



## **Mapping Regional Engagement of Universities of Applied Sciences**

*Portuguese National Report - 2020*

■ **Authors**

Armando Pires & Gonçalo Marques Justino

■ **Country**

Portugal

■ **Organisation**

Coordinating Council of Portuguese Polytechnics (CCISP)

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# List of CCISP Polytechnics



1. Polytechnic Institute of Beja
2. Polytechnic Institute of Bragança
3. Polytechnic Institute of Cávado and Ave
4. Polytechnic Institute of Castelo Branco
5. Polytechnic Institute of Coimbra
6. Polytechnic Institute of Guarda
7. Polytechnic Institute of Lisboa
8. Polytechnic Institute of Leiria
9. Polytechnic Institute of Portalegre
10. Polytechnic Institute of Porto
11. Polytechnic Institute of Santarém
12. Polytechnic Institute of Setúbal
13. Polytechnic Institute of Tomar
14. Polytechnic Institute of Viana do Castelo
15. Polytechnic Institute of Viseu
16. Macao Polytechnic Institute  
(Honorary Member)

# List of CCISP Non Integrated Schools & Universities



## Non Integrated Schools

- Nursing School of Coimbra
- Nursing School of Lisboa
- Nursing School of Porto
- Nautical College Infante D. Henrique
- Estoril Higher Institute for Tourism and Hotel Studies

## (Traditional) Universities

- U. Algarve
- U. Açores
- U. Aveiro
- U. Madeira

# Introduction

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The regional engagement of higher education institutions has been an important theme that has been researched extensively with the results published in a wide range of literature. Some authors emphasize the need for a more prominent role for professional higher education (PHE) in the development of regions (e.g. Foray et al., 2012; Hazelkorn & Edwards, 2019), and also advocate the involvement of the UAS in the development of the regional strategies (Foray et al., 2012, etc.).

This report presents one of the key outputs from the ERASMUS+ project Mapping Regional Engagement Activities of European Universities of Applied Sciences (UASiMAP). The report presents the situation of Universities of Applied Sciences (UAS) and their regional engagement in Portugal. The purpose of this report is to present important analytical data and explain the present situation, evolution, and trends of development of the Professional Higher Education sector with a focus on the UAS. The report provides a qualitative overview of the variety of UAS regional engagement in the country and also presents several examples of good practice in this important area of activity at a local level. The report also presents the perspectives of internal and external stakeholders' groups regarding the different activities and forms of regional engagement; institutions' contribution to society and the regional community and explores currently underutilised capacities and possible further development of regional engagement. Discussion with stakeholders has also addressed the benefits of regional engagement indicators, appropriate approaches to the measurement of these, and how such indicators could inform self-evaluation.

The collection of national reports, prepared by the project partners, demonstrates the variety of the European Professional Higher Education sector and also provided the background for partner's discussion on the main aims of the project, which are to develop a self-reflection tool that will measure regional engagement of UAS and support the development of their further strategies.

# 1. National context of the sector of the Universities of Applied Science

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## 1.1 Definition of UAS in your country

The Portuguese higher education (HE) system is organized as a binary system, integrating the University and the Polytechnic subsystems (Eurydice, 2020):

University education is more geared towards scientific training, with the aim to guarantee a solid cultural and scientific preparation and to provide technical training that allows students to exercise all kinds of cultural and professional activities, promoting the development of critical analysis, as well as conception and innovation skills. University education is taught at universities, university institutes, and other institutions within university education.

Polytechnic education, focused especially in vocational training and advanced technical training, is orientated towards applied research and development, focusing on the understanding and solution of problems aiming to provide a solid technical and cultural training at a high level and to develop the ability to innovate and to critically analyse and teach theoretical and practical scientific knowledge, with their applications in the exercise of professional activities. Polytechnic education is taught at polytechnic institutes, and other institutions within polytechnic education.

Despite the binary organization of the Portuguese HE system, exceptionally, it is possible to integrate some polytechnic institutions into universities, while maintaining all their polytechnic characteristics.

The Portuguese HE system includes public HE, made up of institutions belonging to the State and the foundations instituted by it, and private HE, consisting of institutions belonging to private entities and cooperatives.

## 1.2 Background/history of UAS in Portugal

The April revolution in 1974 launched the development of HE sector (Almeida, 2011; Cardoso et al., 2011). After 1978 HE sector in Portugal was structured as a binary system (CCISP, 2006), comprising both public and non-public HE Institutions (HEIs) (Machado & Taylor, 2010). The short-term HE, polytechnic education, was launched to provide technical training at a higher level. The Basic Law of the Educational System (Law No. 46/86 of 14 October) consolidated the existence of the binary system, by establishing a formal distinction between university and polytechnic education (Simão et al., 2002).

The binary structure of the Portuguese HE system had implications at several levels, of which the following stand out (CCISP, 2006):

- The nature of the teaching provided by the institutions - more conceptual at universities, more practical at polytechnics.
- The different competencies for offering academic degrees - universities award bachelor ("licenciatura"), master's and doctoral degrees; polytechnics award bachelor ("licenciatura") and master's degrees.

- The nature of research - fundamental and applied research in universities and applied research in polytechnics.

Despite the formal distinction between the two subsystems, there has been a movement towards bringing the two subsystems closer together, calling into question the binary structure (Almeida, 2011; Diogo, 2009), similarly to what happens at European level, largely due to the Bologna Process. However, the trend seems the point to reinforcement of the binary model (Diogo, 2009).

### 1.3 Description of the UAS sector and programmes in Portugal

The number of students (table 1), the shares of students in 2019 at different types of HEIs (table 2), the share of UAS students at different legal forms (table 3) and the list of the three most dominant study sectors (table 4) are show in the following tables.

Table 1 Number of students					
	2018 <sup>1</sup>	2019 <sup>2</sup>		2018	2019
Number of HEIs	372 753	385 247	Number of UAS students	131 518	137 380

Table 2 Shares of students 2019 at different types of HEIs	University	UAS	Other HEIs
	64.3 %	35.7 %	0 %

Table 3 Share of UAS students at different legal forms	Private institutions	Public institutions	Other (specify)
	15.0 %	85.0 %	0 %

Table 4 list of 3 the most dominant sectors	Share of from all UAS students from the sector (expert estimation or statistics if available) to all UAS sector
1 Social sciences, business and law	25.9 %
2 Health and welfare	22.9 %
3 Engineering, manufacturing and construction	20.0 %

<sup>1</sup> According to Eurostat, <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>

<sup>2</sup> According to: <https://www.dgeec.mec.pt/np4/EstatVagasInsc/>

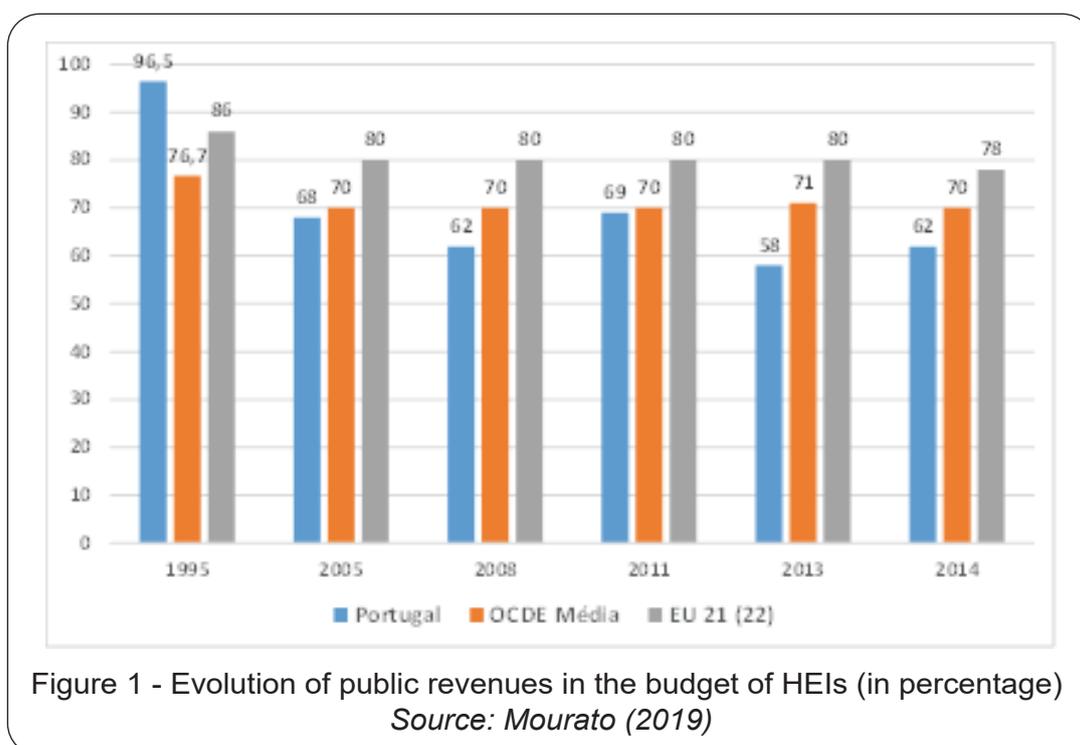
## 1.4. Funding mechanisms

The level of public funding for HE in Portugal covers only the main needs and responsibilities of HEIs, as noted in the recent OECD evaluation report of the HE system in Portugal (OECD, 2018). The State budget is clearly insufficient to pay the salaries of teaching and non-teaching staff (CCISP, 2019).

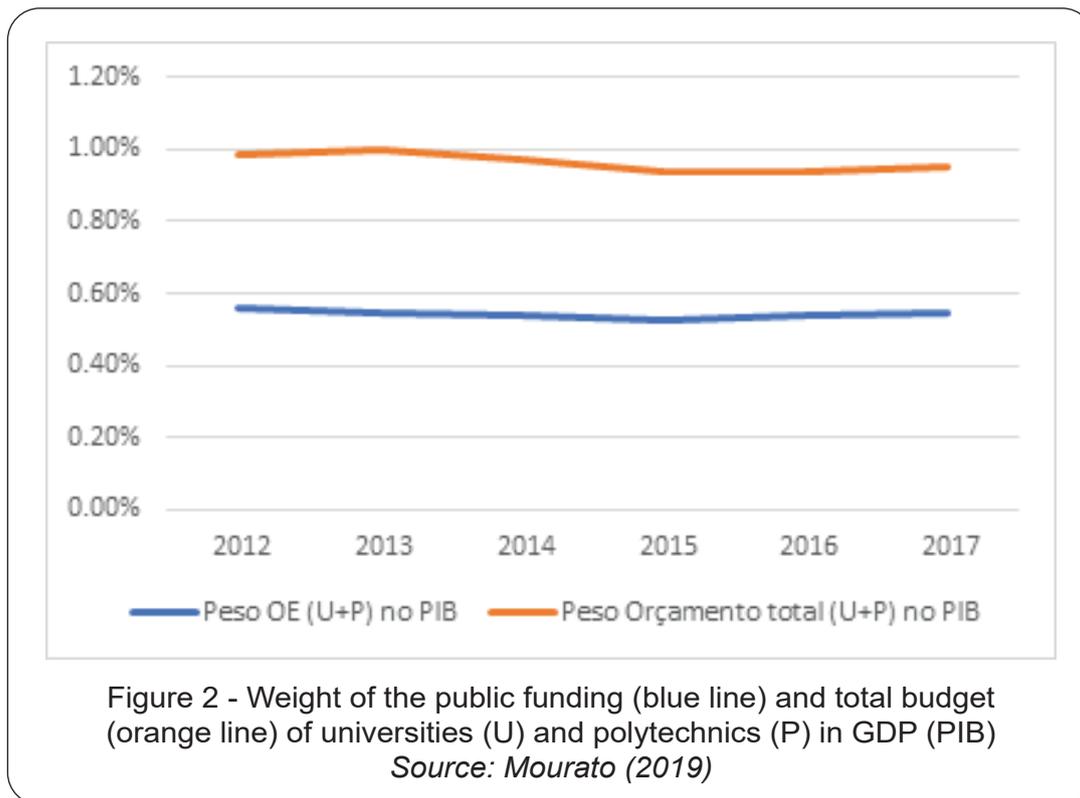
In terms of financial mechanisms for the public polytechnic system - polytechnic institutes and non-integrated schools - the total of revenues is around 500 million euros, including 141.5 million euros of own revenues (IGeFE, 2018).

Altogether, 63% of total revenues are State transfers which cover 85% of the salaries of teaching and non-teaching staff. Tuition and other services represent 28% of the total revenue and European funds about 7%.

In the last twenty years, public funding was reduced by about one third which is in contrast to most of EU and OECD countries (see figure 1).



In figure 2 it can be seen that the weight of funding of universities and polytechnics, from the State budget, was only 0,55% of GDP in 2017. The global budgets of public HEIs were below 1% of GDP (Mourato 2019).



This budgetary pressure that fell on the HEIs has led each institution to diversify its sources of financing, assuming an increasing weight in the revenues generated by the institutions themselves. Thirty years ago, own revenues were only around 5% of the total revenue, but currently, this figure stands at 30% (Mourato, 2019)

## 1.5 Challenges of the UAS sector

According to CCISP (Coordinating Council of Portuguese Polytechnics) the main challenges of the UAS sector in Portugal are (CCISP, 2019):

- To award the Doctoral degree by the Polytechnic Sector
- To change the designation of Polytechnic Institutes to Polytechnic Universities
- To Expand access to HE and to be more inclusive
- To Reformulate the social security in HE, supporting more students from disadvantaged social-economic contexts
- To increase the State Financing for HE
- To enhance the role of applied research, entrepreneurship and the sharing and transfer of knowledge and technology
- To promote the internationalization of the Polytechnic Sector
- To strengthen the autonomy of HEIs

## 1.6 Quality Assurance of UAS and regional engagement

The quality assurance (QA) of the Portuguese HE system is established by law and each HEI is obliged to have a proper QA structure and to implement QA procedures, according to the ESG. The QA implementation in each HEI is assessed and could be accredited by the National HE Assessment and Accreditation Agency, A3ES<sup>3</sup> that also verifies the “pertinence and adequacy of the mission and the educational project , scientific and cultural of the Institution and its coherence with the Institution's polytechnic nature, given the legal requirements and taking into account the geographical, economic and social context in which the Institution operates.”

The regional dimension of the Polytechnic Sector in Portugal is one of its main characteristics and can be demonstrated by the geographical location of the Polytechnic Institutions. All the provinces and districts in Portugal have Polytechnic Education and the regional engagement is an evidence with the growing number of interaction activities between the HEIs and the regional stakeholders.

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<sup>3</sup> Instituted by the State through Decree-Law No. 369/2007, of November 5, the Higher Education Assessment and Accreditation Agency (A3ES), is a private law foundation, constituted for an indefinite period, with legal personality and recognized as of public utility. It is independent in the exercise of its powers, without prejudice to the guiding principles legally established by the State

## 2. Types of regional engagement of UAS

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### 2.1 Active role in regional strategy development and implementation

#### 2.1.1 Forms of engagement of UAS in the development of regional strategies

The Portuguese Polytechnics play an important role contributing to territorial cohesion, as evidenced by the most recent study of the Polytechnic's economic impact, with important contributions to job creation, regional GDP and attraction and retention of young people to demographically depressed regions. Polytechnics are spread across the country in over 60 locations.

The Polytechnics are involved in many advisory bodies of regional business associations, municipalities, private institutions of social solidarity, associations promoting regional development, etc. Developing their activity in the field of education and research, their graduates contribute with relevant skills to regional and national sustainable development, adding cultural, economic and social valued knowledge and innovation to society. The Polytechnics provide several services to the community and extend their cooperation to the technical and cultural fields, investing in well-equipped and modern facilities, to assure quality support services. They have a strong identity brand based on the growing research and development (RD&I) unique ecosystem oriented to innovation, to entrepreneurship and to the regional social and economic collaborative business sector.

#### 2.1.2 Good practices

Polytechnic of Leiria is the Vice-President of the Entrepreneurial Association covering 1 200 small and medium-sized enterprises, and a member of the board of directors of the Regional Technological Park. It is an active and leading player in the development of regional strategic plans with and for local government entities and associations related to regional development. The Polytechnic offers technical and scientific support to the development of the following strategies and plans:

- In 2014, the regional strategic plan for Leiria Region, in a close collaboration with the main regional partners. For strategic plan see <http://hdl.handle.net/10400.8/2756>).
- In 2015, local development strategy for the territory of Sicó which is composed of six municipalities belonging to Leiria and Coimbra NUT III regions, as well as in the definition of the corresponding action and investment programness and the governance model. See <https://iconline.ipleiria.pt/handle/10400.8/1463>
- In 2015, the Ansião municipality's Strategic Plan for 2014-2020, using participatory decision-making techniques (resulting publication available at <http://hdl.handle.net/10400.8/2767>)
- In 2016, Local Action Plan for Urban Regeneration of Municipality of Batalha (municipality located in Leiria Region). This plan aimed at the promotion of a sustainable urban environment and regeneration of the intervention areas of the vadsahistorical

center and riverside area of Vila da Batalha. It was designed in cooperation with the municipality of Batalha and its main stakeholders (see <http://hdl.handle.net/10400.8/2755>)

- In 2018, a Coastal Forest Recovery Programme which collaboration among several partners, aiming to: assess the effects of forest fires, promoting emergency stabilization, rehabilitation of burned forests, long-term recovery and public participation and awareness.
- In 2019, a local strategic plan for Sustainable Tourism in the municipality of Porto de Mós (belonging to Leiria Region) – ongoing.

In April 2020, the Leiria Polytechnic was one of the three founding partners of the Economic and Social Council of Leiria Region (GESRL), along with Intermunicipal Community of Leiria Region (CIMRL), and the regional Business Association (NERLEI). The GESRL was created to prepare action measures that support the Region in the transition phase in the context of a pandemic, in order to mitigate the negative impacts of the Covid-19 crisis. (<https://observatorio-leiria.pt/gesrl/>)



### 2.1.3 Indicators

Portugal uses no official indicators for the engagement of UAS in the development of regional strategies.

During the focus group one stakeholder stressed that municipalities usually are not directly engaged with the research centers, but, on the other hand, polytechnics are involved with more than one municipality. Therefore it would be important to understand the number of municipalities involved and this could become a good indicator.

## 2.2 Regional aspects of higher education teaching and learning

### 2.2.1 Regional aspects of teaching and learning

Society in general and companies in particular participate in the design of curricula and study programmes offered by the Portuguese Polytechnics. They do it either through direct participation in advisory and management bodies of the institutions, or by joining or being consulted by working groups that are created for designing specific study programmes.

In addition, most of the study programmes offered by Polytechnics include students' internships and apprenticeships as well as the involvement of students in projects, mostly in regional companies/organizations.

### 2.2.2 Good practices

The Poliempreende project ( <http://www.poliempreende.com> ), a contest of entrepreneurial ideas and projects, in which all CCISP members participate. The objective is to stimulate entrepreneurship and create. Poliempreende aims to stimulate the entrepreneurial culture in each member of the academic community, through specific training, publications, workshops for idea development, competitions and dissemination of ideas and projects. Poliempreende is an inclusive projects, open to anyone from the polytechnic network, bringing together the entire polytechnic "family" around the same objectives. It is the best identity brand of polytechnic education in Portugal. Poliempreende was the national winner in the category of Investment in Entrepreneurial Skills of the European Business Promotion Awards, in 2013, organized in Portugal by IAPMEI. The 14 editions of Poliempreende have generated the following outputs (Mourato, 2019):

- 1 105 projects, with 3209 participating students, 62 new companies (survival rate equal to 71%) and the registration of 83 patents.
- 5 874 students in training workshops and 243 training courses in entrepreneurship.
- More than 100 teachers benefiting from specific training.
- Evaluative studies of the work developed (.eg. the launch of the book "Entrepreneurship and Business Motivations in Higher Education").

### 2.2.3 Indicators

Portugal uses no official indicators, but potential indicators can include:

- The number of pedagogical innovations in curricular and extracurricular achievements: one programme or module or group of programmes, thematic semesters, complete courses, etc.
- The Poliempreende project provides ideas for useful indicators (see above).
- The number of companies created by students and recent graduates and the number of companies created (start-up) in general, the number of patents held jointly with the companies, the number of students who remain in the companies after the internships.

- The number of advanced training actions carried out on request and aimed at companies.
- The percentage of graduates' placement in companies in the region (those employed in the region and outside the region)

## 2.3 UAS Capacity for the region

### 2.3.1 Forms of regional UAS services

The regional role of Polytechnics, in Portugal, is changing. There is more focus on enabling regions to become globally attractive. CHEPS (2013) highlighted five domains where Polytechnics can positively contribute to regional development:

- Stimulating innovation
- Facilitating clusters of innovative companies
- Fixing qualified talent / human resources
- Developing the local culture and brand
- Promoting human capital

The scope of action of HEIs has been widened, especially in their third mission, assuming a greater engagement in regional innovation ecosystems, with important impacts on regional competitiveness and cohesion. Examples of this interconnection include the various projects undertaken in partnership under the auspices of Portugal 2020, other partnership projects, incubators in the HEIs, as well as in the provision of services to the community or in the social responsibility projects of all HEIs (CCISP, 2019).

Polytechnics must also adapt to the changes in their operating environment, in order to be a place of learning and training for future professionals. Entrepreneurship must be seen as a contribution to the development of society. To create value, schools must be entrepreneurial, providing a higher quality of life index (Bucha, 2006). This change is motivated, in part, by a strategic change in the companies, insofar as they are no longer interested in playing a direct role in the training of their workers., but need to acquire the best staff to compete at a global level with less cost of time and money. (CCISP, 2013).

In addition to collaborating with SMEs through research based on business needs, Polytechnics can foster "smart regional specialization" (identifying new technological links and promoting innovation where SMEs may not have the necessary know-how or resources to implement it), in two distinct ways (CHEPS, 2013):

- Support companies in improving their capacity for innovation, and;
- Collaborate actively with local partners (companies and political partners) in order to create common agendas for regional strategic development.

### 2.3.2 Good practices

A good practice for UAS capacity for the region comes from the Polytechnic Institute of Bragança (IPB). Its Strategic Plan for 2018-2022, notably the objective "Promote the Open Campus" covers the following actions:

- Promote the commitment, contribution and motivation of all actors (national and international students, student associations, collaborators, teachers, researchers and scholarship holders) for the affirmation of IPB and its relationship with society (promoting the holding of events in public spaces in off-campus cities; promoting events promoted by outside entities on campus; promoting participation and support for civil society organizations)
- Affirm the IPB as a cultural and dissemination agent for science, knowledge and technology, in the city and in the region: create an agenda of events, exhibitions, workshops, festivals and summer initiatives, thematic and multicultural, open to civil society and in close collaboration with local and regional agents (promoting scientific dissemination actions, namely within the scope of Ciência Viva; promoting cultural activities, namely in partnership with the Theater of Bragança, Museums and Arts Schools; promoting artistic activities, namely within the scope of Collaborative Laboratory Arts in the Mountain - Graça Morais)
- Affirm the IPB as an actor promoting sport (Holding events to promote sport and healthy lifestyles (hiking, cycling, others))
- Boost solidarity and volunteer projects (Develop the IPB volunteer program)
- Promote the health and well-being of the IPB community (Develop the U-Bike project; support the “IPB gardens”; promote activities to encourage healthy living habits)



### 2.3.3 Indicators

Portugal uses no official indicators for capacity for region, but potential indicators can include:

- measuring the cultural, artistic and sports impact: the number of annual achievements (concerts, exhibitions, artefacts, media production and other cultural, artistic, sports and science dissemination events) carried out in academic, extracurricular and institutional activities, promoted by the academic community (students, associations and student groups), scholarship holders, researchers, collaborators, teach-

- ers and coordination at the level of courses, organizational units and institution).
- the Impact on health, well-being and volunteering, such as the number of annual achievements (initiatives, events and projects) carried out in academic, extracurricular and institutional activities, promoted by the academic community (students, associations and groups of students, scholarship holders, researchers, collaborators, teachers and coordinators at the level of courses, units and institution)
  - measuring the impact on the number of businesses in companies, measuring the impact on the qualification of employees, measuring the impact on the applications they make to regional coordination programs.
  - The number of students, from SCHE's, Bachelor's and Master's degrees, involved and which of these are from the regions of the institutions in which they are enrolled. Institutions have the role of fixing people in their region, so possibly the sooner students go to study for a particular region the more connection they will have with it. The fact of involving students earlier could be an asset in the sense of giving them research practices, teamwork and all this competence should be credited in their training;
  - The number of graduates working in the region and whether the professional occupation is associated with the training they obtained
  - The retention of students from outside the region in the job market, that is the percentage of graduates who continue to work in the region where they studied, having their origin outside the region.

## 2.4 Research and Innovation (applied research)

### 2.4.1 Applied research in UAS

Research in the Portuguese Polytechnics is at different stages of maturity, with different types of research, depending on the areas in which they carry out activities, their level of specialization, and the capacity for regional, national and international intervention. The overview of good practices below shows a few selected examples of research activities which have matured to a level of national and international recognition.

On the other hand, there are also several examples of technology-transfer centers, innovation centers, business incubators, fab-labs, which are gaining more and more dynamism, transferring this effect to the regions where they operate.

### 2.4.2 Good practices

There has been a significant progress in the number and scope of recognized research centers of the Polytechnics, despite constraints such as lack of doctoral degrees and funding. A few centers have obtained the highest level of recognition (Excellent) by the Portuguese Foundation of Science and Technology (FCT):

- CDRSP - Centre for Rapid and Sustainable Product Development, Polytechnic Institute of Leiria (<https://cdrsp.ipleiria.pt/>)
- CeDRI - Research Centre in Digitalization and Intelligent Robotics, Polytechnic Institute of Bragança (<https://cedri.ipb.pt/>)

- CISTER - Research Centre in Real-Time and Embedded Computing Systems, Polytechnic Institute of Porto (<http://www.cister.isep.ipp.pt/>)
- GECAD - Research Group on Intelligent Engineering and Computing for Advanced Innovation and Development, Polytechnic Institute of Porto (<http://gecad.isep.ipp.pt/>)
- CIMO - Mountain Research Center, Polytechnic Institute of Bragança (<https://cimo.ipb.pt/>)

Another set of good practices include the participation in international research and development projects, within the framework of European R&D programmes, notably in the leadership of in-consortia H2020 and FP7 projects:

- THERMAC - Thermal-aware Resource Management for Modern Computing Platforms in the Next Generation of Aircraft (<http://www.cister.isep.ipp.pt/projects/thermac/> | <https://cordis.europa.eu/project/id/832011>), led by the Polytechnic Institute of Porto
- Waste2H2 - Waste to Hydrogen (<https://cordis.europa.eu/project/id/952593>), led by the Polytechnic Institute of Portalegre
- DREAM-GO - Enabling Demand Response for short and real-time Efficient And Market Based smart Grid Operation - An intelligent and real-time simulation approach (<http://dream-go.ipp.pt/> | <https://cordis.europa.eu/project/id/641794>), led by the Polytechnic Institute of Porto
- TESSe2b - Thermal Energy Storage Systems for Energy Efficient Buildings. An integrated solution for residential building energy storage by solar and geothermal resources (<http://www.tesse2b.eu/> | <https://cordis.europa.eu/project/id/680555>), led by the Polytechnic Institute of Setúbal
- Symbiotic - innovative autonomous electrical biosensor synergistically assembled inside a passive direct methanol fuel cell for screening cancer biomarkers (<http://symbiotic-project.eu/> | <https://cordis.europa.eu/project/id/665046>), led by the Polytechnic Institute of Porto
- GMOsensor - Monitoring Genetically Modified Organisms in Food and Feed by Innovative Biosensor Approaches (<https://cordis.europa.eu/project/id/612545>), led by the Polytechnic Institute of Porto
- P-SOCRATES - Parallel SOFTWARE framework for time-CRITICAL mAny-core systems (<https://p-socrates.github.io/> | <https://cordis.europa.eu/project/id/611016>), led by the Polytechnic Institute of Porto
- 3Ps - Plastic-Antibodies, Plasmonics and Photovoltaic-Cells: on-site screening of cancer biomarkers made possible (<https://cordis.europa.eu/project/id/311086>), led by the Polytechnic Institute of Porto
- ELECON - Electricity Consumption Analysis to Promote Energy Efficiency Considering Demand Response and Non-technical Losses (<http://www.elecon.ipp.pt/> | <https://cordis.europa.eu/project/id/318912>), led by the Polytechnic Institute of Porto

A final example of good practices is related to the recent Collaborative Laboratories initiative, which intends to join together scientific institutions and companies to implement research and innovation agendas geared at creating economic and social value. Of relevance, an example of one of these laboratories, led by a Polytechnic Institute:

- More - Mountains of Research Collaborative Laboratory (<https://morecolab.pt/>), which is led by the Polytechnic Institute of Bragança



### 2.4.3 Indicators

Portugal uses no official indicators, but potential indicators can include:

- the external financing contracted with companies, which means the annual total value of the this financing from contracts with companies or organizations, including programmes and projects in which external companies or organizations participate, consultancy and the provision of contracted research and innovation services, as well as hiring human resources for its implementation and externally financed.
- The number of projects that exist with connection to the companies
- The number of projects developed with companies based in the region
- The number of institutions' collaborations with the region in concrete projects

## 2.5 Social Innovation (no research dimension required)

### 2.5.1 Overview

The Polytechnics intend to train socially responsible citizens, while appealing to technical and soft skills, revealing the transversality and permeability of the Schools in the territory. At the same time the development of these initiatives is expected to leverage the promotion of a more cohesive and inclusive society, contributing to the creation of a higher and more “citizen friendly” institution.

The polytechnic community is aware of its social contribution in the surrounding communities. Students recognize the importance of Social Responsibility (SR) actions, which take shape

through active participation and the creation of volunteer projects. Teachers seek to respond to the real needs of local communities, involving students in social projects.

### 2.5.2 Good practices

Good practices in social innovation include the following activities and approaches of the Polytechnic of Setúbal (IPS):

- “IPS Solidário” was created to support and boost activities of a social, cultural and sports nature aimed at different target audiences in the IPS and local community, aiming at creating a more cohesive, solidary and inclusive society.
- The IPS shows its commitment to the community when welcoming new students, through annual environmental awareness and cleaning actions. In the 2019 edition, 600 students were involved, collecting 2.5 tons of waste from the Sado Estuary.
- The “Oficina das Profissões” offered children and young people from vulnerable neighbourhoods in Setúbal and Moita playful experiences in laboratories and simulators. In 2019, 140 children and young people (6-17 years) were involved.
- Volunteers from the Schools of Health and Education participated in actions to fight HIV / AIDS in schools and institutions in the city, thanks to the National Project “Education by Peers”.
- Starting from the recognition of the arts as a means of social, cultural and intellectual training, the “Recriar-se” initiative aims to help users of the Caritas Diocesan Setúbal to build new individual and community frames of reference.
- IPS actively supports the “Nosso Bairro, Nossa Cidade” Program created by the Setúbal Municipality.
- Since 2009, “IPS Solidário” has been involved in the annual campaigns of the “Banco Alimentar Contra a Fome”. 120 volunteers participated in the last campaign.
- The “All and One” Project assists people with reduced mobility when traveling and enjoying the beach, in Sesimbra. In 2019, during the summer, there were 438 uses of the equipment. In 2020, this action will be extended to two beaches in Setubal.
- Regarding the elderly population, actions that aim to promote the understanding of their specificities and, at the same time, reduce the negative impact of social isolation, stand out: “Listening to the Elderly”, “IdoSOS - A finger of conversation” and “Community for a Life” Healthy”.
- In collaboration with the communities in the region, the IPS Polytechnic Theater has fostered culture and development of communication skills, involving the IPS and local community. It should be noted that during the Christmas season plays for children are performed.
- During the Covid-19 crisis, IPS has provided and distributed hydro-alcoholic gel and visors. Students have been supported in distance learning activities, through the provision of computers and internet access.

Good practices from other Polytechnics include:

- “Together for the Community” of IPSantarém is a Volunteer Programme with four lines of intervention: Making masks; Provision of Basic Services; Solidarity Boxes and Senior Care Line.
- Creation of the Test Center for COVID-19 of IPLeiria that also implemented the production and distribution of PPE's, ventilators, alcohol gel, visors among several actions to support health professionals and institutions.
- Student Keep Project, from IPViana do Castelo, which seeks to tackle the problem of unequal access to Education with a sponsorship system based on a platform that gathers information about the students they need and the sponsors that can help.
- IPSetúbal's Pratica Mente Juntos Programme seeks to develop a set of online actions and strategies that facilitate workplace well-being at home and improve the quality of life, in a logic of promoting physical, psychological and emotional health, showing that it is possible to integrate good habits into everyday life without leaving home.
- “Janelas ConVIDA” project by IPViana do Castelo and ESEC (IPCoimbra) is an action of proximity and support to elder people who are currently living alone or with limited contact with their families and friends following the state of emergency enacted in Portugal. This initiative encourages young people to talk to their older neighbors at the window or balcony.
- The Lisbon Nursing School created the Programme #ESEL EM CASA # to keep the school active and united, conveying a positive and motivational perspective: ESEL Talks, ESEL Alerta, ESEL Alive, ESEL Lounge, ESEL Quiz and ESEL Solidarity.

### 2.5.3 Indicators

As an example, the programme for welcoming new IPS students, collects the following data:

	Number of volunteers (new students)	Amount of waste collected (kg)	Amount of waste recovered for recycling (kg)	Quantity of fine salt packaging collected (un)
1st Edition_2018	350	2,010	376 kg (glass and plastic)	1.379
2nd Edition_2019	600	2,500	527 kg of glass 229,5 kg of plastic	520

The Project “All and One” collects the number of degree students involved, differentiating aspects related to the broadening of the social base of recruitment due to the research and education developed by the polytechnic HEI

	Number of IPS students involved	Number of registered uses
1st Edition_2018	10 students (degrees in Sports and Physiotherapy)	393
2nd Edition_2019	16 students (degrees in Sport, Animation and Sociocultural Intervention, Physiotherapy and Nursing)	520

## 2.6 Lifelong learning

### 2.6.1 Overview

In recent decades, Portugal has made a significant effort to improve the qualifications of its population in order to remedy a historical weakness in this area.

Although progress has been made, the pace of development of qualifications of population remains far below the levels of more advanced countries, preventing Portugal to achieve the necessary conditions for development of a knowledge-based global economy.

It has become necessary to find innovative solutions to the organisation and methods to overcome difficulties and achieve rapid and sustained improvements in skills and competencies. Improving the basic education and training of the workforce must generate the necessary competences for personal development and modernisation of enterprises and the economy, as well as facilitating citizens' academic and vocational achievement. These objectives apply to both young people and adults, already in the employment market, many of whom left school early or dropped out.

The contribution of the UAS for the qualification of the Portuguese population has been significant along the past decades, offering many tailor-made courses to adult population (LLL).

### 2.6.2 Good practices

The Polytechnic of Portalegre offers several undergraduate and master's courses, as well as postgraduate courses and courses for higher professional technicians (CTeSP). In designing its training offer, the Polytechnic takes account of the regional development needs. It also focused on accompanying the professional insertion of students, creating conditions for their retention in the region. The Polytechnic has made consistent efforts to create training courses that allow the continuation of community studies, integrating students from different audiences, already inserted in the world of work, as is the case of most students who enter through special competitions for more than 23 years old (M23). The Polytechnic offers training courses to meet the expectations of students and companies, as is the case of CTeSP Maintenance Electromechanical and Sales Management and Marketing developed in response to requests from locally based companies such as Delta and Hutchinson.

In addition to its four Schools and Research Units, the Polytechnic of Portalegre has functional units that support academic activity and services to the community, particularly in terms of

opportunities for lifelong training either through the Continuing Education Center (NFC) and the Center for Languages and Cultures (CLiC). In addition to providing diversified academic, linguistic and cultural support, they offer short courses and advanced training of different durations and formats, focused on the needs of external stakeholders, including their alumni, but also all the wider community.

The Polytechnic has also partnerships with companies and municipalities in the region, offering courses of different durations and formats, which facilitate the qualification of people, and the renewal and updating of skills in the economic and social fabric of the region such as:

- Foreign Language Courses for students from the external / regional and internal community (CLiC)
- Foreign Language Courses for companies, organizations and associations (CLiC)
- Tailored foreign language courses for companies and community organizations (CLiC)
- Foreign Language Courses with specific discount for students, alumni and employees / employees of the internal community / (CLiC)
- Protocols in the scope of service provision, aiming at courses, training actions and laboratory analyzes (CLiC, NFC, Laboratórios and C3i)
- Training actions in the areas of agriculture, livestock, health, business sciences and new technologies for companies, organizations and associations (NFC)
- Training actions in response to specific requests for companies and community organizations (NFC)

### 2.6.3 Indicators

The Polytechnic of Portalegre monitors and evaluates its activity, reflecting on a set of indicators that provides it with information on the results obtained and deviations from the goals set, thus enabling the implementation of necessary measures, in time, which can correct the less successful results. In the process of promoting lifelong learning, the performance is measured with the following indicators:

- Total number of students enrolled in degree or non-degree courses
- Rate of students in advanced training
- Employability rate
- Student satisfaction rate
- Number of students completing the training (NFC and CLiC)
- Number of requests for service provision under the established protocols

To this it can be added:

- Number of SCHE students allowing the business fabric to hire qualified labor staff. Many of these students later progressed to bachelor, master and even doctoral programs. This quantification could be an indicator.

## 2.7 Other types of activities/engagement

### 2.7.1 Overview

With the progress of globalization of HE, internationalization is one of the strategic aspects of all HEIs. More and more institutions seek to align internationalization with their mission, dedicating more resources to it. HEIs worldwide have been strengthening their internationalization activities, especially in the recruitment of students, internationalization of HE staff and research. In the past 40 years, more than 3 million European students have had an international mobility experience, driven by the Bologna process and the European HE area.

Portugal has demonstrated an increasing evolution in IN and OUT mobility, both for students and teachers. Still students' socioeconomic conditions including regional background continue to influence access to an international mobility experience. In Portugal the new International Student Statute has proved to be a key instrument to attract foreign students to the interior regions, which contributes to the regeneration of these territories. This has based on the strategies of the HEIs, although in recent times there has also been an effort to achieve better articulation between the different entities involved.

Promoting a strategic internationalization plan for HE engages different actors of the system in order to establish HE as an important export sector in terms of services. The attraction of international students has a strong focus on the Community of Portuguese Speaking Countries (CPLP) countries, with Brazil, Cape Verde and Angola at the lead, thanks to linguistic and historical issues. At the same time, it is important to diversify geographies, to avoid over-dependence on Portuguese-speaking countries, and to tap into opportunities in Latin America, Asia and Africa (CCISP, 2019)

### 2.7.2 Good practices

The project “Internationalisation of Portuguese Polytechnic Higher Education” was co-promoted by the Polytechnic Institute of Bragança (leader) and 12 co-promoters: the Polytechnic Institutes of Cávado e Ave, Viana do Castelo, Castelo Branco, Guarda, Leiria, Tomar, Viseu, Beja, Portalegre, Santarém and the Nursing Schools of Porto and Coimbra. Its objectives were to:

- Create a brand for the Portuguese Polytechnic Higher Education;
- Ensure a strong presence of the Portuguese Polytechnics in the priority international markets: Portuguese speaking countries, Latin America and Asia;
- Hold institutional meetings, during international fairs, to formalize cooperation with HEI, Chambers of Commerce, Business Associations, international organizations / associations etc.;
- Attract new international students and teachers;
- Hold national meetings with regional impact, dedicated to internationalization, to share integrated experiences (Polytechnic HEIs and the economic fabric), analyzing the results of participation in international fairs and exchanging good practices;
- Promote the improvement of conditions for the reception and stay of international students and teachers;
- Strengthen the dynamism of the economic fabric of the regions where HEIs are located;
- Collect, process, analyze and disseminate all information related to internationalization of Portuguese Polytechnics.

Implementation of the main activities of the project:

A1 - Branding, website and promotional video. The project created a collective brand for the Portuguese Polytechnic Higher Education, including a website, promotional video (<http://portugalpolytechnics.com/>). The work acknowledge nationally in the “Design and Corporate Image” category during the 2017/2018 biennium of the Lusophone Creativity Awards which is the only worldwide dedicated creativity award for Portuguese speaking countries. (<https://www.premioslusofonos.com>)

A2 - Participation in international fairs and related activities. The promoters' International Relations teams were present at 26 international fairs, covering 21 cities in 9 countries. Attendance at International Fairs totaled 14,908 registered visitors and 81 visits / institutional contacts. Institutional visits and contacts resulted in the formalization of 67 new protocols with the project promoters.

A3 – 2 national Internationalization meetings with regional impact. The 1st Meeting was held in Barcelos and organized by the Polytechnic Institute of Cávado e Ave. The Meeting was attended by a total of 110 participants, representing 20 Portuguese Polytechnics, 15 Companies / External Entities and members of the academic community of the Polytechnic Institute of Cávado and Ave. The 2nd Meeting was held in Beja and organized by the local Polytechnic. The meeting was attended by a total of 128 participants, representing 16 Portuguese Polytechnics and 12 foreign HEI. 12 companies / external entities were also represented.

### 2.7.3 Indicators

Assessing the impact of internationalization is a concern in a number of countries: how to measure the success of internationalization and what are the indicators for that purpose. The project “Internationalisation of Portuguese Polytechnic Higher Education” implemented the following indicators.

Table 1 - Indicators (from the Operational Programme)

No	Indicator	Calculation Method	Initial Ref.	Target	Result	
1	Percentage of new agreements versus presence in international HE fairs	New Agreements (16)/Presences in foreign cities (50)	0%	32%	143%	67 new agreement (in 47 cities)
2	Percentage of SME that used and considered useful the information of the project versus target group	Satisfaction degree of SME participants in national meetings	0%	75%	100%	
3	Percentage of news/press articles from the target market places referring keywords from the campaign versus presence in international HE fairs	News, articles, interviews (16)/ Presences in foreign cities (50)	0%	32%	43%	(20 new in 47 cities)

All the mandatory indicators of the Operational Program have been surpassed.

*Table 2 - Indicators (others)*

<b>Nº</b>	<b>Indicator</b>	<b>Calculation Method</b>	<b>Initial Ref.</b>	<b>Target</b>	<b>Result</b>
1	Registered visitors at the booths of International fairs	NA	0	3250	14908
2	Increase of international students enrolled in Portuguese PHE	Intern. students enrolled 2014-15/ Intern. students enrolled 2017-18	0%	15%	601%
3	Companies/organizations participating in National meetings	NA	0	20	27
4	Visits/Institutional meetings abroad	NA	0	28	81
5	Participants in National meetings	NA	0	200	238
6	News/articles from regional press promoting national meetings	NA	0	4	9
7	Satisfaction of international Students and Teachers with the stay	Positive evaluations / Total evaluations	0%	75%	89,5%
8	Sites that reference the project (in addition to the 13 co-promoters)	NA	0	20	11
9	Events in which the project was announced (in addition to the 13 co-promoters)	NA	0	10	16

With regard to specific indicators, all of them have been reached, with the exception of indicator Nº 8.

### 3. Summary

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The mission of almost all the Portuguese UAS reflects their commitment to the regions. It is in the DNA of this kind of HEI, but not always explicit in the official documents.

Regarding the indicators issue, the information is scarce, particularly in connection to specific activities (different types of regional engagement of UAS). There are no specific official indicators in use for **Active role in regional strategy development and implementation** (participation of UAS as an institution or of their staff in regional development boards, promoting public discussion about the topic); **Regional aspects of teaching and learning** (work-based learning, start-ups); **UAS Capacity for the region** (service for regional stakeholders, facilities, e.g. libraries, cultural/sport activities, museums); **Research and Innovation (applied research)** (research and innovation for/with companies).

Nonetheless we propose some, based on relevant literature and/or on the results of focus groups meetings, and believe that it is possible, after a broader discussion, to identify suitable indicators that can be a useful contribution to the engagement of UAS with their regions.

## 4. Literature

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