



Águeda Local Action Plan

RUnUP Thematic Network

AN URBACT II PROJECT



Connecting cities
Building successes



Contents

Foreword

Executive Summary

Introduction

Socio-economic context

- Problematic
- Actual Situation
- Local challenges
- Balance with the Baseline Study
- Strategy 2020
- From local clusters to sectoral Triple Helix
 - Habitat Cluster
 - Mobility Cluster
 - Tourism and Culture Cluster
 - Intersectoral partnerships

Role of universities in the urban development

- University of Aveiro
- School of Technology and Management of Águeda
- Future challenges

Local Support Group (LSG)

Local Action Plan

- Contextualization
- Actions
 - Centre for Innovation in Triple Helix
 - Online Platform for Innovation
 - Global Casting Project
 - Step-Up Project
 - Inspiring Project

Conclusions

References

Foreword

In 2006, when the current Municipal Executive assumed power, established at the outset as a fundamental aspect the emphasis on networking as a way of strengthening human capital and endogenous potentials of the county, towards a sustainable local development.

To do this, and because the world is constantly changing, we realize that innovation and entrepreneurship are key aspects to creating economic growth and generating positive social impacts in the territory and its people. Several have been the projects that we have began in this perspective and to highlight where RIC Águeda - Network for Innovation and Competitiveness in Águeda and still the Lighting Living Lab, for its innovative capacity at local, regional and even national levels.

Indeed, the perspective of integration from all quadrants of social life of Águeda has been the key aspect that has ruled the county's governance in recent years. The RUnUP Project arises exactly in this logic in which I personally believe, the formalization of partnerships in triple helix for the territory's development.

The RUnUP Project in having its genesis in the link between local government, universities and business presented to us an important learning potential, based on the exchange of experiences with those who have the same problems and challenges facing us, allowing us also to take note of successful experiences and learn the key factors of success in order to adapt and replicate.

Thus, the RUnUP Project contributed to the intensification of recognition given to our city as a national standard in terms of innovation and reinforces the strategy of the Municipal Executive, to promote the territory based on human tissue and relational capacity of that tissue.

We are sure that the projects contained in the Local Action Plan and after its implementation will be able to further stimulate the local economy and create greater attraction for the county, so that it can retain more residents and businesses within a spirit of sustained growth.



Gil Nadais
Mayor of Águeda

Executive Summary

The present document develops at first a characterization of the economy of Águeda, as well of its policies in terms of innovation and networking over the last years. In fact, it seems that Águeda, as significantly industrialized county where the economy primarily consists of small and medium enterprises, needs to encourage this sector as a way to create more sustainability for businesses and to boost local development.

In fact this process has already started in 2006 with RIC Águeda, the first network for innovation created in the county and settled on the concept of triple helix. This project, which identifies key areas for intervention within the potential for local economic development, highlights the clusters of Habitat, Mobility and Tourism and Culture, over which the future action in Águeda shall address.

The present document will also identify those areas, beyond defining a set of actions, based on a model that invests in the creation of informal networks, which aim is to enhance local competitiveness through innovation and entrepreneurship and which are expressed in the final part of this Action Plan.

To this it has been fundamental the creation of the Local Support Group, under the RUnUP Project, which served to strengthen the ties existing between the main actors in local development and vertices of the triple helix, the Municipal Authority, businesses and universities. From the work of this group resulted the present Action Plan, which helps to legitimize the implementation of the actions here mentioned in the territory.

About the actions, the proposed ones are the Centre for Innovation in Triple Helix, the Online Platform for Innovation, the Global Casting Project, the Step-Up Project and the Inspiring Project, this last one already started during the implementation phase of the Project. All this actions should incorporate a significant number of other actions already underway in the municipal territory as the Urban Regeneration, the Network Business Incubator, the Local 21 Agenda or RUCI, in order to generate a more cohesive territory with an increasingly largest and most sustained social and economic development.

Introduction

The Municipality of Águeda has developed in recent years a significant number of initiatives to strengthen the competitiveness of the local business sector, partly founded upon the very advanced factors of competitiveness, where innovation emerges as a cornerstone and where the approach of centres of learning to local businesses is a key aspect in sustainable development planning.

Based on these assumptions, the Local Authority began in 2006 a set of actions that aim to build a new route for local development, based on a new vision for public policy rooted on innovation issues. It was considering this frame of ideas that the Local Authority engaged in broadening horizons and enhancing the role of universities in local development, and in 2008 submitted an application to the Programme URBACT II Operational Programme (2007-2013), more specifically the theme pole RUnUP - Role of Universities for Economic Development in Urban Poles.

This report reflects the results obtained during this project, and presents as the final result the Local Action Plan (LAP), to be implemented till 2015. This plan contains a number of actions aimed at networking triple helix in the municipal territory, and the strengthening of networking with all the positive outcomes arising from it.

One of the most important aspects of the project focused on the establishment of the Local Support Group (GSL), composed by major stakeholders in the local field of action of the project, which, although not unprecedented in Águeda (there were experiences in the past with the creation of groups of a similar nature for other initiatives), turns out to be important in strengthening formal and informal networks that arise at the base of the triple helix concept underlying the RUnUP.

In reality, this document aims at defining a way forward, which will have to be monitored in order to achieve the best effect for the local economic structure and municipal development.

Socio-economic context

Problematic

With the accelerating process of globalization, it is increasingly difficult for companies to compete in the global market and find ways of placing their products on the market. Despite this situation results, partly, from the fact that many of these companies are not prepared to cope with change or market requirements, the main problem is that many of them do not present in its structure and manner of operation, advanced factors of competitiveness, which are fundamental in process and product differentiation.

In Portugal, this situation is increasingly serious and has affected significantly the business sector, especially small and medium-sized enterprises, many of them family based, which are not yet adapted to the challenges posed by the global economy. This situation is aggravated by the fact that these companies are socio-economically fundamental to the country and in particular for some regions, serving, usually, to support the “small” existing economy, so its closure leads to severe social situations.

Cumulatively, many of these companies operate in outsourcing and are usually dependent on the success of large companies for which they work; thereby they don't create a market for their own products.¹ Considering this reality, most of their investment focuses on the acquisition of technology² and human resources, in many cases unskilled labour, required to meet commitments and deadlines, always attempting to reduce production costs.

Thus, it becomes clear that companies will have to change their focus, and concentrate on innovation as a catalyst for this change. Indeed, only by focusing on differentiated products with better quality and design, using innovative materials, it will be possible for companies to become competitive and improve their performance. This process is not, however, easy, involving significant risks and costs that many companies can hardly bear alone. It is therefore in this context that the role of networks becomes critical, as a way to help companies, mainly in relation to the costs of developing products and processes, fundamental aspects for their sustained growth.

The creation of these networks, although discussed a long time now, is somewhat complex, requiring a similar effort from all stakeholders and an absolute confidence in the common goal, something not always the case, leading inevitably to failure. It is therefore necessary to innovate in this field too, with companies facing these partnerships as a way to add value to your product.

For innovation to be present in these networks, it is essential that universities are participating members. These institutions, for the scientific knowledge they contain, are important for the development of enterprises and especially for what nowadays is referred to as technology or knowledge transfer.

Although this relationship is fundamental, it is apparent that there is a significant gap between companies and universities, mainly due to a communication problem between them. Therefore, it becomes essential to find space for dialogue between the two sides through new connection ways, less formal and more accessible. This may be achieved through the use of more simple communication platforms and new technologies.

It is clear that in this connection process, the public sector's role is crucial, especially as a facilitator of communication. Here, local authorities have a crucial role and must take it clearly as fast as possible, bearing in mind that their role is to promote the balanced development of their territory. The local administration will thus no longer be a mere spectator, yet much focused on infrastructure and financial issues, to become an important player in terms of promoting innovation.

Therefore, it is in this framework that the concept of Triple Helix³, developed in the 1990's by Etzkowitz and Leydesdorff, gains importance, and it was in this context that the Municipal Authority of Águeda has decided to participate in RUNUP. By joining nine cities from nine European countries, this project enhances the exchange of experiences in this area and provides a mechanism for development of activities that stimulate the innovative capacity and human resources development, fundamental for the growth of local economy.

¹ If, on one hand, it is true that reliance on large companies, inherent to the “verticality” of subcontracting chains, is a risk factor, is not a “default” that this should impede innovation, since there are highly competitive and innovative companies which work in the logic of outsourcing, although not the majority. However, companies with their own markets for their (final) products have major advantages in terms of innovative potential and building the value chain.

² Despite what was mentioned before, the correlation is not necessarily, or always, straightforward. Imported technology is not necessarily fatal to the ability to innovate, as is also true that suppliers are a major motivating factor for innovation, and one should note that innovation of the production (and organisational) process may be as important as product innovation.

³ Henry Etzkowitz and Loet Leydesdorff (2000).

Actual situation

The Municipality of Águeda is located in the Central Region of Portugal, in Baixo Vouga NUTIII, constituting the largest municipality in the district of Aveiro, with an area of 335.2 km². In 2007, this municipality was the residence to some 50.000 inhabitants who did not have, according to Census 2001 (INE, 2001), high educational attainment (Figure 1). Indeed, the majority had only completed the primary education, while only 4.6% hold a degree higher than secondary education.

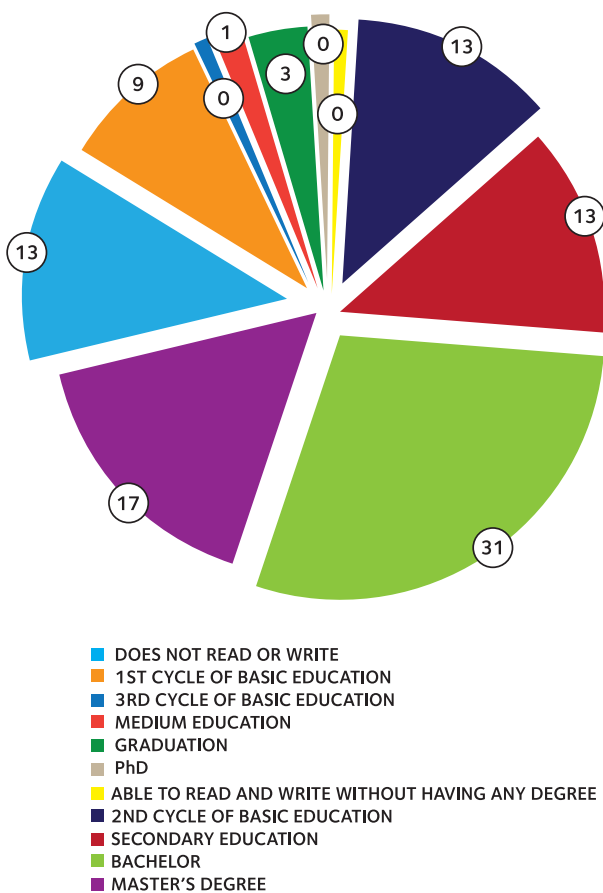


Figure 1: Percentage of Education of the population of Águeda, 2001

Source: INE (2001), Census 2001.

This lack of skills of the local population often leads to hiring of staff in the neighbouring municipalities, which represents a risk for the future of their employability. Local people work mainly in manufacturing (56%), which has a significant role in the economic activity in Águeda (Figure 2).

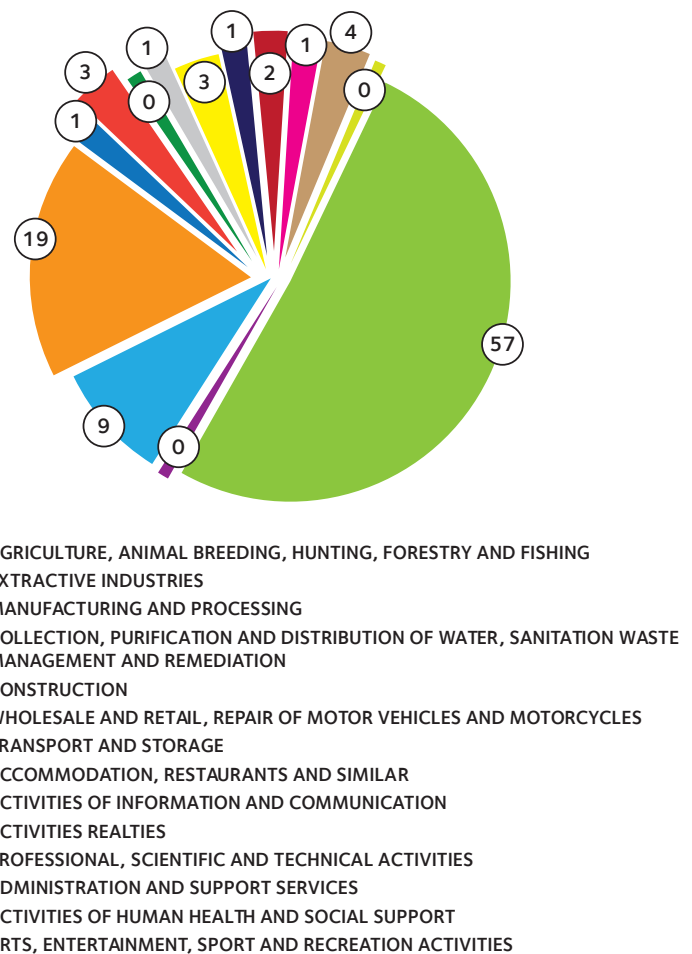


Figure 2: Percentage of employees according to the statistical code of activity (CAE - Rev. 3)

Source: INE (2010), Statistical Yearbook of the Centro Region

The processing companies employing more people in the municipality are mainly in the areas of metallurgy, metal furniture, ceramics, mobility (manufacture of motorcycles and bicycles, parts and components for automobiles) and electrical equipment (Table 1 on the opposite page).

Regarding the type of business, the weight of micro, small and medium enterprises in this territory is significant, with 92% of firms less than 10 employees and a the minor number of companies with over 250 employees (Figure 3). These family businesses operate with a business model focused on providing standard products, with no significant technological input.

Manufacturing industries	%
Fabricated metal products, except machinery and equipment	32.4
Manufacture of furniture and mattresses	14.2
Manufacture of other nonmetallic mineral products	10.2
Manufacture of other transport equipment	8.1
Manufacture of motor vehicles, trailers, semi-trailers and components for motor vehicles	6.2
Manufacture of machinery and equipment (non specified)	5.7
Manufacture of electrical equipment	5.2

Table 1: Manufacturing industries with major importance Source: INE (2010), Statistical Yearbook of the Centro Region

Nevertheless, the competitive ability of these businesses in national and international markets is relatively high (for example, the municipality is the third largest exporter in the sub-region of Baixo Vouga, surpassed only by Aveiro, the main town of the region, and Ovar where several multinational companies are operating), using a set of competitive factors ranging from a low-skilled and therefore cheaper workforce, to other factors more related to innovation.

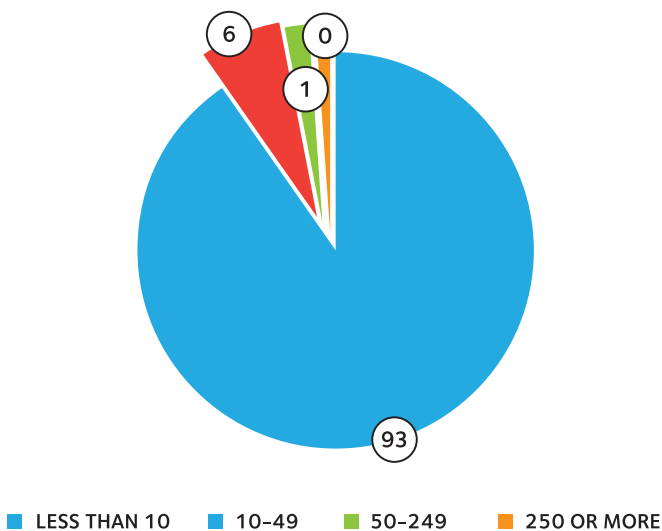


Figure 3: Percentage of Enterprises in Águeda according to employment size class, 2008

Source: INE (2009), Statistical Yearbook of Centro Region

The endogenous competitive ability of Águeda contributed to the success of the municipality during the twentieth century. A number of companies from different sectors managed to overcome, with varying success, the successive crises through rapid adaptation to changes in demand by international markets.

Two examples of this are the metal furniture sector, which found a competitive advantage by investing in the design and marketing, and the lighting sector, which invested on more sophisticated products based on innovative designs and new technologies. As a result, Águeda was able to maintain until recently a high percentage of employment.

After a long period of near full employment, from the 1970's till 2008, unemployment was growing very slowly (in 2001, the unemployment rate was 2.9%). The latest crisis has led to a rise in unemployment to 9% in 2009. The latest figures, for December 2010 show that unemployment fell to 8%, which is below the national average of about 10% (Table 2 below).

Local challenges

The summary of the socio-economic dynamics of the Municipal Authority of Águeda presented above identified two pressing issues. A first question is related to the qualification and/or upgrading of existing human resources in the territory, not only adapting them to existing needs, but also preparing them for rapid adaptation to future needs, introducing learning capabilities and innovation.

The second issue involves the need to overcome the business model based on offering standardised products and low cost manufacturing, and design new product models based on innovation and product quality in order to motivate the transition from a competitive price for competitiveness through differentiation.

Table 2: Unemployment rate (2001-2010)
Source: INE and IEFP

Year	1991 ^{**}	2001	2004	2005	2006	2007	2008	2009	2010
Rate	1.9%	2.9%	6.9%	7.9%	7.8%	5.7%	6.6%	9.0%	8.0%

Moreover, the fact that the crisis we are experiencing today has affected some of the sectors with which the business community of Águeda has connections, especially sectors related with the automotive industry. Therefore, there is also the need to find alternatives which not only make the product stand out, but which associate it with Águeda, taking advantage of and / or reconverting the use of endogenous resources of the municipality.

In order to achieve this, Águeda has a set of industries that can relate to each other as, for example, the manufacture of bicycles and mopeds, or the manufacture of ceramic combined with tourism. These relationships between different areas of activity have the potential of innovation through the development of new products and services.

To meet these challenges, the Municipal Authority has an important knowledge base: the University of Aveiro. This institution as highly qualified human resources and also integrates research and development centres of excellence, which are important sources of technology transfer and development of a culture of entrepreneurship throughout the region of Baixo Vouga.

Balance with the Baseline Study

Comparing the current situation of Águeda with the context described in the Baseline Study, prepared in 2008 by the RUnUP Project Lead Expert, Clive Winters, it appears that the big questions remain at the same level of the economic fabric of the Municipality of Águeda, including the need for upgrading human resources and the creation of new businesses in new areas and greater technological nature, to enable the diversification of the productive sector and increase local competitiveness, still based on traditional industry.

However, in recent years, new economic dynamics based on tourism and culture have been appearing in Águeda, supported by a set of regional policies, and especially local, based on funded programs, such as the Urban Regeneration Programme of the City of Águeda (funded by the National Strategic Reference Framework - QREN - Mais Centro), with infrastructures such as the new Arts Centre, the Cultural Space, or the City Space reflecting a clear commitment to a non-traditional sector in the municipality.

It is also worth mentioning that, in line with what was expressed in the Baseline Study, the cooperation with the University of Aveiro has grown significantly, with the creation of innovation networks, as it happens with Urban Networks for Competitiveness and Innovation [RUCI - Redes Urbanas para a Competitividade e Inovação], which has strengthened the links between local governments and universities, creating a regional environment prone to innovation.

Despite this positive development, Portugal has, since 2008, and as noted above, been plagued by an economic crisis, a reflection of global markets and national policies that have driven the country into a situation of social and economic instability, with impacts in the territory of Águeda, in particular the local industry. Highly dependent on exports, this industry has suffered from the fluctuations that have occurred in international markets, resulting from the global economic environment.

Also the latest political and economic developments, namely the redemption request to the European Union and the International Monetary Fund (IMF), make one believe that in the short to medium term, it can be difficult to develop a strong economy, more so with the financial cuts that have already occurred and foreseen at public expenditure, it is expected a decrease in investment and support to the business sector, which could have adverse effects.

Thus, it becomes even more important (than it was in 2008) that interventions on the territory are shared, generating lower costs and benefits with a broader spectrum, being the ideal context for fostering partnerships in triple helix.

Strategy 2020

The policies adopted for Águeda in recent years have led to a cultural change, where issues of the immaterial and innovation have gained new meaning and new dynamics. In this perspective, the image that has been created, as local brand is **Águeda: industry and city at the service of innovation and entrepreneurship** [Águeda: a indústria e a cidade ao serviço da inovação e da competitividade], which reflects the support for Research, Development and Innovation and the improvement of quality of life for its residents.

Therefore, in this framework supporting innovation, it is expected that projects proposed in the current document have a positive impact on the development of the municipality.

From local clusters to sectoral triple helix

Analysis of the economic community of the municipality and the know-how available in the university member of the Local Support Group (University of Aveiro and its branch in Águeda – the School of Technology and Management of Águeda, ESTGA), it becomes evident that there are strong relationships that can be established (Figure 4), clearly indicating areas where the potential for the formation of innovation networks may be higher.

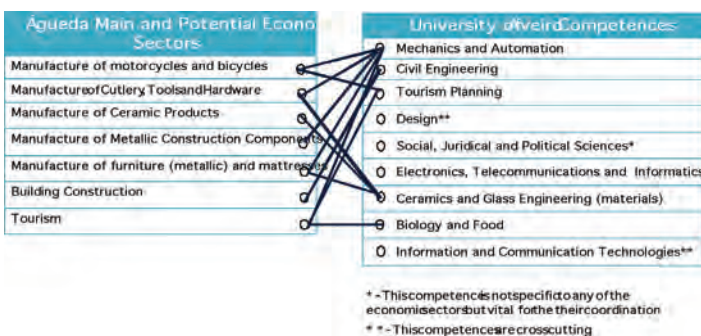


Figure 4: Relationship between activity sectors at the Municipality of Águeda and areas of competence at the University of Aveiro.

From this analysis emerged a set of clusters that, although it does not include all the branches of activity of enterprises in Águeda, it includes those with a significant weight in the socio-economic fabric in the structure of territory and may be seen as strong points for the establishment of relations between companies and universities, rooted in public policies in those areas. They are as follows: Habitat Cluster, Cluster of Mobility, and Cluster of Tourism and Culture (the latter as an area of potential future development). Each one of them will be examined in detail.

Habitat Cluster

The Municipality of Águeda is home to numerous companies which principal activity is the manufacture of products related to the built environment, covering all stages from construction (e.g. metal components used in building), finishing details (e.g. ceramics), to its decoration and or equipment (e.g. lighting, metal furniture). The University of Aveiro has skills and research centres with the potential to contribute to the development of innovation in these sectors, notably the Department of Civil Engineering (e.g. building techniques), the Department of Engineering Ceramics and Glass (e.g. new materials) or in research units as CICECO – Centre for Research in Ceramics and Composite Materials (e.g. new materials), or IEETA – Institute of Electronics and Telematics Engineering of Aveiro (e.g. smart home).

Beyond this relationship, there is also an investment by the Municipal Authority to promote a public policy associated with green housing, ecological sustainability and eco-efficient lighting. The Lighting Living Lab⁴ (LLL) is one example of this policy. Indeed, the Municipal Authority of Águeda is also developing a new concept of Business Park “with all the necessary conditions for the establishment of new businesses and the development of spaces for research and advanced technologies”⁵, not forgetting either their involvement in the Platform for Sustainable Construction, or the commitments of its own Local 21Agenda, which clearly takes the issue of sustainability in energy efficiency as part of a commitment for the future. In parallel, the European Union itself took on the issue of energy and eco-efficiency as key strategies for European development.

It should be noted that the companies from Águeda included in this area have a high potential for progression, which may be enhanced if they know how to walk together with knowledge centres that currently are developing innovative technologies and materials in this area.

It is considered, therefore, to be created favourable conditions for the development of sectoral partnerships in triple helix with respect to habitat, which must be considered an important area of action.

⁴ Following the Network for Innovation and Competitiveness in Águeda project [RIC Águeda – Rede para a Inovação e Competitividade em Águeda] (see subchapter 3.1), under the management of a partnership between the Municipal Authority of Águeda and the University of Aveiro, whose participation process was involving companies of Águeda at various times for sharing and discussing themes that were part of their concerns and current investments. At the end of all the activities and analysis of findings, the Lighting Association Living Lab was created: a partnership involving ESTGA, Municipal Authority and companies Climar, Exporlux, Globaltronic, and Lightenjin Soltráfego, integrating the European Network of Living Labs (ENO LL).

This association aims mainly at finding lighting solutions applicable to the reality of Águeda, in terms of public spaces, based on the best available technologies and know-how of companies from the lighting sector involved in its inception.

⁵ Municipal Master Plan – 2009 Periodic Re-examination.

Mobility Cluster

Águeda is known as the “land of bicycles,” due to a strong tradition of manufacturing this means of locomotion and associated parts/components. However, this is not the only relationship of the mobility sector with the territory, given also the existence of parts manufacturers and automotive components.

Here too, the University of Aveiro may represent a strong support across departments and research centres such as the Department of Civil Engineering (e.g. relationship with physical space), the Department of Ceramics and Glass Engineering (e.g. new materials) The Department of Mechanical Engineering (e.g. new mechanical processes) and research units as CICECO, IEETA or TEMA – Centre for Mechanical Technology and Automation (e.g. new mechanical processes).

In this context, public policies have also been active in order to enhance the mobility and smooth mobility, in particular cycling, focusing on soft electrical mobility, where Águeda is preparing for launch a pilot project involving a public network of electric bicycles, together with its network of cycle paths.

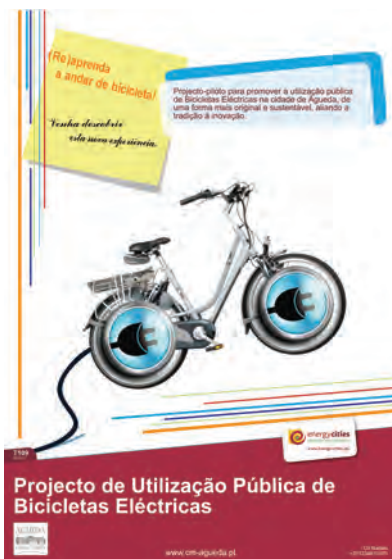


Figure 5: Release Poster of the Project of Public Use of Electric Bicycles

Source: www.cm-agueda.pt

This clearly shows that it may be time for networking in this area as public policy statements on energy constraints and environmental issues may allow the creation of favourable conditions for the generation of sectoral triple helices, which may even generate impacts beyond Portugal, with companies from Águeda presenting themselves as world leaders in terms of electrical soft mobility.

Tourism and Culture Cluster

Unlike the other clusters, Cluster of Tourism and Culture is not strongly supported on an economic base already present in the municipality. However, it is a new challenge, framed in a context of diversification of the economic activity in the municipality. Indeed, the municipality is home to a number of factors and/or features with high cultural and environmental characteristics, including:

- Locations of scenic beauty and high biodiversity of relevance;
- Conditions for nature sports;
- Cultural heritage rich in traditions, festivals and other “profane” celebrations;
- Historical heritage, with archaeological sites and architectural interest; and
- Cuisine, with dishes and delicacies recognized nationally and internationally.

Additionally, some sectors existing in the municipality, not directly related to tourism and culture, can have an important role in promoting this cluster, namely, the manufacture of bicycles (considered a vehicle associated with sport and leisure).

It is also important to highlight the commitment made at the local level to promote culture, as mentioned above, based on the Program of Urban Regeneration in the city of Águeda, which includes the construction of various reference buildings, such as the Arts Centre or the Cultural Space, the latter being an innovative project at the national level and with an internationalisation potential, which may contribute to the growth of the sector’s economic weight in the local economy.

It is noteworthy that here too, the link with the universities could be beneficial, the University of Aveiro may contribute to the development of this cluster, through some of its departments and research centres, including the Department of Economics, Management and Industrial Engineering (with the degree in Tourism Management and Planning), Department of Mechanical Engineering (e.g. associated with soft means of locomotion), the Department of Biology (e.g. information on biodiversity and landscape) or DECA – Department of Communication and Arts (e.g. in design and promotion).

The creation of high cultural dynamics associated with the redevelopment of the city, based on Urban Regeneration Program may, in addition to generating a shift on the local cultural paradigm shift, further contribute to create highly qualified jobs, thus contributing to the retention of talent and people in Águeda.

Intersectoral partnerships

As main point of interest, the three identified local clusters have the fact that they articulate with each other easily and they are able to generate networks and triple helix intersectoral partnerships, further strengthening the local economic fabric (Figure 6).

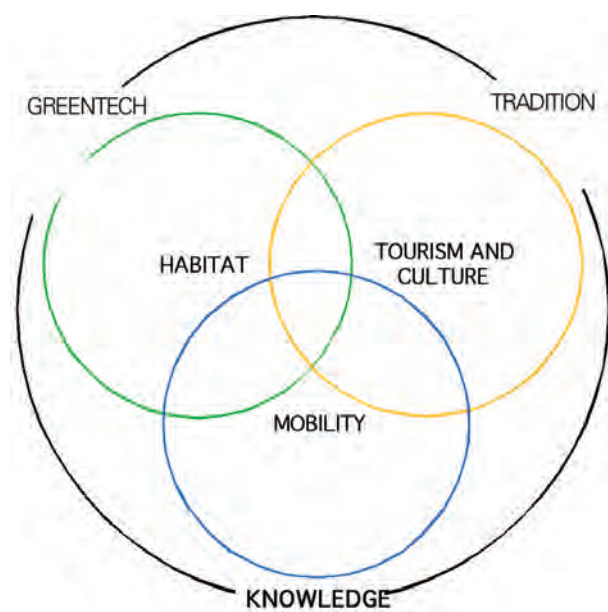


Figure 6: Clusters

In order to establish these partnerships, it is nevertheless essential to create the conditions for that to happen. Thus, the local support group understood that the focus of the Local Action Plan should not be the formalisation of the clusters, but the identification of the main actions for the formalisation of partnerships in triple helix.

Role of universities in urban development

Local triple helices are the result of a process of constant interaction and cooperation, initially, between local and regional knowledge centres and the Municipal Authority of Águeda, mobilising on a second phase the local/regional businesses.

The knowledge centres with a central importance in this process are, as we saw before, the University of Aveiro, through its various departments and research centres, and its local branch, the School of Technology and Management of Águeda.

University of Aveiro

The University of Aveiro (UA) is recent, as it started its activity in 1974, year of the Carnation Revolution, triggered by a military coup occurred on April 25th that year which ousted the Estado Novo dictatorial regime, initiating a process that would end with the establishment of a democratic regime in Portugal. In its inception, the University of Aveiro sought to distinguish itself by creating “innovative degrees in areas not explored by traditional higher education institutions and in areas with correspondence in the regional and national productive structure”⁶, such as Environment, Industrial Management, Music, Tourism, Materials Engineering, Industrial Chemistry and New Technologies. This approach was complemented with services for the transfer of knowledge, technology and innovation to the business community.

But the importance of the University of Aveiro for the local triple helices is not confined to staff training and technology transfer processes. The very concept of triple helix itself was assimilated and embraced by the Region of Aveiro. Indeed, the local triple helices originated from a dual helix between The Municipal Authority and the University of Aveiro, reflecting on the future of the Municipality of Águeda, presenting as a result, the Strategic Plan of Águeda, in 2001. The Network for Innovation and Competitiveness in Águeda [RICÁgueda - Rede para a Inovação e Competitividade em Águeda] was one of the proposals in this plan, and it was completed six years later.

Therefore, the University of Aveiro was always an important partner in the triple helix experiments carried out. In the context of the Network for Innovation and Competitiveness in Águeda, this university was a member of Strategic and Prospective Group, helping to enrich and validate knowledge to be spread to the business community, according to the identified needs.

In addition, it helped to identify the best and most feasible ideas for projects to develop after Network for Innovation and Competitiveness in Águeda, including the Lighting Living Lab (LLL).

It is within the LLL that the University of Aveiro, because of the operating context in terms of research, takes up a greater role in the production and/or close support to the production of knowledge. It is expected that this role will be maintained by some of its departments and research centres, including:

- Department of Economy, Management and Industrial Engineering
- Department of Civil Engineering
- Department of Mechanical Engineering
- Department of Ceramic and Glass Engineering
- Department of Biology
- Department of Communication and Arts
- Design Group, Department of Communication and Arts
- CICECO – Centre for Research in Ceramics and Composite Materials
- EETA – Institute of Electronics and Telematics Engineering of Aveiro
- TEMA – Centre for Mechanical Technology and Automation

School of Technology and Management of Águeda

The School of Technology and Management of Águeda (ESTGA) is a branch of the University of Aveiro, and it is located in the Municipality of Águeda.

It assumes itself as “a unique centre of Higher Education in Portugal”⁷ due to a learning model where the central element is the student who “gradually develops, his/her autonomy (...) placing early on in practice the knowledge that will be required at the time of his/her entry in the labour market”⁸.

This training model, adapted to the needs of the business sector, and the close relations maintained with it, result in a high employability rate of ESTGA students. This is the first contribution of the ESTGA for the local triple helices, as it demonstrates and legitimizes the importance of the triple helix concept and enhances trust relations with the business community.

Under the RIC Águeda, the ESTGA was also a member of the Strategic and Prospective Group, sharing the tasks performed by the “parent”, the University of Aveiro. In addition, ESTGA played a pivotal role in promoting the LLL, and it is also a reference partner in other projects to be deployed.

In the LLL, ESTGA is one of the founding partners and assumes the following responsibilities: the dissemination and / or sharing of knowledge held by it; the conduct of targeted research and / or related to the LLL, as an expression of needs and / or other factors affecting the business sector or the end user, and the promotion of informal networks among researchers developing activities in the LLL (either incorporated in ESTGA itself, or in-house), in order to facilitate the flow of innovation-enhancing knowledge and information. The latter can be achieved through events such as workshops, seminars, among others.

Finally, in its tradition of training associated with the business community, ESTGA will integrate its students and / or beneficiaries of scholarships for master / doctoral degree in research activities associated with the LLL. In order to develop this component, ESTGA is planning to create in the near future, post-graduate training in the field of Lighting Design, with strong connection to the LLL, in terms of curricular program and activities.

Future challenges

Considering the existing relationship between the Municipal Authority of Águeda, the University of Aveiro and ESTGA, the challenge ahead relates to the need to find ways to bring together university and companies, using as common grounds projects like the RIC Águeda or the LLL, moving towards the creation of less formal networks, but more operational, where the local administration takes a role in defining local development strategies that integrate both universities and companies.

⁷ www.estga.ua.pt
⁸ Idem

Local Support Group (LSG)

Under the RUnUP project, and in accordance with the directives of the project, a Local Support Group (LSG) was created, which comprises a set of entities considered strategic to the local socio-economic development, including:

- Municipal Authority of Águeda (CMA)
- University of Aveiro (UA)
- School of Technology and Management of Águeda (ESTGA)
- Business Association of Águeda (AEA)
- Industrial Association of the Aveiro District (AIDA)
- Chamber of Commerce of Águeda (ACOAG)
- National Association of Manufacturers of the Two-Wheel Sector, Hardware, Furniture and Related (ABIMOTA)
- Industrial Laboratory of Quality (LIQ)
- Institute for Support to Small and Medium-sized Enterprises and to Innovation (IAPMEI)
- Commission for the Coordination and Regional Development of the Centre (CCDRC)

In this project, the LSG assumed clearly the role of decision-making about the strategy to adopt, and it actively participated in various activities that were held during the course of the project. The tasks for the LSG included:

- strategic assessment of the local economy;
- to identify opportunities to develop the local economic structure; and
- to develop the LAP, in cooperation with the working group.

In order to ensure the best development of the project, a working group comprising members of the CMA, UA and ESTGA was created by the LSG, aimed at boosting the actions programmed. The main tasks for this group were:

- SWOT analysis of local business structure;
- to identify the areas of strategic potential in the University of Aveiro for the development of sectoral triple helix partnerships;
- to identify clusters;
- to develop various activities under the project (e.g. conferences and workshops); and
- to develop a proposal for LAP.

It should be noted that the working group met over 20 times throughout the course of the project, while still meeting five times⁹ with the LSG in order to consult it about the work that was being developed. Indeed, the very creation of the working group represented at the outset, the formalization of a triple helix, having strengthened the institutional relations between the representatives of the three entities, leading even to the development of other parallel joint projects.

The LSG has participated in several actions, having been present at the working visit to Tampere, Finland, where it studied the local innovation system and how it was developed in recent years in triple helix framework and also in themed events and actions held in Águeda. The working group was present in a wider range of visits, including Enschede, the Netherlands, one of the best examples of cooperation between universities, local government and the private sector, and Barakaldo, Spain, where the topic explored was the way how a city can develop a strategy to attract talent.

The operation of the LSG has proved fruitful and it was possible to reach an agreement on what areas for action to develop, which will certainly help their implementation.

9 Meetings were held on 15th May 2009, 30th September 2009, 19th November 2009, 9th December 2010, and 28th April 2011.

Local Action Plan

Contextualization

The development of the LAP was based on the perspective that the establishment of mechanisms that encourage the realization of these networks, in any type of situation, is more important than the establishment of specific partnerships in triple helix.

Indeed, the success of triple helix partnerships owes, in many cases, to personal relationships and informal contacts established between those who deal in the various spheres of the triple helix. It doesn't mean that the formalization of the partnerships is not a fundamental aspect for their success and achievement, but that their roots may lay in the creation of new relational ways, becoming central to the achievement of these the use of Internet and digital services.

In fact, it appears that the success of a triple helix often depends on the existence of common interests between the various spheres, and, currently, local governments have been serving as the connecting links in search of common interests between universities and businesses. However, this practice should evolve to the next stage, which allows creation of real local triple helices, rather than sectoral dual helices.

As shown in Figure 7, from informality and common interests, formal agreements that encourage joint projects can be reached. In the case of Águeda, and meeting the challenges proposed in the Baseline Study, these agreements will have to be separated in different areas, through technology transfer, skills development and incentives for entrepreneurship, and they should be grounded in sound financial resources, although, if possible, in a limited scale, considering the present economic crisis.

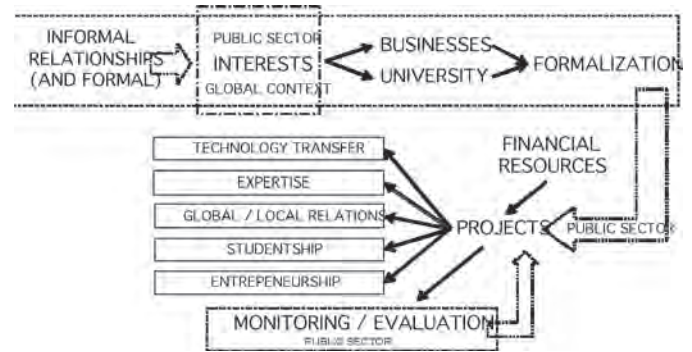


Figure 7: Relational scheme for the formalization of Triple Helix

As mentioned earlier, it is essential that, initially, the State plays the role of monitor of triple helix partnerships, ensuring the proper implementation and achievement.

One must mention that in the case of Águeda, it is crucial that these connections are made throughout the business sector, foot holding those in four main areas: physical infrastructure, support to entrepreneurship, innovation and competitiveness, and networks.

Actions

Bearing in mind the need to create basic conditions that encourage the formalisation of triple helix partnerships, a set of actions considered important to catalyse a local development system grounded in such partnerships was defined within the development of the RUnUP project. Thus, five key actions to be undertaken were identified (Table 3):

- Centre for Innovation in Triple Helix
- Online Platform for Innovation
- Global Casting Project
- Project Step-Up
- Project Inspiring

As shown, these measures vary in form, scale and content, with very diverse costs.

It is worth mentioning that these actions also appear embedded in a broader rationale, drawing synergies from other local, regional or national projects that complement the actions outlined in the RUnUP (Table 4).

Following this interconnection logic it is essential to note projects, such as Urban Regeneration, which aims to make the city more attractive and dynamic, or Local 21 Agenda, where one of the commitments is to increase the competitiveness of the business sector. It is also important to integrate activities such as between TH Innovation Centre and Science and Technology Park of the University of Aveiro, of which this centre might be an integral part.

Noting that the Action Plan was being developed during the RUnUP project, some actions are already being implemented, as is the case with Inspiring Project, which is intended to be continued over several years.

Next, the actions already developed and to be developed under the LAP will be described in more detail (Tables 3 and 4).

ACTION	LEADER	PARTNERS	COST	FINANCING	LEAD TIME
Centre for Innovation in TH	CMA	UA/ESTGA/AEA/AIDA/ABIMOTA/ LIQ/ACOAG/CCDRC	*	Operational Programme of Competitiveness Factors - Axis V - Networks and Collective Actions for Enterprises Development	January 2015
Online Platform for Innovation	CMA	ESTGA/UA/ AEA/AIDA ABIMOTA/LIQ	60,000,00€	Equity	June 2012
Global Casting Project	CMA	APMEI/AICEP ¹⁰ AEA/AIDA/ABIMOTA/LIQ	*	*	January 2013
Project Step-Up	ESTGA/UA	IEFP/CMA	100 00000€	POPH ¹¹ / Equity	October 2012
Project Inspiring	CMA	UA/ESTGA AEA/AIDA/ABIMOTA/LIQ ACOAG/IAPMEI	*	*	November 2011

Table 3: Actions of the Local Action Plan of Águeda

¹⁰ AICEP – Agency for Investment and External Commerce of Portugal [Agência para o Investimento e Comércio Externo de Portugal], not a member of the LSG, but essential in this Project.

¹¹ POPH – Operational Programme for the Human Potential [Programa Operacional para o Potencial Humano]

			Action areas			
	Objective	Projects	Physical infrastructures	Support for entrepreneurship	Innovation and competitiveness	Networks
RUnUP Projects	1/2	Centre of Innovation in TH	x	x	x	x
	2	Innovation Online Platform		x	x	x
	2	Global Casting Project			x	
	1/2	Project Step-Up		x		
	1/2	Project Inspiring		x		
	Level	Projects	Physical infrastructures	Support for entrepreneurship	Innovation and competitiveness	Networks
Synergies	Local	Urban Regeneration	x		x	x
		Network Business Incubator	x	x	x	
		Lighting Living Lab		x	x	x
		Local 21 Agenda	x	x	x	x
	Regional	Office for Business Support	x	x		
		Industrial parks/Links to the Park of Science & Innovation	x	x	x	
		Urban Network for Competitiveness & Innovation (RUCI)			x	
	National	Finicia			x	
Action Plan for Competitiveness (with IAPMEI)				x	x	x

Table 4: Actions areas of development for Águeda

Centre for Innovation in Triple Helix

One of the key aspects to achieving innovation is the creation of spaces for research. However, these spaces are usually associated with a specific area, involving heavy structures in terms of human resources and having a very high financial leverage. In addition, it are usually not too broad, based mainly on creating new products that are important for the companies that produce them, but with little impact in the region where there they live.

Therefore, it was considered essential to find a new way to promote innovation of the entrepreneurial community and triple helix links more broadly. Therefore, it is proposed the creation of a Centre of Innovation in Triple Helix that will be a physical and formal liaison space between companies and knowledge centres, operating in areas where public policies have greater impact. It is expected that this structure will lead to cost savings because in practice it is assumed as a space of connection, rather than pure research and technological development.

The idea is that the structures of the Centre examine an issue raised by a company or a group of enterprises from a specific cluster, being the development of a product, technology or process, leading latter into a university research about technology or people with interest in developing the issue, and helping to formalize this connection. If successful, such networks will bring added value to the local productive community, creating a territorial competitiveness higher then the existing one.

Title	Centre for Innovation in Triple Helix
Project Leader	CMA
Partners	UA / ESTGA / AEA / AIDA / ABIMOTA / LIQ / ACOAG / CCDRC
Lead time	January 2015
Resources	Own resources and funding under EFDR [QREN]
Objective	Reinforcement of triple helix links at local level

Online Platform for Innovation

The Online Platform for Innovation aims to create more direct links between companies and knowledge centres, taking advantage of the Internet.

Its basic principle of operation involve the placement by companies in a digital platform companies, based on a specific site, of a problem that has arisen in terms of design, production, technology or process, waiting for some young graduate, researcher or university student, associated with the platform, to find the solution and then the sale it or possibly establish a partnership for its actual production with the company.

This mechanism can also work in reverse, with the young graduate/researcher/student to put an idea, concept or product on the platform that can be adopted for implementation by any company in the market, and in this case, it may be agreed an initial sale price of the idea, or possibly its joint development.

In a virtual world as the one in which we live today, this Online Platform can establish new forms of relationships between companies and universities, more flexible and with greater chances of success, and ultimately encourage entrepreneurship itself, because here there may be some start-ups resulting from connections made.

Title	Online Platform for Innovation
Project Leader	CMA
Partners	UA / ESTGA / AEA / AIDA / ABIMOTA / LIQ
Lead time	June 2012
Resources	Own resources
Objective	Development of efficient and creative solutions to solve business problems through the Internet

It must be noted that this Platform should present a physical component installed in the Network Business Incubator of Agueda or the Innovation Centre, working on a system of hot desking.

Global Casting Project

The growth in business in a county as Águeda, where the vast majority of these companies are exporters, inevitably involves the constant search for new markets for product placement, avoiding excessive reliance on traditional markets and currently in crisis, such as the case of Spain. Following this logic, it is essential to create mechanisms that allow access to new markets, which is not always easy to achieve for micro, small and medium-sized enterprises.

What is proposed with this project is to develop specific events throughout the year, for which AICEP – Agency for Investment and External Commerce of Portugal [Agência para o Investimento e Comércio Externo de Portugal] will invite important multinational companies, looking for new products or processes to improve their competitiveness, or just to see products and services presentations developed by local companies.

This action, which will be held twice a year, will have economic impacts not only in business but also in terms of innovation, since the production of a specific product may lead to the need of the subcontractor to upgrade production processes, importing technology for this purpose.

Moreover, importing technology is not necessarily fatal to the ability to innovate, because vendors are a major motivating factor for innovation, enhancing the fact that innovation of the production process is as important as innovation of the product.

In this action, the role of AICEP will be fundamental for the establishment of external contacts with larger companies and, therefore, a strategic partner to engage in this action.

Title	Global Casting Project
Project Leader	CMA
Partners	IAPMEI / AICEP / AEA / AIDA / ABIMOTA / LIQ
Lead time	January 2013
Resources	Own resources
Objective	Exploring new markets, boosting innovation

Step-Up Project

One key aspect, as noted in the Baseline Study, is the need to upgrade human resources in Agueda, including skilled unemployed (some with higher education). This could be done through the creation of new courses or areas of training in essential areas for economic development. In addition, it is also essential to create a new generation of entrepreneurs with access to knowledge and expertise offered by the university in order to reach new market opportunities.

Thus, the aim of this project is to create integrated measures for the training of medium and long duration to enable skills acquisition adapted to market needs, seeking to lower the high unemployment rates that are felt at the moment.

Towards this objective, it is fundamental the participation of institutions of higher education and IEFP – Institute of Employment Professional Training [Instituto de Emprego e Formação profissional], through the Professional Training Centre of Águeda [Centro de Formação Profissional de Águeda], since these are the best qualified entities to develop such training. These courses should always take into account the dynamics of the business community and, to this end, it shall be consulted the GSL members when to define the issues to be addressed.

This situation will require some adaptation of the existing training offers at higher education institutions, or even create new courses, including Level IV and V or higher. However, it is also important to create entrepreneurship courses that allow potentiating micro and small business by people without higher education.

Title	Step-Up Project
Project Leader	ESTGA/UA
Partners	CMA/IEFP
Lead time	October 2012
Resources	Own resources
Objective	Lead to a reduction of graduates (and not graduates) unemployment rates by promoting self-employment

Inspiring Project

One of the most important aspects regarding the establishment of triple helix is linked to the need to blur boundaries between the three helices. For that, as stated in the strategic model, informal and personal relations are sometimes much more profitable in terms of common project implementation than the formally established relations.

Therefore, it is important to establish a regular space for dialogue, in an informal setting, attended by companies, public sector and universities, where cross-cutting issues are discussed and the solution may lie in cooperation between them.

In the case of Águeda, it has been decided to start this project at a prior stage to the completion of the present LAP, since it was considered that it could help in building the plan itself, to allow better perceive the problems in training, spontaneous or not, of the triple helix.

Thus, the first meeting was held in October 2010 and it are already planned further meetings for the year 2011, to succeed on a regular basis, every two months. The great advantage of this project lies not only in its almost non-existent implementation costs but also, and above all, in the ability that it may have to create a dynamic approach, which creates an economic community more aware of the need for networking as a way of survive, especially at this juncture.

Title	Project Inspiring
Project Leader	CMA
Partners	UA / ESTGA / AEA / AIDA / ABIMOTA / LIQ / ACOAG
Lead time	November 2011
Resources	Own resources
Objective	Lowering barriers between companies, the public sectors and higher educations institutes

Conclusions

This Local Action Plan was developed by LSG constituted under the RUnUP Project and that allowed a discussion about what problems exist in the municipality of Águeda, as well as about the difficulties of setting up links in triple helix. In fact, this discussion has generated a set of ideas (not all embodied in this document), whose implementation can generate very positive effects in the future.

The presented actions - Centre for Innovation in Triple Helix, Online Platform for Innovation, Global Casting project, Project Step-up and Project Inspiring - are a result of the development of the RUnUP Project, giving them a high degree of importance as they emerge as statements of felt needs by the major actors in local development. These actions are essentially related to the digital age and how it can revolutionize communication, and allow connecting different areas of action, focusing on special events (more or less informal) in order to maximize the establishment of sectoral partnerships.

The proposed actions in this Plan focus on four key areas, including: support for entrepreneurship; strengthening innovation and competitiveness; networking establishment, and; building of physical infrastructure, with reduced weight.

It should be noted also that the projects outlined, and as already observed, complement the existing strategy in Águeda when it comes to building networks and partnerships, which projects like RIC Águeda or LLL were and are an example. In fact, it is important to establish synergies between proposed actions and other existing projects, in order to strengthen the local territory, making it more attractive and competitive.

The proposed actions will certainly contribute to a shifting paradigm process, which is already being felt in Águeda, accelerating the development of an entrepreneurial, local government and universities culture, rooted in the development of common strategies that will result in positive externalities for all.

Thus, and given that some of the planned projects may have more or less difficulty in being implemented, is crucial to reflect if the most important issue has gone through discussion and reflection carried out by the LSG during the project, about the county and its weaknesses and potentialities. Therefore, it is expected that this may contribute to a LAP of Águeda better and more competitive locally, regionally, nationally and internationally.

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