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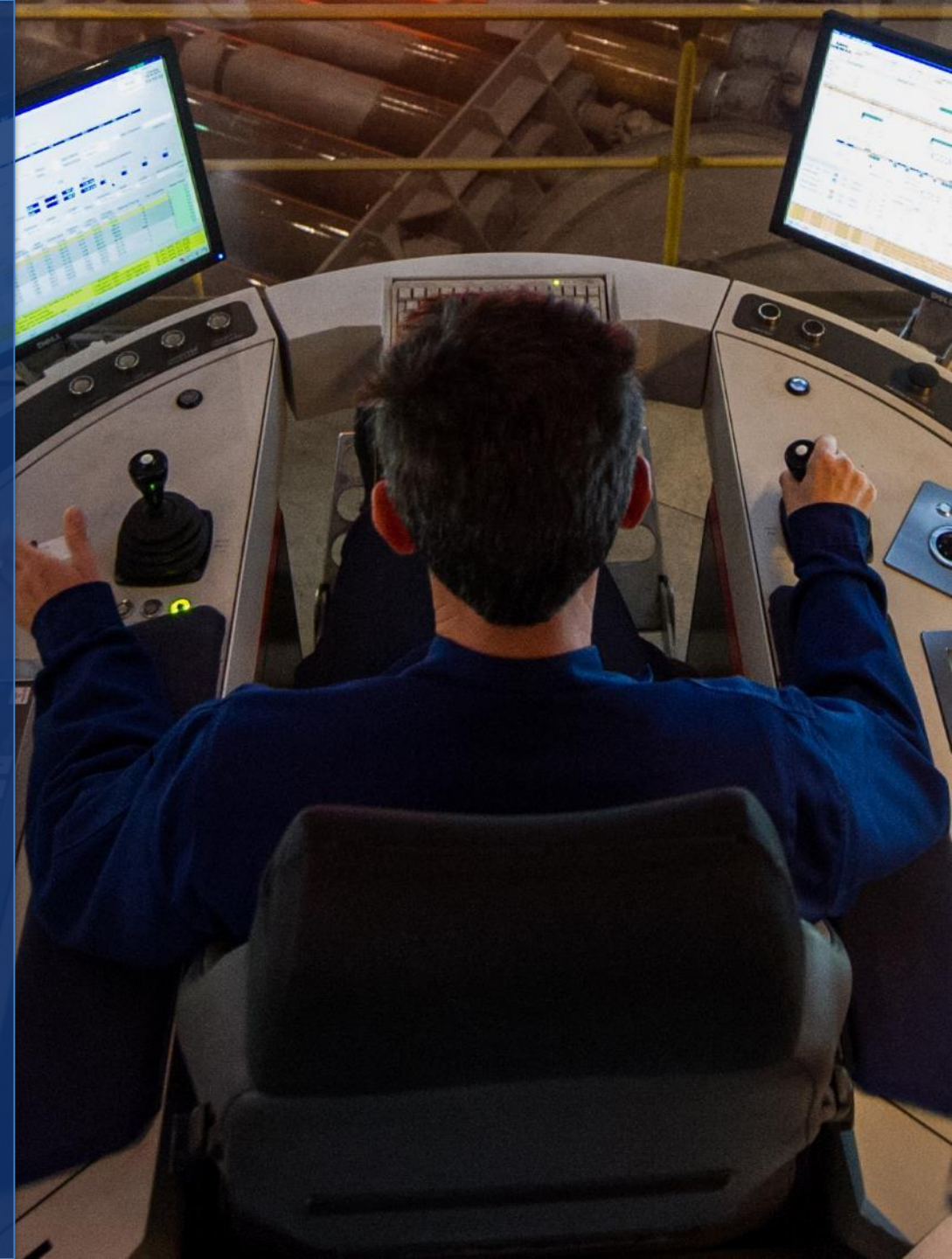
Blueprint “New Skills Agenda Steel”:  
Industry-driven sustainable European Steel Skills Agenda and Strategy (ESSA)

## Mid-term Conference of the European Steel Skills Alliance (ESSA)

### „Skills and Jobs in the Future-Proven Steel Industry“

27<sup>th</sup> & 28<sup>th</sup> of May 2021

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*Polo del Acero*  
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*ArcelorMittal*



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# 9. Regional Rollout Steel Regions



## A. Polo del Acero (Steel Innovation Cluster)



[www.polodelacero.com](http://www.polodelacero.com)



### Mission:

- ✓ Boosting leadership of Steel Innovation Cluster by means of **technological differentiation** of its products and processes.
- ✓ **Promoting technological collaboration** that allows assuming projects with large scope, attracting talent and new companies.
- ✓ **Promoting innovation and technology development** among the Cluster members.

The objectives include the **promotion of training and qualification** in all matters related to R&D&i within the **Steel Value Chain**



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## Main features

- ✓ 19 partners
- ✓ Turnover close to 5.000 M€ (80% partners cover 80% of the sector)
- ✓ Almost 10,000 direct employment (49% of the sector).
- ✓ Working Groups for turning the strategic approach into outcomes for the partners.
- ✓ R&D Activities and Training as example

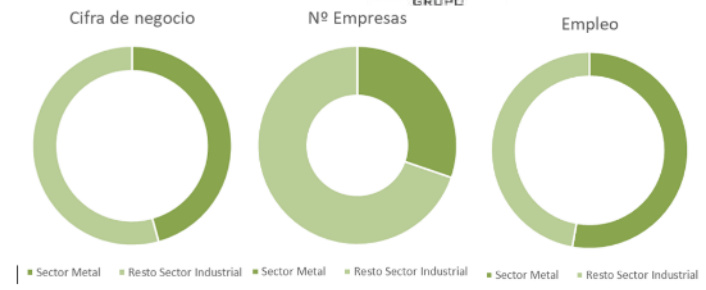


ILUSTRACIÓN 12. RELEVANCIA DE LAS EMPRESAS DEL SECTOR DE APLICACIÓN DEL POLO EN EL ÁMBITO INDUSTRIAL ASTURIANO. FUENTE: DIRCE ENCUESTA INDUSTRIAL DE EMPRESAS Y ESTADÍSTICA ESTRUCTURAL DE EMPRESAS: SECTOR INDUSTRIAL (INE)



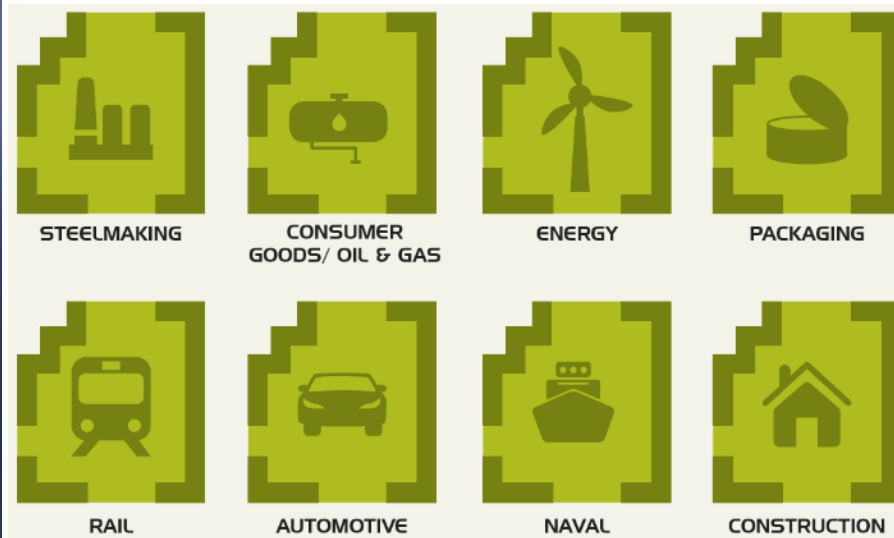
ILUSTRACIÓN 19: DISTRIBUCIÓN DE MIEMBROS EN FUNCIÓN DE SU CIFRA DE NEGOCIO Y EMPLEO DIRECTO ASOCIADO (2017)

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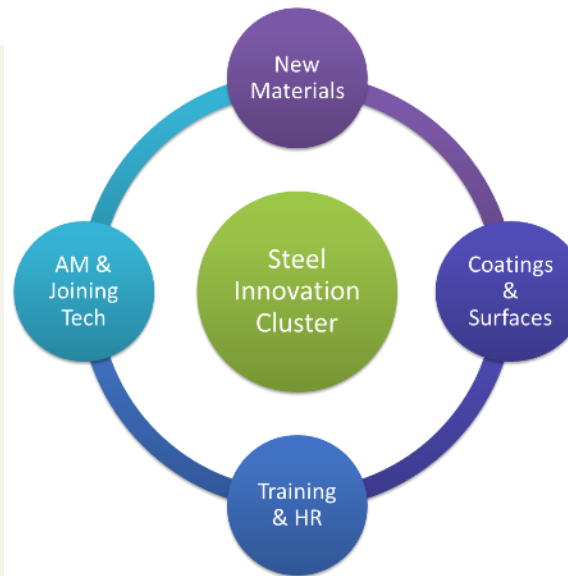


Asturias region covers several value chains with steel products. The clusters aims at **improving competitiveness** at the same time that facing **current challenges** such as twin transition and promoting the **skills** for the future.

## Sectors Involved



## Working Groups





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## B. CALDIA

### Training Initiative

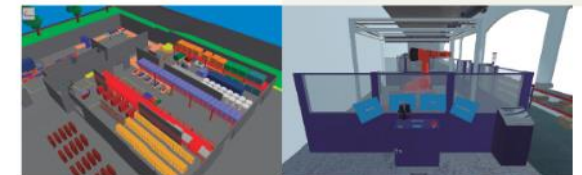
- **3 times since 2017.** More than 150 participants from Industry.
- Open to partners all along the **Steel Value Chain**
- Including tailored modules for the **promotion of Digital Competences**
- **Digital skills** include Advanced Manufacturing, Sensors, Data, Process Simulation or Digital Twins
- Special focus on solving particular challenges **under collaborative schemes**



**MÓDULO 8: TECNOLOGÍAS DIGITALES (I.4.0). FÁBRICAS DEL FUTURO**

*Objetivo: Aplicación de tecnologías dirigidas a facilitar la transformación digital.*

- Robótica, Visión artificial y Realidad virtual/aumentada
- Gemelo digital y Simulación de procesos
- Inteligencia artificial
- Fabricación Avanzada

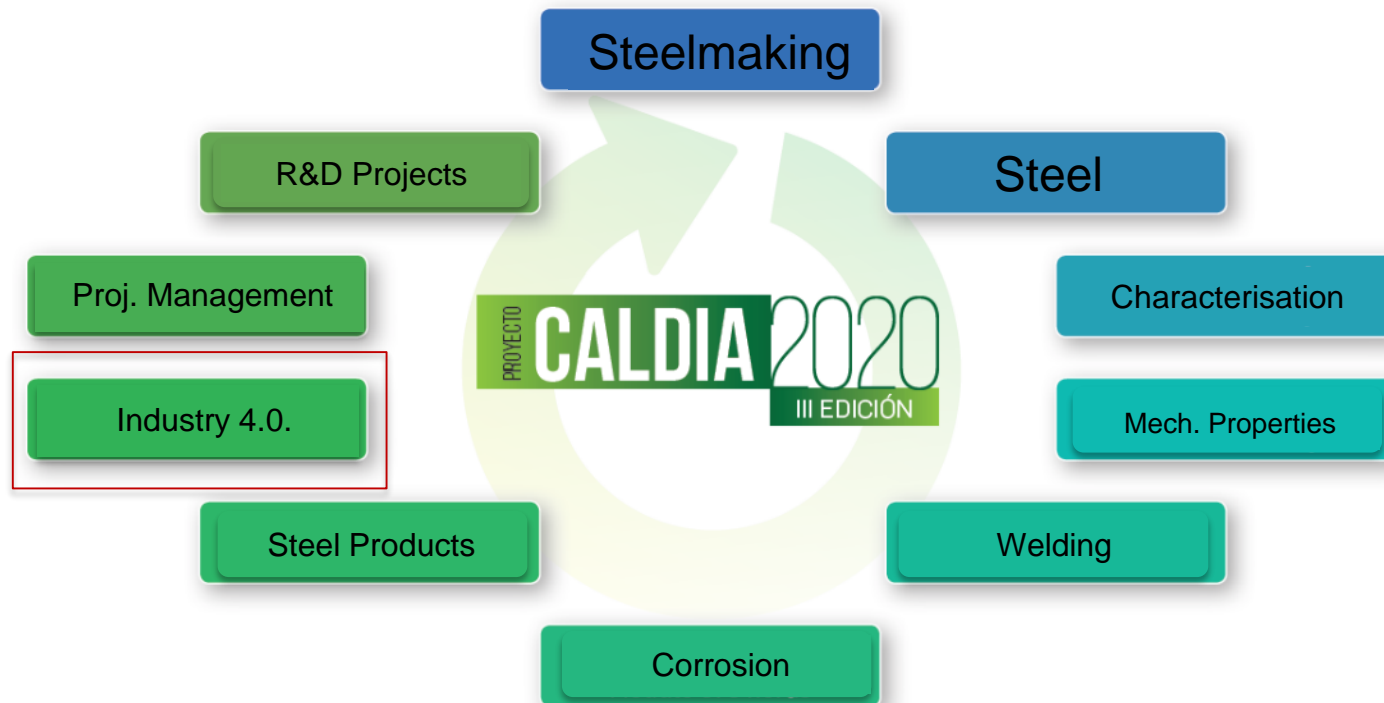


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Training course (200h) with an integrated approach

- Arranged for industry technical staff and for young professionals
- Involvement of steelmaker and metal processing firms, as well as Materials Research Centre and University.



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B. High regional involvement in education/ training activities and in ERASMUS+ projects with direct impact on Steel industry

ERASMUS+ Blueprint “SAM: Sector Skills Strategy in Additive Manufacturing” where IDONIAL is a key partner



+ **SAM** aims to tackle the current European need for developing an effective system to identify and anticipate the **right skills and profiles** for sectors where Additive Manufacturing (AM) plays a role.

+ In response to the increasing labour market needs, thus, contributing for the smart, sustainable and inclusive growth and **industrial implementation of AM.**

**\*International Qualification system established** implemented through a network of AM training Centres



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-IDONIAL (Asturias Region) as 1<sup>st</sup> Spanish **Authorised Training Body**

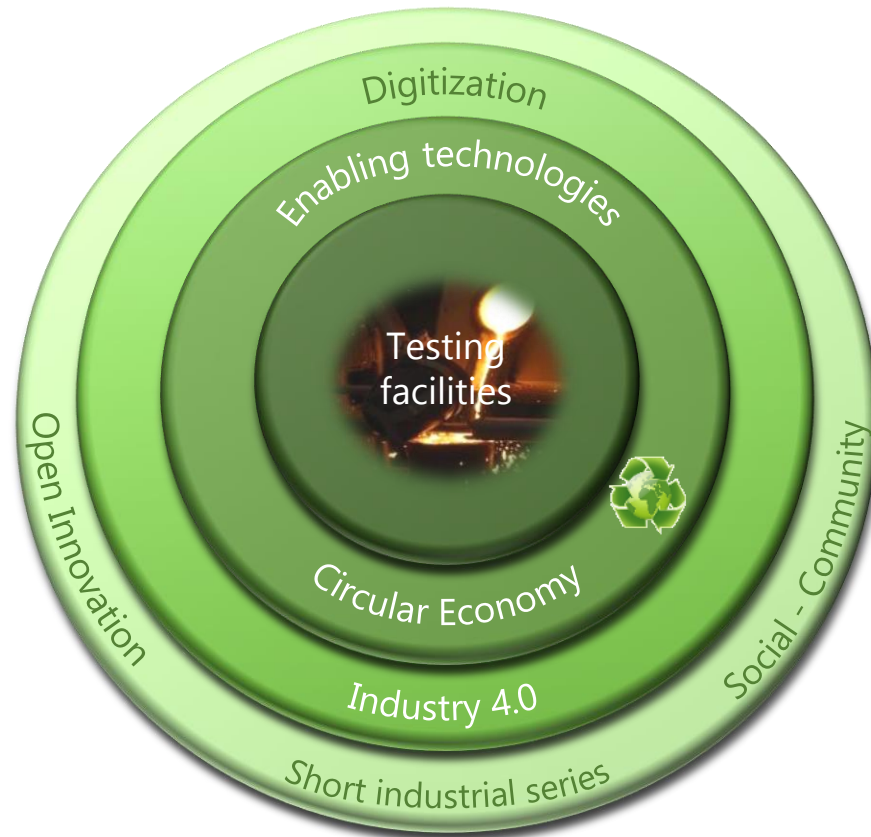
-Profiles created for METAL AM processes in industry and training courses in place:

Operator, Designer, Inspector and Supervisor

- ✓ Design new training curricula and assessment tools
- ✓ Innovative training approaches

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## C. STEEL SQUARE. An strategic asset



Open Innovation Ecosystem blending material science, manufacturing, technology and digitization

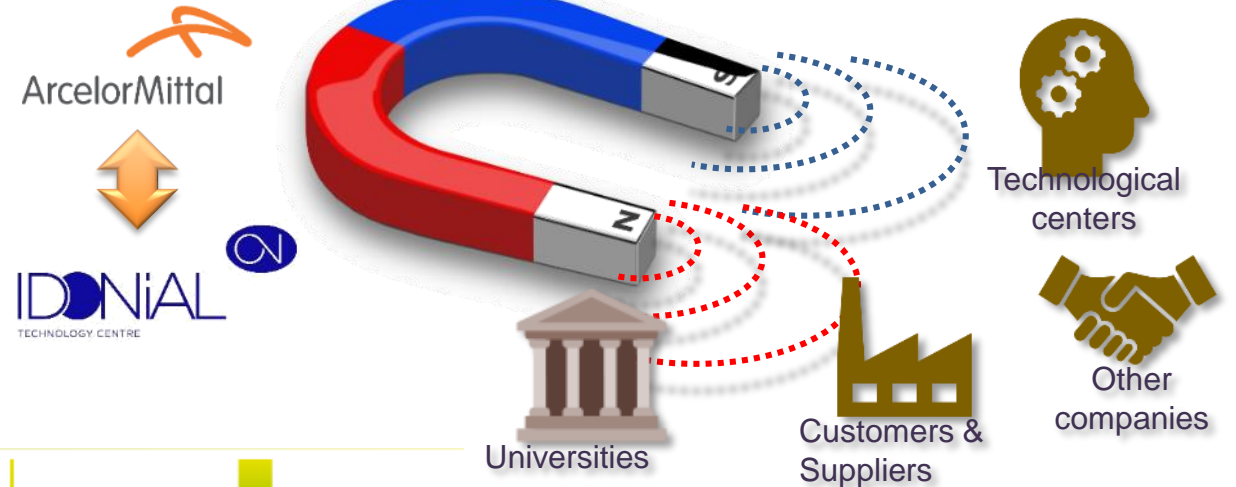
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## STEEL SQUARE. An strategic asset

Origin: Strategic Partnership  
Between ArcelorMittal and Idonial

### Key Objectives



Collaboration to  
become **competitive**



Time-to-Market  
**Reduction**  
Industrial  
Application



Lab scale

Added Value.  
**New products and processes**





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## STEEL SQUARE. An strategic asset

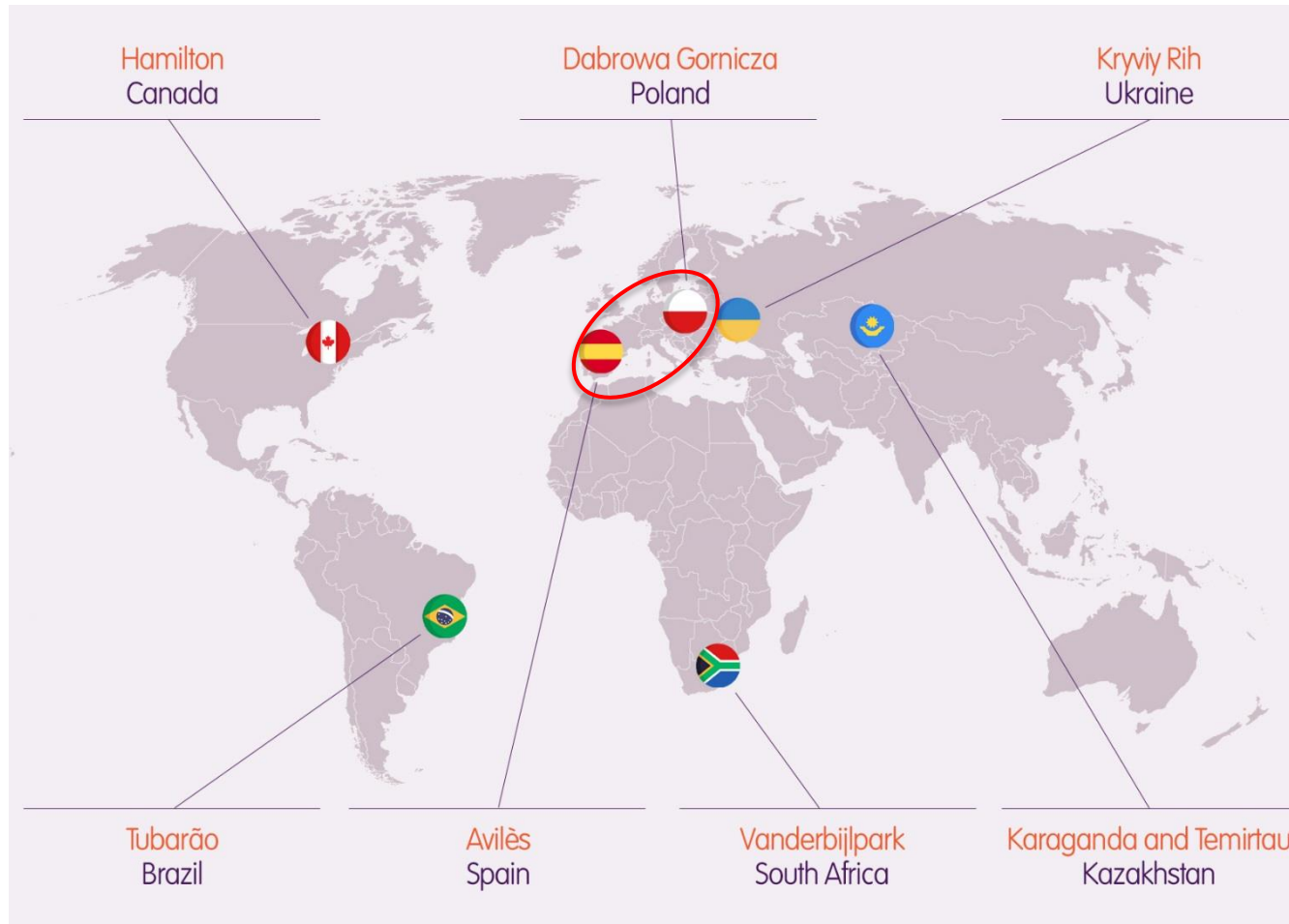


1. Composition and process design
2. Controlled induction melting
3. Chemical analysis
4. Machining
5. Heating
6. Hot / Cold rolling
7. Cutting/ Thermal coating
8. Controlled Cooling
9. Mechanical properties testing
10. Microstructure analysis
11. Cold rolling
12. Controlled annealing and hdg
13. Funtional coatings
14. Coating testing
15. Auxiliary tech.



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## ArcelorMittal University Regional Campuses



ArcelorMittal Spain Holding and ArcelorMittal Poland are partners of ESSA Project.

Both countries have regional campuses of ArcelorMittal University.

Both campuses can be a key factor in the test and roll out of ESSA project tools.

# 9. Regional Rollout Steel Regions

## E. CONCLUSIONS

- **Asturias region** has a powerful role in Steel-related developments.
- Activities in training and acquisition of **skills adapted to the Digital Transformation** are ongoing.
- **Collaborative R&D Approaches** are being promoted together with Steelmaker, RTOs and industries involved all along the value chain.
- **Steel Square** is a unique facility that provides solutions in and for steel





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Thanks for your attention!  
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SteelValueChain  
Technology  
Quality  
Internationalisation  
Differentiation  
TechnologyDevelopment  
Promotion  
Innovation  
STEEL  
AppliedResearch  
SmartSpecialization  
R&D&i  
Leadership  
Collaboration  
CompetivenessImprovement

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