





## PROJECT BACKGROUND

MAKING THE INACCESSIBLE ACCESSIBLE, ABOVE AND BELOW GROUND.

From experienced adventurers to eminent scientists, we have gathered an international team to carry out this ambitious project.

This exploration & scientific project is based on a 30 years experienced subglacial expedition all around the world from Greenland, to the high one into the Alps or in South America and the others massive continental glaciers as Kirgystzan one.

This authentic quest of the unknown will bring professional adventurers into a trip back into history and the future of our planet.

Subglacial exploration is an open up in the new era in Man's understanding of his changing environment.

A journey within the great excitement that comes from the discovery of a new realm: "something true, pure, hard but thrilling topped it" would say Janot Lamberton, first man reaching -200 meters into the ice.

### GLACIAL HAZARDOUS RISK UNDERSTANDING AND CRYOBACTERIA TRACKING

We will track invaluable information on Earth's climate and history and on the potential risk on human health. With global temperatures increasing, glaciers are melting more and more, bringing additional water over and down the glaciers. There exists a risk of collapseing of walls retaining the water, generating a Glacial Lake Outburst Flood (GLOF).

GLOF events have been largely documented in almost all mountain ranges (Himalaya, Alps, Andes, Greenland...) causing thousands of fatalities and the destruction of large infrastructures (hydropower dams, water supply networks, roads and railways).

Identifying the geological, hydrological and mechanical conditions at work under glaciers will help predict their evolution.

As a result of the global warming, a quantity of cryoconite particles, algae and bacteria trapped for thousands of years in ice which are released to the surface.

Modern sequencing genomes and carrying out metagenomics allows us to have a much more precise overview of the entire microbial community. Improving our knowledge of the microbes will be a first steph.

Then we will get a better understanding of them especially trough a change in climate will impact microbial communities and their ecosystem functions.



# YOU MAY LIKE TO JOIN OR TO BE PART OF THE PROJECT, FEEL FREE TO JOIN US.

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#### AN INTERNATIONAL TEAM

From experienced adventurers to eminent scientists, we have gathered an international team to carry out this ambitious project.

Geophysicians and Glaciologists (CNRS France Laboratoire ISTerre, Danish institute, Geography Institute of Moscow).

Ice cave explorers and alpinists.

Bacteriologist (**Pasteur institute**, a non-profit foundation whose mission is scientific and medical research, hosts a Biological Resources Center (CRBIP)).

Photograph and video makers.

And a special mountain and extreme environment medical crew.

A total of 20 explorers on the field, 34 collaborators supporting various side issues.

### THE VALUES

To carry on this scientific exploration project, we might need to push the limits even breaking world depht record under the ice.

However, there is something bigger behind, being a true witnesses of the Ice disappearance though global warming. We are deeply convinced that ice exploration can raise awareness of these major events and help improving a positive correcting way.

Regarding this deep challenge, we need a major partnership. If you feel you are sharing our values we would be glad to bring you in this adventure.

#### **EXPEDITION PROGRAM**

#### A five years exploration program trough:

Pamir glacier (Baltoro)

Jostedales glacier (Norway)

Hielo sur

Alpine Tour (Alestch in Swiss and Mer de Glace in Chamonix)

Canadian glacier

Kangerlussuaq (Greenland)

The glacial Grand Canyon (Greenland)

Kikistan

And a coming surprising subject in Antartica.

The values brought by the SubGlacial Exploration Project are the following ones:

- Scientific research at the service of humanity
- The extreme feat and the exploration of the unknown
- Human performance for a new world record.
- The absolute purity and beauty of the three elements: water, air and ice.
- Transmission and education.
- Authenticity, sharing in discovery Sporting prowess in the service of science.

#### some missions...

## Prospecting IN THE HEART OF THE ICE.

Bacteriological sampling tests for the Institut Pasteur at the bottom of the crevasses and mills of the Aletsch glacier in the Swiss Valais.

#### Youtuber on Expedition **EXPEDITION IN** KIRGHIZISTAN

After Papua, it's off to Kyrgyzstan to explore the bowels of a glacier in the company of a famous French Youtuber.

#### Glacial Lake Outburst Flood AND 3D SCAN.

Topography of ice mills using 3D Scan on the Aletsch glacier to establish a level of glacial risk in terms of flooding for Alpine populations.

#### Exploration and topographic **SURVEY OF THE ICE MILL.**

Exploration and topographic survey of the ice mill with Luc MOREAU, associate researcher at the CNRS EDYTHEM laboratory.

#### Supervision and safety OF A FILM CREW.

In the high mountains and on the Argentière and Mer de Glace in Chamonix.

#### Autistic children

#### AT THE HEART OF THE ICE MILLS.

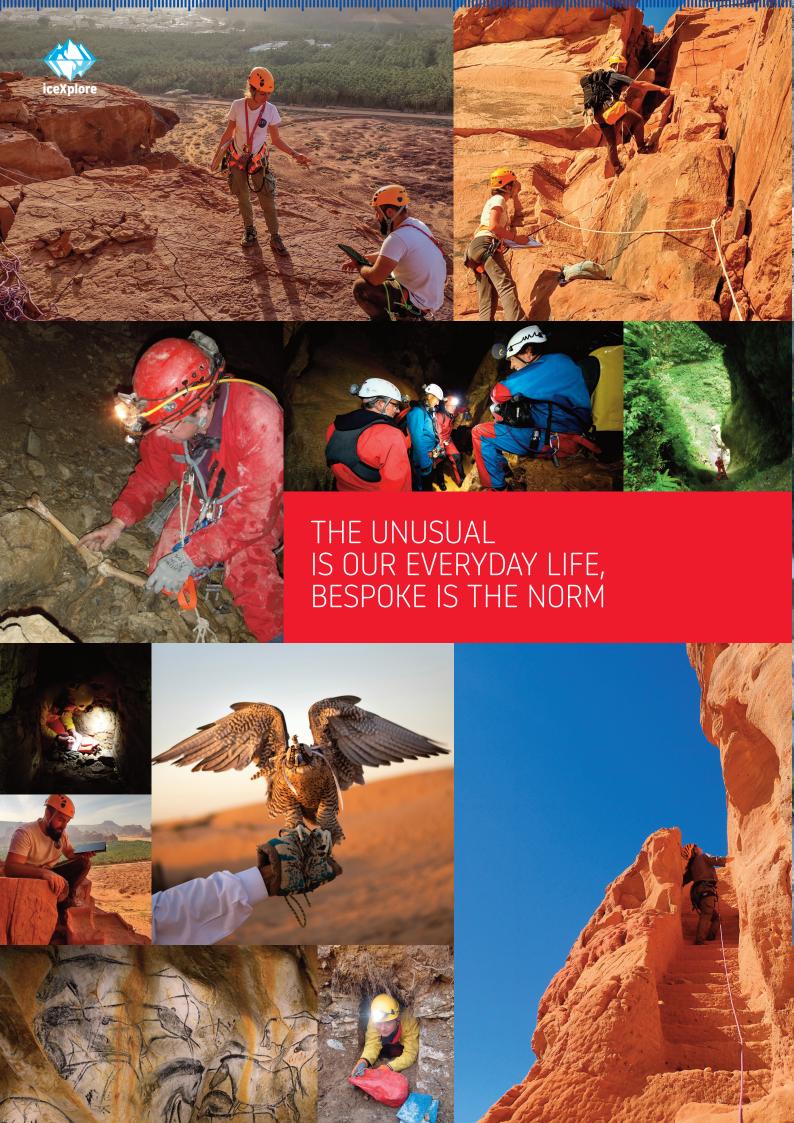
A new ice story for a documentary on autism.

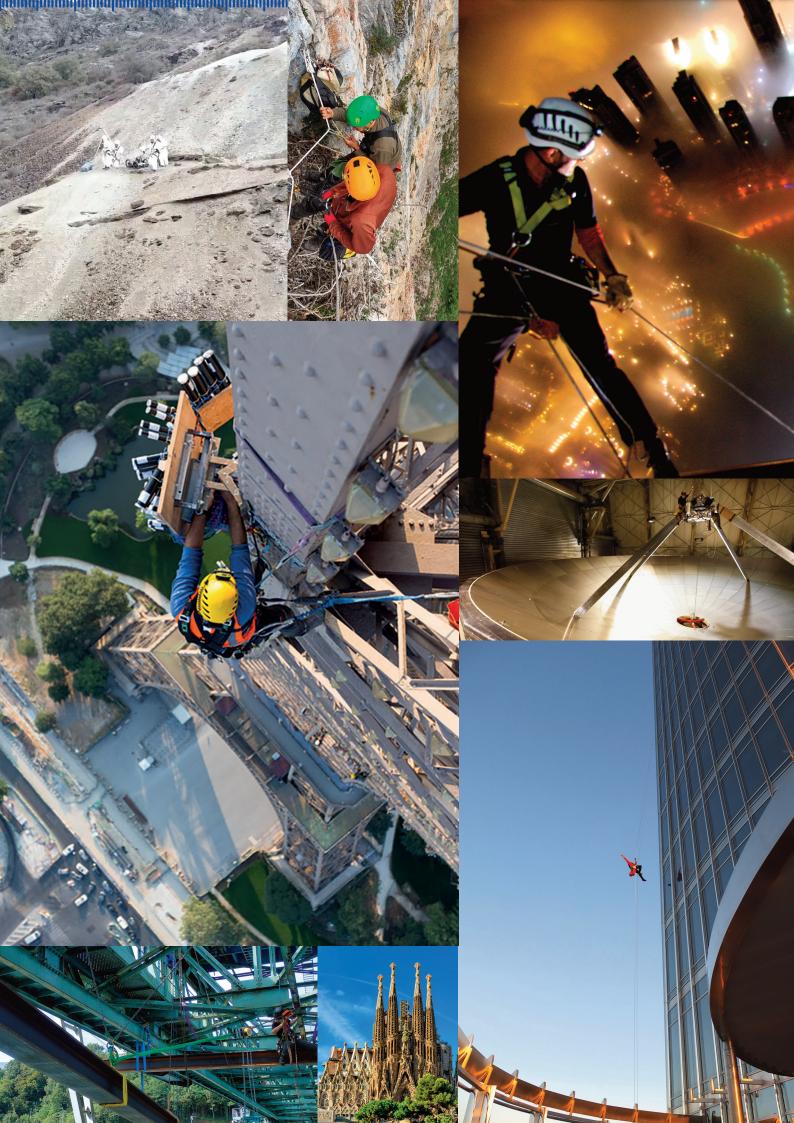
Autonomous seismic listening station

#### ON THE LAURICHARD **GLACIER.**

Installation of supporting structures including solar installations and seismographs.









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