



# SILICANETWORKS

Una empresa de GRUPO DATCO

ARGENTINA · BRASIL · CHILE



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SILICA NETWORKS ARGENTINA

SILICA NETWORKS BRASIL

SILICA NETWORKS CHILE

**Presents:**



## Diapositiva 3

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**HM1**

Horacio Martinez; 02/08/2021

## Developing Preliminary Study of the Project:

- Connecting Antarctica by Fiber Optic Link
- Building the First Antarctic Scientific Hub

# Silica Network Arg. Ch. & Brasil



## Silica Networks Argentina + Brasil + Chile

Operates a Fiber Networks that connects these three South American Countries.

The Project we are presenting is aimed to go the extra thousand Kilometers to reach the White Continent, Antarctica

The only continent that is not linked by Fiber Optics

# Silica Network Arg. Ch. & Brasil



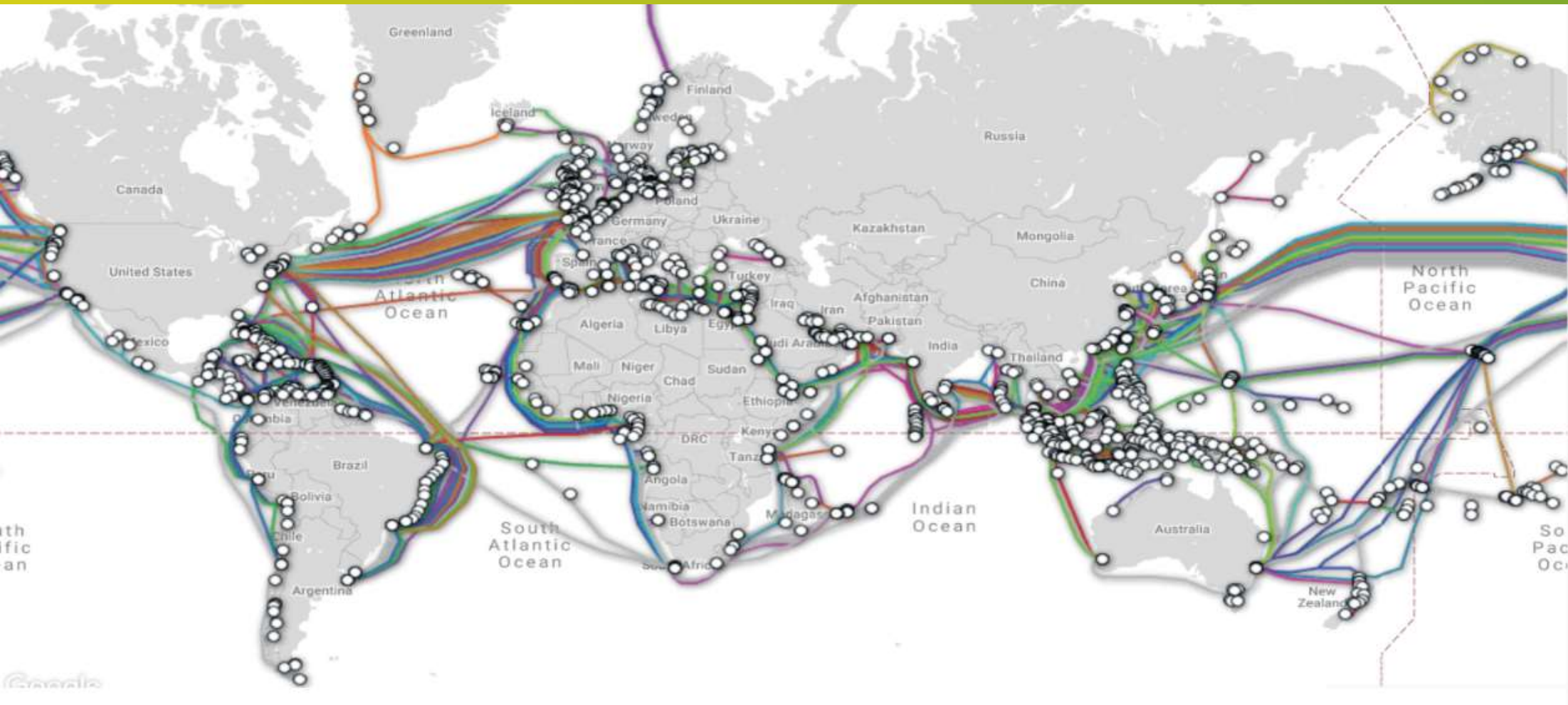
The Project we are presenting is aimed to go the extra thousand Kilometers to reach the White Continent, Antarctica

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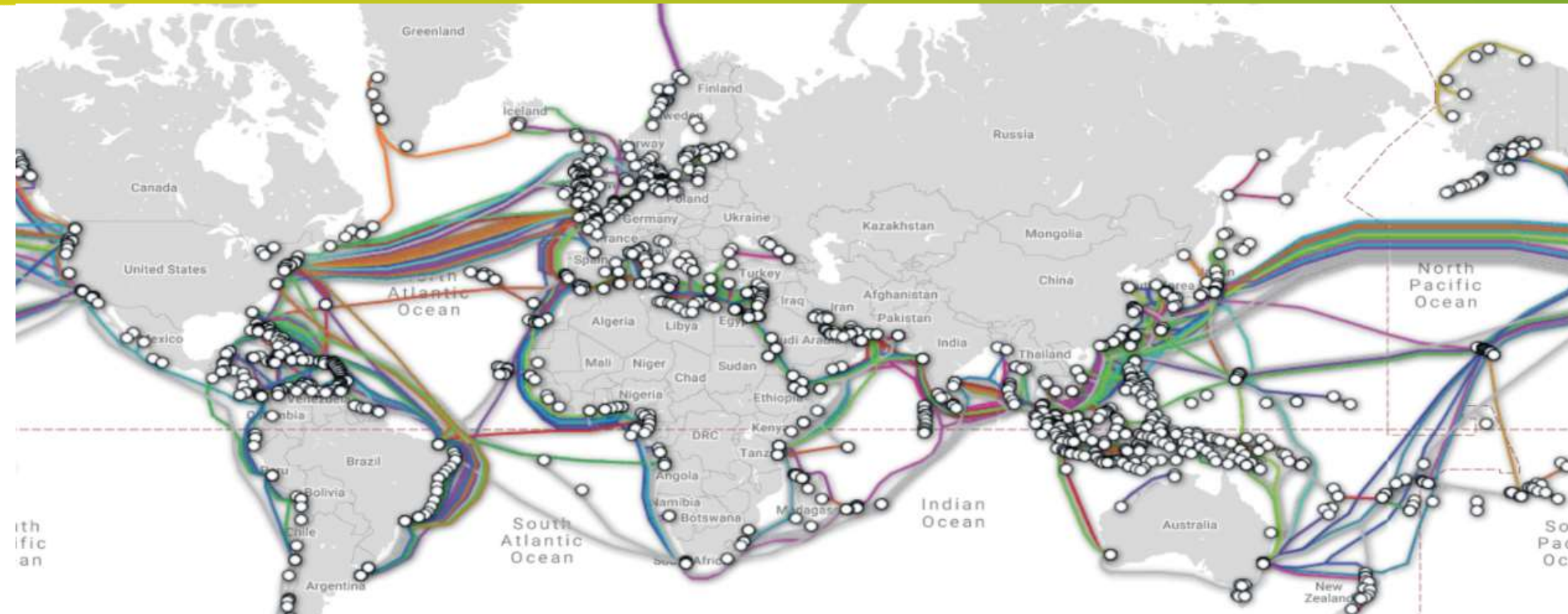
A link by Fiber Optics will enhance the bandwidth of all the bases of all the countries by a factor of 100, at least.



# Submarine Cables Map



# Submarine Cables Map



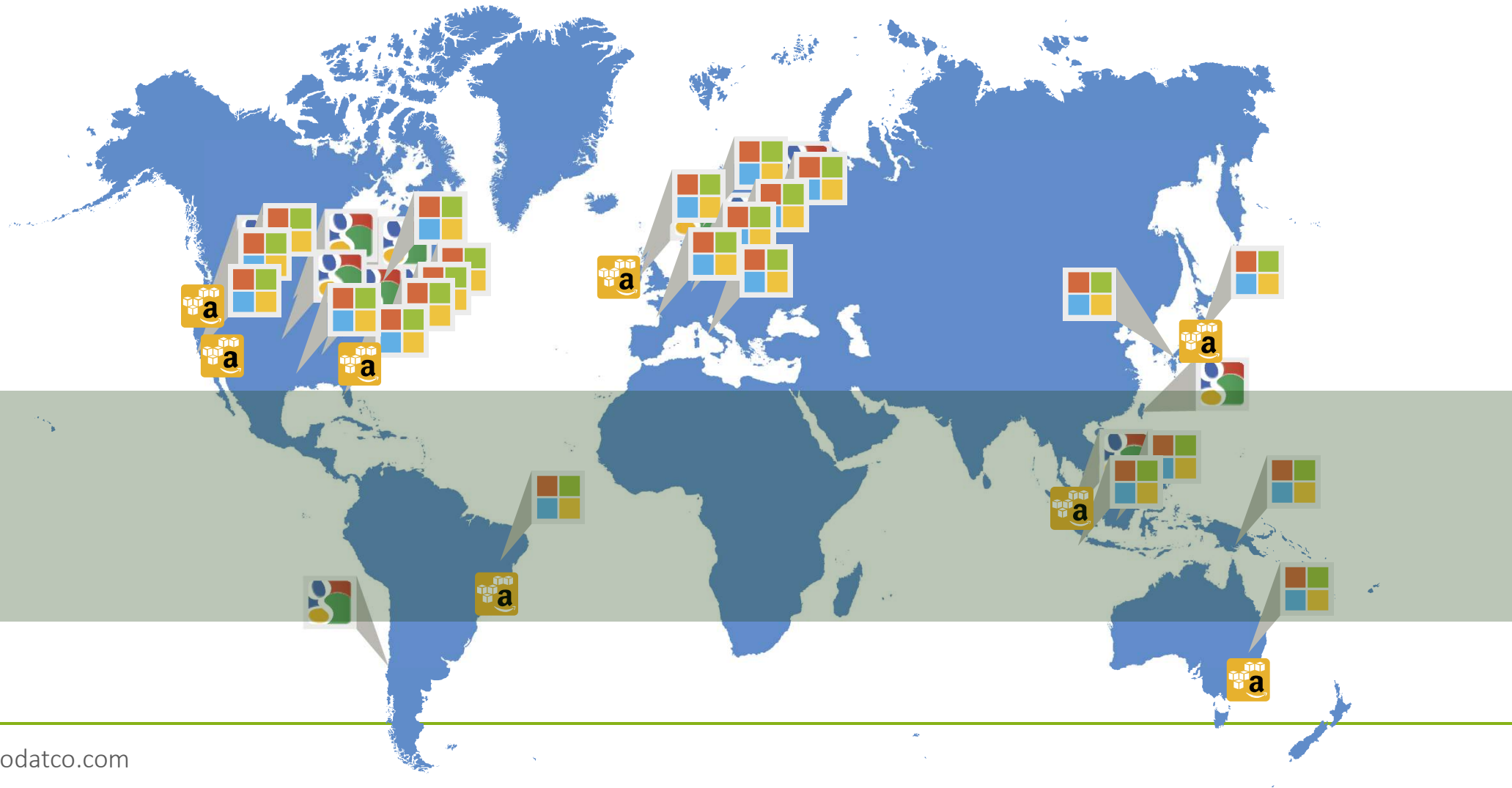
Empty Zone below  $-35^{\circ}$  S

# Present Situation - DATACENTERs





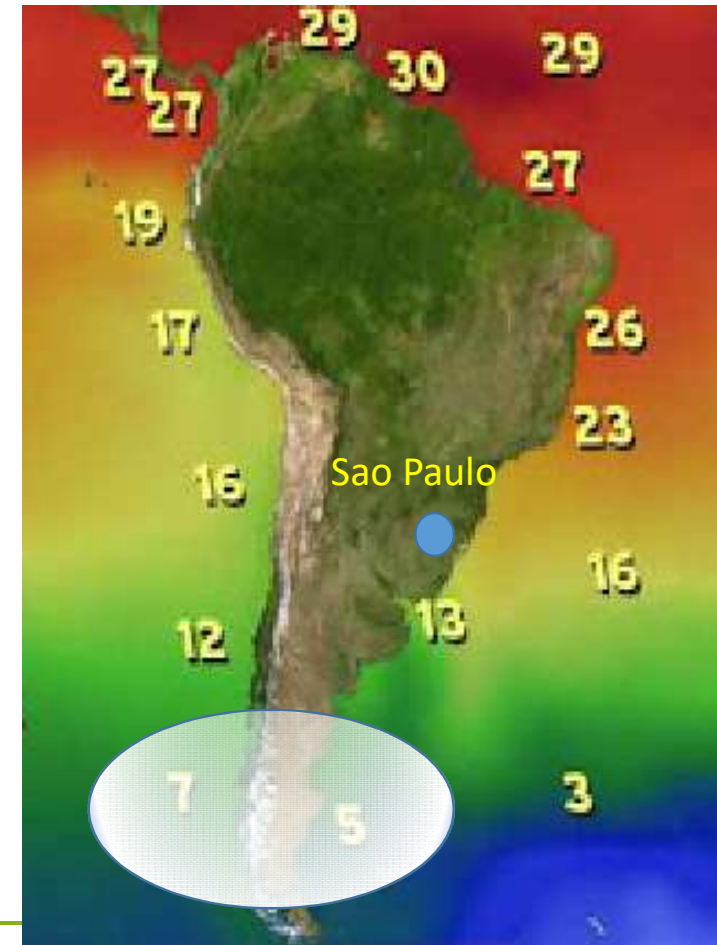
# Position of Datacenters Between Tropics Cancer / Capricorn



# Temperature Distribution in Latam

Today the biggest concentration of Datacenters in Latam is around São Paulo (Brazil).

Instead of taking advantage of the Patagonia - low temperature and cheap energy, both hydroelectric and wind - we are draining resources from cities populations in order to cool down computers.



# Capricornio Network: São Paulo to Arica



# SILICA NETWORKS: CARRIER-CLASS PLATFORM



## Scalable



**Ability of building and increasing the scope of the existing links and bandwidth for transporting information end to end and growing as demand increases.**

## Flexible



**Multiple types of services, interfaces and configurations in different subscriptions requirement. Adjustable to any type of requirement of connectivity and business models.**

## Robust

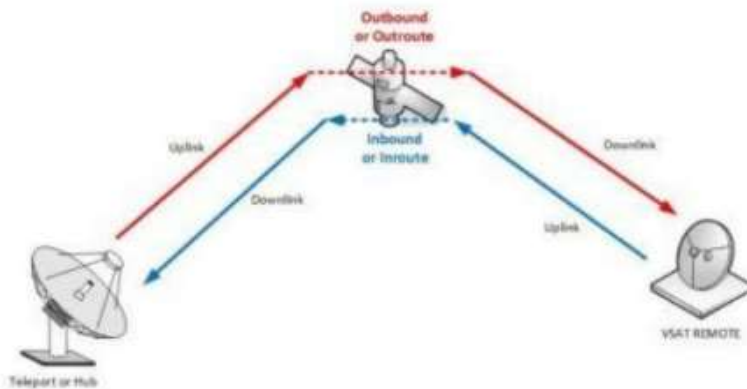


**Based on a Network designed under the concept of redundant architecture Customer expire, that allows us to delivery a high quality Customer Experience and high quality resilience.**



# Antarctica's Bases

More than 40 countries have developed presence in Antarctica, all of them are connected by Satellite links, meaning very high cost, very low bandwidth, and not enough capacity to transmit the rich data they can harvest every day.

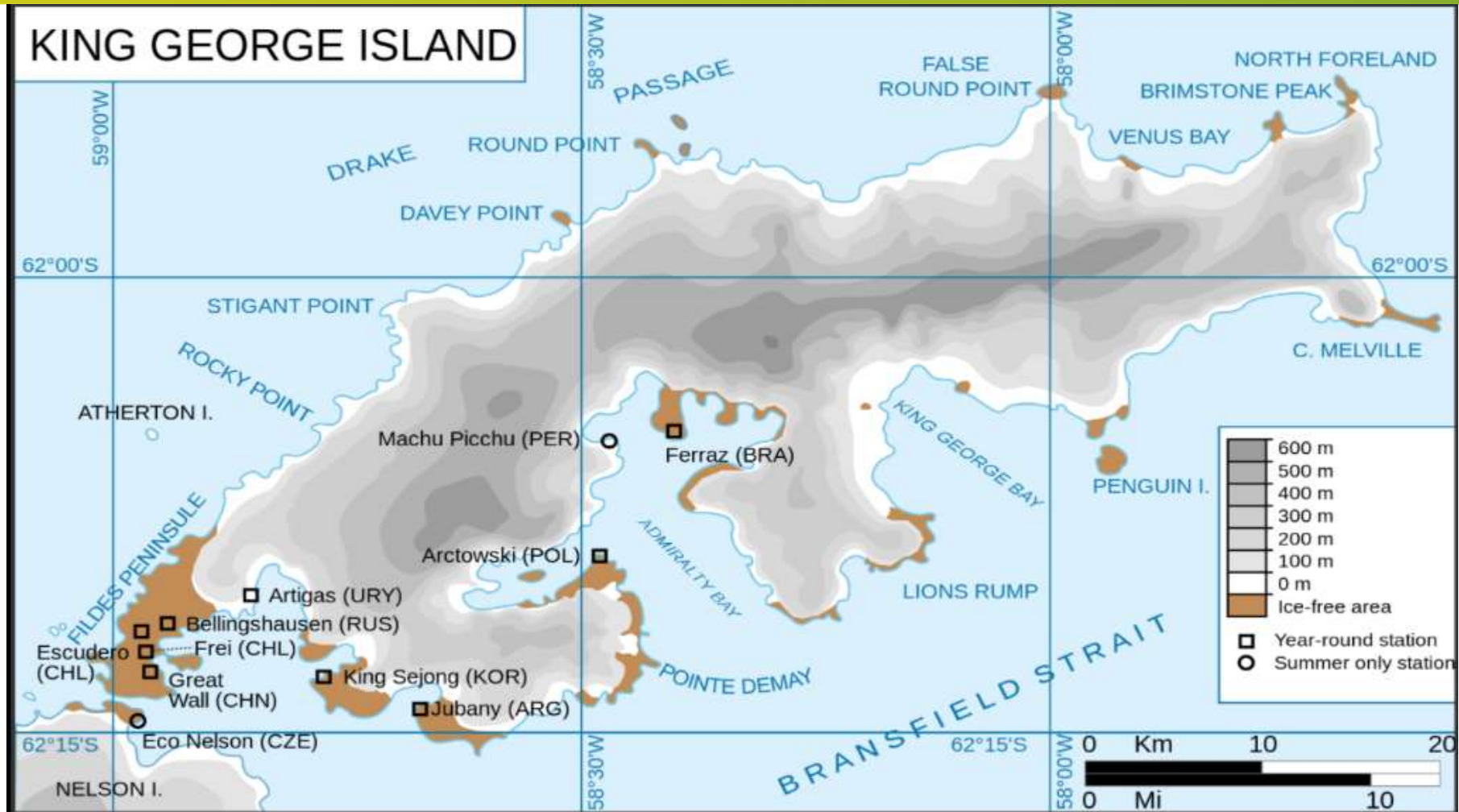




# Location of First Antarctica Hub Close-up



# The Island of the Antarctic Bases



# Antarctic Scientific Hub

**Position: King George Isle/25 de Mayo/Waterloo**

## Main Features:

Largest Island from South Shetlands Archipelago

Bases from 12 countries:

Argentina	Perú	China	Corea
Brasil	Uruguay	EEUU	Polonia
Chile		Rusia	Republica Checa
		Germany (Carlini)	

1 Landing Strip





# One Airport

## Teniente R. Marsh (CI)



# MULTIPLE CONNECTIONS



## USHUAIA

**Isla Grande Network Interconnection:**  
**Connected with ARSAT-BUENOS AIRES**  
**Connected with SILICA NETWORKS**  
**CHILE in SAN SEBASTIAN, Chile**

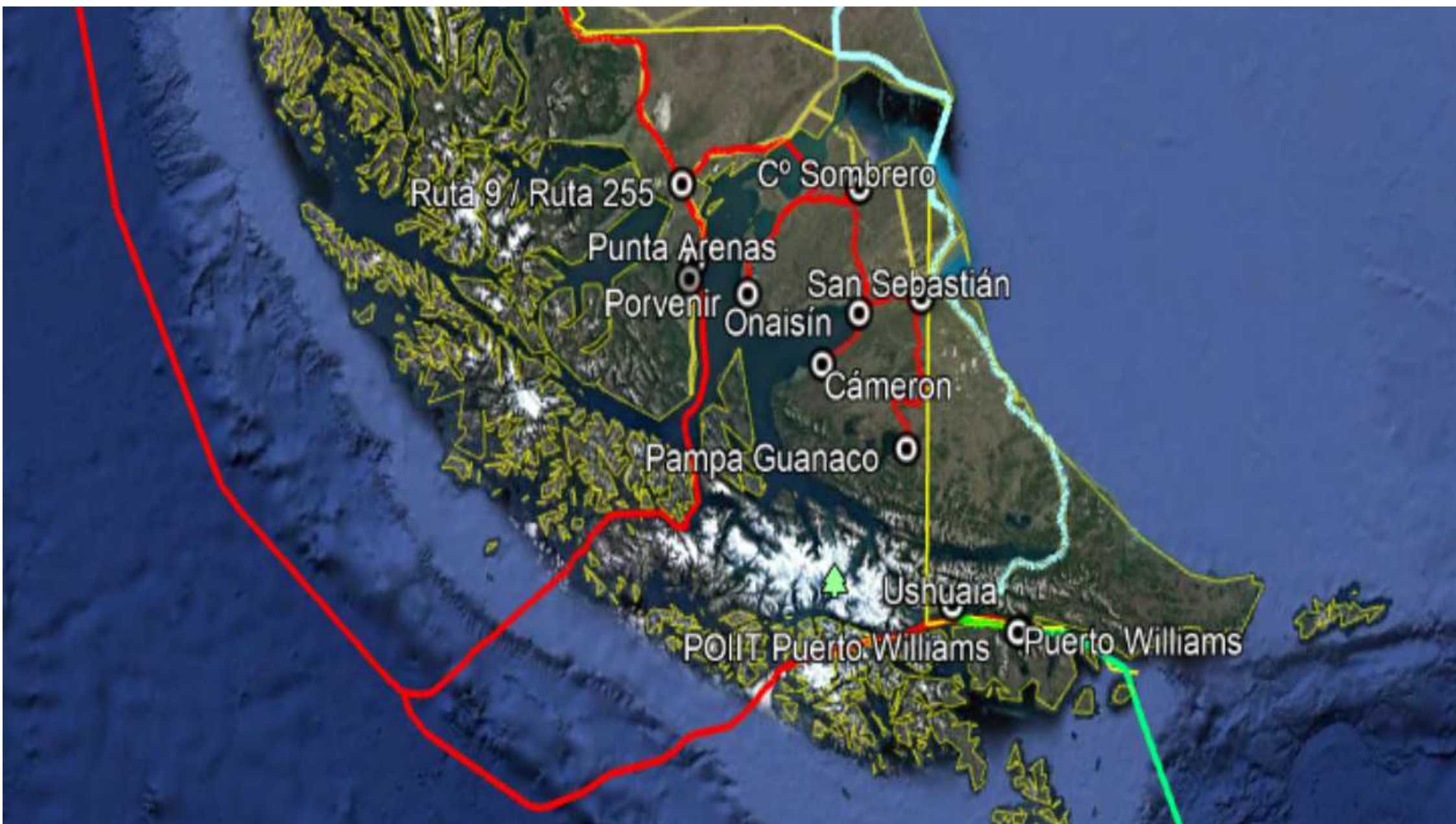
## PUERTO WILLIAMS

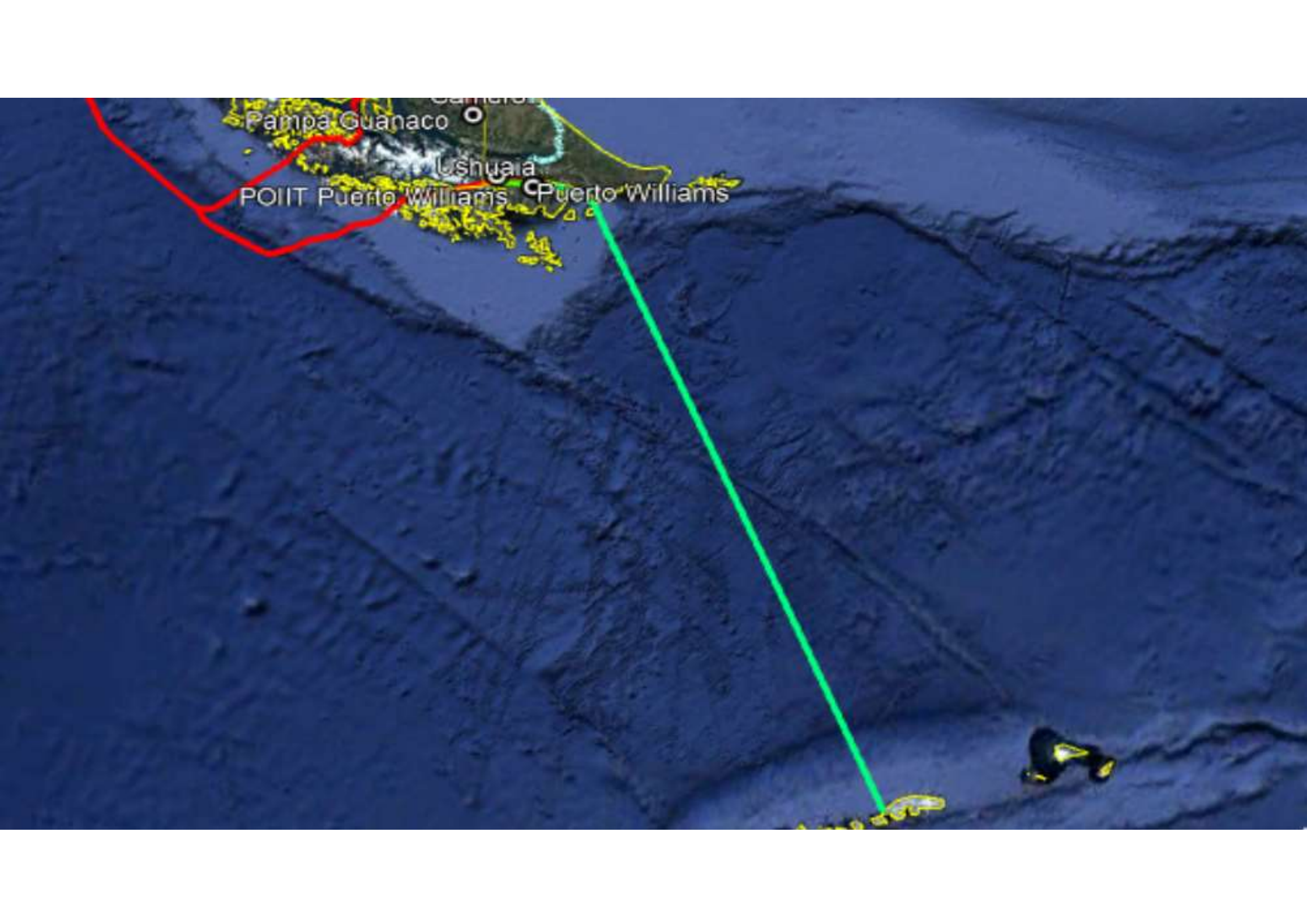
**Interconnection with FIBRA OPTICA AUSTRAL (FOA) CHILE.**  
**Connect To RED SILICA NETWORKS CHILE in CALETA TORTEL**  
**Connect RED SILICA NETWORKS ARGENTINA in BALMACEDA**  
**Connect to SILICA NETWORKS BRASIL in BERNARDO DE IRIGOYEN, MISIONES.**  
**Connect to Submarine Networks in LAS TONINAS**

## Hub Científico Antártida

**Possible connection to Bases de 11 Countries**  
**Crossing the continent**  
**Future ground and submarine links**  
**To all the bases.**



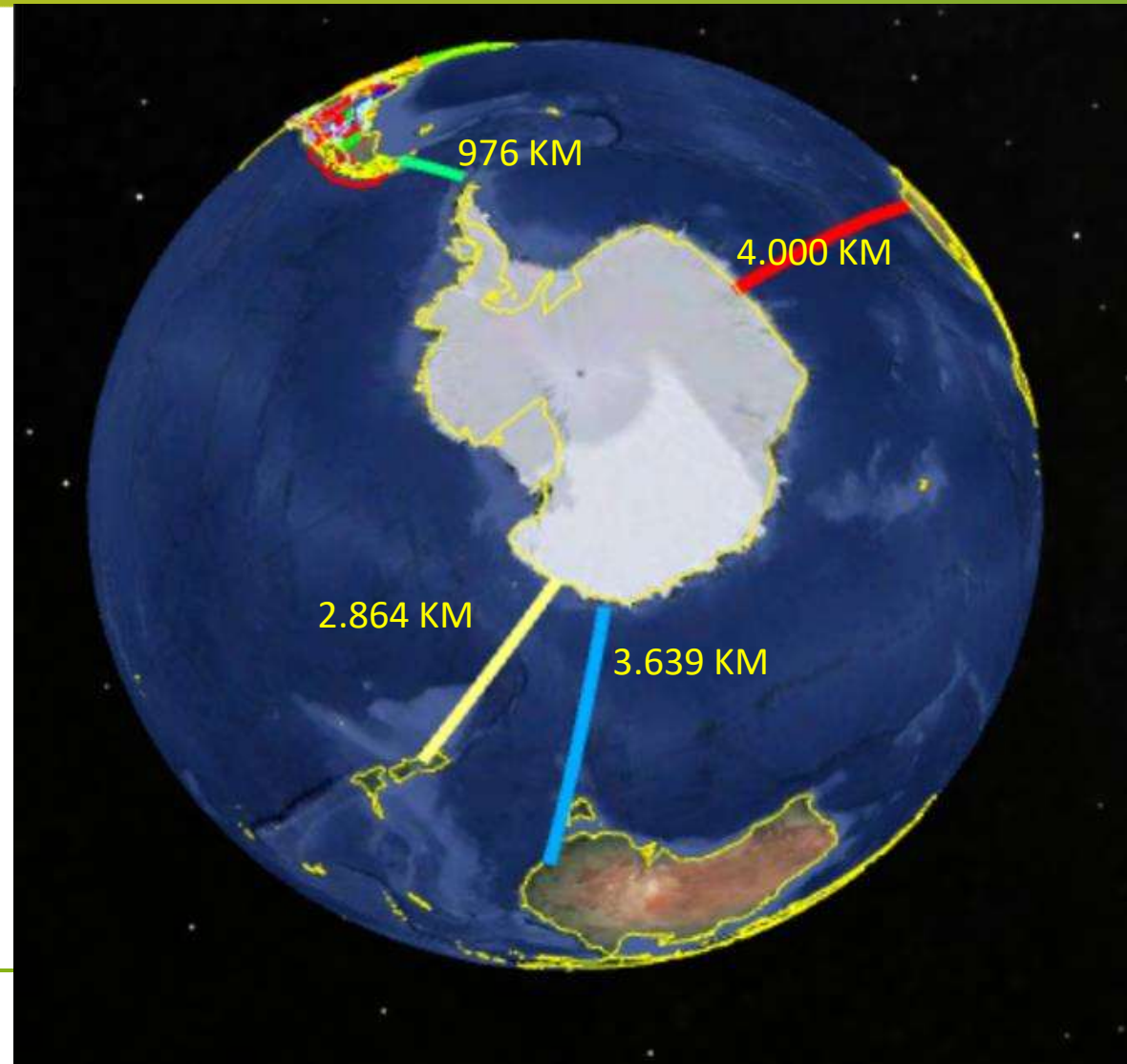




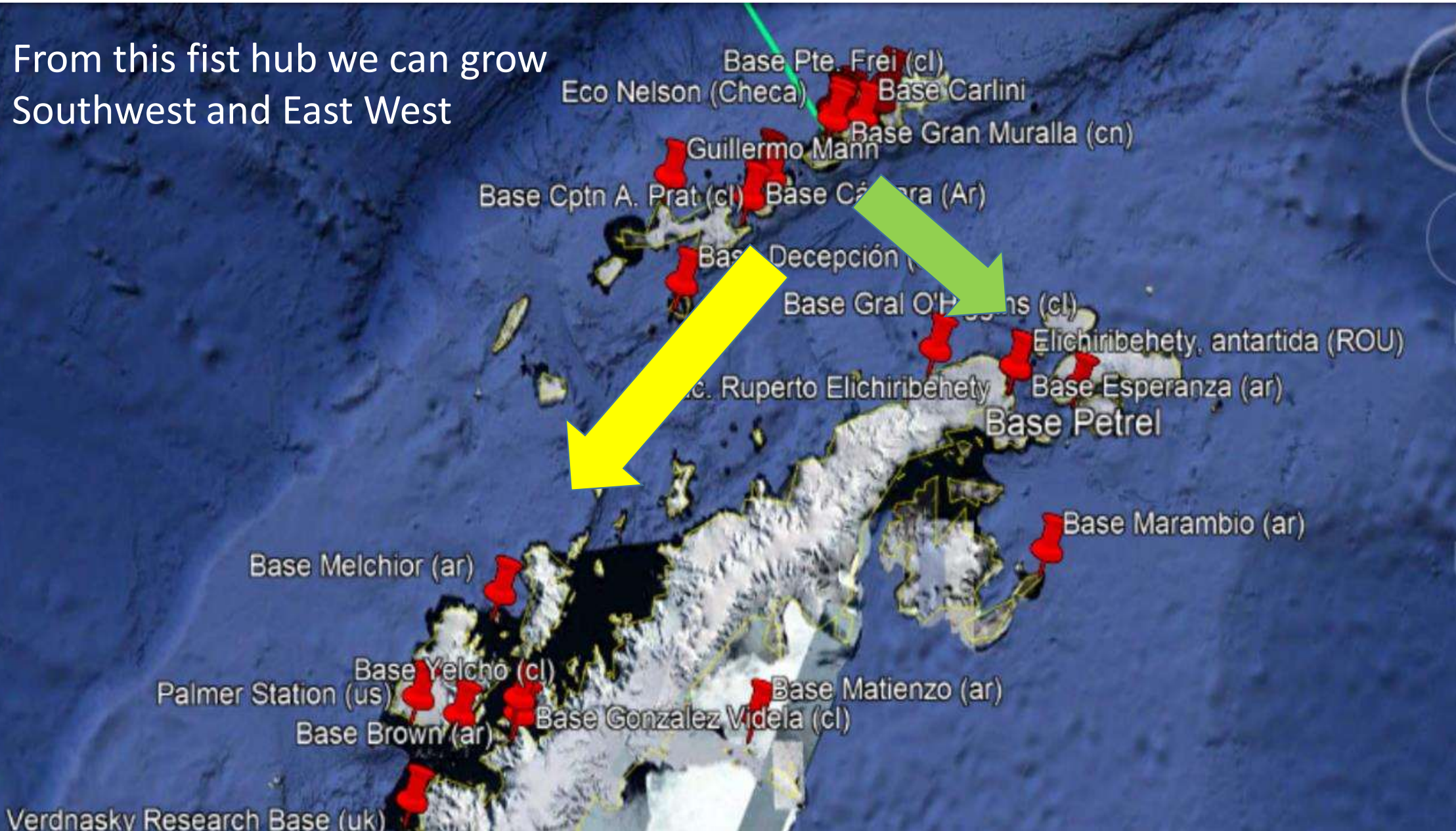


# Closest Place to Antarctica

The Big Island of Tierra del Fuego represents the Nearest point of connection with Antarctica. It is the least exposed point of crossing, also the less expensive to build. Both countries Argentina & Chile made important investments to reach Tierra del Fuego.



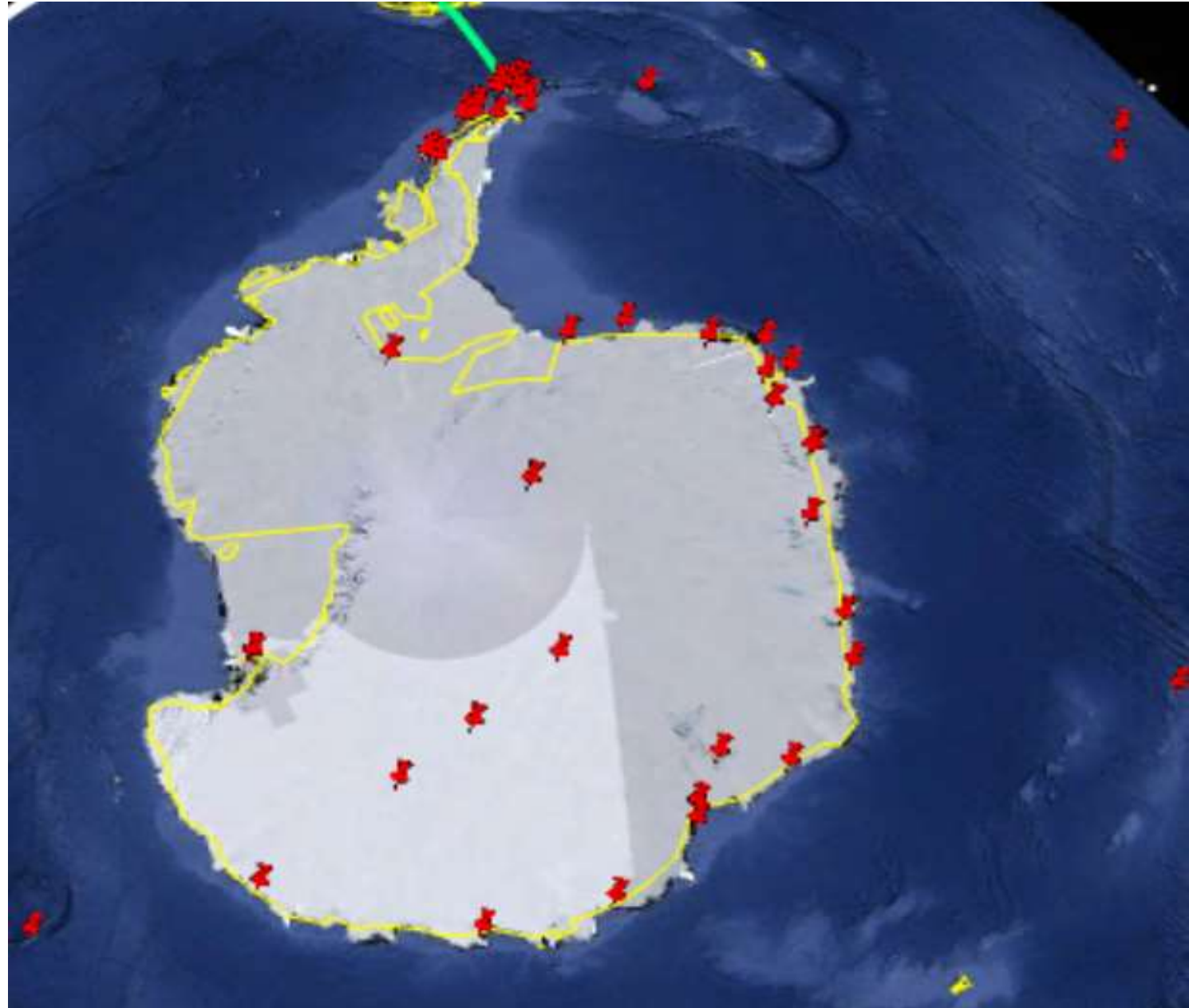
From this fist hub we can grow  
Southwest and East West





The Future:

One day the collaboration between countries can achieve the connection of all the Scientific Bases in the continent, sharing valuable data among them.



# ¡Muchas gracias!



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