basque
digital
innovation
hub

We are your technology link for 4.0 solutions

BASQUE INDUSTRY 4.0

What is it?

The advanced manufacturing strategy is a priority area of the Smart Specialization Strategy RIS3 Basque Country.

Its implementation is carried out through public-private cooperation led by the Basque Industry 4.0 Steering Group.

Mission

To strengthen the position of the Basque Country as an economy with an industrial base through the promotion of knowledge intensive manufacturing.

Strategic Objectives

1

Added value

To help and guide Basque companies towards more knowledge intensive manufacturing activities which have greater added value

2

Integration of KETs

To promote multi-disciplinary and technological convergence in a structured way so as to develop best-in-class manufacturing capacities and solutions while optimizing existing resources

3

Global value chains– Cluster 2.0

To integrate local and international value chains international value chains to meet the challenges of Advanced Manufacturing using the sum of the particular capacities of each sector and its companies

4

Scaling Up

To foster collaboration and support as a catalyst for the industrialization of the results of R+D+i in Advanced Manufacturing

5

Talent

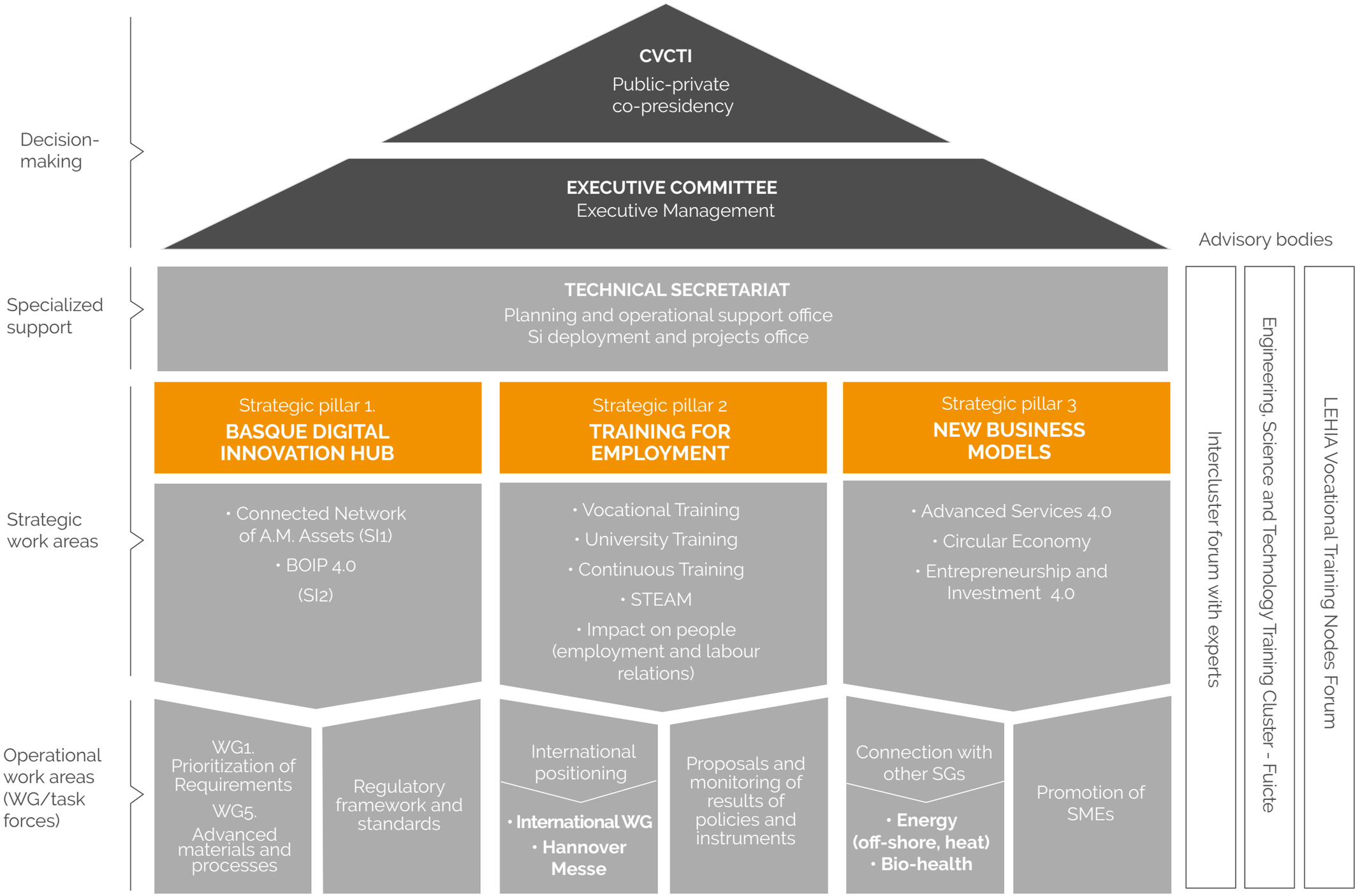
To support education and job training in technologies and management systems related to Advanced Manufacturing

Technological priorities

The commitment to technological development in advanced manufacturing is crucial to maintain the competitiveness of the industry and to ensure positioning in market niches with greater added value

Advanced materials & processes	Intelligent, Flexible & eficient, production systems	Digital & Connected Factory	Energy efficiency
Nanomaterials	Smart supply chain	Virtual Factory	Energy management tools
Joining technologies for advanced materials	Hybrid & multitasking machinery	Predictive maintenance systems	Energy consumption monitoring systems
Automatized composites manufacturing	Smart Production Systems	Integrated inspection & measurement	Energy recovery systems
Efficient processes for materials	Data management systems	Unitary level traceability	
Advanced surface tecnologies	Integrated monitoring systems	Real-time data services	
Life Cycle Assessment	Intuitive & multimodal programming		
	Human in the Loop		
	M2M Communication		

Strategic pillars



BDIH, What is it?

Connected network of advanced manufacturing assets and services. Infrastructure for training, research, testing and validation available for companies.

The BDIH is already a reality in operation

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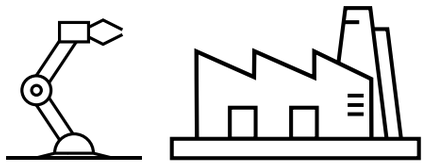
The aim of this initiative is to provide industrial enterprises, especially SMEs, with the technological capabilities needed to meet the challenges of industry 4.0.

It consists of a digitally-linked network of R+D infrastructures, pilot plants and specialized know-how in different areas of advanced manufacturing. The network will be used for the development of R+D projects, scaling of industrial projects, exhibition of cutting-edge technologies and also as a resource for training and acceleration of start ups.

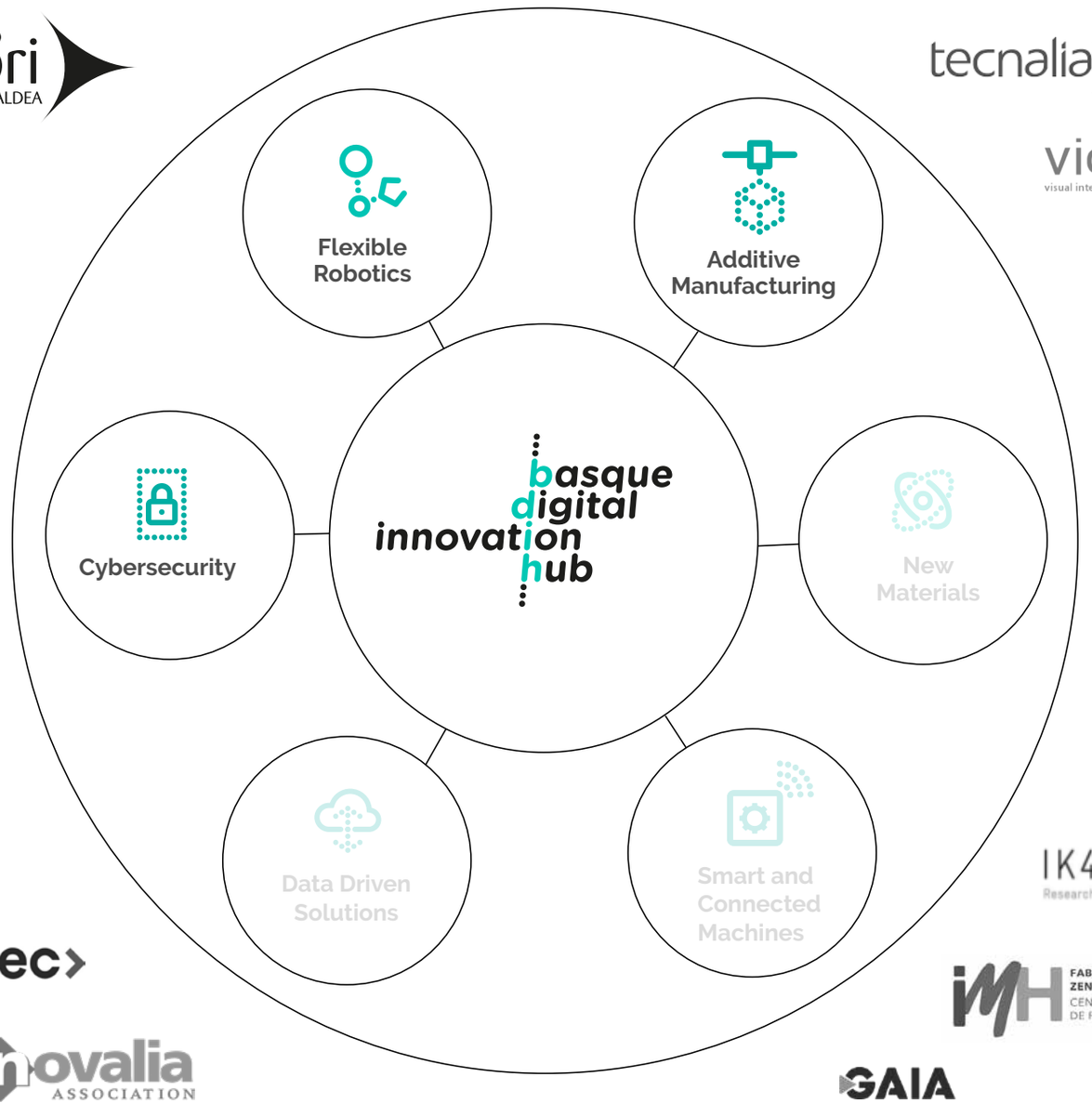
We are going to channel SME digitization in the Basque Country toward more knowledge-intensive and higher value manufacturing activities.



Assets, advanced manufacturing services, training, research, testing and validation infrastructure at the disposal of companies.

Members

The network is owned by R&D Centers, vocational training centers
and universities and is supported by regional public institutions.
It is internationally connected with other European Digital Innovation Hubs.



GRUPO spri TALDEA

MONDRAGON UNIBERTSITATEA

ceit IK4 Research Alliance

IK4 TEKNIKER Research Alliance

Universidad del País Vasco · Euskal Herriko Unibertsitatea

IK4 IKERLAN Research Alliance

cidetec

innovalia ASSOCIATION

tecnalia Inspiring Business

vicomtech visual interaction & communication technologies

(bcam) basque center for applied mathematics

IK4 LORTEK Research Alliance

BASQUE CYBERSECURITY CENTRE

GAIKER IK4 Research Alliance

IK4 IDEKO Research Alliance

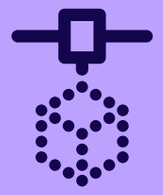
FABRIKAZIOAREN ZENTRO AURRERATUA CENTRO AVANZADO DE FABRICACIÓN

GAIA

Nodes

6 work areas in which
we classify knowledge and technology

Flexible Robotics



Additive Manufacturing

Cybersecurity

Data Driven
Solutions

New Materials

Smart and
Connected Machines

Our offer

We provide companies with infrastructure, equipment and knowledge

Technological-economic advice

bdih

- Need Analysis
- 360 vision technological assessment
- Collaboration & coworking
- Technological Prospective & State of the Art
- Technological Analysis
- Economic viability Analysis
- Proof of Concept

Design, prototyping and validation

bdih

- Conceptual Design
- Simulation, solution architecture
- Safety Analysis
- Prototyping, programming and experimental validation
- Technological transfer for industrialisation

Awareness and Training

bdih

- Showroom
- Training Workshops (<1 day)
- Training (+ 1 day)

More than 100 4.0 assets

Offer of technological-economic advice, design prototyping and validation, and training and awareness-raising in fields applicable to:

Flexible Robotics

- Advanced manipulation with robots
- Internal logistics with mobile robots
- Manufacture and assembly of components by robots
- Quality Control with Robots
- Flexibility for robotics applications

CABLECRANE: robotic gantry crane for fully controlled handling and assembling.

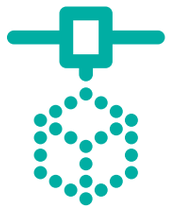
Assets | Flexible Robotics

Cell for research on robotic machining.

MUGIRO: Customizable omnidirectional mobile robot with autonomous navigation and teleoperation.

NEXTAGE-Open - Dual arm robot with humanoid torso.

Offer of technological-economic advice, design prototyping and validation, and training and awareness-raising in fields applicable to:

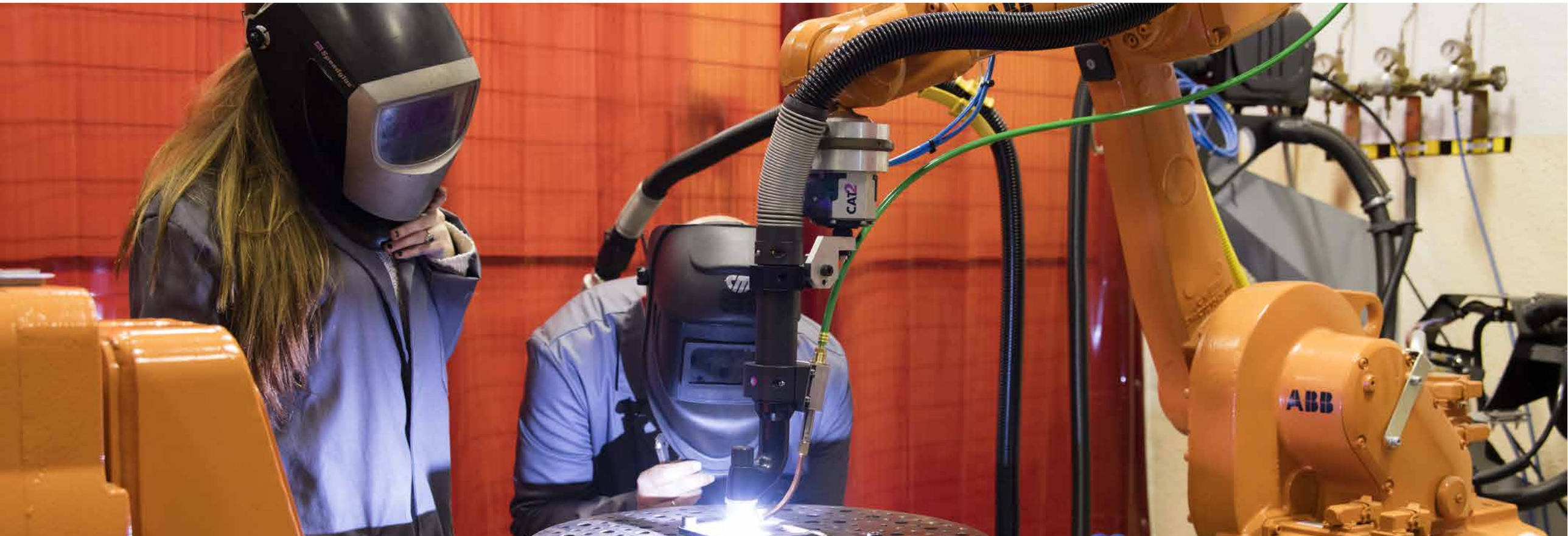


Additive Manufacturing

- AM/3D Printing process
- Design for AM and Digital pre-processing
- Post process
- Materials for 3D/AM
- AM Digital Chain
- Supporting technologies and processes
- AM Process Validation

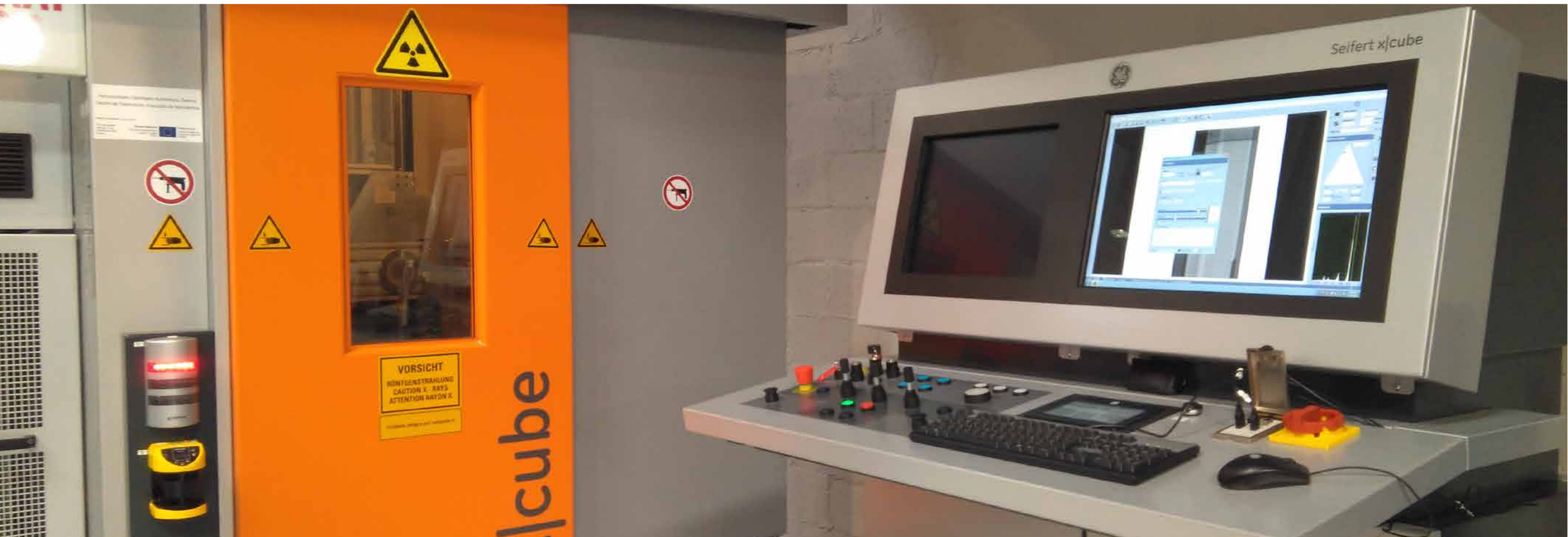
Assets | Additive Manufacturing

Metal cladding cell (Robot IRB-1600 ABB) and plasma welding machine SBI (PMI-280B)



Assets | Additive Manufacturing

RX/computer tomography cell GE model X-CUBE compact 225



Assets | Additive Manufacturing

Additive manufacturing of continuous fiber composites

Assets | Additive Manufacturing

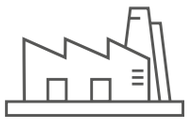
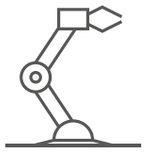
Laser laboratory for the analysis and development of solutions for additive manufacturing.

Assets | Additive Manufacturing

Manufacturing Processes Lab

Request your proposal

The aim of this initiative is to provide industrial enterprises, especially SMEs, with the technological capabilities needed to meet the challenges of industry 4.0.

1	2	3	4
Need to know, test or develop 4.0 technologies?	Take a look at our offer	Tell us your requirements	Our 4.0 link person will contact you
			

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EUSKO JAURLARITZA
GOBIERNO VASCO

EKONOMIAREN GARAPEN
ETA AZPIEGITURA SAILA

DEPARTAMENTO DE DESARROLLO
ECONÓMICO E INFRAESTRUCTURAS