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Universidades
Españolas

RIS3: The Spanish Case Study

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Universitat
de les Illes Balears

EUA Annual Conference:

Engaged and responsible universities shaping Europe

*Contributing to Research and Innovation Smart Specialisation
Strategies*

University of Zurich, 5-6 April 2018

RIS3 – The Spanish Case Study | About Spain...

Basic Facts

Population: 46.77 million **Area :** 505,940 km² **GDP per capita (2016):** 92 Index (EU28 = 100)

R&D investment (2016): 1.19% GDP (Spain) / 2.03% GDP EU28

R&D investment (2010): 1.4% GDP (Spain) / 1.92% GDP EU28

Strengths

- High number of qualified graduates
- Clusters of regional excellence - Campus de excelencia (Universities involvement in regional development)
- A highly qualified scientific and technological system
- A large experience in cross-border programs.
- Good results in European projects participation: H2020, ERC, Marie Curie, etc.
- Very attractive country for students' mobility

Weaknesses

- Severe economic crisis (with fiscal and salary adjustments)
- High unemployment rate: 25.77% in 2012, 20.9% in 2015 and 16.38% in 2017 general (9.49% higher education studies)
- Moderate GDP growth (below 3%, IMF 2016)
- Brain drain (7,8% of university graduates in 2009/10 were working abroad in 2014 - INE 2015)
- High percentage of micro companies (Spain: 94,1%, Germany: 81,8%, UK: 89,5%)
- Low investment and participation of the private/industry sector in R&D&I
- High level of public debt: 98.3% GDP
- Low number of researchers/1000 employed people : 6.61 vs 7.87 UE 2015 (compare with 6.86 vs 7.09 EU28 in 2010)
- Slow rate of economic recovery (Bloomberg, El Economista, 2013):
 - Low attention to R&D&I
 - Difficult access to financing
 - Rigid labour relations and excessive bureaucracy.

RIS3 - The Spanish Case Study | Spanish Higher Education System

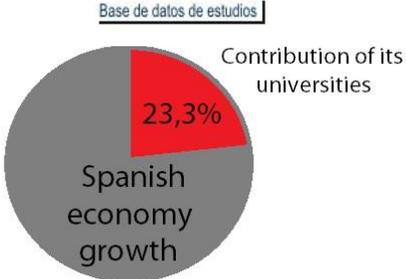
MAPA DE UNIVERSIDADES ESPAÑOLAS



50 Public -34 Private
2015-16: 1.500.000 students
140.000 graduates

Universities and Scientific Production
 65 % of the Spanish scientific production
#10 World #5 Europe

- Over 40% of **entrepreneurs come from university** (GEM2015)
- **H2020 – 4th position return raised 9,8% 2014/2016**
- **Universities 19,5% (2nd after enterprises)**



For every euro destined

Spanish University System **2,5€** **Spanish society**

Source:
 -Contribución económica del SUE 2012 – Ministry of Education, Culture and Sports and IVIE
 -Datos y Cifras MECD. 2015-2016

RIS3 - The Spanish Case Study | About RIS3 in Spain

Spain is divided into 17 regions (autonomous communities)



Universities are a competence of regional governments



Multiple systems coexist in the country, and they are highly asymmetric.

The relationship between universities and their regional governments strongly influence the different university policies



Universities felt that, although the Spanish Central Administration tried to coordinate the RIS3 process, **more efforts could have been done to promote universities' participation**

Spanish Universities were **very interested in the (new) RIS3 initiative**: Most Universities contacted their regional governments in order to participate in the definition of regional RIS3

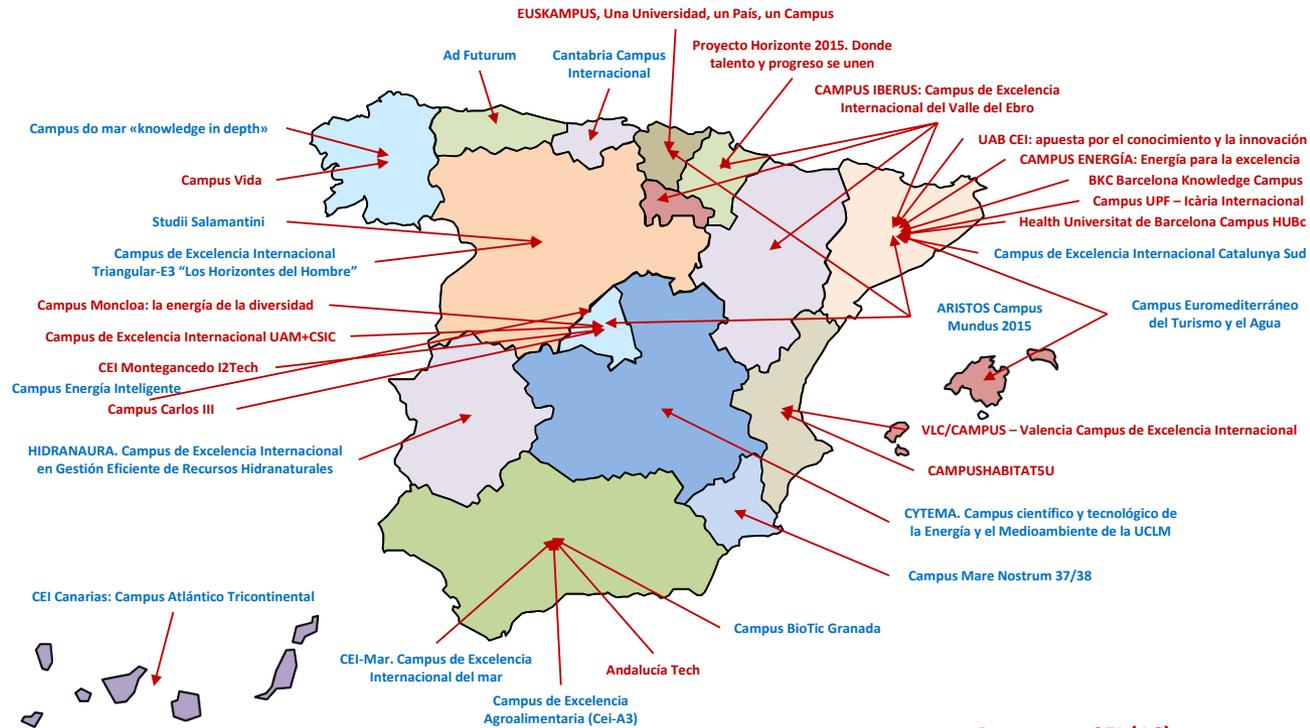
Crue Spanish Universities pushed for the competent authorities **to insist upon regional authorities about the importance of university participation**, and in 2013 the R+D Crue Commission **promoted a RIS3 working group**

Meetings and workshops were promoted at the Spanish level: The role of the university in the smart specialization strategy for innovation. (CRUE_CYD. Madrid 14-July 15, 2014); Working day of RIS3 discussions (Barcelona, June 3, 2015); Workshop on “Universities promoting regional innovation across Europe” (Crue – EUA, Madrid, November 24, 2015)

RIS3 - The Spanish Case Study | International Campus of Excellence initiative

Universities - International Campus of Excellence

Knowledge Field	N° of CEI
Biomedicine / Health	18
Biotechnology	11
Sea and Marine Sciences	4
Natural Sciences (Physics, Materials, Chemistry)	5
Heritage and Culture	7
Information and Communication Technologies	6
Environment & Sustainability	14
Energy	8
Agriculture, food & Nutrition	8
Social sciences & Humanities	13



Proyectos CEI (16)
Proyectos CEI Regional (15)

- Aggregation
- Internationalization
- Specialization

Source: Crue-CPU-EUA workshop Nov.2015. Presentation Juan M^a Vazquez, Universidad Murcia.

RIS3 - The Spanish Case Study | RIS3 Survey

In order to know in more detail the current situation, Crue Spanish Universities conducted a survey containing 10 questions devised to assess the level of involvement of universities in RIS3, across the (17) different regions:

- Question 1: What is the current status of RIS3 development in your region?**
 - 1) Has the Strategic Plan been approved?
 - 2) Has the Operational Program been approved and implemented?
 - 3) Have calls been launched? Are they ongoing or resolved?

- Question 2: Concerning the involvement of universities:**
 - 1) Has your university participated in the initial design of the strategy?
 - 2) Has it participated in the management committee or the monitoring committee?
 - 3) Has it participated in the design of the calls?

- Question 3: Is the RIS3 strategy aligned with the strategy of the campus of excellence in your region?**

- Question 4: Has the RIS3 contributed to a greater collaboration between universities and businesses?**

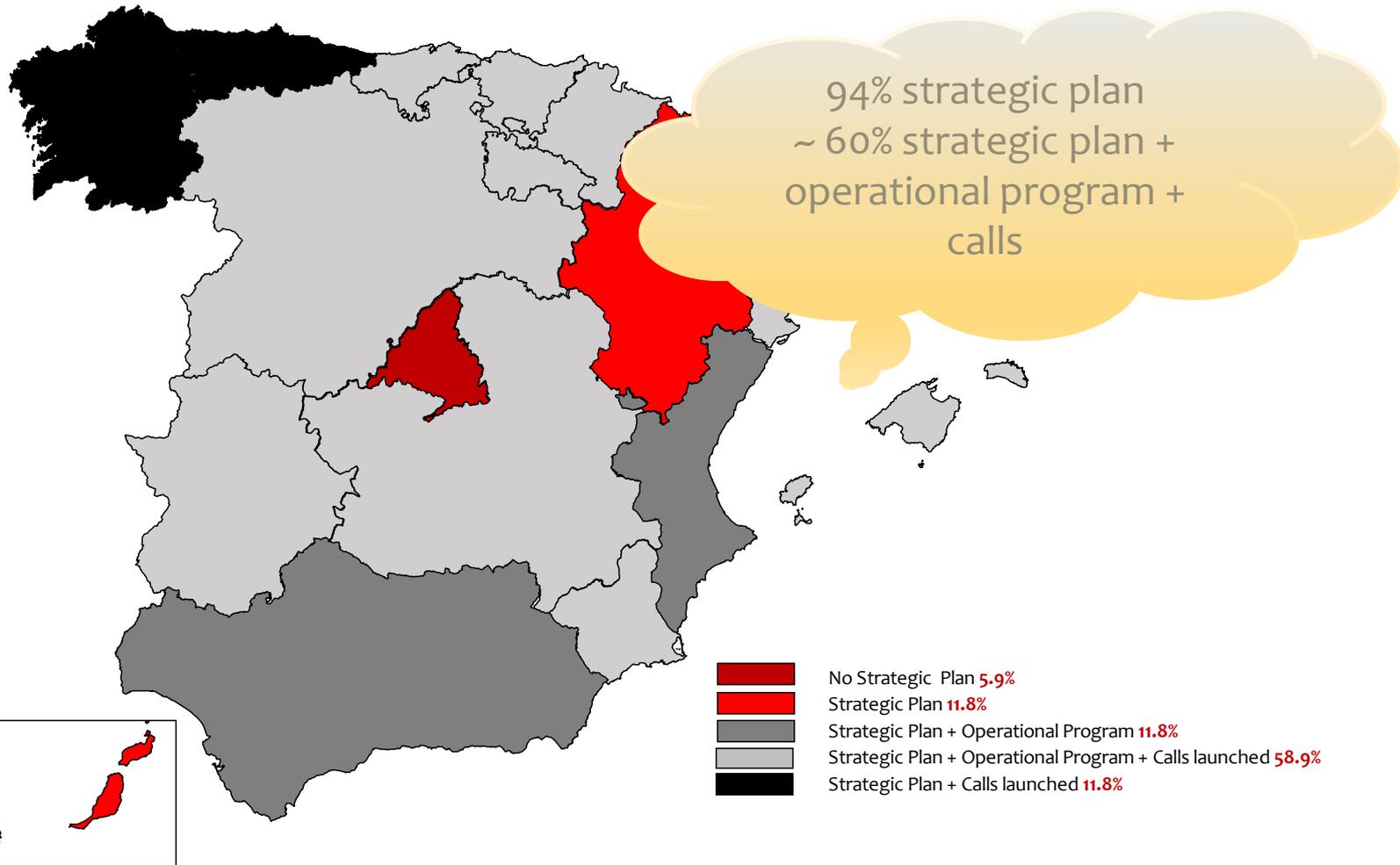
- Question 5: What changes has RIS3 implied on the use of the structural funds (ESIF)?**

RIS3 - The Spanish Case Study | RIS3 Survey

- Question 6: Have research and innovation been prioritized over other actions (e.g. infrastructures)?**
- Question 7: Have actions been launched specifically addressed to research and universities?** If possible, indicate them, as well as their main characteristics.
- Question 8: Have any programs been launched in which the active participation of universities is a fundamental condition or an incentive in their evaluation?** If possible, indicate them, as well as their main characteristics.
- Question 9: In your region, do R&I not aligned with the RIS3 strategy have any type of funding?**
- Question 10: Please, indicate the main positive and negative aspects arising from the existence of RIS3 in your region.**

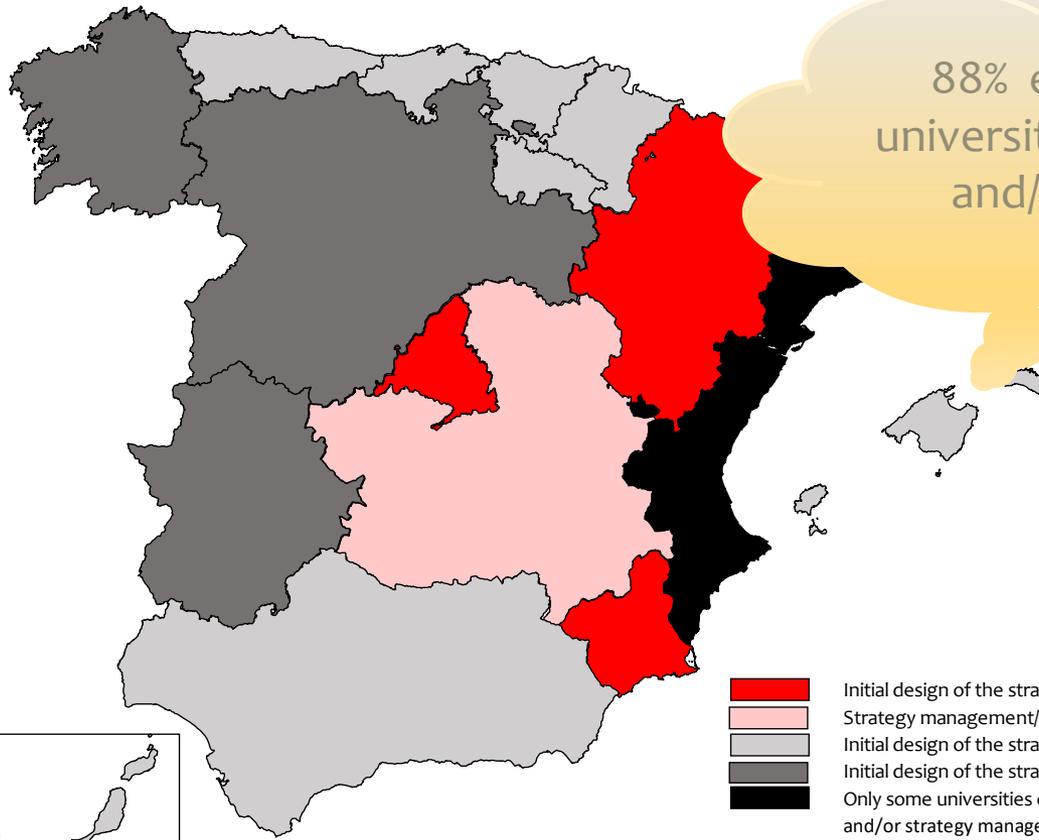
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Question 1: What is the status of RIS3 development in your region?



Source: Crue Spanish Universities

RIS3 - The Spanish Case Study | Question 2: Concerning the involvement of universities



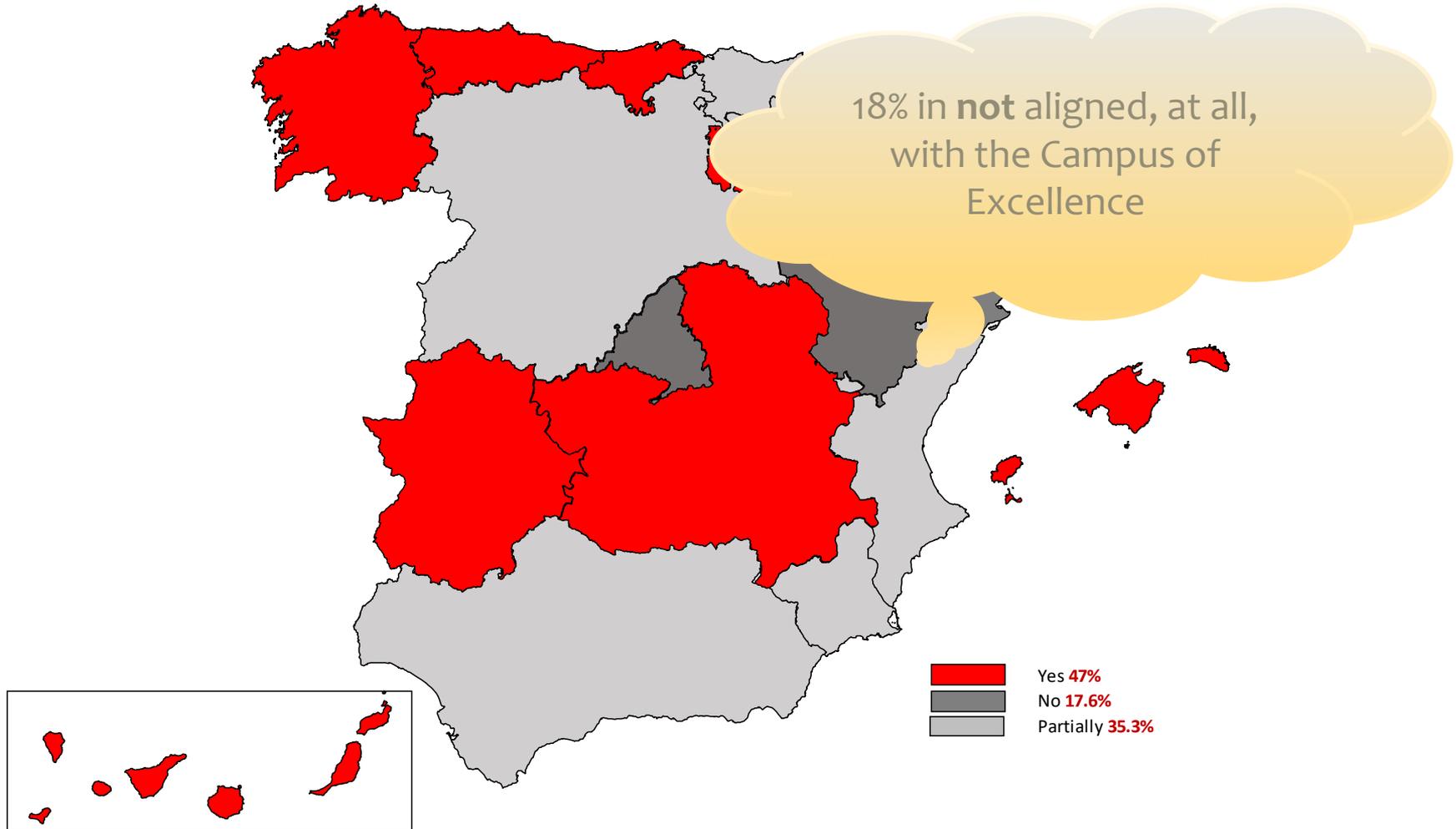
88% engagement of universities in RIS3 design and/or monitoring

- Initial design of the strategy **17.6%**
- Strategy management/monitoring committee **5.9%**
- Initial design of the strategy + strategy management/monitoring committee **47%**
- Initial design of the strategy + strategy management/monitoring committee + call design **17.6%**
- Only some universities of the region participated in the initial design of the strategy **11.8%** and/or strategy management/monitoring committee

Source: Crue Spanish Universities

RIS3 - The Spanish Case Study |

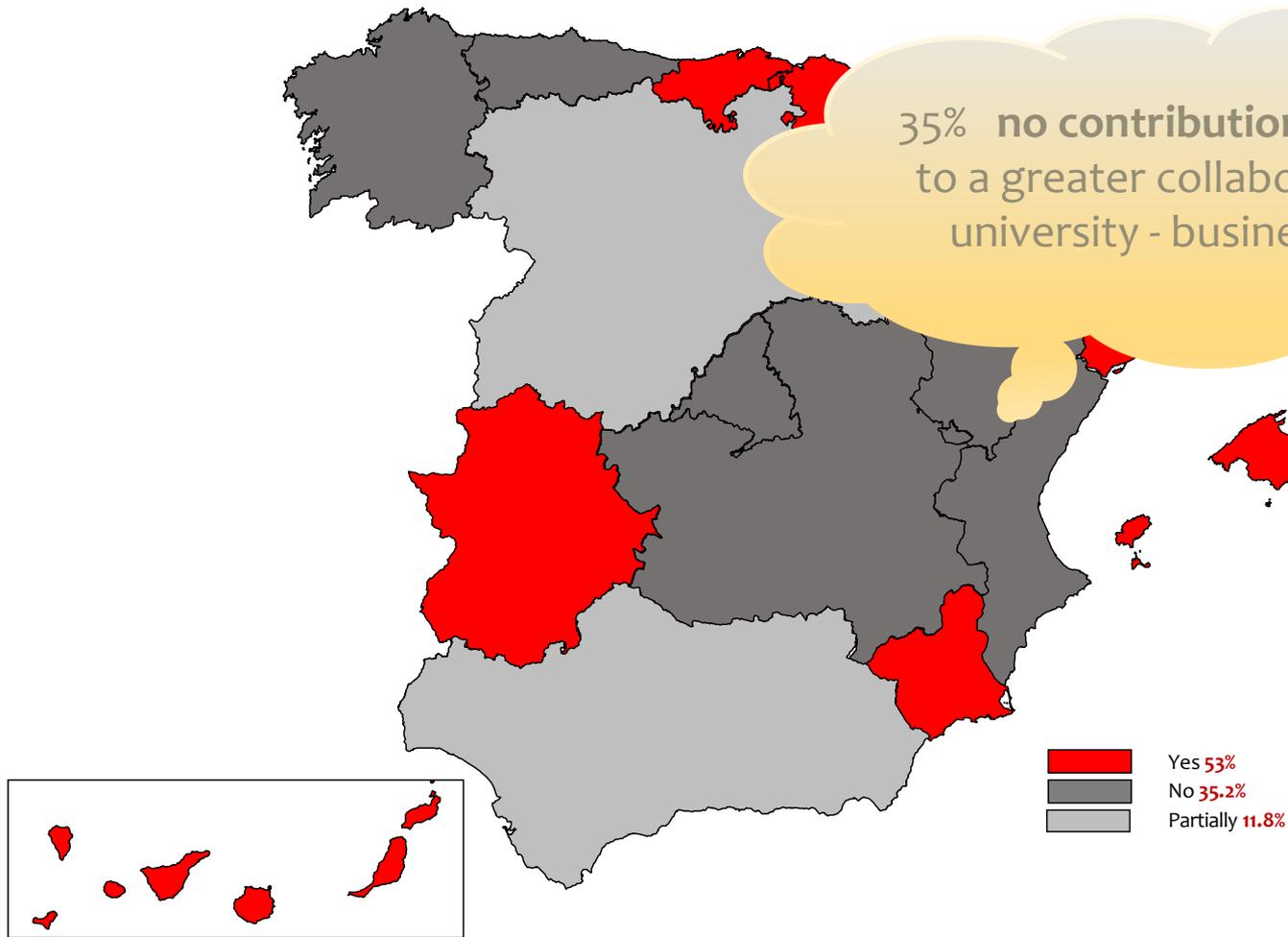
Question 3: Is the RIS3 strategy aligned with the strategy of the campus of excellence in your region?



Source: Crue Spanish Universities

RIS3 - The Spanish Case Study |

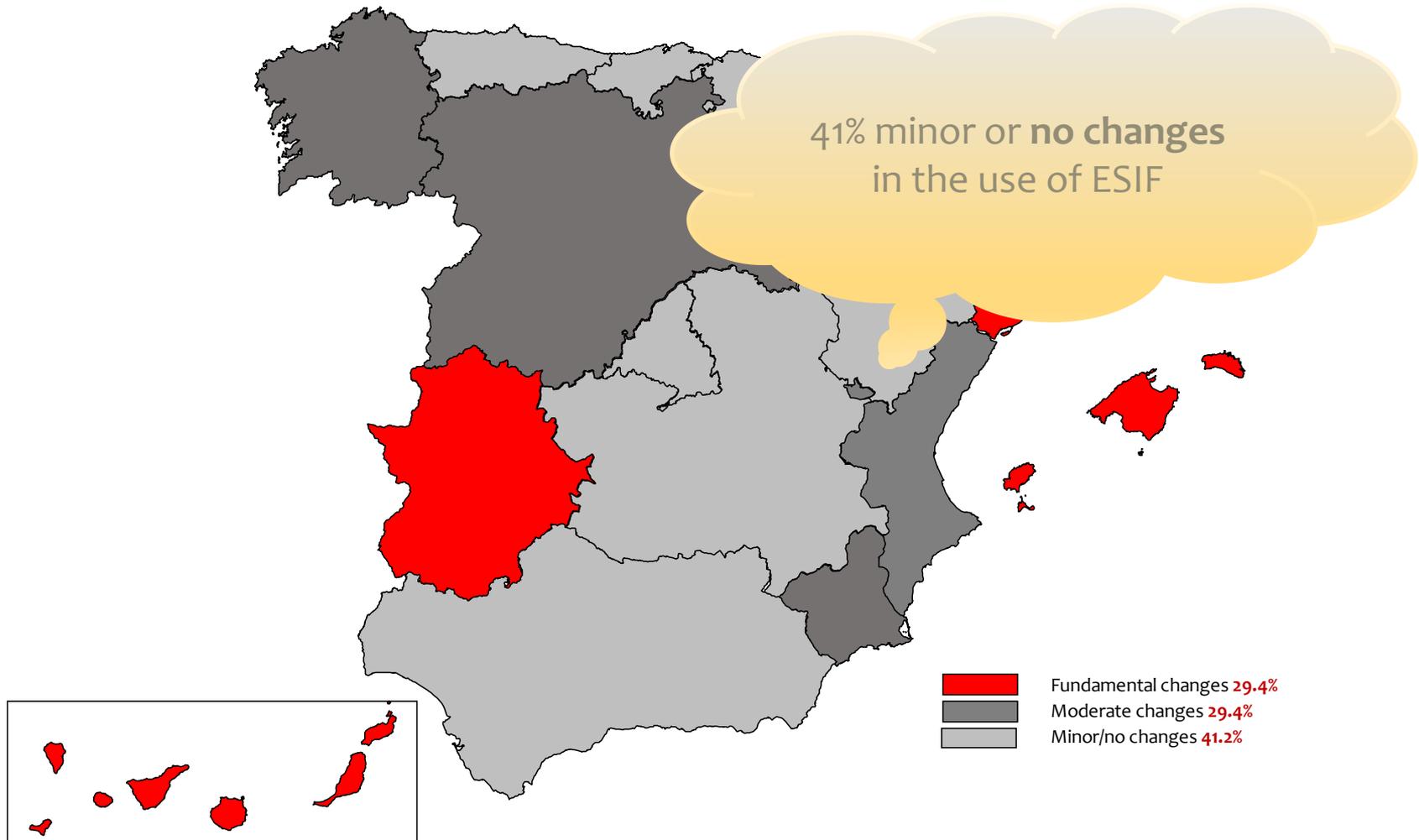
Question 4: Has the RIS3 contributed to greater collaboration between universities and businesses?



Source: Crue Spanish Universities

RIS3 - The Spanish Case Study |

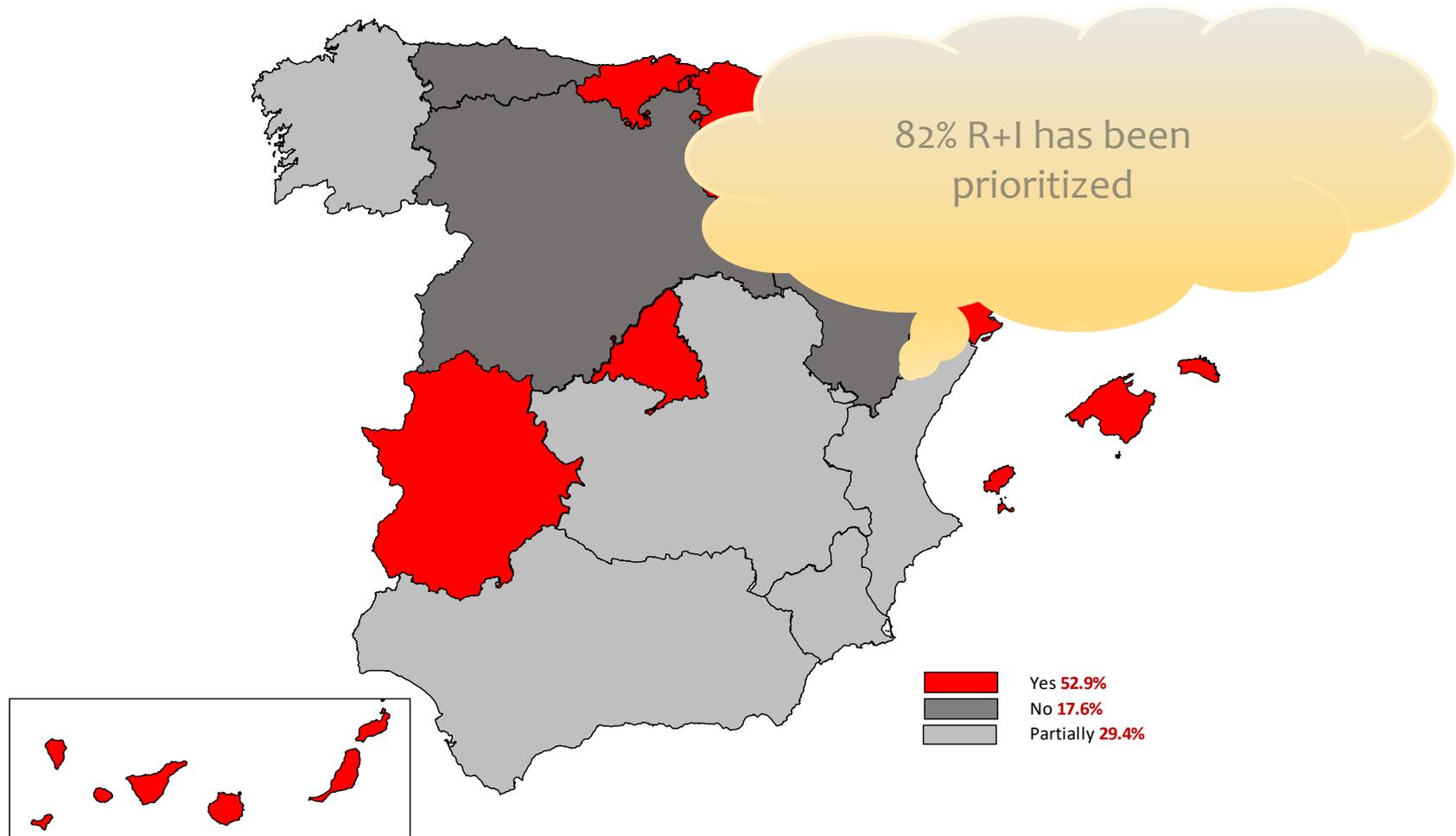
Question 5: What changes has RIS3 made in the use of structural funds?



Source: Crue Spanish Universities

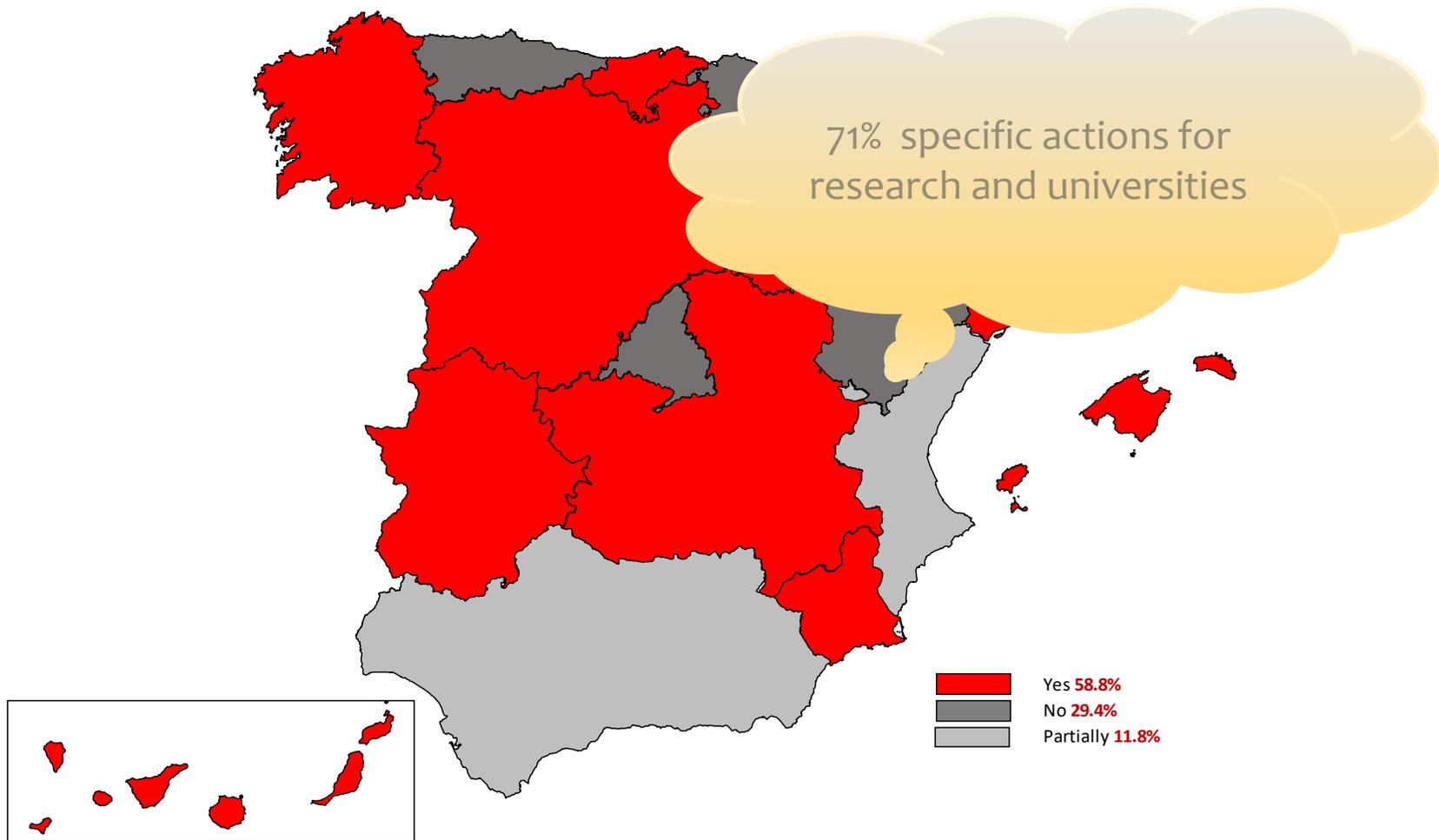
RIS3 - The Spanish Case Study |

Question 6: Has research and innovation been prioritized over other actions (e.g. infrastructures)?



RIS3 - The Spanish Case Study |

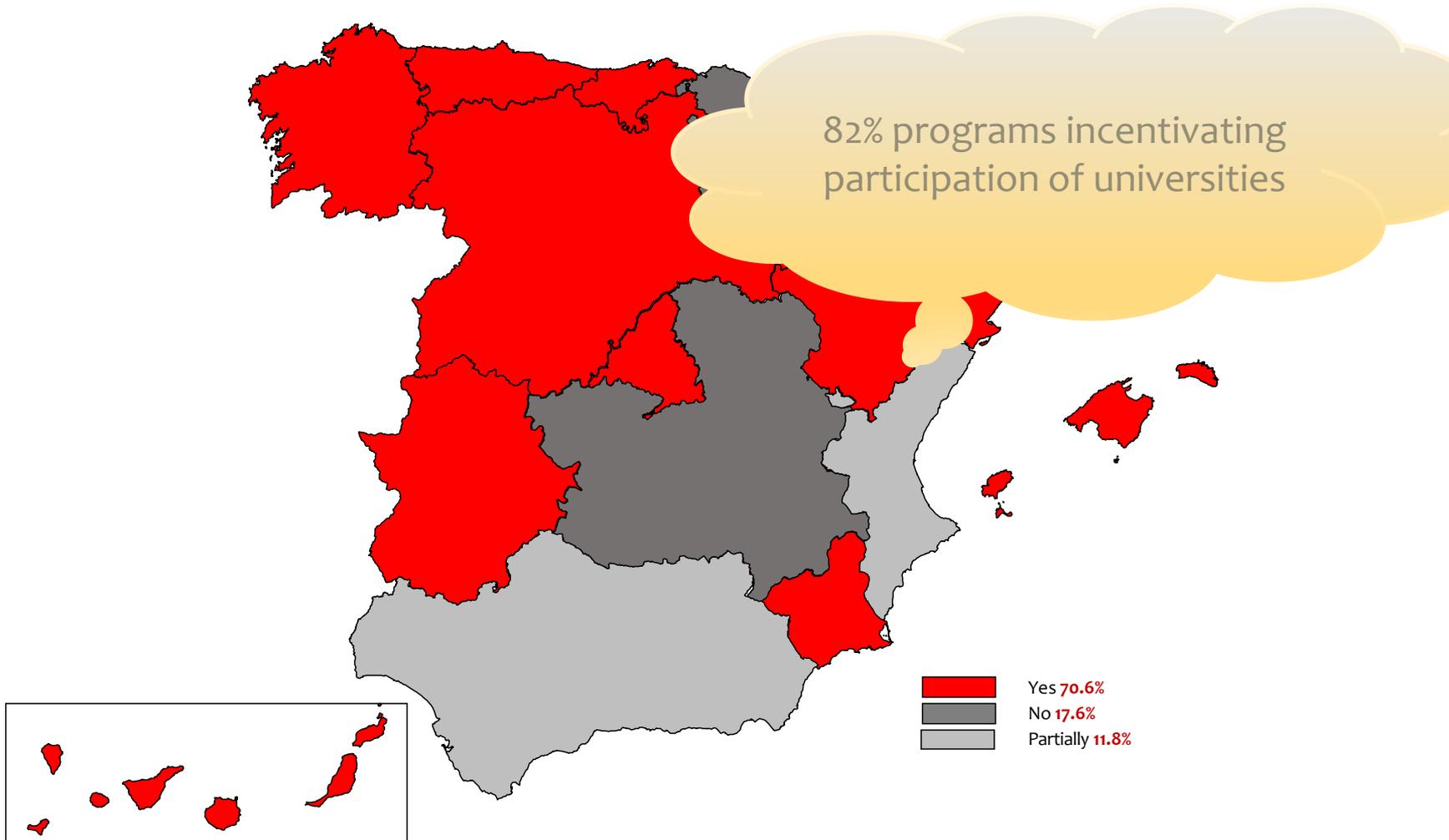
Question 7: Have specific actions been launched for research and universities?



Source: Crue Spanish Universities

RIS3 - The Spanish Case Study |

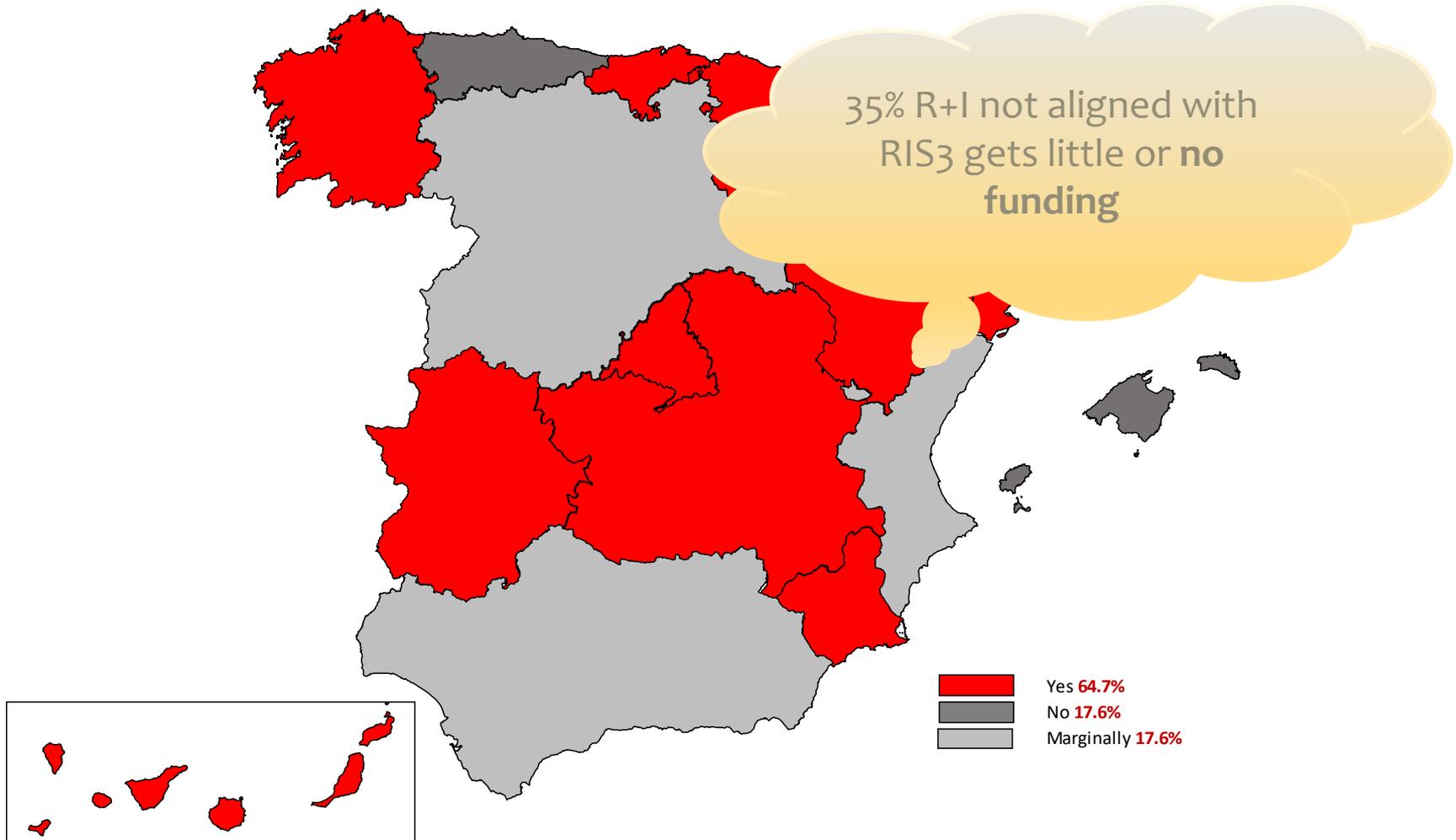
Question 8: Have any programs been launched in which the active participation of universities is a fundamental condition or an incentive in their evaluation?



Source: Crue Spanish Universities

RIS3 - The Spanish Case Study |

Question 9: In your region, do R&I not aligned with the RIS3 strategy have any type of funding?



source: crue Spanish Universities

RIS3 - The Spanish Case Study | **What is left and should be done...**

- ❑ Monitor progress of RIS3 in each region
- ❑ Monitor degree of involvement of universities in the RIS3 strategies of their respective regions, and match it with the progress of the corresponding RIS3 strategy

Some indicators could be

- ✓ Evolution of the number of innovative companies (registered as such) in the region
- ✓ Evolution of the number of doctors working in the business sector
- ✓ Evolution of the investment in R+I in the region
- ✓ Participation of universities in RIS3 monitoring and steering committees
- ✓ Other (classical) indicators: evolution of, e.g., scientific output, number of patents, number of spin-offs and start-ups... (related to the strategic fields of specialisation)
- ✓ Evolution of regional GDP
- ✓ ...

RIS3 – The Balearic Islands (BI) case|

Basic Facts

Population: 1.12 million (2.3 % of Spain) **Area :** 5,000 km² (1 % of Spain) **GDP per capita (2016):** 95 Index (EU28 = 100)

R&D investment (2016): 0.33% GDP (BI) / 1.19% GDP (Spain)/ 2.03% GDP EU28

One University: Universitat de les Illes Balears (UIB)

Funded: 1978

Number of students (2017): 13,706 (undergrads: 11,532 / master: 1,333 / PhD: 841)

Campus of International Excellence (November 2011)

Euromediterranean Tourism and Water Campus : <http://www.e-mta.eu/>

Key words: *Tourism, Sustainability, ICT, Food & Health*



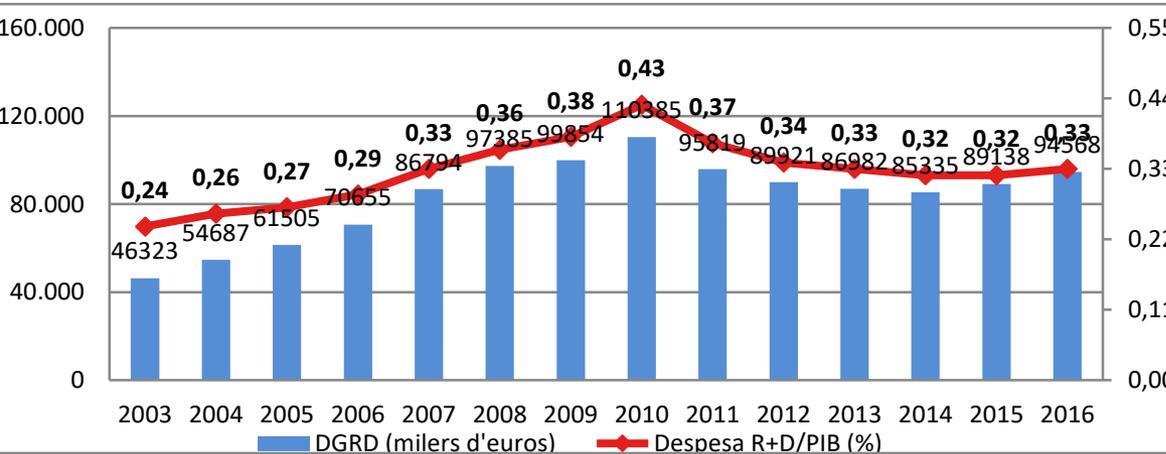
RIS3 Balearic Islands (2012/2013)

Regional Innovation Strategy for Smart Specialization in Sustainable and Technological Tourism (S4T2)

<http://www.ris3balears.org/wp-content/uploads/2014/03/E7-Estrategia-S4T2-Balears-vMar14.pdf>

- Two strategies revolving around Tourism, sustainability and ICT...
 - ✓ Regional government ignored University, at the beginning, when devising the RIS3
 - ✓ Later, DG got in touch with UIB and a small joint group was set up aligning both strategies

RIS3 – The Balearic Islands (BI) case|



Investment R&I (% GDP)

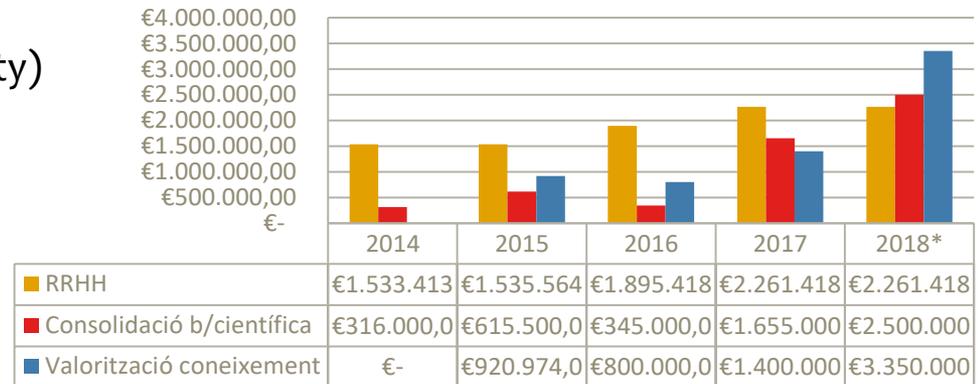
- ✓ Increase 0.32% to 0.33% GDP
- ✓ Reverse decreasing trend
- ✓ High increase (absolute numbers): 1.85M€ (2014) → 5.32 M€ (2017)

University takes now part in the steering and monitoring committees of the RIS3

New actions → calls for:

- ✓ Collaborative projects (Company + University)
- ✓ Industrial PhDs
- ✓ Business research projects
- ✓ Human resources for R&I (pre, postdocs, technicians)
- ✓ Others to come

Ppto. Línies d'actuació PCTI



Budget R&I 2014 - 2018

RIS3 - The Spanish Case Study | Conclusions

- ❑ Big differences between regions and universities' involvement in RIS3

- ❑ Positive aspects:
 - ✓ Greater focusing: joining efforts in a common direction
 - ✓ Clear and common priorities
 - ✓ Increase of funding for R+I
 - ✓ More cooperation between public and private agents
 - ✓ Higher participation of universities in R+I
 - ✓ Inclusion of knowledge in the economic model

RIS3 - The Spanish Case Study | Conclusions

Negative aspects:

- ✓ Basic science and humanities (low TRLs), as well as non-RIS3 aligned research, are penalized
- ✓ Excessive focus on transfer, to the detriment of research
- ✓ Complex management and bureaucracy
- ✓ The highest returns and benefits are for the business sector
- ✓ Weight of the business sector is, in general, much higher than that of the Universities when it comes to implementing RIS3

RIS3 - The Spanish Case Study | Key messages

- ✓ Universities provide an essential (unique) link between education, research and innovation. Investing in them is one sure way to contribute to the **development of human talent**, which is the key success factor for change
- ✓ Universities are **strategic players** in the regional innovation ecosystems. They should be fully engaged in their respective regional RIS3 strategy and **participate**, in relevant ways, in the **entrepreneurial discovery process**
- ✓ **Cooperation** between universities, public authorities, enterprises and civil society is to be strengthened in order to foster innovation and regional development
- ✓ Efficient **multi-level governance** systems should be put in place to fully benefit from RIS3 strategies, **simplifying bureaucracy** and **exploiting synergies**
- ✓ In order to bridge the gap between different regions, **trans-regional/inter-regional cooperation mechanisms** should be set up

RIS3 - The Spanish Case Study | Lessons learned (my personal viewpoint)

- ✓ **Mutual understanding** between regional government and university is all important. This is best achieved on a one-to-one basis
- ✓ **Leadership**, when setting up the main lines of the strategy, is paramount. University(ies) must be there from the very first moment since they are unique in their role of creating knowledge and developing human talent (including researcher training)
- ✓ **Entrepreneurial Discovery Process** is the way of enhancing regional strategies. Again, Universities are privileged actors in it
- ✓ **Small teams** work better at the initial stages

RIS3 - The Spanish Case Study | To know more

On RIS 3

- ✓ Check <http://s3platform.jrc.ec.europa.eu/home>
special attention to the *tools* section and its various *viewers*

On Universities and their role

- ✓ Check <http://www.eua.be/>
special attention to the *Policy and Representation* section and its
various *position papers*

Thank you!

