

**InnoBridge –
Bridging the innovation gap
through converting R&D results into
commercial success
in a more effective and efficient way**

Action Plan by

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1. Policy context

1.1 Aim of the Action Plan

The Action Plan aims to impact:

- x Investment for Growth and Jobs programme
- € European Territorial Cooperation programme
- € Other regional development policy instrument

Name of the policy instrument addressed:

ERDF Operational Programme of Castilla y León 2014-2020, priority Axis 1 "Fostering research, technology development and innovation"

1.2 Introduction

This Action Plan, which is a direct consequence of the work developed within the INNOBRIDGE Project framework, will be implemented in Castilla y León until 31st December 2020 as an essential part of the University-Business Knowledge Transfer Plan (TCUE Plan) 2018-2020.

The TCUE Plan 2018-2020 was passed by agreement 28/2018 of the Regional Government (Junta de Castilla y León), of 26th April, 2018 and published in the official record of the Regional Parliament (Boletín Oficial de Castilla y León) on 30th April, 2018.

The INNOBRIDGE Action Plan and its different actions are part of the TCUE Plan 2018-2020 for all purposes, including those related to its financing and follow-up.

The main InnoBridge objective is to improve the value of the results of the research, involving universities and regional companies in the implementation of new policies to support collaboration in R&D&I. The aim is to increase the innovation of regional companies, particularly SMEs, by making them the true engine of regional competitiveness.

The project is developed in 2 phases:

In the first phase (of 3 years duration) a joint work of the whole consortium was carried out, including peer reviews, study visits and exchange of experiences, in which each partner has focused on a specific political and regional strategy, always linked to their respective RIS3.

In the case of Castilla y León, work has been carried out on the Operational Program of Castilla y León 2014-2020, especially in the promotion of research, technological development and innovation, taking as a main reference the University - Business Knowledge Transfer Plan (the previous Plan TCUE 2015-2017, now updated).

The result of all this work is the present Action Plan that will be deployed on the territory as a second phase (of two years duration) within the INNOBRIDGE project itself.

Specifically, and based on the analysis of the 2015-2017 TCUE Plan, the INNOBRIDGE Action Plan improves specific aspects of the new TCUE 2018-2020 Plan, in which it is in fact integrated.

In short, the **TCUE Plan 2015-2017**, which was the object of study and peer review during phase 1 of the INNOBRIDGE Project, can be said to have arisen as a way of promoting collaboration, links and synergies between companies and higher education centres, acting on three different fronts, although with clear overlaps:

- Development of R&D&I projects in university – business collaboration
- Register and commercialization of university research results (patents, intellectual property registers, licences, etc.)
- Direct exploitation of research through the creation of a new business (EBT).

Promoted by the Regional Government Education Ministry with participation from all the universities in Castilla y León, the TCUE 2015-2017 Plan had the following lines of action:

- Consolidation of the university Knowledge Transfer Structures.
- Identification and consolidation of technological supply and demand.
- Cooperative R+D+I.
- Protection and exploitation of knowledge.
- Entrepreneurial activity and technology-based business creation.
- Diffusion.

The TCUE Plan 2015-2017 as a whole, along with some of its most significant actions, were the subject of study and experience sharing (including an *in situ* visit of the whole consortium in November 2017) throughout Phase 1 of the INNOBRIDGE Project.

1.3 Learned Lessons from INNOBRIDGE Project. SWOT Analysis of Policy Instrument tackled

1.3.1 Regional framework

Castilla y León has a consolidated university system, with critical mass and experience in key areas for economic and social development. The universities of Castilla y León together have 60% of all personnel devoted to R&D in the region; accounting for almost a third of R&D spending, which represents a higher proportion than the Spanish national average.

Over recent years, the universities have known how to modernize and have faced up to many challenges, particularly the construction of the European Higher Education Area, which has required a change in methodologies and the very structure of their qualifications. The second great challenge has been that of preparing Castilla y León for what the Lisbon Strategy called the construction of “the Europe of Knowledge”. This approach requires the implementation of policies for competitiveness based on the capacity of regions to generate and mobilize knowledge, and it therefore placed universities at the centre of social and economic development. Overcoming this second challenge involved not only the modernization of structures and procedures but also a tough cultural change and an opening up of the universities, which are institutions that are increasingly connected globally, but also involved locally.

From the previous experiences (TCUE Plan 2015-2017), with capital provided by the INNOBRIDGE Project, and particularly with the reflections and experiences provided by the partners making up the consortium and also the regional stakeholders mobilized by the project itself, the Education Ministry of the Regional Government (la Junta de Castilla y León) set up the mechanisms for passing the University-Business Knowledge Transfer Plan (TCUE Plan) 2018-2020, which includes what had been learned from the INNOBRIDGE Project applied to Castilla y León and specifically all the actions that comprised the Action Plan for the INNOBRIDGE Project itself.

The new TCUE Plan 2018-2020 will be in force from 1st July, 2018 to 31st December, 2020, although it can be extended before it comes to an end.

With the new TCUE Plan 2018-2020 the aim is to progress towards a new integrated, stable and sustainable model that forms an essential part of the strategic planning for Castilla y León’s universities, and which generalizes transfer processes between university research personnel and facilitates the work of the Knowledge Transfer Offices (OTC for short, in Spanish) in the region’s universities.

The aim is to increase critical mass and generalize transfer processes between university research personnel in Castilla y León.

In terms of procedure, the plan has been the subject of citizen participation by means of the Open Government Portal. Likewise, there has been collaboration in its design from all the universities of Castilla y León by means of the TCUE Network, it has been sent to all the Regional Government Ministries (Junta de Castilla y León), the Castilla y León Economic and Social Council, which has representation from unions and businesses, and it has received a favourable report from the Castilla y León Commissioner for Science and Technology.

In accordance with article 16.j) of Law 3/2001 of 3rd July, on the Government and Administration of the Community of Castilla y León, the Junta de Castilla y León Regional Government is given the power to pass programmes, plans and binding directives for all the bodies of the Community's Administration.

Based on this, the Junta de Castilla y León, on the proposal of the Education Ministry, and after deliberation by the Governing Council, passed the TCUE Plan 2017-2020 on 26th April, 2018 (Published in the Official Regional Journal of Castilla y León - 30 April 2018)

1.3.2 Lessons learnt and SWOT Analysis

The final objective of the European INTERREG EUROPE programme is to improve the development and implementation of research and innovation policies (among others) in regional and local governments all over Europe.

The INNOBRIDGE Project (Bridging the innovation gap through converting R&D results into commercial success in a more effective and efficient way), funded within the INTERREG EUROPE programme, is focussed on strengthening the connection between research activities and regional innovation to improve the competitiveness of businesses. The main objective of INNOBRIDGE is to improve the valorization and use of research results, involving regional universities and businesses in the implementation of new policies for support and collaboration in matters of R&D&I.

The **addressed policy instrument** is the ERDF Operational Programme of Castilla y León 2014-2020, priority Axis 1 "Fostering research, technology development and innovation". Taking into account that the Smart Specialisation Strategy has been a

condition ex-ante for the approval of the ERDF OP –as the European Commission has required all over Europe- the RIS3 is a key document as far as research, development and innovation is concerned.

In way of an overview, the thematic priorities (TP) of the recently updated RIS3 of Castilla y León are:

- TP1. Agri-food as a catalyst for the extension of the innovation on the territory
- TP2. Manufacturing and processing technologies, especially in transport sectors, such as the automotive and aeronautics, making materials and components the key to leadership and sustainability
- TP3. Application of knowledge and technology to Health and Social Care, Demographic Change and Well-being, for the improvement of the quality of life of citizens.
- TP4. Natural Heritage, Cultural Heritage and the Spanish Language, and endogenous resources as basis of the sustainability of the territory.
- TP5. R&D in Information and Communication Technologies, Energy and Sustainability, for the regional global competitiveness based on the transversal nature of technologies and knowledge.

Moreover, the strategic objectives of the RIS3 of Castilla y León are:

- Reinforce a more competitive and sustainable economic model through business innovation and more efficient use of resources,
- Move towards scientific and technological leadership in certain fields of potential for regional specialization, setting up a more attractive science and technological system,
- Improve the internationalisation and the outward looking perspective of the regional innovation system,
- Promote multidisciplinary collaboration between generators of knowledge and the knowledge transfer,
- Promote talent and creativity in all social and economic areas,
- Turn ICT into tools enabling change and innovation, social and territorial cohesion, economic growth, rural development and job creation.

The Managing Authority of the ERDF OP is the General Direction for Budget and Statistics of the Ministry of Economy and Finances of the Regional Government of Castilla y León. As far as R+D+I is concerned the Regional Commissioner for Science and Technology, as well as the Commission of General Secretaries ensures the general coordination of the policy instrument being tackled.

Within INNOBRIDGE, Castilla y León specifically reviewed priority Axis 1 “Fostering research, technology development and innovation” of the ERDF Operational Programme of Castilla y León 2014-2020, centring the review work on two specific actions:

1. **TCUE Plan 2015-2017: TCUE Plan** stands for the Spanish acronym “Plan de Transferencia de Conocimiento Universidad-Empresa, in English “University-Business Knowledge Transfer Plan”, and it is part of the Investment Priority 1.2.

This Investment Priority aims to promote investment of enterprises in research, development of links and synergies between companies, research centres and higher education centres, in particular, investment in the development of products and services, technology transfer, social innovation, ecological innovation, public service applications, stimulation of demand, network interconnection, clusters and open innovation through smart specialization and support for technological and applied research, pilot lines, early product validation actions, advanced manufacturing capabilities and first production, in particular, in key enabling technologies and promotion of multi-functional technologies.

Strategic Objective 1.2.2. RIS3 Technology transfer and cooperation between businesses and universities or research centers.

Section 8 “Governance of the Research and Innovation Strategy (RIS3) of Castilla y León 2014-2020” states that management and implementation of the Strategy corresponds to various bodies of Public Administration of the Region of Castilla y León that, within the framework of their competences, will be able to develop specific action plans.

On that basis and from the experience gained in previous years, the Regional Ministry for Education has developed the University-Business Knowledge Transfer Plan 2015-2017 (TCUE Plan), approved under the umbrella of the RIS3, with the objective of fostering the university-business knowledge transfer in terms of better exploitation of R&D results.

The new scenario of smart specialisation opens new opportunities for redefinition and improvement of the TCUE Plan. The INNOBRIDGE project has been a key reference for the elaboration of the new TCUE Plan for the time 2018-2020, which was approved by the Regional Government of Castilla y León in April 2018. The project will also be a reference for the implementation of the new TCUE Plan in the coming years through the Action Plan.

2. **InfraRed** (part of Investment Priority 1.1). Initially proposed to be reviewed for the INNOBRIDGE consortium, the InfraRed project is currently at too early stage of development and it is not possible, at present, to carry out its SWOT analysis or analyse its own impact. However, we consider it important to refer

to this measure due to the fact that we intend to take advantage the INNOBRIDGE project to improve InfraRed and to boost its initiatives. Thus, the Castilla y León Peer Review results and ideas of improvement focus only on TCUE Plan.

InfraRed is conceived as a partnership among public universities to acquire and share scientific equipment linked to collaborative projects, and foster its availability to the public in general and the private scientific community. This is a new initiative in the region. InfraRed is envisaged as collaboration among universities, which can significantly enhance the access to technology of regional companies and the university-business collaboration in innovation projects. Scientific infrastructures can be at the core of innovation and therefore, InfraRed has significant potential for establishing synergies with TCUE (and therefore with Priority Axis 1.2). New ideas generated during the exchange of experiences of InnoBridge can significantly improve this aspect.

Study visits, Peer Reviews, and personnel and best practice exchanges have been produced within this project's framework (Phase 1), which has given a view of the real regional system for university-business knowledge transfer in the European context.

Furthermore, there has been *in situ* discovery of some specific actions being developed by other partners that will transfer to Castilla y León during Phase 2 (implementation) of the project, in the period up to 31st March, 2021. This is the specific case of the personnel and best practice exchange undertaken with the Alentejo region (Portugal) which will serve as the basis for incorporation of their rapid prototype laboratory model (FabLab) in Castilla y León in the next two years.

On that basis, and after joint work with the whole INNOBRIDGE consortium, summarised to a great extent in the SWOT analysis provided later in this document and under the following heading, which describes some of the lessons learnt throughout phase 1 of the project, the INNOBRIDGE Action Plan in Castilla y León is aimed at improving the TCUE 2015-2017 Plan for the coming years, from 2018-2020.

In addition to this, the following sections include a more detailed description of the influence and lessons learned from the INNOBRIDGE Project, there are also descriptions of the actions to be implemented under the heading "background".

The following SWOT analysis is the result of the Peer Review for the addressed policy instrument of Castilla y León within the framework of the INNOBRIDGE project, focusing on the 'TCUE Plan 2015-2017' measure:

STRENGTHS	WEAKNESSES
<p>S1 Strong and highly consolidated university system in the teaching and research areas.</p> <p>S2 Institutional experience in the design and implementation of strategic plans (University-Business Strategy 2008-2013).</p> <p>S3 Existence of the TCUE Network. The participating universities have been able to overcome old local rivalries to collaborate in the implementation of projects and joint actions.</p> <p>S4 Existence of good technological infrastructures.</p> <p>S5 High educational level of the population.</p> <p>S6 Most of the Knowledge Transfer Offices (OTC) of Castilla y León universities have stable staff, which would never have been possible without TCUE support during the economic crisis.</p> <p>S7 Strong personal relationships of the staff of the different knowledge transfer offices, which enables networking.</p> <p>S8 Basic research is strong.</p> <p>S9 All regional universities involved.</p> <p>S10 Strong coordination/cooperation between partners (universities) in relation to using RTD infrastructure.</p> <p>S11 Long-term commitment (sustainable) to RTD and innovation in the region.</p> <p>S12 Experience that can be used for improvements.</p>	<p>W1 Research Groups: Atomized/dispersed and small. There is not enough project flow to attract capital and industry. Scarce knowledge in universities of business demands.</p> <p>W2 Small dimension and specialization of most university-company interface structures.</p> <p>W3 Lack of adaptation of university collaboration rules to the needs of the company.</p> <p>W4 Absence of the private sector in the generation and consolidation of universities' EBT. Also of the university projects of RTD.</p> <p>W5 Lack of recognition of technological, transfer and innovation merits (inventors, managers).</p> <p>W6 Reduced internationalization of innovation and low participation in international funding sources.</p> <p>W7 Low % of new companies searching for these services (always the same ones).</p> <p>W8 Insufficient coordination between the Regional Administration departments.</p> <p>W9 Lack of critical mass.</p>

OPPORTUNITIES

- O1 There is an important and very valuable part of university research that is orientated or can be oriented in the very short term towards the demand of markets and companies.
- O2 Gradually, the mentality of universities is changing and there is a greater willingness to do transfer.
- O3 General current favourable to the promotion of the entrepreneurial spirit.
- O4 According to Bologna, possibility of linking end-of-grade works with real needs of companies.
- O5 Implementation of the RIS3. This implies a new approach to the entire RTD policy and a redefinition of instruments and mechanisms.
- O6 Maintain and strengthen the co-operation between university and start-ups/business sphere due to support service 3 (CAMPUS).
- O7 Cooperation between different universities – cooperative projects.
- O8 Improved RTD performance of the region as a basis for further development.
- O9 High potential to evolve from experimental level to an organised and standardised platform.

THREATS

- T1 Decline in private investment as a result of the crisis of recent years. In particular, reduction of investment in RTD.
- T2 As a result of the economic crisis of recent years, a reduction in the regional budget for RTD, which affects the reduction of public capacities to support structures, human resources and the development of initiatives.
- T3 Risk of loss of a relevant part of the support structure for RTD as a result of the crisis and risk of the system falling due to budgetary reasons.
- T4 Aging of research staff.
- T5 Decapitalization of human resources in research entities and loss of talent or brain drain.
- T6 Excessive dependence on political decisions.

2. INNOBRIDGE Action Plan

This Action Plan, which is a direct consequence of the work undertaken within the INNOBRIDGE Project framework, will be implemented in Castilla y León until the 31st December 2020 as an essential part of the University–Business Knowledge Transfer Plan (TCUE Plan) 2018-2020.

Following the path of the TCUE Plan 2018-2020 in which it is framed, the INNOBRIDGE Action Plan's main aim is to improve the links between universities and businesses within Castilla y León's framework for smart specialization, identifying niches for scientific and economic specialization, establishing strategic public-private collaboration, stimulating the application of knowledge as an asset in the regional economy, and promoting entrepreneurial spirit and the culture of innovation in universities.

This general aim can be subdivided into three major objectives:

- The development of an integrated, stable and sustainable model that forms a part of strategic planning for Castilla y León's universities and fosters collaboration and networking among all the universities in the region.
- The setting up of joint R&D&I strategies and projects among universities and businesses.
- Promotion of university enterprise and the creation of Spin-offs and businesses based on university knowledge.

Together with these objectives, there are three crosscutting criteria for action, oriented towards:

- Ensuring equal access for men and women to the various actions.
- Fostering social integration of vulnerable groups.
- Promoting energy saving and sustainable development.

Always within the University-Business Knowledge Transfer Plan (TCUE Plan) 2018-2020, the INNOBRIDGE ACTION PLAN will be implemented by the *University-Business Knowledge Transfer Network (TCUE Network)*. The Education Ministry, the University and Higher Education Foundation of Castilla y León (FUESCYL), and all the public and private universities in the region participate in this network through the so-called "Knowledge Transfer Offices" (OTC in Spanish), which are the interfaces aimed at fostering university-business collaboration. In some cases these interface functions are developed by means of specific foundations when there is a certain level of specialization. The University and Higher Education Foundation of Castilla y León (FUESCYL) coordinates this network.

The plan presents four major actions:

- *Action 1: INNOBRIDGE. FOSTERING UNIVERSITY SYSTEM FOR KNOWLEDGE TRANSFER:* This section brings together the activities aimed at promoting the activity of the university support structures for knowledge transfer, encouraging the development, protection and exploitation of regionally produced technologies and also fostering collaboration and networking among the region's universities in matters of knowledge transfer,
- *Action 2: INNOBRIDGE. FOSTERING INNOVATION THROUGH PhD WORKS:* Including actions aimed at guiding some of the university doctorate works towards the socioeconomic needs and towards the collaboration with their environment,
- *Action 3: INNOBRIDGE. FOSTERING UNIVERSITY ENTREPRENEURSHIP: bringing together the support activities for university enterprise and the creation of spin-offs and technology-based businesses (EBT for short, in Spanish).*
- *Action 4: INNOBRIDGE. SIMPLIFICATION OF PROCEDURES:* Cross action in order to simplify all management and administrative procedures on the experience of previous years and the analysis done in phase 1 of INNOBRIDGE project.

These actions will be implemented by the 4 public universities of Castilla y León.

On this basis, the Education Ministry awards grants or subsidies to universities in order to implement the Action Plan in their own setting. Each university presents its own proposal for actions to the Education Ministry and it will be responsible for the development and justification over the coming years (till 31/12/2020).

The INNOBRIDGE Action Plan will be in force until 31st December 2020 and have a total budget of 1,567,000 euros, which includes ERDF co-funding and forms a part of the ERDF Operational Programme 2014-2020 for Castilla y León.

The table below summarizes the budgetary estimated for the Action Plan, broken down into Actions:

ACTIONS	BUDGET (euros)
<i>Action 1: INNOBRIDGE. FOSTERING UNIVERSITY SYSTEM FOR KNOWLEDGE TRANSFER</i>	615.000
<i>Action 2: INNOBRIDGE. FOSTERING INNOVATION THROUGH PHD WORKS</i>	192.000
<i>Action 3: INNOBRIDGE. FOSTERING UNIVERSITY ENTREPRENEURSHIP</i>	760.000
<i>Action 4: INNOBRIDGE. SIMPLIFICATION OF PROCEDURES¹</i>	0
TOTAL	1.567.000

This budget estimate only includes the actions that go to make up the Project INNOBRIDGE Action Plan. These would be the funds directly influenced by INNOBRIDGE.

However, additionally, it should be pointed out that the INNOBRIDGE Action Plan is part of a larger planning tool – the TCUE Plan 2018-2020 – on which it has direct influence and whose overall budget comes to 7,875,000 euros, including 5,475,000 euros co-funded by the ERDF as part of the Castilla y León ERDF 2014-2020 Operational Programme.

Regarding the follow-up of the Action Plan, in addition to the performance indicators that are detailed in the descriptive sections of each of the actions (following pages), this general objective is introduced: *20% of enterprises benefiting from the instrument (through contact with TCUE) that cooperate with universities (Indicator FEDER C026).*

¹ This action just refers to the improvement of administrative and management tools, affects the entire project and has no specific budget

3. Action 1: INNOBRIDGE. FOSTERING UNIVERSITY SYSTEM FOR KNOWLEDGE TRANSFER

3.1 The Background

Action 1 stems directly from what has been learnt within the INNOBRIDGE framework, specifically:

Best practices exchange with the Portuguese Alentejo region, which made it possible to learn about their experience spreading the adoption of rapid prototype techniques and additive manufacturing by means of the “Evora Tech” FabLab.

Once this experience had been identified and recognized as allowing some of the opportunities identified in the SWOT analysis in point 1.3 to be taken advantage of, a staff exchange was organized (in September, 2018) with the Alentejo region in Portugal so that the universities of Castilla y León could learn firsthand about the experience of ADRAL (Agência de Desenvolvimento Regional do Alentejo) in managing the “Evora Tech” FabLab and evaluate the possibility of taking it back to their own setting.

The opportunities identified in the SWOT analysis (point 1.3 above) that can be taken advantage of are as follows:

- O1 There is an important and very valuable part of university research that is orientated or can be oriented in the very short term towards the demand of markets and companies.
- O2 Gradually, the mentality of universities is changing and there is a greater willingness to do transfer.
- O3 General current favourable to the promotion of the entrepreneurial spirit.
- O4 According to Bologna, possibility of linking end-of-grade works with real needs of companies.

Based on this, the Action Plan introduces two work lines in the following point that are specific and allow the new possibilities of digital prototyping and additive manufacturing to be used to shift the work of university students and researchers towards the real needs of their social and economic setting. Specifically:

1. "Fab Labs" will be created within the Castilla y León university environment, which will collaborate by networking with similar regional, national and international mechanisms.
2. These new infrastructures will be used to promote the creation of prototypes aimed at the market and proofs of concept before potential commercialization. This line of action will also help to offset at least two weaknesses identified in the SWOT analysis developed by the INNOBRIDGE consortium. Specifically:

W4 Absence of the private sector in the generation and consolidation of universities' EBT. Also of the university projects of RTD.

W6 Reduced internationalization of innovation and low participation in international funding sources.

W7 Low % of new companies searching for these services.

3.2 Action Description

Promotion of the activity of university knowledge transfer support structures, the development, protection and exploitation of their own technologies and the collaboration and networking activities of the public universities of Castilla y León.

Includes two working lines:

3.2.1 Fab-Labs

Creation and implementation of "*Fab-labs*" for students and researchers (prototype labs and digital manufacturing), establishing a collaboration network between the various universities of Castilla y León, and also with similar regional, national and international mechanisms.

These laboratories will give preference to university students and researchers involved in the development of the prototypes and proofs of concept given in the following point.

3.2.2 Calls to carry out, register and exploit technological developments:

The universities will promote regular and periodical internal calls to foster knowledge transfer by means of the development and protection of inventions, prototypes aimed at the market, and proofs of concept. Including:

- Calls for students to experiment with market-oriented prototypes. These calls will be compatible with the undertaking of end-of-grade works, masters or PhDs and will be oriented towards meeting the specific needs of society or business. Priority will be given to the presence of businesses in tasks of guidance and/or tutoring and the use of the Fab-Labs mentioned in the previous point, 2.2.1.

This includes support for making the prototype; tutoring in doing so; legal protection for the intellectual and industrial property of the results whenever necessary and support for commercialization by granting exploitation rights or by creating a new innovation and/or technology-based business (EBT for short, in Spanish)

- Internal calls so that university research staff can carry out proofs of concept before commercializing a new product, process or service. These calls should give preference to research groups that have a marked multi-disciplinary character and which make use of the Fab-Labs mentioned in point 1 above.

This includes support for carrying out the proof of concept; legal protection for the intellectual and industrial property of the results whenever necessary, and support for commercialization by granting exploitation rights or by creating a new innovation and/or technology-based business (EBT).

Action 1 monitoring indicators with their target values:

MONITORING INDICATOR	TARGET VALUE (at the end of the Action Plan)
Number of Fab-Labs running	2
Number of prototypes and/or proofs of concept developed	225
Number of companies involved in these Action 1	10

3.3 Players involved

All the public universities from the Castilla y León region. These may collaborate with business-related entities, such as: Official Chambers of Commerce and Industry, Regional Council of Chambers of Commerce or different social or business groups.

3.4 Timeframe

This action will be implemented from 1 July 2018 till 31 December 2020.

3.5 Costs

Budget foreseen: 615.000 euros

3.6 Funding sources

This Budget is co-funded by the ERDF, as part of the Castilla y León ERDF Operational Programme 2014-2020.

4. Action 2: *INNOBRIDGE. FOSTERING INNOVATION THROUGH PHD WORKS*

4.1 The Background

From the SWOT analysis carried out in the first phase of the INNOBRIDGE Project (see section 1.3 above) and from the peer review undertaken with the other members of the consortium, Action 2 arose, which attempts to shift part of the high-level research personnel and activities from regional universities towards the area's industrial fabric, which is considered to be an important way of invigorating economic activity by means of innovation, generating quality employment, and retaining talent in a region (Castilla y León) with a major problem of population loss.

Specifically, on February 14, 2017, within the Peer Review held in Tampere (Finland), representatives of the Ministry of Education of Castilla y León, supported by FUESCYL, presented to the rest of the INNOBRIDGE partners their experience in the management of the TCUE Plan 2015-2017, explaining its difficulty to convince companies to introduce challenges or proposals for collaboration with universities and asking for suggestions in order to "break the ice" between businesses and universities.

A worthy dialogue emerged from the partner's experience, with concrete contributions from Sofia (Bulgaria) and Alentejo (Portugal), who suggested the creation of services for companies from the university in response to common problems, as well as from the Finnish partner who suggested launching challenges for companies.

Bringing together both ideas to the ordinary activities in the universities of Castilla y León (looking for sustainability), and specifically, linking with PhDs this Action 2 was born.

Finally, on February 19, 2019, at the end of project phase 1, the INNOBRIDGE meeting held once more in Finland (Tampere), mainly focused on the elaboration of the Action Plan, allowed to get everything ready.

Action 2 aims to take advantage of some of the region's strengths highlighted in the INNOBRIDGE SWOT analysis:

S4 Existence of good technological infrastructures.

S8 Basic research is strong.

It attempts to make the most of some of the opportunities highlighted in that analysis. Particularly:

O9 High potential to evolve from experimental level to an organised and standardised platform.

The final objective is to minimize some of the threats that show up in the SWOT analysis. Specifically:

T3 Risk of loss of a relevant part of the support structure for RTD as a result of the crisis.

T5 Decapitalization of human resources in research entities and loss of talent or brain drain.

Thus, Action 2 backs the undertaking of joint research and development projects and open innovation.

4.2 Action Description

Activities oriented to foster the realization of joint R&D&I projects and open innovation, including next action lines:

4.2.1 Industrial PhDs

The universities will promote initiatives to encourage PhD training in businesses by developing research or experimental development projects at their facilities (industrial PhDs). The support measures include:

- Internal and external diffusion of public and private calls and programmes that support industrial PhDs.

- Development of workshops and working groups with research staff and businesses in order to explore the possibilities of collaboration in this area.
- Proactive support for preparation of proposals for calls and programmes of this type. This can be done by holding internal calls to select candidates and by establishing collaboration agreements with organizations and companies that will allow interested businesses to be identified.

4.2.2 University-Business Challenge: the PhD Challenge

It is the meeting point between universities, businesses and society, to encourage small, joint R&D&I projects which respond to needs or specific challenges that are consistent with the current situation or future applicability of a specific technology.

These challenges will be proposed to the other party by the participating businesses or universities.

Specifically, the “PhD Challenge” is an initiative to be developed with schools offering PhD programmes at the universities of Castilla y León, in which the universities will propose a challenge to businesses and social organizations to develop a joint project that implies a qualitative leap in terms of the methodologies and technological tools used currently.

Action 2 monitoring indicators with their target values:

MONITORING INDICATOR	TARGET VALUE (at the end of the Action Plan)
Number of workshops with research staff and businesses to explore the possibilities of setting up “industrial PhDs”	8

4.3 Players involved

All the public universities from the Castilla y León region. They may collaborate with companies or nonprofit related entities.

4.4 Timeframe

This action will be implemented from 1 July 2018 till 31 December 2020.

4.5 Costs

Budget foreseen: 192.000 euros

4.6 Funding sources

This Budget is co-funded by the ERDF, as part of the Castilla y León ERDF Operational Programme 2014-2020.

5. Action 3: INNOBRIDGE. FOSTERING UNIVERSITY ENTREPRENEURSHIP

5.1 The Background

One of the aspects analysed within the framework of the tasks carried out during Phase 1 of the INNOBRIDGE Project has been the creation of new technology-based or knowledge-intensive businesses that help to shift university research towards the social and economic fabric of the region, invigorating its economy and improving the standard of living of the people living there.

The Castilla y León region has had good experience along this path in previous years in the form of the TCUE Plan 2015-2017 (analysed in phase 1 of the INNOBRIDGE Project), but there is also broad scope for improvement concerning the encouragement of entrepreneurial spirit from an early age, the consolidation of budding business projects, the incorporation of humanities and social innovation, and, in general, everything referring to coordination among the different departments of the regional public administration.

This issue was analyzed jointly by the INNOBRIDGE consortium during the Peer Review held in Tampere, Finland, on February 14, 2017. Within that meeting first ideas were born and it was also revealed (suggestion from Lower Austria partner) that a general vision was needed, beyond the university borders and also involving all the main departments of the regional administration with competences on this matter.

Then there was an opportunity to grow up these ideas and even discuss them with local young entrepreneurs while the study visit held in Castilla y León (Valladolid) on November 2017. Within that visit local entrepreneurs exposed their problems to find financing once the first stages of start-up process were overcome.

In that same study visit, held in Valladolid on November 14, 15 and 16, 2017, Castilla y León presented (as a good practice) a contest for creation of new enterprises, looking for suggestions in order to improve its dissemination among the university, especially among the humanistic studies.

Finally, it should be added that the staff exchange held in Tampere (Finland) on February 21, 2019, let to know the educational Finnish model in order to promote entrepreneurship at early ages, with the presence of the educational authorities of Castilla y León (including its Minister of Education). This staff exchange will greatly facilitate the implementation of this Action 3 during Phase 2 of INNOBRIDGE project (years 2019 and 2020).

Back to the SWOT analysis in point 1.3 of this document, the aim is to take advantage of positive previous experiences (Strength S12 of the SWOT analysis) in order to make the most of some of the opportunities detected in the analysis carried out in collaboration with the other partners in the INNOBRIDGE Project:

- O5 Implementation of the RIS3. This implies a new approach to the entire RTD policy and a redefinition of instruments and mechanisms.
- O6 Maintain and strengthen the co-operation between university and start-ups/business sphere due to support service 3 (CAMPUS).
- O7 Cooperation between different universities – cooperative projects.
- O8 Improved RTD performance of the region as a basis for further development.
- O9 High potential to evolve from experimental level to an organized and standardized platform.

This also means tackling some of the weaknesses included in the SWOT analysis. Specifically:

- W1 Research Groups: Atomized/dispersed and small. There is not enough project flow to attract capital and industry.
- W3 Lack of adaptation of university collaboration rules to the needs of the company.
- W4 Absence of the private sector in the generation and consolidation of universities' EBT.
- W8 Insufficient coordination between the Regional Administration departments.
- W9 Lack of critical mass.

5.2 Action Description

To set up support mechanisms for the creation of innovative businesses originating in the university and the appearance of entrepreneurs among the student body, even in the stages before university.

Includes three working lines:

5.2.1 Venture Capital Fund and Participation Loans

Allocation of a specific fund to finance the emergence or consolidation of innovative entrepreneurial projects in the university sphere, by means of acquiring shares in capital stock and participation loans.

5.2.2 Entrepreneurial School

Foster the entrepreneurial spirit at pre-university education levels by stimulating creativity, innovation and an entrepreneurial attitude, by means of workshops with students, parents and or teaching staff based on:

- “*Learn by doing*” type methodologies,
- “*Visual Thinking*” type methodologies, which make it possible to identify problems in everyday life, search for solutions, find relationships between concepts, and propose possible solutions,
- “*Elevator Pitch*” type presentations (summary explanations of new ideas and projects),
- Meetings with entrepreneurs, talks and visits.

The “Entrepreneurial School” will be the result of collaboration with universities through their entrepreneurial support structures and non-university education centres.

5.2.3 Entrepreneurial Campus. Social Entrepreneurship

Organization of congresses, workshops and seminars on social entrepreneurship and on setting up businesses in the sphere of the humanities and culture, with the presence of experts and successful entrepreneurs in this field.

Action 3 monitoring indicators with their target values:

MONITORING INDICATOR	TARGET VALUE (at the end of the Action Plan)
Economic allocation of the Venture Capital Fund and Participation Loans	500.000 euros
Number of participants in the "Entrepreneurial School"	140

5.3 Players involved

All the public universities of Castilla y León and non-university education centres of Castilla y León (with regards the "Entrepreneurial School").

In addition, a venture capital funds management company for the creation of a fund aimed at financing the emergence or consolidation of innovative entrepreneurial projects in the university sphere, by holding shares in capital stock and participation loans.

5.4 Timeframe

This action will be implemented from 1st July, 2018 to 31st December, 2020.

5.5 Costs

Budget foreseen: 760.000 euros

5.6 Funding sources

This budget is co-funded by the ERDF, as part of the Castilla y León ERDF Operational Programme 2014-2020.

6. Action 4: *INNOBRIDGE. SIMPLIFICATION OF PROCEDURES*

6.1 The Background

Within the SWOT analysis carried out for INNOBRIDGE (point 1.3 of this document), some weaknesses were identified relating to governance of support policies for university-business knowledge transfer and the coordination between different regional government departments. Furthermore, the analysis shed light on the excessive administrative complexity in the management of those policies.

These aspects are included in the following points of the SWOT analysis (point 1.3 of this document):

W5 Lack of adaptation of university collaboration rules to the needs of the company.

W8 Insufficient coordination between the Regional Administration departments.

W9 Lack of critical mass.

Castilla y León introduced this issue at several INNOBRIDGE meetings, being particularly significant the Peer Review held in Finland (Tampere) on February, 2017 in which the Italian partner (South Tyrol) suggested a greater transparency and accurate monitoring. The INNOBRIDGE consortium coordinator (Lower Austria) also explained its experience, suggesting the implementation of average standardized personnel costs.

As a response to these questions, a crosscutting line of action has been introduced into the plan, which affects the whole Action Plan, although it does not have an allocated budget, and attempts to have an impact on the simplification of administrative procedures and foster participation from all the academic, economic and social agents involved in the definition criteria and activities. Furthermore, it particularly deals with promoting coordination between the different departments of the regional administration.

6.2 Action Description

The Plan implementation will have a different reflection in each of the participating universities, according to their particular characteristics. However, as a coordinating entity, FUESCYL will ensure that there is consistency in the Plan as a whole, to strengthen synergies, maintain a common project image and, of course, optimize resources.

On that basis, each university will present a proposal for actions. Additionally, the University and Higher Education Foundation of Castilla y León (FUESCYL) will be able to carry out complementary actions and will collaborate in the technical monitoring of the different actions.

In order to simplify administrative management, financing systems may be used for indirect costs of 10% of direct personnel costs, as provided for in Article 68 (b) of Regulation (EU) No 1303/2013 of the European Parliament and of the Council, 17th December, 2013, by which common provisions are established to the European Regional Development Fund.

All actions should be well framed in the Regional Innovation Strategy for a Smart Specialization (RIS3) of Castilla y León, 2014-2020.

In the specific case of actions related to entrepreneurship, specific aspects and measures contemplated in the regional strategy in this area will be addressed (Entrepreneurship Strategy of Castilla y León 2016-2020).

Both strategies (RIS3 and Entrepreneurship Strategy Castilla y León) will help to improve collaboration between different departments of the Regional Administration (Junta de Castilla y León).

6.3 Players involved

All the public universities from the Castilla y León region and public stakeholders.

6.4 Timeframe

This action will be implemented from 1 July 2018 to 31st December 2020.

6.5 Costs

This action just refers to the improvement of administrative and management tools and affects the entire project but has no specific budget.

6.6 Funding sources

See previous point (6.5).

7. Signature

Date: 4th July 2019

Name of the organization: Fundación Universidades y Enseñanzas Superiores de Castilla y León

Signature: Juan Casado Canales (Director of FUESCYL, and Commissioner for Science & Technology of the Regional Government of Castilla y León)

Stamp of the organization: