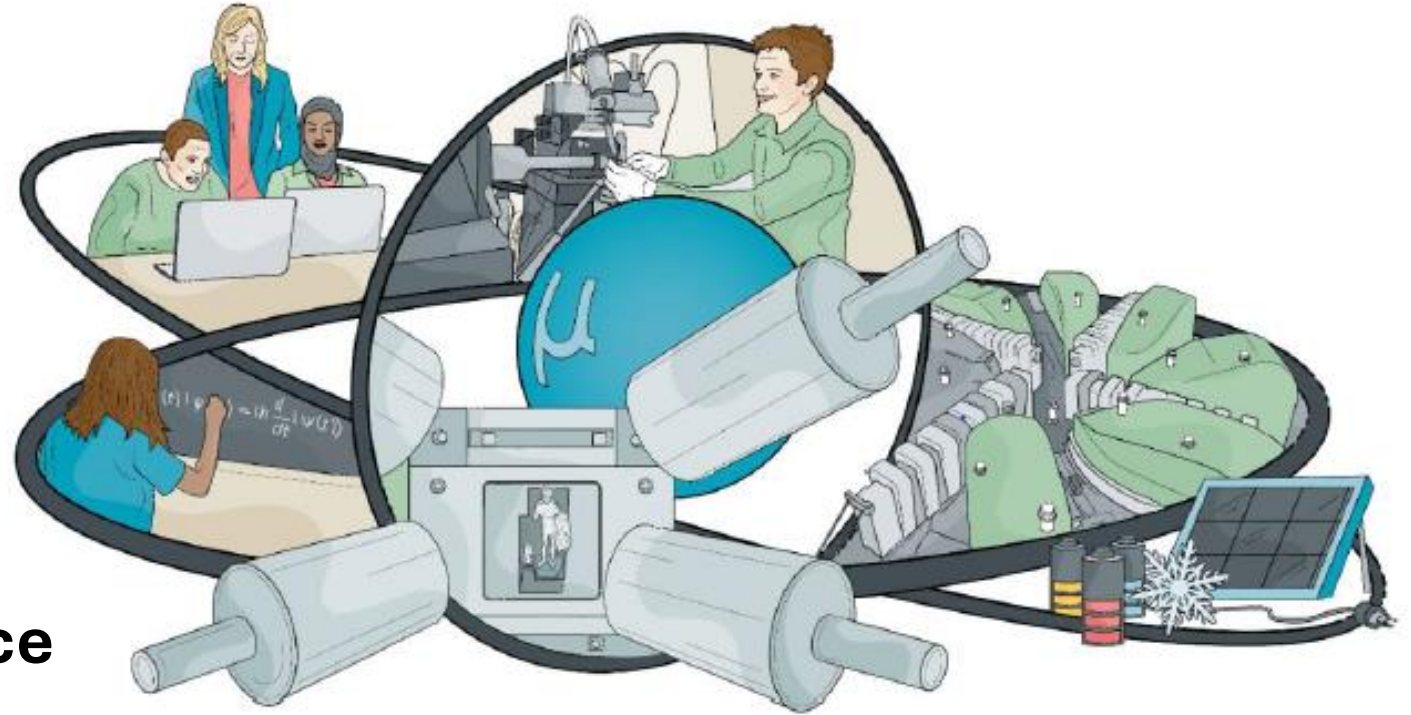


Muoniverse

a proposal for a
National Centre of Competence
in Research (NCCR)



National Centres of Competence in Research (NCCRs)



From sustainable architecture to the evolutionary origins of language to quantum computers: the NCCRs fund long-term research projects on topics of strategic importance to Switzerland.

Submission deadline: 03.02.2025 (declarations of intent: 27 November 2024)

The SNSF published the call for proposals for the sixth series of NCCRs on behalf of the federal government at the end of November 2023. The call is aimed at researchers in Switzerland who want to conduct long-term research projects on topics of strategic importance. The decisions on new NCCRs from this call are expected to be communicated in early 2026. The next NCCRs will start in the first half of 2026.

For experienced researchers

NCCRs are intended for experienced researchers.

An NCCR consists of several research groups working together in an interdisciplinary, interuniversity network with partners from the academic, public and private sectors. They help structure the Swiss research landscape and strengthen its international network.

NCCRs are always hosted by one or more Swiss higher education research institutions.

Long-term, broad-based funding

The federal government defines the financial framework. Between 8 and 20 million Swiss francs are usually approved for the first four-year period. NCCRs last for 8 to 12 years and are divided into four-year periods. The length of the third period may vary. In addition to the federal contribution, funding for the NCCRs comes from the universities and from third parties.

Interval between calls

The SNSF periodically launches new NCCR calls on behalf of the federal government. Six to ten NCCRs are approved for each call. To date there have been five NCCR series (2001, 2005, 2010, 2014 and 2020). The first three series have been concluded.

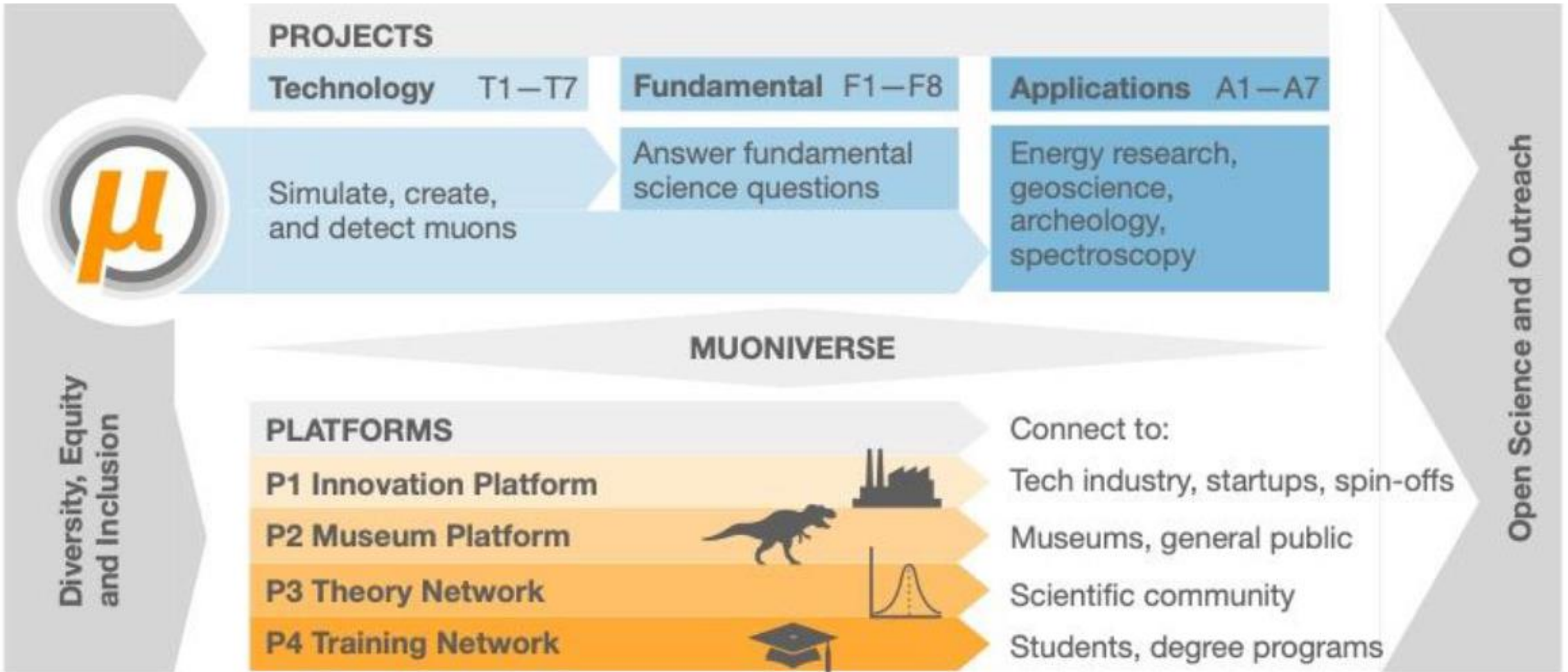
From the executive summary of the outline proposal:



Switzerland already occupies a prominent place in the muon-science landscape, by operating a world-leading muon beam user facility at the Paul Scherrer Institute (PSI), which comprises the Swiss Muon Source ($S\mu S$) and the Swiss Research Infrastructure for Particle Physics (CHRISP). Both will be substantially upgraded in the coming years, and the overall objective of NCCR Muoniverse will be to provide the network to complement and leverage this unique infrastructure in ways that are impossible without a multidisciplinary and inter-institutional effort.

From the start of phase I, we will significantly extend the scientific use of muons by groups across Switzerland, by developing and transferring novel technologies, expanding experimental and methodological capabilities, and pushing the frontiers in applications that address some of the most pressing challenges in various disciplines, from quantum materials and spintronics to renewable-energy production and storage, and environmental monitoring. In parallel we will establish sustainable structures for education, industry collaboration, and public outreach that are unique in the world.

In this way, Muoniverse will enable an extraordinarily broad range of research groups based in Switzerland to establish strong collaborations across disciplinary boundaries and to inspire new links to industry and society. This will go hand in hand with promoting in particular early-career researchers and teams at Swiss universities, to pursue novel directions exploiting the full potential of muons. As such, the proposed NCCR will lay in its first phase solid foundations for two further four-year periods, to create a lasting 'Muoniverse' of talent and opportunities.



Applicant:	Kirch, Klaus
Other applicants:	Schmidt-Ott, Katharina Salman, Zaher West, Shaun Baudis, Laura Caminada, Lea Guguchia, Zurab Pieloni, Tatiana von Rohr, Fabian Grossner, Ulrike Carbone, Fabrizio Soter, Anna Weber, Michele Spaldin, Nicola A. Seidel, Mike Papa, Angela Trabesinger, Sigita Neupert, Titus Janoschek, Marc Luetkens, Hubertus Remhof, Arndt Bernhard, Christian Schmidt-Wellenburg, Philipp Kowalska, Magdalena Bavay, Mathias Natterer, Fabian Donat Antognini, Aldo Stoffer, Peter Fu, Fan

PIs Outline Proposal
Leading House: PSI



Full Proposal

Leading House: PSI

Director: KK (PSI/ETHZ)

Deputy Director:

Angela Papa (PSI/UniPisa)

Co-Leading House: UZH

Co-Director:

Marc Janoschek (PSI/UZH)

Deputy Co-Director:

Johanna Nordlander (UZH)

Swiss National Museum

PSI

HSLU

UZH

PSI/UZH

PSI

EPFL

Uni Genf

ETHZ

EPFL

ETHZ

Uni Bern

ETHZ

PSI/EPFL

PSI/Uni Pisa

PSI

UZH

UZH/PSI

PSI

EMPA

Uni Fribourg

PSI

CERN/Uni Genf

WSL

UZH

PSI/ETHZ

UZH/PSI

EMPA

Connected to:

artists in labs

Zurich University of the Arts (Zdhk)

Irène Hediger, Flurin Fischer

**Interdisciplinary Centre for
Gender Studies (ICFG) Uni Bern**

Andrea Zimmermann

Very rough budget numbers:

SNF: 3.87 MCHF/y

PSI: 4.05 MCHF/y (in-kind&cash)

UZH: tbd

Muoniverse Budget	
Version: 20.03.2024, KK	
SNF	#FTE
Personnel	
Project PhD students	20
Project Postdocs	10
Fellows	3
Guest Scientist	2
Open Data Postdoc	1
Museum platform coordinator	1
Innovation platform coordinator	1
Innovation platform PhD	1
Innovation platform PD	1