EnhanceR | Enhancing Research through IT Expertise

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Promoting Open Science in Switzerland: EnhanceR perspective

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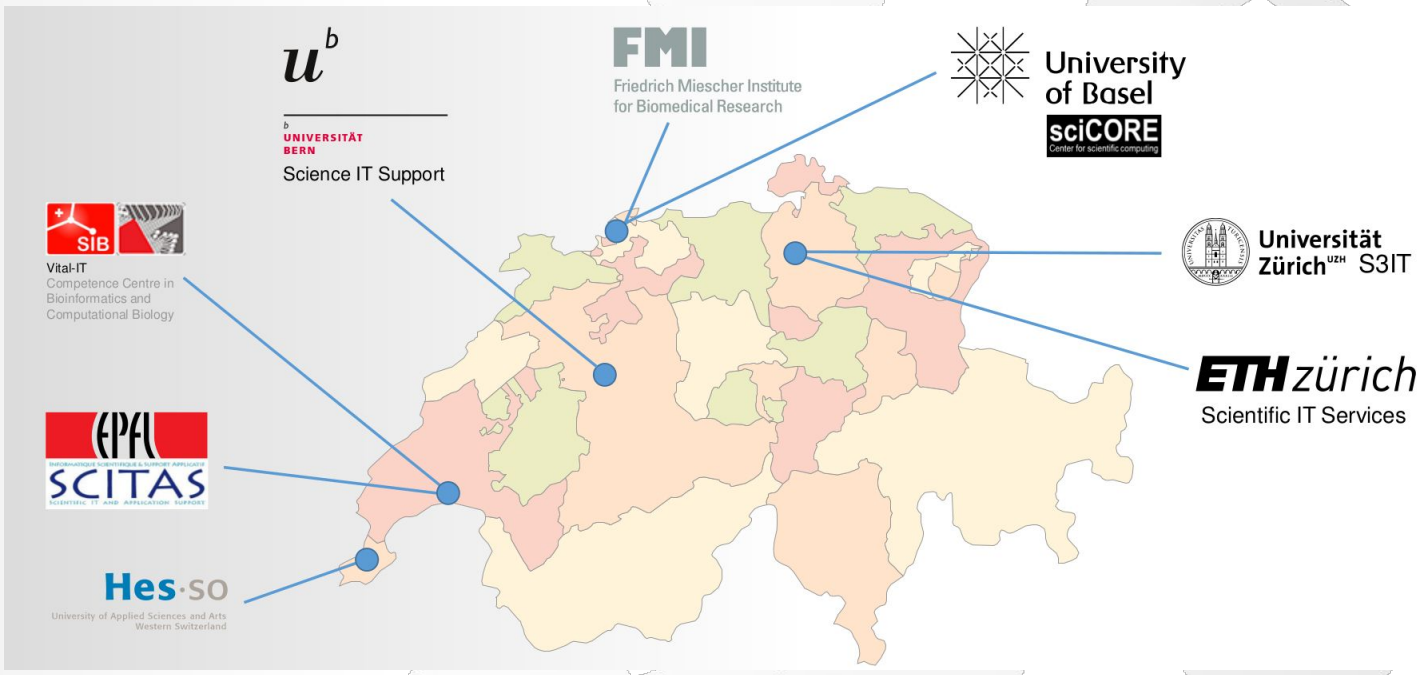
University of Zurich[UZH] | ETH zürich | EPFL ECOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE | UNI BASEL | SIB Swiss Institute of Bioinformatics | Hes·so Haute Ecole Spécialisée de Suisse occidentale | FMI Friedrich Miescher Institute for Biomedical Research | u b UNIVERSITÄT BERN

EnhanceR: enhancing Research through IT expertise

- A federation of Research IT specialists in Switzerland
- Offer consulting and technical services to research groups
- Grow provider capacities and capabilities
- Knowledge transfer to researchers
- Work with other national services and networks



Information from the State Secretariat for Education, Research and Innovation SERI SERI

SWITCH

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Open Science: principles

- Shift to ‘data culture’
  - Build idea into process, approaches, dissemination and work
  - Data as the initial output of research. Papers, insights and discovery as the second stage output.
- Openness by default
  - Require openness unless there is a clear case for privacy
  - Open source software, open formats, open repositories
- FAIR
  - Use as underlying principle and practical guide
- Building skills
  - All activities include training and knowledge transfer
  - Explicit goal of raising community capability

Practical support for open science

Develop skills in research IT

- Consulting process
- Best practices for thematic and tech areas
- Identify upcoming challenges

Tech Development

- Kickstart new tools and services
- Present continuum of infrastructure: Desktop, Cluster, Cloud, HPC
- Support containerisation for interoperability & reproducibility

Engage with end-users and communities

Disseminate knowledge

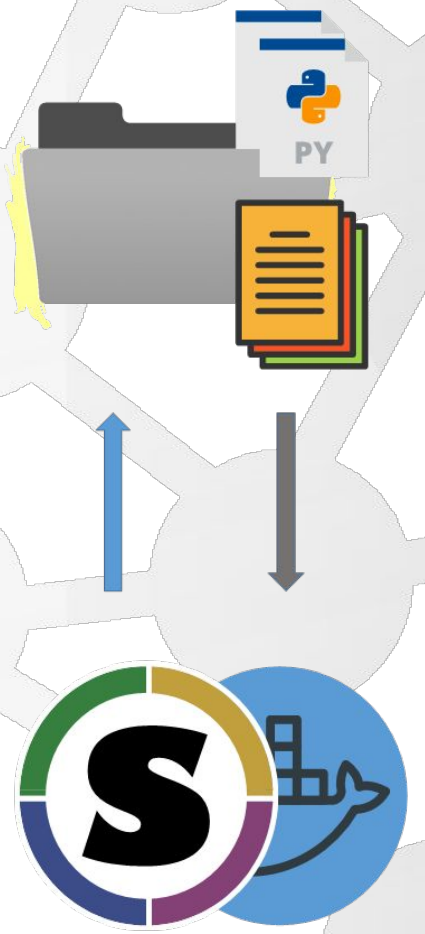
- Training (researchers and IT teams)
- DMP templates & support
- Legal advice and information

Policy development

- Align with funding agencies
- Business & service descriptions models for sustainability
- Governance challenges in federated system

Examples: Data analysis interoperability

- Driven by personalised medicine initiative: SPHN
  - Cutting edge science using private medical data
  - Strong need for collaboration and portability of data AND analysis
- EnhanceR addresses data and analysis challenges
  - Technical layer
    - Heterogeneous infrastrures, different technologies, policies, requirements
    - Develop container-based data analysis and automatically deploy and validate on the supporting infrastructures.
  - Policy/Human layer
    - Establish new practises for researchers to develop their data analytics and validate the reproducibility and interoperability



https://www.enhancer.ch/casestudies