



Policies for universities and affected municipalities to enhance collaboration and incentivize local entrepreneurship



DELIVERABLE IO4

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Imprint

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Table of Contents

1. Introduction	4
2. Approach and methodology	6
3. Analyzes.....	9
3.1. Literature Review	9
3.2. Existing policies at different spatial levels	16
3.3. Round Tables.....	18
3.4. UniCity networking events	24
3.5. Student Survey	28
4. Conclusions and recommendations	32
4.1. Establishing an inventory of existing actions and policies	32
4.2. Policy recommendations on how to avoid brain drain.....	33
4.3. Policy recommendations on enhanced cooperation with universities	36
4.4. Entrepreneurship-related policy recommendations	37
5. References.....	39
Annex 1: Policies on the EU Level	42
Annex 2: Policies by country on the national, municipality and university levels	42
Annex 3: Visualization of policy interlinkages between national, municipal and university level, examples from Germany and Poland	42
Annex 4: Student survey, analysis by country.....	42
Annex 5: Policies and relevant bodies for their execution, tables by country.....	42



1. Introduction

Many regions throughout Europe are affected by a so-called brain drain - the outmigration of highly qualified people. In the wake of demographic change and a shortage of skilled labor, the situation is becoming increasingly acute, especially for smaller, more peripheral and structurally weaker cities and regions. In order to avoid being completely left behind by metropolitan regions and to maintain economic strength in the region, regions affected by brain drain must develop new strategies and measures to counteract this.

Some of the affected regions are university locations¹. This offers certain advantages for these regions as universities can have a positive influence on the region's economy in various ways:

- ❖ Firstly, they are themselves economic players who are likely to make financial and non-financial investments in the region and employ people.
- ❖ In addition, they educate young people who will be available to the region as highly qualified employees after graduation if they can be retained there.
- ❖ Furthermore, knowledge is generated at universities. On the one hand, this knowledge can be utilized within the region to advance local conditions there and to strengthen the region's economic situation. On the other hand, this knowledge can be used to develop innovations and product and service ideas that lead to the founding of start-ups.

However, these advantages must also be utilized. To do this, the universities must establish and maintain a good network with regional stakeholders, such as local authorities, business development organizations, companies, schools and others. This is the only way for universities and regional stakeholders to work together to tackle region-specific problems such as brain drain and develop innovative strategies.

This is where the ENDORSE project comes in, focusing particularly on the possibility of promoting entrepreneurship in regions affected by brain drain. The project aims to involve universities in cities and regions affected by brain drain more closely in activities that shape the local business environment to make it more attractive to student entrepreneurs.

Building on the previous project findings and results, policies and strategies will be developed and presented this fourth intellectual output (IO4) for different regional situations. These policies and strategies include

- ❖ recommendations for policy measures to promote entrepreneurship,
- ❖ policy recommendations to prevent or mitigate brain drain and
- ❖ policy recommendation for regional and local stakeholder regarding an increased cooperation with universities.

Based on these recommendations, regional stakeholders and decision-makers should be able to adapt policy measures to the regional characteristics and requirements of their specific region.

¹ When we speak of universities in this report, we also mean other types of higher-educations institutions, HEI, (e.g. university of applied sciences, universities of arts).



The following chapter, Chapter 2, describes the approach and methods used to derive recommendations on the topics mentioned above. Chapter 3 contains the analyzes carried out and findings from the course of the project. In addition to the findings from the literature and policies, the results of the round tables and UniCity events as well as the student survey are presented here. Finally, conclusions are drawn in Chapter 4 and recommendations for promoting entrepreneurship, preventing brain drain and increasing cooperation with universities are outlined.



2. Approach and methodology

The reduction of brain drain and the promotion of entrepreneurship are complex issues that depend on many different conditions and circumstances. Firstly, it must be clarified how the brain drain came about. Why do highly qualified people leave a certain region and why is the region not able to attract highly qualified people from outside the region?

The reasons can vary greatly depending on the region and the regional conditions. They can range from available job opportunities in various industries to a sense of belonging and connection to the region (Albrecht/Scheiner 2022). The same applies to the promotion of entrepreneurship. Accordingly, the possible solutions or strategies are just as varied. In order to be able to provide recommendations for action both in general and for different types of regions, the first step is therefore to collect various general strategies and measures. For this purpose, a mixed methods approach was chosen. The various methods used are briefly presented below.

The topics of 'brain drain/brain gain', 'entrepreneurship' and 'the role of the university in the region' have been analyzed many times in the academic literature. The first step was therefore to collect and review scientific contributions on these topics, followed by a summary of the recommendations proposed therein. These summaries provide an overview of the general strategies and measures suggested by the academic literature.

The next step was to collect actual policies and strategy documents being pursued by the various regional units. On the one hand, action plans and measures envisaged by the EU to combat the 'brain drain' and promote 'entrepreneurship' were analyzed at European level. On the other hand, the universities involved in the project compiled country-specific policies for Austria, Germany, Poland, Sweden, Latvia and Greece and the respective university regions. A table was used for this purpose, which was filled in by all partners (see Appendix 5). This table enabled a quick overview of the various policies to be obtained, comparisons to be made and gaps to be identified.

In addition to the literature review, empirical research was also conducted: round tables, discussion rounds and interviews were included in the analysis as qualitative methods.

The **round tables with students, teachers and regional stakeholders** took place in Sweden, Poland, Latvia and Austria in 2023. The aim was to find out from the students how willing they are to stay in the region, what they think about setting up a business and what they need to be able to imagine setting up a business. Together with lecturers and staff from the respective universities, the ENDORSE team discussed how entrepreneurial education at the universities can be improved, what resources universities, lecturers and staff need for this and what other measures could be helpful to promote business start-ups by students and graduates. The round tables with the regional stakeholders served to find out what they offer to promote entrepreneurship among students, what cooperation's exist and what the regional start-up conditions are like. The findings from the round tables in the four countries were summarized in key points on the various issues. The consideration of all summaries was used to derive region-specific and cross-regional recommendations.

The **interviews with regional entrepreneurs**, conducted as part of IO2 for the teaching materials, provide insights into the founders' motivation, first steps, particular challenges and lessons learnt. This provides first-hand indications of what can be important and beneficial for founders. The interviews were reviewed and the answers to the pre-defined questions were

noted down. This overview made it possible to identify similarities and differences with regard to the questions.

In autumn 2024, the **UniCity networking event took** place in Greece, Austria and Germany. The aim of the event was to engage in dialogue with regional stakeholders on how brain drain regions can move closer together, work together to secure skilled workers and what role the topic of entrepreneurship plays in this. We discussed these points in moderated discussion rounds. The results should supplement the findings from the round tables and interviews. The results were collected with key points on whiteboards together and then briefly summarized by the project team. The results of all three events were then placed side by side in order to derive general conclusions and recommendations.

The Basic	The Emerging
<ul style="list-style-type: none"> ▪ Peripheral regions (among the poorest in Europe) ▪ Problems, amongst others: <ul style="list-style-type: none"> ▪ Socioeconomic, e.g. unemployment, lack of technological progress ▪ Demographic, e.g. population loss ▪ Physical, e.g. poor infrastructure ▪ Economic development is below average ▪ Universities struggle to attract and retain graduates 	<ul style="list-style-type: none"> ▪ Geographically widespread (many in the periphery) ▪ Regions affected by structural change ▪ Problems, amongst others: <ul style="list-style-type: none"> ▪ Vacant, underutilized housing ▪ Uncompetitive, old local businesses ▪ Poor infrastructure ▪ Sometimes, universities purposely located in these regions to contribute to urban growth
Archetypes of brain drain regions	
The Advanced	The Frontrunners
<ul style="list-style-type: none"> ▪ Bigger or smaller cities in metropolitan areas ▪ Benefit to a certain extent from agglomeration shadows ▪ Lack of industrial diversity, innovative performance and economic growth ▪ Suffering from lock-in effects by path dependence, e.g. determined by less-speedy industrial evolution or traditional socioeconomic structures ▪ Universities often important contributors to local development (e.g. attract national & international students) 	<ul style="list-style-type: none"> ▪ Mainly metropolises and regions surrounding them with certain level of economic dynamism, sectoral heterogeneity, R&D investment, and human capital ▪ Lack of important social capital, e.g. <ul style="list-style-type: none"> ▪ Knowledge transfers ▪ Personal exchange between firms) ▪ Partly consumer cities that focus on culture, art, tourism and research but often low entrepreneurial success ▪ Universities attract many national and international students without having a matching labor market

Figure 1: Archetypes of brain drain regions (Source: IO1)

Moreover, a quantitative study was also used in the form of a **student survey**. All universities involved in the project shared the survey link at their universities via various channels (email, newsletter, presentation in the courses/lectures, etc.). In Greece, the survey was also distributed to other Greek universities throughout the country. The survey was intended to generate



a more comprehensive picture of students' choice of location and their propensity to start a business.

Finally, all these methods of analysis are considered as a whole and translated into generally applicable recommendations. The policy recommendations are also applied to four archetypes of brain drain regions (see Fig. 1), which have been developed and identified in IO1. In addition to those general recommendations, specific recommendations for each of these archetypes are provided as well.



3. Analyzes

3.1. Literature Review

Brain drain

Demographic change and the shortage of skilled workers are intensifying competition between European cities and regions. Structurally weak and peripheral cities and regions in particular often lose out in this competition. As a result, they are experiencing a brain drain. As many European university locations cannot compete with the wide range of jobs offered in metropolitan areas, they must find alternative ways to increase the attractiveness of their location and avoid the brain drain. Both the topic of “brain drain” and strategies to combat it have been discussed many times in academic literature. This chapter summarizes, compares and evaluates the recommendations that have been made to reduce brain drain.

Recommendations

Strengthening job opportunities and job conditions in the region


Regions with more favorable labor market conditions, such as extensive job opportunities in various sectors and a good wage level, are generally at an advantage (Jäger/Kreutzer 2012; Hamm/Jäger/Kopper et al. 2013; Buenstorf/Geissler/Krabel 2016; Albrecht/Scheiner 2022). Peripheral regions are often at a disadvantage here (Gareis/Diller 2020).

Studies show that the higher the level of education, the more willing people are to leave the region (Buch/Hamann/Meier et al. 2011; Albrecht/Scheiner 2022). Job ambitions of highly qualified people often require flexibility (Busch/Weigert 2010). This might be due to the fact that highly qualified people have no other choice, as there are not enough job and educational opportunities in their home regions. The recommendation relates to improving the education and job opportunities so that especially highly qualified people are not forced to migrate to other regions (Albrecht/Scheiner 2022).

Regions that attract university graduates can benefit from these mechanisms in the long term. The reasons for that is that students have already passed the most mobile biographical phase of their lives by the time they graduate. They are therefore more likely to stay in the region (Flöther/Kooij 2012).

Gaining work experience in the region

Regional work experience reduces the tendency to leave the region after graduation; this finding applies to all groups of students including international students (Niebuhr/Otto/Rossen et al. 2022). Bringing students into contact with regional companies, e.g. through study projects, student jobs or internships, can be a strategy to bind graduates to their university region.



Feeling at home / belonging

A sense of belonging also plays a role that should not be underestimated when deciding on a location (Jäger/Kreutzer 2012; Hamm/Jäger/Kopper et al. 2013; Albrecht/Scheiner 2022). On the one hand, this is determined by where parents, family members and/or friends live. On the other hand, a feeling of home can also be acquired when students feel comfortable at their place of study, for example, and when they make new contacts and friendships.

Many graduates move to regions of the same type as their home region or migrate to regions of their university type. The latter is particularly likely for graduates from peripheral regions, as their home regions may have a lack of job opportunities (Buenstorf/Geissler/Krabel 2016). This opens up an opportunity for university locations if they manage to make students feel comfortable there and provide them with the conditions they need.

One strategy for retaining international students at the university location is to offer language courses and support with job applications (Thies 2022).

Improving the quality of life in the region

Cultural and social amenities may not play a decisive role, but they are neither insignificant. Here too, peripheral regions are often at a disadvantage compared to metropolitan areas (Albrecht/Scheiner 2022).

Improving city and/or regional marketing, better employer branding

Often there is also a lack of awareness of the advantages and strengths of regions (Albrecht/Scheiner 2022). For example, some regions do not have the big-name companies that everyone is familiar with. However, these regions may have interesting small and medium-sized companies that are hidden champions. Many people living in that region, such as students, are often unaware of these firms thus making it difficult to properly assess the opportunities offered by the regional business landscape (Masch/Ulrich 2021; Masch/Gutenberg/Ulrich 2021). In such cases, employer branding and a better city and regional marketing can help to increase the awareness and knowledge about the opportunities in the particular region.

Promoting entrepreneurship

Entrepreneurship can have a significant impact on the economic development of a region and is therefore a promising strategy for regions affected by brain drain. Young start-ups in particular often have innovative ideas and growth ambitions that in turn can have a positive impact on the economic dynamism and revitalization of a region. For structurally weaker or more peripheral regions, there is an opportunity to boost the economy by promoting start-ups and creating a start-up-friendly environment. Regional universities can serve as an engine for this and favor innovative start-ups from students, graduates and employees of the university with various activities. This chapter summarizes, compares and evaluates the recommendations that have been made to foster entrepreneurship.

Recommendations

Entrepreneurial ecosystem and networks

Academic literature emphasizes the importance of entrepreneurial ecosystems and networks. Accordingly, an **entrepreneurial approach** can strengthen regions if the region succeeds in creating strong networks between many different regional stakeholders. These stakeholders include entrepreneurs, policy makers, universities (and students), communities and other regional interest groups (Lara-Bocanegra/García-Fernández/Gálvez-Ruiz et al. 2022; Dick-Sagoe/Lee/Boakye et al. 2023; Huggins/Munday/Thompson et al. 2023). Likewise, state/government, the broader public, local and regional firms/industries as well as academia in general typically play a role (Carayannis/Campbell 2009).

If the regional objective is to encourage certain groups to set up a business, it is important to both offer **networks specifically tailored to the target group** and integrate them into existing networks in a targeted manner.

One example for the relevance of connecting 'the right people at the right point in time': migrant founders are one of these target groups. Bringing migrant founders in to contact with other start-ups, established companies and/or scientific institutions can make an important contribution to integrating these groups (Sternberg/Gorynia-Pfeffer/Täube et al. 2023).

Such ecosystems and networks are also particularly important in relation to **mentoring programs** and **role models** (Sternberg/Gorynia-Pfeffer/Täube et al. 2023). Potential founders need role models who are tangible and who can provide both advice and (non-) monetary support. Mentoring programs have also proven to be helpful in this respect, too (Ajayi-Nifise/Tula/Asuzu et al. 2024).

Additionally, **female founders** have proven to be an often underrepresented and underacknowledged (regional) resource. Thus, it is important to establish contact between potential female founders with female role models to share not only but also gender-specific their experiences and barriers throughout the entire start-up process (Sternberg/Gorynia-Pfeffer/Täube et al. 2023). However, female founders monitoring in Germany shows that so far only a few women act as business angels and support other founders with investment, advice and contacts (Hirschfeld/Gilde/Walk 2022).

All of these aspects make it possible to better imagine oneself as a founder and gain self-confidence through advice from role models – and hence contribute to the likeliness that an own business is started.



Entrepreneurship orientation and education

Universities can, for example, establish contacts between students and entrepreneurs and thus facilitate the exchange of experience (Lara-Bocanegra/García-Fernández/Gálvez-Ruiz et al. 2022) both for all groups as well as for specific groups of students, alumni etc.

Establishing entrepreneurship and entrepreneurial thinking in the mindsets of people has proven to be an enduring process. For that, it is important to start at an early stage and **promote entrepreneurship orientation and education** already in schools and universities.

Students should be offered specific courses on entrepreneurship within their regular study programs (Liu/Gorgievski/Qi et al. 2022; Dick-Sago/Lee/Boakye et al. 2023; Liu/Gorgievski/Zwaga et al. 2023; Siddiqui/Mumtaz/Ahmad 2023). These courses should provide them with the skills and mindset needed to develop ideas, turn them into a business and eventually run that business.

The following recommendations have been made for the **design of the courses** in the scientific literature:

- The courses should be offered on an interdisciplinary basis and not just for specific subjects (e.g. business management) (Dick-Sago/Lee/Boakye et al. 2023).
- A major barrier for many students is the economic and financial aspects of starting a business. Thus, the university should offer support and information in this respect and, for instance, explain to students how and where they can look for funding opportunities (Lara-Bocanegra/García-Fernández/Gálvez-Ruiz et al. 2022).
- The literature also recommends a challenging learning environment in which students learn to think out of the box (Liu/Gorgievski/Qi et al. 2022).
- The practical side of such courses is also emphasized as practical course content is said to be more important than imparting theoretical knowledge (Siddiqui/Mumtaz/Ahmad 2023). Learning to experiment is also seen as a vital part of an entrepreneurial mindset and can be helpful in turning ideas into reality (Sternberg/Gorynia-Pfeffer/Täube et al. 2023).
- Good and supportive teacher-student and student-student relationships in these courses are furthermore considered conducive to students' interest in starting a business (Liu/Gorgievski/Qi et al. 2022; Liu/Gorgievski/Zwaga et al. 2023).
- To be able to offer courses on the subject of entrepreneurship as a university, it is crucial that its teachers are



provided with the necessary resources and knowledge in advance (Siddiqui/Mumtaz/Ahmad 2023).

As mentioned at the beginning, entrepreneurial education should also start in **(high-) schools**. Greater importance should be placed on economics as a school subject. In this way, knowledge about entrepreneurship can be imparted at an early stage and room for experimentation can be guaranteed (Sternberg/Gorynia-Pfeffer/Täube et al. 2023)...

Entrepreneurial environment

It is important that the government creates an entrepreneurial environment that is **favorable, supportive and inclusive**. The latter means that targeted efforts must be made to include previously underrepresented groups – whose resources and potentials have remain unused so far – such as women, older people and non-graduates (GEM 2023).

In rural regions in particular, it is recommended that the physical **infrastructure** is analyzed and, in most cases, also expanded. This refers to good transport connections (e.g. roads, public transport), good communication infrastructure (e.g. free Wi-Fi in the city center) and the availability of new types of workspaces (e.g. co-working spaces). To create space for innovation in the region, the provision of real-world laboratories as well as science and computing parks is also an option (Sternberg/Gorynia-Pfeffer/Täube et al. 2023).

Creating an entrepreneurial climate, especially at universities, is important. Universities and regional policymakers should pool their resources and work together to create such a climate (Greven/Beule/Fischer-Kreer et al. 2024). This is the best way to **utilize synergies**.

Financial and material support

Financial and material support is one of the basic prerequisites for start-up activities and their success (Dick-Sagoe/Lee/Boakye et al. 2023). Raising capital is often a major challenge for those interested in setting up a company (Ajayi-Nifise/Tula/Asuzu et al. 2024). Governments can interact through various measures and thus have a positive influence on the start-up landscape (Lupova-Henry/Blili/Dal Zotto 2021; Ajayi-Nifise/Tula/Asuzu et al. 2024). Examples of this include subsidy programs, support programs or tax benefits and reliefs.

Reduce fears and risks

The Global Entrepreneurship Monitor shows that starting a business is still associated with many fears, which is why many people decide against it. Support with better knowledge of risk



Foster research and development

management techniques or amended insolvency rules that mitigate the costs of failure could contribute to an increase in start-up rates (GEM 2023).

Research and development are important to generate innovative ideas, which in turn can lead to innovative, future-orientated start-ups (Ajayi-Nifise/Tula/Asuzu et al. 2024). This applies in particular to **future-oriented areas**, such as the development of new processes and technologies in the field of green technologies, which can open up new markets and customer groups (Sternberg/Gorynia-Pfeffer/Täube et al. 2023). This could encourage potential entrepreneurs to look beyond the easily accessible sectors for ideas and thus tend to develop more sustainable, innovative companies (GEM 2023).

Likewise, **Social Innovations** should not be forgotten as they are suitable for raising endogenous potential beyond technology and existing industrial paths, which is particularly relevant for regions under structural economic transition processes (Terstriep 2018; Herzog/Krehl 2024).

Cooperation with universities

Universities can play a decisive role in the development of the region in which they are located. Through their function as employers, educators of highly qualified young people and generators of knowledge through research and development, they can help their region move forward. However, this demands a productive networking between universities and regional stakeholders. Both establishing and maintaining such networks involves a great deal of effort. The benefit of these efforts is synergies that represent a win-win situation for everyone.

Recommendations


Address all regional stakeholder groups

In academic literature, the Quadruple Helix Model (Carayannis/Campbell 2009) is seen as an important driver of innovation and regional development. Close cooperation between the four helices **universities, industry, government and civil society** is considered essential.

Perceive geographical proximity as an opportunity

Studies show that companies of different sizes and popularity mainly enter commitments with regional universities. Better recruitment success and the retention of graduates in the region play a role here, but also the avoidance of competition with other potential employers (Winterhager/Krücken 2015).

A **strategic and long-term co-operation** between universities and regional companies must therefore be expanded and strengthened.



Enabling transfer from the universities

In order for the transfer effects of universities to have an impact in the region, information gaps between the university and industry must be overcome, both sides must show interest and conflicts between academic research and practical transfer must be reduced. **Incentives for transfer activities** and personnel capacity must also be made available for the university (Hamm/Koschätzky 2020). This also applies to financial incentives that can improve the entrepreneurial influence of universities (Rinkinen/Konsti-Laakso/Lahikainen 2024).

Even more important, however, is the expansion of **dialogue spaces** in which all regional players can meet and exchange ideas in person. This personal dialogue is seen as essential for ecosystems to work properly (Rocha/Brown/Mawson 2021; Rinkinen/Konsti-Laakso/Lahikainen 2024).

Conclusion

Reflection upon the literature review the following aspects become evident:

Brain drain: Much research is taking place regarding its drivers, causes and effects and several policy suggestions have been formulated throughout the years. The results indicate that even though drivers and the like are known and fairly well understood it is difficult to implement direct policies that effectively reduce brain drain or turn it into a brain gain. Reasons could be that the relevant mechanisms at work are inaccessible for standard policies.

Entrepreneurship: Research on entrepreneurship is vast, research on entrepreneurship in relation to regional development is less though still a lot, and research on entrepreneurship as a means to combat brain drain is comparatively scarce. A key point seems to be that the issue is not so much to understand which ingredients entrepreneurship and establishing entrepreneurial mindsets need but to find ways of effectively distributing them to people and to encourage them setting up a business. Hence, how to reach the individual level of persons, preferably at a young age.

University cooperation: The literature is comparatively clear in this field. Research highlights that cooperation between different stakeholders can make a difference and the role of universities may take several facets, including employer, educator, innovator, facilitator and carrier. This makes them a strategic partner for many regional stakeholders and regarding entrepreneurial aspirations.

To put it into a nutshell: Knowledge is either already available or straightforward to obtain. However, it is not trivial to put a value on this knowledge and derive concrete activities and effectiveness from it.



3.2. Existing policies at different spatial levels

European level

At the European level, a large variety of different policy approaches can be observed that are directly or indirectly designed to (1) combat brain drain, (2) foster entrepreneurship, (3) particularly strengthen the role of universities with respect to entrepreneurship.

Most of these policies are organized in a way that EU funding bodies typically distribute money towards the EU member states or institutions therein hence delegating the responsibility for precise actions to a lower spatial level.

Looking at the topics mentioned above, it first becomes evident that many EU policies do not necessarily address them separately but in a combined manner. Brain drain, for instance, is often addressed in combination with labor market issues such as a lack of skilled forces (e.g., the “Labor and skills shortages in the EU: an action plan” as of 2024). Likewise, entrepreneurial issues are addressed both in strategies oriented towards socioeconomic challenges, at times also in combination with the role of universities (e.g., “Rethinking Education: Investing in skills for better socio-economic outcomes” as of 2012 or “Connecting Universities to Regional Growth: A Practical Guide” as of 2011). A selection of fundamental policies, receiving bodies or cooperating institutions as well as key instruments may be found in Annex 1.

A key message here is that policies and strategies exist for almost all levels of target groups – from entire member states to single small or medium sized enterprises. Likewise, the range of topics and issues that can be funded with EU money is vast and also ranges from the revision of educational and training catalogues and curricula, via networking issues and training programs to the development of national skill strategies and tax incentives for different stakeholders.

Country Level – Austria, Germany, Greece, Latvia, Poland and Sweden

The country level proves to be very different among the member states. The most striking difference is the way the respective country is organized, i.e. from very centralistic to very federal. Examples showing “maps” of policies and the interlinkages between the different spatial levels may be found in Annex 2.

Commonalities may be found in the precise instruments or actions that exist in the different countries: There is a large number of monetary support policies, such as tax benefits and incentives, business incubators and acceleration programs, loans and grants for certain (entrepreneurial) activities. Likewise, many countries fund different types of training and networking programs for different target groups, both institutions and individuals (typically firms). Additionally, funding and training schemes that are co-funded by the European Union prove similar in the different countries although the technical and hence the national distribution mechanisms might be organized differently.

Looking at a more aggregate level reveals that all countries have national development strategies for regions under economic challenges, transformation pressure or similar. However, the number of ministries and further governmental bodies involved in such programs varies, by and large following the way the respective country is organized.

A list of the core relevant policies at the country level and below may be found in Annex 2. There, a table has been produced for each of the ENDORSE partner countries in general as



well as each university region involved (see also next subsection) and, eventually, each university involved (see next-next subsection).

Municipality Level

The municipality levels addressed in this section encompass the respective university cities of the project partners involved, i.e. Krems/Austria, Mönchengladbach/Germany, Athens/Greece, Ventspils/Latvia, Łódź/Poland and Östersund/Sweden. As cities and municipalities only are not revealing, the corresponding regions have been addressed as well. Selected policy documents, cooperating institutions as well as specific instruments or activities may again be found in the Annex 2, as well.

Inspecting the information for both region and municipalities highlights similarities and differences between the spatial entities in the different countries. Similarly, the embedding of the regional and municipal structure into the national context differs – again the network figures, exemplarily produced for Germany and Poland – reveal substantial differences here (see Annex 3). However, when looking at the specific activities and instruments that are mentioned in respective policies and documents from the municipal/regional level, again similarities

may be identified: Broadly speaking, all municipalities and/or regions have developed policies that pertain to several of the following issues. Sometimes, these issues may be found in combination. Sometimes these instruments are co-funded by federal or EU-money, and sometimes, these activities are held in cooperation with universities, other governmental bodies or in public-private-partnership.

Labor market and related:

- Special economic zones and tax releases (where legally possible)
- Job creation schemes and support, labor market interventions (where legally possible)
- Promotion of start-ups and entrepreneurship/self-employment incl. support for spin-offs

Infrastructure:

- Digitalization support, funding/support of physical infrastructure
- Start-up centers, business incubators, science and technology parks

Training, competence and knowledge:

- Regulatory support and consultancy,
- Training and competence development, mentoring, networking offers, both monetary and in kind

Awareness and realization activities

- Project funding (also co-funding of EU- and/or national money) and support with the respective implementation of activities
- Public awareness campaigns, sponsoring activities and events

University Level

Finally, policies to foster entrepreneurship and, to a much lesser extent, combat brain drain are also developed and implemented at the university level. Though not exactly a spatial but



more an institutional level, the most relevant policies set in place at the ENDORSE partner universities shall be summarized here (details may again be found in the Annex 2).

The most obvious university policy is the design and implementation of respective study programs at the Bachelor or Master level. Furthermore, the implementation of entrepreneurship-related, business management-oriented courses or modules in non-economic programs is typically found at the universities. A closer look at the six institutions analyzed here also reveals that all of them offer extracurricular training and/or mentoring activities. Many of them also host start-up centers, which are at times also well-known beyond the university itself, and organized several types of networking events and opportunities with different stakeholders from the quadruple helix, i.e. government, industry, public and academia.

From a university perspective, the role of academia in regional innovation systems and contexts is addressed in university development plans, mission statements or similar. The term “third mission” occurs there at times. Instruments and activities to “operationalize” such overarching topics also range from study programs to networking events and the supply of consultancy and business incubators incl. training offers. Likewise, explicit cooperation between university and municipality or region may be found, too. Examples are student competitions on “real” topics or cases provided by the municipality or region, approaches towards the foundation of social enterprises in the municipality, concise support and mentoring of students on their way from having an idea to being an entrepreneur incl. best practices and training from local experts.

Conclusions

Although the six countries, regions, municipalities and universities differ, they pursue relatively similar policies and instruments. All entities developed a broad range of policies and strategies to address local/regional/national challenges in terms of – amongst others – brain drain and entrepreneurship.

Though not overly striking, it should be mentioned here that the actual socioeconomic, demographic or geographical location situations substantially varies between the regions. A classification of all brain drain region in Europe (see IO1, and Fig. 1 here) has revealed substantial regional differences. Still, all regions and municipalities facing brain drain tendencies resort to similar measures to addressing this and to contribution to regional development and prosperity. However, while measures and policies sound or read similar, they will most likely experience site-specific arrangement and designs. The following descriptions of local events provide further insights here.

Looking at the large amount of strategies and policy documents, at the cooperation bodies and institutions as well as the role and engagement of regions and municipalities and the offers the universities make on top reveals that much effort is taken and that much of this also meets a need. However, as will become clearer when analyzing the Round Tables (Ch. 3.3) and UniCity events (Ch. 3.4), the issues seem to be not so much a supply one but equally so an informational one

3.3. Round Tables

In 2023, round tables were held at four project partners’ locations in Austria, Poland, Sweden and Latvia, namely Krems/Austria, Łódź/Poland, Östersund/Sweden and Ventspils/Latvia. All



round tables took place with students, teaching staff and regional stakeholders and were intended to provide more detailed insights into the topics of brain drain, entrepreneurship and regional cooperation between the university and regional stakeholders.

Specifically, the round tables pursued the following objectives for the different target groups:

Round tables with students	Round tables with academic staff	Round tables with stakeholders
<ul style="list-style-type: none"> ▪ Assess students' willingness to stay in the region ▪ Assess students' willingness and ability to participate in entrepreneurship-building activities offered by universities ▪ Identify existing gaps in the universities' educational offerings and support activities as perceived by the students ▪ Point out possible actions that could help closing the identified gaps and boosting the students' potential for business ventures ▪ Identify students' expectations with regarding the entrepreneurial support system. 	<ul style="list-style-type: none"> ▪ Identify existing gaps in the universities' educational offerings and support activities as perceived by the teachers ▪ Point out possible actions that could help close the identified gaps and boosting the students' potential for business ventures ▪ Observe the willingness and possibilities of introducing changes in study programs and individual courses ▪ Assess whether the academic staff has the competences necessary to fill the identified gap 	<ul style="list-style-type: none"> ▪ Identify the forms and scope of collaboration between local/regional stakeholders and universities, e.g., in the context of preparing students for entrepreneurial activities and challenges ▪ Identify conditions and barriers to collaboration between local/regional stakeholders and universities ▪ Point out possible actions that could support improving collaboration between local/regional stakeholders and universities

To fulfill these objectives, targeted questions were developed for the different topics that should be discussed with the respective participants. During the round tables, large sheets of paper with these questions were laid out on the tables and the participants were asked to write their thoughts, answers and comments on small sticky notes and attach them to the questions. The subsequent discussion was then conducted based on these notes. The main results of the round tables and discussions are summarized in the following tables and a conclusion is drawn afterward.

Results of the round tables with students

Krems, Austria	Östersund, Sweden
<ul style="list-style-type: none"> ▪ Reasons for leaving the region: <ul style="list-style-type: none"> ○ language barrier ○ cultural barrier ○ limited workplaces ○ limited resources (market size, human resources) ○ isolation ▪ Entrepreneurial skills exist, but there is no ability to practice them ▪ Lack of networking and capital opportunities ▪ Voluntary, practice-oriented courses by experts would be helpful (e.g. for setting up a company while studying) ▪ Regional support programs are not well known, thus there is need to raise awareness and provide more information to students ▪ Krems is not as international as advertised 	<ul style="list-style-type: none"> ▪ Most students intend to stay in the region ▪ Important factors to stay or leave includes: <ul style="list-style-type: none"> ○ Jobs ○ Career opportunities ○ Personal development ○ Housing ○ Salaries ▪ Consider that they have right background (education) ▪ Lack of entrepreneurship in education, even in business administration study program ▪ The students ask for more: <ul style="list-style-type: none"> ○ Entrepreneurship in their education, ○ Management ○ Leadership ○ Internship ▪ Increase networks – mentorship, guest lectures, internship
Łódź, Poland	Ventspils, Latvia
<ul style="list-style-type: none"> ▪ Reasons for leaving the region: <ul style="list-style-type: none"> ○ Poor public transport ○ Aesthetics of the urban space ○ City's social problems ▪ Good region for founding a start-up due to <ul style="list-style-type: none"> ○ Location ○ property opportunities ○ place full of artistry ▪ lots of competition, level of innovation and difficult Polish law ▪ More training, exercises and workshops in running and setting up a business (interdisciplinary, academic and practical aspects) ▪ Universities should run career offices (e.g. offering training, internships and guidance) ▪ Universities should collaborate more closely on such programs. 	<ul style="list-style-type: none"> ▪ Jobs are a main factor in the decision to stay or leave the region ▪ Further reasons for staying include attachment for family reasons. ▪ Some students find Ventspils more attractive than the capital city, Riga, for setting up their business ▪ General aspects relevant for setting up a business include: <ul style="list-style-type: none"> ○ Support throughout the entire process is needed ○ Passion for running one's own business is necessary ▪ Some obstacles in or with Ventspils includes: <ul style="list-style-type: none"> ○ Number of competitors is either too small or too big ▪ Number of inhabitants and market size too small

- Networking with companies, graduates, etc.
- Support system for young entrepreneurs is not well known.
- University should focus on its informational role.

Results of the round tables with academic staff	
Krems, Austria	Östersund, Sweden
<ul style="list-style-type: none"> ▪ Study programs are overloaded with content. ▪ Think out of the box and provide extra-curricular activities ▪ Determine the right time for entrepreneurial courses: neither too early and not too late in the study program. ▪ Teambuilding and team-work projects are essential skills. ▪ Provide students with networking and connections to local companies. ▪ Use local entrepreneurs as teachers to provide practical experience and role models to stay in the region and share the entrepreneurial spirit. ▪ Idea: student companies, idea contest or shared master thesis (interdisciplinary) ▪ Communicate more what the university is doing as institution. ▪ Support students to take-over existing businesses instead of starting new ones. 	<ul style="list-style-type: none"> ▪ Students need to gain an increased entrepreneurial thinking/approach. ▪ There is a need for increased collaboration with business. ▪ Consider self-employment as an alternative to employment <p>But...</p> <ul style="list-style-type: none"> ▪ difficult to find working forms for working with the so-called third mission (i.e. cooperation with the surrounding society) <p>and,</p> <ul style="list-style-type: none"> ▪ difficult to find space for new courses in the existing programs ▪ the competence exists at university-level, but still conservative thinking remains at university level
Łódź, Poland	Ventspils, Latvia
<ul style="list-style-type: none"> ▪ Young people come to Łódź to study, but many leave the region afterwards ▪ Problem: Proximity to Warsaw (i.e. better job offers, better paid) ▪ Benefits of staying in Łódź: cheaper cost of living, but still access to shops and cultural institutions 	<ul style="list-style-type: none"> ▪ Up-to date teaching programs including practical relevance and student-centered courses. ▪ Professors should want to be teachers ▪ Relevant skills for students include: <ul style="list-style-type: none"> ○ Start-up management ○ “learning by doing” ▪ Getting hold of both the own education and the field.

- Universities do not encourage the development of entrepreneurial skills: interdisciplinary and inter-university cooperation, practical workshops
- Courses should be taught by academic staff, entrepreneurs or jointly.
- Regional support system for young entrepreneurs include:
 - entrepreneurship incubators
 - support programs
 - start-ups
 - co-financing, business angels and venture capital funds
 - ...
- Entrepreneurial education should start earlier (e.g. kindergarten)
- Stronger cooperation between the university, the city and businesses
- Implementation of economic and social incentives for young people.

Results of the round tables with stakeholder	
Krems, Austria	Östersund, Sweden
<ul style="list-style-type: none"> ▪ Teach entrepreneurship much earlier and already set this mindset to kids in middle school: make innovation for the youngest generation desirable ▪ Open up entrepreneurial offers for different age groups/generations/disciplines ▪ More entrepreneurial projects will create more jobs and graduates might stay in Krems for those jobs ▪ Building networks and strengthen communication by acknowledging the triple and quadruple helix models. ▪ Idea: Advice center for all questions related to business founding. ▪ Improve the flow of information between students, teachers and stakeholders. ▪ Encourage entrepreneurs to act as mentors for young founders: support and take away fear. 	<ul style="list-style-type: none"> ▪ Lack of educated people, a big problem in society. ▪ Lack of knowledge if university's courses are aligned to local needs. ▪ Wish to create more connections with students during the study period ▪ Want to be an attractive region beyond the university environment.



Łódź, Poland	Ventspils, Latvia
<ul style="list-style-type: none"> ▪ Cooperation between universities and secondary schools is needed. ▪ Universities should establish cooperation with business and enable internships. ▪ At universities, we educate employees not entrepreneurs ▪ Teach what it means to lead and how teamwork works ▪ Consistent and joint image-building activities: stronger marketing of the offers of the region and universities (also outside the region) ▪ Joint actions of the local government, companies and universities to attract companies ▪ Entrepreneurial education should start earlier (e.g. kindergarten) ▪ Create good living conditions (communication, housing and entertainment etc.) ▪ You need to provide a whole set of advisories / institutions to support young entrepreneurs ▪ Business is created by people (leaders): use them as role models 	<ul style="list-style-type: none"> ▪ Supportive aspects include: <ul style="list-style-type: none"> ○ Innovation grants ○ Cooperation between the public and private sectors. ○ Business Support Center ▪ Initiative and “will” to set up a business on the one hand and a government granting respective aspirations on the other hand should align.

Conclusions

The results of the round tables on the topics of brain drain show some differences and similarities between the four European regions. Most of the participating students in Östersund/Sweden can imagine staying in the region, while this is less common in Krems/Austria, Łódź/Poland.

The reasons for **staying or leaving a region** often overlap. Job and development opportunities, salary levels, housing and public transport are particularly important, but softer factors such as cultural and leisure facilities, the social environment including family bonds, the cityscape and a sense of belonging also play a role. To attract students and graduates, regions must fulfill these requirements. Often the regions also have good location conditions, but these may not be sufficiently recognized by the target group. This was also pointed out several times in the round tables. These advantages of regions must be marketed more strongly and communicated to the target group. To this end, image campaigns and the provision of information are measures to improve potential knowledge gaps among students and graduates.

With regard to the **education of entrepreneurial skills**, the results of the round tables show deficits in all regions. The participating students would like to see more entrepreneurial education, particularly practical and interdisciplinary courses, exercises or workshops – also from experts in the field. Career offices, internships and mentorships are also suggested. In addition, the participating students believe that existing support programs for young entrepreneurs are not well known. Universities should take on the role of information provider here and disseminate the information more strongly to the students. The participating academic staff's statements largely confirm those of the students. The involvement and cooperation of people and related institutions from the field (entrepreneurs, companies) is also considered important: on the one hand to impart expertise and on the other hand to pass on experience and act as role models.

Networking opportunities between students and companies should be strengthened. Possible formats for students could include interdisciplinary student companies, idea contests or shared master's theses. However, the inclusion of this content in the already full curricula is often not easy. According to both academic staff and stakeholders, entrepreneurial thinking should be taught long before university (in schools or even kindergartens). **Cooperation between these educational institutions** is proposed. In addition, programs on entrepreneurial thinking could also be offered across generations and target groups (students at secondary school, students at universities, alumni, professionals). Another point that is also mentioned several times in the round tables with the academic staff and stakeholders is the distribution of information on entrepreneurial offers and opportunities. The flow of information between students, teachers and stakeholders (local authorities, companies, other educational institutions, etc.) should be improved in order to highlight the region's opportunities and make the region attractive to potential founders.

3.4. UniCity networking events

In November and December 2024, three UniCity events took place, one each of Germany, Greece and Austria. The target group for these events were regional policymakers as well as other stakeholders who deal with the topics of brain drain and entrepreneurship – and how to address them. The aim of these events was first to present and discuss up-to-now ENDORSE project results and second to brainstorm and draft recommendations together with the participants to reduce brain drain and promote entrepreneurial thinking and behavior among young people. The results of the discussion rounds are shown in the following tables.

Documentation of the German event

UniCity event in Germany on November 7th, 2024

On November 7th, 2024, a UniCity event took place in Mönchengladbach/Germany. Invitees were persons from all three out of four helixes in Mönchengladbach, Krefeld as well as other regional authorities in the broader area. Eventually the invitation list was encompassing persons from academia/universities, industry/business, state/government. Eventually, a list of about 20 commitments was reached but due to sickness, postponements and no-shows, finally seven participants took part representing both different stakeholder groups and different parts of the region. Thus, the small number of heads still captured a broad range of places and perspectives.



Summary of the discussion

Brain drain

Recognition of brain drain / brain gain

- Though it is a rather “sedentary” region (i.e. no fundamental “escape tendencies” from long-established families), brain drain is recognized in the region
- Metropolitan cities close by, such as Düsseldorf and Cologne, outshine the university region of Mönchengladbach and Krefeld
- Problem is known, but seemingly nothing is being done about it

Potentials and possible strategies

- Targeted marketing campaigns for school children, students, young professionals, and later returnees
- Communicating the strengths and special features of the region
- Individual and personal advisory services
 - Transition from school to university or career
 - Advice for job changers
 - Advice for people interested in starting a business
 - Migrants, especially with respect to showing them more appreciation regarding their knowledge and education
- Nationally attractive degree programs to also attract more students from outside the region
- Correlation between study satisfaction and the willingness to stay in the region can be observed

Entrepreneurship

What encourages start-ups?

- Holistic “psycho-social” start-up consulting
- Target group-oriented consulting, assistance and coaching

What inhibits start-ups?

- Too large range of consulting services for founders
- Local and regional initiatives compete with their offerings
- People interested in founding a company overwhelmed when it comes to finding the right offer for them

Potentials and possible strategies

- Improve didactics in schools
- Streamline school curricula and curricula at universities in a targeted manner, teach interdisciplinary skills that increase start-up mentality instead
- Students need
 - insights into different job opportunities, types of companies, sectors and industries
 - role models they can identify with
→ connotations and stereotypes can thus be overcome

Regional players

- Foundation and setting up a business are still strongly focused on technology
- Also include partners, initiatives and companies from other areas, such as social enterprises

Documentation of the Greek event

UniCity event in Greece on December 13th, 2024

On December 13th, 2024, a UniCity event took place in Athens/Greece at the premises of the Regional Development Institute, which is a University Research Institute of Panteion University. Following a screening of stakeholders, a table with 72 potential participants was

completed including Universities, Chambers, Policy Makers from Central Administration and local government, civil society and third sector, start-up companies, private sector, while excluding the host Institutions' stakeholders and policy makers.

Based on this screening an electronic invitation was sent to the list of stakeholders and policy makers with a complete description of the project, the purpose of the invitation, and the expected outcomes from the meeting. On parallel, a big number of contacts was made with the invitees.

The organizers created bonds with the stakeholders and provided them with all the necessary information about the event and the value added of their participation both for them and for the program. Clearness of the purpose and scope of the invitation, precise information about the venue and accessibility, including facilities for parking space if necessary, direct contact for clarifications and support as well as previous collaboration with most of them resulted in a total number of 42 participants.

Summary of the discussion

Brain drain, Innovation and Entrepreneurship

Does the university contribute to Innovation?

- There are a lot of results from research programs and projects conducted by Greek universities, but there is difficulty in utilizing these outcomes to promote youth entrepreneurship.
 - Numerous findings from basic research exist, but often "remain on the shelves".
 - Basic research should be transformed into applied research that adds value to the economy.
 - Therefore, a mechanism is required to leverage research results through youth entrepreneurship.
- The university needs basic research to understand natural and social phenomena. However, it also needs to cultivate skills and capabilities to ensure that the results of basic research can be utilized for applied research, entrepreneurial action, marketable products, and ultimately, local development.

Does the university contribute to local development and brain drain?

- Local development benefits from innovation as it expands economic activity, creates opportunities, and attract new people (or retain those already present).
- By combining education, research and collaboration, the university can play a central role in stimulating local development while creating an environment that encourages talented individuals to remain and contribute to their communities.

How can the university collaborate with other institutions in the public and social/private sector to support brain gain through the innovation and entrepreneurship?

- When talking about public institutions, reference is made to all administrative bodies at all levels of governance (local, national and super-national) as well as to state-finances organizations, chambers of commerce, research institutes, foundations for research and innovation. When talking about the social sector, reference is made to incubators, spin-offs, start-ups, innovation hubs or networks, social enterprises.

- All participants agreed that the mobilization of individual initiative was crucial, supported by social and public institutions through funding, training, coaching, and mentoring.

Documentation of the Austrian event

UniCity event in Austria on December 12th, 2024

On December 12th, 2024, a UniCity event took place in Krems/Austria. Invitees were all kinds of regional stakeholders. After marketing the event among these people, it took place with 9 participants who actively engaged with different questions regarding the improvement of entrepreneurial education and the combat of brain drain. Four overarching topics emerged throughout the exchange that are summarized below.

Summary of the discussion

1. Regional Challenges and Opportunities

- Brain Drain: A significant challenge is retaining university alumni as many migrate to Vienna post-graduation.
- Regional Branding: Lower Austria and its cities, Krems for instance, require stronger branding to position themselves as attractive innovation hubs.
- Start-up Ecosystem:
 - Start-ups were highlighted as crucial contributors to regional attractiveness and economic growth.
 - However, scaling businesses beyond product development (5-7 years) is a challenge due to funding limitations.

2. University Contributions

- Education and Networking: Universities should focus on fostering innovation by integrating students into regional projects and start-ups.
- Infrastructure Support: Universities can act as “funding sources” by providing incubation spaces, mentoring, and services like “buddy coaching” for start-ups and founders.
- Cross-sector Collaboration: Strengthen collaborations between universities, start-ups, local governments and firms to create robust regional innovation networks.

3. Cultural and Structural Barriers

- Risk Aversion: Fear of failure among founders was identified as a significant cultural barrier.
- Bureaucracy: High levels of bureaucracy in Austria hinder entrepreneurial activities and innovation.
- Innovation and Growth: Despite strong support systems, the ability to scale innovations internationally remains underdeveloped.

4. Retention of Talent

- Quality of Life: Highlighting the region’s culture and livability is crucial to retaining graduates.

- Family Support: Families were identified as key drivers or obstacles for entrepreneurship due to social and financial factors.

Conclusions

All UniCity events have proven successful and discussing stakeholders know their regions fairly well. Although all regions face specific challenges some shared findings and conclusions can be drawn:

The stakeholders show a professional attitude towards their **region and its current state**, such as demographic challenges incl. brain drain, missing or untargeted entrepreneurial support systems, unfavorable regional images and hence strong spatial competition with other places (e.g. capital region, neighboring metro areas), bureaucratic processes and barriers.

Against that background, all of them have clear ideas on what to improve and which **policies** to design. However, most of these ideas are neither recently new nor easy to implement. Ideas and suggestions remain on a rather abstractive level but a clear-cut operationalization strategy that is embedded into the regional structures and institutions is still pending.

Similarly, putting research results on fostering and supporting entrepreneurship and regional development into practice is challenging and many results “remain on the shelves” (citation from Greek UniCity event), seem little developed and or are simply unseen. Thus, **leverage points** for utilizing existing regional knowledge both from academia and from practice need to be more clearly identified and used. These leverage points also point to a regional void as individual effort and initiative often seem the true drivers of change and development rather strategic, embedded structures and related positions.

Collaboration among all regional stakeholders is perceived helpful and especially universities are seen as an anchor point therein. Universities core is science and teaching as well as knowledge transfer into the region. Further issues encompass uptake of regional knowledge as well as joint innovation and networking.

Many stakeholders see a key for combatting brain drain and fostering or supporting entrepreneurship and entrepreneurial thinking in **individual and tailor-made offers** that actually meet the needs of potential entrepreneurs, young professionals etc. This may point to entrepreneurial skills, administrative knowledge, legal fundamentals etc. but likewise take a holistic perspective, i.e. include people’s backgrounds and personalities. Thus, **looking beyond** pure economic, professional and job-related aspects and on people’s private and social situation seems so far underacknowledged facet when designing regional policies combatting brain drain and fostering entrepreneurial ecosystems.

3.5. Student Survey

Background

One aim of the survey was to better understand student’s location choice after graduation and to identify decisive factors for their respective decisions. In addition, the survey should provide insights into students’ propensity of starting a business at their place of study. In both cases, both promoting and inhibiting conditions for staying and/or for starting a business should be



singled out. Following the ENDORSE project's focus, the survey and related results refer to students located in structurally weak regions, peripheral regions and/or regions under transformation pressure. Eventually, the results are evaluated on an international comparative basis and placed in the context of urban and regional development

The survey was conducted in November and December 2023 at Hochschule Niederrhein University of Applied Sciences, also as a test run for the international surveys. The survey was then carried out at the other universities involved in the ENDORSE project and further Greek universities in spring and summer of 2024. It was designed as an online questionnaire and distributed to the students according to the possibilities of the respective university.

Various channels, such as newsletters, email distribution lists, social media and presentations in courses were used to promote the survey and achieve a high response rate. The intention was to generate a fully random sample and thus obtain representativity. However, the survey could not be directly distributed to all students personally but had to go through the channels mentioned before, selection biases cannot be fully ruled out. This needs to be kept in mind when interpreting the results.

The survey covered three topics: willingness to stay or leave the university region (henceforth called brain drain), attitude and experience with respect to entrepreneurship, supply and demand of training offers related to being an entrepreneur. Additionally, some biographic information was collected.

Sample characteristics

Eventually 571 complete responses were obtained, although country-specific response rates differ:

Austria	Germany	Greece ²	Latvia	Poland	Sweden	Total
134	97	263	25	32	16	571

The responding students were mostly female (61.6%), studying in a bachelor program (79.1%) and were in their first or second year of study. These figures suggest that that the responding group is younger and more female than the university average, i.e. the entire population covering all students enrolled in all universities where the survey was distributed.

Regional brain drain

Looking at all responding students reveals that just about a quarter (26.8%) of the is actually planning to stay in the respective university region whereas roughly two out of five students (41.7%) are planning to leave the region. 31.5% of the responding students are currently undecided and thus the main target group when combatting brain drain. If their needs are met appropriately, the chances are higher than in the planning-to-leave-group that they will stay in their university region and contribute to regional prosperity there.

Looking at the stated reasons why a student would stay or leave the region is revealing: Jobs and family matter. No matter if a respondent said stay or leave, they would name "(no) suitable

² The survey in Greece was not only sent to students enrolled at the ENDORSE partner University Panteion University in Athens but also to several other universities in Greece. This is one reason why the responses are much higher than in the other countries.



job opportunities” a main reason for their decision. Students willing to stay only put more weight on the proximity of families and friends than on the availability of suitable job opportunities or further economic reasons although the differences are small (91.4% vs. 87.3%). Students planning to leave the region name predominantly economic reasons – jobs, wages, corporate landscape, costs of living. Proximity to family and friends is comparatively subordinate. This is also true for the availability of amenities such as sports and culture. A closer look into the six countries confirms the “European” findings by and large.

Additionally, infrastructure connection and physical accessibility play a substantial role for the location decision of the students at the Lower Rhine in **Germany** as the university region of Mönchengladbach/Krefeld is in the vicinity of metro areas such as Aachen, Bonn, Cologne, Düsseldorf. The line of reasoning is used by both planning to stay- and planning to leave-students: network connection works in both directions – easy come and easy go. The situation in Krems/**Austria** is similar to the one in the surveyed German region with the capital city of Vienna being in about one-hour travel time by car. Here, the agglomeration shadow of Vienna is likely to be effective. Additionally, the unavailability of good cultural, sports and other leisure activities seems to be another push-factor in the Krems-area.

The **Greek** students, located in several bigger cities all over Greece including the capital city of Athens, largely mirror the European findings: suitable jobs, proximity to family and friends as well as the regional corporate landscape are weighted highest among the responding students. The better the regional labor market (or the perception thereof, the study does not permit causality interpretations here), the higher the willingness to stay – just outweighed by those already willing to stay as they name social bonds first.

A closer look at the responses from the **Latvian, Polish** and **Swedish** students confirms the findings so far. However, the number of respondents is less than ten at times and shares thus easily reach 100%. Hence, a more detailed analysis is omitted here and some numbers may be found in the Annex 4 where fact sheets for all countries are provided.

Attitude towards and experience with entrepreneurship

Whereas more than half (57.4%) of the responding students have (had) personal contact with self-employed people, just about 10% of the responding students have personal experience with running a business. Taking into account that the students are in their first or second year of study, it is likely that there is some pro-entrepreneurship bias among the respondents. Reasons could be that students with a positive attitude towards the term “entrepreneurship” were more likely to either open a business or have opened and completed the survey. Against that background, it is not overly surprising to find that two out of five (44.1%) of the responding students are or have been considering to open a business.

These students’ main reasons for opening a business can be summarized as seeking independence. Among the top three nominations (multiple answers were permitted) are “being my own boss”, “prospect of higher income”, and “realization of one’s own product or service idea”. They see difficulties and hurdles in relation with opening a business in different facets of money: acquiring enough capital, high personal risk and unclear income situations are named first. Consequently, when asking these students what they would need in order to increase the likelihood that they actually open a business, different support and network structures were



mentioned: support with funding and bureaucratic requirements and networking opportunities with local firms and role models.

Looking at the regions and trying to understand how the students perceive the (endogenous) regional potential is both enlightening and sobering: the students are often not aware of the regional economic and start-up landscape and (maybe thus? – insights from the UniCity events point into that direction, see Ch. 3.4) the university regions under consideration tend to have a negative image among the respondents.

Country-specific results are rare, students' issues with entrepreneurship therefore comparable. The findings described above also fit for the subsample of **German, Austrian and Greek** students. Additionally, the **Latvian, Polish and Swedish** students' answers point into a similar direction although items not mentioned so far occur within their answers such as the need of support with IT administration, digitization and web design, the lack of a sound business idea and/or suitable co-founder.

Supply and demand of additional training and the role of universities

What I don't know, I'll have to learn. Universities are places of knowledge creation, sharing and exchange. The last part of the survey explicitly addressed the role of the own university and how it could contribute to the students seeing themselves more as entrepreneurs. Thus, they were asked to name contents that should be added to the curricula and that were seen supportive and/or needed to be better prepared for being a founder.

The top three among all responding students are: (1) Core business modules, such as business idea development and business model design. (2) Creative workshops, such as design thinking and pitch workshops, (3) Risk management and mitigation strategies. Multiple answers were permitted here, too.

Looking at the different countries, however, reveals slight differences while generally being in line with the entire sample's results: **Germany**: 61.9% of the responding students also ask for more "Personal skills (personal resilience techniques, conflict management, negotiation etc.)" and another 57.7% name "Administrative modules, such as project management, capital procurement and law for founders". **Austria**: The students name similar items as the German students, but the variety of nominations is much broader. So, for example the top-one and top-two nominations each only reach 16.1%, top-five nominations scores 10.7%. **Greece**: By and large responding like the entire sample and showing a similarly broad response behavior as the Austrian students, the Greek students also highlight a need for "Marketing related modules, such as market research, understanding customers" (13.8%).

Latvia, Poland and Sweden are not discussed separately as the low number of respondents would result in citing topics that essentially a handful of students named. Top-nominations may nonetheless may still be found for each country in the Annex 4.

To put the student survey results in a nutshell:

Jobs and family matter for the decision whether or not to stay.

Independence is attractive and money matters when considering to be an entrepreneur.

Administration, law and regulation distress when thinking about being a founder, whereas creativity and risk management skills might give wings.



4. Conclusions and recommendations

4.1. Establishing an inventory of existing actions and policies

Both the literature review and the different empirical surveys match insofar as all of them postulate and verify that regional development and (regional/local) innovation systems are complex, interconnected structures influenced by various factors including political systems, institutional arrangements, and stakeholder interactions. Following the ENDORSE project's scope, this section now examines and summarizes the interplay between entrepreneurship, brain drain, and university cooperation within the context of regional development.

As can be derived from both the literature and the analysis of selected policies from the EU-level to the university-level, the overarching political system and its configuration play a crucial role in facilitating networking and funding and thus in shaping regional development policies and outcomes. Within this complex, interwoven relationship, regions can be conceptualized – and this can be seen here to some extent, too – as a set of formal and informal institutions “played” by different stakeholders. This institutional framework encompasses policies, main players, and path-dependent processes that influence regional development trajectories.

Looking at the figures for Germany and Poland as provided in Annex 3 highlights that it is essential for all regional developers to first and foremost understand the structure of the own regional development by identifying and analyzing the key stakeholders. Precisely, a comprehensive stakeholder and related policy analysis can reveal the intricate relationships between various actors in the regional (entrepreneurial and innovation) system.

Therefore, a hands-on initial step or recommendation is the following:

Produce tables similar to those found in relevant Annex 5 and related figures as shown in Annex 3 as these tables can help elucidate where a region stands and how it is integrated into broader funding networks. This analysis can provide valuable insights into the flow of resources and the distribution of power within the regional system.

Universities, as discussed both the literature and proven in the empirical ENDORSE work, play a critical role in shaping regional innovation networks. Thus, carefully and purposefully strengthening the link between universities, businesses, and municipalities is essential for creating an entrepreneurial environment that can retain talent and foster innovation. The sheer number of different sources of information (see e.g., teaching Material from IO2), however, reveals that carefully and purposefully is to be taken literally. There is – at times more than enough – information on the market. What is missing is a steward (or a point of contact) to help you find your way through this jungle. This is one leverage point, that universities can and to some extent already do fulfil.

Another point to ponder is that it is well-known that effective regional development is not an overnight process, but requires significant time and patience. Likewise, as the literature review has shown, very much effort in term of time and money, development approaches and strategies have been developed and tried out. However, brain drain still is an issue and one-size-fit-all policies seem to not exist. Combining these findings with insights from the empirical material points to a gap here: approaches seem rather broad, at times also supply-driven but not



so much focusing on actual and current needs of those persons, who are asked to change their job mobility/residential choice behavior and stay in the region, for example. Nevertheless, it is obvious that policy cannot chase individual cases and respond immediately to every present idea.

Listening over presuming knowledge Acknowledging limited resources, carefully and purposefully observing (present and over time) and responding to needs and demands rather than “supply planning” could be a viable way here. Of course, this claim is nothing radically new but it may add a facet that has not gained full attention so far. Nevertheless, the ‘installation’ of brain drain-key accounts could be useful here. Ideally, this group of stakeholders that typically have invested the respective time and or have the job of doing so is key accounts, i.e. persons who are familiar with the paths, institutions and intricacies of their region. They play a crucial role in navigating the long-term nature of development initiatives responding to brain drain and the resulting need of coordinated intraregional cooperation.

Therefore, the development process regional stakeholders initiate, support and finally let go should involve celebrating small successes and taking numerous incremental steps, adhering to the principle that **“little things add up”**. Referring to the empirical material, both the UniCity Events and the student survey support this finding. Many respondents have stated that information has been there but that it needed someone to curate it and then to bring the respective stakeholders together, such as students looking for a job and employers looking for new talents – enriched with success stories of matches.

Thus, successful regional development requires a **sound stocktaking** followed by a patient, collaborative approach that emphasizes synergies over competition. By focusing on responsive strategies suitable to the political and governmental system and design, by an effective resource allocation, and by acknowledging both vertical and horizontal cooperation, regions can derive responses to brain drain and, probably in the mid-run, (more) entrepreneurship. Yet, the process demands time, key stakeholders with local knowledge, and a willingness to celebrate small victories while working towards larger goals.

Summarizing these findings into options of actions and, eventually, policies gives the following:

Regional stakeholders: Find key accounts and equip them with resources such as time, money and decision-making power.

Both the key accounts, their bosses and regional stakeholders: Take time to purposefully observe what is needed, act accordingly and celebrate milestones.

Key accounts: Observe and act accordingly, endowed with necessary resources (see item above) that you may distribute according to identified needs.

4.2. Policy recommendations on how to avoid brain drain

Looking specifically at the brain drain issue some of the ENDORSE partner regions as well as many other regions in Europe, currently face (see IO1), reveals that main challenges are similar. On the one hand, the drivers are issues on the personal level such as feelings of home, family-relationship. This is also tightly linked to individual values and norms which cannot be addressed directly and whose change is a process of years and personal development. On the other hand, the drivers for brain drain can be found on a macro level such as demographic



transition, (global) economic situation, or simply geography. Regional, local and university-specific policies thus can just mitigate effects coming from outside the region but struggle to actively combat or foster these ‘macro influences’.

As both the literature review and the empirical material show, a multifaceted approach is vital to tackle these issues and foster regional growth. To address these issues effectively, regions must adopt a comprehensive strategy that focuses on identifying and fulfilling the needs of young people while simultaneously enhancing the appeal of local opportunities. Two main strands within this are general information about the region and tailor-made individual counselling.

General information collection and distribution

Regional stakeholders such as representatives from government bodies, the private sectors as well as institutions such as business support agencies need to focus on **identifying and meeting the needs of young people** (i.e. those likely to leaving the region thus sustaining the brain drain). Following the empirical analyzes, meeting the students’ needs may involve improving regional amenities and opportunities that align with the young professionals’ preferences, enhancing the communication about regional strengths, and creating and/or marketing meaningful local opportunities in employment, family life, and leisure activities.

Particular attention should be given to the finding that students willing to stay and students likely leaving the regions often give same reasons in the survey for their decision: the (un)availability of suitable jobs. Participants at the Round Tables and the UniCity events, however, often state that students and young professionals were not aware of the options and potentials the region actually provides. Some students support this with their responses regarding regional knowledge. Therefore, **clear-cut information and target-group specific communication** is essential to fully unleash the endogenous regional potentials resulting from reduced brain drain. Effective marketing of regional strengths, such as options for a good work-life balance, high quality of living incl. comparatively low rents and costs of living, and strong entrepreneurial opportunities, is crucial for attracting and retaining talent.

As state in the subsection before, regional key accounts would be a means of doing this. Following the understanding of regions as systems (entrepreneurial ecosystem, innovation system), key accounts desire support from other stakeholders, namely local firms and education institutions. Thus, **strengthening the cooperation between “the region”, schools and universities** is a promising means here. Information about the region and its current potentials conveyed in formats and events, which are tailored to the specific needs and questions of school students, students, graduates and/or young professionals, can contribute to retaining talent within the region. Particular means are joint programs, guest lectures, and early exposure to higher education opportunities. Likewise, integrating students into local businesses during and after their studies is essential, with programs like internships, collaborative projects or dual study programs.

With a closer look at the **labor market conditions and related opportunities**, the following recommendations can be formulated based on the empirical material and backed up with the scientific literature: To counter the perception of a thin labor market, regions should highlight diverse job opportunities the region and its firms offer. Regions and especially the forms therein should furthermore showcase the advantages of working in smaller companies versus large corporations. Regional cooperation is a promising means for this kind of **information and regional marketing**.



Individual counselling and mentoring

Personalized guidance and support play a crucial role in talent retention – particularly the Round Tables and the Uni City events have pointed into this direction. **Implementing person-based means** such as coaching vouchers, offering individualized counselling, and showcasing role models with non-linear career paths can help young people navigate their professional journeys within the region. Additionally, providing targeted support during the transition from higher education to professional life can significantly impact a graduate's decision to remain in the region.

Moreover, in response to the overwhelming abundance of information available to young people navigating their educational and career paths, a **decentralized support system** offers a promising solution. This approach leverages existing structures and relationships within educational institutions to provide more personalized and accessible guidance.

At the **school level**, teachers and senior students can play a pivotal role in offering support and mentorship. Teachers, with their wealth of experience and understanding of the educational landscape, can provide valuable insights into academic and career options. Senior school students, having recently navigated similar decisions, can offer peer-to-peer advice and relatable perspectives on the challenges and opportunities that lie ahead. Similarly, at the **university level**, professors and senior students can form a robust support network for potential as well as younger students. Professors, with their deep subject knowledge and industry connections, can offer specialized guidance on career paths within their fields and refer to own experiences. Senior students, particularly those involved in internships or research projects, can additionally share practical insights about the transition from academic to professional life.

To **enhance the effectiveness of this system**, i.e., interaction between schools and universities, it is crucial to sensitize the multipliers named above to specific topics relevant to the students' and young professionals' development and career planning. Means of doing so may involve training sessions or workshops that equip students and young professionals with up-to-date information on industry trends, potential career paths, and the skills most valued in the current job market. Yet, it is crucial to look at specific needs of the target group and to address it in a purposeful way not following "traditional" or "established" formats in a one-size-fits-all-and-has-always-manner.

Summarizing the finding from these two overarching strands regarding the mitigation of brain drain into options of actions and, eventually, policies gives the following:

Look at the different target groups and provide tailor-made information for them and their current needs.

Specifically address the individual level of persons and offer personal training and support.

Enhance the system by cooperation, collaboration and people navigating the system of actors and information.

4.3. Policy recommendations on enhanced cooperation with universities

Now taking a closer look at the Helix “Academia” as education mostly takes place there and, hence, the target group is comparatively easy to access shall provide more insights into the question “how” to enhance the cooperation between schools and universities in and with the region. As the literature review has already highlighted, the means of doing so are various and as the policy analyzes (see Ch. 3.2) have additionally stressed that (joint) funding schemes have been into play, too. The “Academia”-Helix thus shall encompass the role of universities and further education institutions, such as high schools or vocational training centers. The following recommendations are mainly derived from the UniCity events and enriched with findings from the Student Survey.

Additionally, strengthening networks among universities, start-ups, and local governments is essential. By **creating formalized innovation networks**, all institutions from the “Academia”-Helix as well as local firms can coordinate resources and facilitate knowledge-sharing, ultimately enhancing the region’s innovation capacity. Collaborating with the private sector through public-private partnerships allows universities to co-develop entrepreneurial programs, events, and funding mechanisms that benefit both students and the local economy. The establishment of co-working spaces and incubation hubs can further support such networks by encouraging cross-disciplinary innovation and collaboration among students from various fields.

In addition to fostering collaboration of regional universities with non-university partners, universities should enhance their educational programs by adding or expanding practical entrepreneurship training without compromising their scientific backbone. Such additional courses should **focus on real-world applications and regional challenges**, providing students with hands-on experience that is directly relevant to their communities. Doing this also informs the students about regional potentials and might this motivate them to stay in the region (see Ch. 4.2). It is also vital to offer more opportunities for students to learn **entrepreneurial skills** in practice-oriented environments that promote cross-disciplinary, cross-university, and cross-generational interactions.

To enhance the educational landscape and foster innovation, universities must focus on **targeted approaches** that emphasize practical skills, key competencies, and real-world applications. A well-structured curriculum should therefore incorporate projects that address regional challenges while equipping students with the necessary tools for their future careers. Emphasizing lifelong learning is decisive: entrepreneurial and innovative thinking, along with teamwork and leadership expertise, should be cultivated from an early age. This holistic approach not only prepares students for their future careers but also contributes positively to the broader community and economy.

Tu put it into a nutshell: decisionmakers should focus their activities on

Purposefully strengthening regional network both within academia and between academia and further regional stakeholders

Development, implementation, evaluation and, if necessary, modification of practice-oriented educational programs or trainings schemes in universities and schools.



Implementation of a holistic approach to education, both during formal young-age education and beyond, referring to life-long-learning approaches.

4.4. Entrepreneurship-related policy recommendations

Entrepreneurship and entrepreneurial thinking have the potentials to reduce brain drain and to contribute to a viable region. Yet, one should refrain from seeing entrepreneurship and running own businesses as a one-size-fits-all solution. Personality traits play a role regarding success or failure of being an entrepreneur, which implies that policy efficacy regarding regional development via entrepreneurial thinking support may be limited from a micro perspective. Likewise, the societal acceptance, recognition and appreciation of entrepreneurs as well as the overarching attitude towards taking risks and handling failures make an entrepreneurial ecosystem not necessarily a solid basis for regional development as this aspect also is beyond the direct reach of regional policies. Analyzing the UniCity documentations and the interviews that were held with founders permit the following summary of how to support entrepreneurship and/or entrepreneurial thinking within a region.

To foster a stronger entrepreneurial culture and support aspiring founders, it is essential to create opportunities for meaningful **contact and networking** with role models, particularly entrepreneurs. Additionally, leveraging successful alumni and local entrepreneurs as role models further reinforces this message by demonstrating that challenges are surmountable and success is attainable. These interactions allow individuals to exchange experiences, reduce fears, and gain a clearer understanding of what entrepreneurship entails.

An interesting finding from the empirical material obtained in ENDORSE is that the focus with role models should be on offering authentic connections with **relatable role models** – individuals who are not necessarily perfect but are approachable and representative of an average student or young professional. This notion of “normal” role models is assumed to help reducing exaggerated respect, lowering entry barriers and therefore making entrepreneurship feel more accessible and achievable. Likewise, by providing insights into real-life challenges and successes, such role models can inspire confidence and offer practical advice, including opportunities for internships or hands-on exposure.

Acknowledging and actively addressing cultural traits is equally important in fostering an entrepreneurial mindset and encouraging students and young professionals to consider founding a business. One issue that should be mentioned here is how to deal with setbacks and (perceived) failure: failure should be normalized as an integral part of the journey, with universities and public campaigns emphasizing its value as a learning experience. As this is to a large extent a cultural and societal issues, direct policy means are difficult to implement. Yet indirect activities such as so-called “Fail Forward”-events can create spaces where entrepreneurs openly share their setbacks and lessons learned, helping to destigmatize failure and encourage resilience.

Support for start-ups should extend **beyond the initial stages of development**. Specific funding instruments need to be created for businesses in their scaling phase, typically five to seven years after launch. Structured mentorship programs, such as “Buddy-Coach” initiatives, can provide practical guidance tailored to the needs of start-ups at this critical stage. These programs should focus on hands-on support that helps entrepreneurs navigate the complexities of growth and expansion. Impulses for such funding schemes and mentoring programs



may originate from both the university's start-up centers and from regional economic support agencies (see Ch. 3.2 for existing policies), separately or jointly.

Entrepreneurship should also be presented **as a flexible pursuit** that accommodates diverse interests and talents. It does not have to be an all-or-nothing endeavor. Individuals can, for instance, explore it alongside part-time jobs, their undergraduate or graduate studies, as a second career path or supplementary activity. Marketing entrepreneurship and start-up formation under this color may be another way of addressing and attracting potential founders.

Reducing both mental and actual bureaucratic barriers is crucial for enabling entrepreneurs to start and scale their businesses more efficiently. Simplifying processes in collaboration with local governments and establishing "one-stop-shop" support services can significantly ease the administrative burden on founders. Eventually, by lowering the perceived barriers to entry and providing practical support throughout the entrepreneurial journey, this approach can inspire more people to take the first steps toward realizing their ideas while feeling supported at every stage of their growth.

Summarizing the findings into three key recommendations regarding what could and what should be done gives the following:

Create and promote networking opportunities with authentic and relatable role models.

Develop a positive, forward-looking attitude towards taking entrepreneurial risk and handling failures on the journey.

Provide targeted financial, administrative and mental support for start-ups beyond the take-off and especially during the scaling phase.



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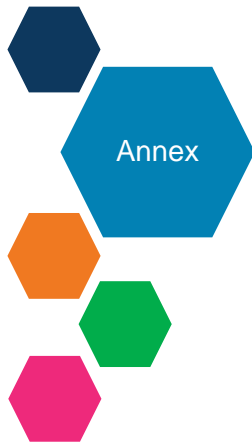
Annex 1: Policies on the EU Level

Annex 2: Policies by country on the national, municipality and university levels

Annex 3: Visualization of policy interlinkages between national, municipal and university level, examples from Germany and Poland

Annex 4: Student survey, analysis by country

Annex 5: Policies and relevant bodies for their execution, tables by country



Annexes



Annex 1

Policies on the EU Level



Policies in EU – entrepreneurship & brain drain

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

Labour and skills shortages in the EU: an action plan

03/20/2024

The action plan outlines strategies to address labour and skills shortages in the EU, emphasizing the need for a multifaceted approach to secure skilled labour and promote business start-ups.

Strategies for Securing Skilled Labour:

1. Enhancing Labour Market Participation: A significant portion of the population remains inactive, particularly among underrepresented groups such as women, low-skilled workers, older individuals, young people, migrants, and persons with disabilities. The action plan suggests that increasing the activity rates of these groups could add millions to the workforce by 2030. Targeted initiatives to activate these demographics are essential, including tailored training programs and support systems to facilitate their entry into the labour market. The European Social Fund (ESF+) is dedicated to promoting employment and social inclusion by funding initiatives that enhance skills and support marginalized groups. The European Regional Development Fund (ERDF) focuses on regional development, contributing to job creation and skills enhancement in specific areas. Interreg programs facilitate cross-border cooperation, enabling regions to collaborate on projects that address labour shortages and improve workforce development.

2. Developing National Skills Strategies: This action plan advocates for comprehensive national skills strategies that involve relevant stakeholders, including social partners. These strategies should be tailored to national circumstances and focus on sectors experiencing skills shortages. By conducting labour market analysis and skills forecasting, countries can better align training curricula with the evolving needs of the labour market.

3. Upskilling and Reskilling Initiatives: As the green and digital transitions reshape job requirements, there is an urgent need for upskilling and reskilling the existing workforce. The action plan highlights the importance of adapting educational curricula to equip students with the necessary skills to meet market demands. This includes integrating advanced technologies and addressing the skills gap in sectors like renewable energy, digital technology, and cybersecurity.

4. Promoting Lifelong Learning: Encouraging a culture of lifelong learning is crucial for maintaining a skilled workforce. The action plan suggests that continuous education and training opportunities should be made accessible to all workers, enabling them to adapt to changing job requirements and technological advancements.

5. Strengthening Social Dialogue: Engaging in social dialogue between employers, employees, and policymakers is vital for identifying skills needs and developing effective solutions. This action plan emphasizes the role of social partners in shaping policies that address labour shortages and skills gaps.

Strategies for Promoting Business Start-Ups:

1. Access to Finance: The action plan stresses the importance of improving access to finance for start-ups and small businesses. This includes facilitating funding opportunities through grants, loans, and investment schemes that support innovative business ideas and encourage entrepreneurship.

2. Simplifying Regulatory Frameworks: To foster a conducive environment for business start-ups, the action plan recommends simplifying regulatory processes and reducing bureaucratic hurdles. Streamlining procedures for business registration and compliance can encourage more individuals to pursue entrepreneurial ventures.

3. Support for Innovation and Research: Promoting research and innovation is essential for driving economic growth and creating new business opportunities. The action plan suggests that the EU should invest in research initiatives and provide support for innovative projects that can lead to the development of new products and services.

4. Networking and Mentorship Programs: Establishing networking platforms and mentorship programs can help aspiring entrepreneurs connect with experienced business leaders. These initiatives can provide valuable guidance, resources, and support, enhancing the chances of success for new ventures.

5. Encouraging Youth Entrepreneurship: The action plan highlights the need to inspire young people to consider entrepreneurship as a viable career path. Educational programs that focus on business skills and entrepreneurial thinking can empower the next generation to start their own businesses. Erasmus+ is a significant funding program that supports the development of learners, staff, institutions in adult learning and vocational education and training.

By implementing these strategies, the EU contributes to securing a skilled labour force and foster a vibrant environment for business start-ups, ultimately driving economic growth and resilience.

EUROPEAN SME-ACTION PROGRAMME

2017

The "European SME Action Programme" outlines concrete strategies and measures to enhance entrepreneurship across Europe, recognizing its vital role in economic growth and innovation. Key points include:

Entrepreneurship Education:

- Integrate entrepreneurship as a key competence in educational curricula.
- Train teachers and school leaders in entrepreneurship education to foster an entrepreneurial mindset among students.
- Create supportive environments in schools that promote entrepreneurship across various subjects

Tailored Support for Start-ups:

- Develop customized support measures for growth-oriented start-ups, emphasizing a synergistic approach.
- Clarify the distinctions between accelerators and incubators to better serve the needs of new ventures

Enhancing Entrepreneurial Skills:

- Implement targeted training programs and management tools to improve entrepreneurial skills, particularly for family businesses.
- Establish coaching and mentoring networks to support entrepreneurs during transitional phases and ensure business continuity

Promotion of Women Entrepreneurs:

- Launch specific initiatives and awards to promote female entrepreneurship, increasing visibility and support for women in business.

Networking and Collaboration:

- Encourage partnerships between educational institutions and local businesses to create real-world entrepreneurial experiences for students.
- Foster international cooperation and dialogue among policymakers to share best practices and enhance the entrepreneurial ecosystem.

Policy Commitment:

- Urge policymakers at both EU and Member State levels to commit to the "Think Small First" principle, ensuring that SME needs are prioritized in policy development.

These strategies aim to cultivate a robust entrepreneurial culture, ultimately driving innovation, job creation, and economic prosperity in Europe.

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

An SME Strategy for a sustainable and digital Europe

03/10/2020

The European Commission's "SME Strategy for a Sustainable and Digital Europe" outlines key strategies to promote entrepreneurship and support start-ups, recognizing their vital role in the EU economy.

A primary focus is on improving access to financing, addressing the significant barriers that SMEs face in securing funding. Initiatives like InvestEU aim to mobilize public and private investments, particularly targeting underrepresented groups, such as female entrepreneurs, to foster diversity in entrepreneurship.

Capacity-building is another critical strategy, providing SMEs with the skills and resources necessary for transitioning to sustainable and digital practices. This includes training programs that help businesses adopt innovative technologies, enhancing their competitiveness and resilience in the market.

The strategy also emphasizes reducing regulatory burdens that hinder market access for start-ups, making it easier for them to operate and grow. Additionally, fostering networks among SMEs, investors, and stakeholders is crucial for enhancing collaboration and knowledge sharing, which can lead to new market opportunities.

The Capital Markets Union initiative is highlighted as a means to diversify funding sources for SMEs, including facilitating public listings through Initial Public Offerings (IPOs).

Overall, the strategy promotes a robust partnership between the EU, Member States, and local authorities, encouraging active involvement from the SME community. By leveraging EU investment programs and fostering a supportive ecosystem, the strategy aims to empower entrepreneurs and start-ups to thrive in a sustainable and digital economy.

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

Rethinking Education: Investing in skills for better socio-economic outcomes

11/20/2012

The European Commission's communication emphasizes the importance of fostering entrepreneurial skills to enhance employability and stimulate start-up creation among young people. It identifies several strategies to promote entrepreneurship education across the EU.

Firstly, the document advocates for integrating entrepreneurial skills into educational curricula from primary through higher education. This includes adopting innovative and student-centred teaching methods that encourage real-world problem-solving and enterprise links. All students should have at least one practical entrepreneurial experience before completing compulsory education, ensuring they are equipped with the necessary skills to navigate the business landscape.

Secondly, the Commission plans to publish policy guidance in 2013 to support the improvement of entrepreneurship education quality and prevalence. This guidance will help Member States develop specific strategies for fostering entrepreneurial skills, as currently, only six have such strategies in place.

Additionally, partnerships between education, business, and research are encouraged through initiatives like the proposed Erasmus for All program and Horizon 2020. These partnerships aim to align education and training systems more closely with the needs of companies, particularly small and medium-sized enterprises (SMEs).

Finally, measuring the impact of entrepreneurship education is crucial. The Commission will provide tools to assess progress and the acquisition of entrepreneurial competencies, alongside a self-assessment framework for educational institutions to enhance their entrepreneurial education offerings. Overall, these strategies aim to create a supportive environment for start-ups and entrepreneurship, ultimately contributing to economic growth and job creation in Europe.

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

Implementing the Community Lisbon Programme: Fostering entrepreneurial mindsets through education and learning

02/13/2006

The European Commission's communication outlines several strategies and measures to promote entrepreneurship education across various educational levels. These strategies aim to create a robust entrepreneurial culture within educational systems, ultimately leading to increased economic growth and job creation in Europe. Key strategies:

Integration in Higher Education:

- Encourage higher education institutions to incorporate entrepreneurship into diverse subjects, particularly in scientific and technical studies.
- Promote the involvement of business professionals in teaching to provide real-world insights.

Teacher Training and Support:

- Public authorities should provide high-level training for teachers to enhance their ability to teach entrepreneurship.
- Develop networks for sharing best practices among educators to improve the quality of entrepreneurship education.

Encouraging Teacher Mobility:

- Facilitate mobility between universities and the business sector for teachers to gain practical experience and insights.

Supportive Educational Environments:

- Create environments that provide access to risk capital, management training, and networking opportunities for students.
- Promote the establishment of business plan competitions, incubators, and science parks to expose students to entrepreneurial challenges.

Public Authority Involvement:

- Public authorities should actively promote entrepreneurship education and establish formal cooperation between different governmental departments.
- Encourage partnerships between educational institutions and local businesses to enhance practical learning experiences.

Systematic Approach:

- Advocate for a coherent framework for entrepreneurship education that spans all levels of education.
- Urge Member States to adopt comprehensive policies that foster entrepreneurial attitudes and skills, contributing to a more innovative and competitive European economy.

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

Entrepreneurship 2020 Action Plan

Reigniting the entrepreneurial spirit in Europe

01/09/2013

The "Entrepreneurship 2020 Action Plan" by the European Commission aims to revitalize entrepreneurship in Europe, particularly in the wake of the economic crisis. It identifies several key strategies and measures to foster a more conducive environment for entrepreneurs.

Firstly, the plan emphasizes the need for entrepreneurial education and training. It proposes the development of a pan-European initiative to consolidate existing expertise and methodologies, encouraging the establishment of entrepreneurial schools and vocational education and training (VET) institutions. The goal is to integrate entrepreneurial learning into curricula, enhancing students' skills such as creativity, initiative, and teamwork, which are essential for successful entrepreneurship.

Secondly, the plan advocates for simplifying regulatory frameworks to reduce bureaucratic burdens on businesses. This includes implementing the "European Code of Best Practices" to facilitate SMEs' access to public procurement and modernizing labour markets to allow for more flexible working arrangements. The establishment of "one-stop shops for entrepreneurs" is also proposed, which would centralize business support services, including mentoring and access to finance.

Additionally, the plan highlights the importance of changing public perceptions of entrepreneurship. It calls for increased visibility of successful entrepreneurs as role models to inspire others, particularly young people. This involves promoting positive narratives about entrepreneurship in the media and public discourse.

Finally, the plan stresses the need for supporting underrepresented groups in entrepreneurship, ensuring that diverse profiles are encouraged and recognized. The collaboration between the Commission and Member States is crucial for implementing these strategies effectively, with a focus on long-term commitment to fostering an entrepreneurial culture across Europe.

A GUIDE TO FOSTERING ENTREPRENEURSHIP EDUCATION: FIVE KEY ACTIONS TOWARDS A DIGITAL, GREEN AND RESILIENT EUROPE

October 2021

The guide aims to create a robust framework for entrepreneurship education that not only prepares individuals for the workforce but also empowers them to tackle pressing societal challenges through innovative thinking and action. Key actions involve:

1. Developing Competences of Educators: It is crucial to enhance the skills of teachers and educational leaders in entrepreneurship. This involves training programs that equip them with the necessary knowledge and tools to effectively teach entrepreneurship concepts and practices.

2. Encouraging Stakeholder Cooperation: The guide advocates for collaboration among various stakeholders, including governments, educational institutions, and businesses. This cooperation is essential for creating coherent strategies, policies, and curricula that align with the needs of the economy and society.

3. Communicating the Benefits of Entrepreneurship Education: There is a strong emphasis on addressing misconceptions about entrepreneurship, which is often viewed negatively. The guide stresses the importance of communicating the positive impacts of Entrepreneurship Education, highlighting how it can build essential life skills and contribute to societal challenges, such as climate change and digital transformation.

4. Research and Evaluation: Conducting research on Entrepreneurship Education methods, impacts, and policies is vital for understanding what works best in different contexts. This research will help in measuring the effectiveness of various Entrepreneurship Education initiatives and inform future strategies.

5. Sharing Knowledge and Best Practices: The guide encourages the sharing of experiences and successful practices among countries and institutions. This exchange of knowledge can enhance teaching and learning in entrepreneurship, ensuring that effective strategies are disseminated widely.

CONNECTING UNIVERSITIES TO REGIONAL GROWTH: A PRACTICAL GUIDE

A guide to help improving the contribution of universities to regional development, with a view to strengthening economic, social and territorial cohesion, in a sustainable way

September 2011

Universities play a crucial role in reducing brain drain and promoting entrepreneurship in their regions. By implementing the following strategies, universities can contribute to regional growth, retain talent, and foster a vibrant entrepreneurial ecosystem.

Reducing Brain Drain:

- **Retention Programs:** Universities implement proactive programs aimed at retaining graduates in the region, which is essential in areas facing a shortage of high-level skills.
- **Alumni Networks:** By leveraging alumni networks, universities can attract former students back to the region. These individuals bring valuable experiences, knowledge, and networks acquired during their time away, enhancing local human capital.

Promoting Entrepreneurship:

- **Training and Skill Development:** Universities provide training focused on entrepreneurial skills, equipping students and recent graduates with the necessary tools to start their own businesses.
- **Business Experience through Placements:** Offering placements in local small and medium-sized enterprises (SMEs) allows students to gain practical experience, fostering a culture of entrepreneurship.
- **Support for New Ventures:** Universities assist in the creation of new businesses by providing resources such as:

Assistance with business plan development

- Free office space and equipment
- Access to meeting and administrative areas
- Specialist advice from business mentors
- Financial assistance and grants

Collaboration and Coordination:

- Partnerships with Private Sector: Close cooperation between universities, the private sector, and regional authorities is essential to ensure coordinated efforts that support entrepreneurship without displacing existing businesses.
- Alignment with Regional Strategies: Universities should align their entrepreneurial support with broader regional development goals, encouraging graduates to start businesses in strategic sectors relevant to the region's economic aspirations.



Annex 2

Policies by country on the national, municipality and university levels



Policies in Germany – entrepreneurship / brain drain

NATIONAL LEVEL

Die Start-up-Strategie der Bundesregierung

Start-up Strategy of the Federal Government

The "Start-up Strategy of the Federal Government" outlines ten key fields of action aimed at enhancing the start-up ecosystem in Germany. Overall, the strategy aims to create a more supportive environment for start-ups, fostering innovation, diversity, and collaboration across various sectors. The government commits to regular evaluations and updates of the strategy to adapt to changing needs and circumstances.

The ten specific measures proposed in each field can be summarized as follows:

- 1. Strengthening Financing for Start-ups:** The government aims to improve access to financing through various initiatives, including the establishment of a public venture capital fund and the promotion of alternative financing models such as crowdfunding.
- 2. Facilitating Talent Acquisition for Start-ups:** Measures include the development of a skilled labor strategy that focuses on increasing participation in the workforce, enhancing training and education, and improving immigration laws to attract international talent, particularly in STEM fields.
- 3. Fostering Entrepreneurial Spirit:** The government plans to simplify the founding process by digitizing administrative procedures and reducing bureaucratic hurdles, making it easier for individuals to start their own businesses.
- 4. Strengthening Female Founders and Diversity:** Initiatives will focus on increasing the representation of women in entrepreneurship and supporting diverse founding teams through targeted programs and funding opportunities.
- 5. Facilitating Spin-offs from Research Institutions:** The strategy includes measures to enhance collaboration between research institutions and start-ups, providing support for technology transfer and commercialization of research findings.
- 6. Improving Framework Conditions for Socially Responsible Start-ups:** The government aims to increase visibility and support for social enterprises, encouraging their participation in public procurement processes to foster social innovation.
- 7. Mobilizing Start-up Competencies for Public Procurement:** A central e-marketplace will be established to improve market transparency and allow start-ups to showcase their innovations, while a centralized announcement service will provide access to public tenders.
- 8. Easing Access to Data for Start-ups:** The strategy includes initiatives to improve data availability and accessibility for start-ups, enabling them to leverage data for innovation and business development.

9. Strengthening Real Laboratories: The government will enhance access to real laboratories, which serve as testing grounds for innovative solutions, allowing start-ups to experiment and validate their ideas in real-world settings.

10. Placing Start-ups at the Center: The strategy emphasizes the importance of integrating start-ups into the broader economic framework, ensuring that their needs and challenges are considered in policy-making and support programs.

Link: <https://www.bmwk.de/SUS/start-up-strategie-der-bundesregierung.html>

EXIST – Existenzgründungen aus der Wissenschaft

EXIST – Start-ups from science

EXIST is a funding program of the Federal Ministry of Economic Affairs and Climate Action that supports university graduates, scientists and students in technology-oriented and knowledge-based business start-ups. The program also aims to improve the start-up climate at universities and research institutions (including non-university institutions).

It consists of three funding programs:

1. EXIST start-up grant: Start-up teams receive a grant for 12 months to write a business plan and prepare for setting up a company with the support of their university or research institution.

2. EXIST research transfer: Research-based start-up projects with complex and high-risk research work are funded in two funding phases (1. further development of research results with start-up potential, 2. commencement of business activities and preparation of external corporate financing).

3. EXIST potentials: EXIST potentials supports universities in the implementation of a perceptible and activating start-up climate as well as the creation of framework conditions for innovative and high-growth start-ups from science in order to create future-proof jobs in the region.

Link: <https://www.exist.de/EXIST/Navigation/DE/Home/home.html>

Nationale Strategie für Soziale Innovationen und Gemeinwohlorientierte Unternehmen

National strategy for Social Innovation and Enterprises for the Common Good

The "Nationale Strategie für Soziale Innovationen und Gemeinwohlorientierte Unternehmen" (English: National strategy for social innovation and enterprises for the common good) outlines a comprehensive framework aimed at enhancing social innovations and supporting enterprises focused on the common good in Germany. The strategy identifies eleven fields of action, each with specific measures to address various challenges. Overall, the strategy aims to create a supportive ecosystem for social

innovations and enterprises that prioritize the common good, fostering sustainable development and social cohesion in Germany.

1. Optimizing Framework Conditions: This field focuses on removing structural barriers that hinder social innovation. Measures include regulatory adjustments and creating a conducive environment for social enterprises.

2. Strengthening Socially Innovative and Common Good-Oriented Founding Culture: This involves promoting a culture that encourages the establishment of social enterprises. Initiatives may include training programs and support networks for aspiring entrepreneurs.

3. Promoting Networking, Collaboration, and Transfer: The strategy emphasizes the importance of collaboration among stakeholders. Measures include establishing platforms for knowledge exchange and partnerships between social enterprises and traditional businesses.

4. Utilizing Public Procurement as a Lever: This field aims to leverage public procurement processes to support social enterprises. Measures include integrating social criteria into procurement decisions to foster the growth of these businesses.

5. Developing and Expanding Funding Instruments: The strategy seeks to create tailored funding opportunities for social enterprises. This includes grants, loans, and investment funds specifically designed for social innovation projects.

6. Advancing Growth and Impact through Optimized Financing Offers: This involves improving access to financial resources for social enterprises. Measures may include developing innovative financing models that cater to the unique needs of these organizations.

7. Expanding Research on Social Innovations and Common Good-Oriented Enterprises: The strategy calls for increased research efforts to better understand the impact of social innovations. This includes funding research projects and establishing partnerships with academic institutions.

8. Promoting Competence Development for Social Innovations and Common Good-Oriented Economy: This field focuses on enhancing the skills and knowledge of individuals involved in social enterprises. Measures include training programs and workshops on impact measurement and management.

9. Establishing Impact Orientation and Impact Measurement as Standards: The strategy aims to standardize impact measurement practices across social enterprises. This includes developing a set of indicators to assess the effectiveness of social innovations.

10. Increasing Visibility and Recognition: This involves raising awareness of social enterprises and their contributions to society. Measures may include campaigns to highlight successful social innovation projects and their impact.

11. Seeking European and International Cooperation: The strategy emphasizes the importance of cross-border collaboration. Measures include advocating for supportive legal frameworks at the EU level to facilitate international cooperation among social enterprises.

Link: https://www.bmbf.de/SharedDocs/Downloads/de/2023/230912-sigustrategie-download.pdf?__blob=publicationFile&v=5

REGIONAL LEVEL

Regionale Innovationsstrategie des Landes Nordrhein-Westfalen

Regional Innovation Strategy of the state of North Rhine-Westphalia

The "Regional Innovationsstrategie des Landes Nordrhein-Westfalen" places significant emphasis on supporting start-ups and enhancing financing mechanisms to foster innovation. Its measures collectively aim to create a robust support system for start-ups, enhancing their capacity to innovate and succeed in the competitive landscape.

The key measures mentioned there include:

1. Promotion of a Vibrant Start-up Culture: The strategy highlights the importance of innovative start-ups as crucial drivers of the innovation ecosystem. It aims to create an environment conducive to entrepreneurship, focusing on overcoming structural challenges to develop a more digital, sustainable, and resilient economy.

2. Financial Support Mechanisms: The strategy emphasizes the need for tailored financial instruments to support young and innovative companies. This includes the provision of grants, subsidies, and venture capital to facilitate the growth of start-ups, particularly in knowledge-intensive and technology-driven sectors.

3. Extended Support Programs: Initiatives such as the extension of the founder's stipend and enhanced support for both male and female entrepreneurs are outlined. These measures aim to improve the overall environment for start-ups, including international ones, by providing comprehensive assistance throughout the entrepreneurial journey.

4. Business Competitions: The strategy advocates for the organization of start-up competitions to identify and support the best innovative ideas. These competitions are designed to mobilize various stakeholders, including research institutions and regional economic developers, to collaborate on innovative solutions.

5. Mentorship and Advisory Services: Start-ups will receive holistic support in market positioning and competitiveness through mentorship programs. This includes assistance in business plan development and access to expert advice from mentors and specialists.

6. Market Expansion Support: The strategy also focuses on helping start-ups with scaling potential to grow and enter new markets, ensuring they can leverage their innovations effectively.

Link: <https://www.wirtschaft.nrw/innovationsstrategie>

#GründenNRW

#FoundingNRW

#GründenNRW is a platform of the Ministry of Economic Affairs, Industry, Climate Action and Energy of the State of North Rhine-Westphalia that bundles information on the topic of start-ups. The information ranges from start-up reports, networks and events to advice and support services as well as funding opportunities. In addition, target group-specific information is also provided for young founders, female entrepreneurs, sustainable and social start-ups, start-ups in the high-tech sector or start-ups in the craft sector. In this way, the state aims to provide founders with the best possible support on their way to setting up a business.

Link: <https://www.gruenden.nrw/>

Gründungsregion Niederrhein

Start-up Region Niederrhein

The “Gründungsregion Niederrhein” is a network of more than 20 institutions, associations and organisations located in the Rhine-County Neuss, county of Viersen and the cities of Krefeld and Mönchengladbach. It supports people interested in setting up a business on their way to a successful start-up.

The platform offers valuable information about the region as a start-up location, regional contacts, regional events and workshops, available funding opportunities (loans, grants or investments) and regional networking options (including co-working and coaching opportunities).

The Chamber of Industry and Commerce Mittlerer Niederrhein (in German: IHK Mittlerer Niederrhein) is responsible for the website.

Link: <https://www.gruendungsregion-niederrhein.de/>

MUNICIPAL LEVEL

Mönchengladbach: Städtische Gesamtstrategie

Mönchengladbach: Overall Municipal Strategy

The “Städtische Gesamtstrategie” of Mönchengladbach addresses critical challenges that the city of Mönchengladbach currently faces and which are posed by demographic changes, technological advancements, and economic conditions, particularly focusing on the shortage of skilled labor and the promotion of start-ups. Two main aspects are of particularly relevant to the topic of entrepreneurship and brain drain:

1) Strategies for Addressing Skilled Labor Shortage

The demographic shift has led to a significant shortage of skilled workers, compelling local governments to compete not only with each other but also with the private sector for talent. To combat this, Mönchengladbach aims to enhance its employer brand, making the city administration a more attractive workplace. This involves creating innovative work environments that appeal to potential employees and improve job satisfaction among current staff. Furthermore, the strategy emphasizes the urgent need for a digital transformation within municipal administration to maintain competitiveness and efficiency

Key initiatives include:

- 1. Strengthening Employer Branding:** The city plans to promote its image as a desirable employer through innovative workplace designs and practices. This is intended to attract and retain skilled personnel, ensuring that the city can continue to meet its diverse municipal responsibilities effectively.
- 2. Collaboration with Educational Institutions:** The strategy highlights the importance of partnerships with local educational institutions to align training programs with market needs. By fostering closer ties with universities and vocational schools, the city aims to ensure that graduates possess the skills required by local employers.
- 3. Utilization of Labor Market Instruments:** The city will work in conjunction with local job centers to develop measures that facilitate the reintegration of long-term unemployed individuals into the workforce. This includes enhancing access to training and employment opportunities, thereby addressing the skills gap.
- 4. Support for Existing Businesses:** The strategy also focuses on supporting local businesses in expanding their training and development programs. By encouraging companies to invest in the continuous education of their workforce, Mönchengladbach aims to mitigate the skills shortage and enhance overall economic productivity.

2) Strategies for Promoting Start-Ups

In addition to addressing the skilled labor shortage, the strategy outlines a comprehensive approach to fostering a vibrant start-up ecosystem in Mönchengladbach. Recognizing the importance of entrepreneurship for economic growth, the city aims to create an environment conducive to innovation and business development.

Key initiatives of this strategy include:

- 1. Development of a Start-Up-Friendly Environment:** The city plans to implement policies that make Mönchengladbach an attractive location for new businesses. This includes simplifying administrative processes, providing access to affordable commercial spaces, and ensuring that necessary infrastructure is in place.
- 2. Collaboration with Educational Institutions:** Similar to the approach taken for skilled labor, the strategy emphasizes the role of local universities in supporting start-ups. Initiatives such as the Wissenscampus project (<https://wicmg.de/>) aim to foster collaboration between academia and industry, providing resources and support for aspiring entrepreneurs.
- 3. Targeting High-Value Industries:** The economic development strategy focuses on attracting high-productivity sectors and industries that can drive innovation. By identifying and promoting future-oriented industries, the city seeks to create quality jobs and enhance its economic base.
- 4. Support for Founders:** Mönchengladbach aims to provide targeted support for start-ups, particularly those founded by graduates from local institutions. This includes mentorship programs, access to funding, and networking opportunities to help new businesses thrive.

In summary, the Overall Municipal Strategy of Mönchengladbach presents a multifaceted approach to tackling the challenges of skilled labor shortages and fostering a robust start-up culture. By enhancing its employer brand, collaborating with educational institutions, and creating a supportive environment for entrepreneurs, the city aims to secure its economic future and improve the quality of life for its residents.

Link: https://www.moenchengladbach.de/fileadmin/user_upload/DEZ_I/I-SC/ge-meinsam/St%C3%A4dtische_Gesamtstrategie_Gesamt_web.pdf

Gründungsfabrik Mönchengladbach

Start-up factory Mönchengladbach

The start-up factory is a project of the Mönchengladbach Economic Development Agency (in German: Wirtschaftsförderung Mönchengladbach) and the Chamber of Industry and Commerce Mittlerer Niederrhein (in German: IHK Mittlerer Niederrhein) and is funded by the Federal Ministry for Economic Affairs and Climate Action and the state government of North Rhine-Westphalia. The aim of the project is to provide founders

and those interested in founding a company in the region with all information they need to make their start-up stories a success.

The services offered by the Gründungsfabrik range from workshops on topics relevant to start-ups, such as social media marketing or design thinking, to individual coaching and an innovation program for small and medium-sized enterprises, SMEs. The start-up factory also supports female founders and founders with children in particular. The Female Makers Community, for example, offers a 6-month mentoring program for aspiring female entrepreneurs. Once a week, children can also be brought along to the Family Space and parents who are also founders can exchange ideas.

Link: <https://gruendungsfabrik.mq/>

UNIVERSITY LEVEL, Hochschule Niederrhein University of Applied Sciences

Hochschulentwicklungsplan: Unser Weg 2022 - 2026

University Development Plan: Our Way 2022 - 2026

The Hochschulentwicklungsplan 2022 – 2026 of Hochschule Niederrhein outlines comprehensive measures to address entrepreneurship, innovation, and the challenge of brain drain.

To foster entrepreneurship and support start-ups, the university has established a Central Start-up Service (HNX), which provides resources, mentorship, and networking opportunities for aspiring entrepreneurs. Networking events connect students with local business leaders, facilitating collaboration and idea exchange.

Furthermore, partnerships with cultural institutions enhance the entrepreneurial landscape by supporting creative start-ups and promoting cultural entrepreneurship. This holistic approach seeks to create a dynamic environment that not only supports business development but also enriches the cultural fabric of the Niederrhein region.

Regarding innovation, the university engages in research and development initiatives that encourage interdisciplinary collaboration and the commercialization of research findings. This approach aims to create a vibrant ecosystem that nurtures innovative ideas and solutions.

To combat brain drain, Hochschule Niederrhein focuses on integrating scientific talent into research and transfer activities, offering career pathways for graduates and promoting cooperative doctoral programs. By fostering a supportive environment for research and entrepreneurship, the university aims to retain talent within the region and encourage graduates to contribute to local economic development.

Link: https://www.hs-niederrhein.de/fileadmin/dateien/Hochschulkommunikation/Publikationen/HEP_22-26.pdf

HNX- Team für Existenzgründung an der Hochschule Niederrhein

HNX - Team for business start-ups at the Hochschule Niederrhein University of Applied Sciences

HNX is the central contact point of the Hochschule Niederrhein when it comes to start-ups and entrepreneurship. HNX aims to shaping the start-up culture both at the university and in the region in a practical and lively way. Likewise, it contributes to recognizing and exploiting the potential for innovative start-up ideas together with its customers, i.e., mostly student of the University.

The services offered by HNX include:

1. Counselling and coaching

Students, lecturers and staff can contact HNX if they have any questions or need support with any issues relating to entrepreneurship and/or founding a business.

2. Funding and finances

HNX supports founders in finding the right funding program for their ideas (e.g. EXIST, EXIST-Women, Gründungsstipendium NRW). They advise on requirements, formalities and the application process of grants.

3. Networking and inspiration

HNX furthermore promotes the entrepreneurial ecosystem at the university and in the region by providing meeting spaces and networking opportunities. Start-ups, people interested in setting up a business, companies and all other people involved in start-up issues can for example take part in the regular start-up round tables. The HNX Coffee Hour also regularly offers students and employees of the university who are interested in founding a company the opportunity to exchange information and network in a relaxed environment.

4. Interesting facts and workshops

HNX offers various information events and workshops on all topics related to start-ups and founding, e.g. start-up knowledge, questions about taxes, F**kUpNights, pitching workshops or Lego® Serious Play® Workshops.

5. StartUpLabs

StartUpLabs have been set up at the campuses in Mönchengladbach and Krefeld-Süd, two out of three campuses of the Hochschule Niederrhein. They can be used by various stakeholders and are intended to create a sense of community.

6. Laboratories

HNX promotes the use of the university's available laboratories, such as the Textile Innovatorium, the DigiLab and the MakerSpace

Link: <https://www.hs-niederrhein.com/students/counseling-for-students/founders-advice/>

NATIONAL LEVEL

"Regional Development Corporate Agreement 2021-2027"

The "Regional Development Corporate Agreement 2021-2027" ("ESPA 2021-2027") is largely reflective of the new priorities of the European Commission and the new development priorities of Greece for the coming years. The Policy objectives of the Regional Development Corporate Agreement 2021-2027 includes *WP1 "A Smarter Europe"* that aims to strengthen innovative entrepreneurship and business innovation by providing incentives for the exploitation of research results and new ideas by existing and start-up businesses} Strategic investment in the tourism ecosystem based on national and complementary regional tourism strategies. Furthermore, the objective of the WP1 is to reinforce productive investments, with a particular emphasis on digital transformation (Industry 4.0) and environmentally friendly processes and products. There is a need to enhance connectivity through the provision of high-speed broadband access. It is essential to facilitate the digital transformation of both the public and private sectors, and to extend digital services to citizens and businesses through the utilization of EU tools and the adoption of optimal practices at each stage of implementation. Furthermore, the initiative within WP1 seeks to align human resources competencies with the tenets of the Smart Specialisation Strategy. It strives to foster business innovation, industrial transition, digital transformation, and a circular economy. It also aims to establish infrastructure and support mechanisms for innovation and entrepreneurship, such as an Innovation Agency. Additionally, it seeks to enhance the average size of Greek enterprises and promote clusters. It also aims to reinforce the research and innovation ecosystem within the Smart Specialization Strategy.

It is also noteworthy that the WP4 "A more social Europe" of the Regional Development Corporate Agreement 2021-2027 has the objective of increasing the employment of human resources and improving employability, facilitating access to the labour market and reducing the mismatch between supply and demand. In order to achieve this, there is an emphasis on the following groups: NEETs aged 15-29, long-term unemployed, unemployed, migrants, beneficiaries of international protection and disabled persons.

https://www.espa.gr/el/Documents/2127/Parousiasi_neou_ESPA_21-27.pdf

"National Strategy for Smart Specialization"

The Smart Specialization Strategy is characterized by the identification of priorities on which to focus investments. This identification is based on an analysis of the strengths and potential of the national or regional economy and the Business Discovery Process (BDP). The BDP is a bottom-up process of identifying and refining priorities, involving the actors of the four strands: business, research centers and universities, the public sector and representatives of

civil society. The Smart Specialization Strategy is an outward-looking approach, takes a broad view of innovation and is supported by effective monitoring mechanisms. The Smart Specialization Strategy for the period 2021-2027 is national with regional specializations, in contrast to the period 2014-2020 when one national and 13 regional strategies were designed and implemented independently. In the period 2021-2027, the national and regional levels of the Smart Specialization Strategy will work together and cooperate to achieve the maximum possible impact.

The vision of the National Smart Specialization Strategy of Greece is the transition to a new development model, socially, economically and environmentally sustainable, based on knowledge and its exploitation through the production of high value-added products and services, with the prospect of integration into international value chains.

The National Smart Specialization Strategy sets the following strategic objectives: Increasing the production of new knowledge, Effective use and dissemination of new knowledge, Technological modernization-adoption of innovations, Development, networking and internationalization of Greek enterprises, Increasing Extroversion-Participation in research, technology and business international value chains. The fields (sectors) of intervention of the National Strategy are the following: Human Resources (Research & Production), Research and Innovation Infrastructures, Mechanisms, Services & Innovation Support Structures, Linking Research and Production, Digital Transformation, Regulatory Framework (Legislation, Administration, Taxation), Promoting innovation from the public sector, Promotion - Publicity. The Priority Areas of the National Smart Specialization Strategy of Greece include the following: Agri-food chain, Life sciences, Health, Medicines, Digital technologies, Sustainable energy, Environment, Circular economy, Transport and supply chain, Materials, construction and industry, Tourism, culture and creative industries.

At the national level, the Council for National Strategy for Smart Specialization is responsible for strategic issues and consists of the Secretary General, a representative of the Union of Greek Regions and three well-known figures from the fields of entrepreneurship, research and new technologies. At the coordination level, the Planning, Coordination and Monitoring Unit of the National Smart Specialization Strategy and the Entrepreneurial Discovery Mechanism (Innovation Platforms with the participation of the Innovation Agency) were established. Finally, at the level of implementation and management of actions, management and implementation bodies for individual actions and projects are established. At regional level and for strategic issues, the regional authority responsible adopts the regional specialization of the Smart Specialization Strategy. It shall be informed of the progress of its implementation and give guidance to the Regional Competent Body. For coordination issues, the Regional Competent Regional Body for the Smart Specialization Strategy shall be designated by the Region and the Regional Research and Innovation Council shall be used. Finally, at the level of implementation and management of actions, the bodies responsible for the management and implementation of individual actions and projects are responsible.

<https://pta.gov.gr/prokiryxeis/approvedris32127/> (in Greek)

At the national level, the main initiative supporting the national entrepreneurial ecosystem is Elevate Greece, the official platform and main repository of comprehensive information on the Greek start-up ecosystem. The Elevate Greece initiative encompasses the following activities: the creation of a database of start-ups in Greece, the monitoring of start-ups' progress through the use of Key Performance Indicators, which should facilitate the implementation of targeted policy interventions when applicable, the establishment of entrepreneurial prizes, and the attraction of entrepreneurial finance, in part through the provision of favourable tax incentives for angel investors investing in the Greek entrepreneurial ecosystem. After the expiration of the JEREMIE (Joint European Resources for Micro to Medium Enterprises) funds investment period (2007-2013), the Greek government collaborated with the European Investment Fund (EIF) in a public private partnership: EquiFund, a fund-of-funds programme through which more than EUR 400 million is expected to be invested in the Greek market, to boost entrepreneurship and creating a lasting impact on local businesses. Funds are provided by the European Union and the Hellenic Republic; the scheme will also be financed by the EIF and the European Investment Bank (EIB), through the European Fund for Strategic Investment (EFSI). EUR 200 million is provided by national funds, EUR 60 million from the EIF and EUR 40 million from the EIB. The remaining amount is to be funded by the private sector. Investments via EquiFund are directed to companies with an establishment or branch in Greece, in the form of equity financing, complemented by the investors' support for access to knowledge, connections in the local start-up ecosystem and guidance on how to make the most of the teams' and founders' potential. EquiFund investments are scaled along three separate windows, each involving a different set of funds, directing their investments at specific areas of the market: the innovation window, funding pre-seed and seed stages through four funds, for an aggregated target size of EUR 133 million; the early-stage window, funding seed and series A stages through two funds for an aggregated target size of EUR 82 million; and the growth stage window, funding scale-up and expansion through three funds for an aggregated amount of EUR 210 million.

<https://elevategreece.gov.gr/>

'Competitiveness 2021-2027' Programme

The "Competitiveness 2021-2027" Programme is an integrated intervention in the productive, competitive, and outward-looking sectors of the economy in their transition to a development model guided by the Knowledge Economy, reflecting to a great extent the Country's development priorities and in line with the Commission's new priorities. The Programme is the implementation tool of the National Smart Specialisation Strategy (NSSS), which links research and innovation with entrepreneurship and the strengthening of national and regional advantages. It is also in line with European Union policies for the digital and green transformation of the Greek economy. Integrated support initiatives will be designed to cover the entire range of enterprises' needs in terms of information, strengthening partnerships, developing new business models and finding technological, human and investment resources. In the long term, the Programme's goal is to increase the size of Greek enterprises and bolster their international orientation, making them a key driver of growth for the Greek economy. The "Competitiveness 2021-2027" Programme's strategy is complementary to the interventions of REACT-EU, which finances short-term measures in the labour market, health

and SME support with liquidity and solvency support, investments in green and digital transition, and the RRF, which finances reforms and long-term investments for the productivity and resilience of the economy. The “Competitiveness 2021-2027” Programme sets priorities for strengthening the productive potential of the economy and the relevant human skills. With a strong growth footprint through actions and projects with high added value and multiplying benefits for both society and the economy, the projects/actions of the “Competitiveness 2021-2027” Programme are expected to contribute substantially to remedying the structural deficiencies of the Greek economy. The “Competitiveness 2021-2027” Programme’s strategy is organized on four key investment axes within the framework of the respective Funds:

<https://21-27.antonistikotita.gr/en/programme-competitiveness/>

The “Digital Transformation” Programme

The “Digital Transformation” Programme contributes to the vision for Digital Greece and the promotion of the country’s economic transformation, emphasizing the utilization and integration of cutting-edge technologies, and fulfilling the strategic choice to strengthen digital competences and skills. The Programme’s principal objective is to facilitate the provision of cutting-edge digital public services and applications to citizens and businesses. This is being pursued with a view to effecting the digital transformation of public administration and local authorities, while ensuring the protection of privacy and data, and guaranteeing accessibility for all, in accordance with the principles of universal design. Furthermore, the objective is to guarantee the interoperability of digital systems and services, thereby reinforcing the Unified Digital Portal of the Government (gov.gr) and developing digital platforms to facilitate business operations. Additionally, the Programme entails the creation of highly reliable and environmentally conscious data centres and cloud infrastructures, along with an expansion of wireless access points and the completion of the Public Sector Network. Furthermore, the objective is to guarantee ultra-high-speed connectivity through the implementation of fibre optic networks and to reinforce the National Digital Skills Academy and the National Coalition for Digital Skills and Employment. This will be achieved by meeting the national requirements for digital skills of public sector executives, the general population, and public and private sector employees with medium to high digital maturity. These individuals will be able to utilise and manage innovative digital technologies and cybersecurity. The reference point for the implementation of the Programme is the Bible of Digital Transformation 2020-2025, which includes, among other things, the guiding principles, the governance and implementation model, and the strategic axes of the digital transformation, which are organized into three (3) Priorities in the Programme, for the implementation of related interventions: Connectivity, Digital competences and skills, Digital transformation of businesses, Digital public services, Digital innovation, Integration of cutting-edge technologies.

<https://www.digitaltransform.gr/en/the-digital-tranformation-programme/programme-details/>

REGIONAL LEVEL

Smart Specialisation in the Region of Attica

In 2015, the Regional Strategy for Smart Specialisation (RSS) for the period 2014-2020 was approved by the Regional Council of Attica, aiming to strengthen innovative activity in three fields of specialisation, the Creative Economy, the Blue Economy and the Sustainable Economy of Needs, which are still today privileged and with significant windows of growth in research and technology. For each of these areas, further prioritization was done that involved the sectors: Culture, Tourism and Media in the Creative Economy, Shipbuilding, Materials-Soil Engineering, Aquatic Biotechnology and Intelligent/Sustainable Fisheries in the Blue Economy, Pharma/Health, Energy, New Materials and Smart Cities in the Sustainable Economy. In addition, a number of areas have been selected whose subject matter can be exploited (horizontally) across the fields: environmental technology, nutrition, space technologies, micro/nano electronics and multimedia and games applications/technologies. The aim of the strategy for Smart Specialization of Attica was to transform these sectors into actions funded by the EU Structural and Investment Funds, which would support technological and practice-based innovation and stimulate private sector investment in the region. Therefore, all of the actions foreseen were included in Priority Axes (Axis 1, 2, 3 and 8) of the Attica regional operational programme 2014-2020. As regards the new programming period 2021-2027, a National Smart Specialization Strategy with regional extensions has been prepared by the General Secretariat for Innovation Research, which was designed at national level taking into account the regional specialisations as proposed by the country's regions. The analysis carried out in the design of the new RDI has led to the identification of eight priority areas in which the country has advantages and in which the transition to a new development model could be based. These areas are as follows: Agri-food chain, Life sciences, Health, Medicines, Digital Technologies, Sustainable Energy, Environment and Circular Economy, Transport & Transportation Supply Chain, Materials, Construction & Industry, Tourism, Culture and Creative Industries

The Strategy now has two interlinked and mutually supportive dimensions, national and regional, and will allow funding from national programmes to regional projects. The aim is to meet the needs and exploit the potential of each region in the most effective way. As far as the Region is concerned, Attica continues to show growth potential in the three areas of specialisation of the previous period, qualifying as priority sectors for the period 2021-2027: the Pharmaceutical, Health & Aquatic Biotechnology Sector, Energy (renewable energy, energy saving, Smart Grips), Sustainable Shipping, the Specialised Foods, Integrated Tourism Destination Management, the specialisation of the Blue Economy, Tourism, Culture in the Blue Economy, Digital Thematic Tourism, Intelligent and Sustainable Transport, Digital Technologies (Smart Cities, Space Technologies, Micro-nano electronics, Design Intensity), Smart Transport, the shipbuilding industry, the New Materials – Construction, High Capacity Digital Infrastructures, Artificial Intelligence in the Blue Economy, the Dual Digital and Green Transformation, The above areas may be modified and further refined through the Business Discovery Process. Actions such as strengthening the mechanisms and investments of SMEs in research and innovation to boost their extroversion and competitiveness, development and dissemination of innovative products and services using ICT, skills development and adaptability of regional human resources, in the above mentioned areas, will contribute to the achievement of the objectives of the SEE. The ultimate goal is to make Attica a leading metropolitan centre for research, production and innovation export in the wider Eastern Mediterranean region, through the exploitation of scientific and technical human capital while improving working and business conditions and the environment.

<https://ris.innovationattica.gr/el/exypni-exeidikeysi-stin-perifereia-attikis> (in Greek)

The Regional Programme “Attica” 2021-2027

The Regional Programme of the Region of Attica for the Programming Period (P.P.) 2021-2027 was designed as an integrated intervention, taking into account the Development Plan for the Greek Economy 2020, the planning of the NSRF 2021-2027 for the country, the study for the Regional Policy of Greece prepared by the OECD, the National and Regional Strategies in the reference areas of the Operational Programme, the relevant National and European Programming/Regulatory texts, etc.

Under Policy Objective 1 (“*A more competitive and smarter Europe by promoting innovative and smart economic transformation and regional digital interconnectivity*”) Attica is a trans-regional hub of traditional and new research and innovation infrastructure. A significant number of higher education institutions and research centres are located in the region, 79% of the supervised research and technological institutions under the supervision of the General Secretariat for Research and Innovation and 78% of other public research institutions. The Region of Attica produces the highest value in Research and Innovation, approaching 75% of the EU average, while it is also first in the Regional Competitiveness Index (RCI) with 44.97/180 compared to the rest of the regions in the country. In addition, it shows R&D expenditure in the business sector, amounting to 0.89% of GDP with an average of 0.55% at regional level (1st place at national level). In this context, the strategic choice of the Attica Programme 2021-2027 is to strengthen the research and innovation ecosystem, by further linking research and productive activities, with emphasis on emerging technologies and smart specialization sectors in Attica, as well as by strengthening the intermediate structures to support innovation. The strategic choice of the Attica Programme 2021-2027 is to promote digital transformation in the operation of the public and private sector to improve the daily lives of citizens, with an emphasis on the adaptation of businesses. The strategic choice of the Attica Programme 2021-2027 is to strengthen the competitiveness, resilience and extroversion of businesses in the areas of smart specialization, to adapt to the modern environment and the green economy, to mitigate the impact of the COVID-19 pandemic and for the transition to the post-pandemic era. The strategic choice of the Attica Programme 2021-2027 is therefore to meet the skills needs of human resources, through education and training, to link with the needs of industrial transition and regional smart specialization sectors.

https://patt.espa2127.gr/sites/default/files/2021-10/attiki-2021-2027_executive-summary.pdf

MUNICIPALITY LEVEL

Athens 2021- 2030 Vision and Strategy for the next Decade 2021- 2030

Priority Axis 2 of “Athens 2021-2040 Vision and Strategy for the next year Decade 2021-2030, embodies and specifies the vision of the Municipality of Athens to become, in the coming

years, one of the most outward-looking and competitive capitals in Europe and the wider Eastern Mediterranean region. A metropolis that is truly open and cosmopolitan, attractive to those who wish to work, invest, do business and live. A parallel priority is to consolidate the link between entrepreneurship and production with modern knowledge, technology and innovation, with the aim of upgrading products and services, increasing competitiveness and extroversion, and creating new jobs and opportunities. At the same time, the rapid spread of information and communication technologies (ICT) and the ever-increasing national and international trend towards digital transformation are creating a need for adaptation on the part of the public sector (and at local - municipal level) as well as the private sector.

The Municipality of Athens is in a privileged position to strengthen the link between entrepreneurship and research and innovation, given that within its geographical boundaries there are four of the country's largest academic institutions, major research institutions and a significant part of the entrepreneurial ecosystem of Attica. Using modern tools and instruments, such as networks and clusters, and within the framework of the Regional Strategy for Smart Specialization (RIS3), the Prefecture of Athens will launch important initiatives in this field in the coming period, aiming at a greater penetration of knowledge, research and innovation in productive activities and the integration of innovation in products, services, processes and value chains. In the same vein, the Municipality of Athens is planning measures to increase the competitiveness, extroversion and resilience of businesses operating there, with particular emphasis on critical and dynamic sectors of the local economy, but also of the wider Attica economy, including the creative economy, tourism, culture, specialized services and technological and computer applications.

In addition, the Municipality of Athens is promoting a comprehensive strategy for the digital transformation of its organization and operations, as well as the services provided to citizens and businesses. Indicatively, the expansion of services currently delivered remotely and through digital channels, as well as the digitalization of additional service delivery/service processes, is being initiated. Special attention will be paid to creating an environment of optimal and efficient service through digital means for vulnerable social groups. At the same time, the Municipality of Athens is pursuing measures that use the most advanced technologies to improve everyday life in the city, such as the use of smart systems for large-scale data collection and analysis (e.g. atmospheric data, traffic congestion data, energy consumption of buildings and infrastructure, etc.), the use of modern technologies to enhance the resilience of the urban ecosystem, and the use of technological tools and instruments to promote the historical, cultural and natural heritage of the city. Moreover, in order to support the process of technological and digital transformation of enterprises and productive activities, the Municipality of Athens is promoting a series of actions for the integration of ICT technologies in the processes of production, management and distribution of products and services, as well as for strengthening the technological readiness of enterprises and their digital skills.

Finally, the adaptation of both the private and public sectors to the challenges of the Fourth Industrial Revolution and digital transformation must be combined with measures to develop and certify the digital skills of human resources, on the one hand to increase the capacity to support the needs of businesses and consumer-citizens, and on the other to improve the skills and employability of workers. The development of modern and efficient digital services, combined with initiatives planned at central level to strengthen and expand broadband and new generation networks, can make Athens a city that attracts digital nomads, who can settle in Athens and work or provide services remotely, while enjoying the benefits that the city offers.

The set of priorities and categories of interventions included in A.P.2 support the vision for the evolution of Athens into a city open to international trends and developments, and welcoming to those who want to invest, work and do business, and of course to live in the city. Through the parallel promotion of productive and digital transformation, the coupling of production and entrepreneurship with knowledge, research and innovation, and the digital transformation of public administration, an overall upgrading of the city's economic and social environment and the daily life of citizens and visitors is planned. The set of priorities and categories of interventions included in A.P.2 support the vision for the evolution of Athens into a city open to international trends and developments, and welcoming to those who want to invest, work and do business, and of course to live in the city.

https://patt.espa2127.gr/sites/default/files/field/file/article/2021-10/%CE%94%CE%97%CE%9C%CE%9F%CE%A3%20%CE%91%CE%98%CE%97%CE%9D%CE%91%CE%99%CE%A9%CE%9D_%CE%A3%CE%A5%CE%9D%CE%97%CE%9C%CE%9C%CE%95%CE%9D%CE%9F_2021-2030.pdf

Special Programme of the Municipality of Athens 2020-2025

The aim of the project is to significantly reverse the continuous deterioration of the city over the last decade due to the economic crisis and the accumulation of long-standing environmental, social and cultural challenges and problems. Reversing this climate will lead to the effective regeneration of the country's capital by improving the urban environment, stimulating economic activity and tackling social problems and discrimination. The main objectives of the programme are to improve the economic climate through the implementation of targeted measures to support local entrepreneurship and the economy, to implement anti-discrimination and social cohesion policies, and to design and maintain the urban environment of the city in order to enhance its image and improve living conditions in the city. The development objectives and priorities of the Programme are as follows: Development Objective Priority Axis 1. Smart Growth 1.6 Public Administration and Digitalization 1.10 Smart Cities 2. Green growth 2.4 Energy efficiency 2.4 Risk prevention and management 2.11 Green cities 4. Infrastructure Development 4.5 Road Infrastructure 5. Extroversion 5.8 Supporting enterprises to increase their outward-looking activities in national and international markets 6. Programme support 6.1 Administrative support 6.2 Technical assistance. The overall duration of the Programme is 2020-2025 and the Programme budget is € 80.000.000.

<https://www.nomotelia.gr/photos/File/737b-23.pdf> (in Greek)

UNIVERSITY LEVEL

The Entrepreneurship and Innovation Structure of Panteion University of Social and Political Sciences «CREATIVE+»

The Entrepreneurship & Innovation Structure of Panteion University of Social and Political Sciences «CREATIVE+» is a new structure that is being developed in the academic area of Panteion University. Its aim is to support innovation, entrepreneurship and business maturation, transfer of know-how by utilizing the research activity produced by the academic - research community of the university. Empirical training and entrepreneurial innovation education processes and pre-incubation and networking activities with the start-up entrepreneurship ecosystem and the entrepreneurial community in Greece and abroad are the main activities of the structure. In particular, CREATIVE+ actions include the following: Creative+ Competitions: Research-enterprise innovation competitions in collaboration with Panteion's research laboratories-centres and entrepreneurship and innovation institutions in Greece. Creative+ Pre-incubator: pre-incubation program to support/market the business ideas/ products/ services of the Panteion University teams that will excel in the research-business innovation competition. Creative+ Mentors: includes experienced executives from the market and business community, entrepreneurship ecosystem, investment institutions and researchers/ academic members of Panteion University, in a collaborative and co-creation scheme, who will train, mentor in relation to the development and business validation (validation, prototyping testing) of the business ideas of the Panteion University teams. Creative+ Partnerships: leveraging the networking of the existing research centres and laboratories of Panteion University with the entrepreneurship-innovation ecosystem. Expansion of networking and synergies-collaborations in Greece and abroad. Demo Days. Makers Spaces - Simulation Labs. Technology Exchange Trips Greece – Abroad. Creative+ Joint: Interdisciplinary/interdisciplinary innovation/entrepreneurship projects, feedback from the actions/experiences/results of the "fast track" structure. Creative+ Innovate: innovating in curricula - new courses-workshops on entrepreneurship, innovation, creativity, "Curriculum Innovation" competition. Creative+ Experience: innovative experiential learning activities in local communities with positive social-environmental impact. Innovation Sustainability Social Impact. Co-Creation and Design Thinking Workshops. Production of Educational Materials.

<https://creativeplus.panteion.gr/>

Strategic Planning - Panteion University of Social and Political Sciences, 2020

(Extract from the University's Strategy paper)

Our vision is a modern public university which will play a primary role in Greek society through the treatment of social and political sciences. We seek the restructuring and reengineering of its actions and processes through development, internationalization with extroversion as a key tool, the qualitative improvement of human resources and actions and the strengthening of research, while at the same time we are preparing a new strategic architecture that will give Panteion University its rightful place in the academic community and will highlight its potential. The main strategic objective is to upgrade the image of Panteion University at national and international level.....

The main strategic development objectives of Panteion University include the following:

1. Upgrading Teaching at Undergraduate and Postgraduate Level
2. Upgrading Research

3. Scientific Impact - Strengthening the relative position of Panteion University in national and international rankings
4. Developmental and Social Impact
5. Governance with staffing in human resources in all areas (Dept. of Education - D.I.Y.)
6. Upgrading Infrastructure and Equipment
7. Development of scientific and interdisciplinary cooperation
8. Timely "design and implementation" of the Statute, Rules of Procedure
9. Operation of all mechanisms that ensure the control and Quality Assurance of the overall work of the institution

1. Upgrading Teaching at Undergraduate and Postgraduate Level

- Strengthening existing programmes and enhancing their attractiveness
- Rationalisation and coordination of course content
- Promotion of the University and its Departments in Secondary Education - Upgrading their image
- Investigation of possibilities for the integration of New Programmes and, based on the decisions of the Senate, the creation of New Departments
- Enhancing the quality of teaching - Emphasis on the evaluation of lecturers by students and the
- use of evaluation - Rational design of evaluation questionnaires according to the qualitative terms -
- Enhancing the teaching of digital and quantitative tools - Upgrading of laboratories
- Emphasis on improving students' critical thinking, their ability to work in groups and their oral and written expression
- Inclusion in the teaching of Doctoral Candidates and Doctoral Candidates (assignments - tutorials - contact with students) with the provision of a scholarship
- Strengthening and streamlining the institution of HQI, HQE, etc.
- Immediate completion of the Regulations for Undergraduate and Postgraduate Studies of the University's Departments
- Use of tools that enhance student engagement in courses (electronic tests, mid-term exams or reports, coursework presented in class)
- Announcement of the answers to the examination questions or the solutions to the exercises, immediately after the examination of the course
- Rationalisation of teaching hours and use of classrooms and laboratories
- Upgrading of the Library

2. Upgrading Research

- Strengthening the Research Work of the Departments
- Publication of Research Projects Bulletin on an annual basis
- Substantial Inclusion of Doctoral Candidates in the Research Project with remuneration
- Completion and modernisation of the Regulation on Postgraduate, Doctoral and Postdoctoral Studies and Research
- Linking Research and Teaching. Promotion of interdepartmental and interdisciplinary research collaborations and parallel support with recognized research centres (KEPE-EKKE, etc.)

- Publication of at least one publication in an international scientific journal and participation in at least one international scientific conference in collaboration with the supervising professor, as prerequisites for the award of the Doctoral Degree
- Enhancement of publications of research results in international scientific journals of high prestige (Impact factor, Scimago ranking, Scopus ranking, etc.)
- Publication of the research results to institutions, local government and society, through press releases, brochures, presentation in the media, participation in local development conferences, etc.
- Substantial consideration of the quality and impact of research work in the development of faculty members
- Administrative support for researchers and the research project

3. Scientific Influence - Strengthening the relevant position of Panteion University in national and international rankings

- Upgrading of Panteion University in the ranking of Greek and foreign universities
- Increase in the number of publications of faculty members in international scientific journals of high impact (Impact factor, Scimago ranking, Scopus ranking, etc.)
- Establishment of compulsory publication of articles by PhDs in collaboration with their supervisors in high impact journals
- Elections or recalls of faculty members only when they meet the above conditions
- Strengthening of international partnerships and networks of Panteion University
- Agreements for joint Doctoral Degrees with foreign universities
- Increase in participation in European Research Programmes
- Promotion of the Scientific Fields in which Panteion University has a Tradition and Comparative Advantages
- Increasing the number of graduates accepted for postgraduate and doctoral studies in foreign universities - Establishment of a yearbook
- Publication of cases of important scientific careers in Greece and abroad of Panteion University graduates.

4. Developmental and Social Impact

- Strengthening Cooperation with Local and Regional Authorities, Ministries, Chambers of Commerce, Social Bodies, Associations, etc. as already observed with the creation of the Syngrou network since January 2018 on the initiative of Panteion University (<https://syngrounetwork.panteion.gr/index.php/about-us>)
- Integration of Panteion University into the urban fabric and its functions
- Interventions through MMEs on issues of public concern related to development, economy, administration, society, international relations, etc.
- Popularized presentation of the research work of Panteion University, for the dissemination of accumulated knowledge and for the enhancement of the University's image in society and among prospective students
- Strengthening the image of Panteion University as a Centre for Social Sciences
- Participation in local development-thematic-cultural workshops and conferences
- Activation of Undergraduate and Postgraduate Students in the social and developmental interventions of the University
- Participation in Local Networks and Working Groups

- Support of the Graduate Associations of the University Departments
- Development and expansion of the operation of KEDIVIM. New distance learning programmes

5. Governance - Efficiency of the Administration

- Developing trust between Management Bodies, Departments and Services
- Upgrading and Utilisation of Human Resources - Improving Training Skills. Attracting staff with digital skills
- Strengthening Peak Services: Computerization, Technical Services, Legal Services, Financial Services, Administrative Services
- Strengthening - Staffing of the Special Account for Research Funds (SRA) of the University
- Effective use of existing resources. Seeking new resources through Research Programmes, participation in NSRF programmes, etc.
- Immediate enactment and publication of both the University's Statute and the by-laws
- Full and timely absorption of both the state grant and the PDE
- Study for better management of the given financial resources , increase in expenditure for the needs of the library, and for the development of digital infrastructure

6. Development - Upgrading of Infrastructure and Equipment

- Utilization of the "Hestia" building on Kallirois Street
- Purchase or rent of new operational and economic space for increased educational and administrative functions
- Upgrading of existing building infrastructure with emphasis on public spaces
- Upgrading access conditions for people with disabilities

7. Development of scientific and interdisciplinary cooperation

- Encourage collaborations within the Departments within the Laboratories and Centres
- Encouraging collaborations (e.g. common courses) within the Schools in order to ensure cohesion between the constituent Departments
- Creation of interdepartmental postgraduate programmes of study based on the specific fields of investigation in which Panteion University has an advantage in terms of the concentration of faculty members
- Creation of inter-institutional postgraduate programmes with universities in Greece or abroad
- The presence of foreign-language programmes of study is imperative but complementary so as not to distort the cultural importance of maintaining the dominance of the Greek language at different levels of higher education.

8 Operation of all mechanisms that ensure the control and Quality Assurance of the overall work of the institution

- Upgrading of evaluation procedures for the achievement of the objectives of the Departments
- and the University itself

- Upgrading the information system of the Panteion MO.DI.P.
- Development and integration of the Foundation's Internal Quality Assurance System
- Substantial operation as a Department of the Organizational Chart of the Panteion of the MO.DI.P and its staffing
- Upgrading the cooperation between OMEA and MO.DI.P.

https://drive.google.com/file/d/1ZQ-RnG-x2eL8oku37Gwbc_SCgOeMAieB/view (in Greek)

Policies in Latvia, Ventspils University of Applied Sciences

The strategic development of VUAS is planned in accordance with the regulations and directions for the development of higher education, defined in the policy planning documents. VUAS development planning also takes into account the important findings of international research on changes in higher education and its management. The development of the strategy and the development of VUAS are planned in accordance with the obligatory requirements:

Law on Education, Law on Universities (including planned amendments), Law on Scientific Activity, Conceptual report "On the change of the internal governance model of universities (2020), Cabinet of Ministers (MC) regulation No 994: "Procedures for Financing Institutions of Higher Education and Colleges from the Funds of the State Budget", MC regulation No 333: "New model of higher education financing in Latvia", MC regulation No 320: The Procedure for Granting the Rights of an Expert of the Latvian Council of Science."

The development of the VUAS Strategy is based on the regulatory framework that regulates the activity of the VUAS (Law on the Constitution of Ventspils University of Applied Sciences, VUAS Senate Regulations) and takes into account the development documents of the VUAS - the VUAS Strategy 2020, the VUAS Business Plan, the development and consolidation plan of the VUAS Study Programs 2019-2023 and VUAS Research program for 2015-2020.

1. Policy planning documents

The development of the strategy took into account the EU development planning documents, national, regional and local, including the goals and initiatives of higher education, research and development (see Table number 2). 2020 marks a turning point in policy planning periods, so the analysis looks at current policy planning documents and those that are in the process of being developed or agreed upon.

Table number 1: Impact of policy planning documents on VUAS.

Document	The target of the document	Impact on the development of VUAS
1.	2.	3.
INTERNATIONAL POLICY PLANNING DOCUMENTS		
UN resolution: The 2030 Agenda for Sustainable Development	<i>Resolution of sustainable development targets for integration into the national development plans of the UN member states.</i>	The target of sustainable development: "Ensure inclusive, fair and high-quality education and promote lifelong learning opportunities for all" provides equal access to high-quality higher education regardless of gender, age and social status. Higher education should provide both young people and adults with skills suitable for work and entrepreneurship and should provide an understanding of sustainable development.
Europe 2020: A Strategy for Smart, Sustainable	<i>The European Commission's long-term political strategy, which includes a reform agenda</i>	<ul style="list-style-type: none"> The proposed major initiatives point to the need to improve access to higher education, the quality and performance of higher education institutions.

and Inclusive Growth	<i>for growth and job creation.</i>	
Towards a sustainable Europe by 2030	<i>An overview of the progress of the EU in the implementation of the sustainable development goals and current affairs for the next planning period.</i>	<ul style="list-style-type: none"> • Development targets and activities of educational institutions must be linked to sustainability development targets, which include both the use of "green" resources and the acquisition of digital competencies.
The European Skills Agenda	<i>EU program for joint work with Member States to improve skills, incl. qualification raising and retraining opportunities.</i>	<ul style="list-style-type: none"> • HEI must provide students with the competencies that are in demand in the future and in the labor market, among which digital skills and an understanding of sustainability stand out in the first place. • The framework for higher education cooperation should be improved to achieve meaningful and effective cooperation at the international level between institutions and external partners, incl. industry. • Implement lifelong learning.
Digital Europe Programme	<i>EU program to support the digital transformation of European society and economy.</i>	<ul style="list-style-type: none"> • Digital transformation requires the full use of digital skills, so higher education institutions should be involved in the development of digital skills in students, entrepreneurs and the labour power. • The program provides for the strengthening of the network of digital innovation centers through which access to modern technologies will be provided.
The Digital Education Action Plan (2021-2027) Resetting education and training for the digital age	<i>Action plan of the European Commission aimed at fostering the development of a high-performance digital education ecosystem and improving digital skills and competences for the implementation of the digital transformation.</i>	<ul style="list-style-type: none"> • Basic digital skills should become part of the cross-cutting core skills that help everyone develop personally; participate in public life as an active citizen. • Quality educational content is essential to enhance the relevance, quality and inclusiveness of European education and learning at all levels. Greater efforts are needed in the area of digital educational content, tools and platforms. • A changing society and securing the transition to a green and digital economy require strong digital skills. • The Covid-19 pandemic is having a major impact on education and training systems. • In a particularly challenging environment, it has accelerated digital transformation and brought about rapid, large-scale change.
NATIONAL LEVEL POLICY PLANNING DOCUMENTS		
The National Reform		<ul style="list-style-type: none"> • The set of measures that need to be implemented in the field of higher education includes ensuring

Program of Latvia for the implementation of EU 2020 Strategy	<i>Action plan at the national level to achieve the goals of the Europe 2020 strategy.</i>	the availability of education, modernizing the material and technical base and increasing the efficiency of resource use, improving the quality of education and scientific activities.
Sustainable Development Strategy of Latvia until 2030	<i>At the state level, the highest development planning document in the hierarchy, defining a long-term vision for the development of Latvia; the main planning document, which sets out an integrated perspective for the balanced and sustainable development of the national territory.</i>	<ul style="list-style-type: none"> • It is necessary to change the paradigm in education - a transition to an efficient and flexible system of higher education, in which the educational institution is aware of its responsibility in providing quality education that meets the requirements of the labor market, and in the development of the national economy. • HEI should create a systematic basis for cooperation with external partners, ensuring that education meets the needs of the labor market. • Universities must purposefully increase the proportion of international students among their students. • Professional programs should also provide knowledge about professions related to the chosen specialty. • Universities can use this opportunity to develop adult learning as a sustainable and essential activity in society, especially by facilitating the ability of young people to see the need for lifelong learning. • In order to preserve the Latvian language and use the potential of linguistic diversity, it is necessary to support the development and translatability of the modern universal Latvian language as the basis for the universal use of digital technologies. • VUAS plays an important role in the economic growth of Ventspils as a development center of national importance, in the creation of knowledge, in the development of innovation, high value-added industry and mechanical engineering (especially in the field of electronics, information and communication technologies).
National Development	<i>National Development Plan - is Latvia's main medium-</i>	<ul style="list-style-type: none"> • The necessary changes in higher education are: improving the quality of education, modernizing and digitalizing the learning environment, implementing the principle of science integration, internationalization, developing international and interdisciplinary cooperation, improving management, and introducing a quality monitoring system. • Universities should strengthen the implantation of new technologies and develop digital skills

<p>Plan of Latvia for 2021-2027</p>	<p><i>term development planning document.</i></p>	<p>and STEM competencies, qualified digital specialists in the educational process.</p> <ul style="list-style-type: none"> • At the national level, it is necessary to support research institutions and transfer knowledge to the national economy, especially in the field of technology. • Technology and digitalization open up opportunities for developing new forms of employment, attracting and retaining qualified graduates in the labor market.
<p>Latvia's Education Development Guidelines 2021-2027 “Future skills for future society” (project)¹⁸</p>	<p><i>Medium-term policy planning document for the education branch.</i></p>	<ul style="list-style-type: none"> • The offer of higher education must be modern, of high quality, research-based and student-centered. In professional higher education, this includes the implementation of a modular approach. • Significant changes in higher education are associated with an increase in the quality of the academic staff, which is associated with the introduction of a new doctoral model, the improvement of the academic career system and support for the professional development of academic staff. • The quality of higher education is promoted by cooperation with industry, social partners and other educational institutions throughout Latvia and the Baltic States, as well as around the world. • HEIs should realize out digital and knowledge transformation. • The development of the infrastructure of the HEI, first of all, should be associated with the provision of technologies. • Changing the internal model of education management will include support for strategic planning and development of managerial competencies. • HEIs need to develop the educational offer for adults.
<p>The Science, Technology Development and Innovation</p>	<p><i>A medium-term policy planning document that defines science and technology development policy.</i></p>	<ul style="list-style-type: none"> • The basis for the successful development of science, research and higher education is curiosity and scientific excellence. • At the national level, it is necessary to create a strategy and legal framework for the development of an internationally competitive, open and sustainable academic career system, as well as a higher education and research infrastructure for excellence and innovation. • International mobility and cooperation in higher education, research and science should be strengthened.

<p>Guidelines 2021-2027</p>		<ul style="list-style-type: none"> • Changing the model of internal management of higher education institutions should be carried out in accordance with international progressive practices. • The transfer of knowledge should be promoted. • Demonstrate to society the added social and economic value created by and as a result of research.
<p>National Industrial Policy Guidelines 2021-2027</p>	<p><i>Medium-term policy planning document, the sub-goal of which is to increase the amount of spending on research and development to 300 million euros in 2023, reaching 600 million euros per year in 2027</i></p>	<ul style="list-style-type: none"> • Promote private and public sector investment in research, development and innovation, support basic and applied research, support knowledge and technology transfer. • Promote the influx of new specialists and doctoral students into the industry by establishing close cooperation between educational institutions and industry representatives. • The initiated reforms in the education system should be continued, with special attention to the revival of the system of lifelong learning. • Organization of effective, modern and high-quality general education, increasing the number of students in STEM areas, promoting closer involvement of company representatives in the learning process at higher educational institutions • By increasing the digitization skills of both students and the labour power (continuation of university ICT programs, training of highly qualified IT specialists), as well as by integrating digitization in all educational programs (especially in higher education), industry 4.0 and modern skills are: transferred, stimulating changes in the attitude of society and employers.
<p>Smart specialisation strategy</p>	<p><i>National research and innovation strategy for the transformation of the national economy, unlocking the potential for knowledge-based development.</i></p>	<ul style="list-style-type: none"> • Higher education institutions, research and scientific institutions should promote knowledge, networking and innovation in areas of smart specialization, incl. ICT, technology and engineering systems.
		<ul style="list-style-type: none"> • Basic competence of the 21st century is digital competence; Universities must achieve Level 5 of the Digital Economy and Society Index (DESI) “Impact and Profit”.

<p>Digital transformation guidelines 2021-2027 for the year (for the year)</p>	<p><i>A medium-term document that plans digital transformation measures in Latvia.</i></p>	<ul style="list-style-type: none"> • Digital literacy as a cross-cutting skill should be included in all areas of education. • As part of the digital transformation, it is necessary to change the role of higher education institutions, making them centers of Digital innovation. • The offer of universities must meet the needs of the labor market. • In order to facilitate this, the offer of higher education and the knowledge of university lecturers must be improved, closer cooperation with employers must be developed, and education quality monitoring must be implemented. • Digitalization of educational processes - both study and management.
<p>Cohesion policy 2021-2027</p>	<p><i>A medium-term policy planning document that defines Latvia's regional policy.</i></p>	<ul style="list-style-type: none"> • By 2023, regional innovation and knowledge platforms will be established, which will also involve higher education and research institutions.

<p>Conceptual report "On changing the internal management model of universities"</p>	<p><i>Development planning document for developing a competitive higher education and science system.</i></p>	<ul style="list-style-type: none"> • Decisions on qualitative changes in the higher education system include three main areas: management, funding and human resources.
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REGIONAL LEVEL POLICY PLANNING DOCUMENTS

<p>Development Strategy of Kurzeme Planning Region. 2015-2030.</p>	<p><i>The long-term development strategy of the region, which defines the basic directions for planning coordination in the region and guidelines for municipal development planning.</i></p>	<ul style="list-style-type: none"> • The presence of higher educational institutions and scientific institutions is associated with the development potential of the region. • Ventspils and VUAS are one of the two education and science service centers in the region.
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VENTSPILS DEVELOPMENT PLANNING DOCUMENTS

<p>Sustainable development strategy of the city of Ventspils until 2030</p>	<p><i>Long-term development planning document of Ventspils city municipality, which defines the city's long-term development vision, goals and priorities.</i></p>	<ul style="list-style-type: none"> • VUAS is a development center of international and national importance, providing the labor market of Ventspils and the region with highly demanded qualified specialists and applied scientific services.
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<p>Ventspils' development programme for 2021–2027</p>	<p><i>Medium-term planning document for the development of the Ventspils municipality, which defines the priorities of the municipality and sets out the directions of action and tasks for their implementation.</i></p>	<ul style="list-style-type: none"> • Direction of action "Professional, higher and continuing education, science and research corresponding to market demand" development" tasks: P-1-4: To promote the development of VUAS as an internationally recognized center of higher education and science at the Baltic Sea level and P-1-4: Development of the offer and quality of adult education.. • VUAS plays an important role in achieving the stated overarching target "Ventspils is a European level smart technology center". The development of VUAS is associated with an increase in the number of students and academic staff, especially in the ICT branch, as well as the transfer of knowledge in the national economy.
<p>Ventspils ICT industry development strategy and action plan for 2014-2020</p>	<p><i>Ventspils city municipality's medium-term planning document for promoting the development of the ICT branch.</i></p>	

Policies in Poland – entrepreneurship

NATIONAL LEVEL

1. Strategy for responsible development (Strategia na rzecz odpowiedzialnego rozwoju, SOR)

The document is Poland's comprehensive plan to achieve sustainable socio-economic growth by 2030. It addresses the nation's need for a resilient, innovation-driven economy, aiming to enhance the quality of life for citizens, reduce socio-economic inequalities, and improve regional balance. The strategy promotes entrepreneurship, particularly among small and medium-sized enterprises (SMEs) and young people, while focusing on digitalization, education reform, and workforce development to boost productivity and competitiveness. Key areas include reindustrialization, regional development, and enhancing Poland's role in international markets. The document outlines targeted support for sectors like advanced technology, energy, and infrastructure, underpinned by an active role of the state in fostering growth, regulatory improvements, and strategic investments.

SOR does contain provisions for instruments that support the development of entrepreneurship among young people. These include educational programs to foster entrepreneurial attitudes, vocational training adapted to current market demands, and simplified access to financial resources for young entrepreneurs. Additionally, the strategy encourages partnerships between educational institutions and businesses to help young people acquire practical, industry-relevant skills, aiming to create a supportive ecosystem for youth-led entrepreneurship

Noteworthy are the provisions regarding the adaptation of higher education to the needs of the modern economy – implementation of educational programmes adapted to the needs of the labour market, development of cooperation networks between universities and entrepreneurs and other entities (e.g. NGOs, social partners), broader involvement of practitioners in the educational process (e.g. in the scope of the didactic offer created and implemented jointly by universities and entrepreneurs), implementation of the implementation path of the academic career (implementation doctorates), support for scientific circles, evaluation of educational outcomes in the context of linking them with the needs of the economy, participation of students in high-quality internship programmes and professional training.

2. National Regional Development Strategy, 2030 (Krajowa Strategia Rozwoju Regionalnego, 2030)

The main idea of the document is to outline Poland's regional development strategy aimed at promoting socially sensitive and territorially balanced growth by 2030. The document highlights the country's developmental challenges, such as climate adaptation, demographic shifts, human capital, infrastructure, and regional disparities. KSRR 2030 defines goals and policies to address these issues, focusing on enhancing economic, social, environmental, and spatial cohesion, improving productivity and

innovation in regional economies, and fostering effective governance at all levels. The strategy emphasizes coordinated actions involving national and local governments, and socio-economic partners to create resilient and competitive regions while mitigating regional inequalities.

The document sets out support mechanisms for both existing and newly established businesses, in particular in terms of improving the legal and institutional environment to facilitate growth and encourage expansion into new markets. It emphasises the importance of promoting family businesses, especially during generational changes, and the need for targeted support for businesses in smaller towns and rural areas. To address this, the strategy promotes access to professional advisory services and financing options tailored to different types and sizes of businesses.

Business development support is also closely linked to increasing regional innovation and competitiveness, with a particular emphasis on creating a support ecosystem for startups, especially in large urban centres and expanding into smaller towns.

The document refers to the development of entrepreneurship among young people. It emphasises the need to nurture entrepreneurial attitudes, especially in the less economically developed regions of Poland. The strategy promotes activities supporting young people in developing skills relevant to the modern labour market, including vocational education programmes tailored to market needs. In addition, there is an emphasis on strengthening cooperation between educational institutions and businesses to provide practical skills that enhance the employability and entrepreneurial skills of young people.

Among others it is worth mentioning:

- Businesses need support in three areas: access to finance, development of business models and improvement of the legal and institutional environment.
- A strong emphasis in regional economic policy in the area of innovation support will be placed on creating and strengthening an ecosystem conducive to the development of start-ups. Undertakings implemented at the regional level should be linked to national priorities, but also create support for companies in industries and areas identified by the region as priorities. Due to their specific character, start-ups are created mainly in voivodeship centres, while regional policy measures will be directed at creating conditions for their development also in small and medium-sized towns. It is important to provide young companies with access to professional advisory services at every stage of their development, i.e. from the incubation phase, through development, to international expansion. The offered capital, advisory and institutional support will also encourage entities from abroad to set up start-ups and develop their activities in Poland.
- In this respect, the following activities, among others, will be supported:
 - strengthening the competences of university employees dealing with the sale of services of universities and scientific units, commercialisation of research results and contacts with business,
 - building a culture of cooperation between business and science with the involvement of JST,

- further development of business support instruments dedicated to the creation of innovations and separate instruments dedicated to supporting the SME sector or instruments based on preferences for the SME sector,
- supporting the development of start-ups by building an ecosystem supporting people preparing to set up a company and then to attract an investor, in the area of legal, financial and management competencies,
- to intensify cooperation and information exchange between private enterprises and universities within technology transfer centres (innovation brokerage model, which provides services in the field of knowledge transfer and acts as an intermediary in building links between representatives of various sectors of the economy), coordination of regional instruments for supporting innovation with funding instruments at national and international level (state budget, EU instruments for supporting R&D e.g.: Horizon 2020 and Horizon - Europe framework programmes) and EU instruments supporting digital transformation of the economy such as the 'Digital Europe' programme,
- development of instruments to support clusters in regions synergistic with support at national and international level,
- support of infrastructural potential for R&D&I activities in the business and science sector,
- development of mechanisms motivating universities to undertake cooperation with entrepreneurs in order to shape the didactic offer adjusted to the needs reported by entrepreneurs,
- creation of networks of permanent relations: secondary schools (especially industrial education) - higher education - employers and employers' organisations, including in cross-border systems.

3. *Development Strategy of the Lodzkie Region 2030 (Strategia Rozwoju Województwa Łódzkiego 2030)*

The document outlines several strategies to strengthen entrepreneurship in the Lodzkie Region. Key initiatives include:

1. **Supporting the SME Sector:** Recognized as a critical part of the economy, the SME sector is targeted for increased competitiveness through measures like promoting scientific research, supporting technological modernization, and implementing circular economy practices. Additionally, networking efforts are encouraged to connect SMEs with potential partners and resources.
2. **Enhancing Business Environment Institutions (BEIs):** The region plans to strengthen BEIs by broadening their services, increasing loan and venture capital resources, and making them more effective in providing advisory and implementation support to entrepreneurs. Improved cooperation between BEIs and public administration is also a focal point to foster entrepreneurship region-wide.
3. **Fostering Innovation:** Emphasis is placed on building an innovation ecosystem that bridges research and industry. Specific efforts include creating channels for R&D commercialization, supporting technology startups, and providing financial and advisory support for new businesses. This focus on innovation aims to embed advanced solutions within enterprises, particularly around digitalization and sustainable practices.
4. **Educational and Vocational Training:** The strategy also highlights the need to develop entrepreneurial skills at different levels, including incorporating business skills training in schools and vocational institutions. Enhancing vocational education aligns with the goal of equipping the future workforce with skills relevant to market demands.
5. **Strengthening Rural Entrepreneurship:** In rural and marginalized areas, efforts to stimulate local entrepreneurship include improving infrastructure, offering vocational training, and supporting agricultural modernization, which helps diversify the local economy and strengthens the entrepreneurial fabric of these regions.

Strategies to counter brain drain in the Lodzkie Region include (apart above points 3 and 4):

1. **Improving the Appeal of Higher Education:** The region aims to enhance the quality of education in local universities, expand multidisciplinary curricula, and increase cooperation with industries. This also includes developing an attractive image of Łódź and the Lodzkie Region to encourage students from within and beyond the region to study and work locally.
2. **Enhancing Job Market Competitiveness:** The document emphasizes the importance of a competitive job market with high-quality employment opportunities. Plans to attract investors, improve salaries, and develop industries such as ICT and logistics are intended to make the region an attractive place to work and settle.

4. Łódź Development Strategy 2030+ (Strategia Rozwoju Miasta Łodzi 2030+)

The strategy document outlines specific approaches and instruments for strengthening entrepreneurship in Łódź. Here are the primary initiatives and tools:

1. **Supporting Local Businesses and Workforce:** Emphasis is placed on initiatives that enable local entrepreneurs to operate effectively, especially through collaboration that strengthens a knowledge-based economy. This includes efforts to boost the local job market, with particular focus on long-term unemployed individuals and new entrants to the workforce.
2. **Promoting and Developing Startups:** A structured support program includes training and advisory services, grants for new business ventures, employment subsidies, and the equipping of workspaces. The aim is to foster business-friendly conditions that encourage new businesses, high-quality job creation, workforce development, and the cultivation of universal skills like continuous learning and managerial competencies.
3. **Developing cooperation with universities and investors to align education with labour market needs.**
4. **Development of cooperation with the local economic self-government to support the economic development of Łódź.**
5. **Enhancing Competitiveness through International Engagement:** Łódź aims to promote itself in both Polish and international business sectors by participating in trade events and organizing study visits that highlight innovation. Partnerships with local academic and research centers are encouraged to enhance Łódź's appeal as an academic and entrepreneurial hub.
6. **Developing Creative Industries:** The strategy identifies creative industries (like culture, media, and art) as vital areas, providing incentives and spaces to support creative projects. This includes mentorship and networking for creative businesses and tax incentives to foster a vibrant creative sector.

To achieve these entrepreneurial goals, the document suggests several instruments:

- **Financial and Legal Mechanisms:** Leveraging EU funds, public-private partnerships, and multifinancial models that combine public, private, and crowd-sourced funds to support diverse business projects.
- **Networking and Collaboration Support:** Encouraging knowledge exchange among local entrepreneurs, as well as fostering relationships with educational institutions and foreign investors
- **Tax Relief and Support for Social Economy Initiatives:** Incentives are proposed for businesses that tackle social exclusion, particularly those in the social economy sector.

5. Strategy of the University of Lodz 2021-2030 (Strategia Uniwersytetu Łódzkiego 2021-2030)

The document outlines the development of a "culture of entrepreneurship" as a key operational goal. Key instruments and actions for strengthening entrepreneurship include:

1. Interdisciplinary Entrepreneurship Program designed to inspire students and doctoral candidates to pursue their ideas, with a focus on teaching entrepreneurial thinking and responsibility in a more interactive and non-traditional educational format.
2. Training and Resources for Innovation - a comprehensive training offer in entrepreneurship and innovation is planned, along with dedicated spaces for creative and entrepreneurial projects. This includes workshops and support tailored to nurture both creative and commercial ideas among the academic community.
3. Academic Incubation and Start-Up Support which aims at creating a robust support system that allows students and faculty members to bring their entrepreneurial ideas to market.
4. Engaging the "Council for Entrepreneurship" in implementing and coordinating entrepreneurial initiatives, thereby institutionalizing support for entrepreneurial activities within the university's operational framework.

6. Strategy for Lodz University of Technology (TUL) (Strategia Politechniki Łódzkiej)

The document includes multiple references to strengthening entrepreneurship, with a primary focus on fostering innovation, enhancing digital skills, and supporting small and medium-sized enterprises (SMEs). Key instruments include:

1. Grants, loans, and tax incentives designed to provide capital for start-ups and expanding businesses, particularly those driving innovation and technology development.
2. Training and Development Programs aimed at enhancing entrepreneurial skills, focusing on digital competencies, innovation management, and general business acumen. These are especially targeted at young entrepreneurs and those in regional areas.
3. Business Incubators and Accelerators intended to support early-stage companies by providing mentorship, infrastructure, and access to networks that facilitate growth and market entry.
4. Collaboration Platforms that promote collaboration between businesses, research institutions, and government agencies to boost knowledge-sharing and innovation.

7. Development Strategy of the Medical University in Lodz for 2021-2025 (Strategia Rozwoju Uniwersytetu Medycznego w Łodzi na lata 2021-2025)

The document includes several references to strengthening entrepreneurship, with a focus on innovation, commercialization of research, and collaboration with the socio-

economic environment. Key instruments and actions related to entrepreneurship strengthening are as follows:

1. Enhancing Innovation and Implementation Potential:
 - Providing comprehensive support for researchers, doctoral candidates, and students in securing intellectual property rights.
 - Actions aimed at improving the efficiency of medical innovation implementation.
 - Strengthening relationships with the socio-economic environment to facilitate innovation transfer and adoption.
 - Establishing and Developing the Center for Coordinated Health Care (CKOZ), which serves as a platform for health innovations.
2. Commercialization of Research:
 - New Service Offerings: Developing and promoting a range of commercial services to new clients.
 - Establishing mechanisms for the commercialization of research and increasing the economic performance of the university's innovation ecosystem.
3. Educational and Supportive Structures:
 - Supporting student entrepreneurship through structured mentorship.
 - Offering additional courses, postgraduate studies, and e-learning programs, which may support entrepreneurial skills.
4. Engaging in partnerships and networks with high-ranking research centers, both domestically and internationally, to foster an entrepreneurial spirit among students and staff.

Policies in Sweden – entrepreneurship

NATIONAL LEVEL

1. **National strategy for sustainable regional development in the whole country 2021–2030 (Nationell strategi för hållbar regional utveckling i hela landet 2021–2030)**

This strategy constitutes the direction for the regional development policy. The implementation of the regional development policy must be coordinated with the rural policy, the policy for sustainable urban development, the environmental policy and other relevant policy areas.

In order to meet the societal challenges, take advantage of the opportunities and find solutions and achieve the goal of the regional development policy, the government identifies in this strategy four strategic areas that will form the basis for the implementation of the regional development policy 2021–2030. The strategic areas are:

- equal opportunities for housing, work and welfare in the entire country
- competence supply and competence development, in the entire country
- innovation and renewal as well as entrepreneurship and entrepreneurship
- availability through digital communication and transport systems, in the entire country

Source:

<https://www.regeringen.se/contentassets/53af87d3b16b4f5087965691ee5fb922/nationell-strategi-for-hallbar-regional-utveckling-i-hela-landet-20212030/>

2. **The government's strategy for social enterprises - a sustainable society through social entrepreneurship and social innovation (Regeringens strategi för sociala företag – ett hållbart samhälle genom socialt företagande och social innovation)**

The national strategy for social entrepreneurship and social innovation, which the government adopted on 1 February 2018, aims to meet societal challenges such as integration, health, education, climate, environment, gender equality and ways out of unemployment.

Social enterprises are defined in the strategy as businesses (regardless of corporate form) where business-like working methods are a tool for achieving social benefit, which is the result that the company is evaluated on the basis of - rather than kroner and ören.

In addition, the government writes in the strategy that the financial surplus should mainly be reinvested in the business or in other socially useful projects, instead of

being distributed as profit to the owners - which, however, is a question that has been repeatedly debated.

The strategy's goal is to strengthen the development of social enterprises in Sweden, so that these can contribute to a greater degree to solving societal challenges through new ways of working and innovative solutions to existing problems. It is particularly emphasized that the public sector needs to become better at paying attention to and cooperating with social enterprises in order to develop a more sustainable society.

The work to achieve the goal of the national strategy for social entrepreneurship is divided into five areas.

1. Need and demand: Business relationships and partnerships between public actors and social enterprises must be clarified. Knowledge of social entrepreneurship must be increased within the public sector in order for more social enterprises to be started and grow.

2. Strengthened business and advisory skills: Social entrepreneurs need better support and advice in business development and entrepreneurship in general. Among other things, this must happen through the existing innovation support system sharpening its own knowledge and becoming better at meeting and supporting social enterprises.

3. Funding: Surveys show that social enterprises often find it difficult to get funding, partly because they operate at the border between the public, private and non-profit sectors and therefore do not fit into existing templates and frameworks. On the one hand, existing possibilities for financing need to be made more known, and on the other hand, the financing system needs to be reviewed.

4. Clarify and measure the effects: The whole basic idea of social enterprises is that they deliver results in the form of social benefit, but today there is a lack of uniform and generally accepted models for how such impact measurement should be done. It complicates both the possibility of financing and cooperation comparisons between different social enterprises as well as cooperation with the public sector through, for example, public procurement.

5. Develop knowledge and meeting places: The development of social entrepreneurship is hampered in Sweden by the lack of effective dissemination of knowledge about the area and examples of success. There is also a lack of natural meeting places where social entrepreneurs and their partners can meet and exchange experiences. Other countries have been stronger in this area, the government writes in the strategy and believes that lessons can be learned from there. The government therefore wants to create a national structure for spreading knowledge about social innovation and social entrepreneurship and create meeting places for social enterprises and their customers and financiers.

The government assigns the Agency for Innovation Systems in Sweden (Vinnova) to carry out investments to support the development of social enterprises. The

assignment is part of the implementation of the government's strategy for social enterprises - a sustainable society through social entrepreneurship and social innovation.

Source: <https://socialinnovation.se/wp-content/uploads/2019/11/1315-ett-%C3%A5r-kvar-av-regeringens-strategi.pdf>

<https://www.vinnova.se/contentassets/700f917aa72f4019a6fe137a28779710/2018-00556--slutrapport.pdf>

3. Municipalities' collaboration with social enterprises Lessons learned from Development Network social enterprises (Kommuners samverkan med sociala företag, Lärdomar från Utvecklingsnätverk sociala företag)

This report present twelve innovative municipalities that have developed their collaboration with local social enterprises over the course of two years.

Through increased cooperation and more business with the social enterprises, these municipalities want to create a broadened labor market and a more participatory, inclusive and sustainable society

In recent years, the municipalities' and regions' interest in social entrepreneurship and social innovations has increased significantly. The main reason is the need to deal with our major societal challenges and perhaps it is now when the recruitment of personnel with the right skills becomes urgent that we find the solution to long-term unemployment. Everyone is needed if we are to be able to make it through municipal welfare in the coming years. The need of municipalities and regions to develop and test new solutions has never been bigger and thankfully the municipalities and regions are not alone in this. The social enterprises are actors whose main purpose is to contribute with societal benefit and solutions to one or more of the complex challenges municipalities and regions are facing.

During the crises of recent years, such as the wave of refugees in 2015, the pandemic and most recently a new stream of refugees Because of the war in Ukraine, we have seen many examples of what incredible potential and power these actors have. We need to reach out and find one sustainable organization for cooperation, so that the social enterprises become natural and keen collaboration partners also in a more long-term perspective. It is many times a new arena for municipalities and regions, but also an arena that creates new opportunities and new solutions - if you are willing to explore it.

Source:

<https://skr.se/download/18.4810054185aaa3e03db0968/1675146925485/Kommuners%20-samverkan-sociala-foretag-Webb.pdf>

4. Jämtland County 2050 - An innovative and sustainable region to live, work and develop in (Jämtlands län 2050 - En nytänkande och hållbar region att leva, verka och utvecklas i)

The strategy highlights the vision and goals for the region.

In the county of Jämtland, the population is in focus, the ecology sets the framework and the economy is a tool and a prerequisite for sustainable development

Vision: Jämtland County 2050 - An innovative and sustainable region to live, work and develop within.

Creativity and innovation

The county has a diversified business life. Entrepreneurship and our entrepreneurial skills (abilities and competences that make us enterprising) in combination with creativity and innovation and good cooperation between academia, civil society, public and private sector have meant that we have taken advantage of the opportunities with new kinds of business models due to the green transition and digitization. Forms of business that favor cultural offerings and social cohesion have an obvious place in that the county's social challenges require new kinds of solutions, innovations and collaborations. Actors with different perspectives are involved in the innovation systems.

The high-class environment of the university's creates development power and an ability for the business world to be innovative. The success of business transition means that companies are in the forefront and they are prosperous and thriving, and contribute to many of our natural resources and areas of strength being refined in a sustainable way within the county and working life is mobile and developing. Business has been transformed, digitized and automated and is today competitive economically, but also socially and ecologically.

The education system is flexible and accessible and we have the opportunity to learn throughout our lives via studies at different levels, which benefits social cohesion as well as the development of public authorities and companies throughout the county and their provision of competence.

Source:

<https://www.regionjh.se/regionalutveckling/regionalutvecklingsansvar/jamtlandslan2050/regionalutvecklingsstrategi/jamtlandslan2050ennytankandeochhallbarregionattlevaverkaochutvecklas/regionalutvecklingsstrategijamtlandslan2050.4.497b3048177c8b4c6e67e3.html>

https://www.regionjh.se/download/18.6a57fe1b17c800de56d26abf/1636558863215/Sk%C3%A4rm_RUS_M%C3%A5lochprioriteringar_S3.pdf

5. *The regions develop Sweden. (The Swedish Agency for Economic and Regional Growth, Tillväxtverket)*

The regional development policy must contribute to the transition to a sustainable society - in all parts of the country. In each county, the region is responsible for coordinating, developing and implementing the work for sustainable regional development. By law, each year the regions must report the results of the work in a report to the government.

The report '*The regions develop Sweden*' is the Growth Agency's summary of the regions' reports for 2023. It gives an overview of the work that has been carried out around Sweden's regions.

The Swedish Agency for Economic and Regional Growth, works to ensure competitive companies and sustainable development in all parts of Sweden. We do this by strengthening companies, municipalities and regions. Tillväxtverkets offers knowledge, networks, and opportunities for investments that creates the conditions needed to be able to face tomorrow's challenges. Tillväxtverket is a government agency under the Ministry of Climate and Enterprise. The agency has tasks in three policy areas: enterprise policy, regional development policy and rural policy. One of our primary tasks is helping to ensure that EU funds are invested in projects that promote regional growth and employment.

Source:

https://tillvaxtverket.se/download/18.3b7a2fa819010041c8f73c49/1718689549755/R_egionerna%20utvecklar%20Sverige%202023.pdf

MUNICIPAL LEVEL

6. *Östersund municipality, Business strategy for sustainable growth 2022–2026. (Östersunds kommun, Näringslivsstrategi för hållbar tillväxt 2022–2026)*

The strategy document outlines specific approaches and instruments for strengthening entrepreneurship in Östersund. Mid Sweden university is highlighted as an engine for sustainable growth.

*** *A good business climate in the entire municipality***

Östersund municipality work constantly on developing and strengthening reception, availability and competence within the areas of authority. The municipality strives to create a good business climate that enables new companies to start and existing companies to grow and develop throughout the municipality. Cooperation between different actors are supported and the strategy contribute to providing good conditions for work with innovation and entrepreneurship.

*** *Innovation and entrepreneurship***

Innovation requires initiative, new thinking and commitment. In order to challenge existing solutions and to dare to test new ideas, there have to be place where entrepreneurs, ideas and companies can develop and grow. Östersund's cultural heritage and Sami culture and tradition is mixed with influences from new residents of the municipality, both newcomers and newly arrived. Östersund are a welcoming municipality where people from different cultures and with different backgrounds can meet and exchange ideas and experiences. **The Mid Sweden university** is an engine for sustainable growth, which contributes both nationally and internationally such as international innovation and research. The work to strengthen relationships, cooperation and contact areas between the municipal organisation, university and the business world need to constantly develop. In order to meet societal challenges and meet social needs, we need promote social innovations and collaboration with the non-profit sector. By taking care of people's ideas and entrepreneurship, together we can create more opportunities for jobs and different forms of business. Initiatives that come from below must be promoted and we must protect the zealots.

Source:

<https://www.ostersund.se/download/18.72f6d09817c2d85560f7e1/1634133755597/Naringslivsstrategi.pdf>

7. Strategy of Mid Sweden University, 2019-2026 (Mittuniversitetets strategi 2019-2026)

The vision of Mid Sweden University is: *“Mid Sweden University is a global university with a regional commitment where we carry out research and education for life”.*

The strategi document lacks guidelines and approaches to entrepreneurship. Instead, it inter alia highlights the importance of collaborating with the surrounding society.

1. Increase and develop our cooperations on an internal, regional, national and international level.
2. Strengthen current, and develop new international exchanges and research cooperations.
3. Increase the integration of sustainable development in education, research and cooperations

Our activities on the global arena fuels and contributes to the development of the region

8. The strategi of Innovation office, Fyrklöver, 2021–2024 (Innovationskontoret Fyrklöver strategi 2021–2024j)

Fyrklöver (the four-leaf clover) was established by the government at the end of 2009 and is one of 14 innovation offices in Sweden. It is a collaboration between four equal partners: Karlstad University, Linnaeus University, **Mid Sweden University** and Örebro University. Fyrklöver's goal is to ‘meet current and future societal challenges by increasing the value creation in, and the utilisation of, research-based knowledge and by contributing to more innovations from students, researchers and other staff’. Fyrklöver has a strong and active presence at the local, regional and national levels.

“Fyrklöver shall meet contemporary and future societal challenges by increasing the value creation and utilization of research-based knowledge and contribute to more innovations from students, researchers and other staff”.

Area of development:

A) *Proactive innovation support that creates the conditions for quality that leads to a beneficial culture.*

B) *Renewal of innovation support by creating structure, and funding to develop future areas of strength for the innovation office.*

C) *International and national participation, visibility and environmental monitoring.*

How Fyrkövern create opportunities for more ideas to benefit society:

Many people have innovative ideas, but are unsure if there is a real need for their idea in society. That assessment is important, but often costs money - which means that many people never take their idea further. To remedy the situation, Vinnova has set up a verification programme that gives the innovation offices the opportunity to distribute funds to potential innovators. Within Fyrklöver, this is done through a joint ‘verification council’, where innovation advisors assess current ideas and cases, and then decide

on the allocation of verification funds. In this way, we open up the possibility of more ideas and research results being utilized.

Source: <https://www.kau.se/files/2021-05/Fyrkl%C3%B6vern%20strategi%202021%20ver%201.1.pdf>

9. Cooperation agreement Östersund municipality and Mid Sweden University 2024–2025 (Samarbetsavtal Östersunds kommun och Mittuniversitetet, 2024–2025)

Mid Sweden university and the municipality of Östersund have a mutual interest in working together to strengthen and develop operations at the Östersund campus and to contribute to long-term sustainable growth in the municipality of Östersund. Employees at Mittuniversitetet and Östersund municipality can submit joint research applications within the framework of the collaboration agreement. The agreement is based on three main areas for cooperation and collaboration during the agreement period:

- 1) Strengthen the research center at Mid Sweden university, which has a profile in Östersund (ETOUR, NVC, RCR & Sports Tech Research Centre)
- 2) Develop Östersund Municipality's activities through research and collaboration
- 3) Strengthened student collaboration linked to skills provision for the public sector and business.

These agreements provide opportunities to strengthen the entrepreneurship in the region.

Source: <https://www.miun.se/Forskning/kommunsamverkan/samverkan-med-ostersunds-kommun/>

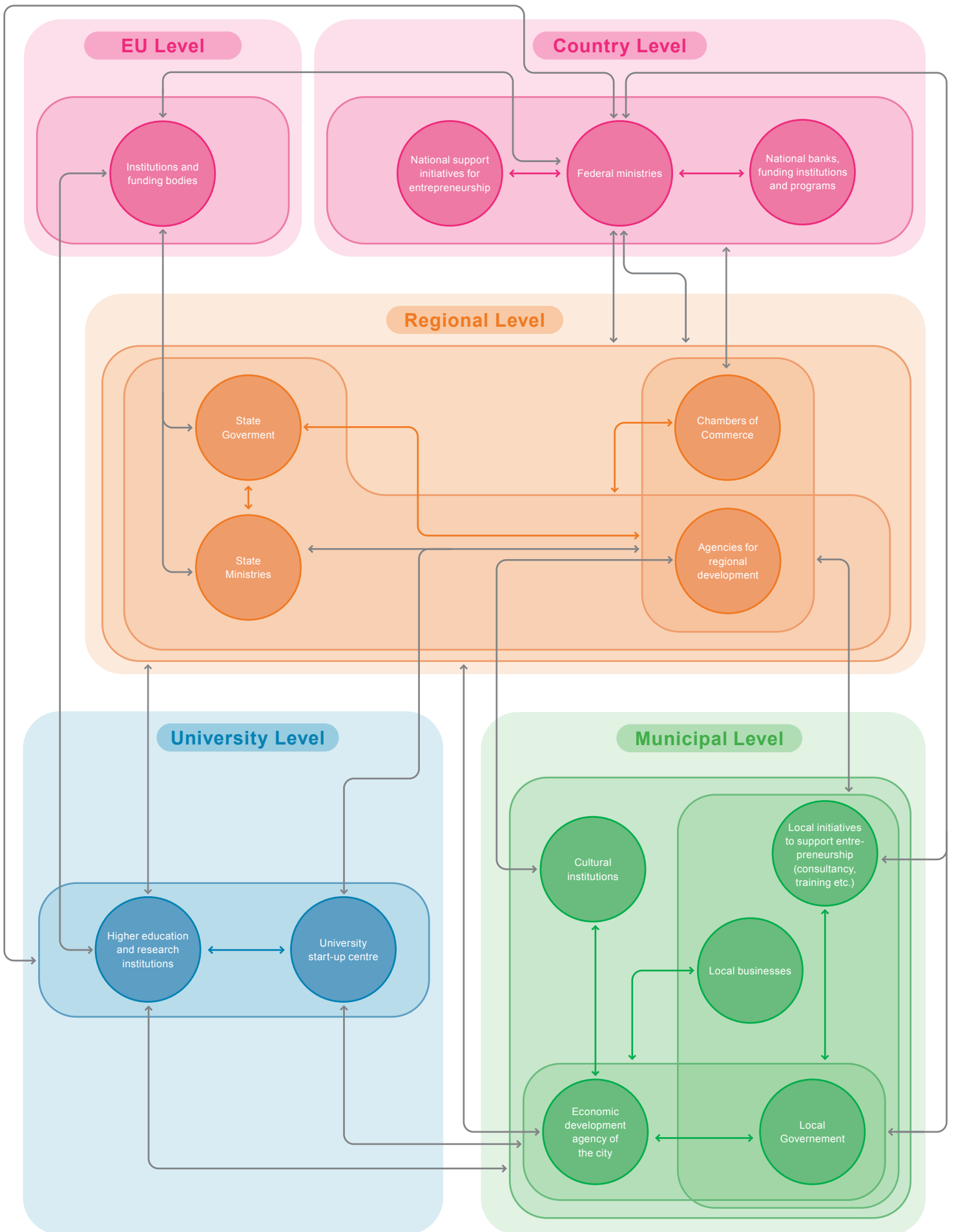


Annex 3

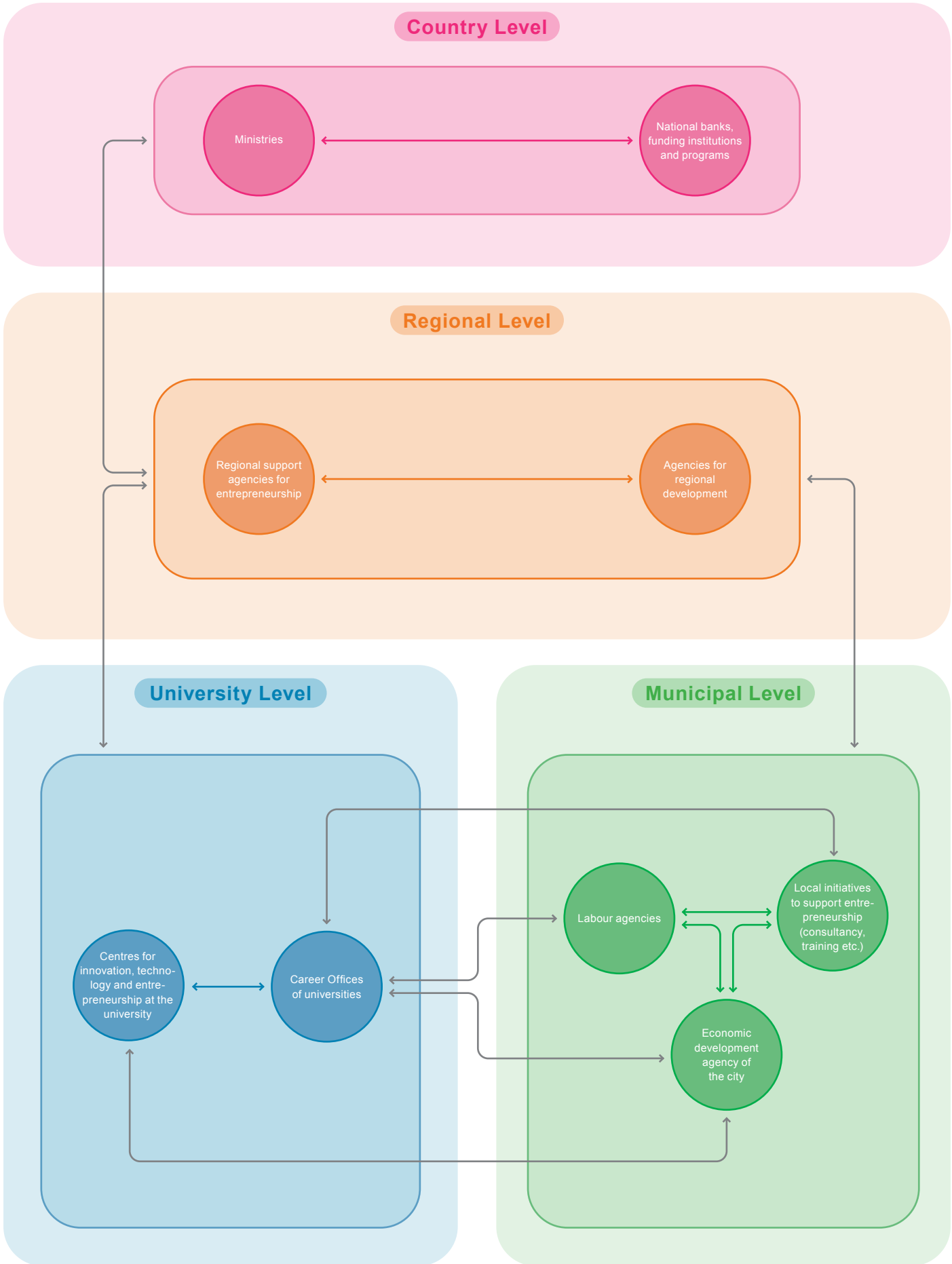
Visualization of policy interlinkages between national, municipal and university level, examples from Germany and Poland



Entrepreneurship support ecosystem in GERMANY



Entrepreneurship support ecosystem in **POLAND**





Annex 4

Student survey, analysis by country



Appendix 4: Student survey

Aim of survey

One aim of the survey was to better understand students' location choice after graduation and to identify decisive factors for their respective decisions. In addition, the survey should provide insights into students' propensity of starting a business at their place of study. In both cases, both promoting and inhibiting conditions for staying and/or for starting a business should be singled out. Following the ENDORSE project's focus, the survey and related results refer to students located in structurally weak regions, peripheral regions and/or regions under transformation pressure. Eventually, the results are evaluated on an international comparative basis and placed in the context of urban and regional development.

Approach

The survey was conducted in November and December 2023 at Hochschule Niederrhein University of Applied Sciences as a test run for the international surveys. The survey was carried out at the other universities involved in the ENDORSE project and further Greek universities in spring and summer 2024. The survey was designed as an online questionnaire and distributed to the students according to the possibilities of the respective university. Various channels, such as newsletters, email distribution lists, social media and presentations in courses, were used to promote the survey and achieve a high response rate.

Participating universities

(* also direct partner in the ENDORSE project)

Austria:	IMC Krems*
Germany:	Hochschule Niederrhein University of Applied Sciences*
Greece:	Athens University Democritus University of Thrace International Hellenic University National Technical University of Athens Panteion University* The National and Kapodistrian University of Athens University of Ioannina University of Patras University of Peloponnese University of Thessaly University of Western Macedonia
Latvia:	Ventspils University*
Poland:	University of Lodz*
Sweden:	Mid-Sweden University*

Response rate by country

Austria	134
Germany	97
Greece	263
Latvia	25
Poland	32
Sweden	16
Total	571

Characteristics of the survey's entire sample

61.6% female	79.1% bachelor students	More than half of the students are in their 1 st or 2 nd study year
36.0% male	20.9% master students	
0.7% non-binary		
1.8% do not want to answer		

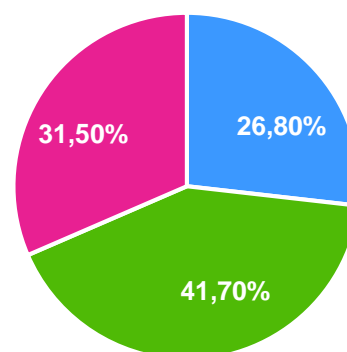




Brain Drain

To learn more about the students' location choice, we asked them whether or not they would like to stay in their university region¹ after graduation, or whether they were not yet sure. We also asked them about the reasons for their respective response.

Are you planning to stay in the city/region where you study after graduation?



■ Yes ■ No ■ I'm not sure yet

N = 571

Reasons to stay (N = 145-152) ²		Reasons to leave (N = 226-231) ³		Reasons for the decision (N = 176-179) ⁴	
Proximity to family and/or friends	91.4%	No suitable job opportunities	85.7%	Suitable job opportunities	93.9%
Suitable job opportunities	87.3%	Unattractive corporate landscape	76.5%	Low costs of living, affordable housing	85.9%
Attractive corporate landscape	81.9%	The city/region has no future potential	68.7%	Good transport connection / infrastructure	84.3%
Low costs of living, affordable housing etc.	80.0%	Cultural, sports and other leisure activities are not sufficient	64.9%	Attractive corporate landscape	83.0%
Good transport connection/infrastructure	79.6%	Transport connection/infrastructure not sufficient	62.8%	Family and friends	78.8%

Conclusions

- The majority of students wants to leave the university region after graduation.
- Reasons for this can mainly be found in job-related factors (i.e., job offers, companies at the respective location, regional future potential) but soft factors such as leisure opportunities, play a seemingly subordinate role, too.
- Students who want to stay prefer to remain because of the vicinity to their family and friends and/or regional job offers.
- An attractive location for graduates combines extensive job opportunities, good infrastructure, affordable housing and attractive leisure activities – ideally close to their family and friends.

¹ university region = radius of about one hour travel time, measured via car driving time

² Four-point Likert-Scale (unimportant to very important) → The percentages here are a summary of the answer options 'rather important' and 'very important'

³ See footnote 2

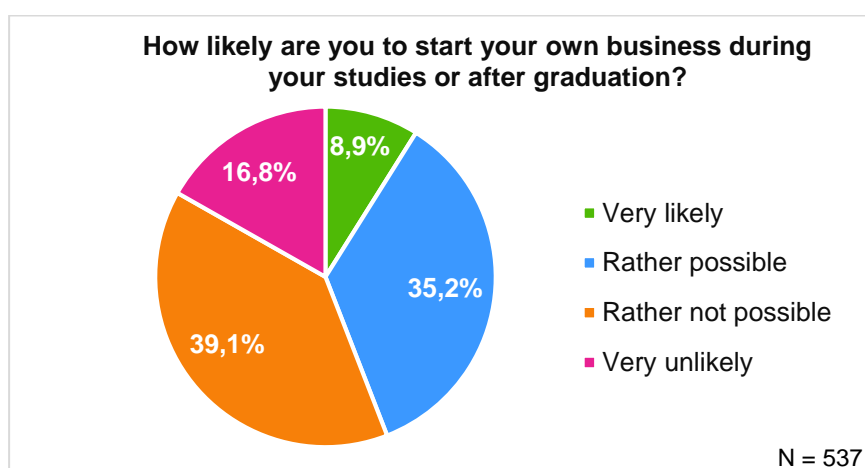
⁴ See footnote 2



Entrepreneurship

Foundation and start-up background of the students surveyed

- 57.4% have family members, friends or acquaintances who run a business.
- 32 students are running an own business and 30 students had an own business in the past.
- 89.1% of the responding students have not founded yet, but about two thirds of these students have considered setting up and running an own business (67.6%)



What would increase your (i.e. the students surveyed) intentions to start a business?⁵

	Strong increase	Increase
1. Special funding programs and government support	57.0%	34.8%
2. Support with bureaucratic effort and legal issues	54.7%	35.8%
3. Networking opportunities with local firms (e.g. research, co-publication, business support etc.)	47.9%	40.5%
4. Networking opportunities with other young founders and role models	44.2%	41.0%
5. Support systems by regional business development agencies	41.1%	47.3%
6. More study courses to acquire entrepreneurial competences	37.0%	42.8%

What are the three main motivations for you to start your own business? (nomination of TOP 3 mentions, here)

Students who have already founded an own business (N = 62):

1. Being my own boss (22.1%)
2. Prospect of higher income (19.2%)
3. Realization of own product/service idea (16.9%)

Students who have not founded an own business yet (N = 349):

1. Prospect of higher income (23.1%)
2. Realization of own product/service idea (20.7%)
3. Being my own boss (18.5%)

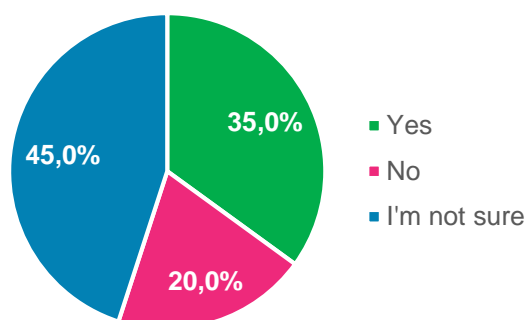
⁵ Three-point scale (strongly increase, increase, no influence)



What kind of difficulties do you see in starting your own business?
(nomination of Top 3 mentions, here)

1. Procurement of the needed capital (66.8%)
2. High personal risk / fear of failure (62.4%)
3. Personal income situation (51.7%)

**Do you think that
entrepreneurship is a good
career choice in your
university city/region?**



N = 567

Regional chances

I am not sure	35.9%
Good university networking with local firms	28.7%
Good university courses to acquire entrepreneurial skills	24.7%
Low rents for corporate space	24.0%

Regional barriers

Lack of good support systems for young entrepreneurs by the regional business development agencies and/or by the university	35.2%
Unattractive start up scene / community (rarely good examples and role models)	31.3%
High rents for corporate space	30.8%
The city's/region's missing future potential	25.7%

What courses/content could be added to current study curricula to increase the range of acquired competences with regards to entrepreneurial skills and founding competences?

1. Core business modules, such as business idea development, business model design
2. Creative workshops, such as design thinking, pitch workshops
3. Risk management and mitigation strategies

Conclusions

- Almost half of the surveyed students (44.1%) consider starting a business either very likely or rather possible for them. These students form the target group for start-up courses, activities etc.
- Their willingness to start a business increases if the students have role models among their acquaintances.
- In particular, funding programs and financial support systems, support with bureaucratic and legal issues and networking opportunities (role models etc.) could increase the students' interest in starting a business.
- Concerns about starting a business are clearly evident in the answers and point to personal risk, bureaucracy, legal situation etc.
- Half of the surveyed students do not seem to be informed about the opportunities and obstacles in the region regarding start-ups: There seem to be knowledge gaps among the students surveyed.



GERMANY

University and Region

Hochschule Niederrhein University of Applied Sciences

- Approx. 12,800 students in 10
- More than 100 Bachelor- and Master programs

Locations:

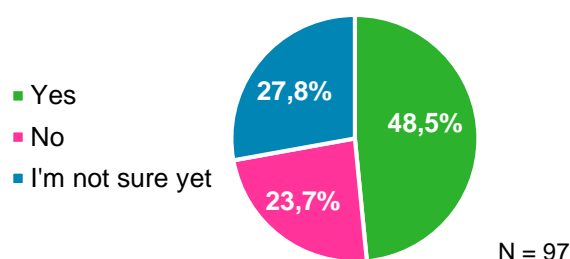
- **Krefeld** (268,465 inhabitants⁶) and **Mönchengladbach** (223,426 inhabitants⁷)
- Peripheral locations near metropolises Düsseldorf and Cologne

Sample

63.9% female 29.9% male 6.2% do not want to answer	72.2% bachelor students 27.8% master students	Half of the students are in their 1 st or 2 nd study year
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Brain Drain

Are you planning to stay in the city / region where you study after graduation?



Important reasons to stay (N = 45-47)⁸

Proximity to family and/or friends	97.9%
Suitable job opportunities	89.4%
Good transport connection/accessibility/infrastructure	85.1%
Attractive corporate landscape	78.3%
Low costs of living, affordable housing	76.7%

Important reasons to leave (N = 23)⁹

Transport connection/accessibility/infrastructure not sufficient	73.9%
Poor image of the city/region	69.6%
No suitable job opportunities	69.6%
Unattractive corporate landscape	69.6%
My family/friends live in a different region	56.5%

Important reasons for the decision (N = 26-27)¹⁰

Suitable job opportunities	96.3%
Family and friends	96.3%
Feeling home in the city/region	96.2%
Good transport connection/accessibility/ infrastructure	92.6%
Attractive corporate landscape	84.6%

⁶ https://ec.europa.eu/eurostat/databrowser/view/demo_r_pjanaggr3/default/table?lang=de (DEA14, numbers as of 2023/12/31)

⁷ https://ec.europa.eu/eurostat/databrowser/view/demo_r_pjanaggr3/default/table?lang=de (DEA15, numbers as of 2023/12/31)

⁸ Four-point Likert-Scale (unimportant to very important) → The percentages here are a summary of the answer options 'rather important' and 'very important'

⁹ See footnote 8

¹⁰ See footnote 8



Entrepreneurship

Foundation and start-up background

45.4% have family members, friends or acquaintances who run a business

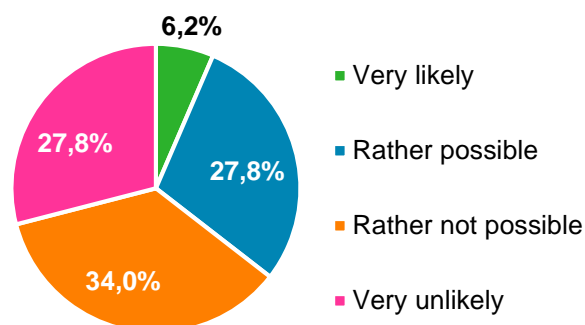
4 students are running an own business

3 had an own business in the past

92.8% have not founded yet:

But more than half of these students have considered setting up and running an own business (57.8%)

How likely are you to start your own business during your studies or after graduation?



N = 93

What would increase your intentions to start a business?

	Strong increase	Increase
1. Support with bureaucratic effort and legal issues	62.4%	30.1%
2. Special funding programs and government support	45.2%	44.1%
3. Support systems by the regional business development agencies	44.1%	41.9%
4. Networking opportunities with local firms (e.g. research, business support etc.)	41.9%	39.8%
5. More study courses to acquire entrepreneurial competences	38.7%	44.1%
6. Networking opportunities with other young founders and role models	31.2%	49.5%

What are the main motivations for you to start your own business? (TOP 3)

Already founded an own business (N = 7):

1. Realization of own product/service data
2. Being my own boss
3. Gaining experience (business know-how etc.)

Not yet founded an own business (N = 54):

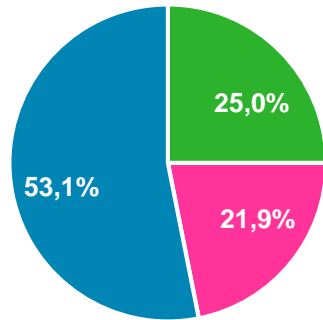
1. Realization of own product/service idea
2. Prospect of higher income
3. Being my own boss

What kind of difficulties do you see in starting your own business? (TOP 3)

1. High personal risk / Fear of failure (74.2%)
2. Procurement of the needed capital (66.0%)
3. Bureaucratic effort (53.6%)



Do you think that entrepreneurship is a good career choice in your university city/region?



■ Yes ■ No ■ I'm not sure yet

N = 96

Entrepreneurship

Regional chances

I am not sure	47.4%
Low rents for corporate space	23.7%
Good university networking with local firms	22.7%
Good transport connection/accessibility /infrastructure	21.6%

Regional barriers

Bad working environment (e.g. unattractive cityscape)	46.4%
Bad image/reputation of the city/region	44.3%
The city's/region's missing future potential	34.0%
I am not sure	29.9%

What content could be added to current study curricula to increase the range of acquired competences with regards to entrepreneurial skills and founding competences?

1. Core business modules (business idea development, business plan development, business model design etc.)	74.2%
2. Personal skills (personal resilience techniques, conflict management, negotiation etc.)	61.9%
3. Creative workshops (design thinking, pitch workshops etc.)	60.8%
4. Administrative modules, such as project management, capital procurement and law for founders	57.7%
5. Risk management and mitigation strategies	55.7%

“Bachelor’s modules are very theoretical. For me, the bachelor’s program only taught me how to become an employee rather than a founder.”

BA student (m), 34, no start-up

“Offer modules across degree programs, even for later semesters. I had the idea of founding long after my business studies module in the first Bachelor’s semester and would have listened differently.”

MA student (m), 29, no start-up yet

Conclusions

- Almost half of the students (48.5%) would like to stay in the university region and another 27.8% of the students is undecided. The main reason for staying is the proximity to family/friends.
- About third of the surveyed students can imagine setting up a company after their graduation.
- More than half of them (53.1%) are unsure whether setting up a business in the university location was a good ideas. The main reason for that is lacking knowledge about the chances the region offers for start-ups. Conversely, regional barriers are, according to the survey, a bad working environment, a bad image and a missing regional future potential.
- When it comes to personal knowledge and education, students demand more modules on business topics, personal skills and creative workshops that teach how to become a founder.



AUSTRIA

University and Region

IMC KREMS University of Applied Sciences

- Approx. 3500 Students in 3 faculties
- More than 29 Bachelor- and Master programs

Locations:

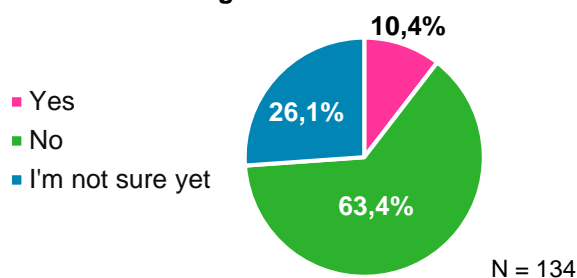
- **Krems** (25,363 inhabitants¹¹), **Horn** (6505 inhabitants¹²) and **Mistelbach** (12,036 inhabitants¹³)
- Peripheral locations near the metropolitan area of Vienna

Sample

60.4% female 39.6% male	66.4% bachelor students 33.6% master students	82.7% of the students are in their first year
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Brain Drain

Are you planning to stay in the city/region where you study after graduation?



Important reasons to stay (N = 14)¹⁴

Suitable job opportunities	100.0%
Good transport connection/accessibility/ infrastructure	92.9%
Proximity to family and/or friends	85.7%
Attractive corporate landscape	85.7%
Low costs of living, affordable housing	85.7%

Important reasons to leave (N = 82-83)¹⁵

No suitable job opportunities	88.0%
Transport connection / accessibility / infrastructure not sufficient	81.9%
Cultural, sports and other leisure activities are not sufficient	74.7%
Unattractive corporate landscape	72.3%
The city/region has no future potential	72.0%

Important reasons for the decision to stay or leave (N = 35)¹⁶

Good transport connection / accessibility / infrastructure	94.3%
Suitable job opportunities	91.4%
Good cultural, sports and other leisure activities	88.6%
The city's / region's future potential	85.7%
Family and friends	82.9%

¹¹ <https://www.statistik.at/fileadmin/pages/453/RegGliederungEw.ods> (No. 30101; as of 2024/01/01)

¹² <https://www.statistik.at/fileadmin/pages/453/RegGliederungEw.ods> (No. 31109; as of 2024/01/01)

¹³ <https://www.statistik.at/fileadmin/pages/453/RegGliederungEw.ods> (No. 31633; as of 2024/01/01)

¹⁴ Four-point Likert-Scale (unimportant to very important) → The percentages here are a summary of the answer options 'rather important' and 'very important'

¹⁵ See footnote 14

¹⁶ See footnote 14



Entrepreneurship

Foundation and start-up background

68.7% have family members, friends or acquaintances who run a business

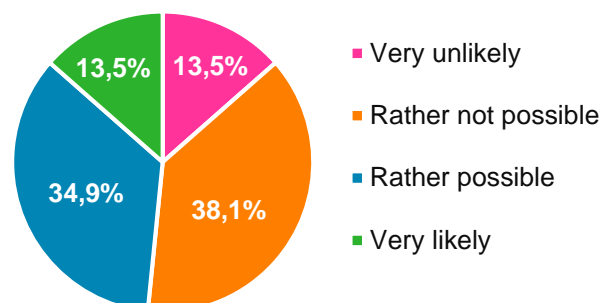
8 students are running an own business

5 had an own business in the past

90.3% have not founded yet:

But more than three out of four students have considered starting and managing an own business. (76.9%)

How likely are you to start your own business during your studies or after graduation?



N = 126

What would increase your intentions to start a business?

	Strong increase	Increase
1. Special funding programs and government support	57.6%	36.0%
2. Networking opportunities with local firms (e.g. research, co-publication, business support, etc.)	54.0%	40.5%
3. Support with bureaucratic effort and legal issues	50.0%	42.1%
4. Networking opportunities with other young founders and role models	46.0%	43.7%
5. Support systems by the regional business development agencies	37.3%	54.0%
6. More study courses to acquire entrepreneurial competences	57.6%	46.0%

What are the main motivations for you to start your own business? (TOP 3)

Already founded an own business (N = 13):

1. Being my own boss
2. Prospect of higher income
3. Gaining experience (business know-how etc.)

Not yet founded an own business (N = 93):

1. Prospect of higher income
2. Realization of own product/service idea
3. Being my own boss

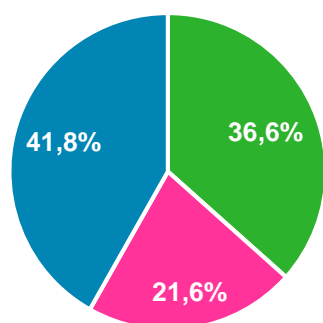
What kind of difficulties do you see in starting your own business? (TOP 3)

1. High personal risk / fear of failure (17.5%)
2. Procurement of the needed capital (15.3%)
3. No good business idea (11.1%)



Entrepreneurship

Do you think that entrepreneurship is a good career choice in your university city/region?



■ Yes ■ No ■ I'm not sure

N = 134

Regional chances

Good university networking with local firms (e.g., research, co-publication, business support etc.)	10.3%
Good university courses to acquire entrepreneurial skills	10.0%
Good image / reputation of the city/region	9.8%
Good working environment (e.g., beautiful cityscape, good leisure facilities, co-working spaces, open-minded population etc.)	9.6%

Regional barriers

High rents for corporate space	11.2%
Unattractive start up scene / community (rarely good examples and role models)	11.0%
Lack of good support systems for young entrepreneurs by the regional business development agencies and/or by the university	10.5%
Bad transport connection / accessibility / infrastructure	9.7%

What content could be added to current study curricula to increase the range of acquired competences with regards to entrepreneurial skills and founding competences?

1. Core business modules, such as business idea development, business plan development, business model design	16.1%
2. Creative workshops, (such as design thinking, pitch workshops)	16.1%
3. Risk management and mitigation strategies	13.0%
4. Personal skills such as personal resilience techniques, conflict management, negotiation techniques, team building	11.7%
5. Administrative modules, such as project management, capital procurement and law for founders	10.7%

- "Giving us lectures where we simply work on our business ideas"
- "AI Business Support Class"
- "Personal skills would be number one and connections to local start-ups in the region."

Students' comments in the open text fields in the survey



Conclusions

- Jobs matter: Almost two thirds of the responding students (63.4%) are planning to leave the university region after graduation, almost 90% of them because of no suitable job opportunities. Conversely, the most influential factor for a decision to stay in the region, is the availability of suitable job opportunities.
- Nearly half of the surveyed students can imagine setting up a company after their graduation.
- 41.8% of the students are uncertain whether it is a good idea to found a business in the region. Regional barriers to founding are, according to the survey, high rents for corporate space (11.2% of the responding students say this), an unattractive start up scene/community, the lack of good support systems for young entrepreneurs by the regional business development agencies and/or by the university.
- Looking at personal knowledge and education, students request amongst others more modules on business topics, creative workshops, courses on risk management and mitigation strategies.



GREECE

University and Region

Panteion University of Social and Political Sciences

- Approximately 20,000 students in 9 faculties
- More than 100 Bachelor's, Master's and PhD programs

Locations:

Athens (643,452 inhabitants¹⁷)

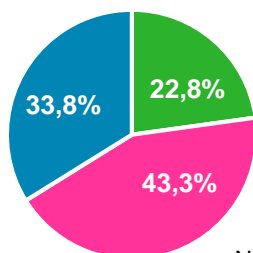
Sample

63.9% female 34.2% male 1.1% non-binary 0.8% do not want to answer	88.2% bachelor students 11.8% master students	One third of the students are in their 1 st or 2 nd study year
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Brain Drain

Are you planning to stay in the city/region where you study after graduation?

- Yes
- No
- I'm not sure yet



N = 263

Important reasons to stay (N = 58-60)¹⁸

Proximity to family and/or friends	88.3%
Further study or doctorate opportunities	84.7%
The city/region has undiscovered potential	79.7%
Suitable job opportunities	79.7%
Attractive corporate landscape	78.0%

Important reasons to leave (N = 108-111)¹⁹

No suitable job opportunities	85.6%
Unattractive corporate landscape	79.1%
Bad conditions for start-ups	72.5%
The city/region has no future potential	67.6%
My family and friends live in a different region	64.9%

Important reasons for the decision (N = 87-89)²⁰

Suitable job opportunities	93.3%
Low costs of living, affordable housing etc.	85.2%
Attractive corporate landscape	85.2%
The city's / region's future potential	78.4%
Good transport connection / accessibility / infrastructure	76.1%

¹⁷ https://elstat-outsourcers.statistics.gr/Census2022_GR.pdf (p. 41, numbers for 2021)

¹⁸ Four-point Likert-Scale (unimportant to very important) → The percentages here are a summary of the answer options 'rather important' and 'very important'

¹⁹ See footnote 18

²⁰ See footnote 18



Entrepreneurship

Foundation and start-up background

52.9% have family members, friends or acquaintances who run a business

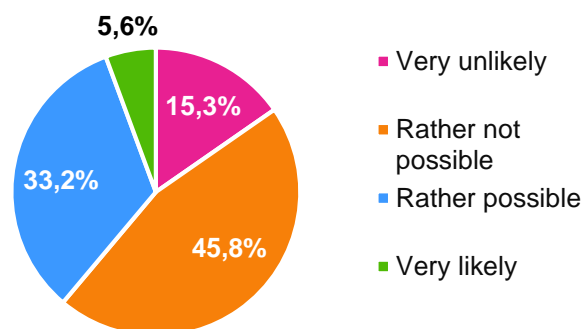
15 students are running an own business

14 had an own business in the past

89.0% have not founded yet:

But more than half of these students have considered setting up and running an own business (56.3%)

How likely are you to start your own business during your studies or after graduation?



N = 247

What would increase your intentions to start a business?

	Strong increase	Increase
1. Special funding programs and government support	63.7%	30.2%
2. Support with bureaucratic effort and legal issues	54.8%	35.9%
3. Networking opportunities with other young founders and role models	47.0%	36.8%
4. Networking opportunities with local firms (e.g. research, co-publication, business support, etc.)	46.2%	41.3%
5. Support systems by the regional business development agencies	42.5%	47.8%
6. Support systems by the university	41.5%	40.3%

What are the main motivations for you to start your own business? (TOP 3)

Already founded an own business (N = 34):

1. Prospect of higher income
2. Being my own boss
3. Realization of own product/service idea

Not yet founded an own business (N = 150):

1. Prospect of higher income
2. Realization of own product/service idea
3. Being my own boss

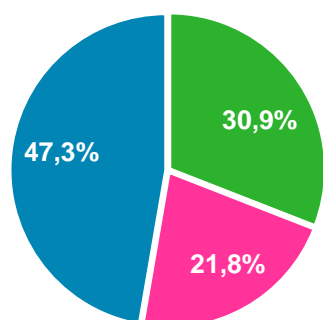
What kind of difficulties do you see in starting your own business? (TOP 3)

1. Procurement of the needed capital (19.2%)
2. Personal income situation (15.7%)
3. High personal risk / fear of failure (14.6%)



Entrepreneurship

Do you think that entrepreneurship is a good career choice in your university city/region?



■ Yes ■ No ■ I'm not sure

N = 262

Regional chances

I am not sure	12.4%
Low rents for corporate space	8.4%
Good university networking with local firms (e.g., research, co-publication, business support etc.)	8.4%
Lack of products and services in the region/market gaps	7.5%

Regional barriers

Lack of good support systems for young entrepreneurs by the regional business development agencies and/or by the university	12.7%
High rents for corporate space	10.4%
Unattractive start up scene / community (rarely good examples and role models)	10.2%
Lack of good university offers to acquire entrepreneurial skills	8.4%

What content could be added to current study curricula to increase the range of acquired competences with regards to entrepreneurial skills and founding competences?

Core business modules, such as business idea development, business plan development, business model design	15.4%
Risk management and mitigation strategies	14.3%
Marketing related modules, such as market research, understanding customers	13.8%
Creative workshops, (such as design thinking, pitch workshops)	13.4%
Personal skills such as personal resilience techniques, conflict management, negotiation techniques, team building	11.8%

"I would like to have more modules on legislation, procedures, and taxation."

BA student (f), 47, with past business experience



Conclusions

- Jobs matter: Almost half of the students (43.3%) would not like to stay in the university region. 85% argue that unavailability of suitable job opportunities was the main reason for the leaving-decision. Conversely, 93.3% of the responding students say that the availability of job opportunities was a reason for a decision to stay.
- Nearly two out of five of the surveyed students can imagine setting up a company before or after their graduation.
- Nearly one third of the responding consider it a good idea being a founder in their current university location whereas another 47.3 % are undecided whether it is a good idea being a founder in their current university region.
Regional barriers to founding are amongst others the lack of good support systems for young entrepreneurs by the regional business development agencies and/or by the university, high rents for corporate space and unattractive start up scene / community (rarely good examples and role models).
- When it comes to personal knowledge and education, students request a broad set of courses: modules on core business topics, courses on risk management and mitigation strategies or marketing-related modules to name the TOP 3.



LATVIA

It needs to be mentioned that the survey has few respondents – just 25 students completed it. Some item in the survey received considerably fewer answers. Thus, the results are more highlights and anecdotal than actual trends.

University and Region

Ventspils University of Applied Sciences

- Approx. 900 Students in 3 faculties
- 14 Bachelor- and Master programs

Locations:

Ventspils (32,634 inhabitants²¹)

- Peripheral location on the Baltic coast

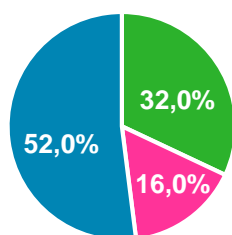
Sample

68.0% female 32.0% male	84.0% bachelor students 16.0% master students	84.0% of the students are in their 1 st or 2 nd study year
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Brain Drain

Are you planning to stay in the city/region where you study after graduation?

- Yes
- No
- I'm not sure yet



N = 25

Important reasons to stay (N = 8)²²

Good cultural, sports and other leisure activities	100.0%
The city/region has undiscovered potential	100.0%
Good transport connection/accessibility/infrastructure	100.0%
Attractive corporate landscape	100.0%
Good conditions for start-ups	100.0%

Important reasons to leave (N = 4)²³

No suitable job opportunities	100.0%
The city/region has no future potential	100.0%
Poor image of the city/region	100.0%
Transport connection / accessibility / infrastructure not sufficient	75.0%
The city/region has no future potential	75.0%

Important reasons for the decision (N = 13)²⁴

Suitable job opportunities	100.0%
Low costs of living, affordable housing etc.	100.0%
The city's / region's future potential	100.0%
Good transport connection / accessibility / infrastructure	92.3%
A good city image / regional image	92.3%

²¹ <https://stat.gov.lv/en/statistics-themes/population/population/247-population-and-population-change?themeCode=IR>

²² Four-point Likert-Scale (unimportant to very important) → The percentages here are a summary of the answer options 'rather important' and 'very important'

²³ See footnote 22

²⁴ See footnote 22



Entrepreneurship

Foundation and start-up background

72.0% have family members, friends or acquaintances who run a business

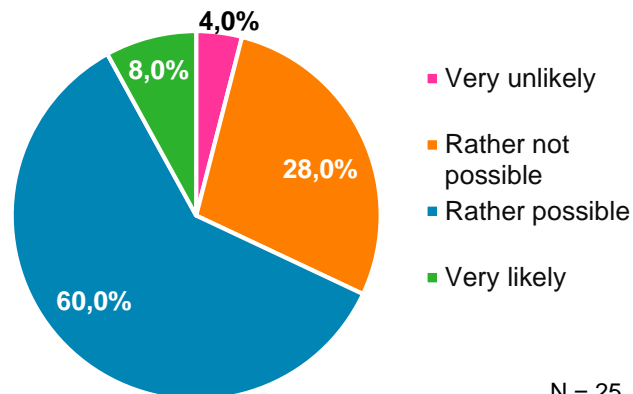
0 students are running an own business

4 had an own business in the past

84.0% have not founded yet:

But nearly four out of five students have considered starting and managing an own business. (85.7%)

How likely are you to start your own business during your studies or after graduation?



What would increase your intentions to start a business?

	Strong increase	Increase
1. Special funding programs and government support	48.0%	40.0%
2. Networking opportunities with local firms (e.g. research, co-publication, business support, etc.)	44.0%	48.0%
3. Support with bureaucratic effort and legal issues	36.0%	36.0%
4. Networking opportunities with other young founders and role models	36.0%	52.0%
5. Support systems by the regional business development agencies	32.0%	48.0%
6. More study courses to acquire entrepreneurial competences	32.0%	40.0%

What are the main motivations for you to start your own business? (TOP 3)

Already founded an own business (N = 4):

1. Gaining experience (business know-how etc.)
2. Being my own boss

Not yet founded an own business (N = 19):

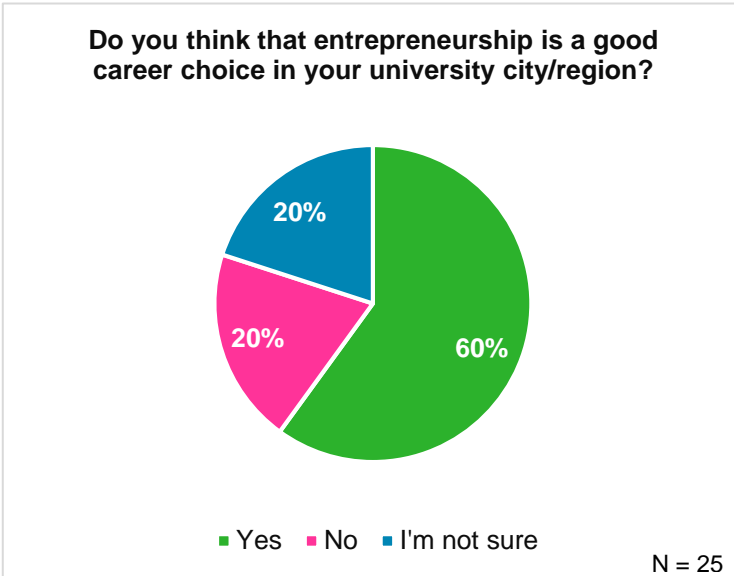
1. Being my own boss
2. Prospect of higher income
3. Realization of own product/service idea

What kind of difficulties do you see in starting your own business? (TOP 3)

1. No good business idea (16.5%)
2. Personal income situation (15.5%)
3. Procurement of the needed capital (12.4%)



Entrepreneurship



Regional chances

Good working environment (e.g., beautiful cityscape, good leisure facilities, co-working spaces, open-minded population etc.)	12.5%
Good university networking with local firms (e.g., research, co-publication, business support etc.)	10.6%
Attractive start-up scene/community (many good examples and role models)	8.7%
Good image / reputation of the city/region	8.7%

Regional barriers

Low purchasing power in the region	16.5%
High rents for corporate space	10.1%
Lack of good support systems for young entrepreneurs by the regional business development agencies and/or by the university	7.6%
Strong competitive situation / only few market gaps	7.6%

What content could be added to current study curricula to increase the range of acquired competences with regards to entrepreneurial skills and founding competences?

1. Personal skills such as personal resilience techniques, conflict management, negotiation techniques, team building	18.0%
2. Creative workshops, (such as design thinking, pitch workshops)	14.0%
3. Marketing related modules, such as market research, understanding customers	14.0%
4. IT Administration, Digitalization and Web design	12.0%
5. Risk management and mitigation strategies	11.0%

“Maybe modules that include examples and experience stories from real entrepreneurs.”
 BA student (f), 23, no start-up yet



Conclusions

- Jobs matter: 32.0% of the responding students would like to stay in the university region. The (un)availability of suitable job options is the main driver for staying in/leaving the region
- More than half of the surveyed students can imagine setting up a company after their graduation.
- 60.0% of the students are confident about opening a business in the region.
- When it comes to personal knowledge and education, students request more modules on personal skills, creative workshops, marketing-related modules.



POLAND

It needs to be mentioned that the survey has few respondents – just 31 students completed it. Some items in the survey received considerably fewer answers. Thus, the results are more highlights and anecdotal than actual trends.

University and Region

Lodz University of Technology

- Approx. 15,000 Students in 9 faculties
- 68 Bachelor- and Master programs

Locations:

Lodz (652,015 inhabitants²⁵)

- Central location in Poland, southeast of Warsaw

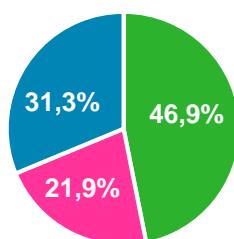
Sample

46.9% female	75.0% bachelor students	75.0% of the students are in their 1 st or 2 nd study year
46.9% male	25.0% master students	
6.3% do not want to answer		

Brain Drain

Are you planning to stay in the city/region where you study after graduation?

- Yes
- No
- I'm not sure yet



N = 32

Important reasons to stay (N = 15)²⁶

Suitable job opportunities	93.3%
Low costs of living, affordable housing etc.	92.9%
Proximity to family and/or friends	86.7%
Attractive corporate landscape	86.7%
Good transport connection/accessibility/infrastructure	73.3%

Important reasons to leave (N = 5-6)²⁷

No suitable job opportunities	100.0%
Unattractive corporate landscape	100.0%
Poor image of the city/region	83.3%
Bad conditions for start-ups	60.0%
The city/region has no future potential	50.0%

Important reasons for the decision (N = 9-10)²⁸

Good transport connection / accessibility / infrastructure	90.0%
Low costs of living, affordable housing etc.	80.0%
Attractive corporate landscape	80.0%
A good city image / regional image	80.0%
Family and friends	80.0%

²⁵ https://lodz.stat.gov.pl/download/gfx/lodz/en/defaultaktualnosci/678/1/18/1/202412_r_statystyka_lodz_2024_ang1.pdf (p. 60, numbers as of 2023/12/31)

²⁶ Four-point Likert-Scale (unimportant to very important) → The percentages here are a summary of the answer options 'rather important' and 'very important'

²⁷ See footnote 26

²⁸ See footnote 26



Entrepreneurship

Foundation and start-up background

53.1% have family members, friends or acquaintances who run a business

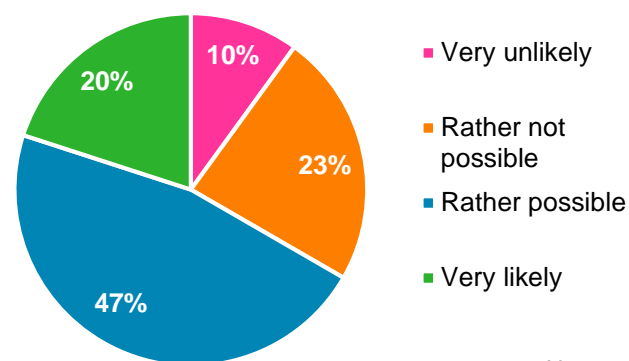
2 students are running an own business

2 had an own business in the past

87.5% have not founded yet:

But nearly three out of four students have considered starting and managing an own business. (75.0%)

How likely are you to start your own business during your studies or after graduation?



What would increase your intentions to start a business?	Strong increase	Increase
1. Support with bureaucratic effort and legal issues	68.97%	27.59%
2. Special funding programs and government support	58.62%	24.14%
3. Networking opportunities with local firms (e.g. research, co-publication, business support, etc.)	58.62%	31.03%
4. Networking opportunities with other young founders and role models	58.62%	31.03%
5. Support systems by the regional business development agencies	55.17%	31.03%
6. Support in finding suitable co-founders	68.97%	27.59%

What are the main motivations for you to start your own business? (TOP 3)

Already founded an own business (N = 4):

1. Realization of own product/service idea
2. Being my own boss

Not yet founded an own business (N = 24):

1. Prospect of higher income
2. Realization of own product/service idea
3. Being my own boss

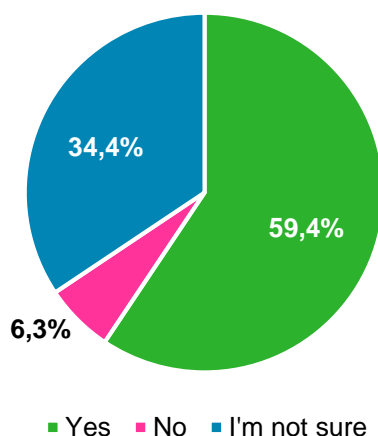
What kind of difficulties do you see in starting your own business? (TOP 3)

1. Bureaucratic effort (15.5%)
2. High personal risk / Fear of failure (14.0%)
3. Procurement of the needed capital (12.4%)



Entrepreneurship

Do you think that entrepreneurship is a good career choice in your university city/region?



N = 32

Regional chances

The city's / region's so far undiscovered potential	12.1%
Good transport connection / accessibility / infrastructure	10.3%
Lack of products and services in the region / market gaps	9.3%
Good working environment (e.g., beautiful cityscape, good leisure facilities, co-working spaces, open-minded population etc.)	9.3%

Regional barriers

Lack of good support systems for young entrepreneurs by the regional business development agencies and/or by the university	15.2%
High rents for corporate space	13.3%
Strong competitive situation / only few market gaps	11.4%
Bad image/reputation of the city/region	11.4%

What content could be added to current study curricula to increase the range of acquired competences with regards to entrepreneurial skills and founding competences?

1. IT Administration, Digitalization and Web design	14.3%
2. Creative workshops, (such as design thinking, pitch workshops)	13.4%
3. Core business modules, such as business idea development, business plan development, business model design	13.4%
4. Administrative modules, such as project management, capital procurement and law for founders	13.4%
5. Risk management and mitigation strategies	13.4%



Conclusions

- Jobs matter: Nearly half of the students (46.9%) would like to stay in the university region, nearly all of them because of suitable job opportunities.
- Two of three surveyed students can imagine setting up a company after their graduation.
- 59.4% of the students are confident about the start-up opportunities in the region.
- Looking at personal knowledge and education, students state interest in modules on IT administrative modules, creative workshops, core business modules.



SWEDEN

It needs to be mentioned that the survey has few respondents – just 16 students completed it. Some item in the survey received considerably fewer answers. Thus, the results are more highlights and anecdotal than actual trends.

University and Region

Mid Sweden University

- Approx. 13,000 students in 9 faculties
- 45 Bachelor- and 32 Master programs

Locations:

Sundsvall (99,213 inhabitants²⁹) and **Östersund** (64,881 inhabitants³⁰)

- Inland location in central Sweden (Östersund), with a coastal counterpart on the Gulf of Bothnia (Sundsvall).

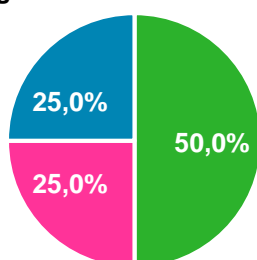
Sample

43.8 % female 56.3 % male	75.0 % bachelor students 25.0 % master students	Almost half of the students are in their 1 st or 2 nd study year (46.7%)
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Brain Drain

Are you planning to stay in the city/region where you study after graduation?

- Yes
- No
- I'm not sure yet



N = 16

Important reasons to stay (N = 7-8)³¹

Suitable job opportunities	100.0%
Proximity to family and/or friends	100.0%
Attractive corporate landscape	100.0%
The city/region has undiscovered potential	85.7%
Low costs of living, affordable housing	85.7%

²⁹ <https://www.scb.se/en/finding-statistics/statistics-by-subject-area/population-and-living-conditions/population-composition-and-development/population-statistics/pog/tables-and-graphs/population-statistics---year/population-in-the-country-counties-and-municipalities-on-31-december-2023-and-population-change-in-2023/> (no. 2281; numbers as of 2023/12/31)

³⁰ <https://www.scb.se/en/finding-statistics/statistics-by-subject-area/population-and-living-conditions/population-composition-and-development/population-statistics/pog/tables-and-graphs/population-statistics---year/population-in-the-country-counties-and-municipalities-on-31-december-2023-and-population-change-in-2023/> (no. 2380, numbers as of 2023/12/31)

³¹ Four-point Likert-Scale (unimportant to very important) → The percentages here are a summary of the answer options 'rather important' and 'very important'.



Important reasons to leave (N = 3-4)³²

No suitable job opportunities	100.0%
My family and friends live in a different region	75.0%
High costs of living, expensive housing etc.	75.0%
The city/region has no future potential	75.0%
Bad conditions for start-ups	66.7%

Important reasons for the decision (N = 4)³³

Suitable job opportunities	100.0%
Family and friends	100.0%
Feeling home in the city /region	100.0%
Good cultural, sports and other leisure activities	100.0%
Low costs of living, affordable housing etc.	100.0%

³² See footnote 31

³³ See footnote 31



Entrepreneurship

Foundation and start-up background

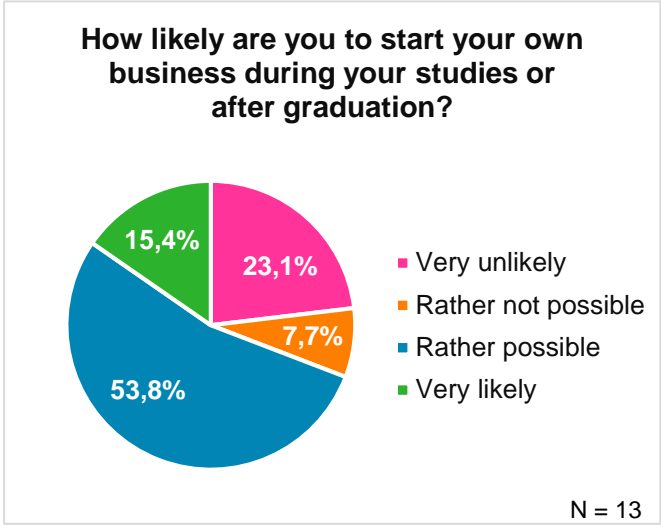
88.0% have family members, friends or acquaintances who run a business

3 students are running an own business

2 had an own business in the past

69.0% have not founded yet:

But more than a third of these students have considered setting up and running an own business (37.5%)



What would increase your intentions to start a business?	Strong increase	Increase
1. Networking opportunities with local firms (e.g. research, co-publication, business support, etc.)	53.85%	30.77%
2. Networking opportunities with other young founders and role models	53.85%	30.77%
3. Support with bureaucratic effort and legal issues	46.15%	30.77%
4. More study courses to acquire entrepreneurial competences	30.77%	46.15%
5. Special funding programs and government support	23.08%	53.85%
6. Support in finding suitable co-founders	23.08%	38.46%

What are the main motivations for you to start your own business? (TOP 3)

Already founded an own business (N = 7):

1. Realization of own product/service data
2. Being my own boss
3. Possibility to combine employed part-time work or studies with self-employment

Not yet founded an own business (N = 54):

1. Prospect of higher income
2. Being my own boss
3. Realization of own product/service idea

What kind of difficulties do you see in starting your own business? (TOP 3)

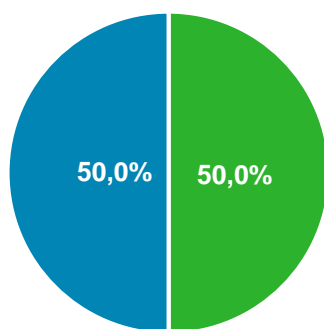
1. High personal risk / Fear of failure (16.9%)
2. No good business idea (13.6%)
3. Lack of entrepreneurial skills (11.9%)





Entrepreneurship

Do you think that entrepreneurship is a good career choice in your university city/region?



■ Yes ■ I'm not sure

N = 16

Regional chances

Good university networking with local firms (e.g., research, co-publication, business support etc.)	13.6%
Attractive start-up scene/community (many good examples and role models)	11.4%
I am not sure	11.4%
Good working environment (e.g., beautiful cityscape, good leisure facilities, co-working spaces, open-minded population etc.)	9.1%

Regional barriers

I do not see any barriers	14.8%
I am not sure	14.8%
Strong competitive situation / only few market gaps	11.1%
Lack of good university offers to acquire entrepreneurial skills	11.1%

What content could be added to current study curricula to increase the range of acquired competences with regards to entrepreneurial skills and founding competences?

1. Administrative modules, such as project management, capital procurement and law for founders	18.4%
2. Risk management and mitigation strategies	16.3%
3. Personal skills such as personal resilience techniques, conflict management, negotiation techniques, team building	16.3%
4. Core business modules, such as business idea development, business plan development, business model design	14.3%
5. Creative workshops, (such as design thinking, pitch workshops)	12.2%

"I would like to have more modules that teach how to navigate the bureaucratic environment."

BA student (m), 29, no start-up yet

"I think it would be beneficial to have more modules on sales, particularly on selling to others (B2B and B2C)."

BA student (m), 23, no start-up yet



Conclusions

- Half of the students (50.0 %) would like to stay in the university region. All of them because of the suitable job opportunities, their proximity to family and/or friends and the attractive corporate landscape.
- More than two-thirds of the surveyed students can imagine setting up a company after their graduation.
- Every second student is certain about the start-up opportunities in the region. According to the survey, the main regional opportunities for start-ups include strong university networking with local firms (e.g., research collaborations, co-publications, business support), an attractive start-up community with many good examples and role models, a good working environment (e.g., a beautiful cityscape, good leisure facilities, co-working spaces, and an open-minded population), while some students remain uncertain.
- When it comes to personal knowledge and education, students demand more modules on administrative modules, risk management and mitigation strategies, personal skills, core business modules and creative workshops that teach how to become a founder.



Annex 5

Policies and relevant bodies for their execution, tables by country

Level of analysis	Policy papers / Strategy documents	Cooperating institutions (external) and/or organisational units (internal)	Instruments / activities	SDG achieved through the instrument														
				4.4	8.3	8.6	8.10	9.3	9.5	11.1	11.6	11.A	16.6	16.7				
Country	1. Open Innovation Strategy for Austria	Central government: 1. Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK) Federal Ministry of Labour and Economy (BMAW)	1. Promotion of collaboration platforms	x						x						x		
			2. Funding for open innovation projects	x						x							x	
			3. Public-private partnerships	x							x							x
		2. Nine AplusB centers across Austria (as set out by Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology)	1. Support for high-tech startups									x						
			2. Workshops; Networking									x						
			3. Access to funding and venture capital									x						
	2. Entrepreneurship Education Action Plan (2020–2025)	3. General Secretariat of Industry Ministry of Development (www.mindev.gov.gr)	1. Integration of entrepreneurship education in school curricula	x	x						x							
			2. Teacher training; Resource development	x	x						x							
		4. Hellenic Foundation for Research and Innovation (www.elidek.gr)	1. Professional coaching		x					x								
			2. Financial support up to €55,000 per project		x					x								
Region	1. Economic Strategy Lower Austria 2025	1. Government of Lower Austria: ecoplus Regional Support Agency	1. Innovation grants								x							
			2. Digitalization support program									x						
			3. Regional development initiatives		x								x					
	2. Cluster Initiatives - Technopole	2. Lefkippos Attica Tech Park (https://lefkippas.demokritos.gr/)	1. Sector-specific collaboration initiatives									x						
			2. Innovation workshops									x						
			3. Funding for R&D projects										x					
	3. Innovation Center Attica Region (https://ris.innovationattica.gr)	1. Workshops; Coaching; Mentoring	x	x								x						
		2. Co-working spaces	x	x								x						
		3. Networking opportunities	x	x								x						
Municipality / District	1. Fellows and Scholars Program in Entrepreneurship and Innovation	1. Bio Science Park Krems (Technopol Krems) co-operation of: City of Krems; University for Continuing Education Krems; Biotech firms; European Regional Development Fund (ERDF)	1. Infrastructure development								x							
			2. Support for biotech startups									x						
			3. Collaboration with academia										x					
		2. IMC University of Applied Sciences Krems accent Gründerservice GmbH	1. Workshops; Coaching; Mentoring	x	x								x					
			2. Co-working spaces	x	x								x					
			3. Networking opportunities	x	x								x					
Higher Education Institution(s)	1. University strategic documents	1. IMC Krems University of Applied Sciences Start-Up Management BA Program	1. Learning	x	x						x							
			2. Mentoring	x	x							x						
		2. University for Continuing Education Krems	1. Academic-industry partnerships				x					x						
			2. Research funding				x					x						
			3. Knowledge transfer programs				x					x						

Level of analysis	Policy papers / Strategy documents	Cooperating institutions (external) and/or organisational units (internal)	Instruments / activities	SDG achieved through the instrument														
				4.4	8.3	8.6	8.10	9.3	9.5	11.1	11.6	11.A	16.6	16.7				
Country	1. National Development Plan of Latvia for 2021-2027	1. Central government: Ministry of Health, Ministry of Education and Science, Ministry of Finance, Ministry of Welfare and others	1. Improvements in social and healthcare infrastructure							X				X				
			2. Expanding digital platforms for public administration and education	X		X								X	X			
			3. Promoting STEM and lifelong education programs	X		X							X	X				
	2. Sustainable Development Strategy of Latvia until 2030	3. Ministry for Environmental Protection and Regional Development, Ministry of Smart Administration and Regional Development, National Development Council	1. Strengthening energy independence through renewable energy initiatives.					X	X			X						
			2. Promoting eco-efficient technologies and knowledge transfer										X					
			3. E-government services to increase public participation										X	X				
	3. Education Development Guidelines 2021-2027	5. Ministry of Education and Science	1. future skills for a future society	X	X	X												
			2. retraining and lifelong learning	X	X	X												
			3. the development of stem sciences	X	X	X												
Region	1. Development Strategy of Kurzeme Planning Region. 2015-2030	1. Kurzeme Planning Region Administration, State and National Agencies, Privat sector and NGO's	1. Provision of public transport accessibility and information dissemination											X				
			2. Regional project identification and preparation for EU funding												X			
			3. Support for education, research, and innovation programs		X			X										
		2. Local Governments (includes 20 municipalities)	1. Implementation of location-based development projects (e.g., urban renewal in cities like Ventspils and Liepāja)													X		
			2. Support for tourism, culture, and environmental protection initiatives									X			X			
			3. Support for education, research, and innovation programs	X		X		X						X				
		3. Local government and planning regions	1. Investments in R&D and innovation in areas like smart specialization								X					X		
			2. Encouraging public engagement in governance		X	X											X	
			3. Public-private partnerships (PPPs) for infrastructure development									X	X	X				
		4. Local municipalities and regional development centers	1. Developing tools to reduce regional inequalities and enhance accessibility											X	X			
			2. Promoting sustainable lifestyles, creativity, and cultural participation											X				
			3. Enhancing transport networks and urban-rural interaction											X	X			
		Municipality / District	1. Sustainable development strategy of the city of Ventspils until 2030	1. Ventspils City Council (Municipality)	1. Development of environmentally friendly and sustainable infrastructure						X	X	X					
					2. Development of competitive and diversified businesses		X			X								
					3. Urban development with affordable housing										X			
2. Ventspils Digital transformation Strategy 2023 - 2030	2. Department for Education, Sport and Culture		1. Accessible education	X		X												
			2. Healthy lifestyles, creative and educated society		X	X												
			3. Maintaining and developing sports infrastructure					X	X									
3. Ventspils City Council (education department)	1. Develop digital skills of Ventspils residents and increase the number of ICT professionals		X	X					X									
	2. Providing quality infrastructure for online services and technology producers										X		X	X				
	3. Promote digital transformation of business and														X			
	4. Ventspils Digital Centre		1. Improve public services through digital technologies		X											X		
Higher Education Institution(s)	1. Strategy of Ventspils University of Applied Sciences 2021-2027	1. Ventspils University of Applied Sciences	1. Development of competitive fields of study (management science, applied linguistics, translation studies, computer science, engineering and others)	X														
			2. Integration of science and research in all areas of study and ensuring scientific excellence and international competitiveness							X								
			3. Strengthening the importance of lifelong learning in education and ensuring its offer	X												X	X	
	2. STUDY DEVELOPMENT PLAN OF VENTSPILS UNIVERSITY 2021 - 2027	4. Implement various forms of cooperation to improve the quality of studies							X							X		
		5. Introduce new forms and approaches to study	X	X					X									
		6. Producing skilled professionals who can successfully enter the labour market and flexibly adapt to change	X		X				X									
	3. VENTSPILS UNIVERSITY OF APPLIED SCIENCES DIGITAL TRANSFORMATION STRATEGY 2024-2027	7. Promote digital security awareness and culture for sustainable VEA operations							X							X		
		8. Develop digital skills and competences of academic staff involved in the study process	X						X							X		
		9. Promote retraining and micro-credentialed opportunities for the growth of the digital society	X						X						X	X		

