining biodiversity / Sustainable resource, water and soil management

### Target markets

- Manufacturing
- Transports (Aeronautical, Automobile, Railways)
- Ressources & Environnement
- Energies
- Health & Bioeconomy
- Development & Construction





## Icéel services for you include:

- Leading a network which federates platforms to ensure crucial links between research, transfer and innovation
- A network of scientific and technological correspondents ready to respond to your requests and requirements
- Proposals tailored to meet company requirements (SMEs, Mid-Cap companies and industrial corporations):
  - R&D projects: bilateral projects (CIFRE, exploratory research, etc.) and collaborative programmes (on the regional, national and international scales)
  - Sourcing of skills and resources
  - Research services: feasibility studies, technology transfer
  - Technology transfer and innovation workshops (ATIs®)
  - Evaluation of innovation capacities
  - Services : characterization, expertise, monitoring
  - Continuous training



## Key Figures

**Permanent staff**  
(full-time equivalent): 520  
**PhD Students: 470**

**Partnership incomes with industry:**  
Contractuel : €11M  
Collaboratiion projects : €5M  
Services : €8M  
**Global budget: €84M**

## Contacts

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