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NEXUS Modus Operandi

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Research scientist at CNRS
project Coordinator

Nexus Kick-off meeting
January 22nd, 2026





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NEXUS Timeline

- **19 September 2024:** Launch of the call for proposals
- **5 February 2025:** Deadline for submitting proposals
- **May 15th, 2025:** Notification of call results to applicants
- **2 September 2025:** Grant agreement signature (CNRS, INFN, SKAO)
- **January 1st 2026:** projects starts
- **January 12, 2026:** Pre-financing payment of **EUR 501,501.00 (65%)**
- Consortium Agreement (17 partners) → still on-going

- **Project Ends:** December 31st 2029 (**48 months**)

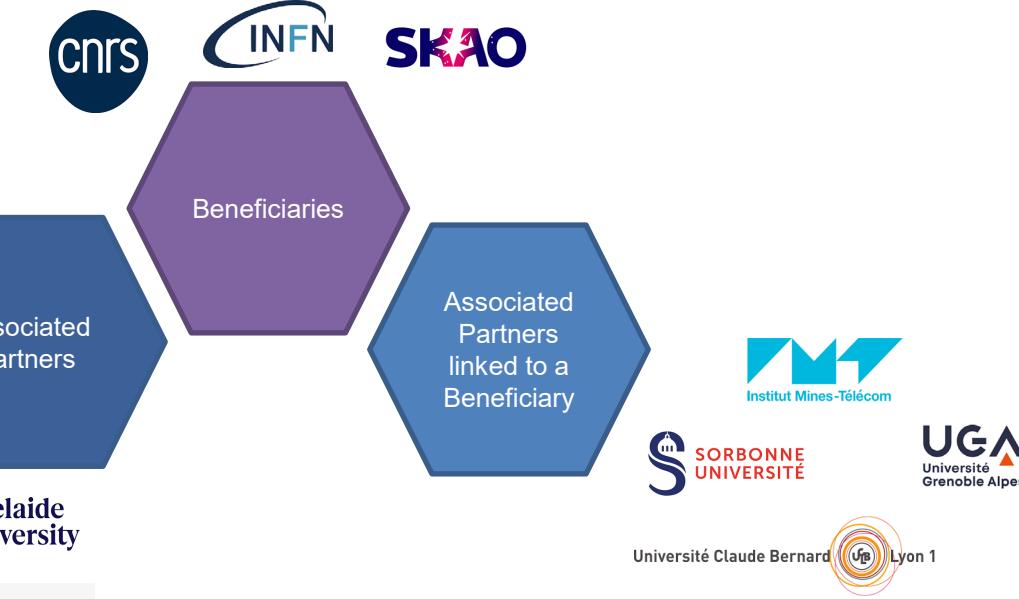


Call: HORIZON-MSCA-2024-SE-01
Type of Action: HORIZON-TMA-MSCA-SE
Acronym: NEXUS
Number: 101236929
Duration: 48 months
GA based on the: HE Unit MGA — Multi & Mono - 1.2
Estimated Project Cost: €0.00
Requested EU Contribution: €771,540.00
Current Phase: Grant Management
Start Date: 01 Jan 2026
Contact: [Amir SPAHIC](#)



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North-south EXchange for Underground Science (NEXUS)





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Partners

| Beneficiaries | | | | | | |
|---------------|------|---|------------|---|---------|-----------|
| Number | Role | | Short Name | Legal Name | Country | PIC |
| 1 | CO | ✓ | CNRS | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS | FR | 999997930 |
| 2 | BEN | ✓ | INFN | ISTITUTO NAZIONALE DI FISICA NUCLEARE | IT | 999992789 |
| 3 | BEN | ✓ | SKAO | THE SQUARE KILOMETRE ARRAY OBSERVATORY | UK | 890491041 |



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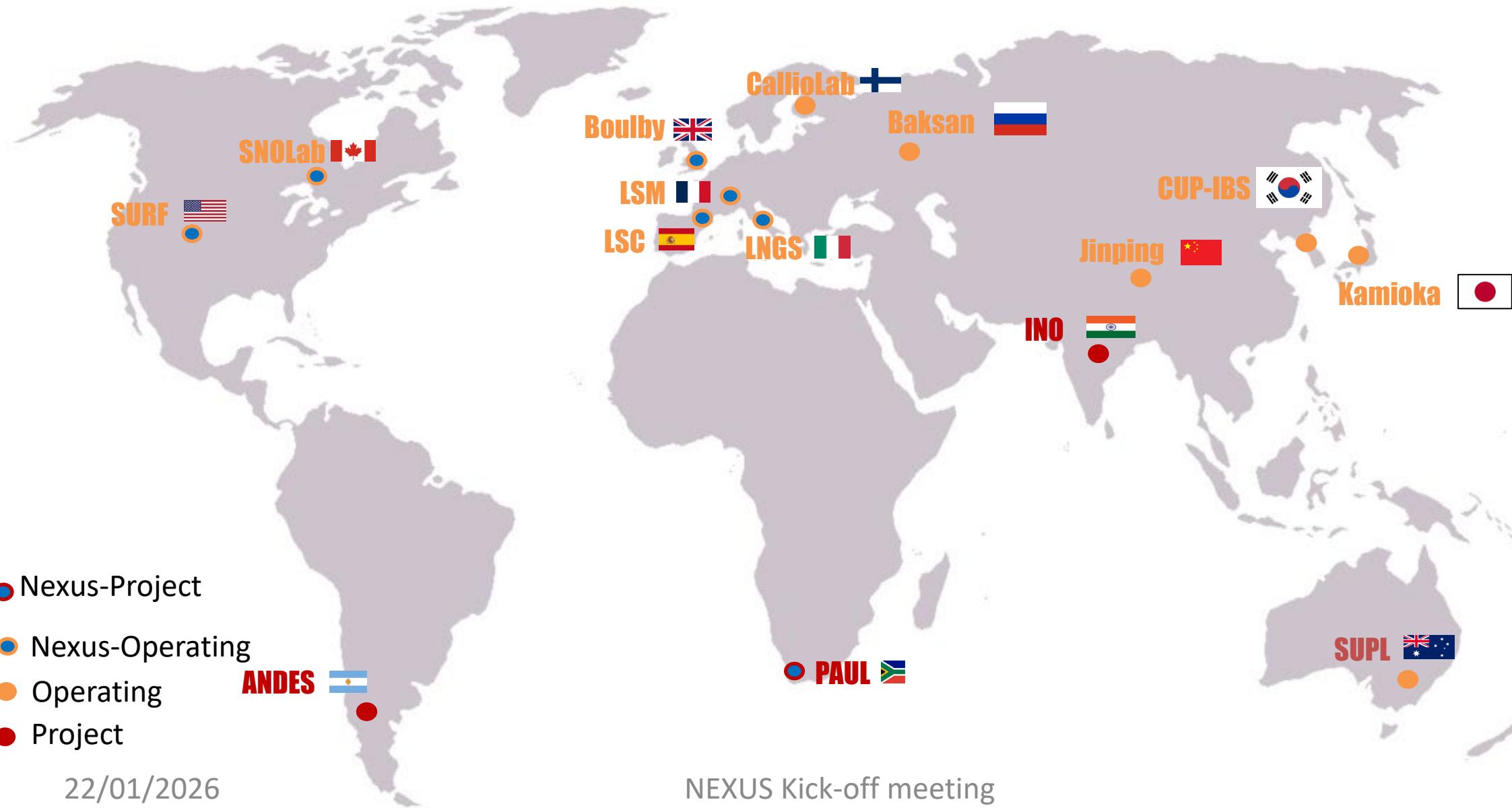
Partners

Associated Partners

| Number | Role | Short Name | Legal Name | Country | PIC | PIC Status |
|--------|----------|------------|--|---------|-----------|------------|
| 4 | AssoPart | UKRI | UNITED KINGDOM RESEARCH AND INNOVATION | UK | 906446474 | VALIDATED |
| 5 | AssoPart | LSC | CONSORCIO PARA EL EQUIPAMIENTO Y EXPLOTACION DEL | ES | 998502093 | VALIDATED |
| 6 | AssoPart | SU | STELLENBOSCH UNIVERSITY | ZA | 999877359 | VALIDATED |
| 7 | AssoPart | SURF | South Dakota Science & Technology Authority | US | 873610810 | SLEEPING |
| 8 | AssoPart | UoA | THE UNIVERSITY OF ADELAIDE | AU | 984570274 | VALIDATED |
| 9 | AssoPart | UoM | UNIVERSITY OF MELBOURNE | AU | 999658818 | VALIDATED |
| 10 | AssoPart | UNISA | UNIVERSITY OF SOUTH AFRICA | ZA | 990429850 | VALIDATED |
| 11 | AssoPart | UWC | UNIVERSITY OF THE WESTERN CAPE | ZA | 999883373 | VALIDATED |
| 12 | AssoPart | WITS | UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG | ZA | 998014086 | VALIDATED |
| 13 | AssoPart | SNOLAB | QUEEN'S UNIVERSITY AT KINGSTON | CA | 997151562 | VALIDATED |
| 14 | AssoPart | UCB | UNIVERSITE LYON 1 CLAUDE BERNARD | FR | 999902579 | VALIDATED |
| 15 | AssoPart | US | SORBONNE UNIVERSITE | FR | 909875521 | VALIDATED |
| 16 | AssoPart | IMTA | INSTITUT MINES-TELECOM | FR | 999849326 | VALIDATED |
| 17 | AssoPart | UGA | UNIVERSITE GRENOBLE ALPES | FR | 897379108 | VALIDATED |



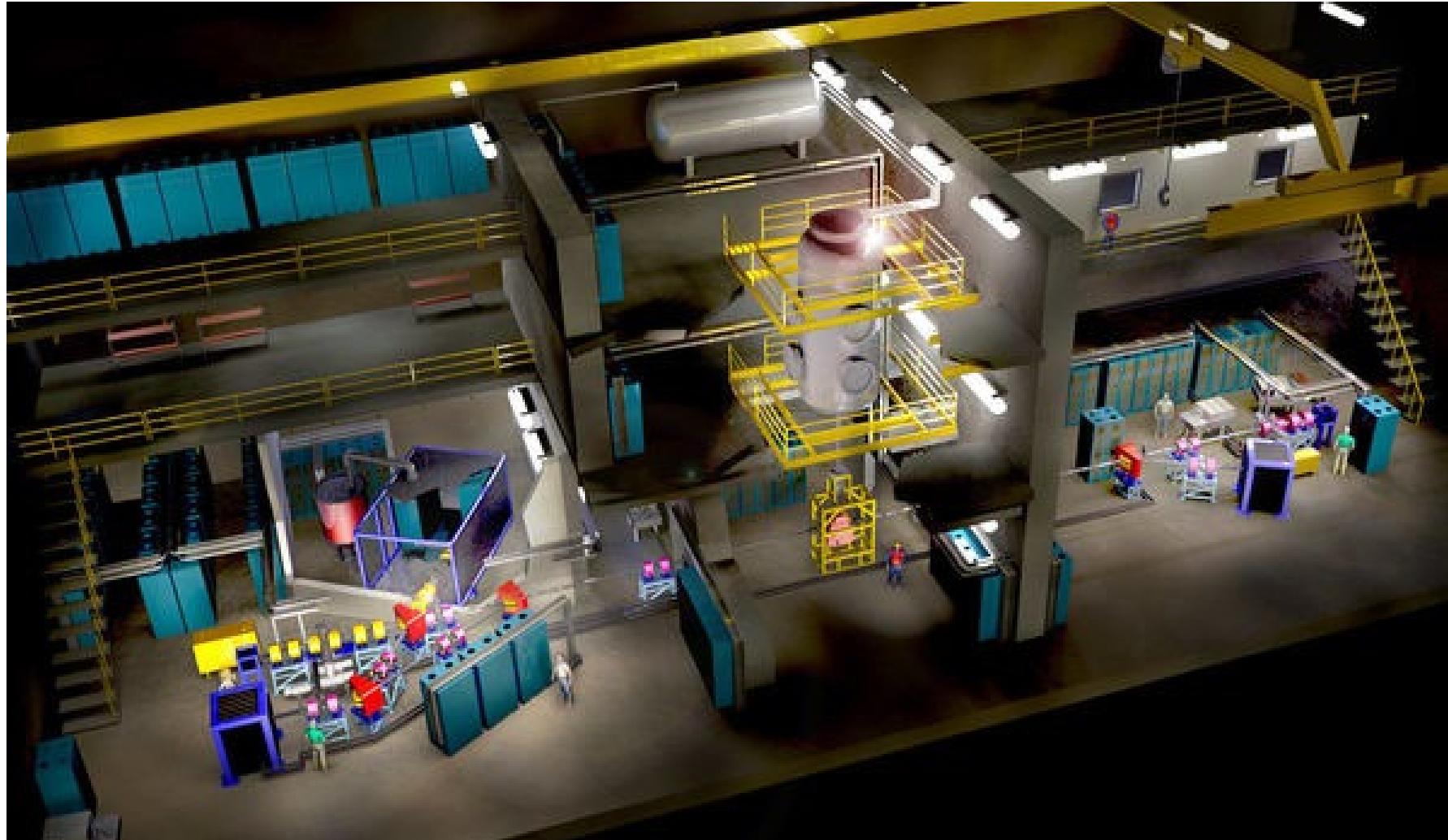
Underground Science in a map





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Underground Science





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NEXUS Science

Work Packages and Effort (PM)

Work Packages

| Number | | Name | Lead Beneficiary | Total Effort |
|--------|---|--|------------------|--------------|
| 1 | ✓ | Low background technologies | CNRS | 44 |
| 2 | ✓ | Muography and radiation measurements | INFN | 48 |
| 3 | ✓ | Modelling, Simulation and Machine learning | UNISA | 12 |
| 4 | ✓ | Quantum science and technology | SNOLAB | 24 |
| 5 | ✓ | Education and Training Activities | INFN | 26 |
| 6 | ✓ | Management and Coordination | CNRS | 0 |
| | | | Total: | 154 |



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Deliverables

| Number | Relative Number in WP | Name | Lead Beneficiary | Due Date (in months) |
|--------|-----------------------|---|------------------|----------------------|
| D1 | D1.1 | Dissemination and publication of test results on Rn absorption | CNRS | 30 |
| D2 | D1.2 | Progress report on low background suppression technologies of interest | CNRS | 36 |
| D3 | D2.1 | Characterization of the ULs background environment | INFN | 36 |
| D4 | D2.2 | Best practices for the concept and design of ULs | INFN | 44 |
| D5 | D3.1 | Results of denoising of muon data and monitoring of sensor equipment using machine learning | UNISA | 48 |
| D6 | D4.1 | Prototype quantum detector for low-mass Dark Matter and performance assessment | SNOLAB | 24 |
| D7 | D4.2 | Report on noise mitigation framework for Quantum Technologies | SNOLAB | 42 |
| D8 | D5.1 | Report on project workshops | INFN | 45 |
| D9 | D5.2 | Report on training activities | INFN | 42 |
| D10 | D6.1 | Progress report | CNRS | 13 |
| D11 | D6.2 | Mid-term meeting | CNRS | 18 |
| D12 | D6.3 | Data Management Plan | CNRS | 6 |
| D13 | D6.4 | Website | CNRS | 6 |
| D14 | D6.5 | Communication, Dissemination and Exploitation plan | INFN | 6 |



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Milestones

| Number | ▲ | | Name | Lead Beneficiary | Due Date (in months) | Work Package No. |
|--------|---|---|--|------------------|----------------------|------------------|
| M1 | | ✓ | Kick-off meeting | CNRS | 1 | 6 |
| M2 | | ✓ | Definition of interposer technologies of interest | CNRS | 12 | 1 |
| M3 | | ✓ | Neutrons measurements | INFN | 12 | 2 |
| M4 | | ✓ | Emulsion measurements | INFN | 18 | 2 |
| M5 | | ✓ | Definition of the protocols for the accepted technologies | CNRS | 24 | 1 |
| M6 | | ✓ | Radon levels measurement, recommendation on the ve | INFN | 24 | 2 |
| M7 | | ✓ | Identification of suitable radio pure materials to add to th | CNRS | 30 | 1 |
| M8 | | ✓ | New protocols for sample treatment and automation pri | CNRS | 30 | 1 |
| M9 | | ✓ | Geophysical measurements in the Huguenot Tunnel for | INFN | 36 | 2 |
| M10 | | ✓ | Muon flux measurements and simulation | UNISA | 36 | 3 |
| M11 | | ✓ | Comprehensive cross-calibration for low background m | CNRS | 40 | 1 |
| M12 | | ✓ | Realisation of density distribution map and the joined in | INFN | 48 | 2 |



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Staff Exchanges

STAFF EFFORT

Staff effort per participant

Grant Preparation (Work packages - Effort screen) — Enter the info.

| Participant | WP1 | WP2 | WP3 | WP4 | WP5 | WP6 | Total Person-Months |
|----------------------------|-------|-------|-------|-------|-------|------|---------------------|
| 1 - CNRS | 16.00 | 17.00 | | 3.00 | 6.00 | | 42.00 |
| 2 - INFN | 24.00 | 9.00 | 3.00 | 21.00 | 13.00 | | 70.00 |
| 3 - SKAO | | 2.00 | | | | | 2.00 |
| 6 - SU | | 15.00 | 5.00 | | 2.00 | | 22.00 |
| 10 - UNISA | | | 3.00 | | 2.00 | | 5.00 |
| 11 - UWC | 4.00 | 5.00 | | | 2.00 | | 11.00 |
| 12 - WITS | | | 1.00 | | 1.00 | | 2.00 |
| Total Person-Months | 44.00 | 48.00 | 12.00 | 24.00 | 26.00 | 0.00 | 154.00 |



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Staff Exchanges

Partner exchanges

Summary of secondment months per sending partner (beneficiaries and associated partners)

| Partner No | Partner Name | Country | Country Group | Academic Sector | Number of Secondment Months Period 1 | Number of Secondment Months Period 2 | Total Number of Secondment Months |
|--------------|--------------|---------|---------------|-----------------|--------------------------------------|--------------------------------------|-----------------------------------|
| 1 | CNRS | FR | EU/AC | Y | 22 | 20 | 42 |
| 2 | INFN | IT | EU/AC | Y | 35 | 35 | 70 |
| 3 | SKAO | UK | EU/AC | Y | 2 | 0 | 2 |
| 6 | SU | ZA | TC | Y | 14 | 8 | 22 |
| 10 | UNISA | ZA | TC | Y | 3 | 2 | 5 |
| 11 | UWC | ZA | TC | Y | 7 | 4 | 11 |
| 12 | WITS | ZA | TC | Y | 2 | 0 | 2 |
| Total | | | | | 85 | 69 | 154 |



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Funded exchanges

Overall funded exchanges

Summary of secondment months funded by the EU per beneficiary (as sending partner + seconded to partner)

| Partner No | Partner Name | Country | Number of Secondment Months Period 1 | Number of Secondment Months Period 2 | Total Number of Secondment Months |
|--------------|--------------|---------|--------------------------------------|--------------------------------------|-----------------------------------|
| 1 | CNRS | FR | 35 | 31 | 66 |
| 2 | INFN | IT | 48 | 38 | 86 |
| 3 | SKAO | UK | 2 | 0 | 2 |
| Total | | | 85 | 69 | 154 |

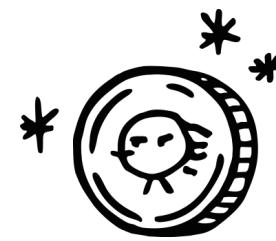


Grant Agreement



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Payments (GA art. 22)



Pre-financing

- ✓ Pre-financing (PF) of 65% of the maximum grant amount > 30 days from entry into force of the GA or 10 days before starting date – whichever is the latest → notified **January 12, 2026**
- Pre-financing will be paid to the Coordinator who will transfer the funds to the Beneficiaries according to the Consortium Agreement

Other payments

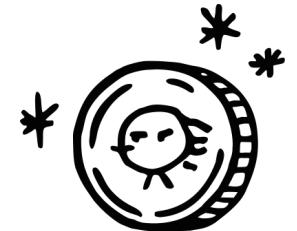
- Interim payment** at the end of RP1 (**M24**)
→ Total amount of pre-financing and **interim payment shall not exceed 90%** of the maximum grant amount
- Final payment** at the end of RP2 (**M48**)
→ Deadline for making interim and **final payments > 90 days from receiving periodic report**



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Payments – Associated Partners

- ✓ Beneficiaries may transfer funds to Associated Partners
- ✓ Beneficiaries are accountable
- ✓ Distribution of funds agreed in the Consortium Agreement



Budget – Unit costs

| Beneficiaries | Grant for beneficiaries | | Grant for associated partners | | | | | | | | Total grant allocated to beneficiaries |
|---------------|-------------------------|---------------|-------------------------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--|
| | | | SU | | UNISA | | UWC | | WITS | | |
| | Person-month | Amount | Person-month | Amount | Person-month | Amount | Person-month | Amount | Person-month | Amount | |
| CNRS | 42 | 210 420 € | 16 | 80160 | 2 | 10020 | 5 | 25050 | 1 | 5010 | 330 660 € |
| INFN | 70 | 350 700 € | 6 | 30060 | 3 | 15030 | 6 | 30060 | 1 | 5010 | 430 860 € |
| SKAO | 2 | 10 020 € | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 020 € |
| TOTAL | 114 | 571140 | 22 | 110220 | 5 | 25050 | 11 | 55110 | 2 | 10020 | 771 540 € |

Contribution/PM **5 010 €**

Top-up allowance **2 710 €**

Research training & networking contribution **1 300 €**

Management and indirect contribution **1 000 €**



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Unit contributions

Contributions for seconded staff members

Top-up allowance

- Contribution to travels, accommodation and subsistence costs incurred during a secondment
- The whole contribution has to be allocated to the seconded staff
- **Proofs related to the travels and payment to the staff or of the invoices have to be kept and provided in case of an audit**

Special need allowance

- Contribution to additional costs for the acquisition of special needs items and services for staff members with disabilities certified by a competent national authority. This contribution is upon request when the need arises.

Institutional contributions

Research, training and networking costs

- For training, transfer of knowledge and networking activities as well as research expenses
- Examples: research materials, conference fees, publication fees, etc.

Management and indirect contribution

- Costs related to management, indirect costs

Additional information

- Costs must be related to the implementation of the project and incurred within the timeframe of the project.
- Unit contributions will be paid according to the total number of secondments.
- **If less secondments are made, less money will be granted by the European Commission.** The total planned budget can however not be raised, even if more secondments take place.



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Reporting (GA art. 21)

Continuous reporting

- Submission of **deliverables, milestones**, etc. according to schedule > **all partners**
- Progress report** at M13: report on the progress of the project using the template published on the Participant Portal
- Mid-term meeting M14-18**
 - Meeting between the consortium, staff members and the EU to assess the status of the project and discuss potential issues
 - Duration: 1 day or 2 half days

Reporting and payment schedule (art 21, 22):

Periodic reporting

2 periodic reporting periods: M24 & M48

- Composed of a **technical report** (overview of the action implementation, all partners) + a **financial report** (one by beneficiary)
- Template provided by the EC on Participant Portal
- Secondment must be correctly encoded and validated before submitting the periodic reports

| Reporting | | | | | Payments | |
|-------------------|------------|----------|-----------------|---------------------------------------|----------------------|--|
| Reporting periods | | | Type | Deadline | Type | Deadline (time to pay) |
| RP No | Month from | Month to | | | | |
| | | | | | Initial prefinancing | 30 days from entry into force/10 days before starting date – whichever is the latest |
| 1 | 1 | 24 | Periodic report | 60 days after end of reporting period | Interim payment | 90 days from receiving periodic report |
| 2 | 25 | 48 | Periodic report | 60 days after end of reporting period | Final payment | 90 days from receiving periodic report |



Visibility (GA art. 17)

Publicity regarding the EU funding is an obligation. Acknowledgement of EU funding is expected:

- On partner's websites, project website and social media
- On study reports, publications
- In communication activities including by the NEXUS grant must include a reference to EU funding media relations, conferences, seminars, information material, such as brochures, leaflets, posters, presentations, etc., in e-form, via traditional or social media, etc. of activities funded



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Disclaimer to be added

“Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or [name of the granting authority]. Neither the European Union nor the granting authority can be held responsible for them.”

https://rea.ec.europa.eu/communicating-about-your-eu-funded-project_en



Secondments



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Secondments – few rules

Who can go on secondment?

- Researchers at any career stage (from doctoral candidates to postdoctoral researchers), as well as administrative, managerial, or technical staff supporting the R&I activities under the project.

Conditions

- Be considered staff of the sending organisation (through employment contract, fellowship or other)
- Be actively engaged in or linked to R&I activities at the sending institution for at least one month (full-time equivalent) prior to the first period of secondment
- Have appropriate R&I experience
- Return to the sending institution
- During a secondment, the staff member must dedicate 100% of its working time to the research project (/\ for staff with teaching obligations and part-time working staff)

The sending partner and the host partner should sign a Secondment agreement
(see template in the Consortium Agreement)



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Secondments – few rules

Eligibility of secondments

- Secondments must be between different countries
- Secondments between non-associated third countries are not eligible; secondments from a non-associated third country must take place in an EU member state
- Same sector secondments between EU members states is limited to 1/3 of the total secondments
- Secondments must take place between partners of the project

Duration of secondments

- Secondments for each staff member must be a minimum of 1 month (= 30 calendar days) and a maximum of 12 months
- A secondment may be split into several stays (eg. 15 days in M6 and 15 days in M18)

Secondment plan (draft)

<https://box.in2p3.fr/s/DHSoM69Wf2R7JFZ/download>

Additional information

- For secondments involving long travels (e.g. South Africa to Europe or Europe to America or Australia), long stays should be preferred. It will be economically more valuable.
- Secondments should take place according to the planned proposal. **Significant changes must be duly justified and validated by the European Commission.**
- If the number of same sector secondments is over 1/3, the EU grant may be reduced.



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Secondments – a few rules

Record keeping – List of documents (non-exhaustive)

Eligibility of the staff member

- Employment contract, fellowship or similar document to prove that the seconded staff has a link with the sending entity
- Qualifications of the seconded staff (CV or similar) > the seconded staff should have a proper R&I expertise

Evidence of the secondment

- Physical presence > travel and accommodation receipts, attestation from the hosting institution
- Activities performed > lab report, time sheets, exchange of emails, secondment report, etc.

Use of staff allowance

- Records of payment of the staff allowance, either to the staff member and/or proof of payment when costs are paid directly by the institution

Important

- Solely beneficiaries are accountable towards the European Union. They have to collect the documents for their staff **AND** for the staff members from partners located in South Africa and their linked associated partners.
- Secondments cannot be performed remotely.
- Each seconded staff will be asked to provide a **secondment report**.



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Mobility declaration – how to

Online declaration

- ❑ Secondment must be declared on Sygma (grant management tool on the EU Funding & Tenders portal)
- ❑ A secondment has to be declared within 20 days from its start
- ❑ **Declarations can only be made by Beneficiaries (CNRS, INFN, SKAO)**
- ❑ Each partner shall be responsible in providing the Beneficiaries with information related to the secondments of its staff and inform them of any changes

Online guide:

→ <https://webgate.ec.europa.eu/funding-tenders-opportunities/pages/viewpage.action?pageId=60850187>



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Mobility declaration – how to

Tips on how to declare a secondment

- A seconded staff member must be listed on the portal prior to declaring the secondment > check in the « Researchers » tab if the staff member is already listed or add a new profile
- Exchange period > Start and end dates corresponds to travel days to and from the place where the secondment takes place*
- Split secondments > has to be encoded as a new period in the previous mobility declaration

*Exceptions:

- 1/ if the staff member travels for leisure and/or another activity which is not related to the NEXUS project, the start and/or end date should be the first day/last day of the secondment as per Secondment Agreement.
- 2/ If the staff member takes holidays during the secondment, these days will be removed from the exchange period (this might be the case for long-term secondments).
- 3/ Same applies if the staff members takes part in activities which are not related to the NEXUS project (e.g. participation in a conference/meeting on another topic or project, etc.), days will be removed from the exchange period.



Questions - Comments