

20 “Tenerife: a Knowledge Hub at the Atlantic”

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Canary Islands is one of the main touristic destination of Europe, with more than 12 millions of visitors per year, stressing a territory of 7446,95 km² with only 2,1 millions of residents. This scenario has developed a societal structure highly driven to the service sector, real state and low qualifications jobs.

The economical crisis in the last years has generated a great social breakdown, driving to all the region to become one of the highest rate of unemployments of the EU. As you probably know, this long term crisis has produced great proportions of population closer to poverty and an enormous desperation concerning to the perspectives to get a job, mainly to young people.

However, this dramatic situation has reactivated the idea to convert all the region and, in our case of study, the island of Tenerife in a knowledge hub which could connect Europa, Africa and Iberoamérica, by similar status (Europe), by proximity (Africa) and by cultural and historical linkages (Iberoamerica).

In this article we resume some of the main facts which we assume that would help to get this goal by attracting investors, support entrepreneurs and promote innovative business, highly based on knowledge, taking the maximum benefit from the Intellectual Capital of the region and generating a more promising future for the young generations.

20.1 Tax benefits

The network of companies based in the archipelago benefits from a stable legal and tax system that also has direct access to bilateral agreements with different countries in Africa.

Businesses that decide to operate from Tenerife will immediately benefit from privileged conditions under the protection of the islands' status as an ultra-peripheral region of the European Union. It should be added that the Canary Islands channel part of Europe's support programme in the north-west of Africa.

All of this provides opportunities for companies that operate from the Canary Islands to access the support, cooperation, arbitrage and institutions of the European Union and chiefly the Canary Islands Tax and Economic System (REF). All of this translates into investment opportunities, and tax and customs advantages.

20.2 Singular infrastructures

Tenerife enjoys modern infrastructures across all sectors. Two ports and two international airports, advanced telecommunications infrastructures, as well as large industrial areas.

There has been a high level of development in recent years with over seven million tourists visiting the island in 2012 and an active population of over 800,000 residents.

- Modern hospitals and health centres. These are a national benchmark, mainly in specialised areas such as kidney or liver transplants.
- Public and private education establishments. The University of La Laguna currently has over 23,000 active students who can choose from a long list of specialities to train for their future in complete confidence.
- Tenerife hosts a campus of the renowned Universidad Europea. Connected with universities around the world with an education system with a strong international focus.
- Transport and communications. The island has two international airports and two commercial ports. This means there are wide business opportunities since they are the main arrival points for tourists and entrepreneurs.
- Environmental infrastructures. Tenerife has a modern solid waste infrastructure. One of the island's main values is its commitment to sustainability and respect for the environment.

ITC Facilities

The ALiX project is a proposal from Tenerife Island Council, headed by the Technology and Renewable Energies Institute (ITER) and aimed at promoting competitiveness on the island with regard to the global ITC market, eliminating the structural shortcomings in the Canary Islands for the Information and Communication Technology sector.

Thanks to ALiX, the Canary Islands are twenty years ahead of other European ultra peripheral regions. It is the most strategic plan in the Canaries in the last fifty years.

The main aim of ALiX is to improve competitiveness in the Information and Communication Technology (ITC) sector in Tenerife and, by extension, in the Canary Islands. The Council has thus committed to making Tenerife and the Canary Islands a real information technology platform for Africa, America and Europe, having quantitative and qualitative broadband capacity at a competitive price in addition to offering free access for all operators to the neutral ALiX infrastructures.

The three pillars of the project

In order to carry out the project, ALiX comprises three main pillars:

- The Telecommunications Technology Institute of Tenerife (IT3)

This public operator was created by the Tenerife Island Council for the ALiX project and is responsible for rolling out a land-based island ring of fibre optic cable around the entire island (running alongside the motorway).

- CanaLink

CanaLink has laid and implemented a system of neutral submarine cables between Rota (Cadiz) and Granadilla de Abona, Tenerife, where the ALiX project data centre is located, in addition to an offshoot towards north Africa (Morocco). The aim is to liberate the sector and provide new alternatives to current operators (or with expansion plans in the Canary Islands) since the only cable before between the mainland and the Canaries belonged to Telefónica. CanaLink has rolled out two further cables: Tenerife – Gran Canaria and Tenerife – La Palma.

Furthermore, thanks to the new CanaLink infrastructures, coverage of the Spanish academic and research network (RedIRIS) has been extended, offering three points in the Canaries: the first two at the University of La Laguna and the main headquarters of the Astrophysical Institute of the Canary Islands on the island of Tenerife and the third at the Roque de los Muchachos Observatory on the island of La Palma.

- Datacenter ALiX (D-ALiX)

The implementation of the ALiX project data centre represents a neutral three-continent aggregation and distribution point, as well as the southern European gateway in terms of telecommunications. The management equipment for the communications trunk network is located at D-ALiX, housing the IT services of the Island Council, RedIRIS and most town councils on the island of Tenerife, as well as equipment from CanaLink and IT3. In addition, the data centre provides installation space to provide services to businesses and operators, benefiting from the ability to house their technology platforms at a neutral high-availability infrastructure (TIER III+).

The proximity to the coast of D-ALiX means it can be a landing station for the ALiX project submarine cable system, with businesses housed at the data centre being able to reach the European and African continents and, in the future, America. D-ALiX is located at the facilities of the Technology and Renewable Energies Institute (ITER) on the Granadilla de Abona Industrial Park – a completely renewable and sustainable setting.

20.3 Scientific and Technological Park

The Tenerife Science and Technology Park (PCTT) aims to efficiently, effectively and sustainably foment the creation and develop of innovative technology companies in Tenerife through creating different innovative settings where land and spaces, infrastructures and appropriate services are on offer.

The PCTT is the right-hand of Tenerife Council with regard to business innovation and support for Research and Development (R&D).

- It has two business incubators for innovative and technology projects located at the Santa Cruz de Tenerife Exhibition Site (Innovaparc) and the Main Campus of the University of La Laguna (Scientific-University Node). The first is practically full with only one free office remaining, whilst the second has the whole of floor five available in the building, with a surface area of 549 m². The incubator has a total surface area of 1,647 m².
- The tender process for the planning project of the future Science and Technology Park in Cuevas Blancas is currently underway, where over 260,000 m² will be available for setting up technology businesses and organisations to carry out research, development and innovation projects mainly in Information and Communication Technology and Innovation in Tourism. In all, both the planning for the area and the construction of the main building are expected to be ready for February 2016.
- The third pole will be a university related area, devoted to three main areas of specialization, all strongly related with the Key Enabling Technologies (KET): Astrophysics, Nanotechnology and Advance Materials, Biotechnology and Biomedicine, and Sustainability. This facilities will be finished at the end of 2016.

20.4 Conectivity

Tenerife is an excellent commercial, logistical, business, and service and technology transfer platform between continents

The Canary Islands are a European Union territory located between three continents. Their excellent airport and telecommunications infrastructures turn their geographical location into an opportunity, whilst also having European legislation, regulations and standards.

It is the ideal location to operate in the three continents: Europe, America and Africa.

The main resources are the following:

- Connection with 147 international airports by the performance of more than 79 airlines working in our airports
- Connection with 278 ports
- 6 international cable systems connecting Europe, America and Africa

20.5 University Campus of Excellence

The University of La Laguna, together with the another public university of the Canary Islands located at Gran canaria island, have joined forces to develop the Tri-Continental Atlantic Campus, a space of excellence that, by this 2015, must be an Atlantic Benchmark in Europe as an axis that receives and catalyzes talent in teaching research, innovation and transfer projects with Africa and Latin America in Marine and Maritime Science and Technology, Biomedicine and Astrophysics, under the common denominator of a development model of integral sustainability.

The Campus will be an indispensable element in the development towards the new economic, production and social structure of the Canary Islands. Improved competitiveness is based on a sustainable, global approach that will consolidate key sectors, promote new sectors linked to the fields of specialization of the Campus and help to create employment.

The Canary Islands Atlantic Tri-continental Campus will act with particular attention in the areas of specialization that are unique, given the characteristics of the Canary Islands Archipelago and the geostrategic situation closet he Africa and bridge to Latin-America:

- Sea-related fields: Marine (Marine Science and Technology), Maritime (Tourism, Economics of the Sea-Mobility-Logistics)
- Astrophysics
- Biomedicine applied to Development Cooperation

These three areas will function under one common denominator: Integral Sustainability. In this sense, teaching and research will be closely linked to sustainability. The integral nature of the concept lies in its relationship with the environment, with the economic development of the Islands and Development Cooperation with Africa and Latin-America, as well as with the urbanistic elements for transforming the campus—some of which are environmental. A global sustainable economy within the framework of the Tri-continental Atlantic Campus means working for the conservation and good use of environmental resources, new personal mobility models (tourism and immigration) and merchandise (Logistics).

After three international evaluations, the project has been graded with A, showing the enormous potential of the universities as engine of the change in the region.