Project applications of the ninth call for proposals (August 2018)

Total number of applications: 9, list sorted by key area of focus, project ID.

Key area of focus	Main Implementation action	Project ID	Project short title	Project full title *Link to the abstract further below*	Leading institution	Partner institution(s)	Contact *linked to e-mail address*	Total cost / funding [kCHF]
eScience	R-2	182-001	Eudaimonia	EUDAIMONIA - EvalUation of DAta Infrastructures – MONitoring, Inquiry & Assessment → Abstract	HES-SO GE	n/a	René Schneider	380.2 (100%) / 190.4 (50.1%) Rejected
Publications	P-9	182-002	SwissCOSS	Nationale Mitgliedschaft an der Global Sustainability Coalition for Open Science Services (SCOSS) zur Förderung der Open-Access-Dienste SHERPA/RoMEO und DOAJ (2019-2021) → Abstract	Consortium	BCU-FR, EPFL-Bib, ETH-Bib, Lib4RI, PHZH, UB BE, UB BS, UniGE, USI, ZB ZH, ZHB LU, ZHdK, other	Rafael Ball	188.0 (100%) / 132.7 (70.6%) **Approved** *(Cut of 5'640 CHF)*
eScience	R-2	182-003	EnhanceR-ev	EnhanceR: Evolving support for Research through IT Experise → Abstract	UniZH	EPFL, ETHZ, FMI, HES-SO GE, SIB, UniBE, UniBS	Sergio Maffioletti	1'278.3 (100%) / 799.3 (62.5%) Rejected
eScience	B-6	182-004	SELVEDAS	Services for Large Volume Experiment-Data Analysis utilizing Supercomputing and Cloud technologies at CSCS → Abstract	CSCS	PSI	Maxime Martinasso	1'579.2 (100%) / 684.0 (43.3%) **Approved**

Key area of focus	Main Implementation action	Project ID	Project short title	Project full title *Link to the abstract further below*	Leading institution	Partner institution(s)	Contact *linked to e-mail address*	Total cost / funding [kCHF]
Basis	B-1	182-005	Swiss edu-ID Step3+4	Swiss edu-ID Deployment Steps 3+4 → Abstract	SWITCH	n/a	Christoph Graf	2'215.2 (100%) / 1'107.6 (50%) **Approved**
Basis	B-4	182-006	CCdigitallaw	Competence Center in Digital Law – Phase II → Abstract	USI	UniBS, UniLU, UniNE	Stefano Tardini	1'084.7 (100%) / 540.2 (50.9) Rejected
Basis	B-6	182-007	EOSC-ELCH	Integration of EOSC-hub services at the Swiss level → Abstract	UniBE	CSCS, PSI, SwiNG, SWITCH	Sigve Haug	538.5 (100%) / 248.0 (46.1%) **Approved**
eScience	R-4	182-008	Materials Cloud	Materials Cloud as an open, international, and fully FAIR repository of computational data and workflows → Abstract	EPFL	CSCS	Giovanni Pizzi	1'284.0 (100%) / 642.0 (50%) **Approved**
Publications	EP-10a	182-010	e-codices 2017-2020	e-codices – Produktionsphase 2017-2020 [Teil 2] → Abstract	UniFR	Bib-GE, UB BS, other	Christoph Flüeler	3'040.1 (100%) / 1'404.9 (46.2) **Approved** *(Fördermittel : 400 KCHF)*

Abstracts

Eudaimonia (182-001)

EvalUation of DAta Infrastructures – MONitoring, Inquiry & Assessment

Ziel des Projekts EUDAIMONIA ist die Durchführung der grundlegenden Arbeiten zum Aufbau eines Clearing House für die Evaluation von *Daten*, deren *Infrastrukturen* und *Services*.

Dazu sollen vielfältige Methoden und Instrumente zur Sicherstellung von Qualitätsstandards und zur Durchführung von Wirkungsanalysen für den Zugang, die Verarbeitung und die Sicherung von Forschungsdaten zusammengefasst werden. Nach Projektende soll eine Evaluationsplattform zur Verfügung stehen, die so beschaffen sein soll, dass sie Grundlage eines eigenen Services sein kann, der von einer geeigneten Institution (etwa der zu schaffenden nationalen Organisation oder in deren Auftrag) kontinuierlich weiterentwickelt und in entsprechenden mehrjährigen Zyklen durchgeführt werden kann.

Die Evaluationsplattform wird es demnach ermöglichen, Nutzwertabschätzungen für Daten (i.S.v. Data Seals), Qualtitätsüberprüfungen von Infrastrukturen (Repositorien und Archive) (i.S.v. Core Trust Seals) sowie Eigen- und Fremdevaluationen von Dienstleistungen rund um das Forschungsdatenmanagement durchzuführen. Dabei sollen sowohl die sich immer beständiger entwickelnden internationalen Standards als auch die Idiosynkrasien der schweizerischen Forschungslandschaft berücksichtigt werden. Die Plattform soll zudem all jenen als Portal offenstehen, die sich erstmalig bzw. fortlaufend zum Thema Evaluation und Qualitätsmanagement von Daten informieren wollen.

Das Projekt zeichnet sich durch eine doppelte Dreigliederung aus, zum einen hinsichtlich des Evaluationsgegenstands, d.h. den drei Ebenen Daten, Infrastrukturen und Dienstleistungen, zum anderen hinsichtlich der methodischen Betrachtungsweise, d.h. dem Monitoring (Wie evaluieren die anderen?), der (Selbst-)Evaluation (Inwiefern werden Qualitätsstandards erreicht?) sowie des vergleichenden und bewertenden Assessment bzw. Benchmarking (Wie stehen die Daten, Infrastrukturen und Dienstleistungen im Vergleich zu den anderen dar).

Back to top

SwissCOSS (182-002)

Nationale Mitgliedschaft an der Global Sustainability Coalition for Open Science Services (SCOSS) zur Förderung der Open-Access-Dienste SHERPA/RoMEO und DOAJ (2019-2021)

Das Projekt SwissCOSS sieht die Bildung eines nationalen Konsortiums und dessen Beteiligung an internationalen Open-Access-Infrastrukturen über eine Mitgliedschaft bei der Global Sustainability Coalition for Open Science Services (SCOSS) vor. Die Koordination des Projektes obliegt der neu gegründeten Fachstelle Neue Lizenz- und Publikationsmodelle / Open Access des Konsortiums der Schweizer Hochschulbibliotheken. Dies ermöglicht nicht nur die in der nationalen Open-Access-Strategie von swissuniversities angestrebte Koordinierung und Zusammenlegung der Ressourcen einer überwiegenden Mehrheit der Schweizerischen Hochschulbibliotheken und des Schweizerischen Nationalfonds (SNF) zu erreichen, aber auch den Ausbau der Fachstelle zu einer Drehscheibe für die Vermittlung von Best Practices und von Standards zur Unterstützung eines nationalen Open-Access-Monitorings, im engen Austausch mit der internationalen Community.

Im Fokus der SCOSS-Mitgliedschaft steht die Unterstützung der zwei Open-Access-Dienste Directory of Open Access Journals (DOAJ) und SHERPA/RoMEO (SH/Ro) über die Bildung eines Konsortiums. Beide Dienste wurden 2017 von der SCOSS erfolgreich evaluiert und verfügen über ein Förderkonzept mit Entwicklungszielen für die nächsten Jahre. DOAJ und SH/Ro sind im Kontext von OA zu unverzichtbaren zentralen Diensten für WissenschaftlerInnen, Bibliotheken und Forschungsförderungsorganisationen geworden. Eine breit abgestützte Förderung aus der Schweiz entspricht der Massnahme 5.7 des Aktionsplans zur OA-Strategie von swissuniversities und im Wortlaut genau der Umsetzungsmassnahme P-9 der Umsetzungsstrategie 2017 bis 2020 des Programms P-5.

Über eine konsortiale Mitgliedschaft bei der SCOSS wird darüber hinaus den Schweizer Hochschulbibliotheken und dem SNF eine einmalige Möglichkeit geboten, aktiv an der Sicherung einer für die Forschungsgemeinschaft unverzichtbaren globalen Infrastruktur mitzuwirken und deren zukünftige strategische Ausrichtung mitzugestalten.

Back to top

EnhanceR-ev (182-003)

EnhanceR: Evolving support for Research through IT Experise

EnhanceR-ev is the continuation of the work begun in 2015 with the eSCT project and continued in EnhanceR. It aims to transition the current activities to a sustainable service model. This is the final stage in the EnhanceR project series before integration as a long-term service in the national landscape coordinated by the Coordination Office for Scientific Information (COSI).

The service types and the general service delivery model established in the EnhanceR project will remain much the same, but in this phase support projects as well as training modules will be charged directly to customers. Federal subsidies will be used for coordiantion and twop servcie activites: initial cosnultign and community projects. Iinitial consulting helps us to understand customer problems. Community projects involve engaging with the community to identify current and upcoming needs, developing common strategies to address them, and developing and delivering training courses to spread the knowledge within the research IT community. These then support the paid delivery of services needed for EnhanceR to be sustainable.

Community engagement involves two stages. The first is a form of consultation, where project partners, community representatives and invited external advisors participate in active discussions to identify common themes of customer needs and upcoming needs based on new research avenues. Next, selected challenges will be addressed by the project consortium working together with the community representatives to generate reusable and maintainable solutions such as a tools, procedures, reports and know-how.

EnhanceR-ev also includes concrete steps to ensure sustainability of its services. Support services and training modules are charged, and pricing is designed to allow for some overhead to support coordination and growth in future, as the volume of trade grows to support it. To help bridge the gap to this sustainable mode, one customer has committed to a sizable purchase to help support the creation of community consensus services and solutions. Equally, there are concrete plans for the financial, organizational and operational models needed to be sustainable as of 1 Jan 2021. Meeting this deadline with a effective, attractive and acessible service is our top prioprity.

Back to top

SELVEDAS (182-004)

Services for Large Volume Experiment-Data Analysis utilizing Supercomputing and Cloud technologies at CSCS

Evolution and scalability of e-infrastructure services for the PSI operated large-scale research facilities including Swiss Light Source (SLS), the Swiss Free Electron Laser (SwissFEL), and the Swiss neutron source (SINQ) are es-sential for researchers from Swiss universities, and a growing number of industrial partners. Ongoing and future progress in accelerator and detector technologies lead to substantial growth of data generated during experiments. PSI, in close collaboration with the Swiss National Supercomputing Centre (CSCS), aims at developing scalable and extensible services for data management, data processing, and data analysis to the Swiss academic user by lever-aging high performance computing (HPC), storage, networking as well as cloud technologies. Implementation of PSI target use cases and data-driven workflows will demonstrate not only GPU-enabled application acceleration but also Supercomputing on Demand service for utilizing existing and planned novel HPC resources at CSCS.

Back to top

Swiss edu-ID Step3+4 (182-005)

Swiss edu-ID Deployment Steps 3+4

Planning 2018-2020

While the current SWITCH edu-ID service is already offering advanced services to a number of resources, the full potential can only be unleashed when existing SWITCHaai customers adopt SWITCH edu-ID. SWITCH plans to fully deploy SWITCH edu-ID by the end of 2020, with all organisations migrated to SWITCH edu-ID. To implement this, SWITCH is planning to carry out a series projects, each carrying out three distinct groups of tasks:

- Adoption planning (aka migration strategy planning): in these work packages, organisations are planning their adoption of the SWITCH edu-ID service with the support of SWITCH.
- Adoption implementation (aka migration): in these work packages, organisations are implementing the plans they developed earlier with the support of SWITCH.
- Functional extensions: SWITCH is extending the functionality of the service SWITCH edu-ID in line with the needs of migrating institutions and the demand of other SWITCH edu-ID service stakeholders.

A bundle of seven universities (4 cantonal universities, 2 UAS and 1 ETH institution) made the first step towards adopting SWITCH edu-ID by developing an adoption plan in the predecessor project “Swiss edu-ID Deployment Step 1”. In the follow-up project “Swiss edu-ID Deployment Step 2.2” (starting August 2018) three universities are currently implementing the plans prepared in the predecessor project, while a number of new universities is doing their first step in parallel: preparing their own adoption plans awaiting implementation in one of the subsequent projects.

The project “Swiss edu-ID Deployment Step 3&4”

This last follow-up project is combining the originally foreseen Steps 3 & 4 into one project. It is running through 2019 and 2020 to allow all remaining universities to join. While maintaining the same methodical approach, the project is organized differently in order to cater for the longer running time and to gain agility. Instead of naming the participating organisations at this time, a process is defined to integrate partners at a later time.

The overarching goal remains unchanged: To enable all universities to adopt SWITCH edu-ID by the end of 2020 and thus to implement an important element of the Implementation strategy 2017 to 2020 of the programme 2017-2020 P-5 "Scientific information: Access, processing and safeguarding".

Back to top

CCdigitallaw (182-006)

Competence Center in Digital Law – Phase II

This project is an extension (phase 2) of the project “Competence Center in Digital Law”. The main idea for this phase 2 is to further develop CCdigitallaw, by re-positioning it through a strong integration at USI, by extending its scope to include topics related to data management, and by keeping a clear focus on the delivery of services and knowledge transfer.

CCdigitallaw will be further developed according to the following three main lines:

- Shifting the focus on the delivery of services and towards user demands

  The project will shift its focus on service delivery and towards user demands. Marketing and dissemina-tion activities will be reinforced, too, so as to ensure an effective outreach.

- Extending the scope of the topics addressed in the field of digital law

  While CCdigitallaw has addressed so far only the topics related to copyright, the scope of the Center will be extended to include topics in the realm of data and data management, specifically data protection and privacy, and the legal aspects of research data management.

- Reinforcing partnerships with other interested Swiss HEIs at an institutional level

  Partnerships with other interested Swiss HEIs will be reinforced at an institutional level through a top-down approach, i.e., through a direct involvement of USI Rectorate in the collaboration negotiations. Moreover, CCdigitallaw will be more deeply integrated in the partner institutions.

The approach of the project phase 2 of CCdigitallaw will be strongly oriented to the delivery of services, i.e., it will be driven by the users’ requests and demands. CCdigitallaw will offer three main types of services:

1. Training services: basic workshops, webinars, on-demand trainings.
2. Communication and dissemination services: newsletters with knowledge pills, an Online Service Platform (available at www.ccdigitallaw.ch), annual events.
3. Advising services in 4 languages.

Back to top

EOSC-ELCH (182-007)

Integration of EOSC-hub services at the Swiss level

The implementation of the European Open Science Cloud (EOSC) is driven by some major and several minor EC projects. Switzerland is participating as third party in the major EOSC-hub project through the membership of the Swiss National Grid Association (SwiNG) in EGI.eu, the leading house of the project. The EOSC-hub project brings EC funded services from EGI.eu, EUDAT, INDIGO DataCloud and other projects together under one umbrella and into one portal. So far Swiss research has used and is using high throughput computing services and international identity provision for computers and researchers. In the prior P-2 and P-5 projects NeI-CH and Open NeI-CH the usage of these European services have been established as paid services on the national level. In this follow up project the integration of emerging EOSC-hub services into the P-5 portfolio is addressed. Swiss access to the European infrastructure is then maintained and broadened.

Back to top

Materials Cloud (182-008)

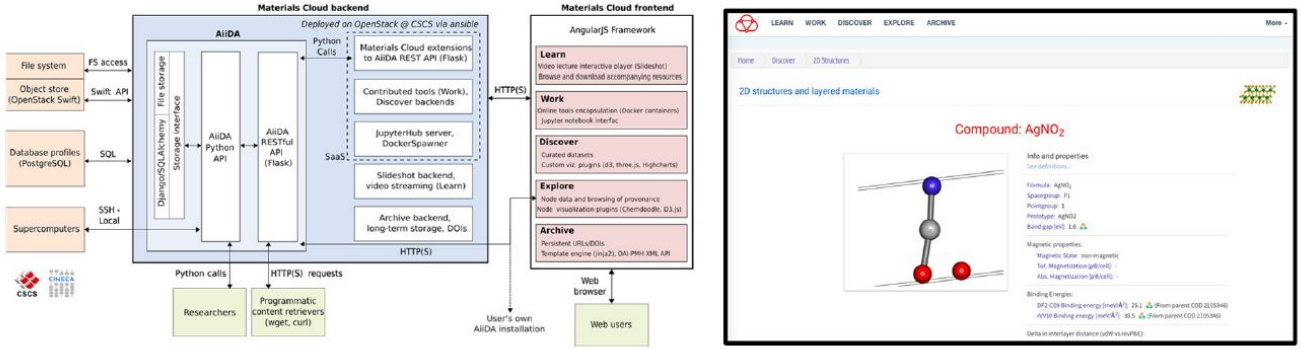
Materials Cloud as an open, international, and fully FAIR repository of computational data and workflows

Materials Cloud (http://www.materialscloud.org) is a web platform for Computational Open Science, conceived to assist Computational Scientists in the full life-cycle of their projects.

In general, we can distinguish three types of data: social, harvested and noisy; experimental, harvested in controlled conditions; and computational, generated in controlled conditions. Materials Cloud focuses on the last type. As such it focuses on two essential components: a) assist the researchers in the data generation part, and b) track, visualize, and publish the controlled conditions under which the data was generated, i.e., record and share of the data provenance (the logical chain or, more precisely, graph of all input data and calculations that were used to produce the final result).

Based on these principles, the core of Materials Cloud is a data generation platform, strongly coupled with an archive and a sharing platform for open research data, assisting scientists in data dis semination, curation and publishing with DOIs. This sharing platform, thanks to a rich web interface, allows users to browse the data, navigate its provenance, visualize it, and download it for further reuse, making data fully accessible and interoperable. The platform is powered by our software framework AiiDA (http://www.aiida.net), that provides automation of simulations, of workflows and a completely automated provenance tracking to ensure reusability and reproducibility of all computational research. Moreover, AiiDA has already a collection of plugins supporting over 20 simulation packages, and implementing various relevant scientific workflows. Thanks to the unique combination of features of AiiDA and Materials Cloud, our platform can ensure FAIR data sharing. Developed since 2015 and public since December 2017, it already provides data on materials computed by over 100’000 calculations. To our knowledge, currently no other infrastructure exists that is designed to guarantee the same level of reproducibility and FAIR sharing of the results in the field of Computational Materials Science, coupled with automation of simulations and workflows.

The aim of this project is to scale up our Materials Cloud infrastructure to match the needs of the whole scientific community, in Switzerland first, extending then to Europe and beyond, while at the same time making sure that the infrastructure is stable, available at all times, flexible to support even more data types and scientific fields. In fact, while currently focused on Materials Science, the platform and the provenance model are very general and can be applied to many different disciplines, starting from computational physics and computational chemistry.



(Left) The current Infrastructure of the Materials Cloud. The backend is powered by AiiDA, that is able to connect to remote computational resources and stores data in a combination of databases and files (or, planned, to an object store). Its REST API, combined with the Materials Cloud REST API and some additional backend components, provides the data displayed interactively by the AngularJS frontend. (Right) A screenshot of one of the curated sections of Materials Cloud, with data always decorated with their full provenance, that can be interactively browsed ensuring reproducibility of research results.

Back to top

e-codices 2017-2020 (182-010)

e-codices – Produktionsphase 2017-2020 [Teil 2]

Die zweite Phase des Projekts „e-codices 2017-2020“ wird die laufenden Bemühungen für eine Verstetigung konsequent weiterführen. Die Verstetigung ist das primäre Ziel der nächsten Produktionsphase. Sukzessiv wird der gesamte Betrieb dem neuen Standort übergeben. Mit Abschluss des beantragten Projekts wird e-codices ein konsolidierter Betrieb sein, der von der Universitätsbibliothek Basel geführt, gehostet und weiterentwickelt wird. Der Grundbetrieb wird von den wichtigsten Handschriftenbibliotheken der Schweiz getragen. Diese sind in einer Trägerschaft zusammengeschlossen, die die Grundfinanzierung gewährleistet und die strategische Ausrichtung der Plattform bestimmt. Das erfolgreiche Qualitätsmanagement wird soweit wie möglich beibehalten.

Für die Weiterführung des Betriebs ab 2021 sollen in den nächsten zwei Jahren möglichst günstige Voraussetzungen geschaffen werden. Dazu müssen an der technischen Infrastruktur weitere Verbesserungen vorgenommen werden. Die geplanten Massnahmen werden vor allem die Stabilität und Modularität, aber auch den einfacheren und kostengünstigeren Unterhalt verbessern. Ferner wird die Interoperabilität weiter ausgebaut und damit ein Qualitätsmerkmal von e-codices zusätzlich gestärkt.

Die laufenden Teilprojekte werden weitergeführt und neue in Angriff genommen. Ziel ist es, die Beziehung zur Forschung zu intensivieren und dadurch die Nachhaltigkeit des Angebots zu stärken.

Back to top