

SUNSTONE

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On behalf of the SUNSTONE training group



The SUNSTONE project has received funding from the European Union's Horizon Europe framework programme for research and innovation under grant agreement n. 101177314. Views opinions expressed are however those of the authors only and do not necessarily reflect those of the European Union or the European Research Executive Agency (REA). Neither the European Union nor the granting authority can be held responsible for them.



“Strengthening the international dimension of ESFRI and/or ERIC research infrastructures – consolidating the SESAME facility”

“SUNSTONE”: SESAME’S UPGRADING NETWORK FOR SCIENTIFIC USER TRAINING AND OUTREACH INTO THE NEXT ERA

- **Nominative call** without identifier, scope matching lobbying paper prepared in 2022
- **Coordinator:** ESRF
- **Budget:** 1.5M€, of which **1.0M€ to SESAME** (staff, other costs, overheads) + 0.5M€ from SERI (PSI)
- **Project duration:** 42 months starting 1 June 2024, end 30 November 2027
- **Beneficiaries (as named in the EC call):** ALBA, CYI, DESY, ELETTRA, ESRF, INFN, SESAME, SOLEIL
- **Associate:** PSI
- Proposal built in full collaboration with Team SESAME



Key Objectives



Addressing Global Societal Issues

Leverage SESAME's capabilities to tackle significant global challenges.



Amplifying International Influence

Increase the global influence of European light sources and their collaboration with SESAME.



Broadening and Educating User Community

Widen the user community on light source techniques and strengthening the user support of SESAME.



Developing African Research Capacity

Support the access of African researchers to synchrotron radiation activities.



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Elevating User Support Quality

Improve the quality of user support at SESAME facilities.



Enhancing Visibility and Membership

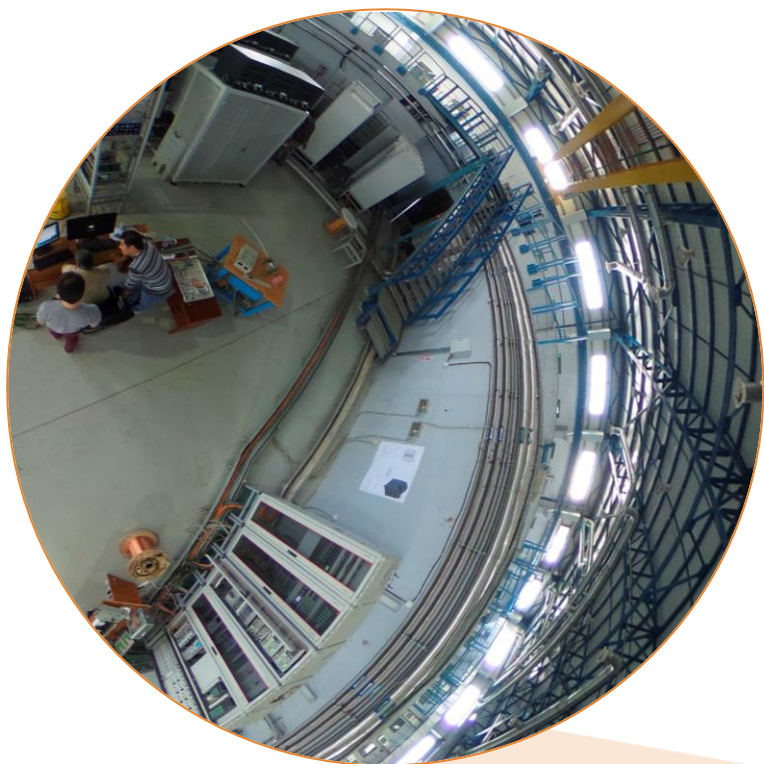
Promote SESAME through targeted outreach and promotional activities.



Ensuring Long-term Sustainability

Secure SESAME's role in fostering scientific advancement in the region and beyond.

SUNSTONE work packages



WP1

Project management, dissemination, communications and exploitation

ESRF & SESAME

WP2

Foster SESAME Sustainability

PSI, DESY & SESAME

WP3

SESAME as a Training Centre

SOLEIL & INFN

WP4

Strengthen SESAME User Services

ALBA & ELETTRA



[The Project](#) [Consortium](#) [Training](#) [News & Events](#) [Deliverables & Results](#)

Support the SESAME facility

SUNSTONE is an ambitious initiative reinforcing the [SESAME](#) (Synchrotron Light for Experimental Science and Applications in the Middle East) facility.

This project involves eight key European and Middle Eastern research infrastructures and organizations, with the

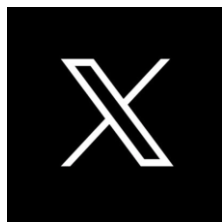


<https://sunstone.sesame.org.jo/>



**WEBSITE
LAUNCH**

September 2024

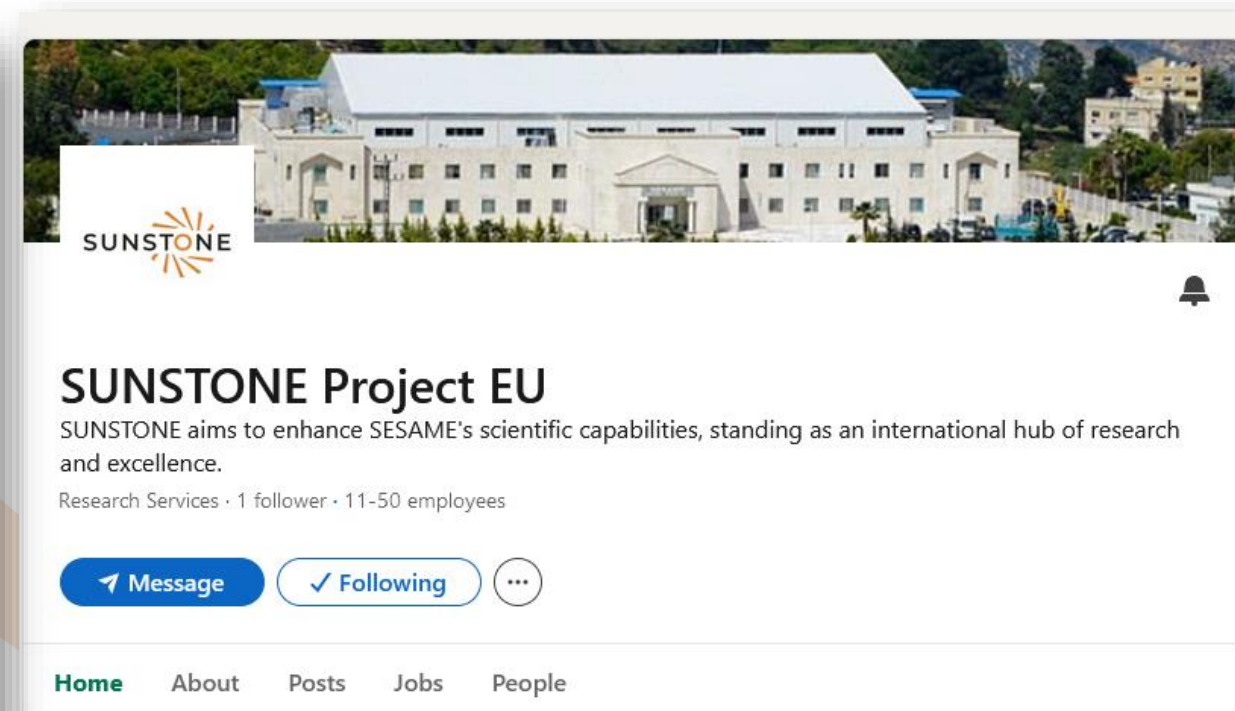
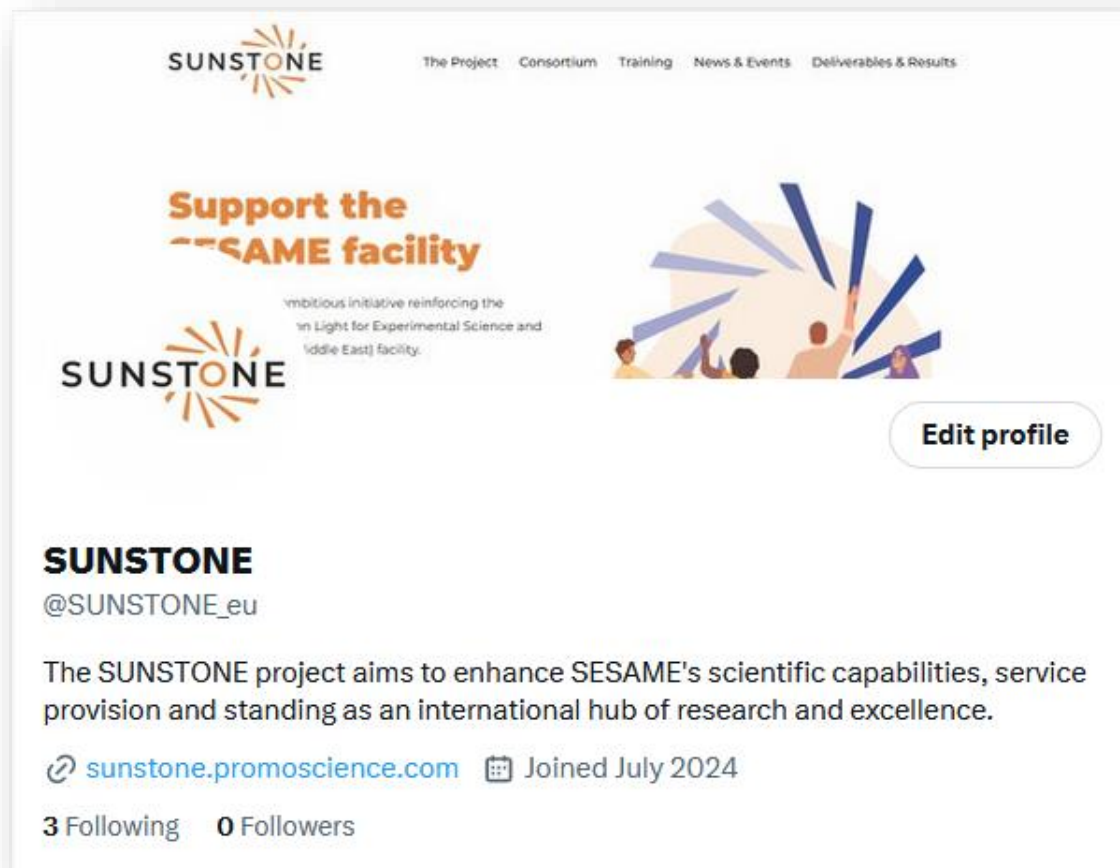


X (Twitter) Log in credentials

- Username: **@SUNSTONE_eu**
- Password: **SUNSTONEeu24!**



LinkedIn Showcase Page
SUNSTONE Project EU



+ Follow SUNSTONE to boost the project visibility!

WP3 -SESAME as a training centre

SOLEIL (Leader), INFN (Co-leader), The Cyprus Institute, SESAME
Interaction with WP1, WP2 and WP4



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WP3 - SESAME as training centre

➤ Objectives:

- Growing (Building and strengthening) SESAME user communities
- Lowering barriers to access the synchrotron SESAME
- Empowering users to realise a major part of their projects on their own

➤ Actions:

- Task 3.1 : Mapping of SESAME existing and potential communities and training needs.
- Task 3.2 : Online/onsite lectures and hands-on training focusing on science key themes and synchrotron radiation.
- Task 3.3 : High-level training by twinning use teams (academic and industrial).
- Task 4.3 : Evaluation of the impact of the training activities and training path effectiveness.

Needs Assessment:

- User surveys revealed a need for training in proposal writing, experiment design, data analysis, and specific techniques like grant writing.
- Beamline scientists identified bottlenecks in user experiments and areas needing improvement.
- Beamlines were evaluated based on proposal submissions, publications, and impact factors.

Training Program:

- Three key themes (Cultural Heritage, Environmental Science, Science in Operando Conditions) are paired with specific beamlines for hands-on experience.
- The program is structured in three steps:
 - Step 1: Online general lectures on synchrotron radiation and key research themes (open to all)
 - Step 2: Thematic virtual training events and hands-on workshops (for selected participants)
 - Step 3: Twinning sessions with external organizations for advanced training on real proposals (for a select few)
- Training materials will be available online and lectures will be recorded.
- Travel and accommodation support will be provided, with a focus on African researchers.

Training program

The SESAME SUNSTONE Training Program will offer **3 thematic schools/year**, each focusing on a specific scientific domain. The first training (starting in 2025) will be on:

- **Cultural Heritage: Using computed tomography on beamline ID10-BEATS.**
- **Science in Operando Conditions: Using absorption spectroscopy on beamline BM08-XAS/XRF.**
- **Environmental Science: Using soft X-rays on beamline ID11-HESEB.**

Each thematic school consists of **three interconnected training steps**, each designed to provide comprehensive and progressive learning experiences from news to experts users.

After each school session, **high level one-to-one twinning sessions** promoting the realisation of a real proposal (six participants) will take place.

Step 1: General Lectures

- Overview: This step offers a foundational understanding of synchrotron radiation techniques available at SESAME and their applications, and key research themes (Life Science, in Operando Conditions, Cultural Heritage, Environmental Science).
- Format: Online lectures, complemented by on-site sessions during the annual SESAME User Meeting (May 2025)
- Content: General lectures on synchrotron radiation fundamentals, techniques, sample preparation, data analysis, and key research themes.
- Target Audience: These general lectures will be open to a broad community of researchers, including both **current and potential** SESAME users.

Step 2: Thematic Training Events and **Hands-On Workshops**

- Overview: This step delves deeper into specific scientific topics and provides **practical training** in synchrotron techniques.
- Format: hands-on workshops conducted at SESAME.
- Content: Thematic lectures on selected research areas, technical aspects of SESAME beamlines, sample preparation, data collection and analysis, and **proposal writing**.
- Target Audience: A subset of **6 researchers** from Step 1 who have expressed interest in specific scientific domains and have been selected based on their qualifications and experience.

Step 3: High-Level Twinning Sessions

- Overview: This step offers advanced training and mentorship opportunities for selected researchers with High-level **one-to-one twinning sessions** promoting the **realisation of a real proposal** (6 participants, 2 for each thematic training) **in collaboration with an external organisation (Museum, archeological site, ...)**.
- Format: **1 proposals selected** every year, 2 people for each proposal, twinning sessions with experienced researchers and scientists.
- Content: **In-depth training** on the selected experiments, data collection, and analysis, as well as guidance on future proposal writing if needed.
- Target Audience: 2 researchers who have successfully completed Steps 1 and 2 and 3 stakeholders from external institutions (museums, hospitals, industry...) who have demonstrated a strong interest in pursuing the twinning step.

Timeline



Program/lectures: beginning of January

Registration: end of January

Period of the training: March-May 20025

<https://sunstone.sesame.org.jo/>



THANK YOU

WP 3 - Training

SOLEIL

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SESAME

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