

**Bourgogne-  
Franche-Comté**

# Aeronautics



RÉGION  
BOURGOGNE  
FRANCHE  
COMTÉ

**aer**  
regional economic  
agency of  
bourgogne-franche-comté

DO YOU HAVE A PROJECT?

# BOURGOGNE-FRANCHE-COMTÉ WANTS YOU!

## set up shop

With its business parks and road and airport infrastructure, Bourgogne-Franche-Comté has all the assets you need to jump-start your projects in an environment designed for entrepreneurial innovation.

No.1

INDUSTRIAL REGION  
IN TERMS OF JOBS  
(1 IN 5 EMPLOYEES)

No.3

REGION FOR  
METAL PROCESSING

No.2

REGION FOR  
MANUFACTURING  
OF PLASTIC TECHNICAL  
PARTS

6

INTERNATIONAL  
AIRPORTS  
NEARBY

9

HIGHWAYS FORMING  
A STRATEGIC INTERSECTION  
IN THE HEART OF EUROPE

451

KM  
OF HSR LINES  
14 TGV STATIONS

## dedicated and related clusters

### AEROMICROTECH

A member of GIFAS (the French aerospace industries association), the Bourgogne-Franche-Comté aeronautics, space, and defence cluster, created by the Microtechnology competitiveness cluster, brings together academic and economic partners: companies, professional partners, and stakeholders in research and education. The cluster promotes the expertise of each participant to get the attention of potential customers like Thales, Airbus, Safran, and more.

### GIS AERO

Located in the north of the region, this cluster of manufacturers brings together 12 companies, including Figeac Aero, Kep Technologies, and Safran. Its objectives are to develop skills and share investments in a surface treatment production line.

### ROBOTICS VALLEY

Robotics Valley is a cluster dedicated to industry 4.0, in particular robotics/cobotics and vision. Its work includes integrating these procedures and processes into industrial companies.



## 4 competitiveness clusters tied to the sector

### PÔLE VÉHICULE DU FUTUR CLUSTER

The 'Pôle Véhicule du Futur' is a leading cluster for **vehicles, mobility solutions, and related services**.

It brings together and coordinates an ecosystem of more than 400 members in the Bourgogne-Franche-Comté and Grand Est regions of France. Its main missions include the emergence of R&D projects and industrial performance to help businesses improve their competitiveness.

A significant number of manufacturers operate in both the automotive and aeronautical industries, such as, for example, Danielson, Galvanoplast, IDMM, and Schrader Pacific.

SBU\* for the cluster: Energy and propulsion, Design, Materials and Recycling, Industry of the future, Connected and autonomous vehicles, Mobility as a service.

400 COMPANIES  
345 MEMBER

### PLASTIPOLIS CLUSTER

Plastipolis promotes the development of collaborative projects related to **additive manufacturing, eco-materials, process engineering, advanced tooling, micro-manufacturing, plastronics and hybrid composites**. Examples of topics addressed: lightening of structures, fire-resistant plastics, materials for batteries, recycling.

SBU\* for the cluster: high value-added manufacturing processes, advanced functional materials, eco-plastic processing, smart plastic products, efficient management of resources and digital factories.

350 COMPANIES  
250 MEMBER

### MICROTECHNOLOGY CLUSTER

The 'Pôle Microtechniques' (PMT) brings together, represents, and coordinates companies with expertise in microtechnology **to support the aeronautics**, health, microsystem, and luxury goods industries, as well as sectors including energy, transport, and optics/photonics.

SBU\* for the cluster: Luxury goods, Health, Aeronautics, Space and defence, Microsystems.

167 COMPANIES  
139 MEMBER

### NUCLEAR VALLEY CLUSTER

Nuclear Valley is the only government-certified competitiveness cluster dedicated to civil nuclear technology in France. The organisation promotes the emergence of innovative and competitive solutions for the civil nuclear industry by mobilising all available resources (industrial, institutional, academic, and scientific). The cluster particularly focuses on **non-destructive inspections** for the **aeronautics sector**.

SBU\* for the cluster: Design and creation of equipment; operations and maintenance; dismantling, recycling, and storage; civil engineering and nuclear-grade concrete; digital technology; medical applications and radioprotection.

240 MEMBERS

\* SBU: Strategic Business Units

## THE REGIONAL ECONOMIC AGENCY OF BOURGOGNE-FRANCHE-COMTÉ

The Regional Economic Agency works in close and harmonious collaboration with stakeholders in business development, innovation, training, and employment to:



**ASSIST**  
in maintaining  
and improving  
economic activity  
and employment  
in the region



**SUPPORT  
AND DEVELOP**  
innovation  
and eco-innovation



**BACK**  
economic  
development  
strategies  
of the region



**PROMOTE**  
the economic  
attractiveness  
of the region

# RESPONSES

# TO TOMORROW'S CHALLENGES FOR AERONAUTICS

In Bourgogne-Franche-Comté, the industry is organised into 3 segments:

- > commercial and defence aeronautics
- > light aeronautics
- > airport infrastructure

The expertise in the region is based on a network of manufacturers with complementary technological skills: telecommunications, networks, transport, energy, metalworking, surface treatment, microtechnology, and composite materials. This expertise has long drawn the interest of the big customers in the industry, one of which operates in the region: **Safran** (4 sites).

Based on the needs of the market, trainings offered create a qualified workforce that meets the needs of the manufacturers.

**A forward-looking ecosystem that helps make Bourgogne-Franche-Comté a region for excellence in aeronautics.**



## STRENGTHS of the region

- ✓ NO.1 FRENCH INDUSTRIAL REGION
- ✓ NO.1 REGION FOR LIGHT AVIATION
- ✓ 1 MAJOR CUSTOMER LOCATED HERE: SAFRAN
- ✓ 2 DEDICATED CLUSTERS
- ✓ A DIVERSE CONTRACTOR NETWORK
- ✓ TARGETED TRAINING OFFERINGS

## A FEW COMPANIES IN THE INDUSTRY



MANUFACTURERS LIGHT AND ULTRALIGHT AIRCRAFT, DRONES



ARS  
AVIONE ROBOTICS  
LA MOUETTE  
DANIELSON AIRCRAFT SYSTEM  
JODEL  
NEW ROBIN AIRCRAFT  
SAFRAN



SYSTEMS MAKERS



GROUPE CLEMESSY  
IAERO  
JPC AVIATION  
KEP TECHNOLOGIES  
LISI AEROSPACE  
SAFRAN



COMPONENT MANUFACTURERS



ALTIA  
AR ELECTRONIC  
AMTE  
AUBERT ET DUVAL  
BECKER AVIONICS  
BODYCOTE  
C&K COMPONENTS  
FIGEAC AERO  
GRESSET ET ASSOCIÉS  
IXBLUE  
KEP TECHNOLOGIES  
PRECILEC  
PRYSMIAN  
RADIALL  
SPARTACUS 3D  
STAINLESS  
STEFORGES  
SKF AEROSPACE



MAINTENANCE



ARS  
JG AVIATION  
UTC AEROSPACE



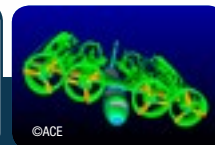
AIRPORTS



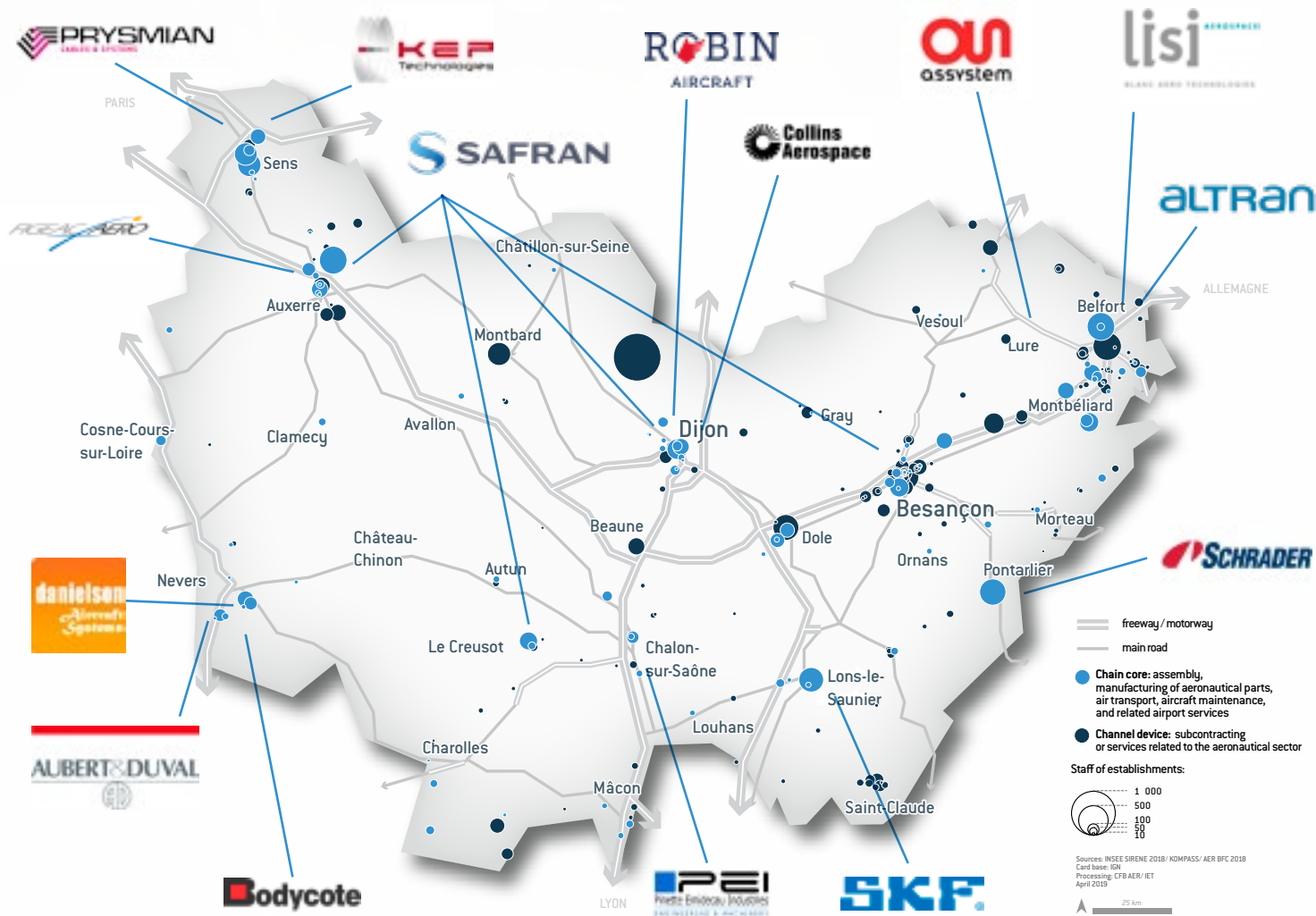
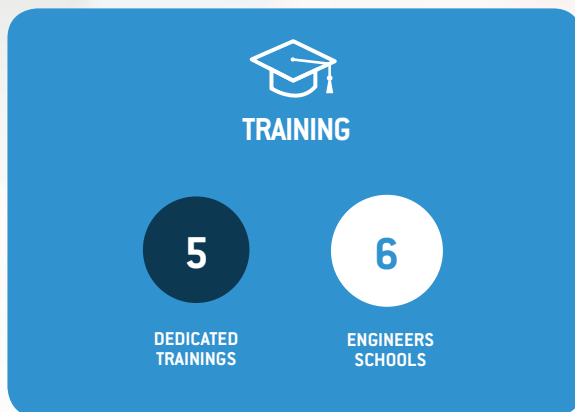
AGID  
CHARLATTE MANUTENTION  
DELTABOX  
FLASH ELEK  
GAUSSIN MANUGISTIQUE  
JPC AVIATION  
NICOLAS INDUSTRIES  
PR INDUSTRIE



ENGINEERING FIRMS

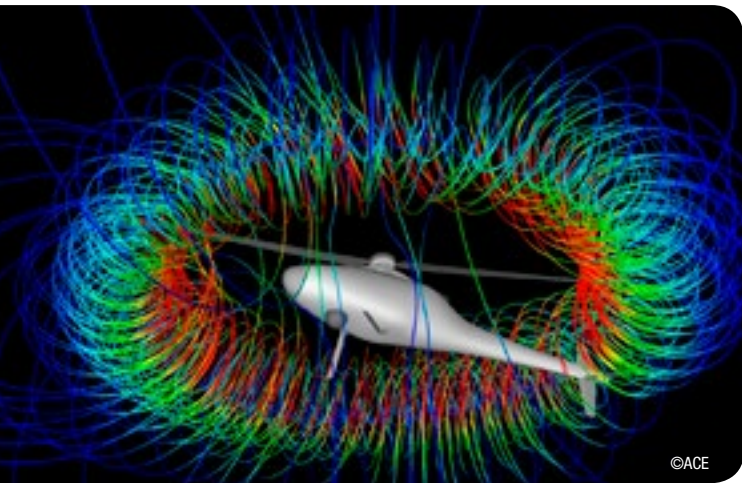


AERO CONCEPT ENGINEERING  
ALTRAN  
ASSYSTEM



BOURGOGNE-FRANCHE-COMTÉ

# A TRAILBLAZING SPIRIT



## AERO CONCEPT ENGINEERING

STUDIES OF FLUIDS

Grown from the Formula 1 racing sector, ACE offers **expertise in aerodynamics** for many different aeronautics applications (drones, aeroplanes, propellers, aircraft tail pieces).

## innovative companies

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### SPARTACUS 3D

3D PRINTING

An expert in **additive metal manufacturing**, Spartacus3D supports aeronautics and space industry customers in developing, manufacturing, and mass-producing innovative components for landing gear, engines, doors, actuators, etc. The company's manufacturing site in Mâcon has laser melting machines that make it possible to work with titanium, aluminium and stainless steel alloys, and nickel-based superalloys.

### AVIONE ROBOTICS

EVTOL 4.0 FLYING TAXI

Avionéo is aiming to develop a zero-emission fleet of eVTOLs (**convertible aircraft with vertical take-off**). An efficient and ecological solution based on an innovative industry 4.0 model, which is much more economical than a car day-to-day.

## a cutting-edge scientific and technical environment

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### ICB LABORATORY

OPTICS AND NEW MATERIALS

The Carnot de Bourgogne Interdisciplinary Laboratory (ICB) is a shared body associated with the CNRS and linked to the University of Bourgogne and the University of Technology of Belfort-Montbéliard. At the laboratory, new functions are developed for **optics** and **new materials**, intended for **applications in industry, medicine, and telecommunications**. ICB is also innovating in **3D and 4D printing**. The Excalibure project, a centre of excellence in powder metallurgy, is developing innovative solutions for manufacturing using powder metallurgy and, notably, using **laser sintering**.

### ImViA LABORATORY

IMAGING AND ARTIFICIAL VISION

The imaging and artificial vision laboratory is a research unit linked to the University of Bourgogne. **Computer vision** is at the heart of its topics with significant activity involving **real-time vision systems**, or even applied to **robotics**.

### FEMTO-ST INSTITUTE

MICRO- AND NANO-TECHNOLOGIES, MATERIALS AND MECHANICAL STRUCTURES, TIME AND FREQUENCY, PHOTONICS, ROBOTICS, IT, ENERGY

With 750 staff members, FEMTO-ST is a research institute associated with the CNRS and linked to the University of Franche-Comté, the National School of Mechanics and Microtechnology, and the University of Technology of Belfort-Montbéliard. Of its 7 scientific departments, **Time and Frequency, Applied Mechanics** and **Optics** are regularly called upon to contribute to high-tech innovations in the aeronautics and space sectors (space navigation, telecommunications, radar, signals, optics systems for satellites, materials and mechanical structures, smart and communicating sensors and microsystems, software testing and checks, etc.).

### ISAT'S DRIVE LABORATORY

RESEARCH IN VEHICLE ENGINEERING FOR THE ENVIRONMENT

**Propulsion** energy optimization, **smart transport** systems, **composite materials and durability, vibratory and acoustic behaviours**. Training: master's in research and PhD.

# BOURGOGNE-FRANCHE-COMTÉ

# TARGETED TRAININGS

## UNIVERSITY OF BURGUNDY-FRANCHE-COMTÉ

- > DUT (University Diploma in Technology): Electrical engineering, Thermal engineering, and Energy
- > Professional bachelor's in aeronautical design and manufacturing
- > MIR Master's – Engineering of complex systems, Microsystems, Embedded instrumentation, Robotics
- > M2E2 Master's: Mechatronics, Microsystems, and Embedded Electronics
- > VIBOT: International and English-language programmes (L3, M1, M2) training specialists in image processing, computer vision and instrumentation, for application in mobile robotics and smart vehicles.

## ISAT NEVERS

HIGHER INSTITUTE OF MOTOR VEHICLES AND TRANSPORT

The only French public engineering university that specifically trains people with student and apprentice status for careers involving motor vehicles and transport, the ISAT has a research laboratory focusing on four skill areas: **Energies, propulsion and environment, smart vehicles, durability and composite structures, vibrations and acoustics in transport.**

## ESIEM DIJON

SUPERIOR UNIVERSITY OF MATERIALS AND INFOTRONICS ENGINEERS

- > Materials – Sustainable development
- > Informatics/Electronics: **Embedded systems, Network security and quality, Software and knowledge engineering**

## ENSMM BESANÇON

A GENERAL ENGINEERING UNIVERSITY SPECIALISED IN MECHANICS AND MICROT TECHNOLOGY

- > Structural mechanics, Creation of connected objects, **Materials and surfaces, Mechatronics and robotics**, Engineering of production systems, Micromechanics, Innovation engineering, Process engineering.

## UTBM BELFORT-MONTBÉLIARD

UNIVERSITY OF TECHNOLOGY OF BELFORT-MONTBÉLIARD

- > Energy course of study: Energy production, Networks, conversion, and storage, **Transport and embedded energy systems**

## ARTS & MÉTIERS PARISTECH CAMPUS

- > Studies in mechanical, industrial, and energy engineering

## aeronautical trainings

### SAINT YAN AIR'E ACADEMY

DEDICATED CAMPUS

**Right next to the Saint Yan Airport in Saône-et-Loire, the campus of Saint Yan Air'e Academy is home to various training centres offering:**

- > **training for pilots and air traffic controllers,**
- > **training for flight crew members,**
- > **training for airport staff (on-the-ground personnel).**

### ENAC SAINT YAN

NATIONAL SCHOOL OF CIVIL AVIATION

Commercial pilot licence – multi-engine instrument rating

### ESIMA SAINT YAN

INTERNATIONAL SUPERIOR UNIVERSITY OF AERONAUTICS PROFESSIONS

Private, professional training for airline agents, flight attendants, airport security agents, air traffic agents, runway assistants, and aeroplane assistants.

### AIRTRACE - BTEE SA

INTERNATIONAL CENTRE OF AIRPORT TRAINING

Expertise, support and training in airport operations, security, certification, animal and environmental risk prevention.

### ASTIER PROFESSIONAL SECONDARY SCHOOL

- > 2 professional baccalaureate programmes: Aeronautics and General Aviation
- > Bachelor's – Aeronautics mechanic

### CREUSOT IUT

- > Professional bachelor's in aeronautical design and manufacturing

### APACHE AVIATION

Grown from the world of aerobatics, APACHE offers upset prevention and recovery training (UPRT) for professional pilots.



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