



Il Sentiero International Campus

Il Sentiero International Campus is an initiative by **Ecor International**, a company based in Schio (Vicenza) and a strategic partner of companies for the production of metal critical components, and complex systems.

The Industrial Research Centre was established in 2018 in the awareness that **innovation is the result of the integration of applied research and production**. The Group's strategy is based on an organisational system that integrates production and R&D activities.

The **Il Sentiero International Campus** also offers qualified R&D services within the framework of **industrial projects** and national and European **funded programmes** for companies and public bodies.

The researchers' technical and scientific expertise covers the following areas: **Reliability Engineering, Surface Engineering, Additive Manufacturing** (3D printing), **Design and Prototyping**, and **Joining Technologies**.

› Activities

- Drafting and management of **R&D projects, including all phases** from the functional diagram to the industrialisation of process/product
- Study, prototyping, design and production of **special systems** and **equipment**, with particular reference to process subsystems in the field of automatic processing and packaging machines.
- Design, construction, and management of test benches.
- Integrated systems for the **study of reliability** and **maintenance methodologies**.
- **Machines for wear and corrosion testing** of materials and components.
- **Industrial design** and **prototyping activities** for process-product development projects.




Schio, Vicenza
Ecor International
and Il Sentiero
International Campus
Headquarters


Formigine/Castelvetro,
Modena
Il Sentiero
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SENTIERO
INTERNATIONAL
CAMPUS



- Customers
- Private companies
 - Public bodies

Ecor International's Certifications

ISO 9001 since 1998 Quality Management System	ISO 14001 since 2004 Environmental Management System	ISO 45001 since 2013 Employers Health and Safety	AS/EN 9100 since 2010 Aerospace Industry Quality

WELDING since 2011	NON DESTRUCTIVE TESTING since 2014	HEAT TREATMENT since 2011

Our expertise

RELIABILITY ENGINEERING

We study and validate the performance of a material/component/system by replicating damage using test benches, assessing the life time, and detecting and optimising design aspects.

- Analysing the technical feasibility for project/product specification research, verification and validation
- Ensuring the definition of test specifications, studying the phenomena involved and drawing up targeted test plans
- Analysing failure modes, performance and/or innovative solutions through data analysis of experimental campaigns

JOINING TECHNOLOGIES

We analyse, test and design special processes and joining technologies for product development.

- Technical feasibility analysis and definition of the production and control cycle
- Evaluation, design and construction of the equipment necessary for industrialisation
- Validation and qualification of both the process and product and drafting of a project's technical and quality documentation

ADDITIVE MANUFACTURING

Industrial research, development and prototyping aimed at identifying the optimal solutions in terms of design, technologies and processes.

- Study of innovative materials and evaluation of their performances, in collaboration with producers and national and international research centres
- Study, identification and application of post-processing solutions that allow one to achieve the characteristics required by specific applications
- Qualification of components in terms of mechanical/physical performance and environmental resistance
- Design, optimisation and construction of prototypes in metallic and polymeric material

DESIGN PROTOTYPING

We study, design and develop machinery, plant systems and prototypes for the food, pharmaceutical and advanced mechanics industries.

- Mechanical, electrical, mechatronic and software design and prototyping
- Design, construction and operation of tailor-made test benches according to customer requirements
- Mechanical (FEA), Thermo Fluid Dynamics (CFD), and Multi-Body (MBS) multiphysics numerical simulations

SURFACE ENGINEERING

We develop process-product systems to make a surface suitable for a specific application (corrosion and wear protection, aesthetic, EM functionality...).

For these activities plants on industrial scale are available (ex. PVD, CVD, HVOF). This allows not only the development of the process/product but also the industrialization and the pre-serial activities.

- Industrial research, design and development of functional surfaces
- Construction of prototypes for process and pre-serial validation with industrial plant systems
- Laboratory analysis for functional characterisation of coatings and failure analysis

