NeuroSYNC

UK Multidisciplinary Centre For Neuromorphic Systems and Computing

NEUROSYNC FLEXIBLE FUND · ROUND 1

Briefing for applicants

How the fund works, what we want to fund and how we assess applications

Natalia Manuilovich
Centre Manager, NeuroSYNC · Aston University

Online · Thursday 12 November 2026, 13:00–14:00

ROUND 1 AT A GLANCE

Funding

Up to £200k, £100k or £50k per project at full economic cost. NeuroSYNC pays 80%.

Deadline

Tuesday 1 December 2026, 16:00 UK time

Projects start

Between 1 February and 1 May 2027

Contact

neuromorphic@aston.ac.uk

uk-neuromorphic-centre.net/flexible-fund

Funded by EPSRC · UKRI982

UKRI Engineering and Physical Sciences Research Council

NeuroSYNC
UK Multidisciplinary Centre For Neuromorphic Systems and Computing

This session

About 30 minutes of slides, then the rest of the hour for your questions.

AGENDA

13:00	NeuroSYNC and the Flexible Fund
13:05	What we want to fund: roadmap challenges and research themes
13:15	How to apply: project types, who can apply, costs, the form, key dates
13:30	How we assess applications, and what happens if you are funded
13:35	**Your questions**

HOW THIS SESSION WORKS

- **Recorded.** We record the presenter and the slides.
- **Questions in the chat, at any time.** If we read one out, we won't say who asked.
- **Everything is shared.** The recording and all questions and answers go on the call page and into the FAQ.
- **Keep confidential details out** of your questions, for the same reason.
- **No advantage.** Attending this briefing plays no part in assessment.

Funded by EPSRC · UKRI982

NeuroSYNC
UK Multidisciplinary Centre For Neuromorphic Systems and Computing

NeuroSYNC and the Flexible Fund

The EPSRC-funded UK centre for neuromorphic systems and computing: Aston with six partner universities.

£2 million

within NeuroSYNC's EPSRC award, for competitive projects that enhance the Centre's core research

Innovation

High-risk, high-reward research aligned with NeuroSYNC's research themes and objectives

Collaboration

New collaborations between NeuroSYNC groups and researchers outside the Centre, across computer science, neuroscience, materials, electronics and photonics

Impact

Work towards applications identified by industry and by the Centre's Industrial Advisory Board

TWO COMPETITIVE ROUNDS

Round 1 · open now

Types A, B and C. All Type A projects are funded in this round.

Round 2 · expected autumn 2027

Types B and C only. Unfunded Round 1 ideas can come back, revised.

All projects, in both rounds, must finish by 30 April 2029. Throughout, we want early-career researchers to have the chance to lead their own projects.

Funded by EPSRC · UKRI982

UKRI Engineering and Physical Sciences Research Council

NeuroSYNC
UK Multidisciplinary Centre For Neuromorphic Systems and Computing

Six roadmap challenges

They stand between promising laboratory results and computing that people can use. We want projects that tackle at least one.

1 Energy efficiency at system level

Show that energy savings survive once memory, data conversion, control and cooling are counted, not only at the level of a single device

2 Working with today's AI

Algorithms, training methods and software that connect new hardware with mainstream AI models and tools

3 Integration with digital infrastructure

Interfaces, reliability and security needed to run neuromorphic hardware alongside conventional computers and in data centres

4 Scale and manufacturability

Materials, devices and circuits that are reproducible, programmable and can be made at scale

5 Carbon savings

Measure and model energy use and emissions over the whole life of a system, and benchmark against conventional computing

6 Routes to adoption

Benchmarks, shared definitions and application cases that show where neuromorphic computing gives a clear advantage

Tick up to two challenges in Section 1 of the form, and explain the fit in Section 3.3 (Impact).

Funded by EPSRC · UKRI982

NeuroSYNC
UK Multidisciplinary Centre For Neuromorphic Systems and Computing

Research themes: neuroscience and algorithms

Example topics linked to NeuroSYNC's research, from Section 3 of the guidance.

Neuroscience foundations

- Understanding and inferring the evolving structures of human cortical organoids
- Models to track connectivity, synaptic behaviour and neuronal types in response to stimulation
- Probabilistic models of how organoid networks respond to stimuli, and the design of optimal stimulation protocols
- Information content, using measures such as entropy and mutual information; data storage and transmission in organoid networks

Algorithms and architectures

- New neuromorphic computing algorithms and architectures
- Quantum-classical hybrid computing: design and optimisation of hybrid architectures
- Energy-efficient weight update mechanisms and long-term reliability

Neuroscience foundations include human neuronal networks and organoids. These are examples, not a closed list.

Funded by EPSRC · UKRI982

NeuroSYNC
UK Multidisciplinary Centre For Neuromorphic Systems and Computing

Research themes: materials, devices and integration

Electronics (CMOS and beyond-CMOS), photonics and optoelectronics.

Energy-efficient devices

Neuromorphic devices and optoelectronic synapses that use less than 1 pJ per synaptic event

Phase-change materials

Study and testing of new phase-change materials for optical memristors

Perovskite components

Demonstration of perovskite components for enhanced signal propagation and reduced interference

Ultra-low-power synaptic elements

Redox-active molecules, 2D materials, and solution-processed metal oxides and ferroelectrics

Photonic neuromorphic architectures

Spiking neurons and photonic spiking neural networks; high-speed architectures built from telecom devices

These are examples, not a closed list.

Funded by EPSRC · UKRI982

NeuroSYNC
UK Multidisciplinary Centre For Neuromorphic Systems and Computing

Research themes: application and deployment

Industrial application and deployment of neuromorphic technologies.

Photonic hardware

- Photonic devices for multiply-accumulate (MAC) operations
- Highly integrated hardware with a density of 10,000 TOPS/mm²
- Photonic spiking neural networks for real-time data analysis and pattern recognition
- Scalable fabrication of volumetric optical devices for parallel computing
- Scalable 3D LC-waveguide architectures for photonic reservoir computing
- Photonic computing with topology optimisation for electromagnetic wave modelling

Materials and sensing

- Validation of candidate phase-change materials: scalability and thermal stability
- AI-driven material discovery to optimise photonic architectures
- Non-Si/CMOS neuromorphic vision sensors with < pJ/op energy and < ns response
- Light-enabled event-based sensing integrated with spiking neural networks, for robotics and advanced AI
- Reconfigurable photodiode arrays in beyond-CMOS materials for in-memory sensing and computing

Biological and hybrid systems

- Practical devices from human-cortical-organoid-based computing, for AI, robotics and quantum-inspired architectures
- Integration of neuromorphic devices with hybrid silicon-cortical systems
- Gain-based systems and hybrid quantum-classical approaches for AI applications

We also welcome strong ideas outside these themes if they clearly advance neuromorphic systems and computing.

Funded by EPSRC · UKRI982

NeuroSYNC
UK Multidisciplinary Centre For Neuromorphic Systems and Computing

Research areas and scope

From any discipline that can advance neuromorphic systems and computing.

Research areas

- Concepts and co-design across the stack
- Neuroscience foundations, including human neuronal networks and organoids
- Algorithms and architectures
- Materials, devices and integration
- Electronics (CMOS and beyond-CMOS)
- Photonics and optoelectronics
- Industrial application and deployment

In scope

- **Every stage,** from fundamental science to proof of concept
- **Any discipline,** including neuroscience and biology
- **Strong ideas outside the six challenges,** if they clearly advance neuromorphic systems and computing
- **New work,** not already funded by NeuroSYNC or another award
- **Results within the life of the Centre**

We will not fund

- Work that repeats a project already funded elsewhere
- Networking, events or travel that are not part of a research project
- Routine equipment purchases or facility upgrades
- Commercialisation or product development
- Projects whose main benefit would fall outside the UK
- Ethical, security or export-control risks the applicants cannot show how to manage

The full topic lists are in Section 3 of the guidance.

Funded by EPSRC · UKRI982

UKRI Engineering and Physical Sciences Research Council

NeuroSYNC
UK Multidisciplinary Centre For Neuromorphic Systems and Computing

Three project types

One form for all three. The limits are the full economic cost (FEC) of the project.

TYPE A
Interdisciplinary collaborations

£200k

12–24 months
Up to 5 awards

A new collaboration across disciplines and organisations, with a research associate (not necessarily for the full project). At least two organisations and two disciplines. Round 1 only.

TYPE B
Exploratory projects

£100k

12–24 months
About 3 awards

Smaller, high-risk projects that open a new research direction or test a new method, material or architecture.

TYPE C
Feasibility studies

£50k

Up to 12 months
About 4 awards

A quick test of a promising idea, to produce the evidence for a larger bid.

WHO PAYS

NeuroSYNC pays 80%: £160k / £80k / £40k	20%

Each organisation that receives funding covers 20% of its own costs. Partners that receive no funding pay nothing.

Numbers of awards are indicative. If one type has too few fundable applications, the Board may fund more of another type or carry the money to Round 2.

Funded by EPSRC · UKRI982

NeuroSYNC
UK Multidisciplinary Centre For Neuromorphic Systems and Computing

Who can apply

You do not need to be a NeuroSYNC member, or to work with a NeuroSYNC researcher.

Lead applicant

- Employed at a UK research organisation eligible for UKRI funding
- **Fixed-term researchers can lead,** including postdocs and fellows, if the contract covers the project or the organisation confirms it will employ them throughout

Working with NeuroSYNC

- Welcome, not required, and no advantage in assessment on its own
- **Looking for a collaborator?** Email up to 200 words on your idea by Monday 16 November and we will introduce you
- NeuroSYNC investigators can lead or join, with new work only

Industry and other partners

- Companies, charities, public bodies and organisations outside the UK are welcome as partners. Contributions are not required
- **Companies cannot receive funding directly.** A justified subcontract at market rates is possible
- Researchers outside the UK can be co-applicants or partners, but cannot lead or receive funding

How many applications

- In Round 1 each person can hold one funded project as lead and one as co-applicant
- You may send the same idea to other funders. Tell us if it is funded before our decision
- Not funded in Round 1? Revise and apply to Round 2 as Type B or C

Funded by EPSRC · UKRI982

NeuroSYNC
UK Multidisciplinary Centre For Neuromorphic Systems and Computing

Two reserved strands

Tick the strand in Section 1 of the form. Both are assessed against the same criteria as every other application.

Early-career researcher feasibility studies

- **Four of the eight Type C awards** across the two rounds are reserved for projects led by early-career researchers: approx two in Round 1
- **Who counts:** a researcher without a permanent (open-ended) post, or whose first permanent post started no more than three years before the deadline, not counting career breaks
- Assessed with all other Type C applications
- If fewer than two ECR-led projects are funded on rank alone, the Board funds the next highest-ranked ECR-led applications that reach the threshold

UK-Netherlands collaborations

- **Up to £50k in each round** for projects with at least one Dutch university, institute or company: enough for one Type C project
- Dutch organisations can also join Type A, B or C projects in the open competition
- **Funding is paid only to UK organisations.** Dutch partners cover their own costs, in kind or from Dutch funding
- The UK budget can pay for the UK team's travel and secondments, and for a visiting researcher of acknowledged standing for up to 12 months
- A letter of commitment from each Dutch partner

Funded by EPSRC · UKRI982

NeuroSYNC
UK Multidisciplinary Centre For Neuromorphic Systems and Computing

What we will pay for

Ask your research office to cost the project as they would for an EPSRC grant.

Changed on 11 November: indirect costs are included. The project cost is the full economic cost: directly incurred, directly allocated and indirect costs. The limits apply to this total, and NeuroSYNC pays 80% of it.

Usually eligible

- Research associate or technician salary (one RA per project, not necessarily for the full project)
- Investigators' time on the project, estates and indirect costs
- Consumables, materials and samples
- Facility access, fabrication, characterisation, computing time
- Small items of equipment, up to £10k each
- Travel for project work, partner visits and secondments; presenting results at conferences and NeuroSYNC events
- Justified subcontracted services; visiting researchers

Not eligible

- Studentships and student costs such as PhD stipends and fees
- Costs incurred before the start date
- Costs already paid by another award
- Items the organisation normally provides, such as standard laptops
- Open-access publication charges
- Costs of partners outside the UK
- Entertainment and gifts

Use the budget template on the call page and fill in the indirect costs line. The current guidance and FAQ are dated 12 November.

Funded by EPSRC · UKRI982

NeuroSYNC
UK Multidisciplinary Centre For Neuromorphic Systems and Computing

The application

One PDF (max 10 MB) by email to neuromorphic@aston.ac.uk, subject "Flexible Fund R1 – [lead surname]".

FIVE STEPS

1. Check the rules: scope, eligibility and costs
2. Join this briefing or watch the recording
3. Ask your research office to cost and approve it. Contact them now: many need several weeks
4. Complete the form, within the word limits for your type
5. Email one PDF by 16:00 on Tuesday 1 December

WORD LIMITS

Section of the form	A	B	C
Public summary	**200**	**200**	**200**
3.1 Vision, novelty, ambition	**800**	**600**	**300**
3.2 Approach and work plan	**800**	**600**	**300**
3.3 Impact and roadmap fit	**600**	**450**	**250**
3.4 Team and management	**500**	**400**	**200**
3.5 Risks (table)	**250**	**200**	**100**
4.2 Justification of resources	**500**	**400**	**200**

References (max one page) and the milestone, risk and budget tables do not count.

IN THE SAME PDF

- **CVs,** two pages each, for the lead and each co-applicant
- **Costing report** from the research office of each organisation that receives funding
- **Organisational approval** by the lead's research office (form 7.2)
- **Partner letters,** one page each, with the £ value of the contribution
- **Optional:** one page of figures, one-page Gantt chart

Funded by EPSRC · UKRI982

UKRI Engineering and Physical Sciences Research Council

NeuroSYNC
UK Multidisciplinary Centre For Neuromorphic Systems and Computing

Key dates

The deadline is Tuesday 1 December 2026 at 16:00 UK time. It will not be extended, and we cannot accept late applications.



All projects must finish by 30 April 2029. Projects cannot start later than 1 May 2027 or be extended beyond the end date.

Funded by EPSRC · UKRI982

NeuroSYNC
UK Multidisciplinary Centre For Neuromorphic Systems and Computing

How we assess applications

Against published criteria, by people with the right expertise and no conflicts of interest.

40% Innovation

Novelty and potential to advance neuromorphic computing: an ambitious idea, sound science, a clear and feasible approach, risk justified by the potential reward

Form 3.1, 3.2, 3.5

30% Impact

Fit with the roadmap challenges and industry needs, links with other NeuroSYNC work, partner support, prospect of a follow-on project

Form 3.3

30% Team

The right expertise, judged relative to career stage; added value of the collaboration; development of early-career researchers; justified resources

Form 2, 3.4, 3.5, 4

THE PROCESS

1 Eligibility and scope check

Operations team, then the Board

2 External review

At least two independent reviewers, six-point scale

3 Flexible Funding Board

Agrees scores, ranks within each type, reserve list

4 Steering Committee

Approves the Board's recommendations

5 Feedback

Written, to every reviewed applicant, by 10 January*
*subject to number of submissions

Conflicts of interest: anyone named on an application or working at an applicant's organisation takes no part in assessing it. The Director and the Centre Manager take no part in decisions on applications involving Aston.

Funded by EPSRC · UKRI982

UKRI Engineering and Physical Sciences Research Council

NeuroSYNC
UK Multidisciplinary Centre For Neuromorphic Systems and Computing

If your project is funded

Awards follow the EPSRC grant conditions. Aston University holds the NeuroSYNC grant and issues the awards.

Agreement

An award letter and a sub-award agreement with the lead organisation. Organisations in a joint project sign a collaboration agreement before the start.

Start and end

Start between 1 February and 1 May 2027. Finish by 30 April 2029. No extensions beyond that date.

Reporting

A short mid-term report, a final report within one month of the end, a statement of expenditure, and outputs for our EPSRC reporting.

Taking part in the Centre

Present at NeuroSYNC events, contribute to the roadmap where relevant, and help us write a short case study.

Intellectual property

NeuroSYNC takes no ownership. The sub-award and collaboration agreements set ownership and use.

Publications and data

UKRI open access policy, EPSRC research data policy. Acknowledge the NeuroSYNC Flexible Fund (EPSRC grant UKRI982).

Before an award is confirmed, Aston and the lead organisation carry out trusted research and export-control checks where relevant. Tell us straight away about any change to team, scope, timing or budget.

NeuroSYNC
UK Multidisciplinary Centre For Neuromorphic Systems and Computing

Questions received so far

Answers added to the FAQ up to 11 November. New answers from 12 November are on the next slide.

Are indirect costs eligible?

Yes. The limits apply to the full economic cost including indirect costs, and NeuroSYNC pays 80% of it.

Does every organisation in a Type A project need budgeted time?

No. An organisation that receives no funding can contribute in kind, with a one-page letter giving its role and the £ value.

Can we budget for joint activities and meetings?

Yes, when they are part of the research: project travel, partner visits, secondments, presenting results.

Our collaboration has only just started. Is it "new" for Type A?

Yes. No joint track record is needed. The project must be new work, not a continuation of an existing one.

Is the UK-Netherlands strand only for feasibility studies?

The reserved £50k fits one Type C. Dutch organisations can also join Type A and B projects in the open competition.

Can part of the budget go directly to a Dutch partner?

No. Funding is paid only to UK organisations, in every project type.

We add every question and answer to the FAQ, without naming who asked. If the FAQ and the guidance ever differ, the guidance applies.

Funded by EPSRC · UKRI982

UKRI Engineering and Physical Sciences Research Council

NeuroSYNC
UK Multidisciplinary Centre For Neuromorphic Systems and Computing

Questions answered on 12 November

Added to the FAQ dated 12 November. Some of them change the guidance: early-career researchers, project lengths and start dates.

I have just started a tenure-track post. Am I an early-career researcher?

Yes, if your first permanent post started no more than three years before the deadline, not counting career breaks. Give the start date in form 2.1.

What counts as a discipline for Type A?

Distinct fields of expertise that the project needs, not departments. Researchers in one department can qualify. Show what each field brings.

Can a Type A project be shorter than 24 months?

Yes, down to 12 months. The £200k FEC limit stays. The RA can be costed for fewer months or part-time: explain the fit in 4.2.

Can the deadline be extended to allow for research-office approval?

No. The costing and the organisational approval must be in the application on 1 December. Contact your research office now.

Can the award pay the lead applicant's full salary?

Only the share of the lead's time spent on the project. If their contract ends sooner, the organisation confirms it will employ them throughout.

What changed in the guidance on 12 November?

Wider early-career definition; Types A and B run for 12–24 months; projects can start until 1 May 2027; the RA need not be employed for the full project.

We add every question and answer to the FAQ, without naming who asked. If the FAQ and the guidance ever differ, the guidance applies.

Funded by EPSRC · UKRI982

UKRI Engineering and Physical Sciences Research Council

Your questions

Put them in the chat. Every answer goes into the FAQ, so all applicants have the same information.

After today

neuromorphic@aston.ac.uk

Guidance, form, budget template, FAQ and this recording:

uk-neuromorphic-centre.net/flexible-fund

DATES TO REMEMBER

Mon 16 Nov

Ask for an introduction to NeuroSYNC researchers

Tue 24 Nov

Send us your questions

Tue 1 Dec, 16:00

Application deadline

By 10 Jan 2027

Decisions and feedback – subject to number of submissions

UKRI Engineering and Physical Sciences Research Council

Funded by EPSRC · UKRI982