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Excellent peripheries for a strong

European Research Area

D6.4 Establishment of the forum strategy

Grant Agreement n°. 101071329

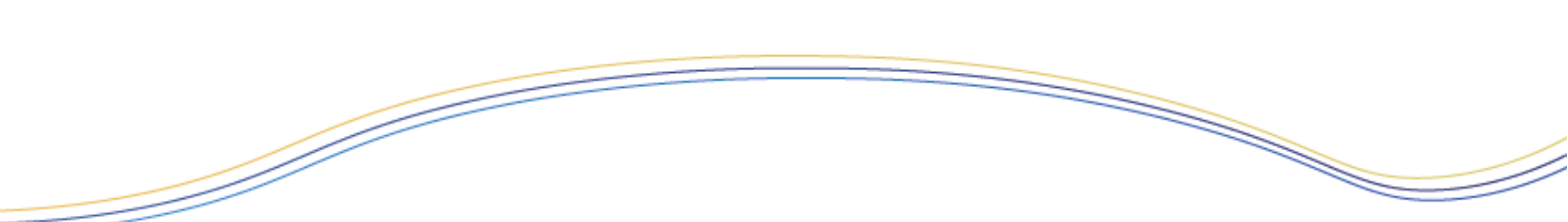| Version History			
Ver.	Date	Comments/Changes	Author
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Acronyms & Abbreviations	
D	Deliverable
DoA	Description of the Action
EC	European Commission
EU	European Union
EUAs	European Universities Alliances
EUI	European Universities Initiative
GA	Grant Agreement
HEIs	Higher Education Institutions
R&I	Research & Innovation
PC	Project Coordinator
PO	Project Officer
SC	Steering Committee
UA	University of Antilles
UAc	University of Azores

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ULL	University of La Laguna
ULPGC	University of Las Palmas de Gran Canaria
UMa	University of Madeira
UR	University of Reunion Island
WP	Work Package

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EXECUTIVE SUMMARY

The EXPER Project's primary objective is to enhance the excellence of the University of Las Palmas de Gran Canaria (ULPGC) and University of Azores (UAc) in three central pillars: scientific excellence, attraction and retention of talent, and knowledge transfer. This initiative involves international cooperation, so creating new ways of dialogue becomes necessary. In this sense, having the support and guidance of the leading Universities of Rostock (UROS) and Calabria (UNICAL), another profile of relations emerges.

Due to sharing important common aspects with other outermost regions (ORs), the opening of new communication channels where sharing barriers and challenges as well as good practices in specific topics, is an excellent way to offer solutions, new ideas, exchange experiences, and also a strategic method to facilitate effective communication and enable the development of innovative strategies that can be modelled and adapted by different institutions in these regions to be more aligned with HEIs

Considering that the institutions chosen to engage in this channel exhibit distinct qualities such as isolation from broader academic networks, a sense of insularity, and notable potential in particular research fields, this proposal will serve a dual purpose. It will function as a dynamic platform for meaningful discussions and deliberations while creating a significant opportunity to cultivate and enhance collaborative relationships among the institutions involved.

The channel will be shaped as a forum easily accessible through the EXPER website, focusing on several crucial topics. These include four main areas: university modernization, fostering international cooperation, fostering international knowledge and innovation-based development models, and increasing research excellence.

Developing a clear strategy that integrates several key components is essential to creating this forum effectively. First, we need to identify and engage participants. Second, we must define the process for data generation and the selection of issues to be discussed. Finally, it is essential to foster an environment that encourages active participation.

In a crosswise manner, all the actions undertaken to implement this strategy significantly enhance the potential for establishing new partnerships among European universities in the outermost regions. This strategic approach was intentional, as we aimed to foster collaboration and knowledge exchange across institutions.

To maintain this collateral outcome, ULPGC has based its work on findings from the deliverable D1.3, "European Universities Best Practices Catalogue ", the task T6.4 "Creation of a forum of peripheral Universities," reports by the EC on the EUI, and updates from specialized websites regarding this report, which provided a crucial reference for our research and analysis.

Within this framework, the aim is to achieve a deeper understanding of the evolving landscape of higher education, research, and knowledge transfer in Europe, particularly challenges faced in the ORs, and how to take advantage of opportunities for collaboration.

1. INTRODUCTION

1.1 PURPOSE OF THE DOCUMENT

This report presents a comprehensive account of the strategy developed and executed to create a dedicated forum for ORs on the EXPER project website. The following section will thoroughly outline the step-by-step process undertaken, providing insight into the rationale behind each strategic decision made during this endeavour. Additionally, the data collected throughout the process will be analysed, and meaningful conclusions will be drawn based on this analysis.

This forum, situated within a designated section of the project's website, is created to promote ongoing discussions and knowledge sharing among the participating Outermost Universities regarding specific topics that will be carefully selected for its establishment. Through this approach, EXPER provides a platform for sustained collaboration and engagement among these academic institutions.

1.2 STRUCTURE OF THE DOCUMENT

This deliverable has the following content and structure:

- Strategy design (Section 2)

- Questionnaire design (Section 3)

- Contact with representative institutions in ORs (Section 4)

- Interviews and comparative analysis of the responses of each interviewee (Section 5)

- Comprehensive analysis highlighting conclusions on the most recurring issues or intersections between problems and solutions (Section 6)

- Forum activation on the EXPER website (Section 7)

- Conclusions (Section 8)

2. STRATEGY OF THE FORUM

ULPGC and CE held initial meetings during the initial strategy design phase to generate ideas and establish the forum's effectiveness. During this meeting, it was decided to select universities from the ORs that took part in T6.4 led by CE, given their shared challenges and unique factors influencing higher education.

By doing this, the strategy moved towards defining the necessary steps to be taken, which are outlined below:

Desk research was necessary to identify the main barriers, challenges, and best practices that universities encounter in the main areas on which the development of this

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research and the subsequent design of interviews is focused, which are divided into the following four areas:

- 🔄 University Modernization

- 🔄 Fostering International Cooperation

- 🔄 Fostering International Knowledge and Innovation-Based Development Model

- 🔄 Increasing Research Excellence

Figure 1. Procedure steps

```
Desk research        Mapping         Contacting           Interview
to detect      →    universities  →  Universities'   →    Process
challenges                           representatives
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For the first and second areas, University Modernization and Fostering International Cooperation, ULPGC and CE supported this desk research on the EC [1]report regarding EUI and articles from specialised Journals. [2]

The aim was to determine whether the barriers, challenges and good practices that the EUAs encountered during the initial years could potentially arise in ORs. In this way, the forum could also function as a channel to gather these challenges and attempt to address them, thereby paving the way or forewarning possible scenarios for future alliances.

In other words, the approach is to start by understanding the European obstacles and seeing if they can be extrapolated to the ORs.

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                              First area: University
                              Modernization
EC report regarding
EUI and articles from
specialised journals
                              Second area:
                              Fostering
                              International
                              Cooperation
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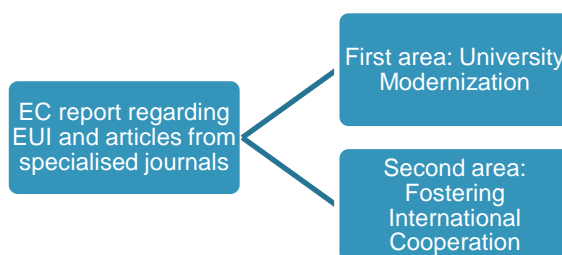
Figure 2. The literature upon which the design of the two first areas of questions is based

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To address issues related to the third and fourth areas, Fostering Regional Knowledge and Innovation-Based Development Model and Increasing Research Excellence, the design of the interviews were based on the knowledge from D1.3 and T6.4
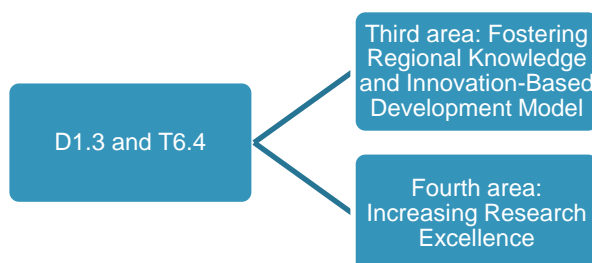
Figure 3. The literature upon which the design of the last two areas of questions is based.

After conducting the desk research, ULPGC developed a set of questions aimed at uncovering the key aspects and barriers highlighted in the earlier themes, such questions are included in section 6. Comprehensive analysis highlighting conclusions on the most recurring issues or intersections between problems and solutionsof the present deliverable. The objective was to identify the most prevalent challenges across different topics for presentation at the forum. During the preliminary phase, ULPGC and CE anticipated that a problem faced by one university might have already been tackled by another, turning the forum into a valuable platform for sharing ideas and fostering collaboration.

Once the questionnaire was defined, interested representatives previously mapped under T6.4 from the Outermost Universities by CE were contacted to conduct interviews in the Canary Islands, Azores, Madeira, Réunion Island, the Antilles, Guyane and Mayotte.

A standardised interview structure was implemented, utilising a consistent framework and set of questions for each participant. This uniform approach enabled systematic comparison of responses across the interview pool, which proved crucial for the subsequent forum topic selection process.

Responses to each interview question are presented in individual tables to facilitate the review and analysis of the collected data. Each table is followed by a comparative analysis of the corresponding responses. This structured approach allows for a clear understanding of the range of perspectives and identifies key themes emerging from the data.

Following the completion of the individual question analyses, forum topics were selected based on two primary criteria:

- Coincidence grade among interviewees´ responses

- Crossover between proposed solutions and identified barriers

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The coincidence grade among interviewees ' responses refers to repetition. This criterion aims to select topics that address common barriers or challenges the interviewed institutions face.

The crossover between proposed solutions and identified barriers pertains to the potential of extrapolating ideas or solutions to issues among institutions.

This methodology prioritised topics of significant relevance and potential for collaborative problem-solving.

Coincidence grade among interviewees´ responses

• Common barriers and challenges

Crossover between proposed solutions and identified barriers

• Potential of extrapolating solutions among institutions
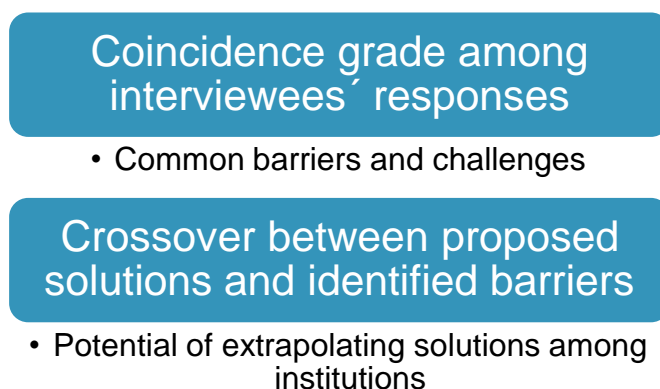
Figure 4. Criterion to select topics

Once the topics were identified, the forum could be established. The forum platform hosts published solutions to specific questions, obstacles, and challenges highlighted during the interviews. Subsequently, all interviewed participants were invited to join the forum and contribute to the ongoing discussions.

3. QUESTIONNAIRE DESIGN

As mentioned above, the emphasis on the content was raised after deciding to focus on universities in the ORs. Following an in-depth discussion, it was concluded that, on the one hand, it would be interesting to carry out a preliminary study on the main barriers, obstacles, and good practices that EUAs encountered in the areas of University modernization and Fostering International cooperation, and to ascertain how these issues could affect alliances between the ORs

The research for the two first selected areas was based primarily on an EC report: *The European Universities Initiative: First Lessons, Main Challenges and Perspectives[3]. This study evaluates the procedures and experiences of European university alliances' first

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[3] The European Universities Initiative: first lessons, main challenges and perspectives (2023). https://www.europarl.europa.eu/RegData/etudes/STUD/2023/733105/IPOL_STU(2023)733105_EN.pdf. Accessed: October 29, 2024.

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years. News items related to this report from the specialised Journals[4] University World News, Science Business, and Swisscore were also analysed.

On the other hand, given the work done in D1.3 and the findings of T6.4, it was decided to use this content to support the questionnaire related to the areas of Fostering International Knowledge and innovation-Based Development Model and Increasing Research Excellence. Regarding the information extracted, the following questionnaire was designed:

Table 1. Questionnaire including the two first areas and questions asked to the interviewees

AREA 1: [5]THE UNIVERSITY MODERNIZATION	
Question 1. Does your university count with some of these improvements? If not, which ones do you think are the main barriers to getting them?	Digitalisation through platforms for teaching and learning
	Digital application based on artificial intelligence
	Blockchain technologies to register students´ credits
	Focus on future skills
Question 2. What are the main barriers to getting this improvement?	Funding
	Diverse institutional leadership structures and cycle lengths
	Legal and regulatory barriers
AREA 2: FOSTERING INTERNATIONAL COOPERATION	
Question 3. Do you cooperate with other universities? If so, describe what forms of cooperation you have already developed	
Question 4. Would you like to see more cooperation with other European Universities?	
Question 5. Does your university encounter any of these barriers?	Language barrier
	Differences in academic calendars and grading
	More bureaucratic internal structures
	Risk of brain drain towards the more prosperous member states
Question 6. Have you found more barriers? If so, could you please provide details on some of them?	

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[4] Digital Newsletter, Science Business (2023).European Universities scheme is poised to expand - but Widening countries still face barriers to taking part | Science|Business | Digital Newsletter, Swisscore (2023) European Universities Firs Lessons and Challenges | Digital Newsletter, University World News (2022) EUA maps European Universities Initiative challenges

[5] The questionarie design for the two first areas are based on:
The European Universities Initiative: first lessons, main challenges and perspectives (2023). https://www.europarl.europa.eu/RegData/etudes/STUD/2023/733105/IPOL_STU(2023)733105_EN.pdf. Accessed: October 29, 2024.

[5]Digital Newsletter, Science Business (2023).European Universities scheme is poised to expand - but Widening countries still face barriers to taking part | Science|Business | Digital Newsletter, Swisscore (2023) European Universities Firs Lessons and Challenges | Digital Newsletter, University World News (2022) EUA maps European Universities Initiative challenges

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AREA 3: [6]FOSTERING REGIONAL KNOWLEDGE AND INNOVATION-BASED DEVELOPMENT MODEL	
Question 7. What are your university´s main challenges in fostering innovation within your region?	
Question 8. Have you found some of these barriers?	Difficulties in attracting skilled researchers, academics and innovators
	Lack of procedures for effective knowledge transfer to society, such as units or dedicated personnel
	Financial constraints or limited regional investment that impede research and innovation activities
	Lack of entrepreneurial ecosystem (programs, information offices, etc.)
Question 9. If you have found some of these barriers, have you overcome any of them? How?	
AREA 4: INCREASING RESEARCH EXCELLENCE	
Question 10. Have you found some of these barriers related to increasing research excellence?	Insufficient research facilities
	Difficulty in attracting external funding
	Brain Drain
	Lack of international collaboration
	The gap between research and practical application
	Lack of entrepreneurial culture in academia
Question 11. Have you overcome any of them? How?	

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[6] The questionarie design for the two last areas are based on D1.3 and T6.4

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4. CONTACT WITH REPRESENTATIVE INSTITUTIONS IN ORS

Key individuals for interviews were identified from CE via T6.4, during which coordinators and partners of funded projects convened to identify needs-based best practices. These practices subsequently informed the Forum's strategy. Following this approach, stakeholders and representatives from distinct universities were contacted via email.

Initial contacts included representatives from the following institutions: University of La Réunion (UR), University of La Laguna (ULL), University of Azores (UAc), University of Antilles(UA), University of St. Martin, University of Madeira (UMa), University of Las Palmas de Gran Canaria (ULPGC) and University of Guyane.

To maximise participation, an email invitation was sent to selected contacts requesting interviews within a one-month timeframe and offering flexibility in scheduling. A second email was sent to non-respondents, and a third, in French, was sent to those who remained unresponsive.

Following this outreach, interviews were successfully scheduled with representatives from the following institutions: the UR, the ULL, the UAc, the UA, the UMa and the ULPGC.

In total, eight interviews were conducted with representatives from these universities. All interviews were recorded via the Microsoft Teams platform to facilitate subsequent analysis. In order to simplify the analysis process, individual tables presenting responses to each question were included.

5. INTERVIEWS AND COMPARATIVE ANALYSIS OF THE RESPONSES OF EACH INTERVIEWEE

A qualitative triangulation was employed to analyse the collected interview data and incorporate all qualitative information gathered. The initial step involved grouping responses by individual interview question. A comparative analysis was then conducted for each question, providing a comprehensive overview of the diverse perspectives offered by the interviewees.

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Figure 5. Analysis process to select the forum topics

Interviews:	• Data collected on challenges and solutions.
Question Analysis:	• Themes and perspectives identified.
Implementation Analysis:	• Current practices assessed.
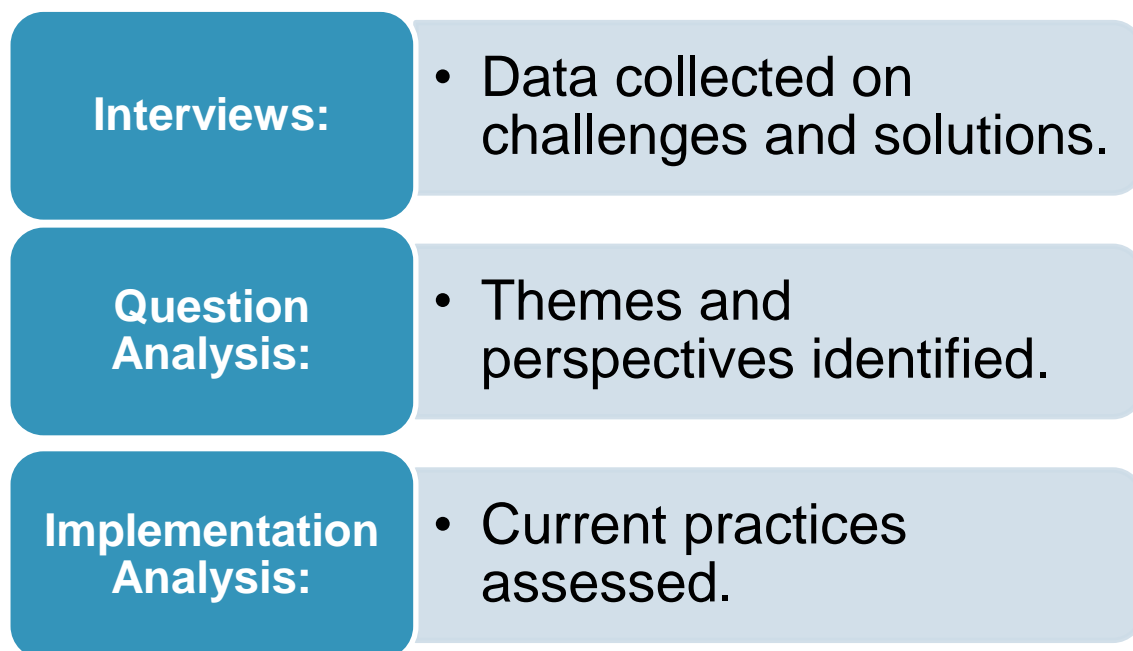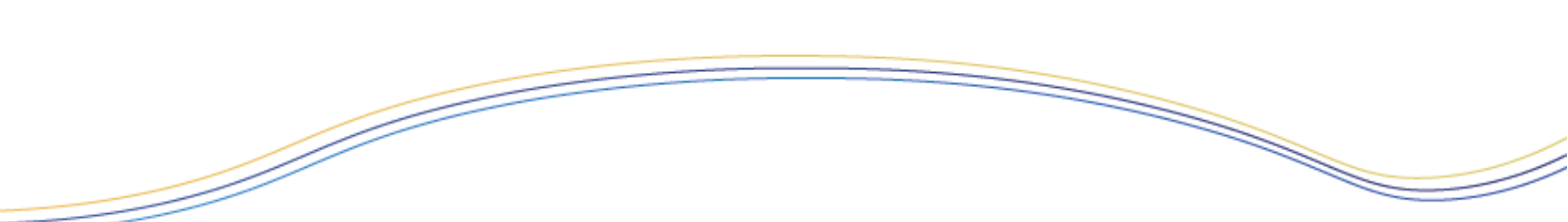
Following the analysis of individual questions, two additional summary tables were generated to accurately reflect the criteria to select the topics to discuss on the forum, which, as this report previously mentioned, are:

- Coincidence grade among interviewees´ responses

- Crossover between proposed solutions and identified barriers

CRITERIA TO SELECT TOPICS TO DISCUSS ON THE FORUM

Coincidence grade among interviewee´responses	Crossover between proposed solutions and identified barriers

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Please note that these answers are gathered from face-to-face interviews conducted via Microsoft Teams. Unlike interviews sent and received in writing, on this occasion, due to the format's nature, some questions may be omitted while others are highlighted. Consequently, some questions may appear unanswered, particularly when discussing barriers encountered in different areas, because the interviewee concentrated more on specific barriers than others.

5.1 FIRST AREA – THE UNIVERSITY MODERNIZATION

This block's questions are specifically related to the aspects the EC[7] report has identified as early indicators, key issues, and driving forces for the future development of EUAs

Those aspects that could be extrapolated to universities in ORs were selected to analyse the extent to which they could influence the development of future alliances among ORs.

The interviewee is mentioned next to each answer.

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Table 2. Respondent answers regarding digitalization through teaching and learning platforms – The University Modernization area.

THE UNIVERSITY MODERNIZATION	
Does your university count with some of these improvements?	
Digitalization through platforms for teaching and learning	
EU Project Manager (UR)	Yes, we have a digital university and are also working on developing degrees with international students through this approach platform.
Vice-president in charge of International Relations and Regional Cooperation (UR)	We use different platforms for teaching and learning, for example. We have a platform to support a large number of connected people simultaneously. We also have a special office to assist staff in developing content on digital platforms.
Vice-rector for Science, Innovation and Knowledge Transfer (UAc)	Yes, platforms continue to be improved.
Vice-rector (UMa)	We began with digital platforms three or four years ago.
Ex vice-rector for Research and Transfer (ULL)	We have the virtual campus which has improved in recent years.
Ex-vice-rector for Culture, Social Participation and Campus Ofra and La Palma (ULL)	Nowadays, all universities acknowledge this aspect granted.
Researcher and Professor (UA)	Our university is across two sites: Martinique and Guadeloupe. We have developed communication methods between the two islands. Initially, with the arrival of COVID, we had to stay connected with our students. The service we call DSIN, which is our IT and digital service, developed a platform that allows us to teach remotely, record videos, send educational documents, and develop courses or tutorials online.
Research Human Resources Director (ULPGC)	Indeed, we utilise Moodle, one of the most popular platforms for teaching and learning.

The digital platforms facilitating online training are implemented across all the universities interviewed, so this is not a challenge to address. Some universities emphasise the benefits of these platforms and the significance of continually improving them.

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Table 3. Respondent answers regarding digital applications based on artificial intelligence – The University Modernization area.

THE UNIVERSITY MODERNIZATION Does your university count with some of these improvements? *Digital applications based on artificial intelligence*	
EU Project Manager (UR)	We are considering it but are more focused on artificial intelligence courses for teachers. We are still in an emerging phase.
Vice-president in charge of International Relations and Regional Cooperation (UR)	We use tools like ChatGPT and Magister Plus (we don't officially have generative tools). We have a commission at the University to identify needs related to generative text, images, or video and address various questions, such as which tools and support are needed to use these tools and the legal issues involved. We prefer to use Mistral (a French tool) over ChatGPT, as the latter is American; however, we find it challenging to access extensive resources with Mistral. They wish to develop local AI, but their challenges revolve around local storage, compelling them to define how to support a developed long-term model at the University, create a long-term AI model compatible with laws, and respect private data.
Vice-rector for Science, Innovation and Knowledge Transfer (UAc)	There are technology platforms, but they are not AI-based. We have not yet implemented AI technologies. We are beginning to train teachers in distance education to facilitate undergraduate, graduate, and short specialisation courses remotely. The aim is to make these new changes compulsory. The University is very conservative.
Vice-rector (UMa)	Yes, we have that technology.
Ex vice-rector for Research and Transfer (ULL)	We are pretty far behind. Last year (2024), we did the first AI training courses. Now, we have just joined group 9 (9 universities in a kind of network), and thanks to that, we have access to all the training courses offered by those universities, most of which are related to AI. But we don't have our apps or access to AI apps. We have to pay for everything, like access to GPT Chat.
Ex-vice-rector for Culture, Social Participation and Campus Ofra and La Palma (ULL)	It is underway. This process must be expedited. We must tackle challenges, such as training the teaching staff and making methodological adjustments to this new reality. There is increasing concern, although a quicker pace would be preferable.
Researcher and Professor (UA)	We have not utilized or integrated artificial intelligence to customize educational paths.
Research Human Resources Director (ULPGC)	We have no applications of our own. However, we have met with ACIISI (Canary Islands Agency for Research, Innovation and the Information Society) to create a chatbot for questions and answers on research topics. Still, these proposals and ideas have not been implemented.

None of the universities have developed digital applications based on AI. However, most have acknowledged this new challenge and begun addressing it through teacher training. Notably, ULL has already taken initial steps towards training by joining a network of nine universities, which provides access to various courses, most of which focus on AI. Others, such as UMa and UA, employ it at the user level. The ULPGC has made the

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closest approach, having held meetings with other institutions (ACIISI) to develop an AI application aimed at researchers.

THE UNIVERSITY MODERNIZATION Does your university count with some of these improvements? *Blockchain technologies to register student´s credits*	
EU Project Manager (UR)	We are unaware of what is.
Vice-president in charge of International Relations and Regional Cooperation (UR)	We don't understand the reasons for using this tool. We perceive blockchain as a bubble and have many discussions about it. For mobile students, we have a protocol, a process to verify certain documents, particularly an official system called a transcript of records.
Vice-rector for Science, Innovation and Knowledge Transfer (UAc)	No. We don´t have this technology.
Vice-rector (UMa)	No. We don´t have this technology.
Ex vice-rector for Research and Transfer (ULL)	No. We don´t have this technology.
E*x-vice-rector for Culture, Social Participation and campus Ofra and La Palma (ULL)*	No. We don´t have this technology.
Researcher and Professor (UA)	No. We don´t have this technology.
Research Human Resources Director (ULPGC)	We do not have this technology, and in my opinion, it is not key to the university's success.

No university has embraced this innovation involving using blockchain technologies to record student credits. Most institutions do not respond; at best, a few indicate that they do not perceive it as necessary or regard it as important for a university's success.

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THE UNIVERSITY MODERNIZATION Does your university count with some of these improvements? *Focus on future skills*	
EU Project Manager (UR)	We are working on higher education, focused on European or international universities, to develop new studies that correspond to the new reality.
Vice-president in charge of International Relations and Regional Cooperation (UR)	We are working on a new training offer; colleagues have differences. Some want to include courses and programs in IA training, but it is not sure at this time because of many constraints related to foreign languages and informatics issues; in addition, some colleagues believe that a strong focus on AI could affect students' autonomy.
Vice-rector for Science, Innovation and Knowledge Transfer (UAc)	We are conservative in this regard.
Vice-rector (UMa)	Yes, we have taken some steps on that.
Ex-vice-rector for Research and Transfer (ULL)	We have just launched a survey to determine the required degrees for the entire university community. However, rather than focusing on issues of need, we have focused heavily on the Sustainable Development Goals, which are really only a part of what will be needed.
E*x-vice-rector for Culture, Social Participation and campus Ofra and La Palma (ULL)*	Adapting to society's competencies is essential. I would like to add a reflection: universities are not merely training centres but institutions that prepare individuals to think critically and solve problems.
Researcher and Professor (UA)	At university, we do very little promotion, apart from the training, which is much like traditional university degrees.
Research Human Resources Director (ULPGC)	I would argue that this represents a weak point in Spanish universities. Due to the extensive bureaucracy involved in altering the curriculum, applying this approach is quite challenging. We lack agility in this regard

Although they face challenges, several universities are working to adapt their programmes to include future skills through meetings and questionnaires. UR has proposed degrees focused on AI. However, colleagues have differing opinions regarding the direction educational programmes should take, and no action has been taken thus far.

For ULPGC and ULL, bureaucracy and a lack of agility present significant barriers to implementing curriculum changes.

In general, responses indicate that while universities try to adapt to new realities and future skills, they encounter several obstacles, including bureaucracy and internal differences.

THE UNIVERSITY MODERNIZATION What are the main barriers to getting these improvements?		
EU Project Manager (UR)	Funding	Yes, it is one of the significant barriers, particularly in digitization.
	Legal and regulatory barriers	Yes, particularly in inter-community cooperation.
	Others	Regarding cybersecurity and data protection, many institutions have been digitally attacked and are taking measures to protect the digital university.
Vice-president in charge of International Relations and Regional Cooperation (UR)	Funding	Yes, we have European funding, such as Interreg and mobilizing programmes, but there is a challenge because we need to ensure a secure funding process, especially with cash advances.
	Legal and regulatory barriers	Yes, there is a lack of ethics in the use of specific software. For example, Microsoft aims to integrate recording functions and screen captures in various computers and programmes every five minutes, disrespecting privacy. The same applies to ChatGPT, which may not respect data protection and privacy.
Vice-rector for Science, Innovation and Knowledge Transfer (UAc)	Funding	It is always an issue; however, with the new recovery and resilience plan, it ought not to be.
	Diverse institutional leadership structures and cycle lengths	There is internal resistance to change, especially to technological change.
	Legal and regulatory barriers	Yes, the regulations are very rigid. There are many rules, and it is complicated to make changes. It's all very formatted.
Vice-rector (UMa)	Funding	There is no funding for modernisation and internationalisation. This is unfair because all the other institutions on the mainland have access to it. This puts us in a challenging position. These are European funds, but Portuguese law states that this money is only for universities on the mainland, which is not fair.
Ex-vice-rector for Research and Transfer (ULL)	Funding	More funding would help; however, this is determined by the government, and until there are clear funding objectives, any money that comes in will always be allocated to the same expenses, namely, to cover vacancies and current expenditures.
	Diverse institutional leadership structures and cycle lengths	Resistance to digital modernization because the staff is ageing and losing skills.
	Legal and regulatory barriers	With strong leadership, you can overcome legal and administrative barriers. However, there is a problem of institutional conformism. The staff is satisfied with doing what needs to be done daily and leaves the future for later.

Ex-vice-rector for Culture, Social Participation and campus Ofra and La Palma (ULL))	Diverse institutional leadership structures and cycle lengths	One of the clearest barriers is adaptability: speed and flexibility. Often, due to the bureaucratic processes to which we are subjected, it is challenging for us to adjust to new trends swiftly.
Researcher and Professor (UA)	Legal and regulatory barriers	Yes, particularly in terms of research and collaborations with European institutions projects.
Research Human Resources Director (ULPGC)	Diverse institutional leadership structures and cycle lengths	The high level of bureaucracy is a significant limitation. As a public administration, we must adhere to public and administrative law regulations, which renders us highly uncompetitive and hinders all processes. All regulations ought to be simplified.

Regarding the challenges in advancing the university's modernisation, the institutions face numerous barriers, including inadequate funding. This is particularly evident in the case of the UMa, which illustrates a disconnect between its region and the mainland concerning the allocation of European funds. Furthermore, the UR experiences difficulties with cash advances and funding limits for digitization. Conversely, ULL, ULPGC, and UAc concur on the excessive bureaucratisation involved in implementing enhancements and the resistance to change displayed by their staff. Additionally, the UR emphasises ethics, privacy, and cybersecurity constraints.

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THE UNIVERSITY MODERNIZATION Have you overcome any of the barriers mentioned? Do you have any idea how to overcome them?	
EU Project Manager (UR)	No.
Vice-president in charge of International Relations and Regional Cooperation (UR)	No.
Vice-rector for Science, Innovation and Knowledge Transfer (UAc)	No.
Vice-rector (UMa)	I have spoken to the European Commission regarding the funding issue (not having access to European funds for internationalisation and modernisation), yet even people are surprised that nothing has happened. Nevertheless, I expect this situation to change with the new European framework; however, it remains as it is.
Ex vice-rector for research and transfer (ULL)	One way to overcome the barriers of bureaucracy and funding is through strong leadership and the government establishing funding targets.
Ex-vice-rector for Culture, Social Participation and campus Ofra and La Palma (ULL)	No.
Researcher and Professor (UA)	No.
Research Human Resources Director (ULPGC)	Implementing microcredits through the permanent training centre to acquire new competencies, although they do not constitute degrees in themselves, represents progress in future competencies. One idea to reduce time is to automate and robotise administrative processes that allow us to be more agile.

The responses indicate that while some universities have attempted to tackle barriers to modernisation, such as funding and bureaucracy, they have not successfully overcome these issues and continue to face significant challenges. ULPGC and ULL are proactive in proposing solutions, which include strong leadership to combat resistance to change, automating processes to alleviate the sluggishness of high bureaucracy, and establishing government funding based on objectives to enhance its distribution. Additionally, ULPGC suggests improving the approach to future skills by implementing a micro-credit system consisting of miniature training courses for graduates that require minimal approval from administrations.

5.2 SECOND AREA – FOSTERING INTERNATIONAL COOPERATION

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As stated in this report, the questions in this section are based on information from the EC's [8] report and the Journal Science Business [9] on the barriers and challenges to transnational partnerships between HEIs.

The questions proposed seek to analyze whether some of the challenges and barriers detected in current European alliances occur in the cooperation activities of universities in the ORs.

Table 8. Respondent answers on International Cooperation area.

FOSTERING INTERNATIONAL COOPERATION		
EU Project Manager (UR)	Do you cooperate with other universities? If so, describe what forms of cooperation you have already developed	Yes, we have been collaborating with European universities for several years. We have dual degrees and are involved in projects such as Horizon Europe and Interreg. We engage in common initiatives in training and research with other countries, including Erasmus+ etc.
	Would you like to see more cooperation with other European Universities?	Yes, we are working on dual-degree collaborations.
Vice-president in charge of International Relations and Regional Cooperation (UR)	Do you cooperate with other universities? If so, describe what forms of cooperation you have already developed	Yes, we have European and international agreements also with universities in the Indian Ocean region are.
	Would you like to see more cooperation with other European Universities?	At this time, we have several policies to develop partnerships and structure some collaborations. That's why we want to utilise the Erasmus+ programme and Horizon Europe programme to organise the collaboration and define strategic partnerships.
Vice-rector for Science, Innovation and Knowledge Transfer (UAc)	Do you cooperate with other universities? If so, describe what forms of cooperation you have already developed	Yes, we collaborate with numerous universities. We have Erasmus+ agreements with several European institutions and welcome many students from abroad. Culturally, sending students from the Azores to other countries is more complex than receiving international students in the Azores. We have extensively cooperated with the universities in the Canary Islands, Madeira, Cape Verde, and the countries involved in Interreg MAC for many years. A significant innovation is our presence in UNICOS (The European University Alliance of Coastal, Port and Island Universities) alongside twelve European universities from eleven countries.

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[8] The European Universities Initiative: first lessons, main challenges and perspectives (2023). https://www.europarl.europa.eu/RegData/etudes/STUD/2023/733105/IPOL_STU(2023)733105_EN.pdf. Accessed: October 29, 2024.

[9] Digital Newsletter, Science Business (2023).European Universities scheme is poised to expand - but Widening countries still face barriers to taking part | Science|Business

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	Would you like to see more cooperation with other European Universities?	Our top priority is to internationalize our university, bring in offers from partners, and export some of our offers to areas where we are more advanced.
Vice-rector (UMa)	Do you cooperate with other universities? If so, describe what forms of cooperation you have already developed	Yes, a great deal; the Portuguese university excels in collaborating with other international universities, perhaps due to our status as an outermost region, which facilitates numerous contacts and research projects with international institutions.
	Would you like to see more cooperation with other European Universities?	Yes.
Ex vice-rector for Research and Transfer (ULL)	Do you cooperate with other universities? If so, describe what forms of cooperation you have already developed	Science and innovation collaborations through projects. As a university, in 2023 we joined one of the European alliances formed due to the Erasmus programme (Stars EU). This has been very positive, as it has enabled us to maintain daily contact with the management and operations of eight different universities, which has allowed us to appreciate the differences between universities in the South and the North, as well as to learn from those universities that truly embody an international perspective approach.
	Would you like to see more cooperation with other European Universities?	Yes.
Ex-vice-rector for Culture, Social Participation and campus Ofra and La Palma (ULL)	Do you cooperate with other universities? If so, describe what forms of cooperation you have already developed	Yes, there is an effort to enhance international cooperation through the vice-rectorships. An established environment already exists in Europe. We are part of the STARS EU university alliance, which has demonstrated good practice. This creates a learning context that fosters a more global awareness of training.
	Would you like to see more cooperation with other European Universities?	Indeed, one suggestion is to expand the range of degrees offered in English to promote the process of internationalisation. It will be essential to provide incentives for the teaching staff to engage with this proposal and lay the groundwork for its implementation.
Researcher and professor (UA)	Do you cooperate with other universities? If so, describe what forms of cooperation you have already developed	We currently have research and academic collaborations, and we also receive Erasmus students. Additionally, we have partnerships with the Caribbean countries.
	Would you like to see more cooperation with	There is a genuine interest in advancing research collaboration, particularly with universities in remote regions, to address shared challenges and enhance our collective impact.

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	other European Universities?	
Research Human Resources Director (ULPGC)	Do you cooperate with other universities? If so, describe what forms of cooperation you have already developed	Yes, we have many international collaborations, a vice-rectorate for internationalization, and we are part of a European Alliance (ERUA) that has now entered its second phase (ERUA2).
	Would you like to see more cooperation with other European Universities?	It is always good to have international collaboration and exchange of professors.

All the universities interviewed actively participate in international cooperation and wish to expand it. Forms of collaboration include participation in European projects and exchange programs such as Erasmus+, international and regional agreements, and research and training collaborations. These initiatives facilitate the exchange of knowledge and resources and promote greater global awareness and an international perspective in higher education.

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FOSTERING INTERNATIONAL COOPERATION Does your university encounter any of these barriers? ***Language barrier***	
EU Project Manager (UR)	Relative progress is evident. The level of English is improving. German courses and online English classes are available. Students are adapting well.
Vice-President in charge of International Relations and Regional Cooperation (UR)	Certainly, but we can see that English is relatively easy, and it is important to embrace multilingualism, especially in political contexts. It is not ideal to have only English as the sole language.
Vice-Rector for Science, Innovation and Knowledge Transfer (UAc)	It´s not a problem.
Vice-Rector (UMa)	It´s not a problem.
Ex vice-rector for Research and Transfer (ULL)	Indeed, the service personnel and teaching staff are particularly affected. Both the PDI and PAS lack proficiency in English, which significantly complicates collaboration.
E*x-vice-rector for Culture, Social Participation and campus Ofra and La Palma (ULL)*	Yes, that is a problem.
Researcher and professor (UA)	There is no language barrier regarding English.
Research Human Resources Director (ULPGC)	Yes, it is the main barrier. There is considerable reluctance to take classes in English, which deters foreign teachers from coming. The same applies to the older teaching staff, who lack these linguistic skills, thereby limiting the attraction of international students. Although we have many Erasmus students, we want them to enrol.

Several universities do not consider the language barrier significant (UAc, UMa and UA). However, other institutions acknowledge that a lack of English proficiency can hinder international cooperation (ULL and ULPGC). Some universities, such as the UR, are actively working to enhance the language skills of their students and staff and believe that the focus should not solely be on English; it is advisable to embrace other languages as well. Others, like the ULPGC, experience substantial reluctance to adopt English as the language of instruction.

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FOSTERING INTERNATIONAL COOPERATION	
Does your university encounter any of these barriers?	
Differences in academic calendars and grading	
EU Project Manager (UR)	We have adapted relatively well. With Erasmus, they have enhanced the processes through adaptation. The differences in degrees are one of the key points regarding university credits.
Vice-president in charge of International Relations and Regional Cooperation (UR)	We have experience in this area; although it's difficult, we overcame this barrier on other occasions. For instance, we hold a double degree with India, with significant differences in academic calendars. It's challenging but not impossible, especially with flexibility among different partners. Our timetable encompasses holidays and public days, flexibility.
Vice-rector for Science, Innovation and Knowledge Transfer (UAc)	It´s not a problem.
Vice-rector (UMa)	Yes, this is a barrier we have faced. We would like to pursue master's degrees in Spain, but the duration differs. In Spain, it is four years, while in Madeira, it is three. However, we have obtained developed degrees and master's with other international institutions. Additionally, we possess two PhDs and one master's from international institutions—two in the arts and humanities with the Azores and Corsica and the other one with La Laguna, Gran Canaria, the Azores, and Madeira.
Ex vice-rector for Research and Transfer (ULL)	It´s not a problem.
Ex-vice-rector for Culture, Social Participation and campus Ofra and La Palma (ULL)	It´s not a problem.
Researcher and professor (UA)	It´s not a problem.
Research Human Resources Director (ULPGC)	I don´t think it´s a barrier.

Several universities have discovered ways to accommodate variations in academic calendars and grading, mainly through programmes such as Erasmus+ and flexible partnerships. Some universities, like UMa, encounter specific challenges due to differences in the duration of bachelor's and master's degree programmes. Others, such as ULPGC, do not view this as a significant obstacle.

FOSTERING INTERNATIONAL COOPERATION Does your university encounter any of these barriers? *More bureaucratic internal structures*	
EU Project Manager (UR)	Relatively.
Vice-president in charge of International Relations and Regional Cooperation (UR)	If you are ambitious about building a project, you may struggle to find a solution. The key lies in ambition and the ability of governments to bring about transformation in the University.
Vice-rector for Science, Innovation and Knowledge Transfer (UAc))	Yes, all is very formatted.
Vice-rector (UMa)	No, for fostering international cooperation.
Ex vice-rector for Research and Transfer (ULL)	No for international cooperation.
Ex-vice-rector for Culture, Social Participation and campus Ofra and La Palma (ULL)	As a public entity, the University experiences a slowdown in its processes. This issue is truly one of public administration; we often encounter lengthy and sometimes questionable procedures for undertaking management tasks, diverting energy and time away from more academic and research-oriented matters.
Researcher and Professor (UA)	No.
Research Human Resources Director (ULPGC)	No for international cooperation.

Several universities did not provide specific responses regarding their internal bureaucratic structures, which could suggest that they either do not view this as a significant barrier or lack a definitive standpoint on the issue. The UR, UAc and the ULL recognise that bureaucratic structures can present challenges. The UR emphasises the importance of ambition and governmental capacity in overcoming these obstacles. The ULL underscores the lengthy and questionable procedures that divert resources from academic and research activities.

FOSTERING INTERNATIONAL COOPERATION Does your university encounter any of these barriers? ***Risk of brain drain towards the more prosperous member states***	
EU Project Manager (UR)	No, not at the moment, as there is a strong culture of rootedness.
Vice-president in charge of International Relations and Regional Cooperation (UR)	It's not a genuine risk for young people researchers.
Vice-rector for Science, Innovation and Knowledge Transfer (UAc)	Yes, due to our low salaries.
Vice-rector (UMa)	This is not a barrier from our point of view. For us, it´s a good thing that our researchers have opportunities abroad.
Ex vice-rector for Research and Transfer (ULL)	This risk does exist. The training provided here is good, but the salaries offered are relatively low. Above all, job opportunities—even for those with a university degree—are scarce, making it familiar for individuals to seek work abroad. The higher the position you are trained for, the more challenging it is to find a job.
E*x-vice-rector for Culture, Social Participation and campus Ofra and La Palma (ULL)*	Retaining talent hinges on funding. We are producing highly trained individuals who are departing for other countries, resulting in a loss of capital.
Researcher and professor (UA)	This is what worries us the most. Most of our students, especially the more capable ones and those with financial means tend to leave for Canada or Europe, particularly France, once they finish high school. If you examine Martinique's age pyramid, you will see a noticeable gap in the youth demographic. We are the oldest region in France because our young people leave and few return. This is due mainly to our underdeveloped economic structure, which leads them to find better opportunities abroad.
Research Human Resources Director (ULPGC)	Regarding researchers, it is not a significant risk because our staff is limited; there comes a point when we have no capacity to accommodate them. Therefore, if researchers leave, it is not a loss as they would not have been able to fit in the staff structure anyway.

Several universities do not view brain drain as a significant risk (UR, UMa and ULPGC)). Some institutions, such as the ULL, UAc and the UA, acknowledge that brain drain poses a genuine problem due to their regions' limited job and salary prospects. The UA expresses concern regarding the loss of talented young individuals due to an underdeveloped economic structure.

Barriers to international cooperation in universities include migration policies that complicate student funding and increase digitisation (UR), geographical balance criteria that hinder the formation of consortia, and governance issues that impact team stability (UR). Additionally, a differing operational rhythm restricts European collaboration and

the necessity to avert brain drain (ULL). Furthermore, the absence of extensive networks for European projects and reliance on research demands from metropolitan colleagues pose challenges in the Antilles (UA).

5.3 THIRD AREA – FOSTERING INTERNATIONAL KNOWLEDGE AND INNOVATION-BASED DEVELOPMENT MODEL

The questions in this block are based on knowledge of D1.3 and T6.4. They seek to identify the barriers and challenges that universities in the ORs may have in common and to extract possible good practices that have been used in some universities and can be extrapolated to others.

Table 13. Respondent answers on difficulties in attracting researchers, academics and innovators - Fostering Regional Knowledge and Innovation-Based Development Model area.

FOSTERING REGIONAL KNOWLEDGE AND INNOVATION-BASED DEVELOPMENT MODEL
Does your university encounter any of these barriers?
Difficulties in attracting skilled researchers, academics and innovators

EU Project Manager (UR)	The challenge is twofold. On one hand, researchers should seek to attract others, but they do so relatively informally. Currently, with some Widening projects, the university allows researchers to come and stay for five years. However, there is no clearly defined policy for attracting colleagues from other countries to their lines of research. Currently, this process remains informal and could be improved and structured.
Vice-president in charge of International Relations and Regional Cooperation (UR)	No answer.
Vice-rector for Science, Innovation and Knowledge Transfer (UAc)	It is difficult for us to attract members because of our low salaries and because our researchers are focused just on the scientific publications.
Vice-rector (Uma)	No answer.
Ex vice-rector for Research and Transfer (ULL)	We could attract innovators to bring their companies here, not only by drawing in digital nomads who work remotely and contribute little in the end, but also by taking advantage of the excellent standard of living, pleasant climate, and the purchasing power that a competitive salary offers compared to other provinces like Barcelona, we could entice technology companies that provide significant added value and create opportunities for researchers or technology professionals trained in our universities. We must also consider that to attract researchers, we must offer competitive salaries, particularly given the remote and insular conditions associated with being here. As other regions do, the government could provide targeted support to draw in talent and implement a stabilization plan to encourage them to stay. If attractive conditions and prospects for stability were presented, the Canary Islands could become a highly appealing location for technological innovation.

Ex-vice-rector for Culture, Social Participation and campus Ofra and La Palma (ULL)	No answer.
Researcher and professor (UA))	No answer.
Research Human Resources Director (ULPGC)	No answer.

Regarding the difficulty of attracting talent, both the UAc and the ULL mention the need to offer competitive salaries to attract talent effectively. The UR highlights the lack of a clear policy to attract researchers, while the ULL suggests government support and stabilization plans.

Table 14. Respondent answers on lack of procedures for effective knowledge transfer to society, such as units or dedicated personnel - Fostering Regional Knowledge and Innovation-Based Development Model area.

FOSTERING REGIONAL KNOWLEDGE AND INNOVATION-BASED DEVELOPMENT MODEL Does your university encounter any of these barriers? *Lack of procedures for effective knowledge transfer to society, such as units or dedicated personnel*	
EU Project Manager (UR)	We have established clear procedures for the proper transfer of knowledge to society. Specifically, we offer two distinct services: a research valorisation service and a scientific mediation service with civil society.
Vice-president in charge of International Relations and Regional Cooperation (UR)	We already have services to cover this need.
Vice-rector for Science, Innovation and Knowledge Transfer (UAc)	Our students, scientists, and professors involved in research that can lead to innovation are often unfamiliar with business models. The University operates at the terrier scale up to level 4. An incubator then manages the incubation process from levels 4 to 7. From level 7 onwards, the industry develops the product. Scientists are not accustomed to working with companies, nor do they express interest in extending their work beyond the scientific article; for them, the scientific article represents the conclusion. Without a structure to analyse the scientific article and explore its potential for industrialisation, we may be investing significant funds in research while wasting resources because we are not leveraging the full potential of this service. What is most needed in the Azores is the intermediate segment, ranging from 4 to 7, which facilitates the transition between invention (research and industrialisation). There is a considerable amount of scientific production, yet very few developed models exist. The university only had its first spin-off last year (2024).

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Vice-rector (UMa)	We have a lot of connections between the university and industry.
- Ex vice-rector for Research and Transfer (ULL)	No answer.
Ex-vice-rector for Culture, Social Participation and campus Ofra and La Palma (ULL)	A more rigorous approach to managing research should be adopted, and indicators should be established that clearly reflect the projects' outcomes.
Researcher and professor (UA)	We have Martinique Technopole, funded by the Martinique region and administered by the university.
Research Human Resources Director (ULPGC)	Yes, many researchers possess the capacity and the need to collaborate with companies to drive innovation, yet they fail to connect. This is due to a lack of understanding on both sides. On the one hand, businesspeople are unaware of where the focal points of innovation lie within ULPGC; on the other hand, researchers do not engage with the business world to align their research activities with societal needs.

The UR appears to have clear procedures for Knowledge Transfer, whereas the UAc emphasises the necessity of an intermediary structure to facilitate industrialisation. ULPGC and UAc point out the disconnection between researchers and enterprises, while ULL advocates for a more rigorous approach and the implementation of clear indicators. Overall, it can be stated that although certain universities are making efforts to establish structures to foster innovation, common barriers persist, such as the disconnection between researchers and companies and the need for intermediary structures to promote knowledge transfer industrialisation.

Table 15. Respondent answers on financial constraints or limited regional investment that impede research and innovation activities - Fostering Regional Knowledge and Innovation-Based Development Model area.

FOSTERING REGIONAL KNOWLEDGE AND INNOVATION-BASED DEVELOPMENT MODEL Does your university encounter any of these barriers? *Financial constraints or limited regional investment that impede research and innovation activities*	
EU Project Manager (UR)	We receive national and regional support from FEDER and local funds, enabling us to maintain an effective innovation system. Currently, we oversee between five and six projects in collaboration with various public and private institutions to support entrepreneurs. Several institutions and projects stand out among our initiatives, such as the biotech project for technological valuation, which spans from research to business. This approach encourages dialogue between the university and industry.
Vice-President in charge of International Relations and Regional Cooperation (UR)	No answer.

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Vice-rector for Science, Innovation and Knowledge Transfer (UAc)	No answer.
Vice-rector (Uma)	No, concerning this area (technology transfer), we are grateful for European support for the outermost regions (Canary Islands, La Réunion, Azores, and other colleagues from the outermost areas) through higher education initiatives related to innovation capacity building. Through this project, we have established a knowledge transfer office, a research centre in entrepreneurship, and a postgraduate programme in innovation and entrepreneurship. Additionally, we have built a network that facilitates acquiring more projects in this area. We are also partner associates of Startup Madeira, the major incubator on Madeira Island, and work closely with them.
Ex vice-rector for research and transfer (ULL)	No, we have allocated FDCan funds to offer competitive salaries to our transfer office staff.
E*x-vice-rector for Culture, Social Participation and Campus Ofra and La Palma (ULL)*	No answer.
Researcher and professor (UA)	Our region receives significantly less financial support for research compared to other regions in France.
Research Human Resources Director (ULPGC)	No answer.

Overall, while some universities receive financial support and have initiatives to foster innovation, others face significant barriers due to a lack of regional investment. The UR and the Uma highlight the financial support they receive and the establishment of specific departments for Knowledge Transfer and the promotion of entrepreneurial thinking among students and researchers. In contrast, the UA notes its lack of financial support compared to other regions. Additionally, ULL emphasises the allocation of funds to provide competitive salaries for its transfer staff.

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FOSTERING REGIONAL KNOWLEDGE AND INNOVATION-BASED DEVELOPMENT MODEL	
Does your university encounter any of these barriers?	
Lack of entrepreneurial ecosystem (programs, information offices, etc.)	
EU Project Manager (UR)	We have established clear procedures for the proper transfer of knowledge to society. Specifically, we offer two distinct services: a research valorisation service and a scientific mediation service with civil society.
Vice-president in charge of International Relations and Regional Cooperation (UR)	Yes, there is a lack of coordination between actors and politicians. The regional consul doesn´t have a regional plan of research; at the moment, the research topic is something unusual to discuss at a political level, and there is a lack of knowledge of research work at a political level.
Vice-rector for Science, Innovation and Knowledge Transfer (UAc)	No answer.
Vice-rector (Uma)	No, We actually celebrated the national final competition of business ideas among students. The final took place in Madeira, and we received some excellent ideas.
Ex vice-rector for Research and Transfer (ULL)	No answer.
E*x-vice-rector for Culture, Social Participation and campus Ofra and La Palma (ULL)*	No answer.
Researcher and professor (UA)	There is a complete lack of an entrepreneurial ecosystem owing to a weak industry resulting from the absence of a market.
Research Human Resources Director (ULPGC)	The Canarian business ecosystem is highly focused on services, with little industry present. Conversely, the business community is significantly unaware of the talent we have at the University.

In general terms, although some universities have taken measures to foster innovation and entrepreneurship, significant barriers, such as a lack of political coordination, industrial weakness, and entrepreneurial awareness, affect the development of a robust entrepreneurial ecosystem based on innovation.

While noting the absence of coordination and planning at the political level, the UR has established specific transfer services for this purpose. Meanwhile, the UMa emphasises a strong connection between universities and the regional business landscape and efforts to promote entrepreneurship. The UA and ULPGC address the lack of a robust entrepreneurial ecosystem, though for different reasons. The UA points out a weak industry with neither opportunities nor consumers, while ULPGC highlights an excessive focus on services and a lack of entrepreneurial awareness.

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FOSTERING REGIONAL KNOWLEDGE AND INNOVATION-BASED DEVELOPMENT MODEL Has your university overcome any of the barriers mentioned? Do you have a proposal for improving this area?	
EU Project Manager (UR)	No answer.
Vice-president in charge of International Relations and Regional Cooperation (UR)	We have a valorization service with existing legal tools, so it´s very easy to manage the transfer of technology; we also have international agreements, which is the source of inspiration for the process.
Vice-rector for Science, Innovation and Knowledge Transfer (UAc)	We have reformulated this objective to establish a Technology Transfer office that can assist our researchers in transitioning from invention to industrialisation. We aim to provide our master's and PhD students with a deeper understanding of how companies operate, how the idea incubation system functions, and how the transition from invention to industrialisation occurs. While it is a gradual process, we have already made progress and achieved noteworthy results, although it is still premature to declare success.
Vice-rector (UMa)	Through our university, we have made significant progress in our region. Since its inception in 1988, the University of Madeira has trained 15,000 individuals, most of whom hold prominent positions in the government and businesses on Madeira Island. There is a strong connection between the university and industry. Businesses often feel encouraged to reach out for assistance in solving problems, conducting research, or offering internships to our students. We maintain robust collaborations between government entities and private enterprises, highlighting our role as key trainers in research institutions. We engage in research projects with regional businesses, and our research group, particularly in physics, is excellent and also collaborates with international companies such as Siemens and Schneider. The beginning was hard. In 2017, there wasn't any activity or connection between the university and industry. The researchers approached the industry in person to align their needs with the research and offerings of the university, trying to engage them in this type of project specifically designed for higher education institutions and enterprises. Therefore, it was our researchers who initially sought to educate the entrepreneurial sector, making them aware that the university and research could be beneficial. Nowadays, the flow of communication has changed, with entrepreneurs now reaching out to the university and researchers to articulate their needs and request assistance in solving problems or developing projects. At this point, it's worth noting that educational efforts were necessary, as in the initial phase, entrepreneurs were unable to recognise how the university could be advantageous for them.
Ex vice-rector for Research and Transfer (ULL)	One of the best practices we can share is allocating an additional score in public tenders for demonstrating active collaboration in R&D with public centers in the archipelago. This encourages the creation of contact networks and the generation of new R&D projects with researchers. It is a system that gives a higher score to private companies that apply for public tenders and collaborate with researchers.

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	Another idea is to promote the islands internationally not only as a tourist destination but also to highlight that there are also universities here capable of training professionals with high capacities in specific fields such as cybersecurity, data technology, industrial engineering, etc. Other people can be trained so that if governments or entrepreneurs want to work here, they know that we have universities that can provide them with human capital. Finally, it´s worth noting that the local councils, technology parks, and the government have a significant commitment to altering the productive fabric and investing in innovation programmes to prevent capital loss caused by brain drain.
Ex-vice-rector for Culture, Social Participation and campus Ofra and La Palma (ULL)	No answer.
Researcher and professor (UA)	No answer.
Research Human Resources Director (ULPGC)	We are undertaking initiatives in the business sector to promote the developments taking place at ULPGC.

Given the region's underdeveloped economy, all universities except the UA are taking various measures to overcome barriers to innovation. These include creating specific services and technology transfer offices and incentives for industries to collaborate with researchers.

5.4 FOURTH AREA – INCREASING RESEARCH EXCELLENCE

The inquiries presented in this section are derived from the knowledge in D1.3 and T6.4. The aim is to identify the barriers, challenges, and best practices encountered by universities in the ORs concerning scientific excellence. Furthermore, the feasibility of implementing successful practices that some institutions in others have adopted will be explored.

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INCREASING RESEARCH EXCELLENCE Does your university encounter any of these barriers? *Insufficient research facilities*	
EU Project Manager (UR)	Depending on which sector, they have sufficient public funding to be able to define a roadmap of investments within the facilities.
Vice-President in charge of International Relations and Regional Cooperation (UR)	Depending on the sectors. We don´t have many difficulties in health, law, climate change or energy, but there is insufficient for social science
Vice-Rector for Science, Innovation and Knowledge Transfer (UAc)	No answer.
Vice-Rector (UMa))	No answer.
Ex vice-rector for research and transfer (ULL))	I don't think it's a barrier, we have good infrastructure.
Ex-vice-rector for Culture, Social Participation and campus Ofra and La Palma (ULL))	No answer.
Researcher and Professor (UA))	In Guadeloupe, we have a large research building, while in Martinique it is more informal, comprising small laboratories of 10 to 15 people. In any case, we possess very little equipment, which compels us to seek partnerships with other universities that enable us to enhance our research.
Research Human Resources Director (ULPGC)	No, we have good facilities.

The responses indicate that, although some universities possess good facilities, such as ULL, ULPGC, and UR. The latter suggests that, depending on the area of study, others do as well. In particular, the UA emphasises the lack of equipment and the need to seek partnerships with other universities to improve their resources research.

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INCREASING RESEARCH EXCELLENCE
Does your university encounter any of these barriers?
Difficulty in attracting external funding

EU Project Manager (UR)	It never hurts, particularly the challenging European horizons that are hard to achieve. They are currently implementing a diversification policy to engage with other external public funds.
Vice-President in charge of International Relations and Regional Cooperation (UR)	Just for social science.
Vice-Rector for Science, Innovation and Knowledge Transfer (UAc)	No answer.
Vice-rector (UMa)	No answer.
Ex vice-rector for Research and Transfer (ULL)	No answer.
Ex-vice-rector for Culture, Social Participation and campus Ofra and La Palma (ULL)	I suspect that much of the public money for research is not distributed equally and that the Canaries do not receive enough money to improve their research. Even so, the Canaries' research performance is remarkable, considering the scarcity of resources. An example is the Canary Islands Astrophysicist.
Researcher and professor (UA)	We typically serve as partners in European projects rather than as leaders. While we do take the lead in some, we are primarily partners in the majority of them.
Research Human Resources Director (ULPGC)	No answer.

Some universities are making efforts to diversify their funding sources. However, they face challenges and complications, such as addressing the unequal distribution of public funds (University of La Laguna) and the difficulty of allocating resources to specific areas, like social sciences (Université de la Réunion).

Table 20. Respondent answers on brain drain as a barrier - Increasing Research Excellence area.

INCREASING RESEARCH EXCELLENCE Does your university encounter any of these barriers? *Brain Drain*	
EU Project Manager (UR)	Yes, because of a lack of opportunities or insufficient financial coordination between employment options and researchers.
Vice-president in charge of International Relations and Regional Cooperation (UR)	Not really.
Vice-rector for Science, Innovation and Knowledge Transfer (UAc)	We fail to retain our researchers due to a lack of funding and the rigid and limiting regulations governing scientific employment, which do not reflect the new reality. After two or three consecutive contracts with scientists, the regulations require permanent inclusion in the staff, which is unfeasible due to insufficient funding. Thus, those wishing to remain in the Azores must either secure a contract with another institution during the transition period between contracts or endure a few months without work. This situation is particularly challenging as they often have economic responsibilities, such as families and homes. Consequently, we have lost individuals with valuable expertise and talent.
Vice-rector (UMa)	We don´t consider negative our researchers leave the country.
Ex vice-rector for Research and Transfer (ULL)	Yes, due to insufficient salary.
Ex-vice-rector for Culture, Social Participation and campus Ofra and La Palma (ULL)	No answer.
Researcher and professor (UA)	No answer.
Research Human Resources Director (ULPGC)	Yes, because there are not enough job positions to hire more researchers.

Universities encounter various challenges associated with brain drain. The University of Réunion points out the lack of opportunities and inadequate financial coordination. In the Azores, there are concerns about rigid regulations and insufficient funding aimed at retaining homegrown talent. The University of La Laguna (ULL) identifies low salaries as a significant factor contributing to brain drain. In contrast, the University of Madeira does not perceive this issue as overly negative.

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Table 21. Respondent answers on lack of international collaboration as a barrier - Increasing Research Excellence area.

INCREASING RESEARCH EXCELLENCE	
Does your university encounter any of these barriers?	
Lack of international collaboration	
EU Project Manager (UR)	No answer.
Vice-President in charge of International Relations and Regional Cooperation (UR)	Not really, except for very famous institutions, regarding ranking. For small or medium universities to get a collaboration.
Vice-Rector for Science, Innovation and Knowledge Transfer (UAc)	Our primary challenge is attracting partners, as our low salaries make it difficult to attract individuals from more developed countries.
Vice-Rector (UMa)	No answer.
Ex vice-rector for research and transfer (ULL)	No answer.
Ex-vice-rector for Culture, Social Participation and campus Ofra and La Palma (ULL))	No answer.
Researcher and professor (UA)	We utilise international collaboration to deepen the research topics we explore and specialize.
Research Human Resources Director (ULPGC)	It´s not a problem.

Certain universities encounter challenges in attracting international partners due to factors such as institutional size, exemplified by La Réunion, and salary constraints, as noted with UAc. Conversely, other institutions do not face considerable obstacles in recruiting researchers from abroad. In this context, the University of the Antilles prioritizes international collaboration, recognizing that such partnerships are essential for advancing research initiatives that are otherwise unfeasible due to limited resources.

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Table 22. Respondent answers on the gap between research and practical application - Increasing Research Excellence area.

INCREASING RESEARCH EXCELLENCE Does your university encounter any of these barriers? *The gap between research and practical application*	
EU Project Manager (UR)	Yes, there exists a community of researchers who continue to perceive the transformation of research into added value in a secondary manner. This is why two services operate in this domain to foster this entrepreneurial culture. We can assert that measures have been enacted to bridge this gap.
Vice-President in charge of International Relations and Regional Cooperation (UR)	Depends on the sector.
Vice-Rector for Science, Innovation and Knowledge Transfer (UAc)	Most of our senior researchers work in fundamental rather than applied research, so it is very complicated to industrialize research and value the research they do on companies.
Vice-Rector (UMa)	No answer.
- Ex vice-rector for Research and Transfer (ULL)	Difficulty in linking the University with companies in the region.
Ex-vice-rector for Culture, Social Participation and Campus Ofra and La Palma (ULL)	There needs to be a reflection on what we want to achieve with research, engaging all entities, alongside a strategic plan. Currently, there is no clear vision of what we truly desire in research; we must devise a plan that integrates companies, local and autonomous institutions, and collaborates with national, teaching, and research centres. This plan should focus on a common project aimed at the development of the territory and the transformation of the economic model of the Canary Islands, from which we are currently merely surviving. No matter how much tourism we attract, it is not a sustainable economic solution model.
Researcher and professor (UA)	.No answer.
Research Human Resources Director (ULPGC)	Yes, this is a problem. This gap exists.

All universities agree that their researchers tend to focus excessively on scientific articles and fundamental research, often neglecting practical applications and social benefits. In response, the ULL proposes involving various stakeholders and creating a strategic plan aimed at developing a productive model for the region. This plan would also include collaboration with other public and private entities involved in the process.

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INCREASING RESEARCH EXCELLENCE Does your university encounter any of these barriers? *Lack of entrepreneurial culture in academia*	
EU Project Manager (UR)	No answer.
Vice-President in charge of International Relations and Regional Cooperation (UR)	The challenge lies in training researchers. Learning is a lifelong journey, but it isn't easy to receive proper training, particularly in fostering a mindset geared towards applying for opportunities.
Vice-Rector for Science, Innovation and Knowledge Transfer (UAc)	No answer.
Vice-Rector (UMa)	We are beginning. While we are not experts in this area, we are taking the right steps and improving things. We aim to establish a junior enterprise similar to those existing in some Portuguese universities. It will serve as a laboratory for our students to learn how to be entrepreneurs.
Ex vice-rector for Research and Transfer (ULL)	No answer.
Ex-vice-rector for Culture, Social Participation and Campus Ofra and La Palma (ULL)	No answer.
Researcher and professor (UA)	No answer.
Research Human Resources Director (ULPGC)	If the researcher focuses on his publication and his laboratory without being compensated in any way, there is no entrepreneurial culture; for there to be one, it would have to start somehow.

Most respondents did not answer this question, which may suggest a lack of focus or prioritisation on this topic. The primary barriers identified in the responses include insufficient training for researchers, the need to cultivate an entrepreneurial culture, and inadequate compensation and motivation for researchers.

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Table 24. Table 23. Respondent answers on overcoming the barriers or ideas proposal - Increasing Research Excellence area.

INCREASING RESEARCH EXCELLENCE Have you overcome some of the barriers mentioned? Or do you have some ideas to overcome them?	
EU Project Manager (UR)	
Vice-president in charge of International Relations and Regional Cooperation (UR)	We have programmes beginning, such as in biotech. An idea to improve research excellence would be to share profits with researchers. A bonus could be applied to different calls, both for training projects and research projects. Long-term stay, it´s interesting to have a policy for human resources in Europe for job exchange between universities.
Vice-rector for Science, Innovation and Knowledge Transfer (UAc))	No answer.
Vice-rector (UMa)	No answer.
Ex vice-rector for research and transfer (ULL)	No answer.
E*x-vice-rector for Culture, Social Participation and campus Ofra and La Palma (ULL)*	No answer.
Researcher and professor (UA)	One idea is to expand the capacity of our laboratories, allowing a greater number of people to work there and creating more opportunities for developing master's and bachelor's programme degrees.
Research Human Resources Director (ULPGC)	The primary barrier is motivation. At the ULPGC, there have been six-year research periods for several years now, which have marked a radical shift in research activity. The key factor here is motivation stemming from remuneration and recognition, which fosters competitiveness and the drive to continue researching.

There are few responses, which may indicate an insufficient focus on proposing solutions to the barriers hindering research excellence. ULPGC, La Réunion, and Antillas suggest several measures, including profit sharing with researchers, expanding laboratory capacity, and enhancing motivation through remuneration and recognition.

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6. COMPREHENSIVE ANALYSIS HIGHLIGHTING CONCLUSIONS ON THE MOST RECURRING ISSUES OR INTERSECTIONS BETWEEN PROBLEMS AND SOLUTIONS

After a more thorough analysis of the conclusions drawn from each question, and using as criteria:

- Coincidence grade among interviewees´ responses

- Crossover between proposed solutions and identified barriers

Several topics that align with these parameters and are therefore suitable for initiating the forum were identified.

To facilitate this analysis, we will use the following tables:

Table 25. Coincidence grade among interviewees´ responses

Topic	Coincidence	Comments
Digitalization	All universities have digital platforms, though at different levels.	Some have advanced more in internationalization and content creation.
AI Applications	Most recognize the importance of AI but are still in the early stages.	Some universities have started training programs, while others have no AI applications.
Blockchain for Credit Registration	Almost all universities do not use blockchain for credit registration.	Some see it as a 'bubble', while others simply do not understand its usefulness.
Focus on Future Skills	All agree on its importance.	There are differences in the speed of implementation and skill prioritization.
Barriers to Modernization	Funding is a common obstacle.	Some universities consider internal resistance a bigger issue, while others cite legal barriers.
International Cooperation	All participate in programs like Erasmus+ and wish for more cooperation	Some have more structured alliances and clear strategies, while others seek further expansion.
Brain Drain	The problem is acknowledged, especially in universities with fewer local opportunities.	Some universities see it as positive, allowing international experience.
Entrepreneurial Ecosystem	Several universities have knowledge transfer offices.	Others still lack a formal structure to connect research with industry.

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Problem	Proposed Solution
Lack of Funding	Seeking European funds, simplifying bureaucracy, bonus for researchers.
Resistance to Change	Staff training, leadership change, incentives for digitalization.
Bureaucracy	Automation of administrative processes, regulatory simplification, policy changes to streamline procedures, strong leadership. Microcredits courses
Lack of Internationalization	Expansion of English-language programs, strategic alliances with more European universities.
Gap Between Research and Practical Application	Establishing incentives for research commercialization, entrepreneurship programs in universities.

The selection of topics aims to initiate the forum's establishment, creating an environment for discussions that promote new ideas and enhance collaborations focused on improvement. The chosen themes were:

- **Bureaucracy and resistance to change hinder focus on future skills.**

- **Funding hinders modernization, attracts and retains talent and international cooperation.**

Topic Selection:
•Key challenges identified.

Forum Launch:
•Platform for discussion and solutions.

The selection of these topics is based on combining the two criteria used for topic selection. This way, solutions are proposed for the issues where the interviewed institutions most coincided.

In other words, the final selection of the issues to be addressed arises from the intersection of the criterion of coincidence and the criterion of proposed solutions to barriers.

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6.1 BUREAUCRACY AND RESISTANCE TO CHANGE HINDER FOCUS ON FUTURE SKILLS

Many universities cite bureaucracy, lack of agility, and resistance to change (ULL, ULPGC, UAc) as significant barriers to modernising and implementing changes in educational programmes. The ULPGC, ULL, UAc, and other institutions highlight a lack of agility and slow processes as significant obstacles.

For bureaucracy, the ULPGC and ULL suggest solutions such as automating processes and implementing strong leadership to combat resistance to change.

To better focus on future skills, some universities (ULL) have developed questionaries and meetings to figure out which are the main training areas to focus on in the future. Others, such as the UR, have proposed degrees centred on AI, while the ULPGC suggests a system of micro-credits for training courses that require minimal administrative approval. Discussing these strategies can aid other universities in finding effective ways to prepare their students for the future.

Considering all these challenges and proposals, it seems that this would enrich the universities involved in this process by giving them the opportunity to discuss these proposals, enhance administrative efficiency, and improve their focus on future skills.

In order to facilitate the discussion on this topic and encourage participation in the forum, the following questionnaire has been designed and published in the <u>forum</u>
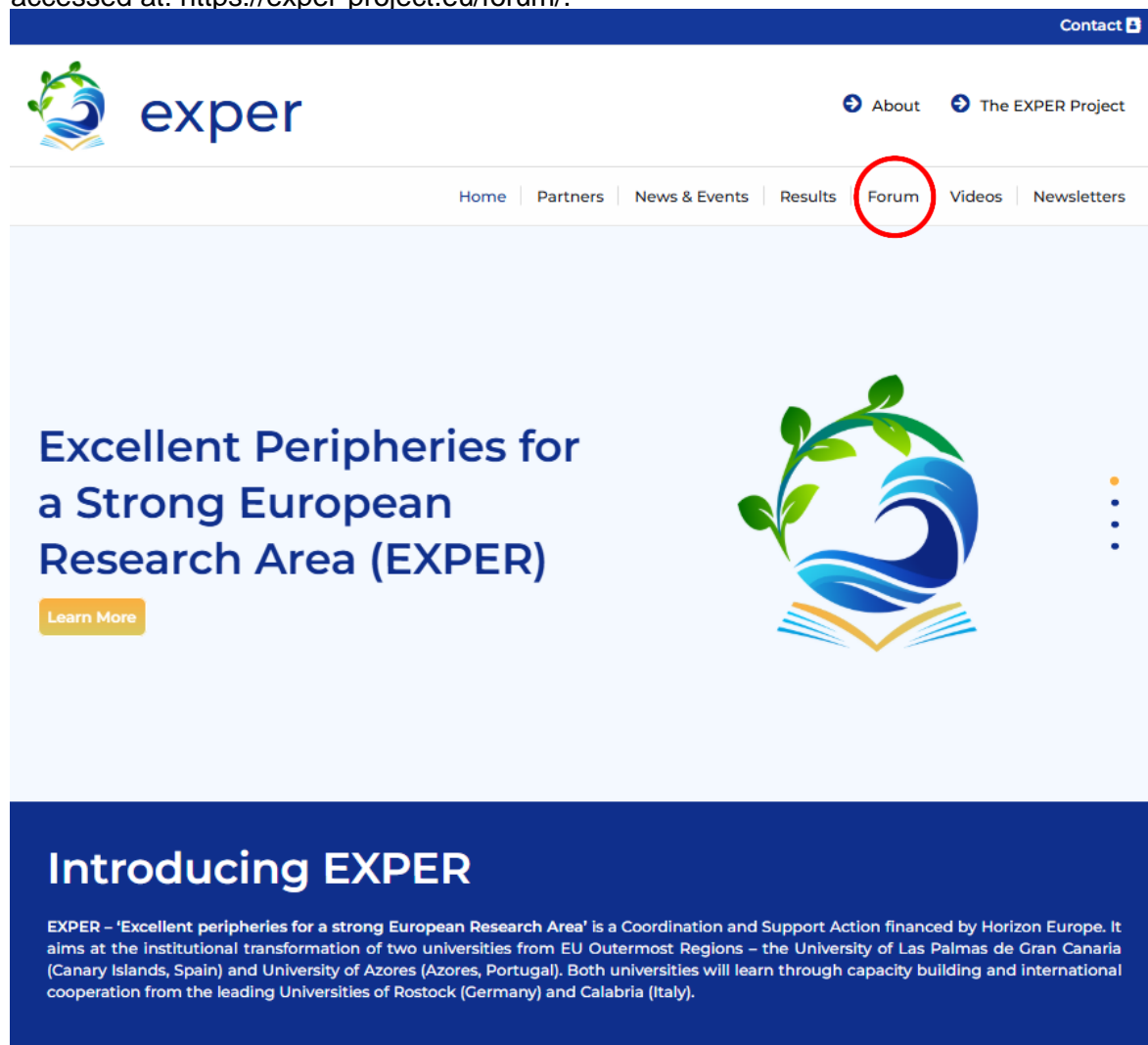
6.1.1 QUESTIONS

- What administrative processes face the most significant delays owing to bureaucracy at your university (e.g., approvals for new programmes, staffing, fund management)?

- What technologies or tools might be utilised to automate and streamline these processes?

- Are you aware of any universities that have successfully reduced bureaucracy and the methods they employed to achieve it?

- Which skills do you think are essential for your university's graduates going forward (e.g., digital proficiency, critical analysis, problem-solving)?

- How might we engage industry and other pertinent stakeholders in the design of training programmes in the university?

- What further resources (technological, financial, human) are required to support the teaching of future skills?

- What strategies could be employed to minimise resistance to change among university staff?

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6.2 FUNDING HINGER MODERNIZATION, ATTRACT AND RETAIN TALENT AND INTERNATIONAL COOPERATION

All universities encounter similar financial challenges. The UMa highlights a disconnect between its region and the remainder of the country regarding the distribution of European funds, underscoring the need for more equitable and sufficient funding.

The UR faces difficulties with cash advances and funding limits for digitisation. ULPGC, ULL, and UAc concur that a regional funding based on objectives could aid in automating processes and mitigating bureaucratic delays. They also suggest enhancing salaries and establishing clear policies to attract researchers and prevent brain drain. Sufficient funding is crucial for creating appealing working conditions and retaining talent.

Selecting the topic of funding at the forum will allow universities to discuss and share strategies to overcome financial barriers, diversify funding sources and improve administrative efficiency. Addressing this topic can also help institutions find innovative solutions to attract and retain talent, foster international cooperation and ultimately improve the quality of education and research.

In order to facilitate the discussion on this topic and encourage participation in the forum, the following questionnaire has been designed and published in the forum

6.2.1 QUESTIONS

- How can we encourage collaboration among universities to tackle shared challenges in funding?

- How can we promote a fairer distribution of European funds for UMa?

- What particular challenges does UR encounter in forming consortia due to geographical balance criteria?

- Which universities have significantly diversified their funding sources, and how have they done so?

- How can we ensure that the government's strategic objectives align with the needs and priorities of universities?

- What indicators could be used to measure the success of a goal-based government strategy?

7. FORUM ACTIVATION ON THE EXPER WEBSITE

CE via the EXPER project website has established a dedicated space to facilitate the forum. This forum is designed for user convenience and can be found prominently within the site's main navigation menu. Once users log in to their accounts, accessing the forum requires just one additional click, ensuring a seamless and efficient experience for all participants. The layout is user-friendly, allowing for easy navigation and interaction

among members in line with the developments detailed in D7.2. The forum can be accessed at: https://exper-project.eu/forum/.

Once logged into the forum, users can explore all discussions, filter by topics, and view members' profiles.

Figure 7. Initial Forum established

Following the interview process, the forum was established and populated with initial discussion topics based on the key challenges identified by participants. This structure allows users to contribute recommendations and solutions to these shared challenges.

8. CONCLUSIONS

The process undertaken to establish the forum strategy within the EXPER project has provided significant insights into the shared challenges and opportunities faced by universities in outermost regions (ORs). By ensuring the connection among ORs universities, the creation of the forum was driven by a structured and thoughtful methodology that began with desk research and continued through the development of a targeted questionnaire, followed by in-depth interviews with key representatives from selected universities left by ULPGC.

This strategy secured that the topics proposed for discussion on the forum were grounded in evidence and reflected real needs across institutions. The criteria used— namely, the degree of coincidence in the issues identified and the intersection between recurring problems and proposed solutions—enabled the identification of relevant and actionable themes. This gave the forum its foundation as a tool for knowledge exchange and collaborative problem-solving among ORs universities.

Furthermore, the inclusive and participatory approach adopted during the strategy's development strengthened ties with representatives across regions and laid the groundwork for future interaction. The process itself served as a valuable exercise in mapping institutional priorities and creating a shared space of understanding among diverse academic contexts.

In conclusion, the establishment of the forum strategy represents a key step forward in addressing long-term collaboration and sustainability goals. It provides a replicable model for other initiatives aiming to connect institutions with shared structural challenges and ambitions for transformation within the European Research Area.

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