

LORRAINE UNIVERSITÉ D'EXCELLENCE : engineering in the 21st century

4,486
researchers
and professors

1,947
PhD Students

108
scientific
platforms
and equipment

The Lorraine Université d'Excellence has brought together its partners to answer major societal challenges, such as energy and ecological transitions, alongside health and digital transformations. Together, they have created a dynamic set of innovative solutions that aim to meet these challenges.

Today, backed by the international recognition of their research site, these scientific partners wish to promote what constitutes the beating heart of their engineering: the mobilization of all of their knowledge, and its growth through the cross-approach of their expertise in the service of the well-being of all.

Applied sciences, foundational sciences, engineering sciences; all contribute to the development of new knowledge regarding these major issues and their overall implications. Thanks to this new relationship between knowledge and research, these various disciplines are innovating together to meet the new needs of our societies.

For the Lorraine Université d'Excellence, collaboration, sharing, and co-construction with all innovation stakeholders – including communities and the public at large – are the keys to advancements and discoveries towards a century open to the future.

To develop their strategy of innovation, the partners of the Lorraine Université d'Excellence rely on the Comité de COordination de PROJets du site LORrain (or CCOPROLOR).

The partners of Lorraine Université d'Excellence



PRESS CONTACT:

AUDREY DONNENFELD

+33 06 30 10 76 90

lue-media-research@univ-lorraine.fr

LORRAINE UNIVERSITÉ D'EXCELLENCE

THE 6 ECONOMICAL AND SOCIETAL CHALLENGES OF THE LORRAINE UNIVERSITÉ D'EXCELLENCE: **THINKING, SUPPORTING AND EVEN ANTICIPATING THE TRANSITIONS OF OUR WORLD.**



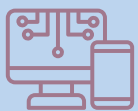
Material challenges



Ecological Transition (One Earth)



Energy Transition



Digital Transition



Global Health challenges



Societal Transitions

A unifying project designed to serve society

In 2016, the Lorraine research site attained the I-Site (Initiative, Science, Innovation, Territories, Economy) status through the Lorraine Université d'Excellence (LUE) project as a part of the future investment program of the French State. This status was confirmed in 2022.

Lorraine Université d'Excellence responds to the common ambitions of its project partners: to develop their global innovation strategy in an effort to strengthen their social and economical impact, such as by involving all stakeholders, including communities and citizens, in a dynamic opening and exchange.

wood and forest, green chemistry, energy and materials, geosciences, cybersecurity, artificial intelligence, etc...

- Lorraine Université d'Excellence therefore relies on strong academic, scientific and technological potentials, and on the socio-economic vibrancy of the region, whose industrial legacy demonstrates why its research is considered number one in Europe for mining and mineral engineering, alongside its excellence in the fields of materials, from extraction to recycling.

Opening and exchange with the whole ecosystem

- By putting fundamental and applied research at the service of society, the partners rely on **an organized culture that is open and flexible.**

This translates to a dialogue between disciplines in order to share knowledge and scientific production, but also to communicate with companies, communities, and the general public. This dialogue, a source of progress for all of society, guarantees that the innovations to be implemented meet the expectations of citizens and socio-economical needs at a local, national, or even European level.

A remarkable scientific and technological potential

- Lorraine Université d'Excellence benefits from the resources of two major research centers, Metz and Nancy, which house state-of-the-art facilities and world-class scientific equipment.
- Lorraine's research facilities and labs.
 - all cover a wide spectrum of scientific and technological disciplines, with many areas of excellence: health,

- Fully committed to the evolution of society, the Lorraine Université d'Excellence makes its research data available. Thus, it contributes to the overall progress of knowledge.

THREE LABEX, MODELS OF SUCCESS

Various vectors of cooperation with scientific and socio-economic partners – Three Labex, ARBRE, Ressources21, and DAMAS – contribute to the structure of the very high level of research of the Lorraine Université d'Excellence, both in France and internationally.

activity such as agriculture or digital technology. This is also how the development of entrepreneurship was favored, in particular via the Lorraine Incubator, a catalyst for the creation of start-ups.

through solid partnerships, such as the following examples:

- In the field of materials, it has partnered with the University of California (San Diego), Georgia Tech in Atlanta, and with Tohoku University, Japan.
- In the field of resources and the environment, it has partnered with the Sustainable Minerals Institute of the University of Queensland, Australia, and with Sun Yat Sen University, China.
- In the field of trees and forests, it has partnered with the Beijing Forestry University.
- In the field of energy, it has partnered with the International University of Rabat, Morocco.
- In the field of health, it has partnered with the University of Wuhan, China.

Many international systems of excellence have been put in place to promote the mobility of students, PhD students, and researchers.

International success stories

- The open culture of the Lorraine Université d'Excellence can be explained by its region, Lorraine being the only French region that shares its borders with three other countries: Belgium, Luxembourg, and Germany.
- Numerous research collaborations have been initiated with the academic partners in the Université de la Grande Région (UniGR), a cross-border university. This cooperation has made it possible to develop links between research and economical cross-border development. Examples include the development of a center of expertise on border dynamics and a new dynamic on the circular economy, as well as a partnership on cybersecurity, in order to create a potential future Franco-German research center.
- Concerning Europe, the Lorraine Université d'Excellence is committed to associations and partnerships that influence and define topics that echo the six challenges it has set itself. With its research site, it positions itself as an essential contributor to the European Green Deal.
- Finally, at the international level, the Lorraine Université d'Excellence is developing close collaborations

Intensive inter and transdisciplinarity

- The wealth of expertises of the Lorraine Université feeds an **intensive interdisciplinary dynamic**. A driver of change, this dynamic promotes the interactions that are most essential for a comprehensive approach to current issues in all of their implications.
- It demonstrates its effectiveness and its impact on the territory through the **transfer of technology**. As an extension of more prospective fields, process engineering is one of the great strengths of the Lorraine Université d'Excellence. This is what allows it to transition from fundamental research straight to industry, in many fields of