

Invitation to Tender:

The Royal Academy of Engineering is seeking a provider to carry out a baseline evaluation for ***This is Engineering: Schools***



Deadline for submissions: 4.00pm Friday 3rd October

Interview date: Tuesday 28th October

All expressions of interest, submissions and queries should be sent to:

Rebecca Sanderson (rebecca.sanderson@raeng.org.uk)

All questions raised will be collated and answers forwarded on to all parties who have expressed an interest in submitting a proposal.

Invitation to Tender
This is Engineering: Schools
www.raeng.org.uk

The Royal Academy of Engineering (Academy) is looking for an evaluation partner to provide a baseline evaluation on the state of STEM provision in schools participating in *This is Engineering: Schools*.¹ This request for proposals sets out the background to the programme, our aims and objectives for the evaluation and how to apply.

Annex 1 at the end of this document provides background information on *This is Engineering: Schools* and should be read in conjunction with this request for proposals.

1. Background

Royal Academy of Engineering:

The Royal Academy of Engineering is creating and leading a community of outstanding experts and innovators to engineer better lives.

In collaboration with our Fellows and partners, we're growing talent and developing skills for the future, driving innovation and building global partnerships, and influencing policy and engaging the public.

- As a charity, we deliver public benefit from engineering excellence and technology innovation.
- As a national academy, we provide progressive leadership for engineering and technology, and independent expert advice to government in the UK and beyond.
- As a Fellowship, we bring together an unrivalled community of leading business people, entrepreneurs, innovators and academics from every part of engineering and technology.

In everything we do, we are guided by our five values: progressive leadership; equity, diversity and inclusion; excellence for impact; collaboration first, and creativity and innovation.

The Academy's strategy can be [viewed here](#).

¹ *This is Engineering: Schools* is generously funded by the Department for Science, Innovation and Technology; the Welsh Government's Tech Valleys programme; the Panasonic Trust; Boeing; the Royal Air Force; Venterra; SGN and the estate of the late John Gozzard.

As an Academy we proactively seek to procure services from diverse teams and diverse suppliers. We expect the project to be delivered in line with our values of inclusion and diversity and to the highest ethical standards. Diverse perspectives should be considered in the development of proposals and outputs should be inclusive.

This is Engineering: Schools

This is Engineering: Schools (TiES) brings together our different regional activities in Scotland, Northern Ireland, Wales and the West Midlands under one initiative, closely aligned with [*This is Engineering*](#) - an online campaign which encourages more young people, from all backgrounds, to consider engineering careers

Built off learnings from previous education programmes, *This is Engineering: Schools* aims to improve learning opportunities by bringing real-world engineering practice into schools and colleges, changing learners' perceptions of engineering, inspiring their participation in STEM subjects, and boosting teacher knowledge and confidence – whilst reflecting the regional context of all the areas we work in.

2. Purpose and scope of the study

The Academy wishes to commission a provider to assess the current STEM provision and context of the 100+ schools participating in the TiES programme across the Welsh Valleys, Scotland and West Midlands.

- 10 primary schools, 10 secondary schools and 1 further education college in Caerphilly (Welsh Valleys).
- 45 primary schools, 9 secondary schools and 2 further education colleges in Merthyr Tydfil and Blaenau Gwent (Welsh Valleys).
- 10 primary schools and 10 secondary schools in Aberdeenshire and Aberdeen city (Scotland).
- 15 primary schools and 15 secondary schools in Glasgow city (Scotland).
- 12 primary schools, 12 secondary schools and 3 further education colleges (West Midlands) - subject to confirmation.

The specific focus of this work can be guided by the provider, but potential focus areas include:

- What is the current state of STEM provision across participating schools and colleges? How do regional, socio-economic and demographic factors influence STEM engagement and access?

- What existing partnerships, resources, and initiatives support STEM education in these schools?
- What are the key barriers to STEM engagement for students, teachers, and schools in each region? How do perceptions of STEM careers and subjects vary across different age groups and regions?

Previously-commissioned evaluations of the Welsh Valleys and West Midlands region have provided evidence of the programme's impact. This study builds upon that knowledge through an exploration of the programme's regional contexts and individual school profiles as well as the key barriers to STEM engagement. The aim is to use a common methodology across the different regions and provide a baseline against which the programme's success can be measured. One additional factor for consideration is that some schools have been delivering TiES for longer than others, so an additional area of exploration could include the extent to which the programme has been embedded in participating schools.

The study will form the foundation of the Academy's longer-term evaluation plans which will focus on understanding the most effective components and enablers of success. At a later stage, there will be tendering opportunities for this evaluation therefore we welcome proposals that consider these evaluation ambitions and include consideration of baseline indicators that can be used to measure long-term impact.

3. Stakeholders to be engaged

The evaluation should be carried out by engaging with:

- Teachers and lecturers at primary and secondary schools, and colleges.
- Students at primary and secondary schools, and colleges.
- Local engineering professionals.
- Academy staff
- Relevant local authority contacts.

Lists of the networks pertaining to the different regions will be provided to the successful bidder, and the programme managers can support to provide necessary introductions and schedule appointments.

4. Deliverables

The provider shall deliver the following outputs as a minimum and we welcome proposals on other outputs to engage the Academy staff.

- A comprehensive final report by 15th July 2026.

This report should include:

- An executive summary and an outline of findings and analysis at a programme and regional level.
- Recommendations emerging from the findings on barriers to STEM engagement.
- Appendices with detailed methodology and data collection tools.

5. Methodology

We are open to differing approaches and ask suppliers to submit their proposed methodology as part of the bid. We can provide the successful provider with the previous Welsh Valleys and West Midlands evaluations, the schools' grant application data and selection criteria and end of year reports which provides limited structured and unstructured information on the areas listed below.

The Academy would like the successful provider to gather detailed information across the following areas:

- School demographics and culture.
- Engineering-focussed STEM provision.
- Uptake and attainment of students in STEM subjects linked to engineering – this should consider barriers to STEM uptake within the schools and link to provision.
- Teacher confidence and capability in teaching STEM (primary) or applying engineering in the context of their own STEM subject (secondary) – this should include an assessment of teachers' knowledge and awareness of pathways to engineering/STEM careers.
- Students' perceptions and understanding of engineering and aspirations to pursue engineering careers – this should include an assessment of students' knowledge and awareness of pathways to engineering/STEM careers.
- Existing partnerships with the schools and other schools, local employers and STEM support organisations.

We do invite further suggestions for baseline data, including indicators that may be useful for the longer-term programme evaluation.

In line with the Academy's commitment to place-based programming and responding to regional and local needs, we are particularly interested in hearing about your approach to regional data collection and stakeholder engagement, as well as your sampling methodology.

6. Budget and payment schedule

A budget of up to £40,000 inclusive of VAT is available for the study. The payment schedule will be discussed with the successful bidder.

7. Procurement schedule

Date	Activity
Thursday 21 st August	Issue of RFP to potential suppliers
Friday 5 th September	Deadline for submission of RFP clarification questions to the Academy
Friday 19 th September	Deadline for the Academy to respond to all clarification questions
Friday 3 rd October	Deadline for submission of RFP
Friday 17 th October	Deadline for initial evaluation of RFP
Tuesday 28 th October*	Interviews
Friday 31 st October	Notification of preferred supplier
Monday 28 th November	Evaluation commences

* This interview date is provisional and will depend on the number and quality of applications received.

If you are successful, at contracting stage we will ask for evidence of liability insurance and require you to confirm that your practices comply with our [organisational policies](#), in particular our Diversity and Inclusion, Safeguarding and Privacy Policies.

8. Proposal submission information

Please send your clarification questions and submissions to:

Rebecca Sanderson - Senior Programme Manager for Schools

rebecca.sanderson@raeng.org.uk

We seek to provide appropriate adjustments and access support where tenderers, consultants or grant-holders require adjustments to enable them to participate in the work. If there are adjustments, we can provide that will make this process more accessible for you, please let us know. If there are likely to be additional budget implications from these adjustments, please identify them in your proposal.

Please include the following in your proposal:

- **Delivery proposal:** Please explain how you intend to approach the commission including methodologies adopted and approach to stakeholder engagement.
- **Project management:** Please provide a brief overview of the project plan, illustrating how you intend to meet the stated deadlines, and an overview of any risks to delivery and planned mitigations.
- **Track record:** Please explain your organisation's experience and track record by evidencing a maximum of three similar projects, including any links to published reports. We are particularly interested in evaluators who can demonstrate knowledge of the education and STEM employment landscape across the programme's regions.
- **Cost:** Please provide a clear breakdown of the budget that accounts for all costs that will be incurred.
- **Organisation and team:** Please provide a biography that sets out the qualifications and experience of those involved in the evaluation. We are particularly interested in providers who can demonstrate an understanding of the barriers to participation in STEM education.
- **Diversity and inclusion:** Please provide a short paragraph responding the question, "What is your organisation doing to show a commitment to Diversity and Inclusion?" You may include details of policies, training, strategies and/or accreditations as applicable.
- **References:** Please provide the contact details of two referees and/or links to testimonials and/or links to previous work.

9. Selection criteria

Your proposal will be evaluated using the following criteria:

Description of criteria	Score	Weighting	Max Points
Proposed content: appropriateness of approach and methodology.	0-5	4	20
Project management: appropriateness of timescales and project delivery process	0-5	2	10
Track record: relevance of the experience of individual team members.	0-5	1	5

Track record: experience of similar service provision.	0-5	2	10
Cost: budget is clear, all costs accounted for and proposal is competitively prices	0-5	1	5
Total			50

Scoring matrix

0	No Answer/Unacceptable Response
1	Very Poor Response
2	Poor Response
3	Acceptable Response
4	Good Response
5	Excellent Response

To score well (i.e., 3 and above) the evaluation panel will look for clear evidence. The scores will be weighted to give an overall score. The tables below indicate the weightings which will be applied to each section. If required, the two highest scoring proposals will be invited to the Academy to present their proposal.

At interview, we will consider all criteria. The scores given before the interview may be amended following new information provided at the interview.

Annex 1: This is Engineering: Schools

Introduction

This is Engineering: Schools (TiES) unites our regional programmes in Scotland, Northern Ireland, Wales, and the West Midlands under one flagship initiative. Each programme is tailored to its region, addressing local challenges and reflecting the unique STEM and engineering landscape. The programme has an integral role in transforming local communities by raising young people's aspirations and improving social mobility opportunities in rural and inter-city areas of high socio-economic deprivation. A further (and principal) aim of the project is to encourage women and underrepresented groups to progress towards professional engineering roles.

Our goal is for engineering skills to meet the 21st-century global challenges and for engineers and technicians to reflect the diversity of the society they serve.

This is Engineering: Schools - Welsh Valleys (TiES-WV), is the continuation and expansion of the former *Welsh Valleys Engineering Project* (WVEP), which launched in 2018. TiES-WV will run from September 2024 to July 2028, supporting 20 new primary and secondary schools in Caerphilly. The programme will continue to support all 54 schools who participated in WVEP in Blaenau Gwent and Merthyr Tydfil. TiES-WV is supported by a full-time, local programme manager who works directly with in-school coordinators (STEM teachers), who are responsible for leading on the delivery of the programme within their schools, partner businesses and colleges.

This is Engineering: Schools - Scotland (TiES-S) was launched in September 2024 with 20 primary and secondary schools across Aberdeenshire, and Aberdeen City. A further 30 schools in Glasgow will join the programme in September 2025. TiES-S is supported by an Academy programme manager and five local lead school coordinators, two in Aberdeen and three in Glasgow, who facilitate termly network meetings and manage their respective networks to form collaborative partnerships between teachers, careers leads, and support staff with local employers and industry.

This is Engineering: Schools – West Midlands (TiES-WM) was launched in March 2020 and ran for five years as the *Lord Bhattacharyya Engineering Education Programme*, concluding in July 2025. September 2025 will see the launch of the next phase of activity in the area, working initially with an estimated 24 primary and secondary schools and 3 further education colleges in clusters across the West Midlands, before expanding into parts of the Black Country. Plans for this phase are still being finalised, acting

upon recommendations from a previous external evaluation, and we anticipate following a lead teacher/cluster model similar to our activity in Scotland.

Programme components

Each regional programme provides a tailored mix of six interventions (see table 1) to best support the unique educational and socioeconomic challenges of their respective geographic areas, together with small variations across the regions:

1. In-house grants

Schools receive an annual grant to purchase resources and provide experiences for students that will enhance the 'E' in STEM. The grant values are different in each region, as shown in table 1 below.

2. Post-16 scholarships

Scholarships worth £2000 over 2 years support students studying either vocational engineering courses, e.g. BTECs or T Levels, or STEM A Levels with a view to going into engineering. The awards aim to incentivise post-16 STEM study and support students to pursue engineering careers.

3. Higher education scholarships

These scholarships, each worth £15,000, support students studying engineering and related courses at university who are from low-income households, and those who are under-represented in the engineering sector.

4. Termly meetings and CPD

The schools attend termly meetings which provide an opportunity for peer-to-peer support, increase collaboration and the sharing of best practice. Guest presenters provide information on opportunities outside of the programme, ensuring schools are informed and equipped to take full advantage of all the opportunities available to them, leveraging the support provided by the Academy. In addition, schools receive STEM teaching and learning resource boxes developed by the Academy and the associated training for teachers. The resources are aligned to curriculums in England, Wales, and Scotland, supporting teachers in the delivery of engineering-themed activities and adding context to the curriculum.

5. Employer partnerships

The programme builds meaningful and mutually beneficial links between schools and STEM businesses. These lead to improved perceptions of engineering careers and improved knowledge of pathways to engineering careers for both students and teachers.

6. Celebration events

The annual celebration events offer schools a platform to showcase their STEM achievements, providing pupils with valuable opportunities to build confidence and presentation skills. The events also provide pupils with hands-on STEM experiences.

	Scotland	Welsh Valleys	West Midlands (subject to confirmation)
Annual in-house grants	£12,000 per cluster	£2,700	£12,000 per cluster
Post-16 scholarships	No	Yes	Yes
Higher education scholarships	No	Yes	Yes
Termly meetings and CPD	Yes	Yes	Yes
Employer partnerships	Yes	Yes – formal Employer Engagement Strand component	Yes
Celebration events	Yes	Yes	Yes

Table 1. Table summarising the components offered across each regional programme.

Outcomes

The following primary outcomes are sought for the programme:

- An increased level of engagement from students in engineering-enriched STEM activities within school leading to a positive perception of engineering.
- An increase in aspiration to progress with STEM subjects at post-16 and pursue STEM engineering careers from the students in participating schools.
- An increase in the rates of attainment and progression in post-16 STEM education.

- An improved knowledge and awareness of the pathways to engineering/STEM careers amongst teachers and pupils through practical activities, industry links and teacher upskilling.
- Increased confidence in teachers to deliver engineering enriched STEM content to students.

The following secondary outcomes are sought for the programme:

- A coordinated approach for STEM and engineering learning across participating schools.
- Closer links between schools, local STEM businesses and other STEM support organisations.
- The facilitation of new resources and activities for teachers to present to their students and enrich their understanding of engineering and STEM.
- Provision of educational support for students from low-income households and underrepresented groups to progress with STEM and engineering in further and higher education.
- Opportunities for learners to improve core employability skills such as team-working, presentation, and communication skills.

The programme will leave a sustainable legacy through better-resourced schools, upskilled teachers and closer alignment between the STEM curriculum and STEM business' needs. The latter will contribute to the pipeline of STEM-skilled workers which the Welsh Valleys, Scotland and the West Midlands will require in the years ahead, providing students with opportunities for social mobility.