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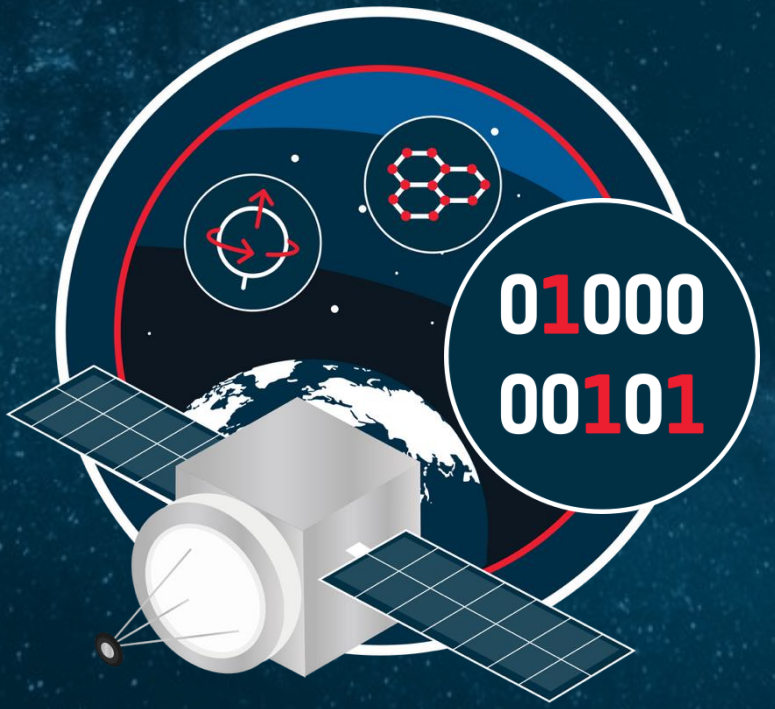
WELCOME

to the Phi-Lab Webinar for the Space × Data Call 2026



EUROPEAN SPACE DEEP-TECH INNOVATION CENTRE

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WHAT IS ESDI?

EUROPEAN SPACE DEEP-TECH INNOVATION CENTRE

A **deep-tech centre of excellence** in Switzerland under the leadership of ESA, implemented in partnership with PSI

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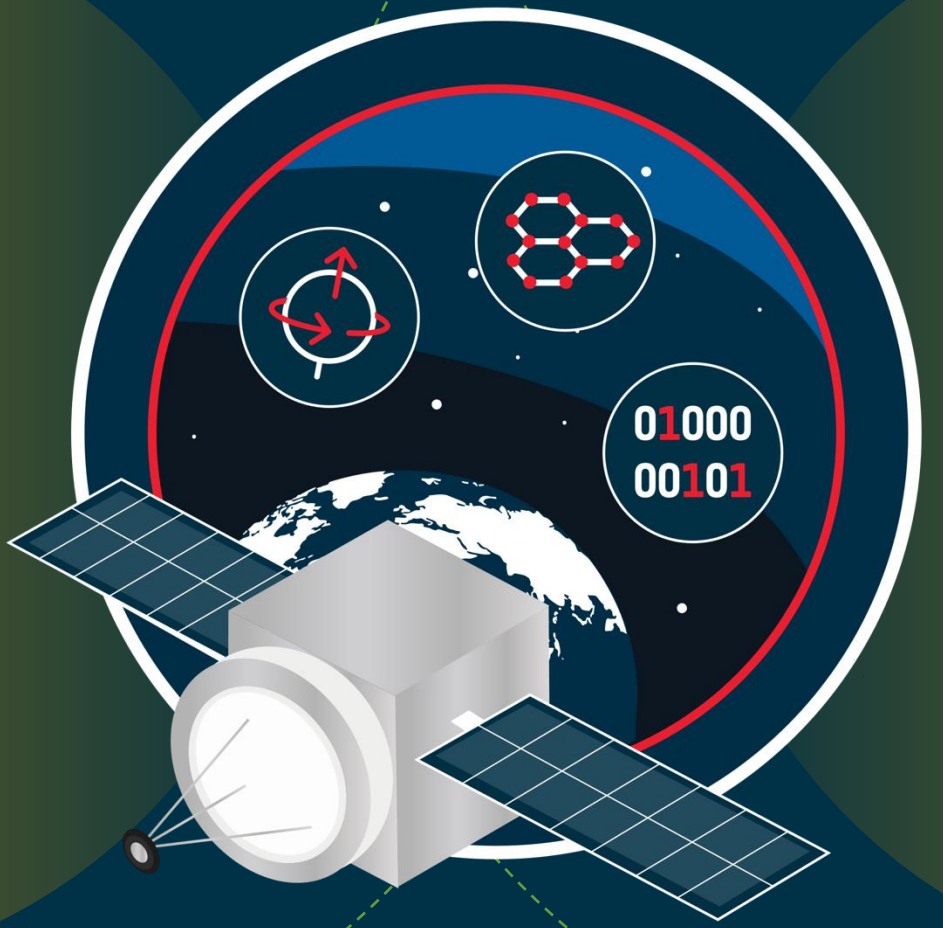
Scientific Excellence



Commercial Relevance

EUROPEAN SPACE DEEP-TECH INNOVATION CENTRE

ESDI‘s First Platform: - Phi-Lab Switzerland

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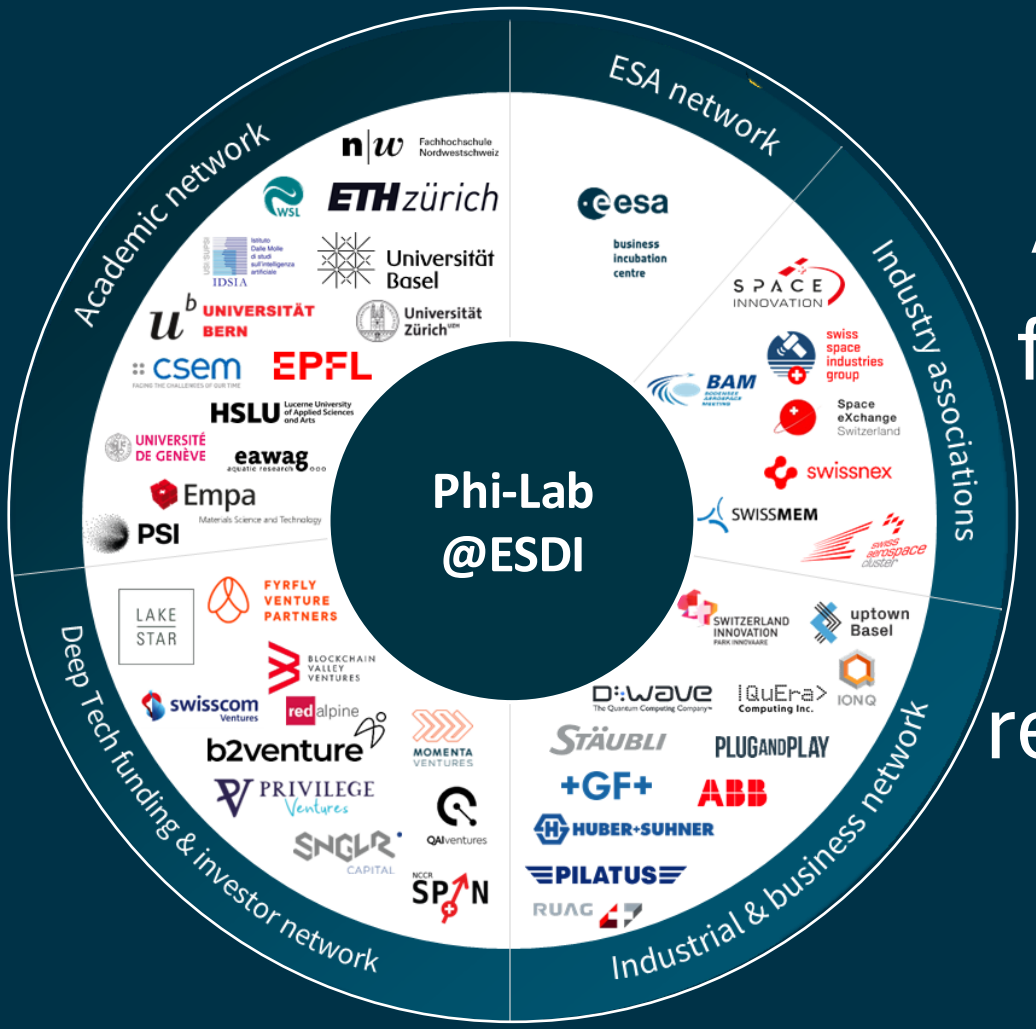
Program Managers

Jennifer Wadsworth
(Quantum & Data Science)

Markus Schölmerich
(Materials Science)



An **ESDI platform** for fostering novel, use-driven, interdisciplinary research via **funded programmes**

Implementation PHI-LAB Net 2023-2025

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ESA PHILABNET MAP

LEGEND
- Large Philab
- Small Philab
- Pilot Philab

PHI-LAB @ ESDI
“DEEP TECH”

12 Phi-Labs

ACCELERATE THE FUTURE OF SPACE VIA TRANSFORMATIVE INNOVATION

GENERATING COMMERCIAL COMPETITIVE ADVANTAGE

FACILITATING INVESTMENT ACTIONS

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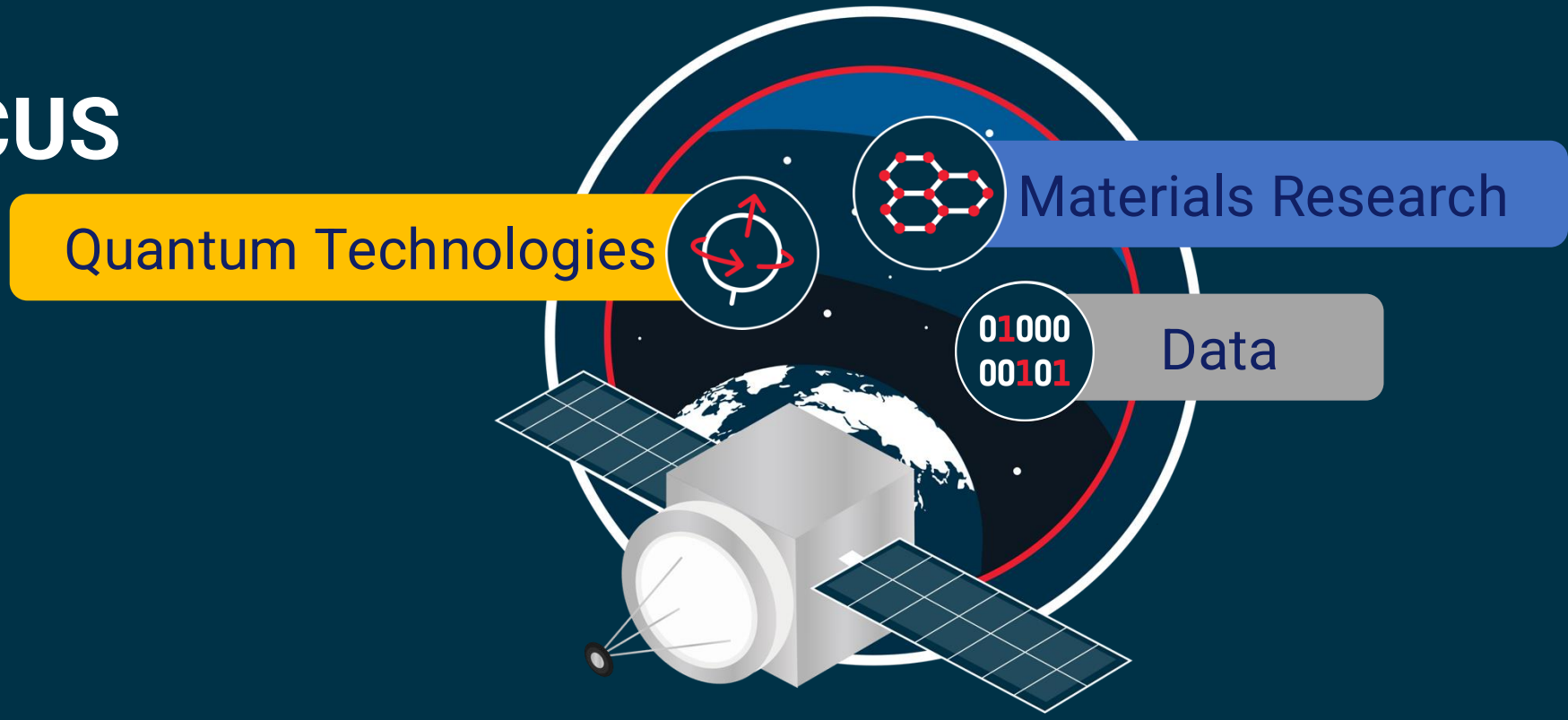
DEEP-TECH: a knowledge-rich technology at the frontier of science and engineering, **PUSHING THE BOUNDARIES OF THE POSSIBLE** forwards.

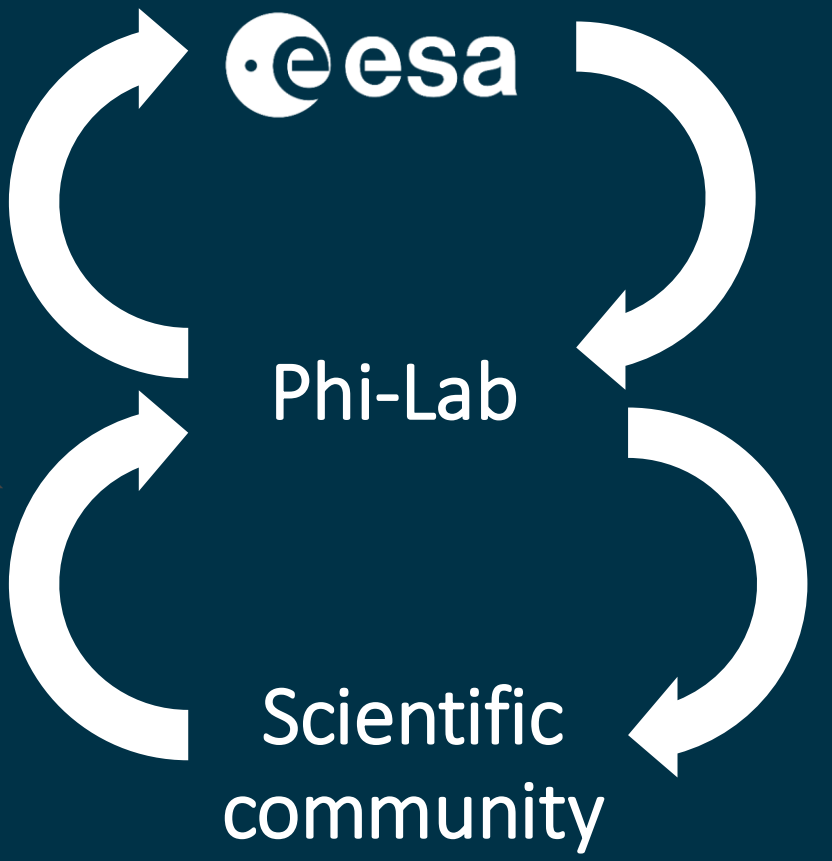
PHI-LAB FOCUS TOPICS:



	Practical Use No	Yes
Quest for fundamental understanding Yes	**Pure basic research** *Bohr*	**Use-inspired basic research** *Pasteur*
No		**Pure applied research** *Edison*

ACADEMIA

INDUSTRY



Source: Stokes, Donald E. 1997. *Pasteur's quadrant: basic science and technological innovation*. Washington, D.C: Brookings Institution Press.

Phi-Lab Mindset-
Go “NUTS”! Novelty, Usefulness, Teaming, Systems

Are we doing something **Novel**?

Are we doing something **Useful**?

Are we working as a **Team**?

Is the work **System**-compatible?

Phi-Lab Program General Scope

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- Solve **upstream technological challenges** that are critical bottlenecks for current and future space activites (with applicability to terrestrial domains)
- **Leverage Switzerland's unique strengths** in research and deep-tech.
- **Inspire use-driven research**, with clear potential for **commercialisation** and near-to-mid-term impact (next 3-5 years).
- Be grounded in **real user needs and practical constraints**, while pushing the boundaries of what is currently possible.
- **Require interdisciplinary, flexible collaborations** — blending top researchers, engineers, and industry experts beyond siloed disciplines.

Research Program Cycle

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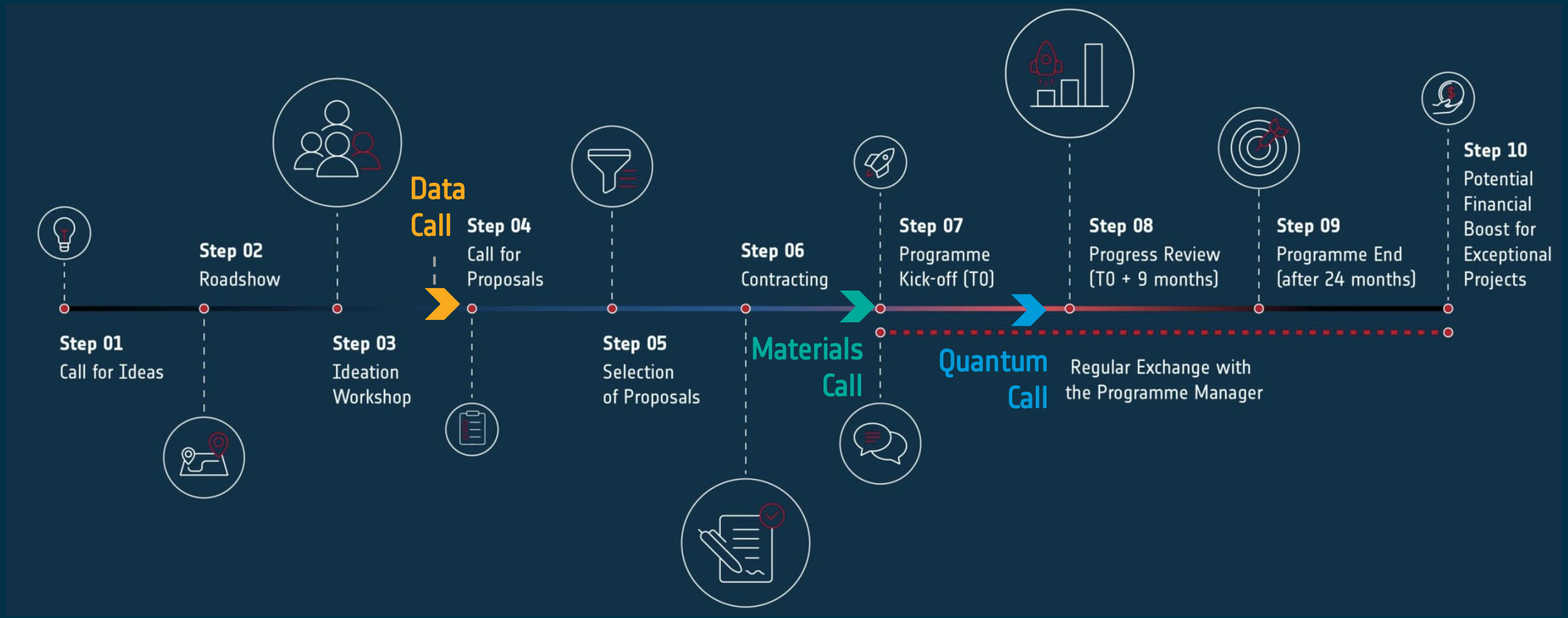

Quantum Programme “Q-CPR”

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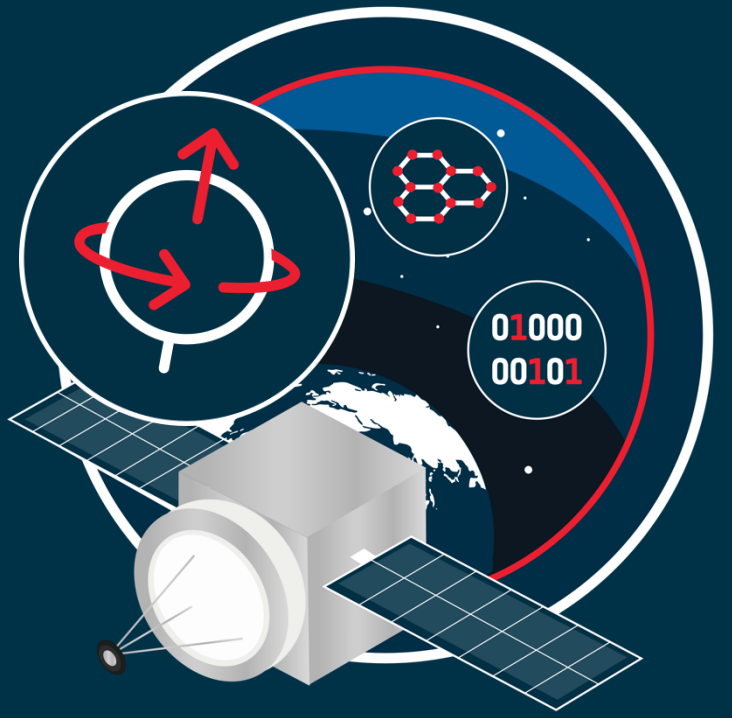
The Big Question:

“What if every satellite could carry a quantum sensor the size of a shoe box?”



The Challenge:

Enable at least a 10X improvement in
Compactness, Performance, or Reliability

Recap Q-CPR Projects

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Quan2M (2HS AG, METAS)
Mission: To develop and test high-performance nanomaterial quantum devices

LINQS (CCRAFT SA, EPFL)
Mission: Build a universal photonic chip for light generation, modulation, and control for a wide range of sensors

MONARQ (CSEM, FEMTOPRINT SA, BFH)
Mission: Create a compact, robust, sugar cube-sized laser stabilization module using Rubidium MEMS cells

HyClock (VERSICS AG, PSI, ETH Zürich)
Mission: Shrink optical atomic clocks onto a photonic chip for portable, space-ready precision timing

MQ-SoC (University Geneva, ID Quantique)
Mission: Create a fast, compact quantum encoder for secure communication and navigation

Materials Programme “AM-XTREME”

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The Big Question:

“What if spacecraft structures could adapt, shield, and self- heal in orbit, enabled through advanced manufacturing?”

The Challenge:

Demonstrate a step change in AM for autonomous spacecraft integrity in extreme conditions

“AM-XTREME” Projects

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Data Programme “Smart Space & Safe Space (S^4)”

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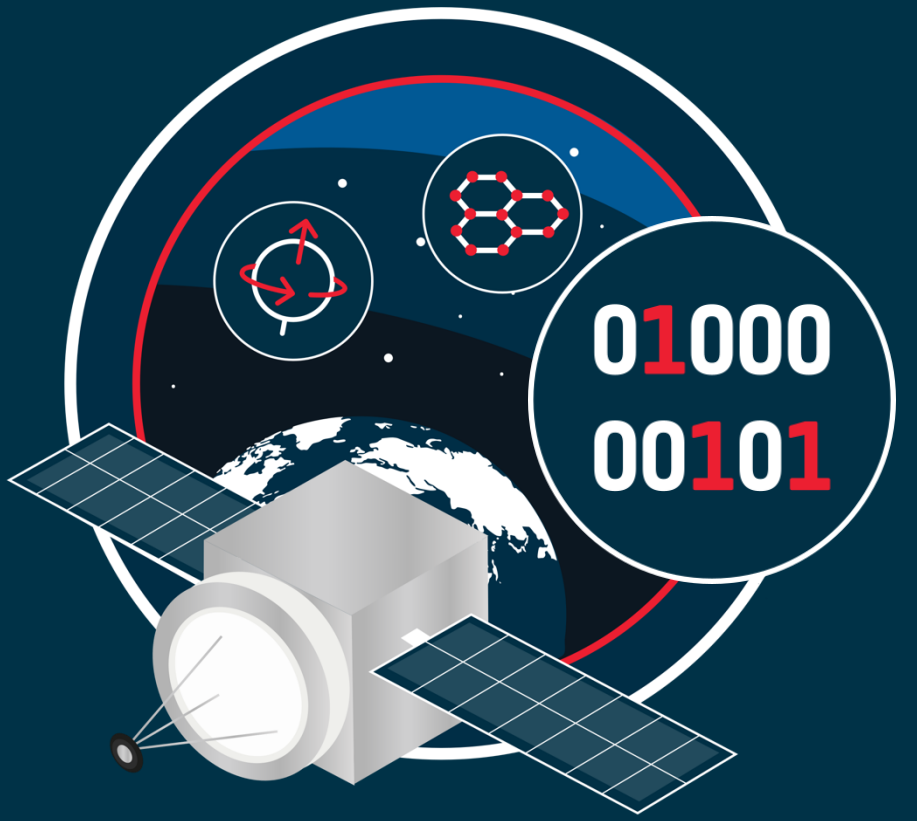
The Big Question:

“What if autonomous space systems could deliver trustworthy, meaningful decisions when most needed?”



The Challenge:

Solve the joint bottlenecks of intelligence and trust in the deployment of time-critical, autonomous decision-making in space systems.

What S^4 is NOT

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- **Not just more basic R&D**
  Every future space market depends on trusted autonomy; S^4 enables the co-design of both, based on current and near-future real-word needs.

- **Not rebranded AI research**
  S^4 focuses on deployable autonomy and the missing trust layers that enable it — not isolated algorithms.

- **Not an ESA programme duplicate**
  S^4 develops cross-cutting capabilities usable across missions, actors, and orbits.

- **Not too broad**
  Separating the two pillars recreates the current problem:
  Powerful systems no one trusts, or trusted systems that do nothing useful.
  The scope is focused in function even if broad in application.

Budget

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Total Data Call Budget: 3.47 M CHF

- Phi-Lab funding (w/o matching): 200-990k/project
- Average expected project funding approx. 600-750k/project
- Phi-Lab funding period no more than 24 months
- Depending on range of requested funding of top proposals, Data Call expected to support 3-5 projects

Budget "Failing Forwards"

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Funding is linked to a milestone-based structure, ensuring it is in line with progress and aligned with project objectives at each stage.

Milestone Schedule	Payment Plan [% of the total approved Phi-Lab funding]
T0 = Kick-Off	Kick-Off: Upfront payment of up to 10%
Milestone 1: T0 (Kick-Off) + 9 months	Milestone 1: 45%
Milestone 2: T0 + 24 months	Final Payment (25%) and Hold-Back: 20% of the total Phi-Lab funding will be held back until the successful completion of the final milestone

Timeline

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- Call for Ideas (not proposals!)
  Deadline Feb 27th
- Workshop March 17th
- **Call for proposals (Deadline July 1st)**
- Selection (Aug)
- Program Kick-Off (Oct 2026)

Some Key Eligibility Criteria

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- **Proposals must be submitted by one prime organisation on behalf on the project consortium**
- **The prime applicant must be a Swiss entity (preferably industry partner)**
- **Partners from other ESA Member States are eligible for up to 30% of the total funding.**
- **Consortia must consist of both academic and industry partners (no cap on consortium size)**

Academia and Research Institutions	SMEs	Economic operators
As subcontractors in a consortium and justifying no further commercial interest in the product or service may be funded up to 100% if this funding does not exceed 30% of the total allowable cost of the activity. Additional share shall be co-funded up to a maximum of 50% of the total eligible costs.	Up to 80% of the total allowable cost of the activity. SME: <250 employees OR <50 MCHF annual budget	Up to 50% of the total allowable cost of the activity.

SMART SAFE | SPACE (S^4)

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Submission tips

- Please use the OSIP link on our website (www.esdi.ch/data)
- Please make sure to follow the submission rules (e.g., word count, format, etc.)
- Please get in touch with us beforehand if you have questions - and try not to submit during the last hour before the deadline
- Please make sure you have read and agree with the draft contract (no signing needed), verify with your legal departments before submission

Data Call 2026 S^4

We want to fund projects, that are commercially relevant and scientifically excellent

We're not looking for a finished product - we want technology-maturing projects that create a step change in their field. The work should be relevant for both space AND terrestrial applications.

We are NOT just another funding agency.
→ We want your "crazy ideas" - ideas that would likely not be funded elsewhere.

HIGH RISK – HIGH REWARD

Submit your proposal here

Subscribe to our Newsletter

EUROPEAN SPACE DEEP-TECH INNOVATION CENTRE

| jennifer.wadsworth@psi.ch |

| www.esdi.ch |

| www.esdi.ch/phi-lab |

Examples of consortia funding (with SME 75% funding)

1 Uni/RTO + 2 SMEs

Szenario 1					
	Total Grant Sum	Uni/RTO	SME1	SME2	
Total Amount (kCHF)	900	250	325	325	
1. Amount fully funded by ESDI/Phi-Lab		250	244	244	
Own Contribution		0	81	81	

1 Uni/RTO (>30% of total funding) + 2 SMEs

Szenario 3					
	Total Grant Sum	Uni/RTO*	SME1	SME2	
Total Amount (kCHF)	900	300	300	300	
1. Amount fully funded by ESDI/Phi-Lab		270	225	225	
2. Partially funded		30			
2.1 Contribution ESDI/Phi-Lab		15			
2.2 own contribution		15	75	75	

2 Uni/RTOs + 1SMEs

Szenario 2					
	Total Grant Sum	Uni/RTO	Uni/RTO	SME1	
Total Amount (kCHF)	900	250	250	400	
1. Amount fully funded by ESDI/Phi-Lab		270	270	300	
Own Contribution		0	0	100	

1 Uni/RTO (>30% of total funding) + SME + Large Company

Szenario 4					
	Total Grant Sum	Uni/RTO*	SME1	Large Company	
Total Amount (kCHF)	900	300	300	300	
1. Amount fully funded by ESDI/Phi-Lab		270	225	150	
2. Partially funded		30			
2.1 Contribution ESDI/Phi-Lab		15			
2.2 own contribution		15	75	150	

- SME: <250 employees, <50 MCHF annual budget
- Own contribution for Unis/RTOs: in-cash OR in-kind (lab equipment, personell…etc)