

The Swiss Data Science Center

A complex journey made simple



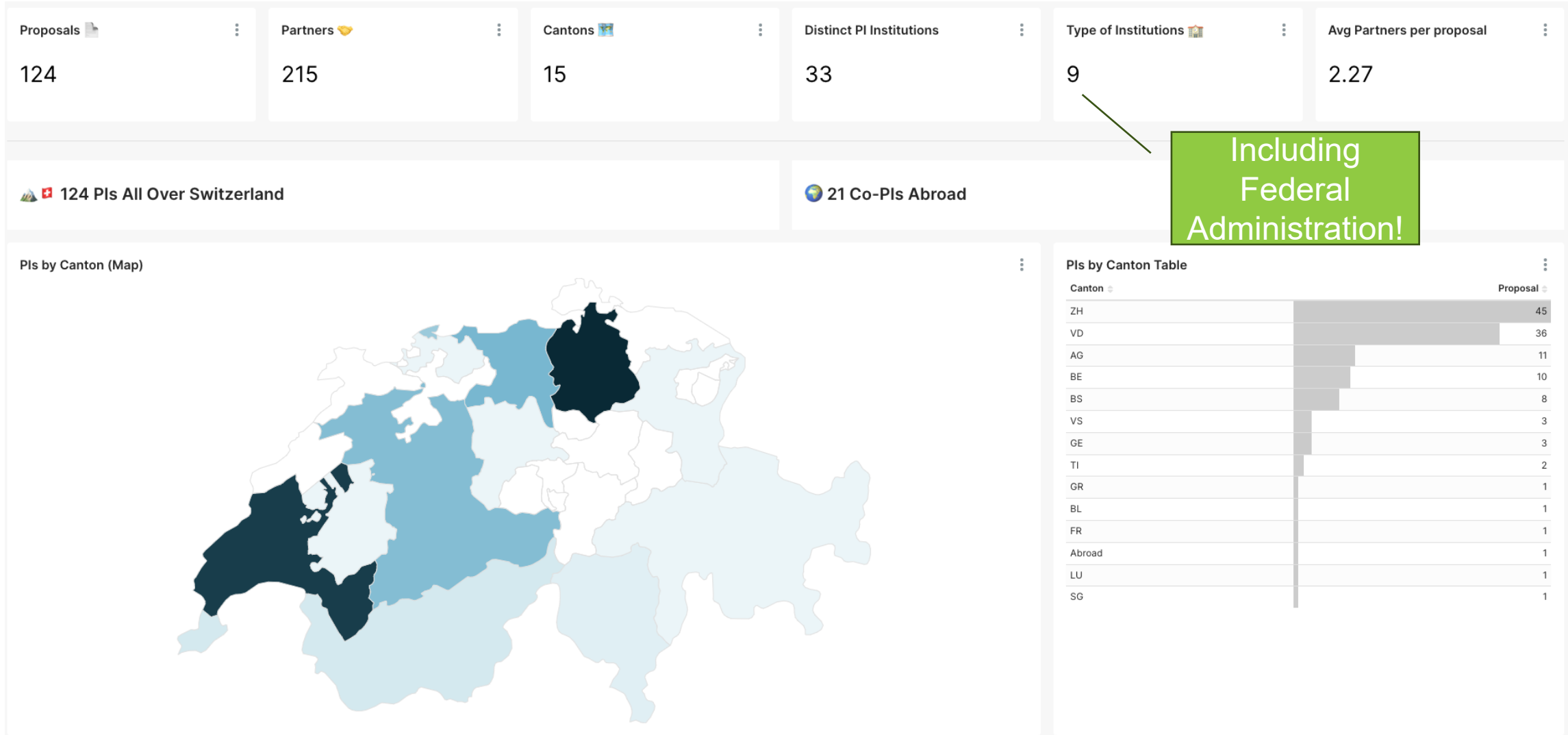
Enabling data-driven science & innovation for societal impact

An initiative from the ETH
Domain initiated in 2017
**Permanent National
Infrastructure** as of 2025

Large multidisciplinary
team of 120+ data science
professionals

Research, Innovation,
Software & platforms,
Education

SDSC National Call for collaborative projects (2025)





BFE/SFOE: Identify data science potential in the energy domain



BFS/FSO & BIT/FOITT: Expand local data science capabilities in public sector projects



BAFU/FOEN: Collaborate on data-driven projects featuring multi-disciplinary teams



Swiss Parliament, FEDRO, FOAG et al.: Support domain specialists with data science expertise



MeteoSchweiz: Model weather more accurately and actionably

Data Science opportunities in energy policymaking

BFE Energy Dashboard

Energy Dashboard for live updates on Swiss energy production & consumption

Objective: Forecast energy production & consumption one week in advance

Challenge: Break data silos from DSO's, gain sound domain expertise



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Bundesamt für Energie BFE
Office fédéral de l'énergie OFEN

Energy Dashboard Switzerland

Overview **Electricity** Gas Prices Weather

ELECTRICITY

Supply situation tense

The supply of electricity is guaranteed

The supply of electricity is guaranteed. Help to keep Switzerland reliably supplied with electricity in winter and avoid wasting energy by applying our [energy-saving tips](#).

<https://energiedashboard.admin.ch/dashboard>

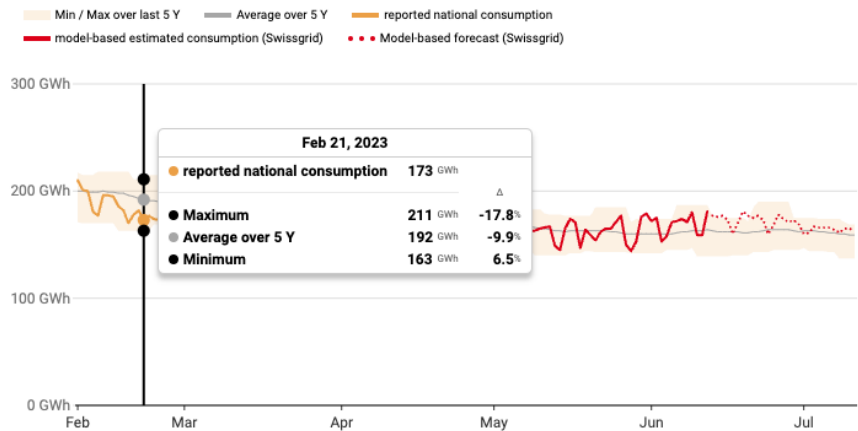
Data and sources

[BFE](#), [Swissgrid](#), [ENTSO-E](#), [ENTSO-G](#), [AGGM](#), [SmartGRT-Gaz](#), [VSG](#)

National consumption including consumption of storage pumps over the last few weeks

Daily updates - Status Jun 12, 2023

The national consumption, including the consumption of the storage pumps, is an important indicator in relation to the electricity supply. The trend is initially presented on the basis of data reported to Swissgrid by distribution grid operators. These data may be incomplete or incorrect and are subsequently corrected. Real-time data are not available, which is why a model (red line) must be used to estimate consumption on the basis of the past. The same model is also used for the forecast of the coming days (red, dashed line).



Strategic partnership with BFS/FSO

2021 – present

Establishing the Data Science Competence Center (DSCC)

Objective: Enable DSCC to deliver data science projects to the Swiss public sector

Challenges: Recruit data scientists/data engineers to serve as the foundation team of DSCC
Identify and deliver impactful collaboration projects



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Main themes:

1. Foster collaborative and reproducible Data Science & AI at FSO's DSCC
2. Bootstrap DSCC's capacity and capability in Data Science & AI
3. Accelerate DSCC's impact in Data Science & AI for public good

Deliverables to date:

1. Renku: the first & only data science platform offered by BIT to Federal Offices
2. Successful recruitment of DSCC team
3. SDSC/DSCC collaboration on Statbot and other projects



Stadt Zürich
Präsidialdepartement

Zürcher Hochschule
für Angewandte Wissenschaften



CONTEXT



Mapping, tracking and **understanding landslides at scale** in the Alpine range is a **data intensive task**

The data science pipeline spans different domains, from radar Earth observation, to computer vision, geology and natural hazards

OBJECTIVES

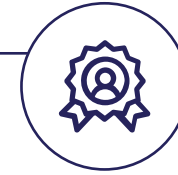


Develop **accurate computer vision models** to map surface movements at scale

Allow integration into domain science **pipelines to track movements and detect new ones**

Close collaboration with domain scientist and nat. haz. specialists in BAFU to meet all requirements


BENEFITS



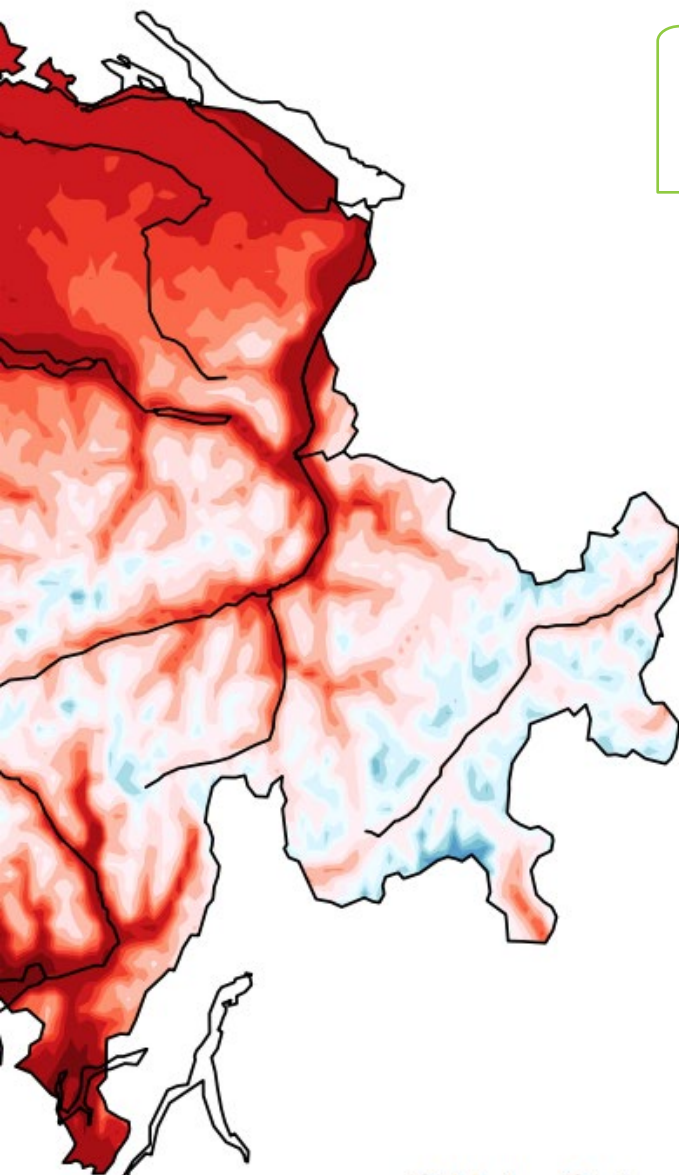
Reusable and open set of tools for the whole alpine range, using open data (Copernicus, EU programs)

Tool for natural hazard management for Cantons and Confederation

System in place for further proof of concept work (e.g. higher resolution radar data)



Landslides (black outline) in interferograms derived from synthetic aperture radar Earth observation. Own annotations.



CONTEXT



Weather forecasts and climate models are increasingly becoming data intensive and **reliant on new AI / ML models**

Advances in the field need tighter collaboration between data scientists and domain scientists

OBJECTIVES



Formalize flexible collaboration on several data and weather sciences projects between the SDSC and MeteoSchweiz

Develop, study and bring into production AI/ML based methods for weather forecast, extreme modeling and climate models at large

BENEFITS



Strengthen and leverage collaboration between experts

Contribute to better weather forecasting products for the scientific community, natural hazards practitioners and the public at large



Thank you!

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