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# **Status report Institute for Business Competitiveness of Castilla y León, ICE, Valladolid**

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# Basic Facts of Castilla y León

- **LARGE:** The 3rd largest Region in Europe: 94,227 km<sup>2</sup> (18.6% of the Spanish territory).
- **RURAL:** 2,249 cities and towns (30% of Spanish ones). 2,224 municipalities < 10,000 inhab.



Central location in Spain  
Economic, Geographical and Cultural nexus  
Surrounded by 9 of 17 Spanish Regions

- **IMPORTANT ENVIRONMENT:** 26,13 % of its area is included in Natura 2000 Network
- 2,454,858 inhabitants (2016) (5,28 % of Spain' population, 6th most populated country in Europe)
- **SPARCELY POPULATED:** Castilla y León: 26.3 inhabitants / km<sup>2</sup> (some areas < 7)
- **AGEING POPULATION:** 24.33% of the population is over 65 years old
- **MEDIUM SIZE CITIES:** the most populated city is Valladolid (301,876 inhabitants)
- **UNEMPLOYMENT:** Castilla y León **unemployment rate (2016): 15.8%** (Spain 19.6%)
- **“MORE DEVELOPED REGION” (>90% EU average):** 2015 GDP (in PPS) = 59,910 M€. 2015 GDP (in PPS per cápita) = 24,300 €
- 2016 Export in Castilla y León reached an historic value of 27% of its GDP.



# Economic Structure

## Evolution of the economic structure (GAV) in Castilla y León

	2000	2005	2010	2015
<b>AGRICULTURE</b>	7.2%	5.6%	5.0%	4.4%
<b>INDUSTRY &amp; ENERGY</b>	22.4%	20.3%	17.1%	22.0%
<b>CONSTRUCTION</b>	8.4%	10.1%	8.7%	6.1%
<b>SERVICES</b>	62.0%	64.0%	69.2%	67.5%

Figure 5. Castilla y León specialisation pattern components

### ECONOMIC SPECIALISATION PATTERN

- Food and agriculture industry
- Automobile industry, Components, and Equipment
- Health Care and Quality of Life
- Tourism, Heritage, and Spanish Language
- Energy and Industrial Environment
- Habitat

### SCIENTIFIC SPECIALISATION PATTERN

- Medicine
- Agriculture, Biology, and Veterinary Sciences
- Chemistry and Material Sciences
- Earth and Environmental Sciences
- Engineering

### TECHNOLOGICAL SPECIALISATION PATTERN

- Advanced Materials
- ICT
- Biotechnology
- Advanced Processes and Manufacturing

# CASTILLA Y LEÓN RIS 3



Mining

## THEMATIC PRIORITIES

1. **Agriculture and Food Industry** and natural resources act as catalysts for the expansion of innovation throughout the region.
2. Productive efficiency in transport sectors such as **Automobiles manufacturing and Aeronautics**, making materials and components the keys to leadership and sustainability.
3. Application of knowledge and technology **in health and social care, demographic change and well-being** for the improvement of citizen quality of life.
4. **Natural Heritage, Cultural Heritage, and Spanish Language**, internal resources that are the base for regional sustainability.
5. R&D in **Information and Communication Technologies, Energy & Sustainability** for comprehensive global competitiveness based on cross-cutting technology and knowledge.



# Mineral sector

## **CyL Mineral characteristics: Very favorable and interesting mining potential**

- Wide geographical spread
- Wide geological diversity

## **Mineral production:**

- 2015 Mineral Production value: 314 M€ (2015), approximately 0.7% of regional GDP (3<sup>rd</sup> national position with 12% of mining GDP, behind Andalusia and Catalonia)
- 3,715 direct jobs in 2015

## **Mineral resources:**

- Tungsten/Wolfram (is expected to achieve by 2018 40% of the EU W production in Salamanca)
- Sodium Sulfate (65% of national production in Belorado area-Burgos)
- Potassium Feldspar (55% of national production in Segovia)
- Attapulgitite (90% of the national production in Bercimuel-Segovia)
- Slate (producing almost 35% of the world production in la Cabrera-León; Spain is the world leader country with 90% of the worldwide production)
- Magnesite (25% of national production in Soria)
- Uranium in Salamanca

# Mining Statistic in Castilla y León



## THE CASTILLA Y LEON MINING ACTIVITY (Mining Statistics 2015 MINETUR)

CASTILLA Y LEÓN (2015)	VALUE		Nº EXPLOITATIONS		HUMAN RESOURCES	
	M€	%	NUM.	%	NUM.	%
Industrial minerals	132	42,21%	17	3,63%	473	12,73%
Ornamental rock	68	21,71%	99	21,15%	1.062	28,59%
Energy minerals	32	10,21%	10	2,14%	609	16,39%
Quarry Products	64	20,32%	341	72,86%	1.452	39,08%
Metal mining	17	5,55%	1	0,21%	119	3,20%
<b>TOTAL</b>	<b>314</b>	<b>100,00%</b>	<b>468</b>	<b>100,00%</b>	<b>3.715</b>	<b>100,00%</b>



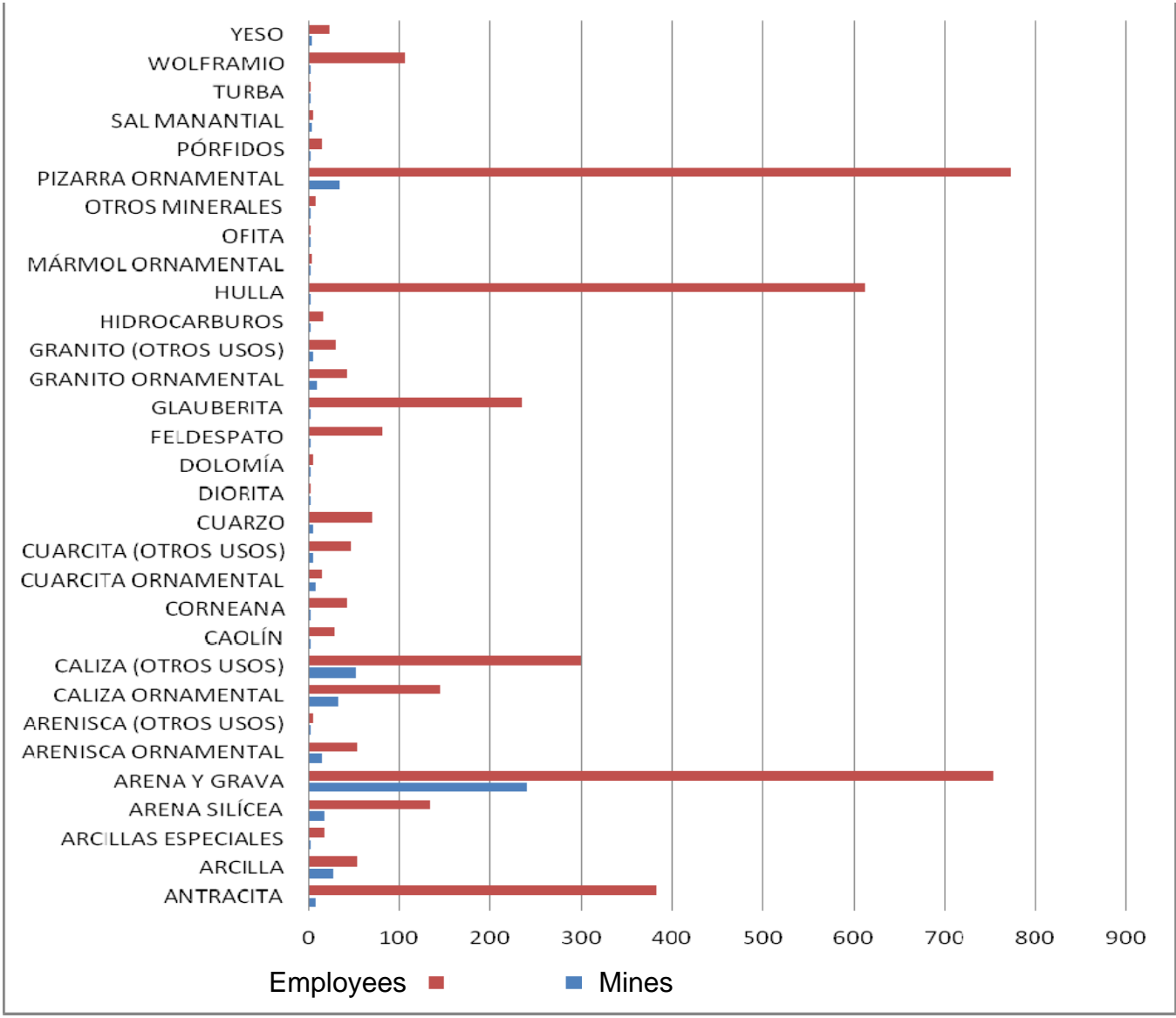
# Mining Statistic in Castilla y León

## THE CASTILLA Y LEON MINING ACTIVITY by provinces (Mining Statistics 2015 MINETUR)

CASTILLA Y LEÓN (2015)	VALOR	
	€	%
BURGOS	120.767.836,00	39%
LEON	101.560.346,00	32%
SEGOVIA	30.156.024,00	10%
SALAMANCA	26.205.814,00	8%
ZAMORA	11.311.645,00	4%
PALENCIA	7.841.930,00	3%
AVILA	7.463.081,00	2%
SORIA	4.160.185,00	1%
VALLADOLID	4.096.665,00	1%
<b>TOTALES</b>	<b>313.563.526,00</b>	<b>100%</b>

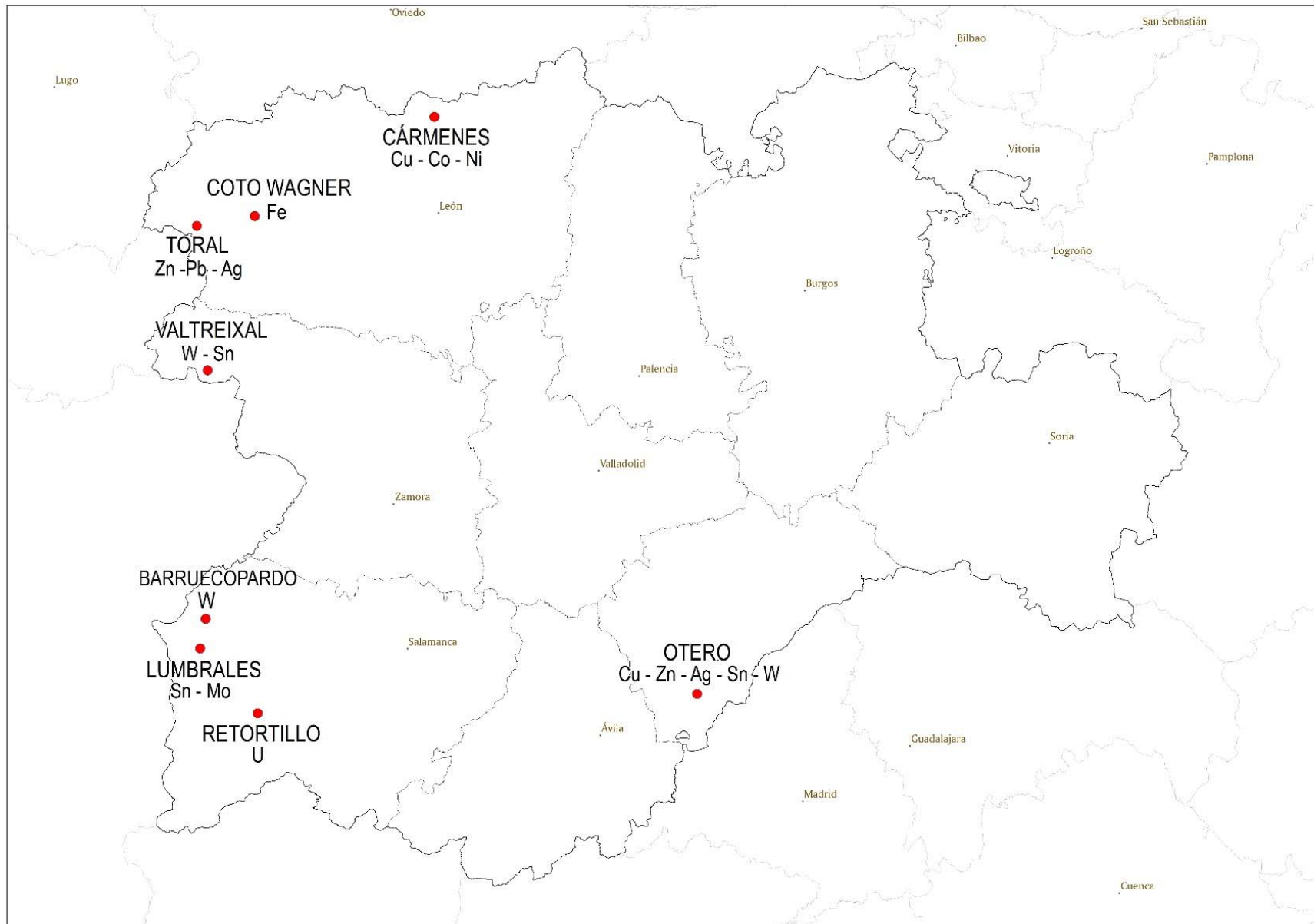
CASTILLA Y LEÓN (2015)	TOTALES			
	Nº EXPLT	%	PERSONAL	%
AVILA	21	4%	108	3%
BURGOS	80	17%	685	18%
LEON	92	20%	1.521	41%
PALENCIA	24	5%	149	4%
SALAMANCA	32	7%	331	9%
SEGOVIA	83	18%	299	8%
SORIA	33	7%	137	4%
VALLADOLID	51	11%	180	5%
ZAMORA	52	11%	305	8%
<b>TOTALES</b>	<b>468</b>	<b>100%</b>	<b>3.715</b>	<b>100%</b>

# Number of Mines and Employees





# ADVANCED PROJECTS



# STRATEGY OF MINERAL RESOURCES IN CASTILLA Y LEON 2017-2020



STRATEGIC AIM (actions)	NUM.	MAIN LINES
1.- MINING & ENVIRONMENTAL ORDINANCE	1	<i>Mining potential</i>
	2	<i>Legal regulations</i>
	3	<i>Environmental issues</i>
2.- SURVEILLANCE AND CONTROL	1	<i>Inspection</i>
	2	<i>Specific interventions</i>
3.- ECONOMIC VALUATION	1	<i>Territorial</i>
	2	<i>Bussines</i>
4.- ADMINISTRATIVE EFECTIVENESS	1	<i>Structural</i>
	2	<i>Operational</i>
5.- KNOWLEDGE MANAGEMENT	1	<i>Training</i>
	2	<i>Information and dissemination</i>

# STRATEGY OF MINERAL RESOURCES IN CASTILLA Y LEON 2017-2020



STRATEGIC AIM (AXIS)	NUM .	LINES	NUM.	ACTIONS	NUM .
<b>1.- MINING AND ENVIRONMENTAL ORDINANCE</b>	1	<i>MinIng potential</i>	1	<i>Updating the Repository OF geological and mining fund</i>	1
			2	<i>Organization of a congress on mining</i>	2
			3	<i>Participation in European cooperation programs related to research and exploitation of mineral raw materials</i>	3
	2	<i>Legal regulations</i>	1	<i>Development of general provisions of mining regulations</i>	4
			2	<i>Development of instructions on mining regulations</i>	5
			3	<i>Promote amendments in Regulation of Urban Planning in Castilla y León to remove prohibitions on the mining sector</i>	6
	3	<i>Environmental issues</i>	1	<i>Promotion of a new joint Decree with the Environment authorities related to restoration of Natural Areas affected by mining activities</i>	7
			2	<i>Reform of the Instruction on financial guarantees or equivalent. Regularization Plan of financial guarantees or equivalent</i>	8
			3	<i>Plan of integration and rehabilitation of old mining and their structures</i>	9

# STRATEGY OF MINERAL RESOURCES IN CASTILLA Y LEON 2017-2020



STRATEGIC AIM (AXIS)	NUM .	LINES	NUM.	ACTIONS	NUM.
2.- SURVEILLANCE AND CONTROL	1	Inspections	1	<i>New collaborations with the National Institute of Silicosis</i>	1
			2	<i>Strategic and Operational Inspection Plans for the mining sector</i>	2
			3	<i>Update and implementation of procedures, inspection protocols and inspection guides</i>	3
	2	Specific Interventions	1	<i>Coordination of accidents and incidents with 112 (the SOS service)</i>	4
			2	<i>Supervision of outdoor mining projects through drones and appropriate software</i>	5
			3	<i>Incentives on safety and health in work</i>	6

# STRATEGY OF MINERAL RESOURCES IN CASTILLA Y LEON 2017-2020



STRATEGIC AIM (AXIS)	NUM.	LINES	NUM.	ACTIONS	NUM.
3.- ECONOMIC VALUATION	1	Territorial	1	<i>Economic boost for Coal Mining areas</i>	1
			2	<i>Plan of valuation of the geo-mining heritage</i>	2
			3	<i>Support for Corporate Social Responsibility</i>	3
	2	Business	1	<i>Support for research, development and implementation of new technologies in the mining sector</i>	4
			2	<i>Support for marketing and exports of mining products</i>	5
			3	<i>Energy efficiency and saving plan in the mining sector</i>	6

# STRATEGY OF MINERAL RESOURCES IN CASTILLA Y LEON 2017-2020



STRATEGIC AIM (AXIS)	NUM.	LINES	NUM.	ACTIONS	NUM.
4.- ADMINISTRATIVE EFFECTIVENESS	1	Structural	1	<i>New configuration and new phase for the Castilla y León Regional Mining Commission</i>	1
			2	<i>Reallocation and structural configuration of resources for a new operation and mining horizon</i>	2
			3	<i>Decree on administrative of mining related procedures</i>	3
	2	Operational	1	<i>Reinforcement of the electronic procedure for mining issues</i>	4
			2	<i>Inter - administrative collaboration in basic and regional regulations</i>	5
			3	<i>Update and improvement of the Administration's web for mining in Castilla y León.</i>	6

# STRATEGY OF MINERAL RESOURCES IN CASTILLA Y LEON 2017-2020



STRATEGIC AIM (AXIS)	NUM.	LINES	NUM.	ACTIONS	NUM.
5.- KNOWLEDGE MANAGEMENT	1	Training	1	<i>Training updated plan for civil servants subject to the Mining Regional Administration</i>	1
			2	<i>Support for vocational training and lifelong learning specialists</i>	2
			3	<i>Conferences for professionals related to the mining sector</i>	3
			4	<i>Collaboration with the Universities of the region for organizing students practices in the Mining Administration.</i>	4
	2	Information and dissemination	1	<i>Mining statistics</i>	5
			2	<i>Mining Registry</i>	6
			3	<i>Dissemination and better image plan for the mining sector</i>	7

# STRATEGY OF MINERAL RESOURCES IN CASTILLA Y LEON 2017-2020



## MAIN OBJECTIVES

### •Administration.

Reconfiguring the administrative model to contribute to achieve improvements in the mining sector.

### Mining sector.

•**Boosting the improvement of the mining activities competitiveness which will develop the mining potential in Castilla y León.**

### Society.

•An improved integration of mining activities in the whole society and its sustainable integration in the territory.

ICE can contribute above all with the second objective, **fostering the international R&D&i, which helps entities to be more competitive.**



# ERDF Operational Programme of CyL



## 2014-2020 ERDF Operational Programme of Castilla y León

Total budget: 628.806.439,00 €

PRIORITY AXES	FINANCING	PERCENTAGE
Axis 1: To improve research, technological development and innovation	€ 183.895.194	29,24 %
Axis 2: To improve the use and quality of the ICT and the access to it	€ 49.374.272	7,85 %
Axis 3. To improve the competitiveness of the small and medium enterprises	€ 177.878.430	28,3 %
Axis 4. To encourage a low economy in carbon in all the sectors.	€ 59.292.578	9,43 %
Axis 6. To protect the environment and promote the efficiency of the resources.	€ 154.365.964	24,55 %
Axis of TECHNICAL SUPPORT	€ 4.000.000	0,64%
<b>TOTAL</b>	<b>€ 628.806.438</b>	<b>100 %</b>

# REMIX Addressed Policy Instrument



## 2014-2020 ERDF Operational Programme of Castilla y León

**Objective 1:** Fostering of Research, Technological Development and Innovation.

**Objective 6:** Preserving and protecting the environment and promoting resource efficiency.

- to reach a sustainable mining preserving the environment
- to achieve the best efficiency in the use of natural resources



through international learning and collaboration in R&D&i  
**ICE main objectives**



**Internationalization.** To promote the participation of Castilla y León entities regarding mining in European structures and programmes (H2020, Interreg, EIP Raw Materials, STTP, etc).

**Innovation.** To foster R&D&i in mining sector.

# REMIX Addressed Policy Instrument



**TO1 To improve research, technological development and innovation**

**PI.1.1. Improvement of the R&i infrastructures and the capability to develop excellence on R&i and promotion of competence centers, especially those of European interest.**

*OE.1.1.2. Strengthening R&D&i institutions and creation, consolidation and improvement of the technology and scientist infrastructures.*

Programme	Management Entity	Budget
1-Technological Centers Research Programme	ICE	14,0 M€
2-INFRAED Programme (scientist equipment acquisition)	DG Universities & Research	12,0 M€
3-Scientific equipment for Technological Centers related to New Materials and Mineral Resources	DG Industry	6,5 M€
4-Stair for the Excellence	DG Universities & Research	16,0 M€
5-R&I Infrastructure for ITACYL	ITA	0,7 M€

# REMIX Addressed Policy Instrument



TO1 To improve research, technological development and innovation

**PI.1.2. Promotion of Companies' investments on R&i, development of links and synergies between companies, technological centers and Universities, especially relating to the investment on new products and services development, technology transfer, social innovation, ecologic innovation, public service applications, demand promotion, associations and open innovation through smart specialization and support to technological and applied research, pilot lines, quick product validation actions, advanced manufacturing capacities and primary production, specially, in KETs and polyvalent technologies dissemination.**

***OE.1.2.1. Impulse and promotion of R&I activities by enterprises and support the creation and consolidation of innovative enterprises***

6-R&D Projects (individual, collaborative, strategic, ...) - Line 4	ICE	75,4 M€
7-R&D Guarantee Fund	ICE	19,6 M€
8-Innovative Public Procurement	ICE	10,1 M€

*NOTE: in most of the aid' lines an extra percentage of grant is applied if the project is sited in a mining municipality.*

# REMIX Addressed Policy Instrument



TO1 To improve research, technological development and innovation

**PI.1.2. Promotion of Companies' investments on R&i, development of links and synergies between companies, technological centers and Universities, especially relating to the investment on new products and services development, technology transfer, social innovation, ecologic innovation, public service applications, demand promotion, associations and open innovation through smart specialization and support to technological and applied research, pilot lines, quick product validation actions, advanced manufacturing capacities and primary production, specially, in KETs and polyvalent technologies dissemination.**

***OE.1.2.2. Technology transfer and dissemination and cooperation between companies, Universities and Technological Centers.***

9- Innovation Voucher-Line 5	ICE	14,0 M€
10- R&D Collaboration projects between companies and knowledge entities (Technological Centers and Universities as beneficiaries)		
11- University-Enterprise Knowledge transfer	DG Universities & Research	14,0 M€

*Another method to foster collaboration between Knowledge entities and Companies is an **Extra percentage of grant (over the total budget) in R&D projects (Line 4) developed by companies subcontracting knowledge entities.***

# REMIX Addressed Policy Instrument



TO1 To improve research, technological development and innovation

**PI.1.2. Promotion of Companies' investments on R&i, development of links and synergies between companies, technological centers and Universities, especially relating to the investment on new products and services development, technology transfer, social innovation, ecologic innovation, public service applications, demand promotion, associations and open innovation through smart specialization and support to technological and applied research, pilot lines, quick product validation actions, advanced manufacturing capacities and primary production, specially, in KETs and polyvalent technologies dissemination.**

*OE.1.2.3. Promoting and generation of outstanding knowledge and oriented knowledge to the societal challenges, development of emerging technologies.*

12-Aids to foster the development of Research Projects	DG Universities & Research	32,0 M€
13-Support to the development of R&D&I and technology transfer of regional interest	ITA	1,4 M€

# REMIX Addressed Policy Instrument



OT2. To improve the use and quality of the ICT and the access to it

PI.2.2 Development of ICT services and products, e-commerce and a bigger demand for ICT.

OE.2.2.1 Development of the Economy' Digitization including e-commerce for the growth, competitiveness and internationalization of the Spanish Enterprise.

14- Fostering ICT use for SMEs-Line 6	ICE	14,0 M€
15- Fostering the development of the ICT Industry-Line 7		

# REMIX Addressed Policy Instrument



**OT3. To improve the competitiveness of the small and medium enterprises**

**PI.3.4. Support SMEs to grow in regional, national and international markets and on innovation processes.**

**OE.3.4.1 Fostering SMEs growth and consolidation, particularly improving their financing, technology and access to advanced support services**

16- Innovation and internationalization services-Line 3 (patents, tax reduction by R&D developed, innovation advise relating to Industry 4.0)	ICE	11,0 M€
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# REMIX Addressed Policy Instrument



## Other ICE instruments to help companies:

**ICAMCYL ICE support** (0.7 M€; this aid run with autonomus fund, not under the Operational Programme): Grant to ICAMCYL for the development of 2 R&D Projects:

Tailings (residues of mining) valorization

Discovering advanced materials by computational methods for the Industry in Castilla y León

**Centr@tec 2017-2019 Programme** (5.0 M€ autonomous fund). The objective of Centr@tec Programme is the Entrepreneurial R&D&i capitalization and support and it is developed in collaboration with the Castilla y León' Technological Centers. It consists on grants to the Technological Centers to develop actions in 5 axes:

- To advice and help SMEs to incorporate processes' innovation and products/services' design.
- To foster the use of ICT by SMEs.
- To incorporate SMEs to the Industry 4.0.
- To foster international knowledge transfer and R&D&i internationalization.
- Technical feasibility assessment of new products/processes.

**REDEi:** Innovation and Entrepreneurship Network. This public-private collaboration network for knowledge exchange is formed by companies, Universities, Technological centers, Clusters and Associations.

# REMIX Addressed Policy Instrument



## Other ICE instruments to help companies:

**ERAMIN2:** ERANET (350.000 € for 2018 Call): International R&D projects on Raw Materials (exploration, extraction, processing, eco-design, recycling, etc.).

**Fellowship Programme 2018-2019** (3 M€): Grants for companies subcontracting young technical staff for innovation and internationalization tasks. 650 €/month

**Mining Lands Programme** + European Fund for the Adaptation to the Globalization: economic impulse to coal mining municipalities, through the development of infrastructure projects and restoration projects of degraded zones.

- Training for unemployed people formerly mining workers to prepare them for new jobs.
- Entrepreneurial Dinamisation. Looking for entrepreneurial alternatives for formerly mining lands.

**ENTERPRISE EUROPE NETWORK (EEN):** 1.6 M€ 2014-2020. European Commission initiative financed by COSME. 60 Countries Network Helping ambitious SMEs innovate and grow internationally. Improvement of the competitiveness through collaboration: innovation, R&D International Programmes, SMEs cooperation, European Commission Communication.

# REMIX Addressed Policy Instrument



## Other ICE instruments to help companies:

**ICE Support** (2018-2020; 1.5 M€ autonomous fund) **to the Innovative and Technological Entrepreneurship Programme**: Helping entrepreneurs in collaboration with public Universities of Castilla y León. 3xes:

- Ideas: feasibility studies, market analysis, etc.
- Projects: legal, intellectual property rights, financing issues, etc.
- Growth: investors, etc.

**Castilla y León Financing Institute SODICAL** (1.0 M€ 2018-2019): Investment Society with participative loans for innovative entrepreneurships with a minimum feasible product.

## **Raw Materials Working Group** (2014→):

- Promoting networking and collaboration between: Companies, Administration, Universities
- Informing Companies about projects calls, opportunities, partners search for projects, etc.
- Integrating Castilla y León entities into an international network with other mining regions in Europe.
- Hearing point of Companies doubts, complaints and desires to transmit to the EU mining policy

# REMIX Stakeholder Group



## Regional Ministries:

- Regional Ministry of Economy and Finance:
  - General Directorate for Budget and Statistics
  - General Directorate of Energy and Mining
- General Directorate of Natural Environment, ...
- Commissioner's Office for Science and Technology (General Directorate for Universities)

## Companies:

- SIEMCALSA (Regional public private company in charge of mining studies and exploration)
- Private companies (extraction and processing) with operative centers in the region

## Regional R&D&i stakeholders:

- CTME, ITCL, CIDAUT and CARTIF (Technological Centers)
- University of Burgos (ICCRAM), University of Salamanca, University of León, University of Valladolid
- ICAMCYL
- Santa María la Real del Patrimonio Histórico (Cultural Heritage)

## Association of mining municipalities: ACOM

## Mining Engineers Professional Associations

**Mining Associations:** PINACAL (Natural Stone), CONFEDEM (Mining and Metallurgy), COMINROC (aggregates, rocks and industrial minerals)

**European associations:** ICE has strong participation at international and EU level (EEN, ERRIN, ERIAFF, EURADA and others)

# CONTRIBUTING TO THE RIS 3 OBJECTIVES



## STRATEGIC OBJECTIVES

1. Reinforce a **more competitive and sustainable economic model** for entrepreneurial innovation and a more efficient use of resources.
2. Move towards **scientific and technological leadership** in specific fields of potential for regional specialization, configuring a more attractive science and technological system.
3. Improve **the regional innovation system's globalization pathways** and the outward looking perspective.
4. Promote **multidisciplinary collaboration** between knowledge generating agents, and the knowledge transfer.
5. Promote a **culture of innovation and creativity** in all social and economic settings.
6. Turn **Information and Communication Technologies into facilitators of innovation**, social and territorial cohesion, economic growth, rural development, and employment creation.



# PEER REVIEW QUESTIONS

## **1-Feedback to the Castilla y León aids to promote R&D (particularly thinking in the mining sector).**

- What are your first impressions of the presented Policy Instrument? (brain-storming adjectives).
- Does it fit to the mining sector?.

## **2-R&D in the mining sector**

- What measures do you have in your Regions to promote R&D&i? (please distinguish between R&D and i) , is there any special aid for R&D&i in the mining sector?.
- How is the R&D&i financed in your regions? (privately, publicly, through thematic associations).
- How can we promote R&D&i in the mining sector?, does the mining sector require special measures?.
- How can we promote international R&D&i collaboration through the mining sector?
- What is in your opinion the best measure to promote R&D in the mining sector?

## **3-Knowledge transfer: Collaboration between Companies-Universities-Technological Centers.**

- What measures do you have in your Regions to boost collaboration between Companies and Knowledge entities?, Does mining companies take advantage of them?
- What type of research is developed in Universities and Technological Centers?, basic?, company oriented?, how is financed this R&D&i?
- What type of activities is developed by your Geological Survey Institute?, some R&D?, how is financed?
- What is in your opinion the best measure to promote collaboration between companies and knowledge entities?

## **4-Structures to facilitate sectoral R&D&i**

- How the technological surveillance is done in the mining sector?
- Do you have any Cluster or Mining Association or Competence Hub in your region? How are they financed?
- What is the role of your regional mining associations? Do they develop R&D&i of common interest?



# PEER REVIEW QUESTIONS

## 5-Sustainability (environmental, economic and social).

**Added value processing.** The industrial use of Raw materials requires further processing after the extraction of mineral. These activities give to the product much bigger added value, but normally these activities go far away from the extraction site.

- Do you have special measures in your regions to fix added value processing to the territory?
- What do you think is the best measure to maintain as wealth as possible in the territory?, Would it help to achieve social license to operate?

### Sustainability Certification

- Do you have in your countries/regions some Laws to certificate sustainability in mines?
- Do you think Sustainability certification is a good way to achieve Social License to Operate?

**Best technologies.** Sometimes, the best efficiency technology is not the most cost-effective. Some companies exploit a natural resource through its more profitable way, but not in a responsible way.

- What do you think is the best way to make aware companies to do the best exploitation of a natural resource?
- What do you think is the best way to promote the use of the best available technologies (highest efficiency in raw materials achievement)?



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