

Services



# Civil works





# The datacenter

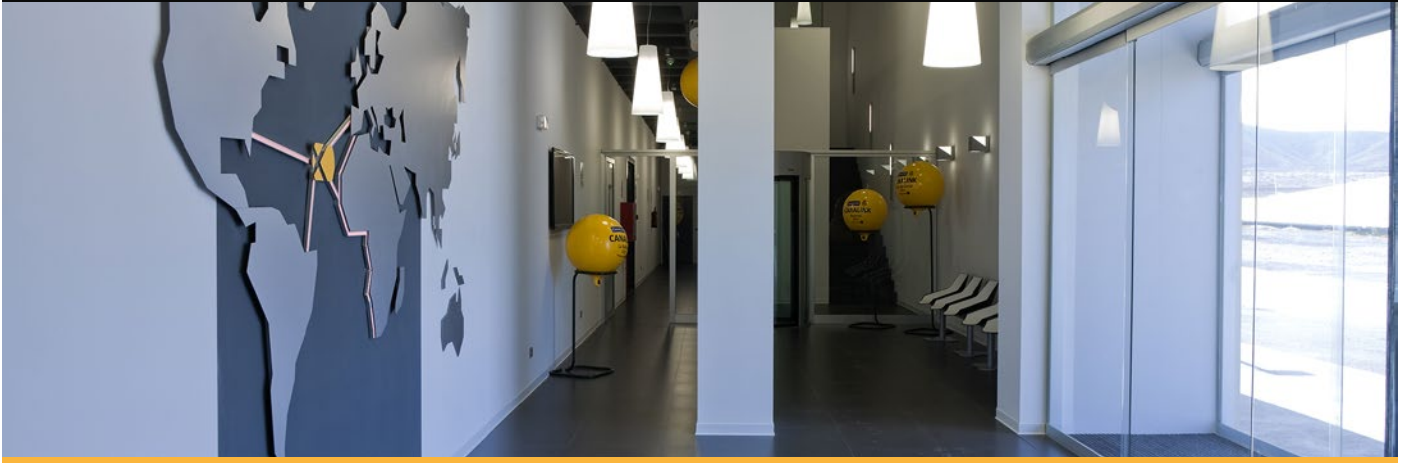
“Thanks to the ALiX project, we have turned Tenerife into the most technologically advanced island of the Oriental Atlantic. It’s the most strategic plan of the Canaries in the last fifty years.”

— Ricardo Melchior (President of the Council of Tenerife, 1999 - 2013)

“With the ALiX, our insular development is strictly connected to the capacity of converting ourselves in an attractive territory for the global economy.”

— Carlos Alonso (Current President of the Council of Tenerife)

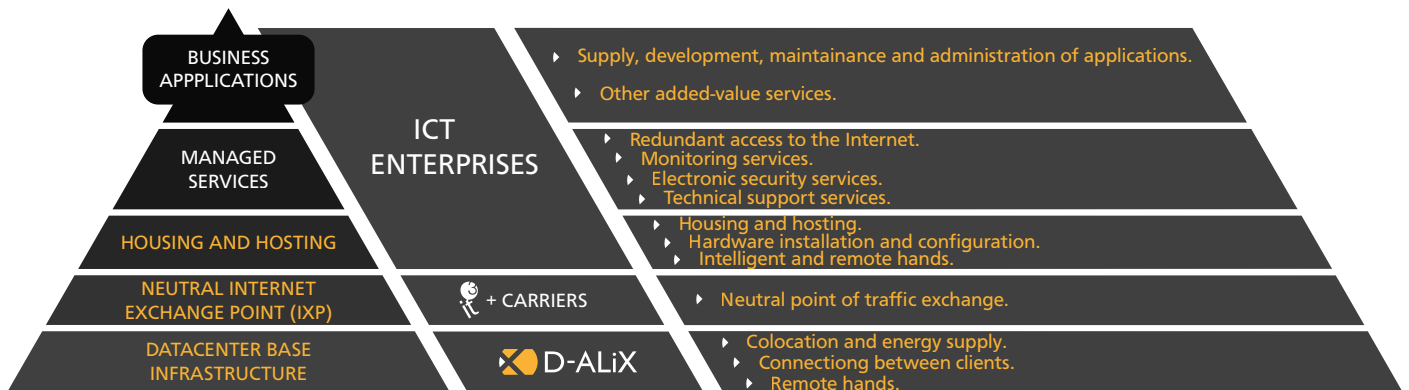
# The company



## Introduction

The neutral datacenter D-ALiX (neutral access point of Western Africa and Canary Islands S.A.) is situated in the Instituto Tecnológico y de Energías Renovables (Technological Institute and of Renewable Energies, commonly abbreviated as ITER) premises in the island of Tenerife.

D-ALiX consists in a high-availability infrastructure aimed at IT colocation services, allowing our clients to develop their business model without the need of large investments and taking advantage of the economies of scale conveyed by the infrastructure promoter.



Positioning in the datacenter industry

## Acknowledgement

D-ALiX was awarded at the **Datacentre Leader Awards 2010** in the "Innovation in an Outsourced Environment" category, recognizing its modularity, scalability and flexibility that, along with its geographical location and international connectivity, converts it in the datacenter of reference as South gateway of Europe. The datacenter has also been finalist in

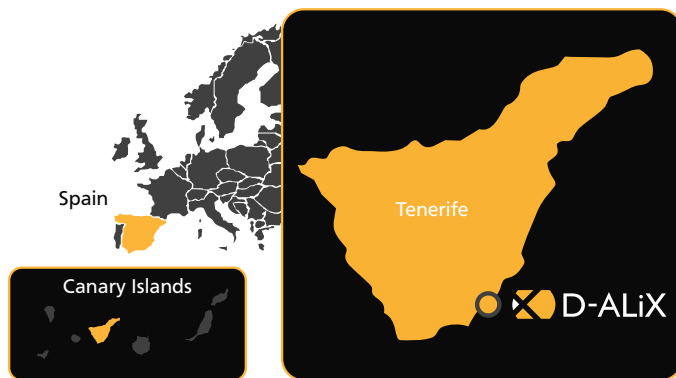
several European awards:

- **Data Centres in Europe Awards:** "Energy Efficiency" category.
- **European Outsourcing Association (EOA) Awards:** "Award for Corporate Responsibility" and "Offshoring Destination of the Year" categories.

# Benefits

## Location

An ideal location as it is situated at the Instituto Tecnológico y de Energías Renovables (ITER) site and next to the Parque Científico y Tecnológico de Granadilla (Scientific and Technological Park of Granadilla). This location means an easy access to the datacenter through the TF1 motorway – the Tenerife South airport is less than 10km away, the future seaport of Granadilla in the surroundings, the Tenerife North airport less than one hour by car and the seaport of Santa Cruz de Tenerife is slightly over 50km away.



## First class infrastructures

State-of-the-art facilities, categorized as TIER III+ due to its high levels of reliability. D-ALiX also receives the TIER IV configuration in its electrical infrastructure thanks to its redundancy.



## Neutrality

Our clients can benefit from open access to any carrier housed in our datacenter due to the neutral characteristic of D-ALiX, which provides high levels of connectivity and quality of communications.

## Service guaranteeing and security

High levels of cooling, electrical availability and strict security systems, apart from resiliency to inclemencies in case of environmental disasters, allowing technological equipment housed at D-ALiX to be operative 24x7x365.

## Tax benefits

### IGIC 7%

The Impuesto General Indirecto Canario (IGIC), which offers benefits with regard to the IVA (Value-Added Tax).



### ZEC 4%

The Zona Especial Canaria (ZEC), to which 4% of Corporate Income Tax applies (instead of 30% of the General Scheme).

### RIC 90%

The Reserva para Inversiones en Canarias (RIC), allowing for a reduction of up to 90% of undistributed profits on the Corporate Income Tax base.

## Scalability

A modular design, allowing a horizontal expansion rather than floor by floor, offers a more adapted service to your needs and business, optimizing the necessary investment.

## Green datacenter

D-ALiX is framed within a sustainable environment, where renewable energy production exceeds demand by far. The datacenter directly incorporates in its roof 400kW of photovoltaic production. This way, your equipment will be housed in a “green” infrastructure without CO<sub>2</sub> emission (carbon fingerprint).



Furthermore, D-ALiX is located at ITER’s wind farm. Twenty years ago, the experimental wind farm (2.83 MW) was installed as a testing platform for different manufacturers and technologies. This installation has served as a basis regarding the implementation of wind power in the island at a large scale. At present, ITER holds a 4.8 MW wind farm, consisting of 8 MADE AE-46 wind turbines of 600 kW power each, producing an annual power of 14 GWh. The photovoltaic plant installation also plays a significant role at ITER’s infrastructure, providing a total of 37.7 MW and distributed in the following way:

- **SOLTEN I**: 13 MW at the Polígono Industrial de Granadilla (Granadilla Industrial Park).
- **SOLTEN II**: 7 MW at the Polígono Industrial de Granadilla and 4 MW at ITER’s site.
- **Finca Roja**: 3.6 MW in Arico.
- **Finca Verde**: 9 MW in Arico.
- **Metropolitan**: 600 kW and 280 kW in Santa Cruz de Tenerife.
- **MERCATENERIFE**: 200 kW in Santa Cruz de Tenerife.
- **Orquidario Lycaste**: 80 kW in Valle Guerra.
- **Casa del Ganadero**: 17.67 kW in La Laguna.

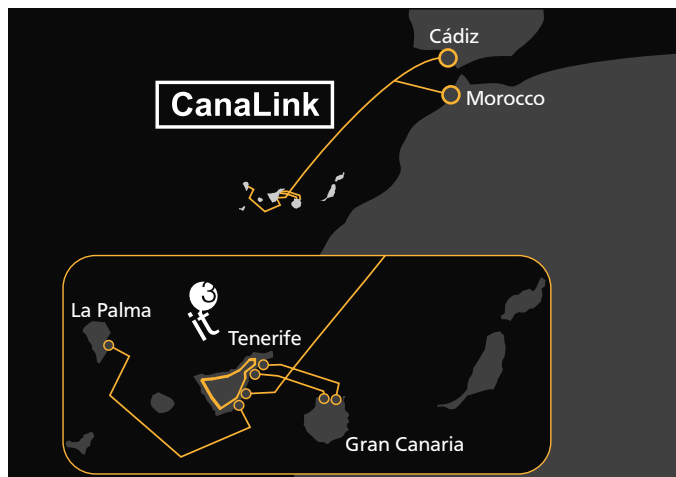
To meet the increasing demand in the photovoltaic market, a photovoltaic panel production factory was constructed at ITER’s site. The aim is to boost diversification of the local market and create a product of great added value.

Next to the datacenter, we can find the bioclimatic houses complex (Casas Bioclimáticas ITER), helping in maintaining a sustainable environment as they are self-sufficient in power supply with zero CO<sub>2</sub> emissions. The houses were developed using bioclimatic architecture criteria, optimizing its adaptation to the environment and climate. The 24 houses that comprise the development can be self-sufficient in an energetic point of view due to the use of solar panels and photovoltaic. Therefore, they form an autonomous, non-pollutant, green spaces and inspired in ecological principles.



## National and insular connectivity

D-ALiX is the first neutral submarine cable station in the world delivering direct connectivity to mainland Spain (including a branch towards Morocco), and to the islands of Gran Canaria and La Palma through the three CanaLink submarine cables which provide open access. The submarine cable systems' physical architecture consists of a new cable of 4-fibre pair, each pair with a capacity of 128x10 Gbps. Furthermore, redundancy is achieved between Tenerife – mainland Spain and Tenerife – Gran Canaria through the Pencil 8 and Candalta cables due to a fibre exchange agreement with another existing submarine telecom carrier.



We can add to this the insular terrestrial ring deployed by the Instituto Tecnológico y de Telecomunicaciones de Tenerife (IT3), which travels around the island of Tenerife. This local infrastructure is available for use by all carriers upon a model which assures free competition. With this backbone network, carriers will be able to use their access networks to reach their respective markets within a competitive framework and within equal conditions.

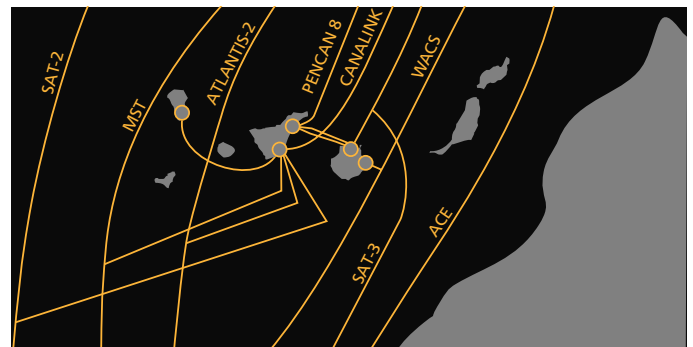
IT3's network also offers the South point of presence of the Spanish academic and research network (RedIRIS). The aim of RedIRIS is to provide advanced communications services to the national scientific community and universities, and is financed by the Ministry

of Science and Innovation. The RedIRIS-NOVA project has been able to connect the islands of Tenerife, Gran Canaria and La Palma with a new fibre that supports up to 96 circuits of 10G.

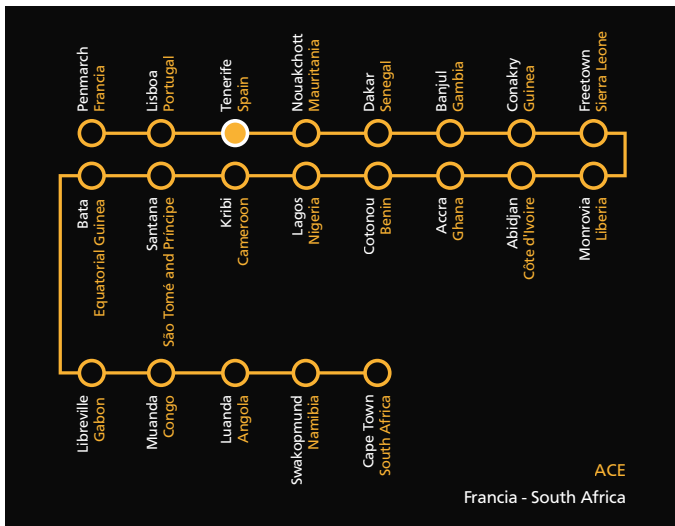


## International connectivity

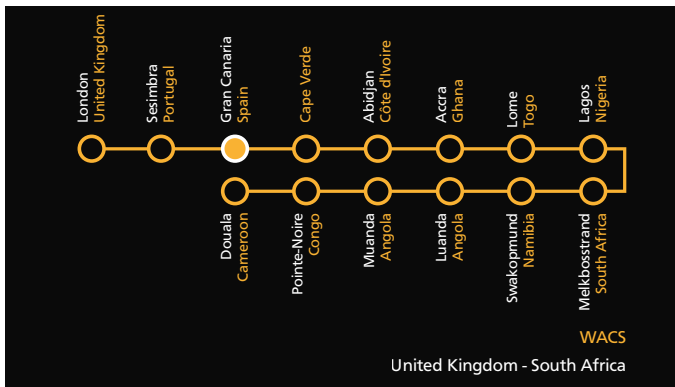
We offer the option to develop your business in a continent such as Africa, thanks to the possibility of connecting through D-ALiX to any of the international submarine cables ACE, WACS, MST, SAT-3, Atlantis-2 or SAT-2, which travel along the Western African coast.



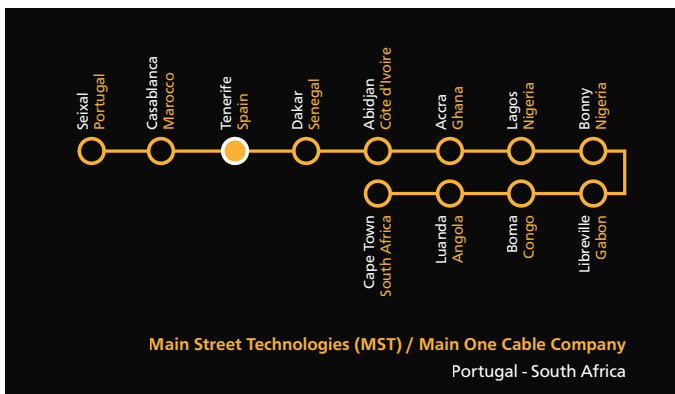
**ACE (Africa Coast to Europe)** is formed by a consortium of 25 carriers (primarily France Telecom) to develop a 17,000km cable stretching from France to South Africa, connecting it its way Portugal, several countries of the Western African coast and reaching Cape Town. The cable is estimated to go live on the second half of 2012.



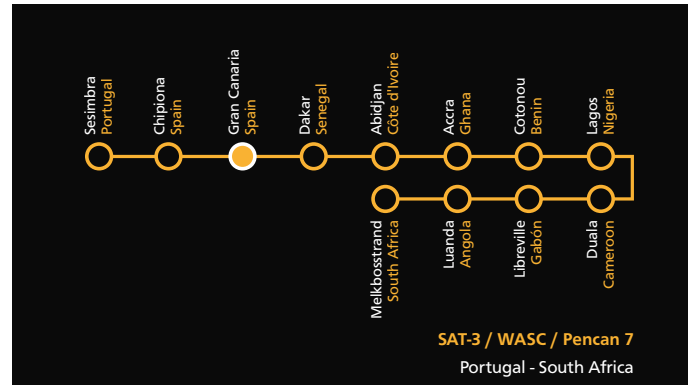
**WACS (West Africa Cable System)** is a consortium of 13 carriers, with a major participation of Vodacom and Telkom, to develop a cable between London and South Africa. The cable, which stretches along 14,000km, will also have landing points through the entire Western African coast and the Canary Islands.



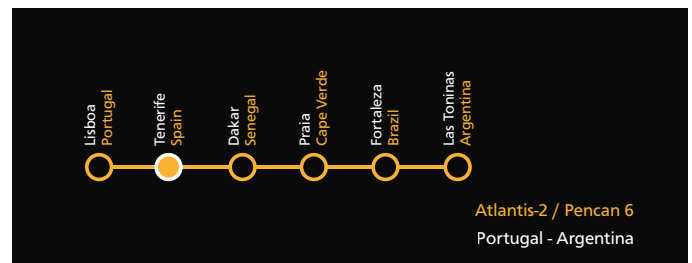
**MST (Main Street Technologies)** is a private cable carrier comprised of African and American capital. Operating since July 2010, it joins South Africa, Tenerife and Portugal to then reach London and New York using existing networks.



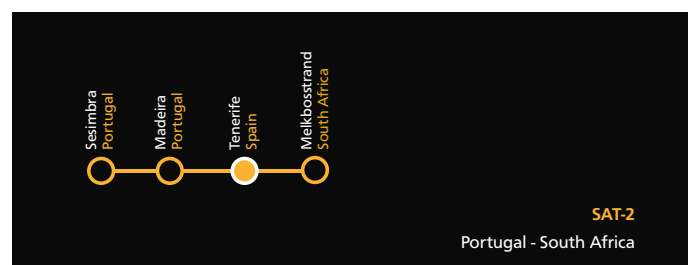
**SAT-3 (South Atlantic-3)** was built in 2001 by a consortium consisting of 36 nations. It links Portugal and Spain with South Africa travelling 15,000km and with landing points in the Canary Islands and several African countries. In South Africa, it connects with the SAFE cable to reach Asian countries such as India and Malaysia.



**Atlantis-2** started service in 1999. It was built by a consortium of 25 carriers including France Telecom, Deutsche Telekom, Telecom Italia and Telefónica. It connects Portugal, Tenerife, Senegal and Cape Verde with South America (Brazil and Argentina), travelling along 13,000km.



**SAT-2 (South Atlantic-2)** came live in 1993 and is owned by a consortium between Telkom SA, Telefónica, Marconi, British Telecom, France Cables et Radio and Deutsche Bundespost. It travels 9,500km, linking Portugal with South Africa. In its way, it also reaches Madeira and Tenerife.







# Housing

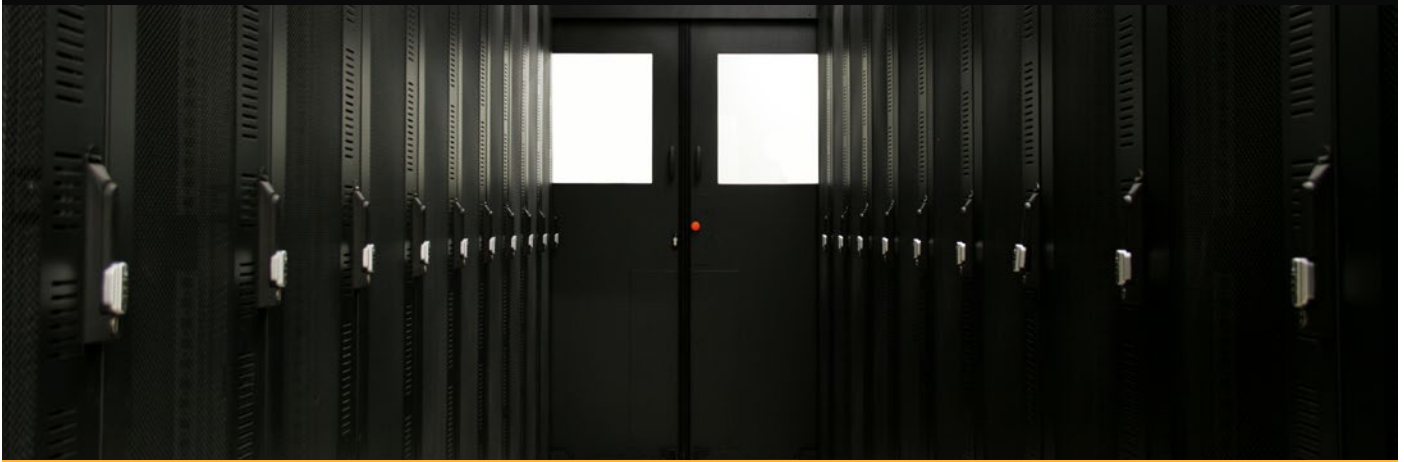
“The housing services of D-ALiX are currently the ones that offer the highest rate of availability and reliability in the Canaries, helping to improve the TIC infrastructures in the islands”.

— Manuel Cendagorta-Galarza (Chief Executive of the Instituto Tecnológico y de Energías Renovables, S.A.)

“D-ALiX includes first class infrastructures that guarantee the high quality of its services. Furthermore, its state-of-the-art infrastructures allows the datacenter to be an example in the sector due to its renewable energies integration and help in having a much more sustainable environment.”

— Antonio Hernández (Director of CanaLink)

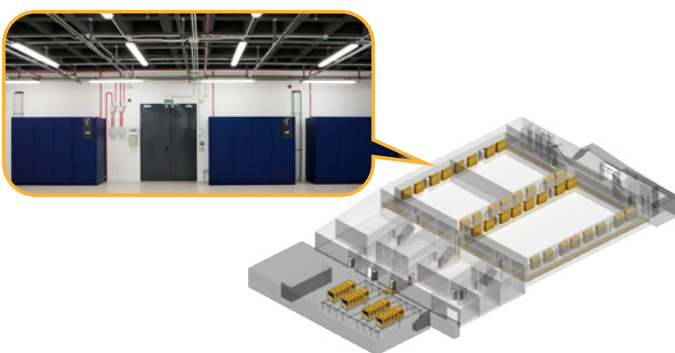
# Infraestructuras de housing



Our housing solutions offer a secure, reliable and high-availability environment to house your technological hardware in a flexible way and without any worries, as D-ALiX manages and maintains all infrastructures 24x7x365.

## A redundant cooling system

D-ALiX balances the main air flows to obtain optimum temperature values. Our redundant water chillers provide a correct management of the flow volume and temperature to the equipment housed in the datacenter. The redundant Computer Room Air Conditioning (CRAC) system communicates with the chillers through the Business Management System (BMS).



The hydraulic circuit implemented in the installations of the datacenter features a main double manifold and a double discharge and return circuit with capacity to cool any space in both building floors. D-ALiX implements room moistening in its cooling system, allowing to maintain a relative optimum humidity for the operation of our clients' hardware.

Each and every room designated to house IT equipment is equipped with discharge / extraction air treatment systems. These systems will keep a higher air pressure in critical areas, preventing the entry to particles which could negatively affect the equipment. Furthermore, these systems will guarantee the quality of the air inside the rooms through filtering and circulation techniques.

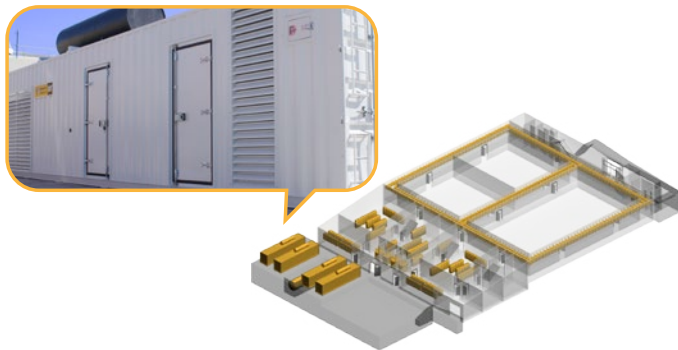
The datacenter has been designed to implement a cold aisle / hot aisle system, distributing the cold air source away from the hot air discharge, cooling the high temperatures that the datacenter can reach. Lastly, our Automatic Flow Pressure system allows to measure the ground flow air pressure at any time, helping to manage its flow.

CHILLERS	2 N
CRAC's	2 N
DOUBLE DISCHARGE AND RETURN CIRCUIT	2 N
ROOM OVERPRESSURE	✓
HUMIDITY AND AIR FLOW CONTROL	✓

TIER III+

## Guaranteed uninterrupted electrical supply

The electrical infrastructure of D-ALiX is designed to guarantee reliability and flexibility, providing you electricity indefinitely even in case of electricity supply failure.



The infrastructure is comprised of a double power supply, a redundant system of power generators (2N), uninterruptible power supply systems (2N+1) and transformation center (2N). All to provide a 48-hour autonomy at full load (2N deposits) with an electrical infrastructure that has been classified as TIER IV.

DOUBLE POWER SUPPLY	✓
UPS	2 N +1
TRANSFORMATION CENTRE	2 N
POWER GENERATORS	2 N
24-HOUR AUTONOMY	✓
REDUNDANT ELECTRIC PANELS	✓

TIER IV

## State-of-the-art fire protection system

The datacenter is equipped with the most advanced detection and extinction systems. The detection system operates through the use of optical and extraction sensors, allowing a high sensitivity early smoke detection apart from a high immunity to false alarms.

As far as the extinction system is concerned, it is comprised of water mist in IT rooms and gas extinction in the transformation centres and battery rooms.



## A flawless monitoring system

All the infrastructure from D-ALiX (security, electrical, cooling, fire protection, etc), whether shared or dedicated to a particular client, is monitored 24x7x365 and operates uninterruptedly within the operative procedures that a critical system of these characteristics requires. This way, we can anticipate to any possible failures and prevent problems that could seriously affect your applications later on.

Thanks to the Business Management System (BMS) implemented at the D-ALiX network operations centre (NOC), all information can be centralized, obtaining immediate notifications if any irregularity is detected in the facilities.



## Strict security

Regarding the security at the datacenter, you will benefit from a surveillance system which operates 24 hours a day, 7 days a week and all 365 days of the year.

The high security system implemented in the datacenter is features the following characteristics:

- **Fencing security.** Includes a fencing system and the presence of security personnel physically at all time. This way, D-ALiX complies with the strictest procedures regarding security.



- **Closed-circuit television (CCTV).** This security measure follows strict operational procedures to guarantee security in all areas of the datacenter.



- **Access control.** Access to the datacenter is strictly regulated through the use of electronic cards for authorized personnel. Rooms and suites are also regulated so that clients that use these housing solutions are the only ones that are authorized to access their own private space.



- **Intercom.** The intercom system implemented in all of the datacenters' rooms allows, at any time, communication with security and control personnel.



- **Public address (PA) system.** The public address system allows all personnel from the network operations centre to communicate with any area of the datacenter.



# Modalidades de housing

Depending on your needs, D-ALiX offers you up until four different housing solutions.

## Rack

The most basic housing solution at D-ALiX are colocation racks. Each rack includes a dedicated power feed, proceeding from a shared power distribution supply.



Racks are located in a shared space along with other racks and each features an individual lock, maximizing the available space. Each client can house, at least, one rack or install its own, as long as it meets the measures established by D-ALiX.

The racks solution is ideal for clients that are looking into subcontracting critical hardware, establish themselves in multiple strategic locations or simply wish to increase their available surface at the same time that their space requirements increase.

## Cage

This private space, built to the exact space requirements of each client, guarantees that the technological hardware will be up and running in a short period of time.



Under this type of housing, cooling, fire suppression and electrical panels will be shared with other clients. In comparison to the racks solution, cages offer the advantage of not being restricted to a specific size, allowing clients to contract exactly the square meters that they require, being able to upscale or downscale the cage space in the future.

This solution suits perfectly to clients that are looking for more privacy, as space is not shared with other clients, taking advantage from a private space that is physically separated from the rest of the room.

## Private suite

Private suites at D-ALiX consist of a dedicated space in the datacenter, adapted to the specific needs of each client.



The fire suppression and temperature control infrastructures are shared. Power supply is dedicated and the access control to the suite is exclusive to the client.

Each private suite is separated from other areas of the datacenter through opaque walls, restricting the view. As the cages solution, the private suite solution also offer complete modularity.

The largest enterprises, which need more space and security for their resources, will be the ones which will benefit the most from the private suite solution.

## Private room

With the aim of adapting furthermore to your requirements, the solution of private rooms has been developed.



Located in the datacenter, each private room provides a completely exclusive infrastructure and is physically separated from the rest by partition walls. Through this solution, each client can enjoy exclusive services such as access control, electric panels and fire suppression systems.

The private rooms' solution is orientated to enterprises that look for further security for their hardware.



# Services

“There is no doubt that one of the strengths of D-ALiX in comparison to other datacenters is its capacity to adapt to the requirements of each client offering, apart from housing, a wide range of additional services.”

— **Jesús Rodríguez (Engineering Director of ITER)**

“With the commissioning of the ALiX project, one of the main benefits that enterprises belonging to the Insignia Empresarial cluster are going to notice will be the saving in infrastructure expenditures.”

— **María Luisa de Arcos (President Agrupación of “Insignia Empresarial” cluster)**

## Hands and eyes, and system maintenance



Thanks to the hands and eyes service of D-ALiX, your hardware will be operative 24 hours a day and 7 days a week. If any maintainability or operational roles are required to be performed to your hardware in the datacenter, D-ALiX technicians will be at your service as they have the experience and have been trained to perform these tasks.

Some of the roles that our technicians may perform are:

- Tasks that need the presence of a level 1 technician, which will perform the tasks following your instructions and requirements.
- Reception of your equipment, as well as photographs of the hardware and datacenter space.
- Cross-connection from your hardware to the patch-panel.





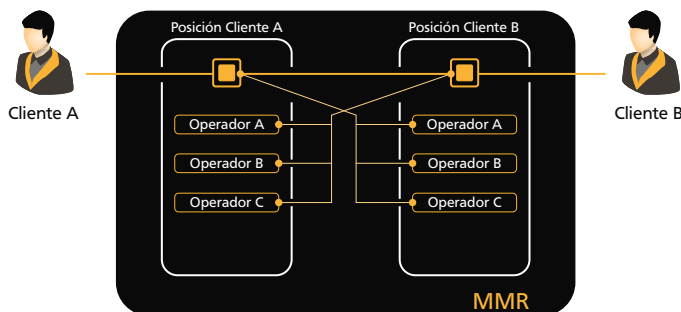
# Meet-me-room



The D-ALiX meet-me-room (MMR) is the ideal place to establish interconnections. The D-ALiX meet-me-room will allow these interconnections through twisted pair, coaxial and fiber optics, and in a completely neutral way.

Once connected to the meet-me-room, you will have total availability and freedom to interconnect with those carriers or clients located in the room at no cost. The only expense will be the internal cabling.

Cabling should be undertaken from the location of the client to the MMR, and the client should acquire a circuit or position in the dispatcher of the room.



Esquema meet-me-room

## Coworking



The modular design of D-ALiX enables us to offer you services even more adapted to your requirements. The office spaces are fully equipped with tables, chairs and individual drawers, apart from shared cupboards and power sockets.

The Wi-Fi signal and hotspots in these coworking spaces will allow you to be remotely connected to your hardware and enterprises at all time. Everything you need to guarantee a comfortable space for you to work.

Characteristics:

- Individual table with chair.
- Drawers with locker underneath desks.
- Ergonomic design.
- Cupboards with lockers for additional space.
- Power sockets.
- Network sockets for high-speed Internet access.
- Wireless Internet access (Wi-Fi).
- Air conditioning (AC).
- Parking space.



## Conference and contingency rooms



From D-ALiX, you can have at your disposal exclusive and completely equipped spaces where you will be able to organize your private meetings inside the datacenter. In the same way and in the contiguous facilities of the ITER, we also offer you the possibility to use our training rooms or assembly hall.

The conference room inside D-ALiX facilities can also be used as a contingency room. In an event of not being able to access the datacenter, there are also two more rooms at the ITER premises that can be used for contingency purposes.

Características:

- Table with chairs for a capacity of ten people.
- Ergonomic design.
- Cupboards with lockers for additional space.
- 55" Full HD TV with the possibility to connect external devices.
- Real-time video streaming for conferences.
- Power sockets.
- Network sockets for high-speed Internet access.
- Wireless Internet access (Wi-Fi).
- Air conditioning (AC).
- Parking space.



## Warehouse



Para complementar nuestros servicios de alojamiento y con el fin de facilitar a nuestros clientes la instalación de sus equipos y materiales ponemos a su disposición dos tipos de almacenes.

La elección del tipo de almacenamiento dependerá del periodo (inferior / superior a 3 días), el volumen de los bienes a almacenar y la ubicación física del propio almacén. Además, D-ALiX realiza la recepción de mercancías y su embalaje.

Existen dos modalidades de almacenamiento:

- **In-site:** physical warehouse to store equipment inside the D-ALiX datacenter. Orientated towards short-term storage.
- **Off-site:** physical warehouse to store equipment in the external facilities of the datacenter (a few meters away) and inside the Instituto Tecnológico y de Energías Renovables (ITER) premises. Aimed at large volume and / or long-term storage.



## Bioclimatic houses



Included in the wide range of services catalogue of D-ALiX, accommodation in the bioclimatic houses of the Instituto Tecnológico y de Energías Renovables premises is also offered. These are located only a few steps away from the datacenter.

The clients of D-ALiX will benefit from special discounts when accommodating in these unique designed houses, which help in having a more sustainable environment as they are self-sufficient in power supply with zero CO<sub>2</sub> emissions. A unique enclave which exudes tranquility and peace.

It consists of 24 exclusive houses which are thought of as a fully equipped single family homes, although each offers different bioclimatic solutions. They are distinct, including water in their interiors, with movement or fixed sheets, leafy courtyards or ventilation systems that conceives each house as a unique project.

For further information, visit the bioclimatic houses webpage at <http://casas.iter.es>.



# Contact

Póngase en contacto con nosotros para solicitar información adicional o un presupuesto para su empresa.

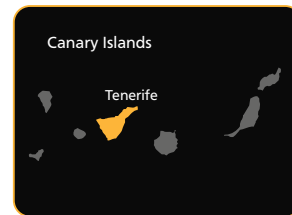
Datacenter-ALiX "D-ALiX"  
NAP de África Occidental-Islas Canarias, S.A.  
Polígono Industrial de Granadilla, s/n  
38600 – Granadilla de Abona  
Santa Cruz de Tenerife – España

**TEL:** +34 922-747-700

**FAX:** +34 922-747-701

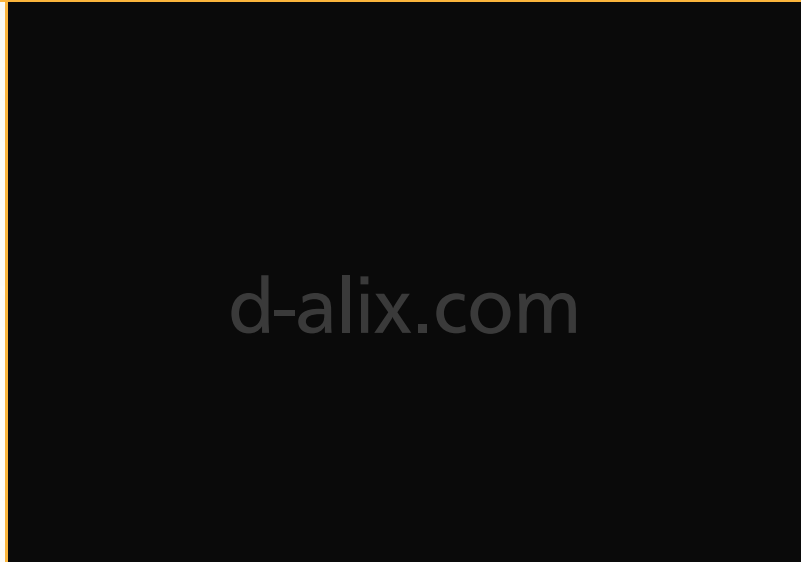
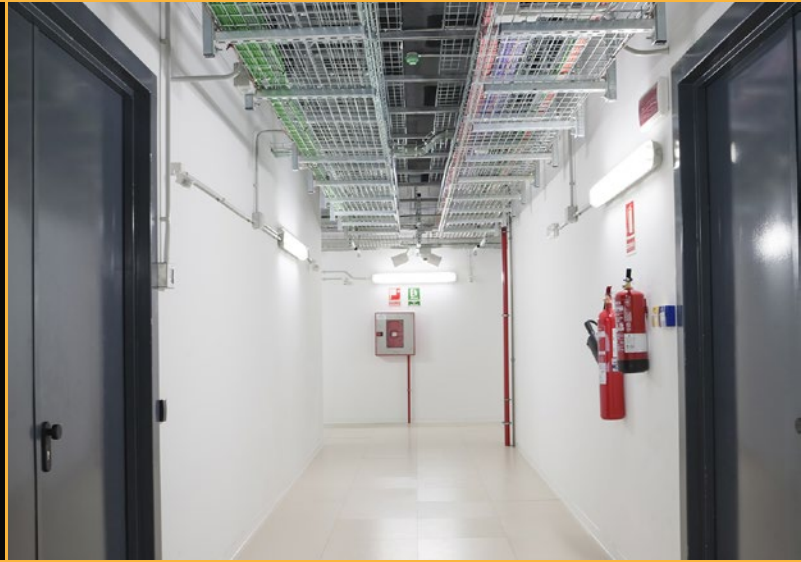
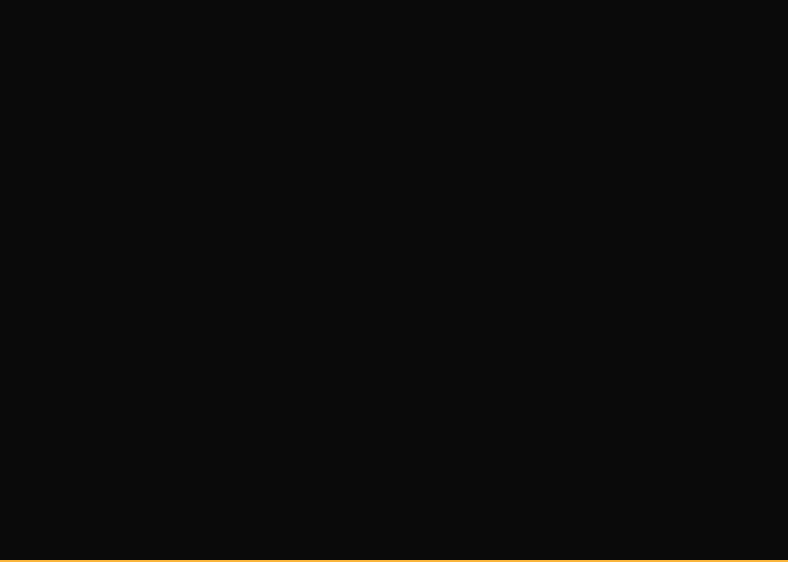
**E-MAIL:** [info@d-alix.com](mailto:info@d-alix.com)

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D-ALiX location





d-alix.com

