

TENDER DOCUMENT

Procurement pursuant to the Regulations Part I for procurement of **fNIRS System (functional near-infrared spectroscopy)**

[Case reference to be assigned]

1 General Description

1.1 Contracting Authority

Information about the contracting authority, NTNU, and the contracting authority's contact person can be found in the contracting authority's competition management tool (CMT).

All communication with the contracting authority shall be conducted through the contracting authority's CMT. This also applies to questions and answers.

1.2 Purpose and Scope of the Procurement

The purpose of the procurement is to enter a contract for the purchase of a fNIRS (functional near-infrared spectroscopy) system for cognitive neuroscience research and teaching at NTNU's Department of Psychology (IPS), Fleksilab. A description of the procurement, its purpose and scope can be found in the contracting authority's CMT and part II of the procurement (Annex 1 and Annex 1A).

1.3 Contract Terms

The contract is governed by the contract terms "General Contract Terms for the Purchase of Goods". See Agreement Document in part II.

1.4 Important Dates and Deadlines

The contracting authority has established the following timeframes for the process:

Activity	Time
Deadline for submitting questions regarding the tender documents	07.10.26 12:00 CET
Tender deadline	14.10.26 12:00 CET
Tender opening	14.10.26] 12:01 CET
Evaluation and any negotiations	42 and 43
Selection of supplier and notification to suppliers	43
Contract signing	43*
Tender validity period	10.03.27

*Dates in this table are placeholders and must be updated before publication. *Please note that the dates after the tender deadline are preliminary and may be subject to adjustments. Any extension of the tender validity period may only occur if the supplier approves this.*

2 Rules for Conducting the Competition

2.1 Procurement Procedure

The procurement is conducted in accordance with the Norwegian Public Procurement Act of 17 June 2016 (LOA) and the Norwegian Public Procurement Regulations (FOA) FOR 2016-08-12-974, Part II

This procurement is conducted as an open tender procedure pursuant to the Norwegian Public Procurement Regulation (FOA) Part II. The competition is open to all interested and qualified suppliers who submit a tender within the tender deadline.

The contracting authority plans to award the contract without having contact with the suppliers beyond making any minor clarifications/corrections to the tenders.

The supplier is strongly encouraged to follow the instructions given in these tender documents with appendices and to ask questions about any ambiguities via the contracting authority’s CMT.

2.1 Partial Tenders

It is not permitted to submit tenders for parts of the assignment.

2.2 Tax Certificate

The selected supplier shall, upon request, submit a tax certificate for value-added tax and a tax certificate for tax. This only applies if the selected supplier is Norwegian.

The contracting authority may obtain tax information via eBevis. Alternatively, the tax certificate is obtained manually.

The tax certificate shall not be older than 6 months from the deadline for submitting a request to participate in the competition or tender.

2.3 Public Access and Confidentiality

The Freedom of Information Act applies to public access to documents related to a public procurement. The contracting authority and its employees are obliged to prevent others from gaining access to or knowledge of information about technical devices and methods or operational and business conditions that would be of competitive importance to keep secret, cf. FOA §§ 7-3 and 7-4 and cf. the Public Administration Act § 13.

2.4 Tender Validity Period

The supplier must stand by its tender until the time specified in section 1.4 above.

2.5 Updates to Tender Documents

Any corrections, supplements or changes to the tender documents, as well as questions regarding the competition with anonymised answers, will be communicated to all suppliers who have registered their interest in the procurement in the CMT.

2.6 Supplementary Information

If the supplier finds that the tender documents do not provide sufficient guidance or are unclear, the supplier may request supplementary information via the contracting authority’s CMT.

If errors are discovered in the tender documents, please report this to the contracting authority via the CMT.

2.7 Deviations from Requirements

Tenderers shall submit tenders that comply with all requirements set out in this procurement document and its annexes. Any deviation from the stated requirements must be clearly identified and described in appendix 3.

Tenders that do not meet mandatory requirements will be rejected. The Contracting Authority has no discretion to accept tenders with deviations from mandatory requirements, as this would violate the principles of equal treatment and transparency in public procurement.

The Contracting Authority reserves the right to:

- Reject tenders that contain material deviations from the procurement documents
- Reject tenders where deviations are not clearly disclosed
- Request clarification of unclear or ambiguous statements regarding compliance

3 Qualification Requirements

3.1 Supplier’s Technical and Professional Qualifications

Requirement	Documentation Requirement
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The supplier shall have experience from comparable assignments.	Description of the supplier's up to 3 most relevant assignments during the last 3 years. The description must include the assignment's value, timing and recipient (name, telephone and email). It is the supplier's responsibility to document relevance through the description. The supplier may document experience by referring to the competence of personnel they have at their disposal and can use for this assignment, even if the experience was acquired while the personnel performed services for another supplier.
The supplier shall have a solid, proven track record of use of the offered system (or an equivalent configuration) in both infant and adult research.	References to peer-reviewed publications and/or prior deployments in which the offered system (or an equivalent configuration) was used in infant research and in adult research.

4 Award Criteria

The award will be based on which tender has the best relationship between price and quality, based on the following criteria:

Criterion	Weight and sub-criteria	Documentation
Price	40 %	Completed price form (Annex 3A). Total offered price including all costs up to SAT.
Quality	60 %, split as follows: • Performance – 25 % • Warranty and support – 10 % • Integration and expandability – 12 % • Practical implementation and usability – 13 %	Completed Annex 1A. Quality is assessed on: - Performance (ET-003, ET-013, ET-010) - Warranty and support (ET-001, ET-002, ET-021) - Integration and expandability (ET-005, ET-008, ET-012, ET-014) - Practical implementation and usability (quality of implementation of ET-006, ET-015, ET-016, ET-020, ET-022)

4.1 Quality

The quality of the tender will be evaluated based on the tenderer's response to the requirements specified in Annex 1A. The Contracting Authority will assess how well the offered solution meets the needs of the research environment.

Performance (ET-003, ET-013, ET-010) – 25 %

The technical performance of the offered system, in particular the number of optodes/channels beyond the minimum (ET-003), the sampling rate per channel after multiplexing (ET-013) and the timestamp precision (ET-010). A higher number of optodes, a higher sampling rate and better timestamp precision are evaluated positively. Each of the elements is scored on a scale of 0–10 and given approximately equal weight within the subcriterion.

Warranty and support (ET-001, ET-002, ET-021) – 10 %

The duration and scope of the manufacturer's warranty beyond the minimum requirement of 24 months (ET-001), the scope of technical support and spare-part availability (ET-002), and the supplier's documented track record of reliable customer service and post-sale support, substantiated through customer references and/or documented response and resolution times (ET-021). This subcriterion evaluates the duration and scope of the manufacturer's warranty and the supplier's after-sales support and track record, beyond the minimum requirements. Extended and clearly defined coverage, together with a well-documented support history, reduces operational risk and total cost of ownership. Each of the three elements is scored on a scale of 0–10 and given approximately equal weight within the subcriterion.

Integration and expandability (ET-005, ET-008, ET-012, ET-014) – 12 %

The extent to which the system supports the optional capabilities described in Annex 1A, including simultaneous EEG recording (ET-005), simultaneous recording of temperature/PPG/skin conductance (ET-008), integration with Python/PsychoPy/MATLAB (ET-012), and hardware integration such as button presses and touch screens (ET-014). A

solution that fulfils more of these capabilities, and offers greater flexibility for future expansion, is evaluated positively. Each of the elements is scored on a scale of 0–10 and given approximately equal weight within the subcriterion.

Practical implementation and usability (ET-006, ET-015, ET-016, ET-020, ET-022) – 13 %

This subcriterion does not evaluate whether the mandatory (SHALL) requirements ET-006, ET-015, ET-016, ET-020 and ET-022 are met – that is assessed as a pass/fail qualification, per the requirements specification in Annex 1A. Instead, this subcriterion evaluates the quality and practicality of how these mandatory capabilities are implemented, for example:

- VR/AR integration (ET-006): comfort, weight, and compatibility with commonly used VR/AR headsets
- Usability across diverse populations (ET-015): number and range of cap/headgear sizes, ease and speed of set-up across populations including infants
- Hyperscanning (ET-016): whether the solution requires a full duplicate system or a more cost-effective modular expansion, and the achieved synchronisation precision between units
- Wireless operation (ET-020): battery life, transmission range, and weight worn by the participant
- Installation and training (ET-022): format (on-site/remote), scope, and quality of training materials

A solution that implements these mandatory capabilities in a way that is more practical, ergonomic and efficient for day-to-day research use is evaluated positively. Each of the elements is scored on a scale of 0–10 and given approximately equal weight within the subcriterion.

4.2 Justification for Not Applying Climate and Environmental Requirements

The contracting authority has assessed climate and environmental requirements pursuant to FOA § 7-9 and concluded that climate and environmental requirements will not be applied in this procurement. The procurement by its nature has a climate footprint and environmental impact that is negligible (“etter sin art har et klimaavtrykk og en miljøbelastning som er uvesentlig”), cf. FOA § 7-9 fifth paragraph.

fNIRS systems are optical measurement instruments that use low-power near-infrared light (LEDs or laser diodes) to measure changes in blood oxygenation in the cortex. During operation, energy consumption is minimal, typically well under 100 watts. Based on estimated annual usage, total energy consumption is in the order of a few hundred kWh per year, equivalent to only a few kg of CO₂ emissions using the Norwegian electricity mix. The equipment does not consume any chemicals or gases during use, and no waste products are generated during normal operation. The optode caps and head gear are reusable.

fNIRS systems typically have a product lifespan of 10–15 years, further reducing the environmental impact per year of use. The procurement involves a one-time delivery of compact electronic and optical components with a low total weight, resulting in negligible transport-related emissions.

Furthermore, all fNIRS systems available on the market utilise similar electronic and optical components, including light sources, detectors, optodes and cabling, resulting in comparable environmental profiles across suppliers. Applying environmental award criteria would therefore not enable meaningful differentiation between tenders.

5 Submission of Tender and Tender Format

5.1 Tender Format

The tender shall be submitted in its entirety according to the format specified by the electronic submission system, within the tender deadline.

Tax information must also be obtained for the supplier that wins the competition. Alternatively, the supplier that wins the competition must also submit a tax certificate.

5.2 Tender Submission Requirements

Tenderers shall submit a complete tender comprising the documents listed in the table below. Incomplete tenders may be rejected.

Document	Reference	Mandatory
Tender Letter	Appendix 1	Yes
Confidentiality declaration	Appendix 2	Yes
Tender Deviations	Appendix 3	Yes

Commitment Declaration	Appendix 4	Yes
Reference Form	Appendix 5	Yes
Requirement Specification	Annex 1A	Yes
Suppliers solution description	Annex 2	Yes
Price Schedule	Annex 3A	Yes
Administrative conditions	Annex 4	Yes

5.3 Electronic Signature

We recommend that suppliers use a qualified electronic signature (QES) compliant with the eIDAS Regulation to authenticate themselves when submitting tenders.

6 Appendices

- Contract with appendices
- Agreement Document
- General Contract Terms
- Annex 1 - Requirements Specification
- Annex 1A - Requirements Specification
- Annex 2 - Suppliers solution description
- Annex 3 - Price and payment terms
- Annex 3A – Price Schedule
- Annex 4 - Administrative conditions
- Appendix 1 Tender letter
- Appendix 2 Confidentiality declaration
- Appendix 3 Tender Deviations
- Appendix 4 Commitment Declaration
- Appendix 5 Reference form