ADDIMADOUR
ADDITIVE MANUFACTURING SOLUTIONS

ADDIMADOUR, ALWAYS INNOVATING!

Addimadour aims to remain at the forefront of innovation and boost the platform through participation in collaborative research projects, for example:

ADDIMAFIL

FUI project, development of a robotic cell and large-sized laser fusion wire deposition effectors.

Partners

ARIANE GROUP • ESTIA • ENIT • ALPHANOV • VLM • VENTANA • POLYSHAPE • SAFRAN HELICOPTER ENGINES • AIRBUS DEFENCE AND SPACE

ADDISPACE

Improvement of metal additive manufacturing processes for the aerospace industry and design of specific training courses in additive manufacturing for both initial and continuous training.

Partners

AFM • ESTIA • FADA-CATEC • GNC LASER • IK4 LORTEK • IP LEIRIA • MICRONORMA • PEMAS • VLM

TRANSFRON3D

Comparison of different additive manufacturing technologies (design, topology optimisation, simulation and manufacture).

Partners

TECNALIA • ESTIA • AKIRA • VENTANA • MIZAR • AERNNOVA • UPV / EHU

HINDCON

H2020 accredited European project, printing of large-sized concrete structures using a robot cell.

Partners

SINTEF • 20 LCA CONSULTANTS • XTREEE • ESTIA • FRAUNHOFER • LAFARGEHOLCIM • SIEMENS • FUNDACIOCIM • LMS • CSIC • VIAS • ATANGA

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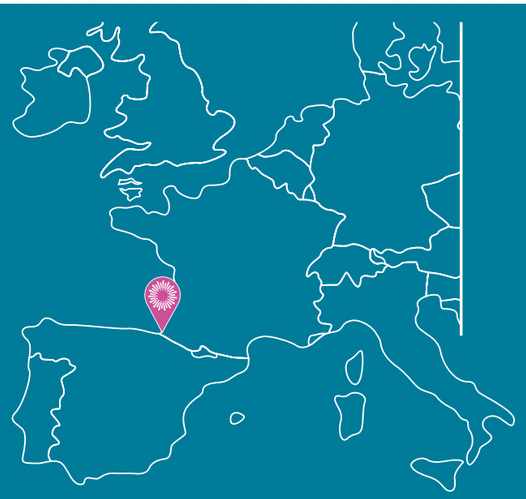

ADDRESS

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Addimadour is an ESTIA technological platform and part of

COMPOSITADOUR COMPOSITES & ROBOTICS SOLUTIONS

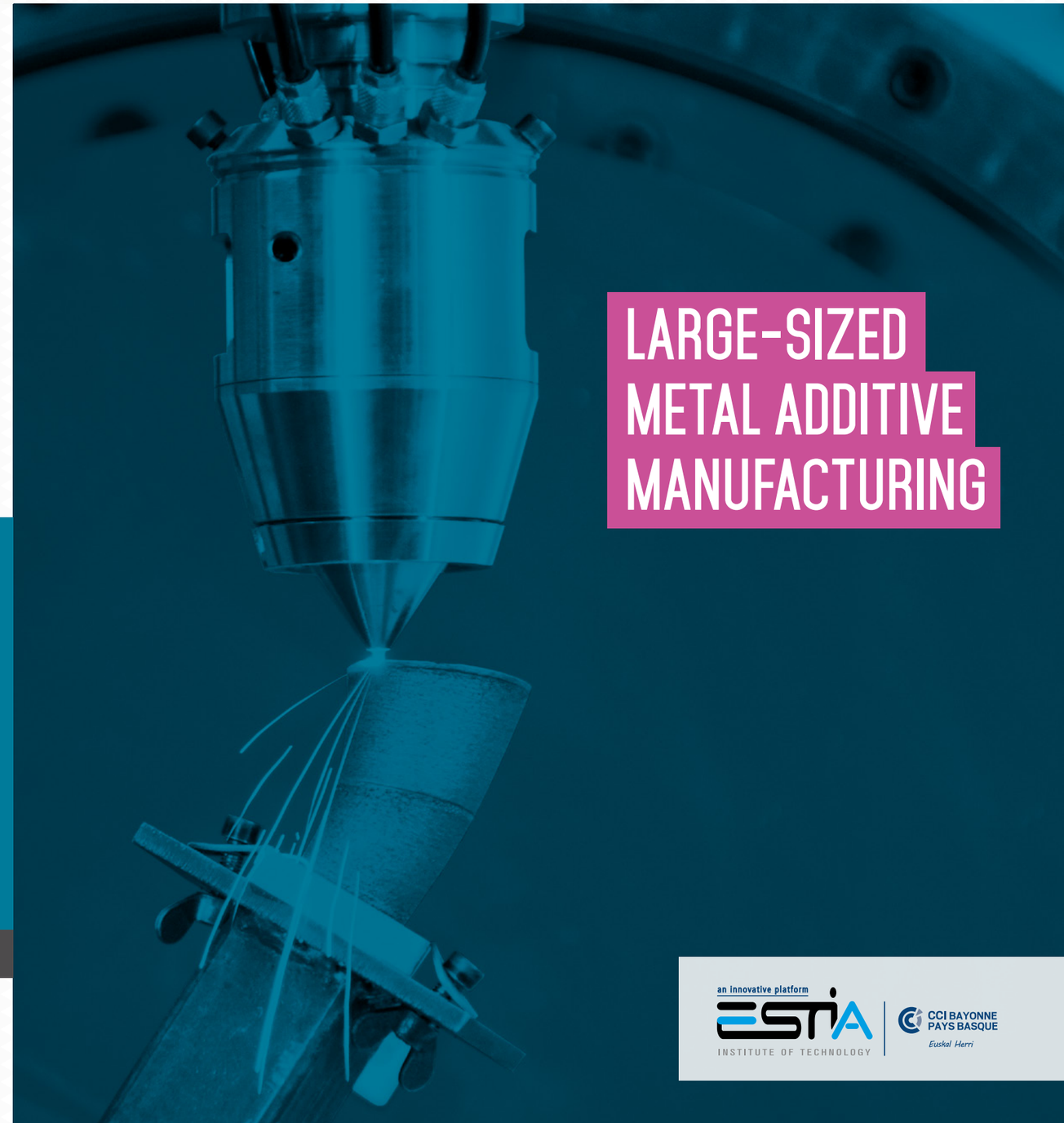
ESTIA INSTITUTE OF TECHNOLOGY

CCI BAYONNE PAYS BASQUE Euskal Herri

Région Nouvelle-Aquitaine

Union Européenne

Communauté d'agglomération PAYS BASQUE EUSKAL HIRIGUNE Elkargoa



LARGE-SIZED METAL ADDITIVE MANUFACTURING

an innovative platform
ESTIA INSTITUTE OF TECHNOLOGY
CCI BAYONNE PAYS BASQUE Euskal Herri

THE CREATION OF ADDIMADOUR

Addimadour is part of the Compositadour platform. It was launched in 2017 by and for companies in order to provide them support in the development of their metal additive manufacturing projects.

Resulting from the coming together of industrial needs and ESTIA Institute of Technology's scientific and technological means, Addimadour is ESTIA's latest platform and provides expert innovative services in metal additive manufacturing.

It adds to Compositadour's existing offer, specialised in robotic processes for implementing composite materials.

MISSIONS

1. Materialise industrial proof of concept for **large-sized parts which no other centre provides to date**.
2. Support companies from A to Z in their metal additive manufacturing projects, **from concept to manufacturing**.
3. Ensure the **transfer of projects to companies from low levels of maturity**.
4. **Improve knowledge** in additive manufacturing.
5. **Train future** engineers in industrial needs.

KEY ADVANTAGES

- An open platform dedicated to manufacturing large-sized metal parts
- Additional additive means (LMD-P, WAAM-CMT, LMD-W, SLM, COLDSPRAY)
- Skills covering the entire chain from design to making parts
- Multi-disciplinary (modelisation, topology optimisation, simulation, robotics, metalworking) and complementary (engineers, researchers, project managers) teams
- Support by ESTIA Institute of Technology

BEAM MACHINE FOR MANUFACTURING LARGE-SIZED PARTS (1200X800X800 MM)

BUSINESS SUPPORT BY ADDIMADOUR

A high-performance organisation

The response provided by Addimadour to the needs of client companies is based on a process which has proved itself and the success of Compositadour.

Needs of client companies	Pre-study	Part (re)design, topology optimisation	Selection of the raw material and/or processes	Modelisation and simulation of the part and processes	Prototype manufacture and post-treatments (Heat treatments, machining)	Qualification (metallographic analysis, mecha-nical tests)	Transfer of the results to the company

Shared complementary skills

- A dozen experts dedicated to projects
- Compositadour's expertise and facilities to complement business services
- The know-how of ESTIA Researchers

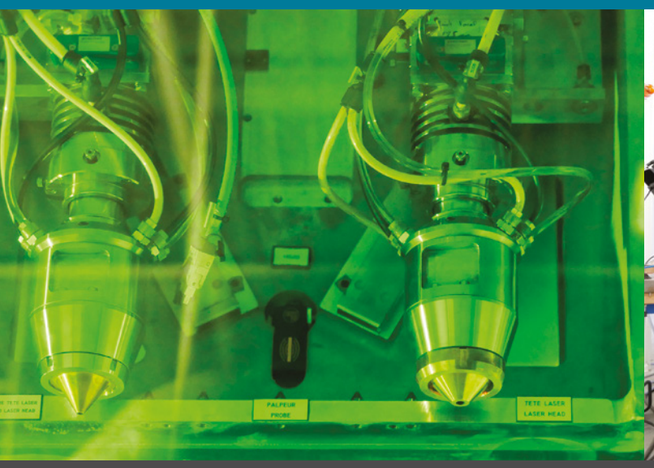
Essential expertise in design, finite element modelisation and characterisation of materials

- Modelisation & simulation
- Topology optimisation
- Design-to-cost & design-to-manufacturing
- Static and dynamic finite element analysis
- Micro-structural analysis
- Macro and micro-hardness

High-tech equipment to create large-sized parts

One of the Addimadour platform's assets is its ability to carry out large-sized metal 3D printing.

800 m2 of workshops at Bayonne's Technocité are home to three high-tech machines.

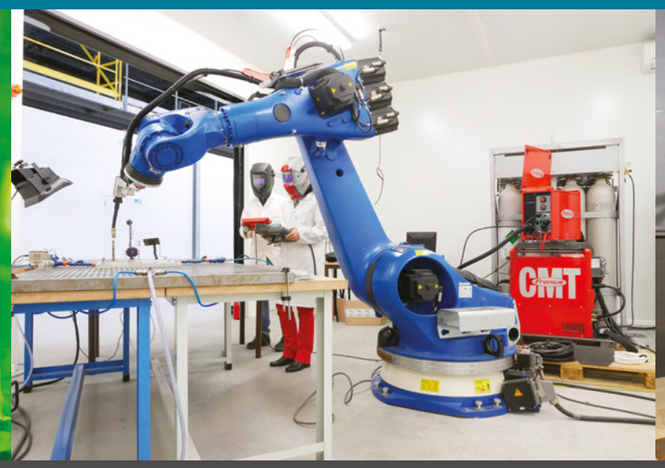


BeAM MAGIC 800, powder deposition machine (LMD-P/DED)

BeAM's MAGIC 800 machine was developed for high-tech industries for 5-axis additive manufacturing and repairs of large-sized metal parts.

- Materials: titanium, Inconel, steel, stainless steel...
- Effective dimensions (X,Y,Z) 1200 x 800 x 800 mm for 5 axes and 600 x 600 x 1500 mm for 3 axes

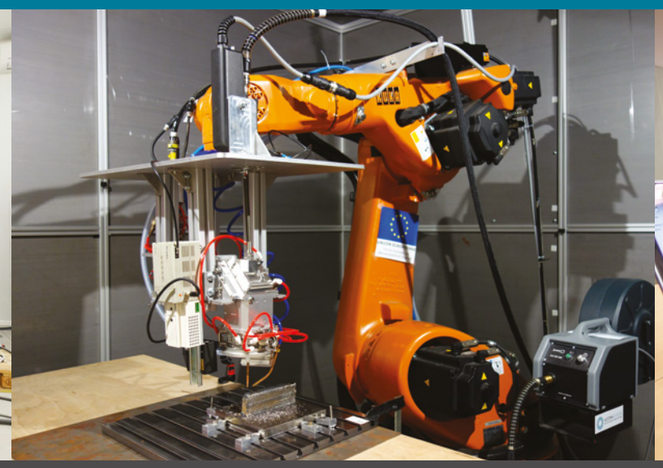
Powder deposition: a differentiating technology. This fully innovative process is what makes Addimadour stand out from other centres thanks to the creation of continuous 3D printed parts.



CMT head wire deposition robot

- Manufacture of large-sized metal parts
- Metal wire deposition process
- Materials: titanium, Inconel, steel, stainless steel, aluminium...
- Effective dimensions (X,Y,Z) 4000 x 2500 x 2000 mm

Cold Metal Transfer (CMT) is Addimadour's second differentiating technology. It enables large-sized parts (blanks) to be manufactured (several metres) with high-speed deposition and reduced residual thermal constraints.



Laser head wire deposition robot

- Manufacture of large-sized metal parts
- Metal wire deposition process
- Materials: titanium, Inconel, steel, stainless steel
- Effective dimensions (X,Y,Z) 4000 x 2500 x 2000 mm

Modelisation, Simulation

Addimadour uses leading modelisation software to design and optimise part and process simulations:

- CATIA
- ANSYS
- Rhino / Grasshopper
- Labview
- VIRFAC de GeonX
- Autodesk Power Shape
- Autodesk Power Mill
- Powerclad
- Altair Hyperworks
- Inspire Solidthinking