CLIMATE CHANGE OBSERVATORY

THE FUTURE OF SUSTAINABILITY IS BUILT IN CHILE

Gobierno de Chile

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THE WORLD'S EYES INTO THE UNIVERSE

Northern Chile

The Atacama Desert is the best place on Earth to study the universe. Humboldt´s marine current, and the Andes mountains, provide a stable, dry and light atmosphere for sky observation with unmatched clarity. Over the past 50 years, we have established the conditions to host the most advanced astronomical observatories, **becoming humankind's eyes into the universe, with 70% of the terrestrial telescopic capacity installed in our country.**

Additionally, our country features unique characteristics for observing the effects of climate change.

LATITUDE

Chile has the longest latitudinal gradient on the planet.

While in the north of the country precipitations are scarce, and the annual average temperature is high, towards the south precipitations are high and the temperatures are low.

At the southern end of the planet, our Antarctic territory joins the rest of the national territory, making it **the most extensive latitudinal gradient for the study of climate change, covering more than eight thousand kilometers.**

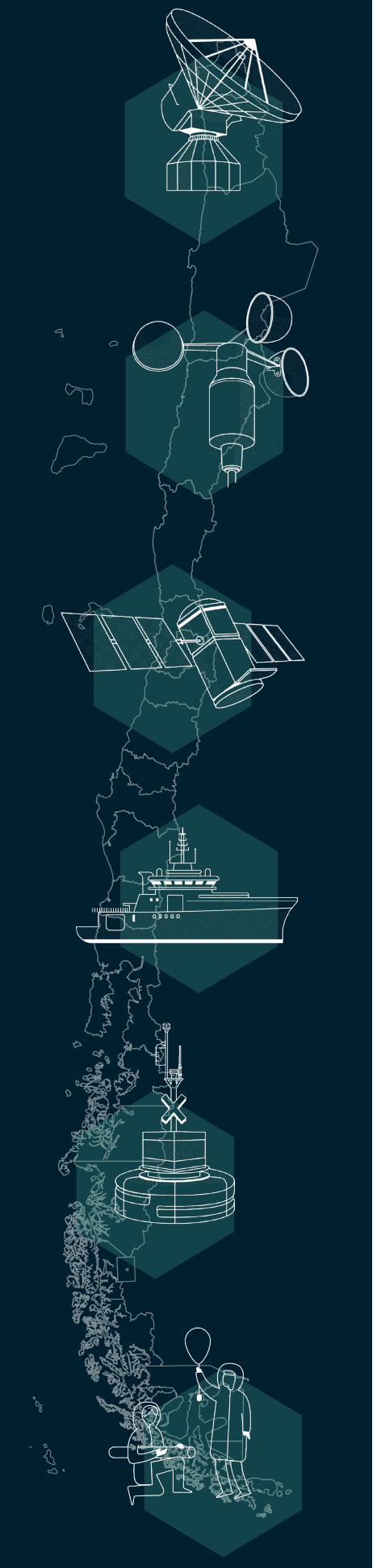
Coincidentally, the need for more climate information in the southern hemisphere has been put forward by the national and international community.

ANTARCTICA

A global climate regulator.

Antarctica is one of Earth's most powerful climate modulators, with regional and global impact.

It affects the productivity of our oceans and determines the existence of the desert in the north of the country, thus becoming a potential source of climate mitigation and adaptation responses. These responses are particularly necessary in Chile, a country highly vulnerable to climate change, although their relevance responds to a greater, urgent and unavoidable challenge for all humanity.



THE CLIMATE CHANGE OBSERVATORY

Transforming our country into a global climate change sensor.

Chile has undertaken the creation of a **Climate Change Observatory (CCO),** a unique initiative to produce and use the world's most valuable scientific evidence on these important phenomena that affects all of us.

The CCO integrates sensors deployed throughout the country and the data collected therefrom, from north to Antarctica, providing information on temperatures, rainfall, sea level and ice masses levels, solar radiation, wind speed and direction, among many others, and makes them available in an open and standardized format that contributes to evidence - based public policies and decision making.

> The CCO represents a decisive action toward one of the government's main goals: the future of sustainability is built in Chile, contributing to creating solutions and technology for the future of humankind.

CCO's main lines of action:

1 GOVERNANCE AND DATA PLATFORM

The OCC's governance will be installed in the Ministry of Science, Technology, Knowledge and Innovation, which will direct, coordinate and facilitate collaborations between the scientific community, citizens, the public sector and the private sector, and will establish data interoperability standards. In addition, the Ministry will have a technical team, specialized in data management.

To fulfill its purposes, the OCC will have a decentralized platform for climate change data, through which its information will be made available.

2

A NEW SENSOR NETWORK IN OUR ANTARCTIC BASES

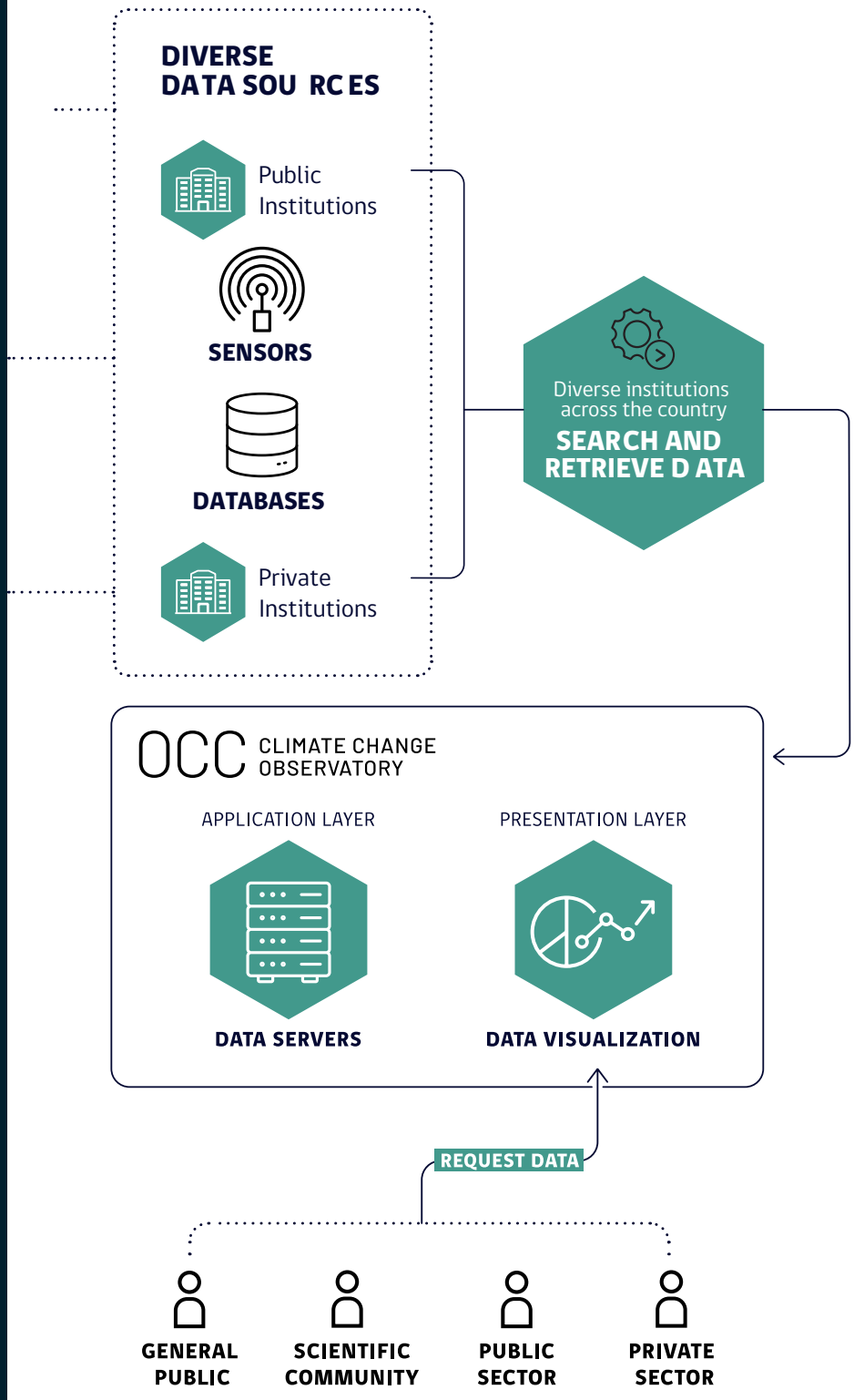
Chile operates several bases with scientific capabilities throughout the Antarctic peninsula, allowing for a robust National Antarctic Science Program, with an ever growing number of researchers, projects and publications. This constitutes a unique opportunity for the deployment of sensors to cover the extreme of the southern territory.

For this reason, through the Chilean Antarctic Institute (INACH), **progress will be made in the installation of a new network of multiparametric sensors that will have as its axis the Antarctic bases of our country along the peninsula, up to the Unión Glacier just 1,000 kilometers away from the south pole.**

3

AN INTEGRATED NETWORK FOR EARTH OBSERVATION

The CCO will consolidate, through its platform, an integrated sensor and data network in the national territory, including sensors from public and private institutions, with the proper density and a variety of Earth observation instruments throughout the territory, that can be upgraded through international alliances.



The OCC platform connects multiple data sources (such as databases and real-time sensors) distributed both in public and private institutions throughout the country. To achieve this, the platform includes a component for cataloging and visualizing the content of the data sets, called the application layer, and a component for retrieving information directly from the source called de application layer.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