

Swiss Experiment

Interdisciplinary Environmental Research

Providing diverse snow research data sets when and where they are required

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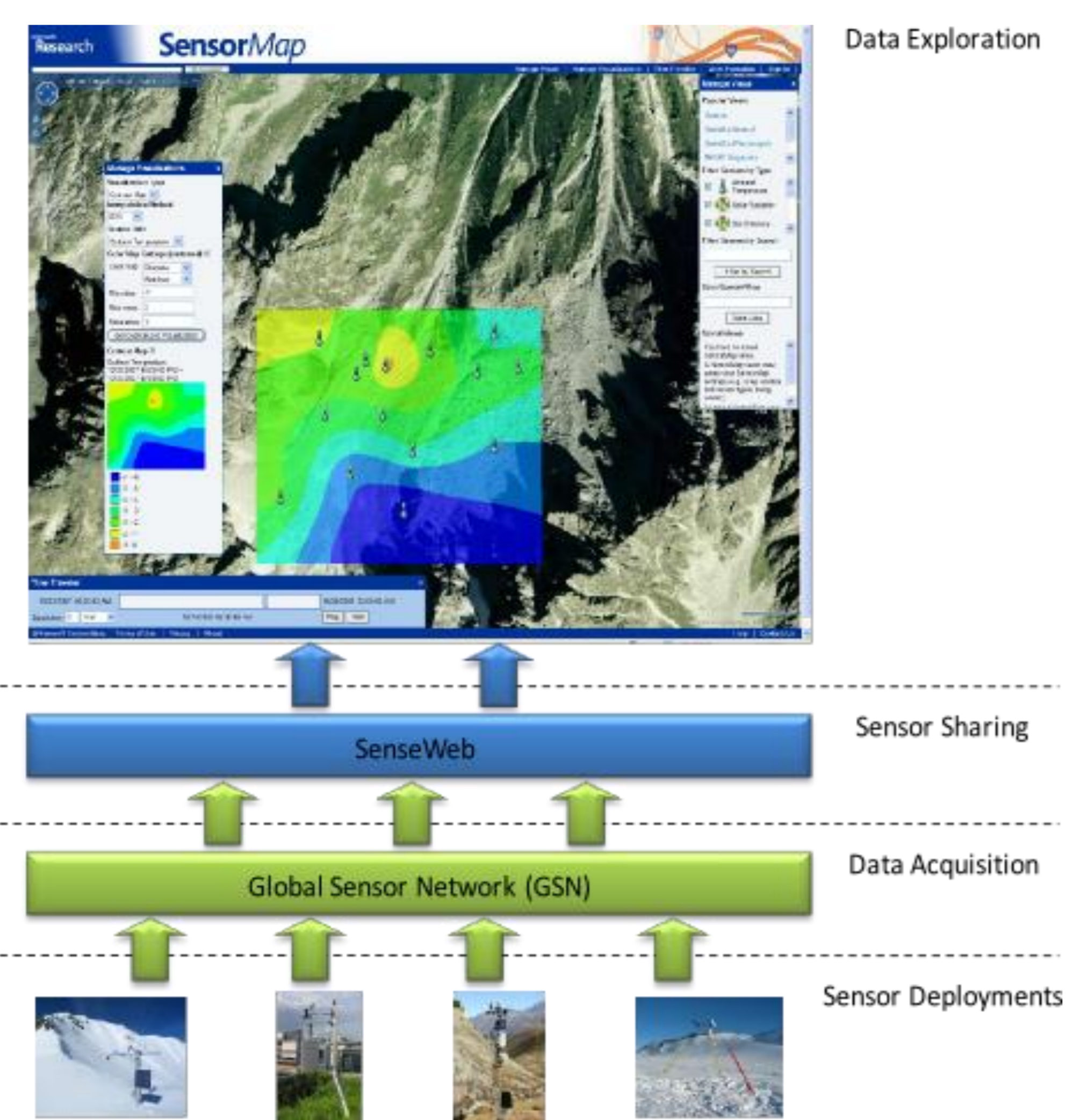
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About Swiss Experiment

A common issue in today's electronic world is that data is gathered and used, but left undocumented and in formats which are later unreadable. The SwissEx collaborative platform aims to apply the latest computer science techniques to support measurements and interpretation in order to integrate sensors and sensor networks on national, regional and local scales. Examples of these scales already integrated are IMIS (national), Davos (regional) and Wannengrat (local).

In addition to the development of the data platform, Swiss Experiment actively supports the development of new, remotely operable, rapidly deployable measurement technologies, providing funding, field experiment scenarios, external data sources and expert feedback vital for the development of new sensors.

What does the data platform provide?



The data platform provides three areas of support:

Distributed acquisition and storage

- Data acquisition solutions.
- Solutions for data sharing between organisations (web based user interface and/or real-time database sync).
- Real-time data processing facilities.
- Generic libraries to allow models access to the distributed real-time (or historical) data (Snowpack, Alpine 3D and GeoTop already integrated).
- Examples of future developments:
 - real-time data quality assessment (hence data rejection by models).
 - reorganisation of data based on metadata e.g. to make a location based time-series where multiple loggers have been used over the measurement period.

Web based editable documentation

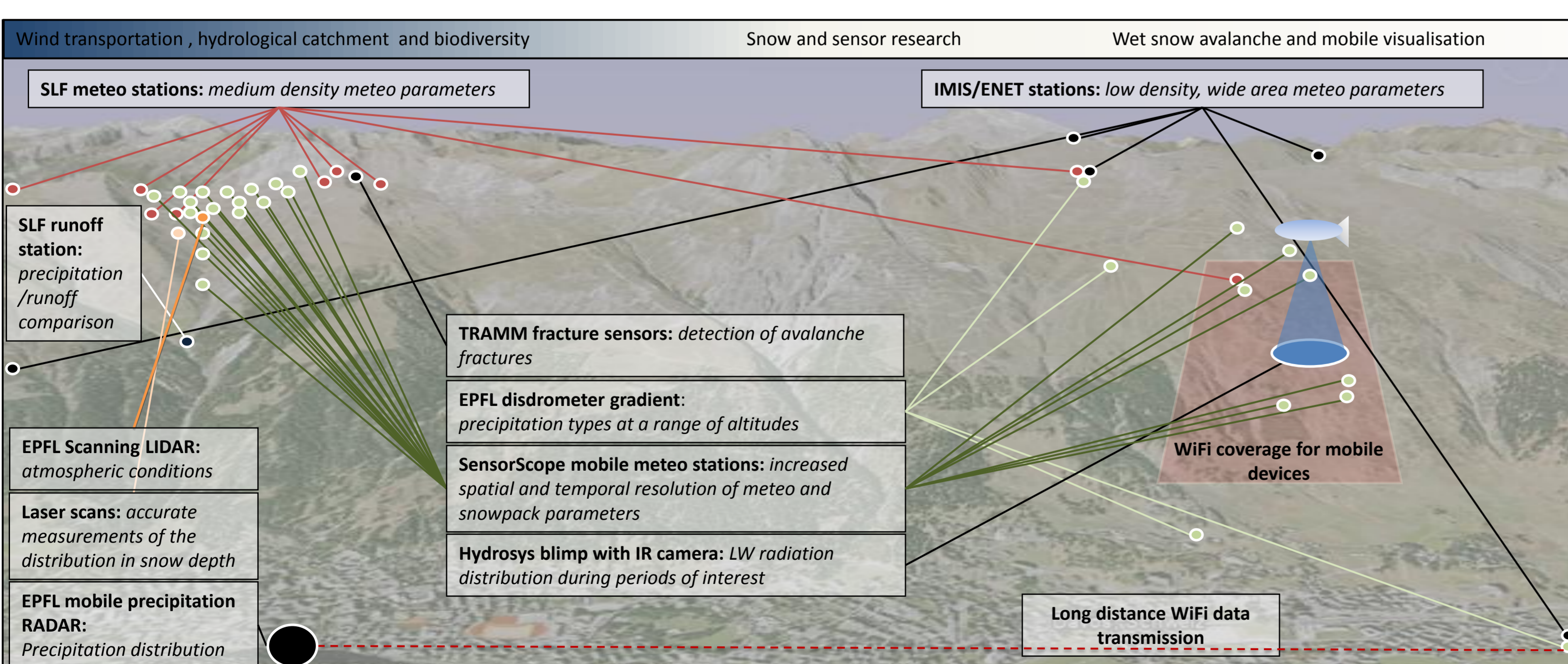
- Storage and online editing of metadata.

Centralised interface

- The centralised interface allows data from all of the distributed databases and multiple sensor types to be visualised, downloaded or processed together with their metadata as if they were all in one file.

Large scale interdisciplinary deployment example

Davos, Winter 2009/10: The following information will be made available in real-time on a common platform and shared between institutions:

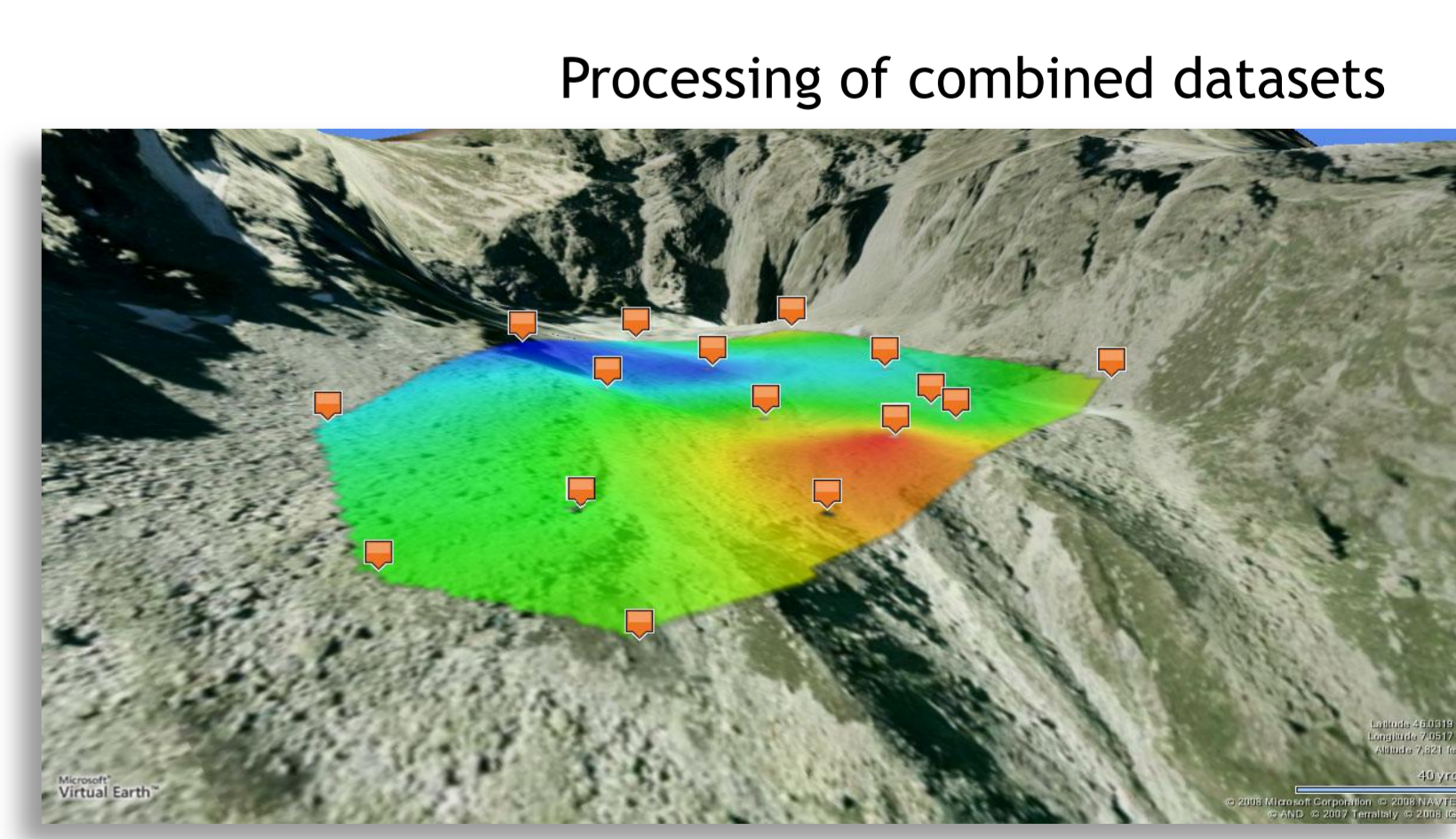
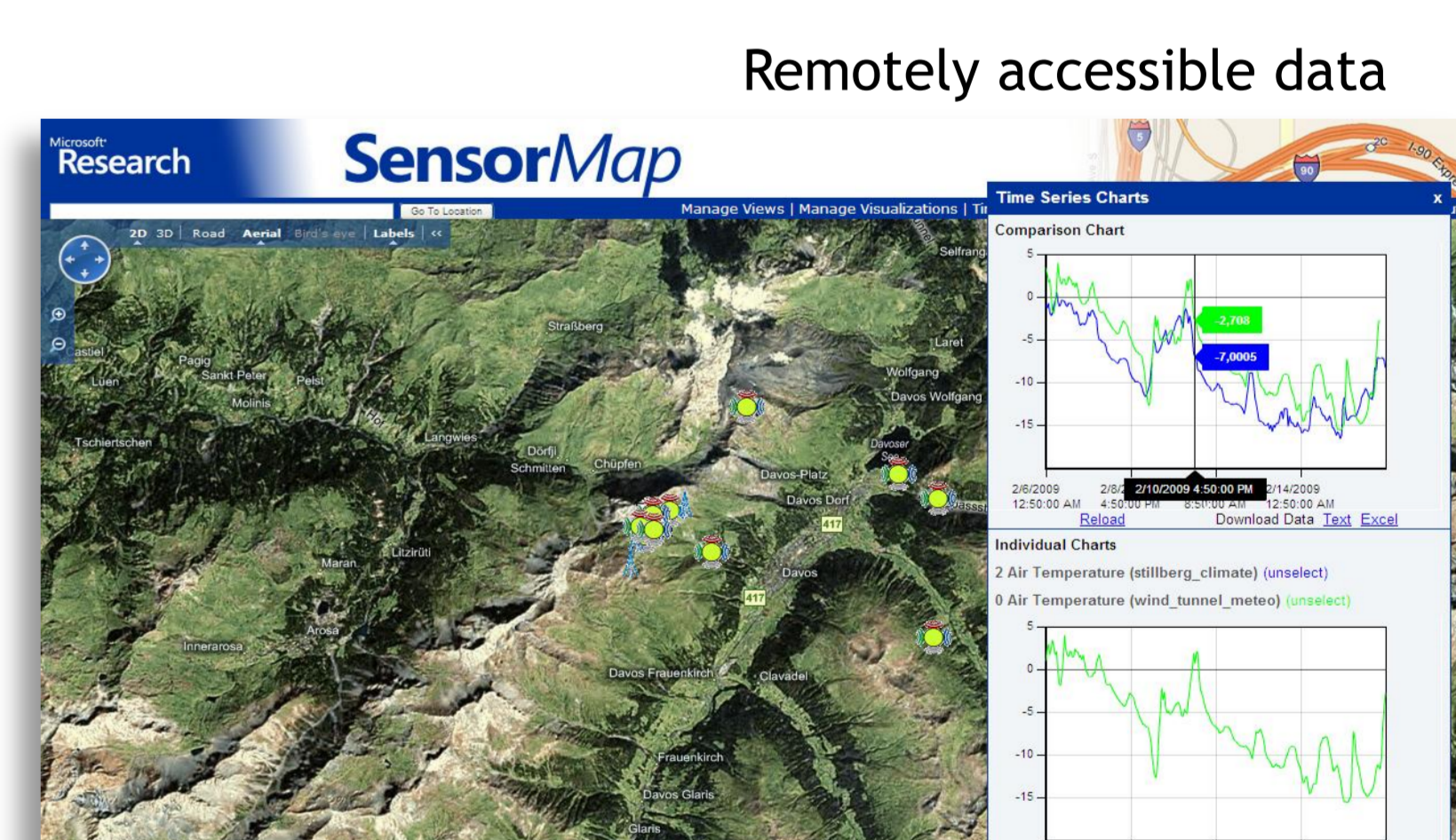
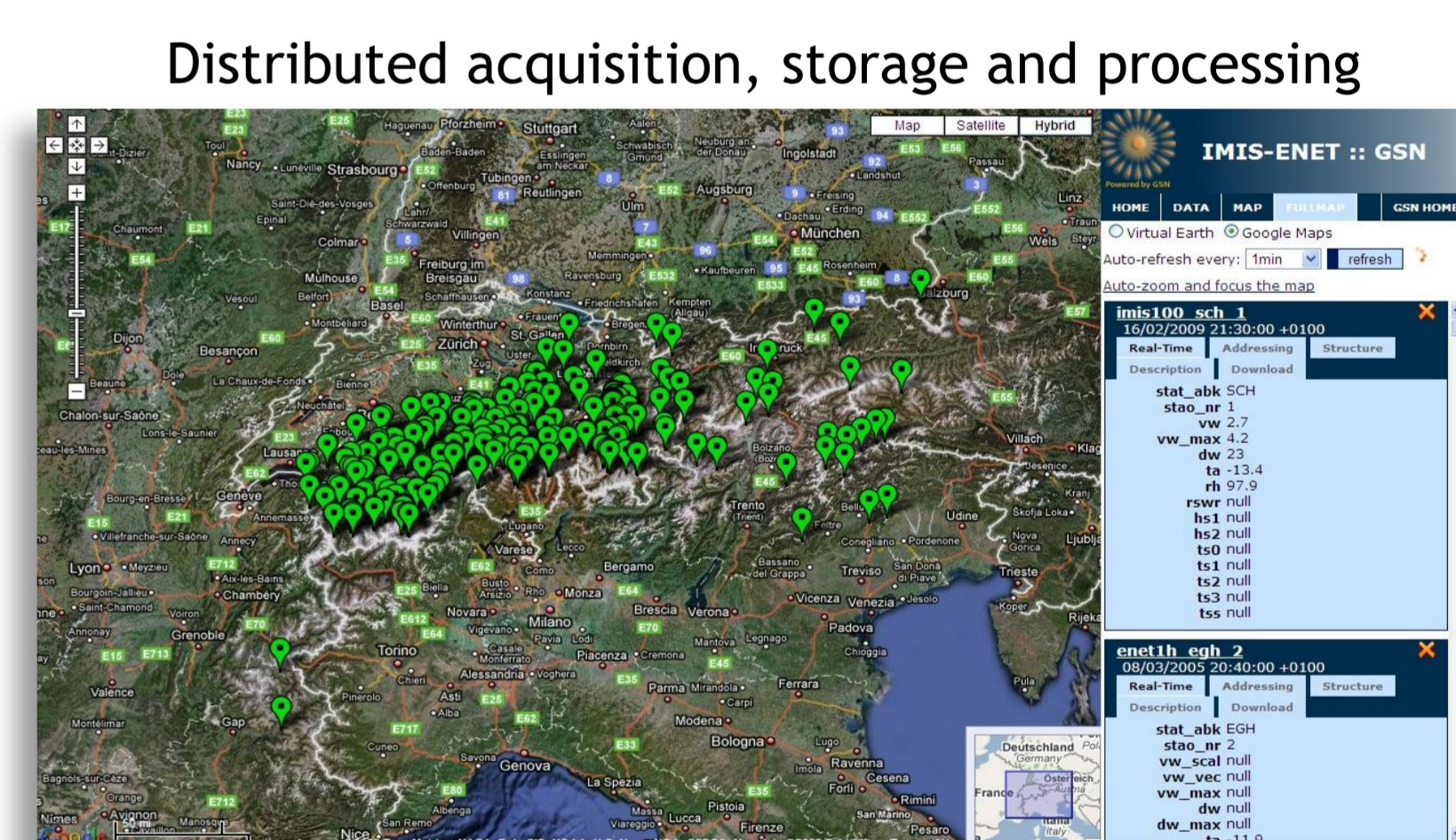
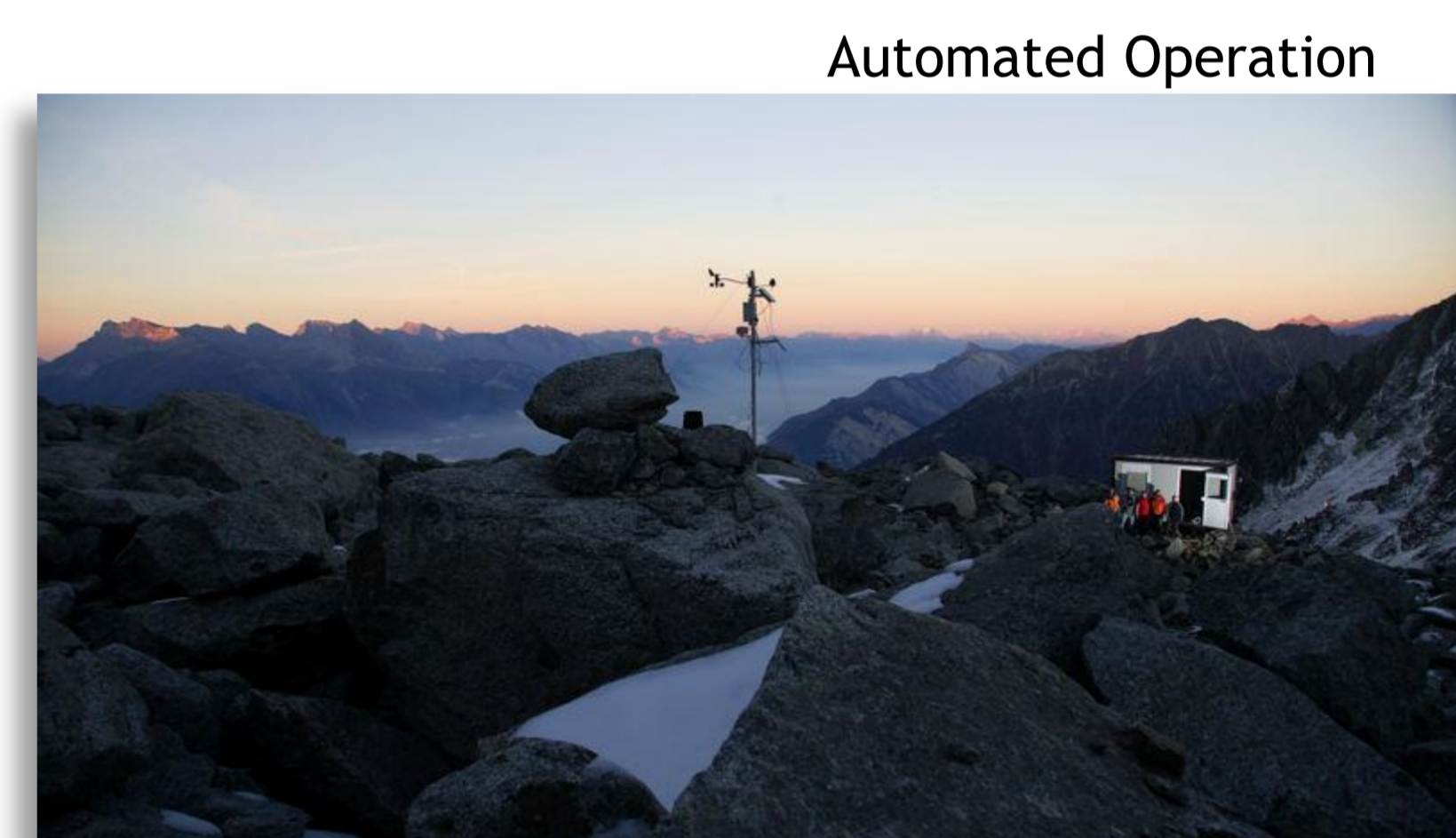
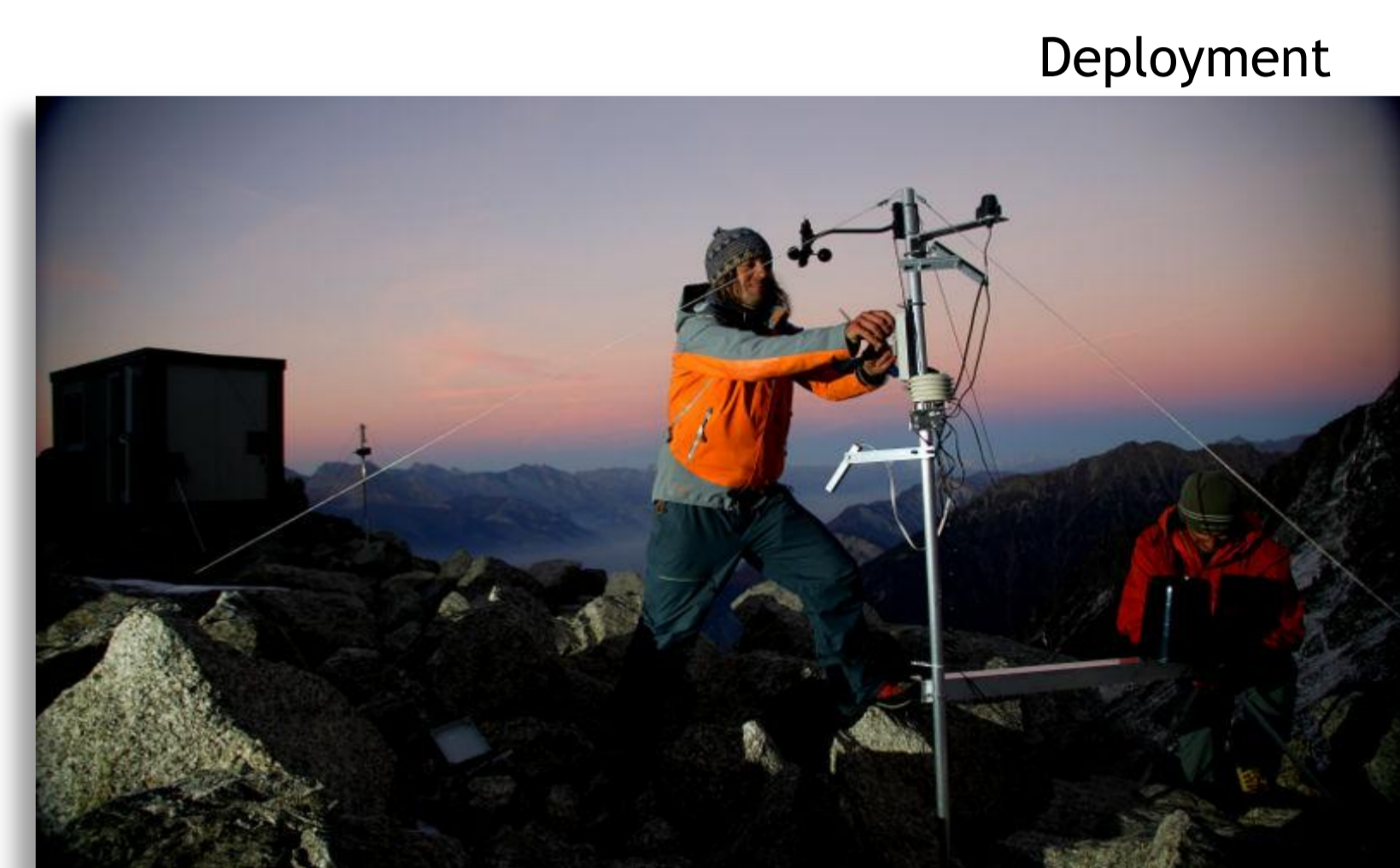


Outcome:

a diverse public data set to be used in a variety projects from wind field/preferential distribution modelling, to biodiversity and sensor development.

Partners:

SLF, EPFL and the Hydrosys consortium.



More information on the technologies under development by the SwissEx partners can be found at the Swiss Experiment stand in the registration area.

www.swiss-experiment.ch

