

## 11.01 SERVICE SOLUTION

### Service solution proposal

Please set out a full description of your service / solution.

Your description should include:

- The description of the service(s)
- The means and medium of delivery
- Any methods, process or technology –including any unique IP you propose to (i) provide or (ii) create
- How the services will relate to an individual participant who is the recipient of the services – what will the user experience be?
- Contextual awareness: the programme design has to recognise the twin challenges of time and workload pressures on staff in schools, and the particular types of schools and areas that TLIF is seeking to prioritise.
- Demonstrable understanding of need in the areas to be targeted.

Please include a section about what you see as the unique value and strength you bring to deliver TLIF's objectives.

*Your proposal should set out the Services you will deliver including the medium and scope of the Services – the “What” – your proposal should relate to the aims of the fund.*

Evaluation will be against:

- Match of the service proposal with achieving the objectives of TLIF as set out in the specification and requirements.
- The evidence of a demonstrably successful solution for achieving the objectives of TLIF as set out in the specification and requirements, in the particular areas the bidder is seeking to target.
- Evidence of the experience, skills, capacity and capability of the bidder as an organisation / consortium and their staff to deliver this solution / services.

The evaluation will be based on solely on the elements of your proposal which cover priority areas and priority schools

## **Service Description**

Aspire to STEM (**AtS**) provides teachers and leaders with a highly bespoke, flexible and focused menu of CPD and inspiration support based upon an Initial Needs Analysis. High impact **AtS** support will address the specific areas of development for a cluster of schools thereby securing rapid and sustained improvement, resulting in better outcomes for young people.

(**AtS**) exemplifies the '**Standard for teachers' professional development**' guidance for effective CPD. It:

- has a clear focus on improving and evaluating pupil outcomes
- is underpinned by robust evidence and expertise
- includes collaboration and expert challenge
- can be sustained over time.

**AtS** will focus on four areas of support to address underlying issues that prevent students, teachers and leaders achieving expected progress.

### 1) Improved leadership to support STEM teaching

CPD will focus on improving the leadership skills of both existing and, vitally, new leaders of STEM subjects. Evidence shows<sup>1</sup> our CPD, through more effective leadership, increases teacher retention, providing greater capacity to drive improvement.

**AtS** will provide subject-specific expertise, enabling school leaders to identify what best practice in STEM looks like, optimising their leadership, utilising effective support strategies and planning tools.

For example:

- A secondary senior leader with a background in the Arts who line manages a science department would be supported to recognise good science practical work; or to secure a better understanding of working scientifically
- A primary science coordinator may require support in designing individual professional learning pathways for each member of staff mapped to the Initial Needs Analysis
- Support to confidently utilise the local environment to support STEM teaching, such as the use of the school buildings and its displays or local infrastructure such as bridges, reservoirs and discovery centres

### 2) Great teaching of STEM subjects

**AtS** provides a bespoke menu of support for teachers focusing on the design and implementation of interesting, active and impactful lessons which will instil a love of learning of STEM in pupils.

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<sup>1</sup> Sheffield Hallam University, Centre for Education and Inclusion Research into STEM Learning Network, 2012

CPD will empower, inspire and build confidence in all teachers of STEM, but specifically those who may be teaching outside their specialism. **AtS** will build their confidence to “kick-away the crutch of PowerPoint lessons and textbook teaching” to teach lessons which are creative and interesting. A specific focus will be the support of interventions that target disadvantaged students so teachers are equipped to teach diverse groups of students and be more aware of their learning needs, correcting any potential bias within their teaching.

Through collaboration with other schools, sharing the methodology and impacts with colleagues, a culture of engaging with small-scale action research would be encouraged: a culture built for professional development through self-sustaining communities of great teaching practice.

### 3) Increased Science capital within disadvantaged communities

**AtS** will provide schools with a clear framework alongside intensive CPD and enrichment support to improve the science capital of young people, with more effective engagement of parents, families and communities. STEM Ambassadors and employers will be utilised to focus on better understanding of career pathways, design and delivery of parent workshops to encourage parental support with homework and revision, effective use of parent evenings and the creation and utilisation of an alumni of successful past pupils in STEM to inspire, celebrate and raise aspirations of the whole community.

### 4) Careers and information guidance

**AtS** will integrate STEM Learning’s Career Toolkit, which includes local labour market information. Quality-assured, career-focused teaching resources (our eLibrary) will be used to contextualise teacher, school-leader and governor subject-specific and employability-focused CPD. CPD that would focus on increasing confidence when advising young people and strengthen the transition from school into employment, focusing on technical pathways with a better understanding of T levels and Apprenticeships.

Teachers will be supported to develop their understanding of “real-world industry” context in their teaching, raising pupil’s aspirations and future engagement with STEM subjects. This would be enhanced through integrated engagement with STEM Ambassadors and access to inspiration activities, e.g. entrepreneurship events such as “Dragons Den” type competitions.

## Means and medium of delivery

Our Network of Science Learning Partnerships and STEM Ambassador Hubs is unique in its infrastructure and expertise. This includes 46 lead-schools working in formal partnership with a further 152 hub schools, ensuring unrivalled geographical reach. The Network is complimented by our regionally-based leadership team – experts in the local contexts and challenges faced by **AtS** schools.

We have extensive experience and tested tools and processes to ensure that bespoke support has the required impact. This includes:

- Our Intellectual Property – incorporating STEM teaching resources linked to quality-assured Professional Development Experiences. Through our team of 600 quality-

assured facilitators, these undergo a cycle of peer review that ensures content is accurate, cutting-edge, in-line with best practice pedagogy, curriculum relevant, evidence-led, and incorporates contextualisation from STEM employers

- Our online Impact Toolkit (ITK) enables schools to access best practice, understand why something works, then plan for and achieve impact
- Through expertise gained establishing the most successful school-led model of support in the sector, we understand the school context, workload pressures and issues faced by schools in challenging circumstances
- A broad range of supporting partners that includes Research and Teaching School, Learned Bodies

### **Addressing individual Needs**

We have placed the unique challenges and needs of individual teachers and schools at the heart of **AtS** support. For example, in Wellingborough and Corby we have identified a strong need to improve outcomes in Key Stage 4 Science and Maths subjects and particularly pupil transition to appropriate post-16 study. **AtS** will:

- support school leaders in the identification of key strengths and areas to improve leadership
- improve teachers' subject knowledge and pedagogy to secure rapid change in teaching practice
- focus on teaching for mastery within STEM subjects so pupils have a secure knowledge base for transition to post-16 study
- increase the knowledge of teachers in the local labour market, so they have a clear understanding of opportunities and how to contextualise the curriculum
- create engagement with local employers in school events to provide resources and illustrate the range of career pathways available to pupils.

**The AtS user experience** will be:

- head teachers who are unable to engage in existing national programmes due to day-to-day priorities will be provided with easy-to-access, bespoke, integrated, off-the-peg support, achieving impact they currently are unable to accomplish
- school leaders being provided with up to 10 days of CPD, including individual in-school mentoring, to guide, support and embed action planning
- teachers being provided with a bespoke programme of up to 10 days CPD to improve subject knowledge and pedagogical skills, and support needed to understand local employment opportunities

The flexibility of our programme and our expertise will ensure that **AtS** is appropriate to each schools' circumstances.

Further detail can be found in **three case studies detailing scope and outcomes of identified projects that already have school buy-in have been included under general documents. See attachments.**

CPD will be scaffolded through inspiration and enrichment activities, utilising our established infrastructure of 33,000 STEM Ambassadors, STEM Clubs and an eLibrary of 11,000

quality-assured teaching resources that will be curated specifically for **AtS** participants. The **integrated approach** will ensure impact is delivered through great teaching and leadership whilst the aspirations of pupils and their communities are raised.