

National Highways
Hazard Protection on Roads
Accelerator
Application Guidance



1. Introduction

Background

The National Highways Hazard Protection on Roads Accelerator is a programme delivered by Connected Places Catapult (The Catapult) that aims to stimulate innovation around the challenge of further helping to protect road users in England from hazards.

England already has some of the safest roads in the world. The number of road deaths is lower in England than in almost every country within Europe, ranking just behind the top performers, Norway, Sweden and Iceland, with 25 deaths per million inhabitants in 2022.

Safety is and will always be the number one priority for National Highways. The organisation aims to reduce the number of people killed or seriously injured on England's roads by 50% by 2025 (against the 2005 - 2009 baseline) with a longer-term ambition of achieving a zero-harm network. To achieve this, innovation will be needed to further help protect road users and operators in England from all causes of collisions and harm, including hazards.

This accelerator programme will foster innovation by inviting SMEs to propose innovative solutions to further help protect road users, addressing specific challenge areas. For this accelerator, we see hazards as any circumstance on roads that drivers may not have anticipated and will need to react to.

About the Programme

This programme will be run in two stages. In stage one, up to 10 SMEs will be selected to work with National Highways, Connected Places Catapult and Tier 1 suppliers to design trials that address one of the programme's challenges, over a 3-month period. The SMEs can be awarded £15K - £30K of funding during this phase to cover their costs. Following a down selection, approximately 5 SMEs will be awarded up to £60K in stage two to deliver their trials over a 5-month period.

Alongside the trialling of their solutions, the SMEs will be guided through a bespoke programme tailored to their requirements, including procurement readiness, product development support and business modelling coaching. These activities will be co-designed with each SME to support them in growing their businesses and adapting their propositions to National Highways' requirements.

About this Document

This application guide will provide supporting information to help applicants to this Accelerator complete and submit a high-quality application. This programme is run as a Pilot and is subject to the terms and conditions set out on the website.

2. Eligibility

Eligibility Criteria

Successful applicants to the programme will meet the following eligibility criteria:

- You must be a micro or small to medium sized enterprise (< 250 employees)
- You must be a UK registered company*
- Your innovative solution will preferably be at least TRL 6
- You must be able to address one or more challenge statements with your solution
- You must be willing to complete a development, testing or demonstration of your solution in a real or relevant environment
- You must be willing to travel on occasion to face-to-face meetings and events in the UK

*This is a requirement in order to unlock trial funding

Equity, Diversity & Inclusion

This programme celebrates Equity, Diversity and Inclusion (EDI), not just because it is the right thing to do but because it leads to better decisions, better innovation and makes our working life more rewarding and more productive. All partners are committed to fostering EDI in our workforce, our partners, suppliers and innovators.

We hold EDI to include the characteristics outlined in the Equality Act 2010 {Age; Sex (and Gender); Race (and Ethnicity); Disability; Religion or belief; Sexual orientation; Gender reassignment; Marriage or civil partnerships; Pregnancy and maternity}, as well as other historic barriers to opportunity, such as “class”, nationality, dialect, education and other forms of socio-economic exclusion.

The Programme is committed to carrying the following initiatives to uphold EDI principles:

- Provide a level playing field for all innovators seeking to apply to participate in the programme by anonymising application forms and implementing a fair, standardised scoring process.
- Drive a human-centred approach when tackling real world challenges.
- Foster an open and inclusive environment for businesses joining the Programme.
- Offer advocacy and collaboration opportunities to reduce barriers to innovation.
- Encourage a range of perspective in our shortlisting and due diligence process by selecting diverse assessment panels.

3. Application Guidance

General Guidance

- Carefully read this guidance document before preparing your application.
- You can access the application form on our Programme Page.
- Section 2 and 3 of your application must be anonymous. This is to reduce the potential for bias and discrimination in the selection process and ensure that you are evaluated based on your skills, qualifications and suitability for the programme.
- Only the information in your application form will be assessed as well as additional attachments where requested.
- Your application will automatically save so you can come back and make edits.
- Applications must be submitted by midnight on **31st December 2023**. Late submissions will not be considered.
- We will begin scoring applications from 3rd January 2024.
- Please keep within the maximum word counts noted in each of the sections of the application form. Any content that exceeds the word count limit will be disregarded.
- In addition to the information included in the application form, further guidance on what should be included is given below. You should also refer to the assessment scoring criteria section as that will help to maximise your score.

- Please ensure you have read and understood the terms and conditions set out on the website.

Application Questions

As part of the National Highways Hazard Protection on Roads Accelerator, successful applicants will be paid £15K - £30K to design in collaboration with a trial with National Highways, The Catapult and Tier 1 suppliers. This is the first stage of the programme and will run for 3 months. After a down selection, approximately 5 SMEs will receive up to £60K to deliver their trials over a 5-month trial delivery period. Section 2 of the application form should detail your plan for delivering this project.

For the programme's assessment panel to accurately evaluate your application, we require the following information.

- A description of your solution – what it is, how it works and why it is needed.
- How the solution is innovative and how it is different to competitive technology.
- Your understanding of your market and traction you have already achieved in the way of sales, contracts, and collaborations.
- Your business model and how you plan to monetise your solution.
- A high-level safety impact and affordability case of your innovation.
- The technical and commercial risks you foresee.
- Information about the team that would work on the project.
- Your reasons for wanting to join the accelerator.
- A high-level outline of what a future development or testing project could look like. If successful, a detailed project proposal will need to be agreed between your company and related stakeholders by the end of May 2024.
- A description of the impact you believe your solution will have.
- A project budget that details the direct costs associated with this work.

Technology Readiness Levels – It is helpful for us to see where your technology currently sits in its development. This will allow us to determine the level of support you may need to bring it to market and whether it is a good fit for this programme.

Reasons behind the challenge(s) selected – This question seeks to understand the main motivation for your project, i.e., you should clearly describe the problem or challenge you are seeking to address. You should not give full details of your innovation here; however, you should focus on why it is needed. Discuss what the possible unmet need or shortcoming is in the current practice. Any evidence you can give us will strengthen your applications.

Problem and solution – Tell us all about your solution in this section, in layman's terms. What is it, what does it do and how does it work?

Innovation – For this question you need to provide a strong case for why and how your solution is innovative. For example, does your solution apply existing technologies in new areas, is it about developing new technologies for existing areas or is it a completely novel approach? You should explain what solutions currently exist and how yours is different, i.e., your application must provide details of its competitive advantage over any existing solutions. Make sure you explain how your solution will advance and improve the current state of play within the industry and provide evidence of how or why your innovation or solution is likely to work. You should also tell us whether you have protected your IP through patents, copyright, or trademarks.

Market understanding and traction – In determining the validity of your solution, our assessment panel would like to see evidence of your commercial traction to date. If you can, please provide us with details of:

- Your existing customer base, including early adopters.
- Who your collaborators are, both past and present.
- Market commendation, such as grant funding paid, investment raised and/or letters of support.
- Successful proof of concepts and or trials already undertaken.

Business model – You should lay out your business model and show how you will monetise your solution, including the pricing model and revenue streams.

Safety business case – Provide a high-level safety impact and affordability case of your innovation, developing a high-level business case for investment to support the safety KPI of National Highways.

Risk assessment - We would like a transparent description of any technical and commercial risks you foresee with your solution, including specific details on regulatory risks, supply chain risks, competition and anything else you deem relevant.

Team – You should describe the roles, skills, and relevant experience of the project team, including any sub-contractors. Please ensure you keep this section anonymised.

Programme objectives – We would like to understand your motivation for applying to the accelerator and what you hope you would gain from being involved if your business was selected.

Trial Summary - Please provide a summary of your proposed trial, including what you're trialling (the specific technology and why), the specific problem you are trying to solve (include any supporting data that you have), your motivation and objectives for the trial, who you will test with, any key requirements and the expected outputs.

Trial Design – Following the first three months of the programme during which participants will finalise a proposal for their trial, there will be a down selection where approximately 5 SMEs will go on to deliver their designed trial. Therefore, it is critical for us to be able to determine from the outset how your project might look. Please give a high-level project design detailing how you would develop and test your technology or solution in the future. You should include:

- The proposed timeline for development and deployment
- How you plan to manage the project
- The characteristics of the testing environment which you might require
- The input that would be needed from stakeholders (for example, data, infrastructure, equipment etc)
- A list of datasets or data parameters that will be required to develop and trial your solution
- Any deployment support you may require from CPC, partners and third parties
- Key risks or challenges you foresee and the plan for risk mitigation
- What you hope to learn/demonstrate on the trial
- Please feel free to upload any supporting documentation

Expected Impact and Evaluation – Please describe the impact(s) you believe your solution will have by addressing the challenge(s) identified, and please specify the evaluation metrics to be used. You should consider impact from the perspective of the wider industry and your own business. Please provide your approach for evaluating the impact of your solution.

Project Finances – You can invoice up to £60K of your fees for your trial delivery work on this programme. Projects should demonstrate value for money. All cost information provided should be clearly explained and all rates must reflect fair market value. Sub-contractor and material costs should be justified. A reasonable daily rate for staffing would be approximately £200 per day. Therefore, in instances where this rate is higher, please provide an explanation as to why the staff member is critical to the project.

4. Assessment Scoring Criteria

After the competition deadline, only applications that meet the eligibility criteria and scope of the competition will be formally assessed. Connected Places Catapult reserves the right to declare applications as out of scope of the programme.

Applications that progress to the assessment stage will be reviewed by at least three expert assessors from the Connected Places Catapult and National Highways. Assessors with a broad technical knowledge across different areas of transport and

technology will mark your application. You should therefore write clearly in layman's terms, avoiding acronyms and obscure jargon.

This section details the criteria our assessors will use when scoring your application. Under each criterion there is a maximum score of five available.

- Solution (25%)
- Team (10%)
- Traction & Investment Readiness (15%)
- Safety Business Case (25%)
- Programme Fit (25%)

Following the initial assessment, several applicants will be shortlisted for interview. Interviews will take place **late January 2024**. You will be provided with interview guidance. With regret, we will be unable to accommodate individual requests for interview slots.

Solution (25%)

It must be clear that your solution is needed and that it has real potential to meet one or more of the project challenges. To achieve the highest score under this criterion, assessors will be looking for the following:

- **USP** – USP is critically important to the customer, and well protected with IP and other defensibility resources versus existing solutions/competition.
- **Technology risk** - The solution is likely to be feasible to develop.
- **Monetisation** – Monetisation model including pricing is likely to be profitable and sustainable and there is evidence of customer willingness to pay.
- **Market** - Very large or rapidly growing addressable market with little to no competition (at least £20m annual obtainable market).
- **Additional risks** – A robust mitigation plan exists for additional risks including regulatory hurdles, availability of necessary materials/supplies, adoption by end-users or anything else.

Team (10%)

You should describe the roles, skills, and relevant experience of the project team, including any sub-contractors and how your expertise will be used to develop the trial solution. To achieve the maximum score for this section, assessors will be looking for the following:

- **Skills** - Outstanding team with a great level of multidisciplinary (technical, business, sales, etc.) experience to execute.
- **Experience** - More than one key member with extensive sector knowledge and previous entrepreneurial success (e.g., founders with 10 + years industry experience, successful exits and unique skill sets).
- **Communication** – Communication shows strong charisma and is very clear, showing potential to bring stakeholders on board effectively.

Traction & Investment Readiness (15%)

We would like to see whether your solution has already gained interest from the market. Traction here could be in the form of actual sales, grants, potential collaborations, interested parties, evidence of intent and investment raised. To achieve the maximum score in this section, assessors will be looking for the following.

- **Traction** – Revenue generated from key customers or contracts signed.
- **Investment Readiness** – Investment ready today, and/or substantial investment received recently.

Safety Business Case (25%)

For this section assessors will want to see a clear safety impact and affordability case of your innovation, developing a high-level business case for investment to support the safety KPI of National Highways. To achieve the highest score under this criterion, assessors will be looking for the following:

- **Affordability** – The solution can be implemented, rolled out safely and operated at very low cost.
- **Safety impact** – The solution is expected to have a high and measurable impact on safety.

Programme Fit (25%)

In determining your suitability for funding, it is vital that you meet the programme eligibility criteria. To achieve the maximum scoring in this section, assessors will be looking for:

- **Challenges** - Very strong fit to one or more challenge statements.

- **Trial feasibility** - Trial is likely to be very successful.
- **TRL** – TRL 5 or above.
- **Location** – Based in the UK with no external influence/owners.

Notification of Assessment Outcome

Only applicants that progress to the assessment stage will be given a breakdown of the scores achieved for each section of the application form. Connected Places Catapult reserves the right to declare applications unsuccessful and out of scope. Once the selection decisions have been made, we regret that we are unable to offer follow up meetings or further feedback for unsuccessful applicants.

If your project is successful, you will be sent a 'Pilot Participation Agreement' (see terms and conditions set out on the website as an example) that you must sign and return, along with any additional documentation that is requested within stated timelines.

5. Project Reporting

Project Proposal

At the end of the first 3 months of the programme, you will be expected to produce a project proposal that details your plan for developing and or testing your technology or solution. The proposal should be written and presented to a professional standard and suitable for non-specialists, with all acronyms and unavoidable technical language clearly explained. This trial proposal will be presented to National Highways and 5 SMEs will be accepted to deliver their trial in stage 2 of the programme.

Final Reporting

At the end of your project delivery period, you will be expected to provide a final report detailing your outcomes, impact, and futures exploitation plans. There will also be a survey for you to complete which ask about your experience of participating in the programme.

Financial Reporting

Please keep evidence of all your project costs. You will be asked to provide a clear breakdown of costs.

6. Funding Rules and Payment Schedule

Stage 1

The funding to successful applicants for Stage 1 will be awarded as a grant under Minimal Financial Assistance (MFA) and subsidy rules. This allows an organisation to receive up to £315,000 of state support during the current and previous two fiscal years. You will be asked to declare any other public aid which your enterprise and any enterprises linked to it may have received during your current and previous two fiscal years so that we can ensure that any grant support given to you under this scheme does not constitute a subsidy. Public aid includes not only grants but also assistance such as free or subsidised consultancy services, marketing advice etc which were funded by a public body.

- The payment of this Grant in accordance with this Agreement is believed to be outside the scope of VAT, but if VAT is chargeable, all payments of this Grant will be deemed to be inclusive of all VAT and Connected Places Catapult shall not be obliged to pay any amount over and above the amount of the Grant.
- If you expect to pay VAT during the delivery of the research, (e.g. for consultancy/sub-contracting charges, material costs and other expenses), and you are unable to recover VAT from HMRC, you must ensure that the cost of these VAT payments is included in the finance section of your Grant Application Form.
- Any VAT payment during delivery of research that is not recoverable from HMRC and not identified in the finance section of the Grant Application Form will not be paid under the programme.
- Upon completion of your project, you will be expected to complete a statement of grant usage form to explain the costs incurred. This should detail staff time utilised, cost of materials, sub-contracting charges, travel expenses and other costs. Please note that only economy-class travel claims will be accepted.
- Throughout the project period, you will be responsible for maintaining detailed records and documentation of the costs incurred.
- Schedule:

- At the start of the programme, you will be required to submit a grant claim form. This should be signed and authorised by the highest financial authority in the company. The submission of the grant claim form will unlock the initial 70% of the grant payment.
- The submission of your end-of-programme statement of grant usage (and other required project reports and documentations) will unlock the remaining 30% of funding.

Stage 2

- We will be procuring the services for Stage 2 under a pre-commercial Pilot & Trial contract.
- Participants who are successful for Stage 2 will be required to sign a separate Pilot & Trial contract.
- Once the contract has been signed, the Catapult will provide you with a Purchase Order number which must be clearly noted on all invoices.
- This will be a commercial arrangement. If you are VAT registered, please include the appropriate VAT on the face of the invoice.
- To enable your fees to be paid, you will need to raise an invoice and send this to us.
- Payments will be staged. An up-front payment of **70%** will be made at the start of the trial delivery phase. The remaining **30%** will be paid once your end of project report has been approved. Invoices will have to be provided for the payment to be released.

In both phases, only fees incurred between project start and end dates will be paid.

7. Dates and Deadlines

Please note the dates and deadlines for the competition below. These are indicative timings; we will adhere to this schedule as best we can. The closing date for applications is fixed and will be midnight on **Sunday 31 December 2023**. We will begin assessing applications from Wednesday 3 January 2024.

Applications submitted after the deadline will not be considered. Extensions will not be granted under any circumstances.

Competition opens	8 November
Application Support Webinar	21 November, 14:00 - 15:30
Competition closes (application deadline)	Midnight 31 December

Notification to shortlisted applicants	15 January
Interviews	22 - 30 Jan
Feedback provided to unsuccessful applicants	9 February
Contracts issued	9 February
Acceptance of funding (returned signed contract)	End of February
Welcome Day	7 March, Birmingham

8. Contact Details

If you have any questions about the programme, please contact Natasha Giroux, the Accelerator Programme Manager, at natasha.giroux@cp.catapult.org.uk.

We wish you luck with your application!