

The ARTS Carnot Institute. A network of complementary expert skills, collaborating towards innovation.

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Plateforme d'optimisation de cycle de combustion

# YOUR R&D PARTNER TO MEET THE CHALLENGES OF THE INDUSTRY OF THE FUTURE

# L'institut Carnot ARTS

Highly involved in the challenges of the industry of the future, the ARTS Carnot Institute (Research Actions for Technology and Society - iC ARTS) is an essential partner serving the technical performance and ambitions of companies planning to engage in a new industrial model and to develop innovative products.

Its scientific multidisciplinary expertise in terms of applied research enables the iC ARTS to assist industry at all stages of a products life cycle. The institute is based on a network of research and innovation laboratories and advanced technical platforms, to address the design, industrialization and manufacturing challenges of complex and innovative products.

Located in 18 sites in 9 French regions, at the core of the French socio-economic environment, the iC ARTS has a natural proximity with industry (notably SMEs) and regional competitive clusters.

# Our technological platforms:

- Machining processes
- Additive manufacturing and laser processes
- Forging and plastic deformation
- Iron casting processes
- Composites and polymer materials
- Wood engineering
- Surface treatments and functionalization
- Material fatigue Shock Service life expectancy
- Product Design and Prototyping
- Simulators, virtual mixed reality
- Industrial robotics
- Biomechanics
- Turbomachinery and energy systems
- Electrical power management
- > Large wind tunnels:

# **Target markets**

- Aeronautical and space
- Transport (automotive, railway, maritime...)
- **Energy**
- Construction
- Robotics
- Optics
- Healthcare
- consumer goods
- Agriculture and information & communication technologies.





### A tailored-made R&D support

A Business Developer is your point-of-contact to gain access to our large range of scientific skills. From an initial discussion to the definition of a complete R&D project, including the contracting process, our customers benefit from a privileged partnership as well as the mobilization of a nation-wide network of experts and expertise.

#### **Research partnerships: direct private contracts** with industrial partners to meet their challenges

- Support for trainees and apprentice engineers
- Mobilization of research engineers and PhD students
- Scientific expertise provided by senior researchers

# **Collaborative Research Programs: contracts between public and private partners:**

French national and regional research funding and subsidies, European funding and subsidies, EU grants (Horizon Europe program)...

Our development strategy is in line with the industry of the future and involves close collaboration with the Alliance for the Industry of the Future.

#### Scientific multidisciplinary expertise and state-ofthe-art technological platforms to cover all stages of a products lifecycle

- Technical and innovation auditing
- Industrial needs analysis and feasibility studies
- Research and development studies
- Design and production of physical demonstrators and prototypes
- Testing and experimental modelling
- Technical expertise
- Specialized short training sessions

# **Key figures**

Research staff: 828 Doctoral students: 701

Partnering research revenue: €28.5M Consolidated budget: €122M

## Contacts

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