

The European Commission's science and knowledge service

Joint Research Centre



Targeted Support to Smart Specialisation in Lagging Regions

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Joint Research Centre**

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Outline

- 1. JRC project "Targeted Support to Smart Specialisation in Lagging Regions"**
- 2. Human Capital: an underlying dimension of the project**

1. Targeted Support to RIS3 Implementation

Four closely complementary JRC activities

STRIVE - Support to Transitions in Regional Innovation Eco-systems

RIS3 Support
to Lagging
Regions

European
Parliament
DG REGIO

2016 - 2020

RIS3 Support
to Romania

European
Parliament
DG REGIO

2016 - 2019

Higher Education
+VET in Smart
Specialisation

DG EAC
DG EMPL

HESS3 - 2018-20

Stairway to
Excellence

European
Parliament
DG REGIO

S2E-4 2018-20

Main objectives

MAIN AIM:
Support the refinement and implementation of the RIS3 of selected EU regions

Low-growth regions:
GDP/capita below EU average

Less developed regions:
GDP/capita <50% of EU average

SELECTED LAGGING REGIONS

- 1 Centro
- 2 Extremadura
- 3 Puglia
- 4 Eastern Macedonia and Thrace
- 5 Warminsko Masurskie
- 6 Észak-Alföld
- 7 Nord-Vest
- 8 Nord-Est
- 9 Severen Tsentralen

Develop and provide appropriate and **specific support** to selected regions in RIS3 implementation

Develop and implement **horizontal approaches** to key issues in the growth and governance of RIS3

Help meet the 2021-7 **enabling condition** of good governance of smart specialisation strategy with **7 fulfilment criteria**

Generate lessons and a model for other regions

Test-bed for theories on S3 and for understanding RIS3

Geographical Coverage

1. Low-growth regions (GDP/capita below EU average)

- Greece
- Italy
- Portugal
- Spain

2. Less developed regions (GDP/capita <50% of EU average)

- Bulgaria
- Hungary
- Poland
- Romania
- Croatia (stage 2)

	Lagging Regions (Stage 1)	Lagging Regions (Stage 2)
BG	Severen Tsentralen	national level
HR		national level
EL	Eastern Macedonia and Thrace, national roll-out	Central Macedonia, Western Greece, national level
HU	Észak-Alföld (Hajdú Bihar county)	national level
IT	Puglia	Puglia & Campania
PL	Warminsko Mazurskie	Kujawsko-Pomorskie, Lubuskie, Podlaskie
PT	Centro	Centro, national level (HESS)
ES	Extremadura	Extremadura, national/regional linkages
RO	Nord-Est, Nord-Vest	Rollout to all 8 regions, national level

Specific (Vertical) vs. General (Horizontal) Support

Specific (Vertical) Support:

- Specifically tailored to the needs of the region/country
- Centred on stakeholder engagement - defined in collaboration with the local government authorities and REGIO

General (Horizontal):

- Peer- and mutual-learning
- Workshops involving representatives from all the regions of the project
- Foci: RIS3 Monitoring and Evaluation, Governance, Transitions

Collaboration and engagement:

- JRC, REGIO, independent experts, local stakeholders (quadruple helix).

Enabling condition Policy Objective 1: Good governance of S3 – 7 fulfilment criteria

1. **Up-to-date analysis of bottlenecks for innovation diffusion, including digitalisation**
2. Existence of competent regional/national institution or body, responsible for the management of the smart specialisation strategy
3. Monitoring and evaluation tools to measure performance towards the objectives of the strategy
4. **Effective functioning of entrepreneurial discovery process**
5. Actions necessary to improve national or regional research and innovation systems
6. **Actions to manage industrial transition**
7. **Measures for international collaboration**

**combined
support**

+ **Crosscutting concern: enhancing administrative capacity building and cooperation**

Project Toolbox

**Specific
(vertical)
support**

Profiling and
analysis of RIS3
implementation

EDP Focus Groups

Project
Development
Labs

**General
(horizontal)
support**

WGs on RIS3
governance,
monitoring &
evaluation

WG on managing
and understanding
Industrial
transitions

WG on
interregional
collaboration

MOOC on RIS3
monitoring

Board of Critical Friends
(since 2014)

JRC Massive Online Open Course

<https://iversity.org/en/courses/monitoring-smart-specialisation-strategies>

The screenshot shows a web browser window displaying the Iversity website. The browser's address bar shows the URL <https://iversity.org/en/courses/sandbox-course-old-continet>. The website header includes the Iversity logo, 'Part of SPRINGER NATURE', and navigation links for 'Courses', 'For Business', 'Blog', 'Deutsch', 'Français', 'Login', and a 'Sign up' button. The main content area features a course card for 'Monitoring Smart Specialisation Strategies' by the Joint Research Centre. The card includes the European Commission logo, the course title, the names of the instructors (Dr Elisabetta Marinelli, Dr Carlo Gianelle, Dr Fabrizio Guzzo, and Ken Guy), a description, and an 'Enroll' button. A 'FREE' badge is visible in the top right corner of the course card. Below the course card, there are sections for 'About this course' and 'Course instructors'. The 'About this course' section contains a paragraph of text and a sub-section 'Who is this course for?'. The 'Course instructors' section features a portrait of a woman. In the bottom right corner, there is a 'Support' button. The Windows taskbar is visible at the bottom of the screen, showing various application icons and the system clock.

Monitoring Smart Specialisation

Part of **SPRINGER NATURE**

Courses For Business Blog Deutsch Français Login **Sign up**

FREE

 **Joint Research Centre**

Dr Elisabetta Marinelli, Dr Carlo Gianelle, Dr Fabrizio Guzzo, and Ken Guy

Monitoring Smart Specialisation Strategies

Build an effective monitoring system for your Smart Specialisation Strategy and help your region meet its long-term goals.

MOOC

- Self-Paced
- English
- Management

Enroll

About this course

Research and Innovation are crucial for meeting the socio-economic challenges of our times. This is why they are at the centre of the European Union strategy and its Cohesion policy. Indeed, countries and regions have designed a Research and Innovation strategy for Smart Specialisation (RIS3) to guide public investment in the coming years. To check whether their policies, investment decisions and projects are delivering, regions and countries need an effective monitoring system, and this course aims at supporting this process. This MOOC, organised by the Joint Research Centre of the European Commission (JRC), answers some of the key questions related to monitoring RIS3, addressing conceptual, policy and empirical aspects.

Who is this course for?

This course is open to anyone interested in monitoring knowledge-based regional development, and in particular monitoring Smart Specialisation Strategies. Whilst it is designed with EU regions and member states specifically in mind, the principles and ideas discussed should be of relevance to a broader audience.

Course instructors



Support

Managing Industrial Transitions

- Addressing the challenge of deindustrialisation
- Exploring the central role of RIS3 strategies in responding to deindustrialisation
- How best to support regions in better tailoring RIS3 to the specific challenges of industrial transitions?
 - Detailed analysis of key issues with hands-on engagement and mutual learning activity with stakeholders in both lagging and transition regions.
 - Expert review and workshop
 - Mutual learning working group
- **Criterion 6**

Interregional cooperation in Lagging Regions

Scope:

- To explore key dimensions of interregional cooperation in enhancing innovation ecosystems of lagging regions (resources, competences, ideas, governance)
- Fulfilment criterion 7 for the enabling condition of RIS3 good governance

Main research questions:

- How can interregional cooperation strengthen the role of S3 in regional innovation systems?
- Can interregional cooperation, through spillover effects and practices exchange, increase the capacity of regional innovation actors and institutional performance?
- Can cooperation between a lagging region and an advanced one increase the opportunities for making regional ecosystem more innovative?

Interregional cooperation in Lagging Regions

Activities:

- **Analysis** of current status of and key issues in interregional cooperation, building on both literature and previous experiences in lagging regions, and the level of internationalisation of the R&I ecosystem.
- **Organisation of up to 3 mutual learning workshops** with representatives of partner regions and other relevant stakeholders with the purpose of discussing the main findings of the analysis and the key issues arising.
- **Expert support** to analysis and the organisation of the workshops
- **Final report**

LR1&LR2: Lessons learned

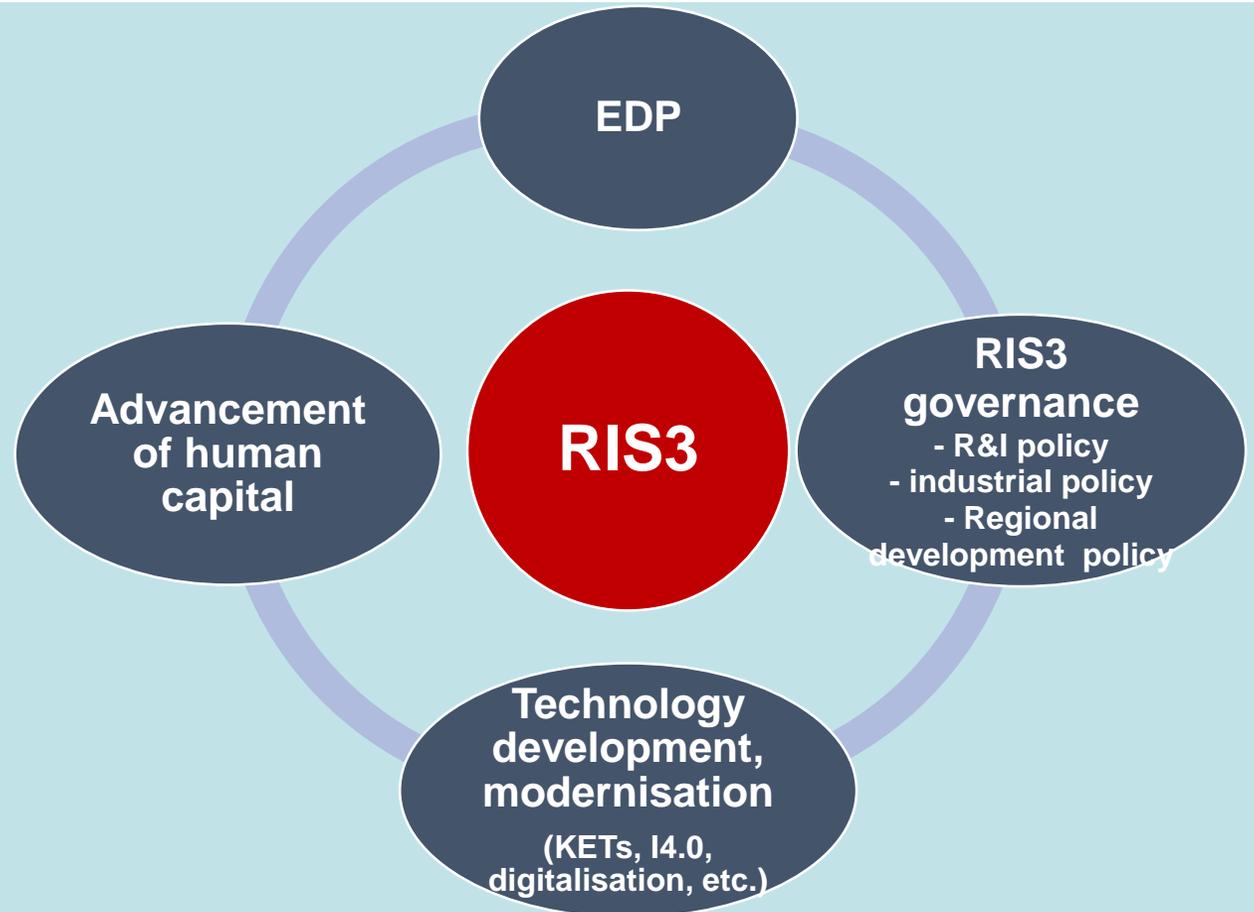
- EDP is a continuous process: needs sustained and systematic interaction among stakeholders and effective coordination between national and regional authorities
- RIS3 governance is a key challenge in all regions: crucial to identify and acknowledge clearly the responsibilities of RIS3 governance bodies vs OP Managing Authorities.
- Monitoring and evaluation require significant capacity-building in pursuing both the development of region-specific indicators and (inter)national benchmarking. The role of Open Data and Open-Gov initiatives is to be further exploited.
- There is clear demand for guidance to prepare for the next programming period.
- EU Regions, and especially Lagging Regions benefit from longitudinal and international peer-learning opportunities and support.

2. Human Capital: a key dimension of the project

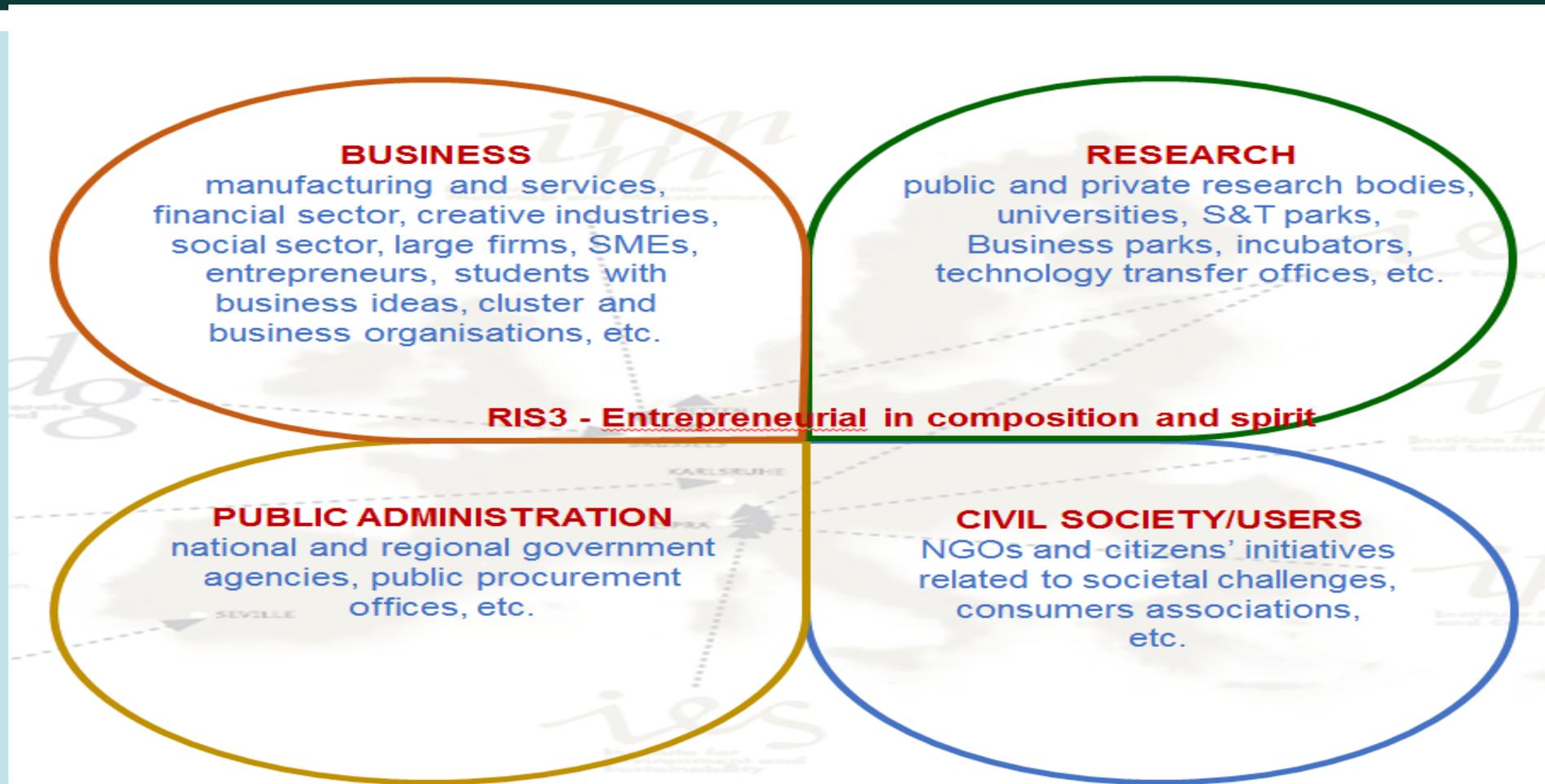
Advancement of human capital: key dimension in RIS3 implementation

- **RIS3 implementation:**

- **Entrepreneurial Discovery Process:** bottom-up priority-setting, strategic allocation of funding, strengthen links among stakeholders (esp. U-I links)
- **RIS3 governance:** horizontal coordination between 3 policy areas, national-regional coordination, stronger focus on the regional level, multilevel governance
- **Technology development, modernisation:** improvement of technology management competences, international value chains
- **Advancement of human capital:** building new skills & competences, professionalisation of innovation-related occupations, behavioural changes (different ways of doing things)



Human capital advancement in each strand of Quadruple Helix



Advancing Human Capital in Academia:
JRC project Higher Education and Smart Specialisation (HESS)

A Renewed EU Agenda for Higher Education (EC 2017)

FOUR PRIORITIES FOR ACTION:

1. Tackling future skills mismatches and promoting excellence in skills development;
2. Building inclusive and connected higher education systems;
3. **Ensuring higher education institutions contribute to innovation;**
4. Supporting effective and efficient higher education systems.

and...support evidence for policy-making and practice

The Commission will :

12. Further roll out Higher Education for Smart Specialisation, to provide advice to public authorities to involve HEIs and, where possible, EIT Knowledge and Innovation Communities (KICs), closely in the design and implementation of Smart Specialisation Strategies.

The Commission will :

17. Optimise synergies between EU evidence tools by creating a **Knowledge Hub on Higher Education**.

EC response to align skills and S3

- 2012** Communication on **Rethinking Education:**
Proposes to align VET policies with regional/local economic development strategies namely for smart specialisation
- 2017** Communication on **Strengthening Innovation** in Europe's Regions:
Proposes to link VET to innovation systems, as part of S3 at regional level
- 2018** Commission proposal for the next **Erasmus** programme **2021-2027**
Proposes to support Platforms of Centres of Vocational Excellence under the title of Partnerships for Excellence (KA2)
- 2018** Commission proposal for future **Cohesion Policy 2021-2027**
Proposes new Specific Objective in the European Regional Development Fund on Skills for Smart Specialisation, Industrial Transition and Entrepreneurship

HESS background

Launched in March 2016 in collaboration with DG EAC

University as a recognised strategic partner

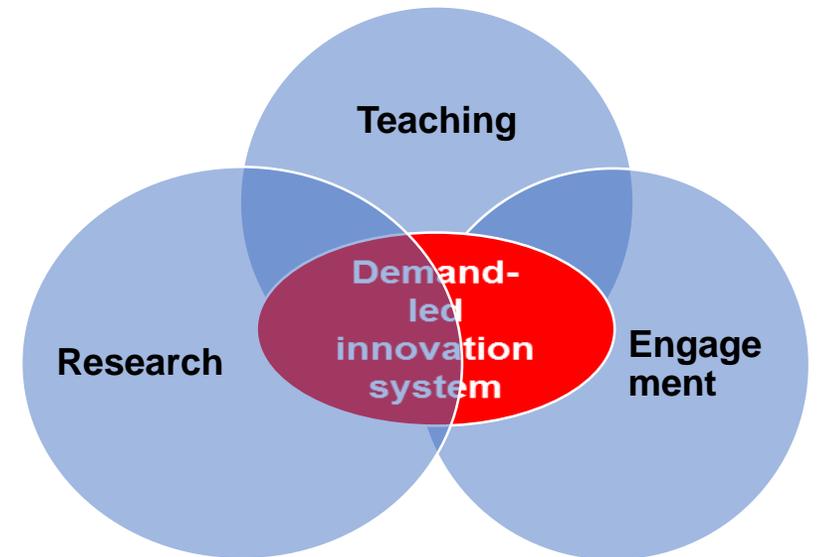
- Focus on research

Human capital– Great absentee

- Sustainability of RIS3
- University as a generator of human capital (traditional and vocational)
- Need to understand the match between demand and supply of skills/competences

More info

<http://s3platform.jrc.ec.europa.eu/hess>



HESS objectives

- Understand the role of tertiary education in RIS3 implementation

Analytical



- Support collaboration
- Favour match of demand and supply of skills
- Identification of shared challenges

Support the Triple Helix



- Extract policy implications for selected regions and for EU as a whole

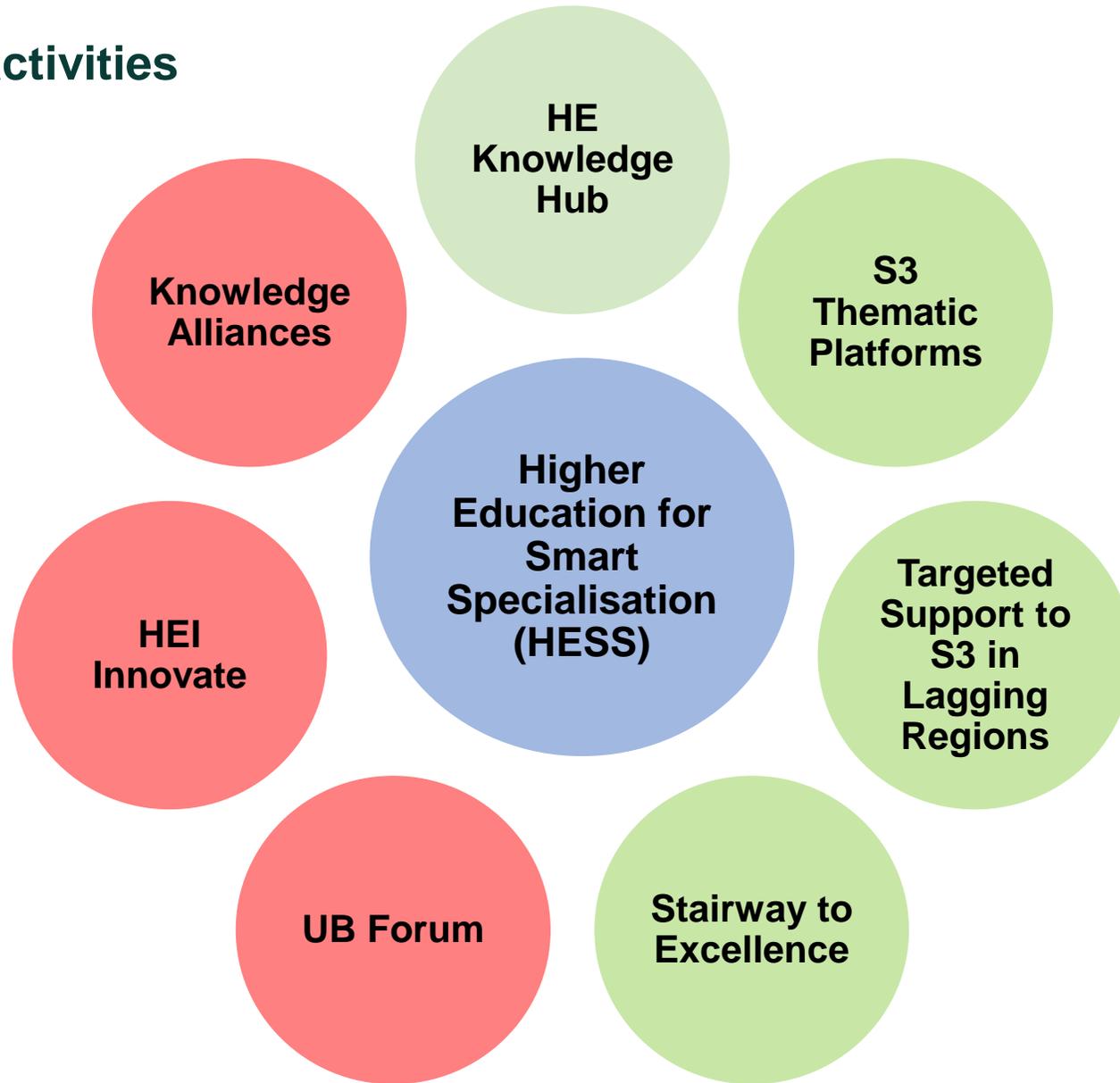
Policy



HESS development



HESS at the intersection of JRC and DG EAC activities



Examples: university involvement in S3 priority-setting

POTENTIAL SPECIALISATION AREAS (DOMAINES POTENTIELS DE SPÉCIALISATION)

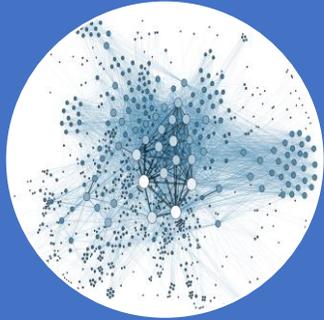
The capacities of the two Universities of Tours and Orléans as well as those of INSA (*Institut National des Sciences Appliquées*) have been taken into account in the definition of five S3 priority areas (that mobilise 55 % of the S3 budgetary plan) as follows:



- ❖ Environmental engineering and methodology for highly resource-consuming activities;
- ❖ Biotechnology and applied services for health and cosmetics;
- ❖ Designing systems for energy storage;
- ❖ Energy efficiency technologies in the construction, use and renovation of buildings;
- ❖ ICT services for heritage tourism;



Examples: university involvement in EDP



Who are the right people?

How to get them?

- Different HEIs missions, different EDP profiles
- Mapping themes, emergent topics and collaborative communities
- Data guide: bibliometrics, student population records, research and TT projects.



Engaging HEIs in continuous EDP:

- HEIs in the S3 governance
- Appropriate instruments
- Skills, education and students
- Hybrid research profile



Examples:

- Text mining and HEI survey for Industry 4.0 in **Toscana (Italy)**
- Student competition on place branding in **Marche (Italy)**

Examples: university involvement in S3 Monitoring

- RIS3 CAT
- Northern Netherlands Innovation Monitoring, etc.

- Participatory nature of monitoring
- Extremadura: Monitoring Working Groups
- University of Vaasa "connectivity model"

Design, data collection and analysis

HEIs as stakeholders

Intellectual debate

Training and education

- Monitoring needs champions!
e.g. Special Issue *Industria*

- Undergraduate, Graduate and Professional programmes

How S3 impacts on HEIs and challenges them to do more...

Element of Smart Specialisation	Impact on HEIs
Prioritisation of investments to build critical mass in areas of international competitiveness	Integrate these areas in curricula and research 'Third mission' redefinition, better connection with the other two missions
Entrepreneurial Process of Discovery (EDP)	More entrepreneurial education More applied and interdisciplinary research in S3 priority areas Horizontal skills among graduates
Innovation for all regions: place-based approach	Embedded in regional governance Different engagement models and tools suited to the regional context Importance of the social sciences
Broader understanding of innovation	Identify and respond to regional challenges, introducing an institutional strategy, strong leadership, more involvement of academics
Focus on monitoring	Role for social sciences

Source: Edwards et al (2017), *Higher Education for Smart Specialisation: Towards strategic partnerships for innovation*



Higher Education for Smart Specialisation A Handbook

Version 1.0
October 2018

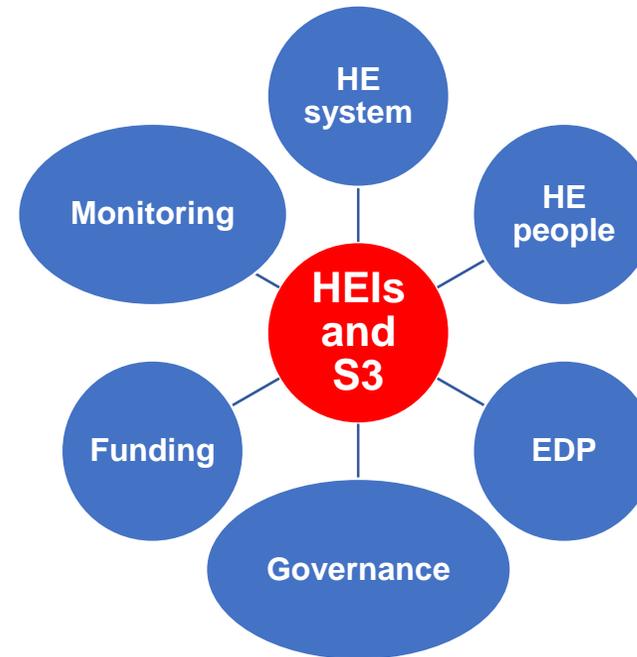


The HESS Handbook (1st edition)

(published online JRC in October 2018, to be updated in 2020)

Advises governments and HEIs on six themes that shape the involvement of universities and other HEIs in the design and implementation of S3:

- 1. HE System:** How reforms to HEIs can make them more capable of engaging regionally
- 2. HE People:** How to understand the drivers and incentives of individuals working in HEIs
- 3. The Entrepreneurial Discovery Process (EDP):** How HEIs can work with stakeholders to identify regional strengths
- 4. Governance:** How HEIs fit into the process of governing regional S3 strategies
- 5. Funding:** How to design funding programmes so HEIs have a stronger role in S3
- 6. Monitoring:** The role of HEIs in monitoring the process of S3 implementation



Other HESS publications



This Policy Brief reports on the results of the 1st phase of the HESS project. This includes an analysis of a survey of S3 Platform members related to the role of HEIs in the design and implementation of their S3, an introduction to how the ESF may finance human capital elements of innovation, and a summary of the two pilot case studies in Navarra and NE Romania.



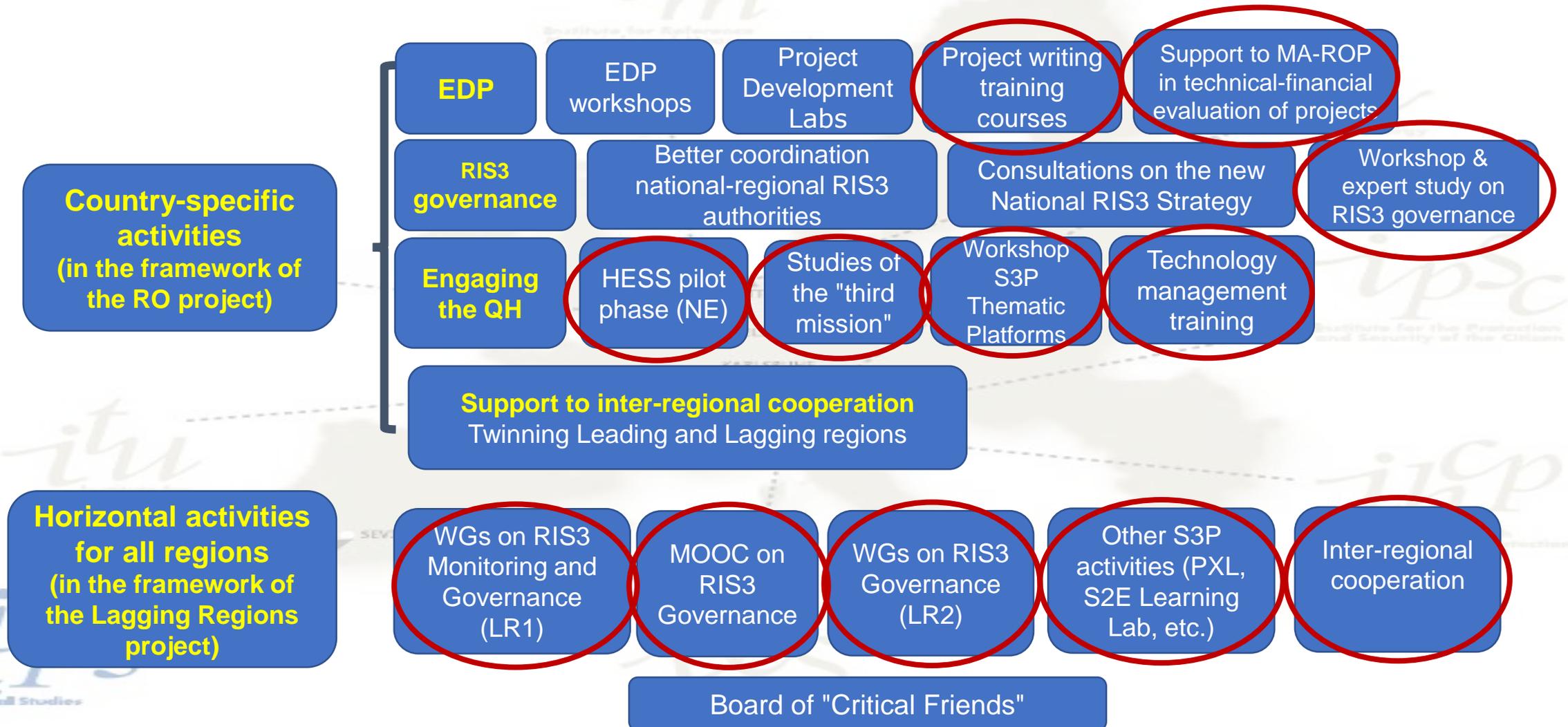
This document reports the action-research activities conducted in the HESS project in the region of Puglia (IT). The authors explored two instruments at the opposite end of the higher education spectrum: 1) Istituti Tecnici Superiori (ITs), i.e. Higher Technical Institutes, a form of technology-based vocational education and training. 2) Innovative Industrial Doctorates.



This report proposes an analytical framework for university governance allowing the comparison and benchmarking of governance systems across EU member states, which could serve as guidance for university managers and policy makers to design the institutional incentives and funding programmes for increased engagement in S3.

Advancing Human Capital in Business and Government

Targeted Support to RIS3 in Romania: Project toolbox



Example: improving S3 governance in Romania

Key challenge: improving the institutional capacity of national and regional authorities involved in RIS3 management

- **At the regional level: RDAs**

- Need to increase the size of S3 teams, hire staff with relevant skills
- Need to improve competences in R&I, technology transfer and commercialisation of research, strategic project management
- Need to provide support services to the local R&I community for improving the quality of the S3 project proposals
- Need for higher visibility, authority in the region

- **At the national level: Management Authority of the Regional OP & Ministry of Research and Innovation**

- Increasing the professional expertise of current staff and hiring new staff with adequate skills
- Need to improve policy-making, policy analysis, policy implementation capacity
- Better definition of priorities, consultations with the R&I stakeholders, policy mix and funding instruments
- Clarity of evaluation procedures for RIS3 projects
- Clear delineation between the RIS3 funding sources (ROP, COP, National RDI Plan, etc.)
- Monitoring and evaluation mechanisms
- Integration of the national and regional levels of R&I: institutional setup, policies, budgets
- Feedback of lessons from the current policy cycle into the next one

Example: improving the EDP process in Romania

Key challenge: create a functional pipeline for RIS3 projects resulted from the EDP process

- **At the regional level: management capacity of the RDAs**
 - ❑ Planning/organising the EDP workshops
 - ❑ Refinement of the RIS3 project ideas resulted from the EDP workshops (PDL, project writing training course)
 - ❑ Support services provided by the RDA for improving the quality of the RIS3 project proposals
- **At the national level: management capacity of MAROP & MRI**
 - ❑ Call for projects issued by MAROP, MRI
 - ❑ Clarity of the funding sources (ROP, COP), budgets, evaluation procedures
 - ❑ Monitoring and evaluation mechanisms
 - ❑ The regional approach in MRI: institutional setup, relations regional-national
 - ❑ Feedback into the next policy cycle
 - ❑ The new national RIS3 strategy: vision, priorities, funding instruments



Project website – major update in progress!

<http://s3platform.jrc.ec.europa.eu/ris3-in-lagging-regions>

Thank you!

