Welcome

Contracts for Innovation: First of a Kind (FOAK) 2025

Applicant Briefing

Date: **8 April 2025**

The webinar will start at 10:00.

- Welcome, we are currently waiting for more people to join.
- This briefing will be recorded. A copy of the slides and the recording link will be made available on IFS.
- Please enter any questions that you may have into the Q&A Box.
- For more information on the competition process, please click here to access our YouTube channel.

Welcome and Introductions

Rebecca Evans
Head of Rail Industry Capability & Innovation, Department for Transport

Klara Ludinova
Innovation Lead for Rail, Innovate UK

Bimba James
Portfolio Manager, Contracts for Innovation

Kelly McGrath
Competition Manager, Innovate UK

Ben Cullen
Knowledge Transfer Manager - Rail, Innovate UK Business Connect

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Welcome and Introductions

Alice Day
Open Innovation Manager, Transport for London
Dan Piner
Senior Design and Innovation Manager, South Western Railway
Anita Brown
Head of Innovation and Engagement, Avanti West Coast
Philip Wildbore
Principal Engineer (Structures), Network Rail
James Adcroft
UK Transport Training and Compliance Manager, Tesco
Jonathan Kelly
Senior Innovation & Accelerator Manager, HS2
Andrew Johnson
Head of Strategic Communications, GCRE
Rob Forde
Director of Strategy and Skills, GCRE
Naomi Arblaster
Head of SME Development, BCIMO
Andy Pawley
Bid and Revenue Manager, Porterbrook

Agenda

- DfT programme overview
- Key Dates
- Contracts for Innovation
- Competition Summary & Scope
- Eligibility Criteria
- Innovation Funding Service (IFS)
- Use of AI
- Assessment
- Project Set Up
- Challenge Owners
- Test Centre Pitches
- Additional Support
- Q&A

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Department for Transport

The eighth ‘First of a Kind’ Competition delivered by Innovate UK on behalf of the Department for Transport

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Key Dates

Timeline	Dates
Competition Opens	**7 April 2025**
Submission Deadline	**28 May 2025** at 11am
Applicants informed	**30 June 2025** by 5pm
Contracts awarded	**1 September 2025**
Project start and end dates	Start by **1 September 2025** End by **31 March 2026**

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About Contracts for Innovation

Innovate UK

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Innovate UK Contracts for Innovation

Helping government, helping businesses

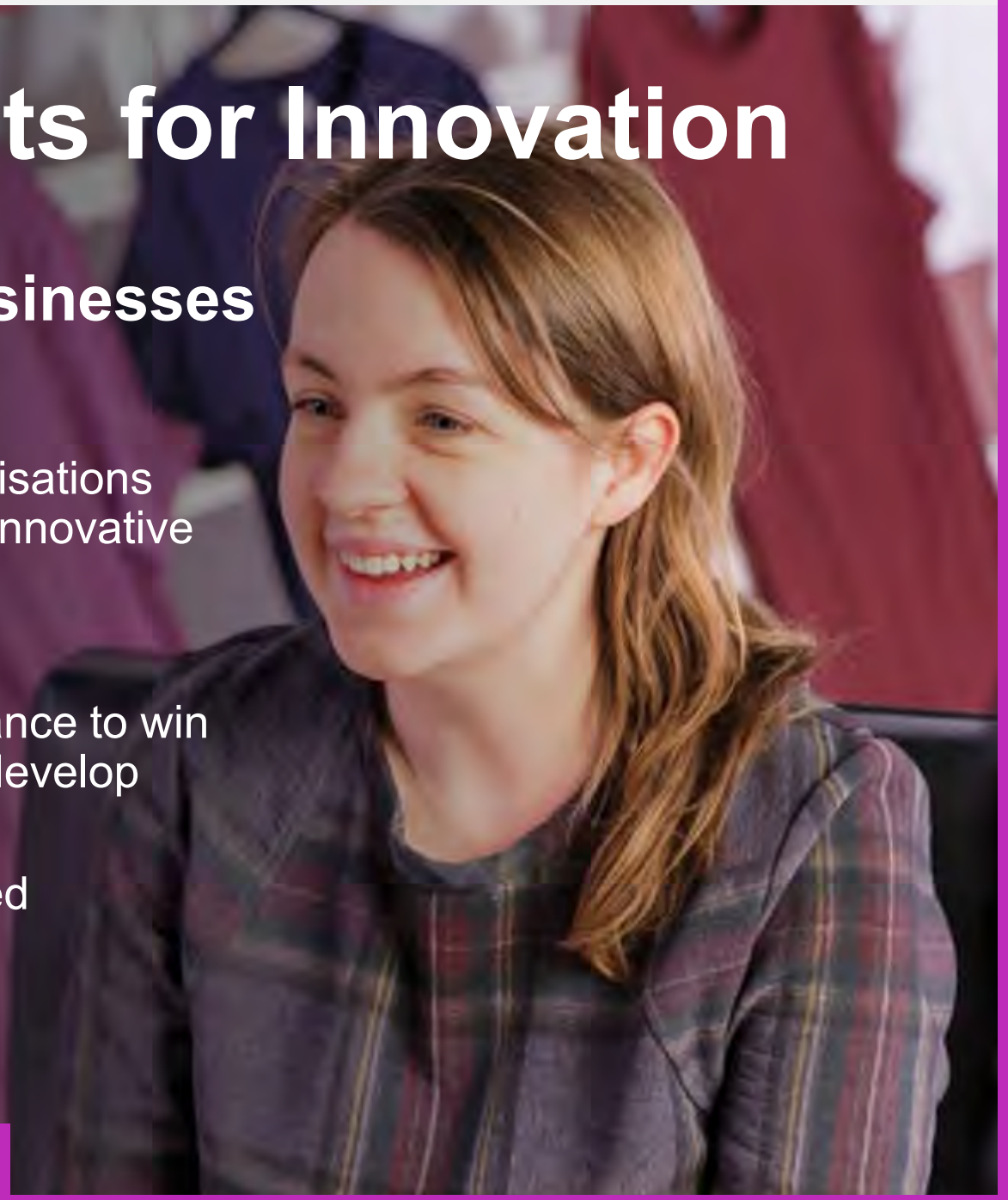
Helping government:

Contracts for Innovation helps government organisations solve tough challenges by connecting them with innovative organisations.

Helping businesses:

Contracts for Innovation offers innovators the chance to win a government contract to help demonstrate and develop their new technologies.

- over 100 public sector organisations participated
- average annual sales grow 30%



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Jenny Griffiths, founder, Snap Fashion

What are Contracts for Innovation?

- Procurement of innovation
- Requires a lead customer
- Outcome-driven solutions
- Well-defined challenges
- 100% funded R&D services procurement contracts

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Contracts for Innovation: Key Features

Development Contracts

- 100% funded R&D (procurement contract for R&D Services)
- Payment made on completion of milestones

Contract with Lead Applicant

- Any subcontractors remain accountable to the lead

IP rests with Supplier

- Certain usage rights for the Public Sector (licenses etc)
- Companies encouraged to exploit IP and will be assessed on this basis

Eligibility

- Open to all organisations. No limit on the size or type of company
- Open to companies not currently engaged in the sector
- Research organisations may also apply
- All organisations must demonstrate a route to market

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Applying to a Contracts for Innovation competition

- In addition to the technical criteria, you will be assessed on your plans to commercialise your technology; value for money; potential benefits.
- This is a contract to deliver a specific outcome - be sure you can deliver what's in your application.
- You must include **VAT** (if registered), as this is a contract for R&D services and the award is classed as trading income.
- You **must not** include profit within your application.
- Explain the problem your project is looking to solve and who your target customers will be.
- We cannot increase your costs once you've been awarded a contract.
- Familiarise yourself with the contract - our terms and conditions are non-negotiable.

Competition Summary & Scope

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Summary

Innovate UK and the Department for Transport (DfT) are collaborating with the rail industry to accelerate and increase the adoption of innovation to improve UK railways. The competition focuses on collaboration with industry and deliver high maturity demonstrations, enabling efficient integration into the railway system.

Organisations can apply for a share of up to £4.7 million, inclusive of VAT, across four themes to develop a prototype, conduct field testing and demonstrate their solution.

Themes:

- Platform Train Interface
- Personal Safety
- Bridge Strikes
- AI for Complex Processes

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Summary

Demonstration event and trialling

A key project deliverable, that must be included in your milestones, is a demonstration event and trial.

The demonstration and trialling must take place in an environment representative of where the solution will be deployed, allowing for effective evaluation.

You must invite potential customers from the railway industry, along with other industry representatives, to your demonstration event.

You will be expected to include an integration supporter in your project to help facilitate the demonstration and trialling of your solution. In their role as potential future customers, they will be well placed to propose an appropriately representative environment.

No official ‘letter of support’ is required to be submitted as a part of the application.

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Summary

Evaluation activity

Projects must include an evaluation activity at the end, measuring data to assess the anticipated impact of the solution on the railway network.

This should compare baseline data related to the competition theme and outline the improvement from your solution using data from the demonstration or trial.

This evaluation activity is a key deliverable and must be included as part of your milestones.

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Themes – Platform Train Interface (PTI)

We are seeking innovative solutions to enhance the PTI, making it more accessible, safer, and more efficient for all passengers.

The transition from train station platforms to trains presents significant challenges in accessibility, safety, and efficiency. Existing technologies often fail to provide a seamless experience, particularly for passengers with reduced mobility.

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Themes – Platform Train Interface (PTI)

We encourage applicants to focus on innovative solutions which:

- are low cost to install and cause minimal disruption
- integrate with existing train and platform infrastructure
- are inter-operable between different stations and trains
- can be easily operated by station staff, train staff or customers
- assist in notifying staff on platforms that a PTI incident has occurred
- maintain current dwell times
- improve the overall process and experience of accessible boarding
- can be trialled and evaluated in a live station environment to get feedback from staff and customers
- are at a high Rail Industry Readiness Level and capable of delivering an immediate impact

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Themes – Platform Train Interface (PTI)

We discourage applicants from focusing on solutions which:

- are complex and difficult to operate
- require high capital expenditure
- require significant modifications or investments to signalling systems, platform nosings or train fleets
- duplicate existing technologies

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Themes – Personal Safety

We are seeking innovative solutions to identify, mitigate, and improve responses to personal safety incidents on the railway, ensuring a safer experience for all passengers.

Feeling safe and secure on the railway is essential for travel. However, incidents such as trespassing, suicides, anti-social behaviour and violence are increasing across the network. These incidents not only cause delays for passengers but also create distress for everyone involved.

In particular, existing research suggests that both the occurrence and fear of Violence Against Women and Girls (VAWG) can influence their travel choices. However, assessing VAWG incidents is challenging due to underreporting and underrepresentation in surveys and crime statistics.

There is an urgent need for innovative solutions to identify safety incidents, mitigate their impact, and improve response measures.

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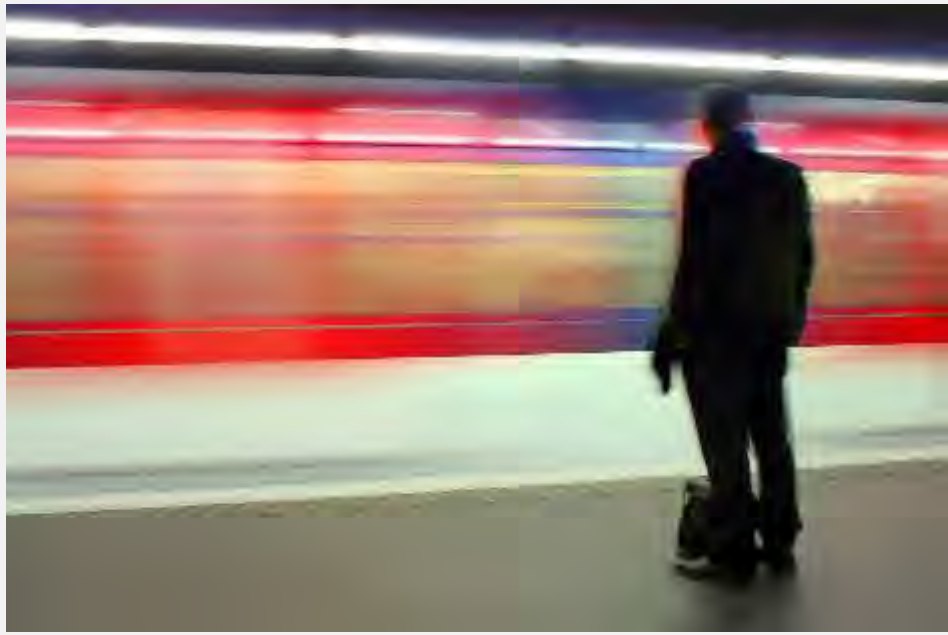
Themes – Personal Safety



We encourage applicants to focus on innovative solutions which:

- address prevention, through measures such as raising awareness and education, designing and providing safer infrastructure, predicting crime hotspots, and improving understanding of perpetrators, particularly in cases of VAWG
- address the immediate response, through measures such as equipping staff with tools and training to handle incidents effectively, enhancing personal safety, and making intervention during incidents easier
- address the post-incident reaction, through measures such as improving intelligence via feedback and reporting, supporting investigations by identifying perpetrators effectively and promptly, and providing evidence; additionally, offer support to survivors, particularly those affected by VAWG
- detect trespass events and incidents occurring in the absence of a train, including those involving mobility impaired individuals and the challenges they face if they fall onto the tracks, particularly from motorised wheelchairs and scooters
- can be trialled and evaluated in a live station environment to gather feedback from staff and customers
- are at a high Rail Industry Readiness Level and capable of delivering an immediate impact
- can be trialled in a railway environment, with effectiveness measured to help operators better understand the problem

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Themes – Personal Safety

We discourage applicants from focusing on solutions which:

- are complex and difficult to operate
- require high capital expenditure
- require significant modifications or investments to train fleets and stations
- cannot integrate into existing systems or processes
- duplicate or fail to integrate with existing technologies and systems such as the British Transport Police's Railway Guardian app

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Themes – Bridge Strikes

We are seeking innovative solutions to prevent bridge strikes and mitigate their impact when they occur.

Bridge strikes are a safety incident where a road vehicle or its load, or a waterborne vessel or its load, collide with the structure of a bridge. This includes tall vehicles hitting low bridges, as well as incidents where vehicles strike bridge supports or parapets on road-over-rail bridges, potentially sending debris onto the tracks.

Innovation opportunities generally fall into two categories which improve the bridge environment and those which support vehicle drivers and operators.

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Themes – Bridge Strikes

Improvements in the bridge environment may aim to:

- prevent bridge strikes from occurring
- minimise damage to infrastructure or trains if they do occur
- improve detection of incidents and reduce response times
- reduce time taken to remove temporary restrictions following bridge strike incidents
- improve data gathering, to help understand the root cause of incidents and also gather evidence to support financial recovery

Improvements to support vehicle drivers and operators may aim to:

- dynamically plan and re-plan routes to avoid low bridges or alert drivers to low clearance obstructions nearby
- ensure drivers know their vehicle's accurate, up-to-date height before each journey
- assist drivers in interpreting signage and explore how technology can safely intervene if warnings are ignored
- enhance awareness and education efforts
- prevent poor alignment with arch bridges
- reduce errors in stowing loads

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Themes – Bridge Strikes

We encourage applicants to focus on innovative solutions which:

- harness technology to reduce the likelihood and impact of bridge strikes, addressing the challenges outlined
- address multiple challenges outlined
- are not targeted to a specific bridge or vehicle and confer a wider reaching benefit, for example, national initiatives
- address realistic operational scenarios and demonstrate potential partnerships with relevant stakeholders, for example, bridge owners, local highway authorities, enforcement agencies or freight and bus operators
- consider a broad range of different kinds of vehicles that can be involved in bridge strikes, acknowledging variations in regulations
- consider psychological and behavioural factors that contribute to bridge strikes

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Themes – Bridge Strikes

We discourage applicants from focusing on solutions which:

- are bespoke, costly systems suited to a limited number of structures or vehicles, without a clear plan for scaling and cost reduction
- improve one aspect at the expense of another, for example, enhancing railway safety while compromising highway safety or improving train performance at the cost of safety
- negatively impact train performance
- lack a demonstration plan or have no feasible path to real-world trials within the project timeframe
- fail to meet fundamental safety, operational standards, highway or rail regulations

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Themes – AI for Complex Processes

We are seeking innovative solutions that leverage Artificial Intelligence (AI) technology to automate and optimise complex processes, improve decision making, enhance productivity, sustainability, and minimise waste.

Large rail and infrastructure projects involve many complex processes and include a significant renewals and enhancement programs, which also present considerable complexity for teams to manage.

This process complexity is driven by several factors, including multiple stakeholders, a complex data landscape comprising both structured and unstructured data from disparate sources across the supply chain, and a highly regulated, safety critical environment.

Several processes in the delivery of large projects and programmes have been identified that could benefit from AI technology, helping to reduce costs, improve efficiency, and minimise passenger disruption.

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Themes – AI for Complex Processes

We encourage applicants to focus on AI powered solutions in the following areas:

- process mining and simulation
- 3D modelling and generative design
- data analytics
- predictive analytics and decision intelligence
- natural language query for business intelligence
- market research and trend analysis
- robotic process automation (RPA)
- workflow automation
- cognitive document processing and optical character recognition
- supply chain optimisation
- risk management
- financial forecasting and budgeting
- programme optimisation

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Themes – AI for Complex Processes

We discourage applicants from focusing on solutions in the following areas:

- digital twins
- virtual and augmented reality
- automated data cleansing and augmentation
- enterprise resource planning (ERP)
- conversational AI and chatbots
- safety applications
- operational rail technology
- customer facing applications

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Eligibility criteria

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Eligibility Criteria – Your Project

Your project must:

- start by 1 September 2025
- end by 31 March 2026
- last between three to seven months
- have total costs of no more than £200,000, inclusive of VAT

Projects must always start on the first of the month, even if this is a non-working day. You must not start your project until your Contract has been approved by Innovate UK.

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Eligibility Criteria – Lead Organisation

Lead organisation:
To lead a project your organisation must:

- be an organisation of any size
- work alone or with the subcontracted skills and expertise of others from businesses, research organisations, research and technology organisations or the third sector (charities, social enterprises and voluntary groups)

Contracts will be awarded to a single legal entity only.

The majority of the project work and key deliverables must be completed by the lead applicant and be carried out in the UK.

Subcontractors can be used, but only for specialist skills.

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Eligibility Criteria

Subcontractors

- Subcontractors are allowed in this competition, but **only** for specialist skills.
- Subcontracting outside of the UK is permitted, but you must fully explain the specific skills the subcontractor brings to the project.
- If you're subcontracting to a parent or sister company, please ensure you list at cost and do not include profit.
- All subcontractor costs must be justified and appropriate to the total project costs.

Eligibility Criteria – Number of applications

Number of applications

You can lead in any number of applications, but if successful you will need to demonstrate your organisation has capacity and necessary resources to fulfil the projects.

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Previously submitted applications

This competition **does** allow you to submit a previously submitted application.

Previously submitted application	Not a Previously submitted application
A previously submitted application is an application Innovate UK judges as not materially different from one you have submitted before (but it can be updated based on the assessors' feedback). If you have previously submitted an application that reached our assessment stage, you can re-apply once more with the same proposal.	A brand-new application, project or idea that you have not previously submitted into an Innovate UK competition. or A previously submitted or ineligible application which: • has been updated based on assessor feedback • and is materially different from the application submitted before • and fits with the scope of this competition

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Innovation Funding Service (IFS)

How to apply

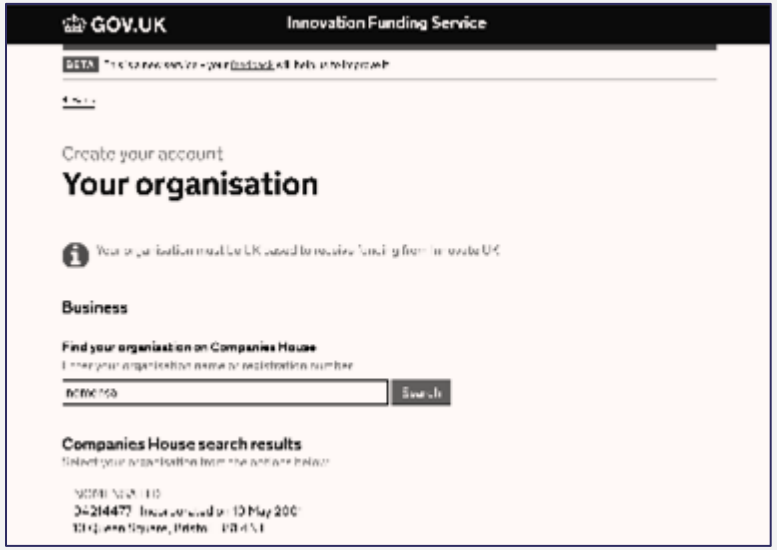
You must create an account:

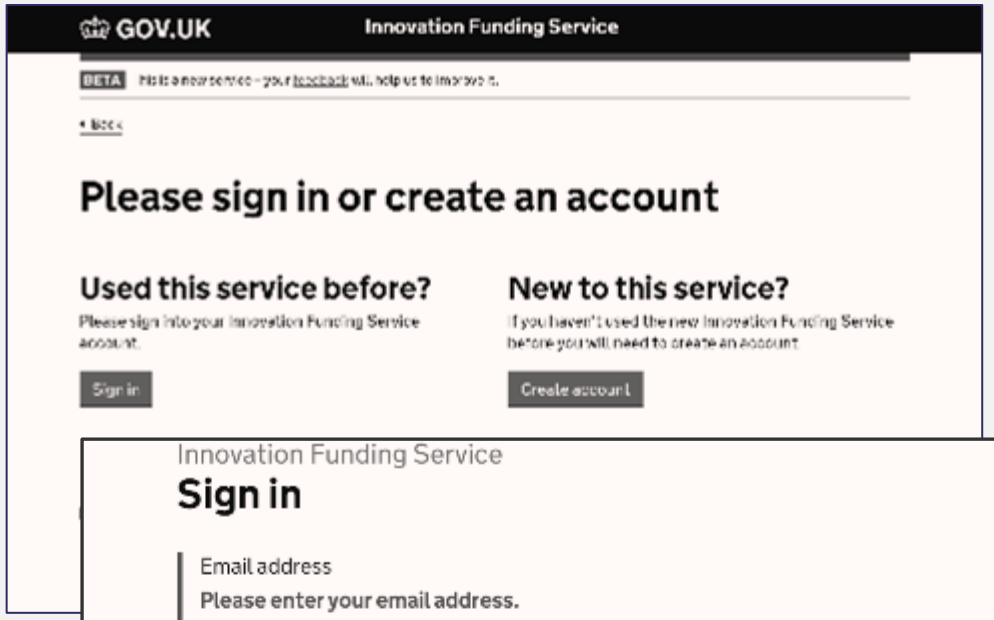
UK registered businesses

Use Companies House lookup as it speeds up our checks by providing your company number. You are unable to enter this at a later date.

Research organisations, academics and universities

To avoid being listed as a business and to ensure you receive the correct funding, enter your information manually on IFS





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Application Questions

Detailed guidance available on IFS

Application Form		Word Count	Appendix inc. number of pages
Question 1	Public synopsis (not scored)	50	No
Question 2	Previous applications (not scored)	400	No
Question 3	Animal testing (not scored)	Multiple choice	No
Question 4	Permits and licences (not scored)	Multiple choice	No
Question 5	Proposed idea or technology and Rail Industry Readiness Level (RIRL)	400	Yes – Optional 2x A4 PDF
Question 6	Technical project summary	400	No
Question 7	Current state of the art and intellectual property	400	No
Question 8	Project plan and methodology	400	Yes – mandatory 2x A4 PDF
Question 9	Technical team and expertise	400	No
Question 10	Costs and value for money	400	Yes – Optional – 2x A4 PDF
Question 11	Commercial potential	400	No

Project Impact questions

- Each organisation in your application will complete the Project Impact questions within the ‘Supporting information’ section
- The Project Impact questions ask for data about your business and innovation and its contribution to the UK economy, society, and the environment
- Visit the Project Impact guidance page for more information, the types of questions you will be asked and how to get further support
- By providing this data, you are enabling us to better understand the impact of our support. It will help us identify success stories and provide evidence to government and the public of the value of supporting innovative businesses

For more information:

- Watch Our Impact Management Framework video
- How is the Project Impact data collected? video

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Your Project Cost Categories

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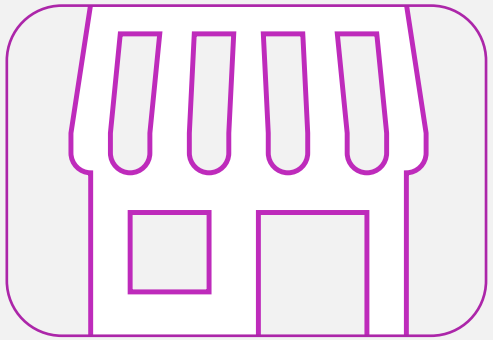
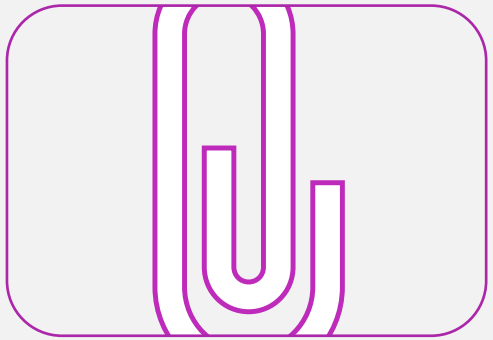
View our Application Finances Instructional Video

Labour

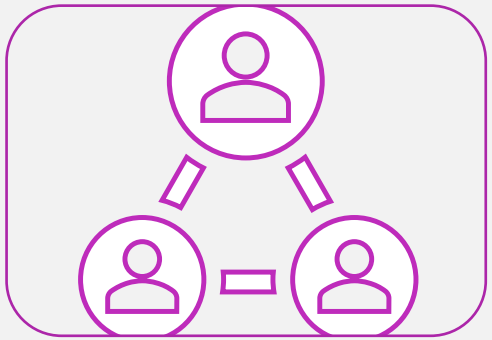


Overheads

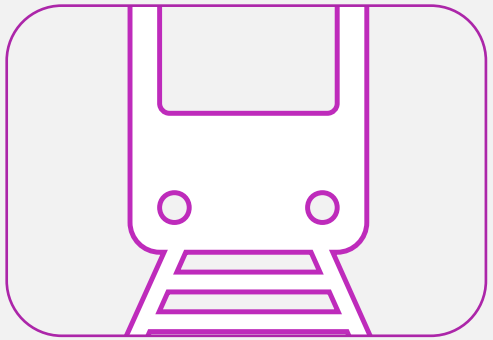


Materials

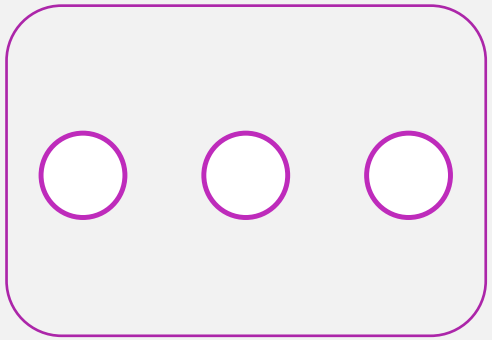
Capital Usage



Subcontractors

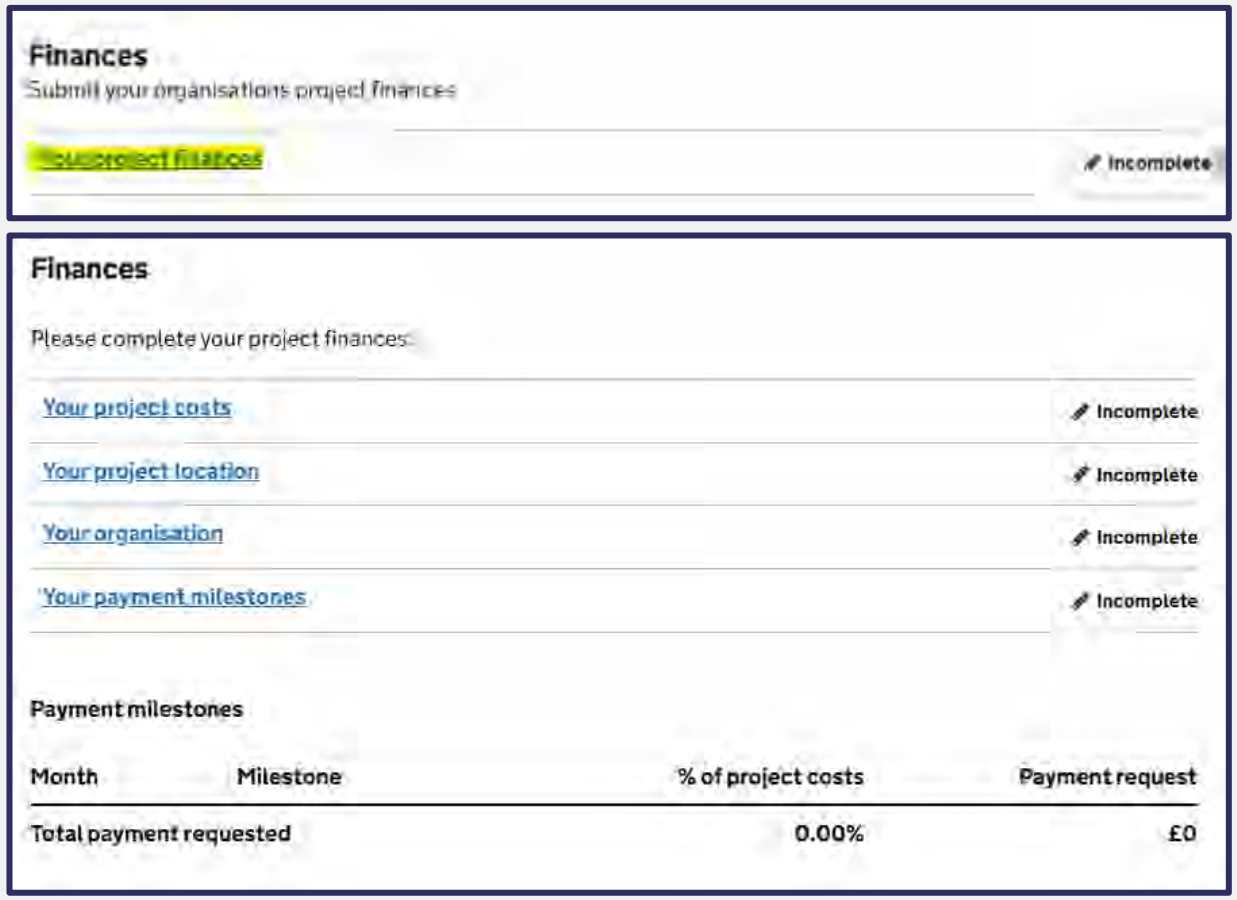


Travel & Subsistence



Other

Your project finances



Your project costs
Add your project costs by category – refer to previous slide for link to instructional video

Your project location
Enter postcode for where most of the project work will take place.

Your organisation
Add details of your organisation including size, turnover and number of employees

Your payment milestones
Enter each milestone and deliverable information. Where appropriate, link the milestone with a payment request.

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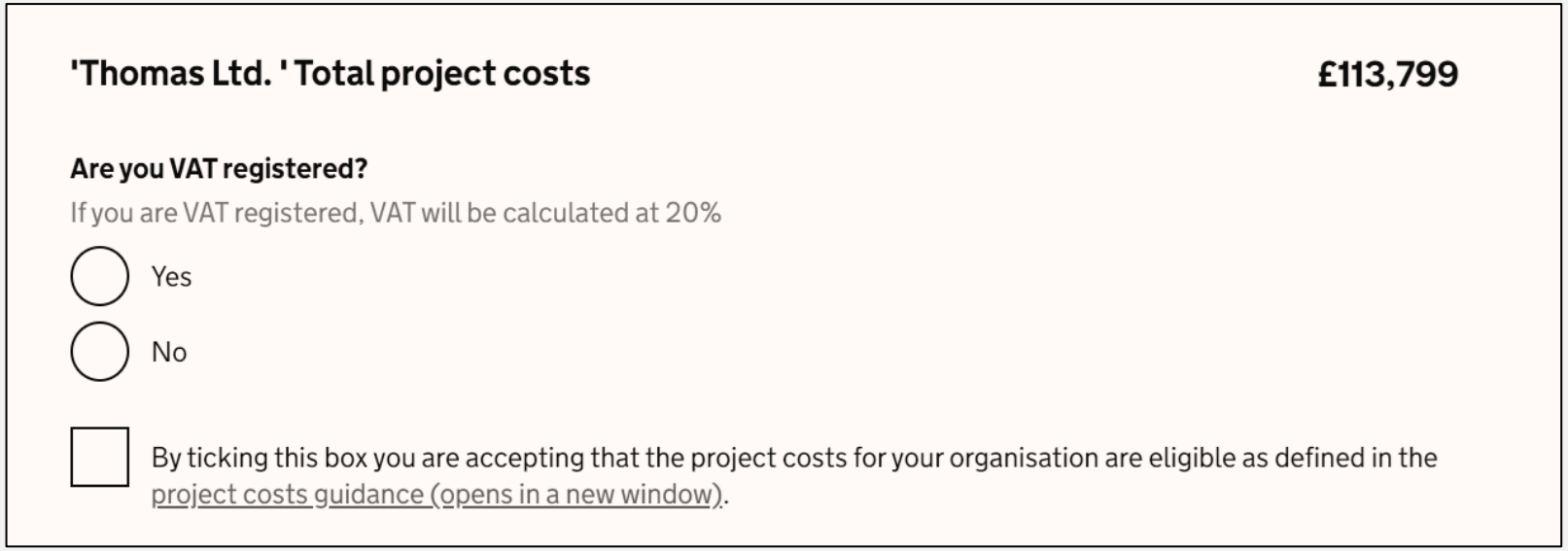
VAT

Once you have completed your costs you will be asked to confirm if you're VAT registered.
If you select 'yes', IFS will automatically add on VAT calculated at 20%.

If you are a VAT registered organisation you will **not** need to enter your project costs inclusive of VAT as the application form will calculate the VAT for you.

If you are not VAT registered then you can quote without VAT, but you will not be able to increase invoice values to cover VAT later on.

Make sure not to double count your VAT as it may increase your project costs and make you ineligible.



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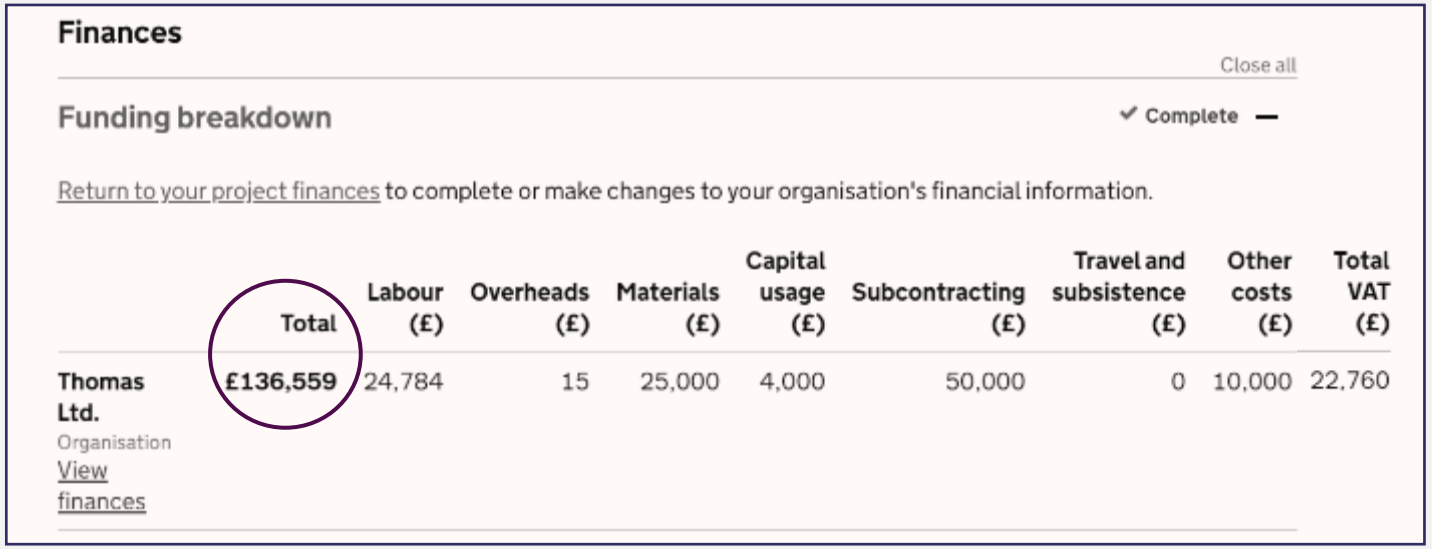
Project cost summary



Finances

Close all

Funding breakdown ✔ Complete —

Return to your project finances to complete or make changes to your organisation's financial information.

	Total	Labour (£)	Overheads (£)	Materials (£)	Capital usage (£)	Subcontracting (£)	Travel and subsistence (£)	Other costs (£)	Total VAT (£)
Thomas Ltd. Organisation View finances	**£136,559**	24,784	15	25,000	4,000	50,000	0	10,000	22,760

Ensure the highlighted costs fit the criteria for this competition.

The maximum project costs for this competition are **£200,000**

The lead organisation can see a summary of project costs calculated inclusive of VAT (if VAT registered)

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Subcontractors

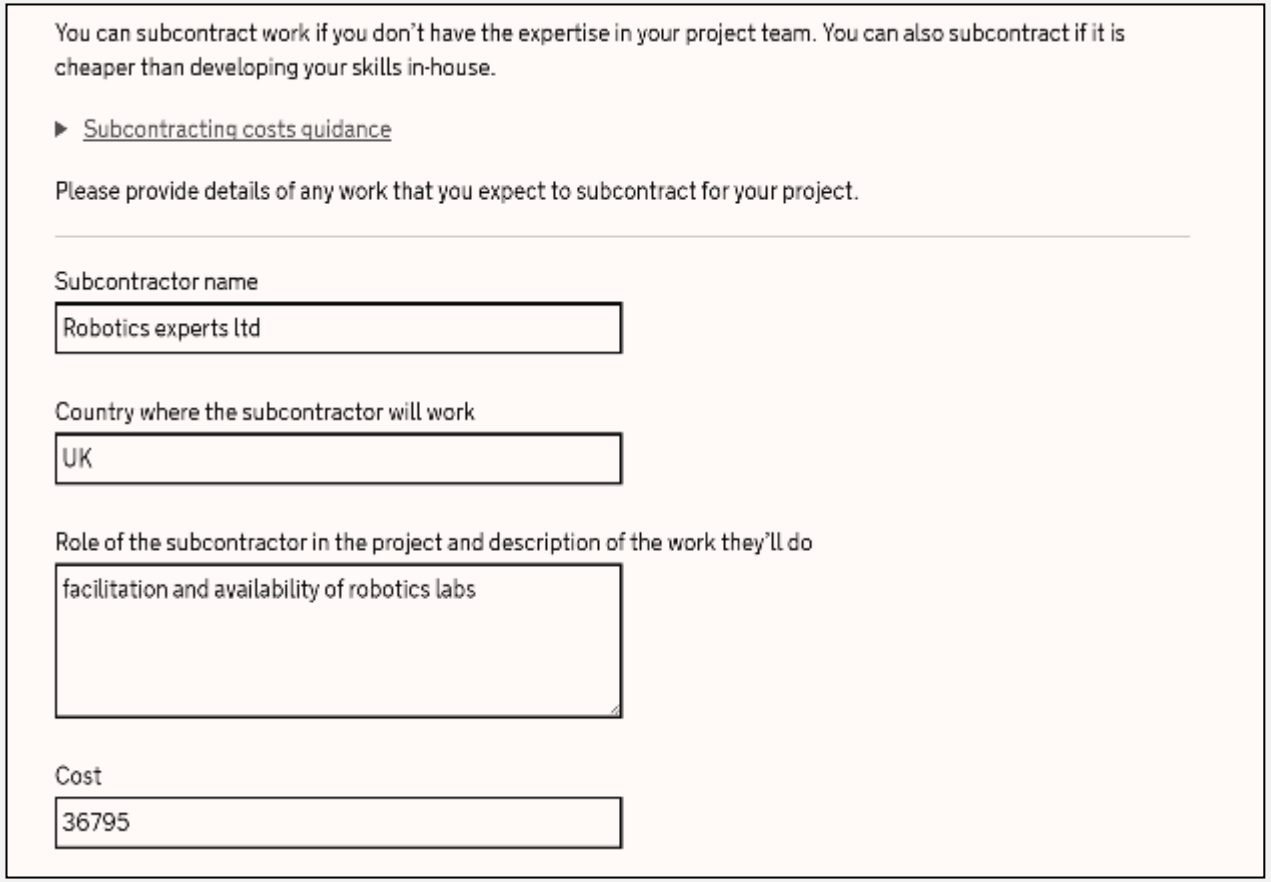
Eligible:

Subcontracting outside of the UK is permitted.

You should fully explain the specific skills the subcontractor brings to the project.

If you're subcontracting to a parent or sister company, please ensure you list at cost and do not include profit.

All costs must be justified and quantified.


You can subcontract work if you don't have the expertise in your project team. You can also subcontract if it is cheaper than developing your skills in-house.

▶ Subcontracting costs guidance

Please provide details of any work that you expect to subcontract for your project.

Subcontractor name

Robotics experts ltd

Country where the subcontractor will work

UK

Role of the subcontractor in the project and description of the work they'll do

facilitation and availability of robotics labs

Cost

36795

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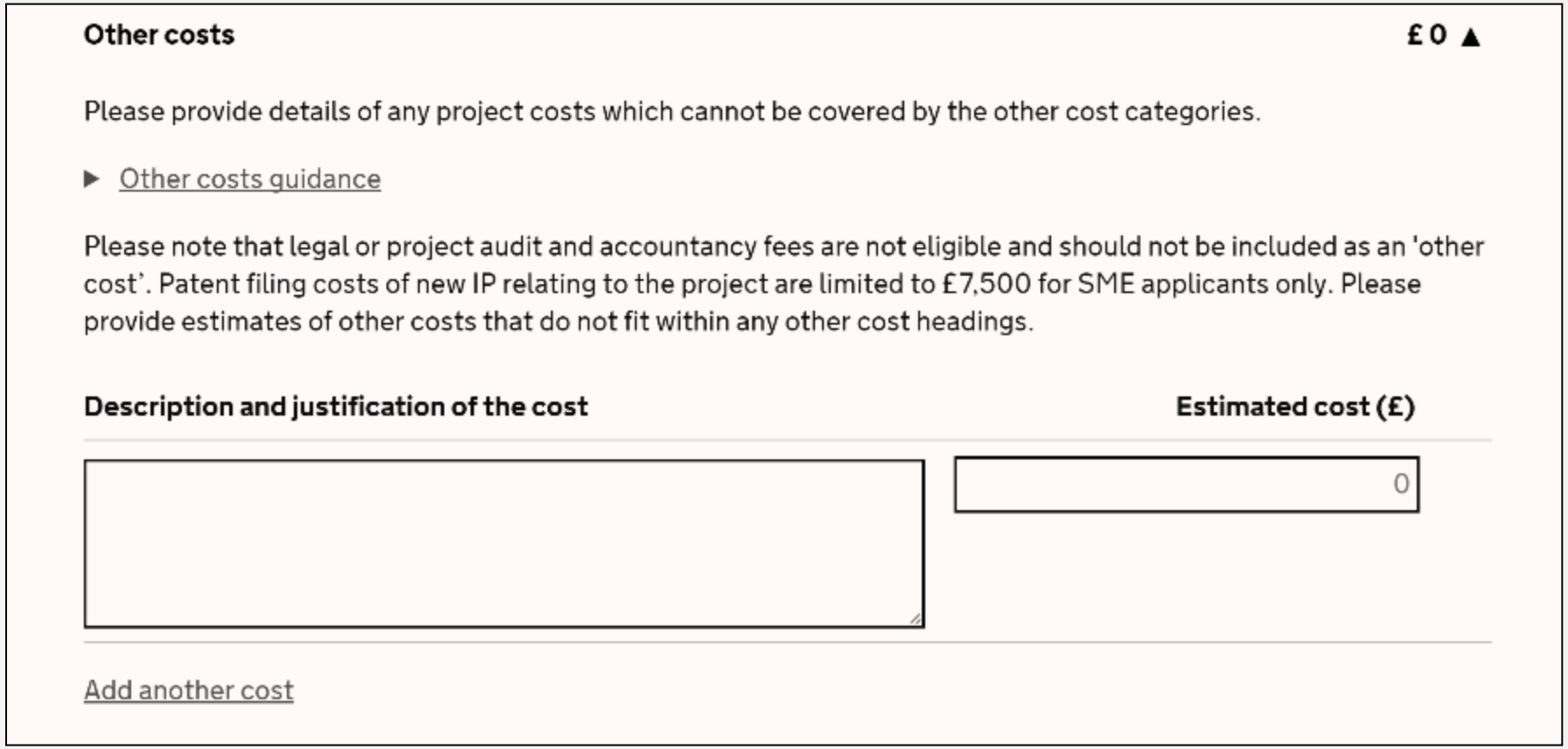
Other costs

Costs that could not be added under previous headings.

Do not double count.

All costs will be reviewed by the finance team during contract award



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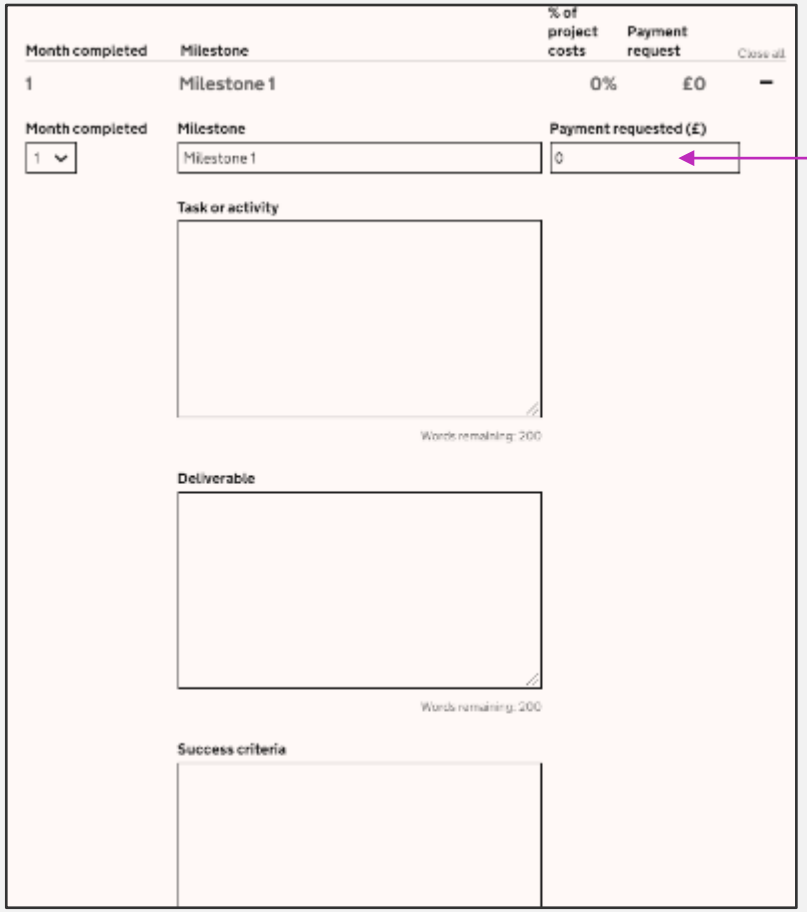
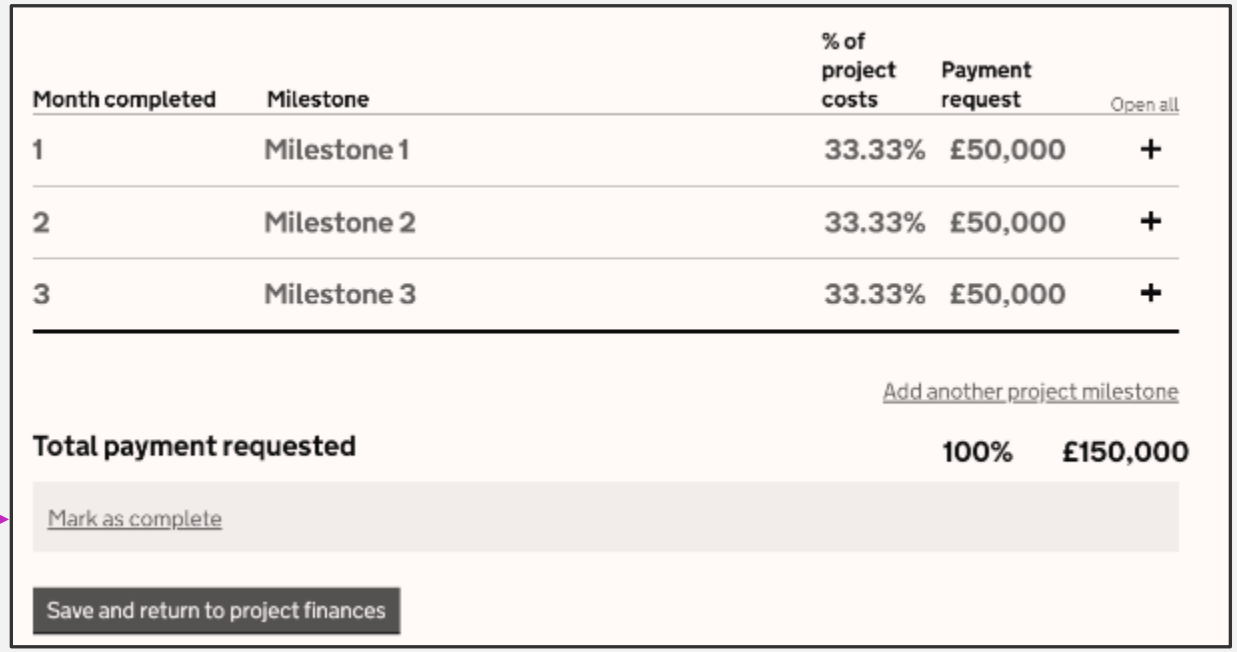
Payment milestones



Enter each milestone and any associated payments



Once all milestones have been entered, mark the section as complete

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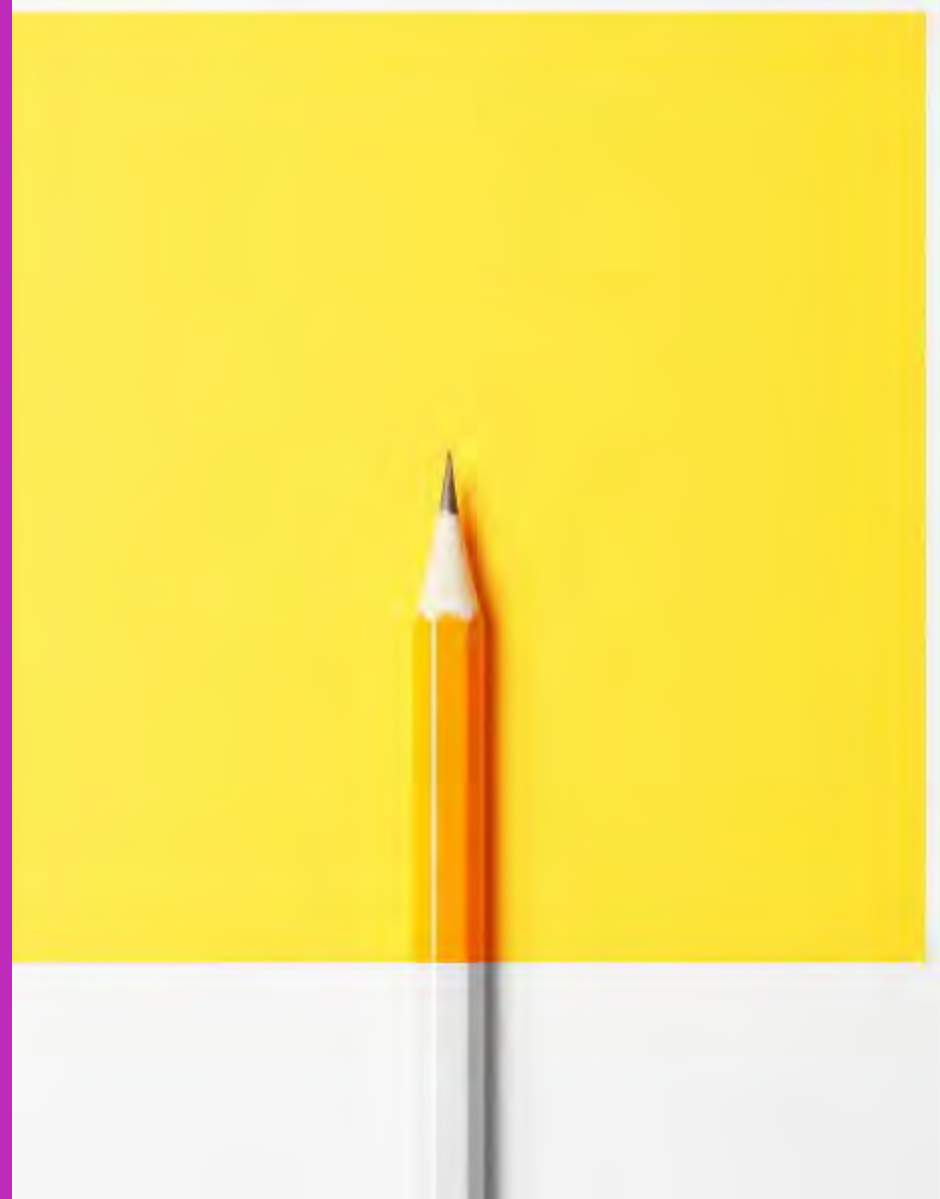


Information to include in your milestone template

- Details of work packages with clear description of the activities taking place in each milestone.
- The month the milestone will be completed, which will help form your **quarterly** payment schedule.
- Clear and distinct deliverable(s) from each milestone that you'll be able to evidence to confirm you've completed the milestone in full.
- Success criteria for each milestone, noting that it must be clearly relatable to the work packages, deliverable(s) and must be measurable within reason.
- Costs for each milestone – check that the total costs on the milestones match the total project costs page within the finance section.
- Do not cluster your milestones together, even if they occur in the same period. We need separate deliverables and costs for each milestone.

Milestone example

Milestone

Build test environment for prototype

Task or activity

Complete physical hardware build

Software integration finalised

Deliverable

Prototype test environment built in accordance with associated designs

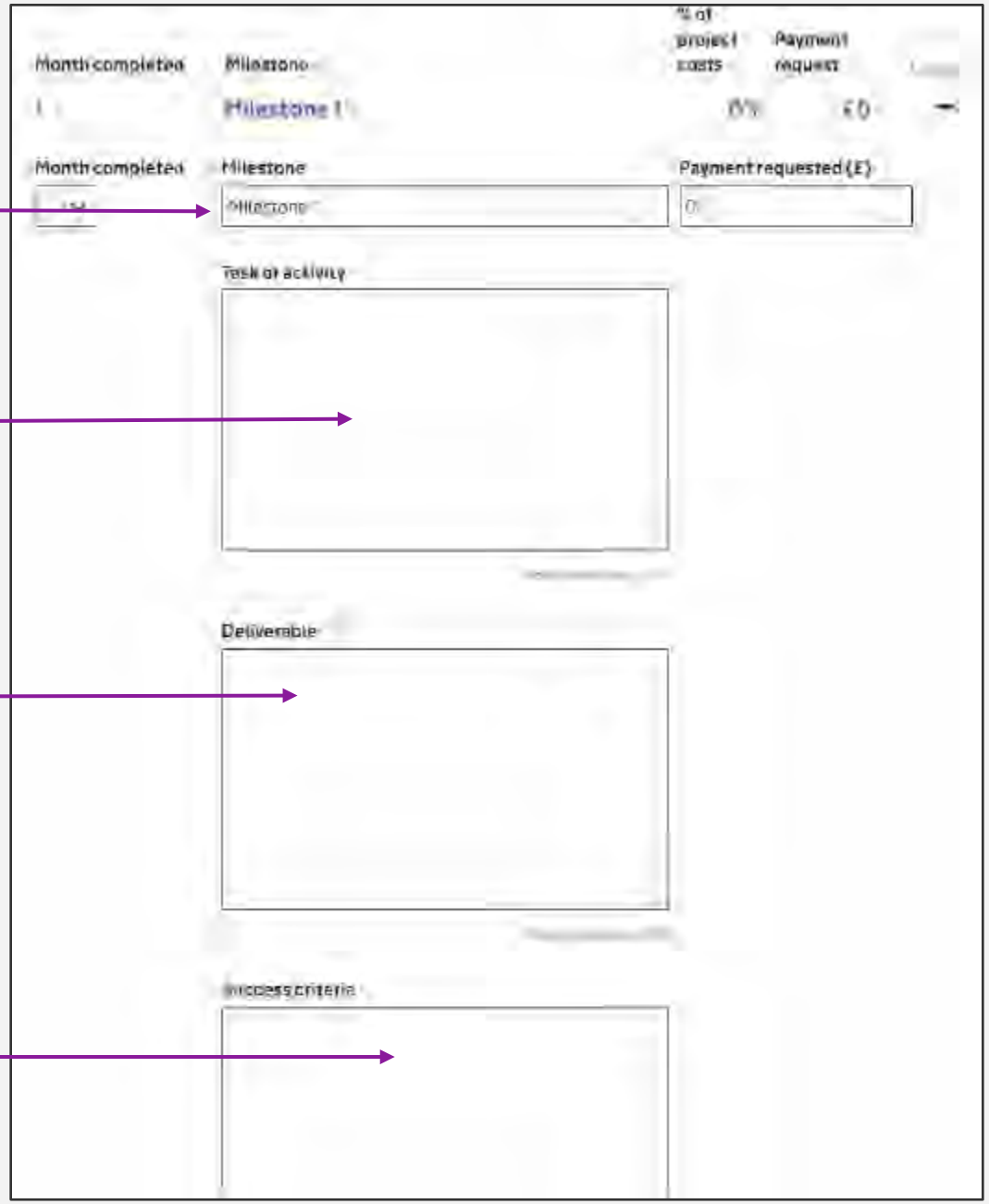
Operating instruction manual completed

Success Criteria

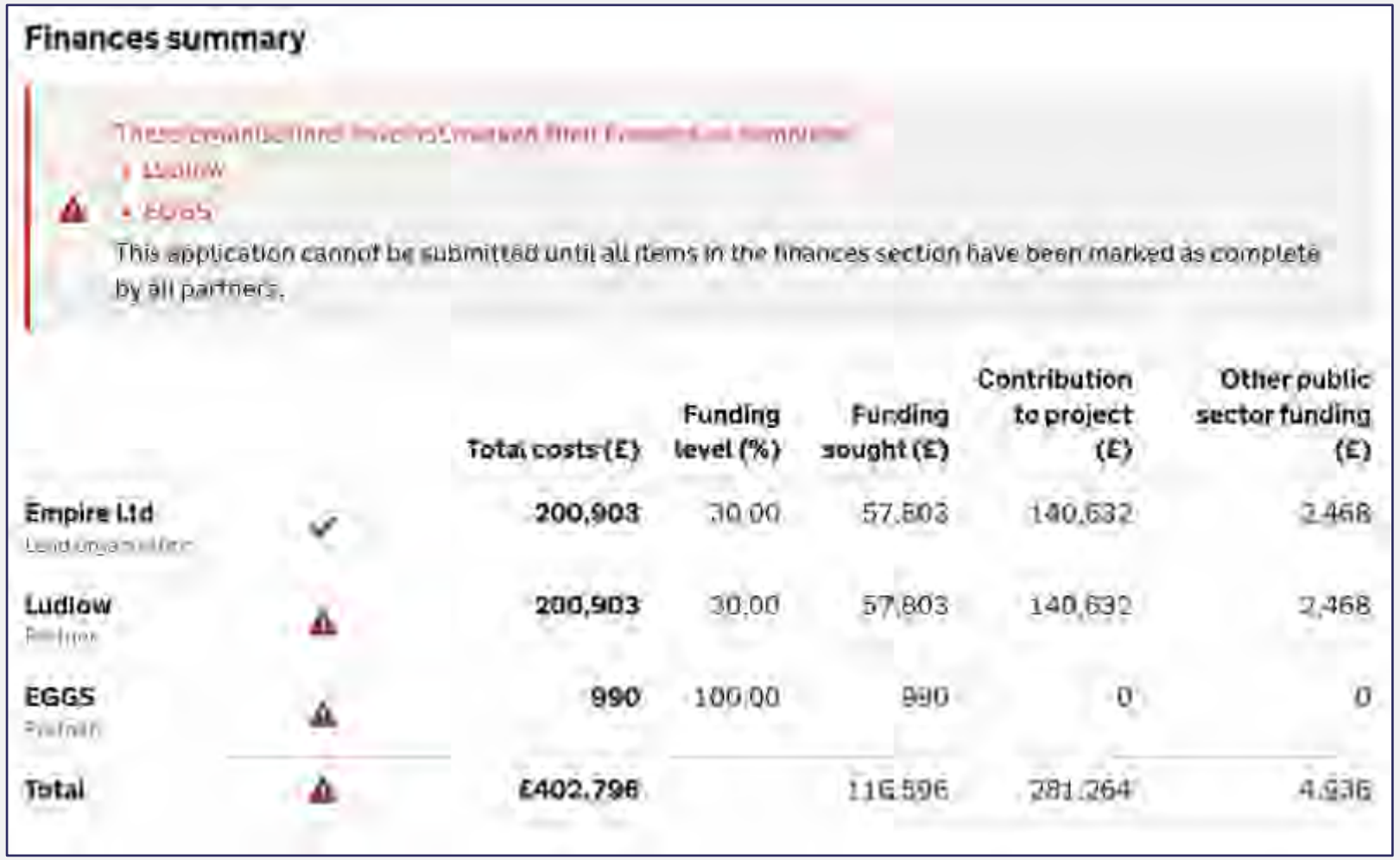
Fully operational test environment.

Successful integration of prototype and test environment software.

0.5% error rate



Checking your finances are complete



Finances summary

This application cannot be submitted until all items in the finances section have been marked as complete by all partners.

		Total costs (£)	Funding level (%)	Funding sought (£)	Contribution to project (£)	Other public sector funding (£)
Empire Ltd	✓	200,903	30.00	57,803	140,632	2,468
Ludlow	⚠	200,903	30.00	57,803	140,632	2,468
EGGS	⚠	990	100.00	990	0	0
Total	⚠	£402,796		116,596	281,264	4,936

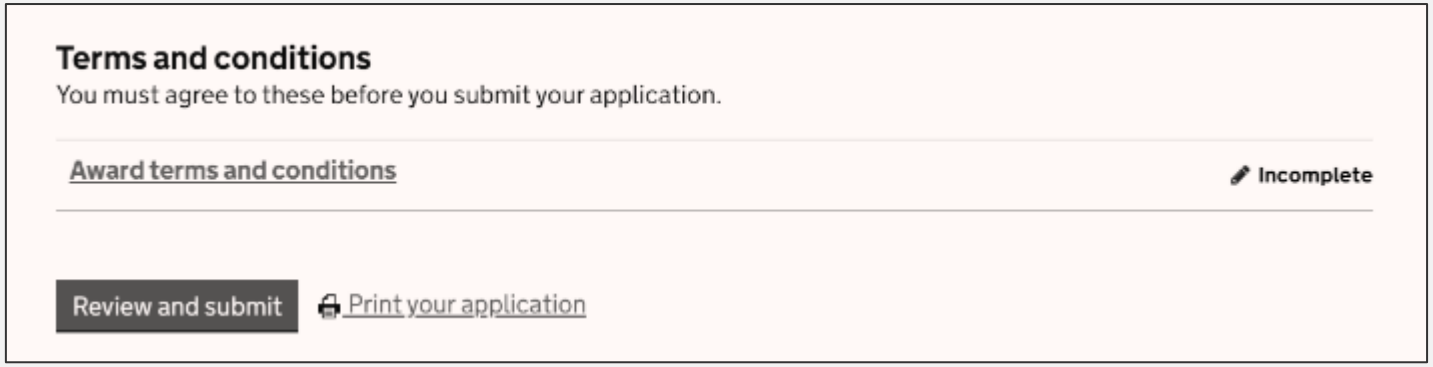
Check your finances have been correctly inputted, with the correct costs, funding level at 100% and funding sought figure, as per the eligibility criteria of the competition.

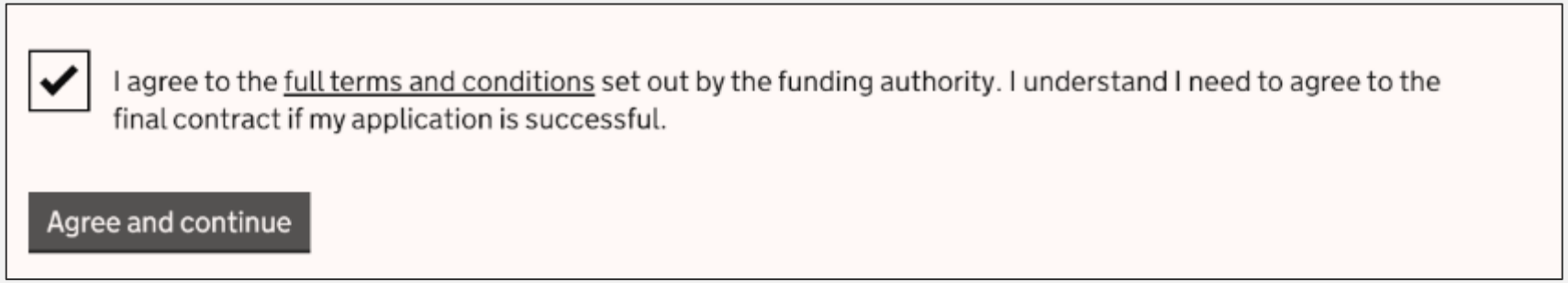
Innovate UK

Terms and Conditions

Before you can submit your application, **you must** agree to the draft terms and conditions for this competition. Please ensure you share the T&Cs with your legal team at the earliest possible opportunity.

Note that for procurement, they may differ from any you have agreed to before. These terms are set and are non-negotiable.





Innovate UK

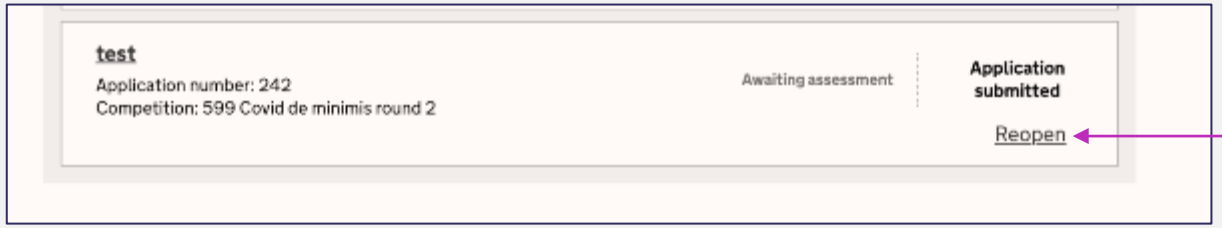
Submitting your application

Customer Support can help resolve any issues you might have when submitting **but only if they are contacted before the deadline**.

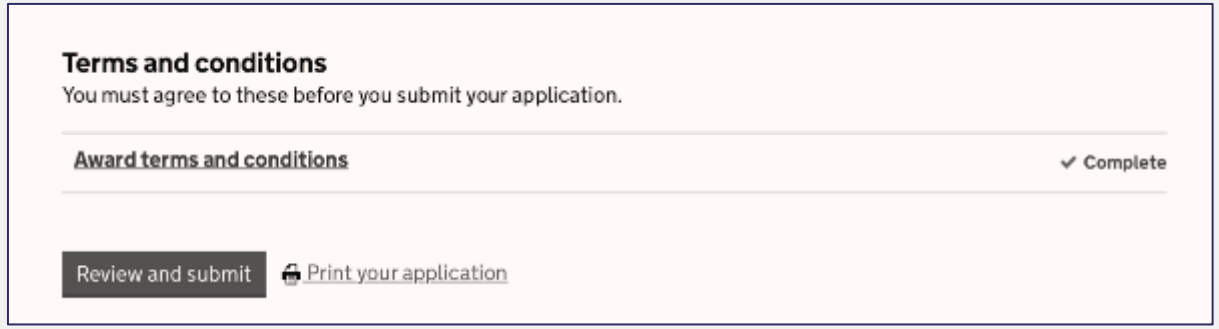
Once the deadline has passed, your application cannot be submitted.

Innovate UK

Editing a submitted application



Reopen by clicking here



Remember to press ‘Submit application’

Innovate UK

Pros & Cons of using AI to support you

With the advances in AI technology, it is only natural to use technology to support you in applying to our competitions. Whilst we don't recommend or advise against it, we would like to make you aware of the following which could potentially impact your project.

Pros

- Removes barriers for people with disabilities and non-English speakers
- Allows you to rephrase your content to meet the word count in a question
- Ensures all aspects of a question are answered
- Can aid a better understanding of:
  - intended/wider market
  - best practice in project management
  - complementary technologies and advances in the industry
  - expected project impacts

Cons

- It is not always accurate in its assumptions and can get things wrong
- AI learns from the information you give it as well as what it has already learnt
- May provide a generic response meaning your application could use similar phrasing to others
- AI can be detected as non-human as it lacks expression and insight because it relies on logic to summarise information based on the question asked

Whilst AI offers many benefits, it is important you are aware that **you are potentially sharing your idea with the world,** so be careful what you share as you have no control over how it is shared on once you do.

UKRI Innovate UK

Assessment

Innovate
UK

Assessment

[YouTube Playlist]

1 How do our assessors assess?
Innovate UK • 8.1k views • 2 years ago
2:33

2 How are successful applications selected for funding?
Innovate UK • 17K views • 2 years ago
2:39

3 What steps are there before a project starts?
Innovate UK • 7.7k views • 2 years ago
2:45

4 How are successful projects monitored?
Innovate UK • 4.1K views • 2 years ago
2:20

5 How successful applicants receive their funding.
Innovate UK • 4.6K views • 2 years ago
2:51

Innovate UK

Project setup

If you pass the technical assessment, you will have a further eight steps detailed in your notification to complete in Project Setup before being able to start your project.

These are:

- Project details
- Project team
- Documents
- You will be allocated a Monitoring Service Provider (MSP)
- Bank details
- Finance checks
- Milestones
- Contract

Please share the T&Cs with your legal team at the earliest possible opportunity to avoid any delays.

You are expected to complete all the steps above within 30 calendar days of receiving your notification. Failure to do so may result in funding being withdrawn.

Work can only commence on your project once you have received your Go Live email.

Our speakers

Alice Day
Open Innovation Manager, Transport for London
Dan Piner
Senior Design and Innovation Manager, South Western Railway
Anita Brown
Head of Innovation and Engagement, Avanti West Coast
Philip Wildbore
Principal Engineer (Structures), Network Rail
James Adcroft
UK Transport Training and Compliance Manager, Tesco
Jonathan Kelly
Senior Innovation & Accelerator Manager, HS2
Andrew Johnson
Head of Strategic Communications, GCRE
Rob Forde
Director of Strategy and Skills, GCRE
Naomi Arblaster
Head of SME Development, BCIMO
Andy Pawley
Bid and Revenue Manager, Porterbrook

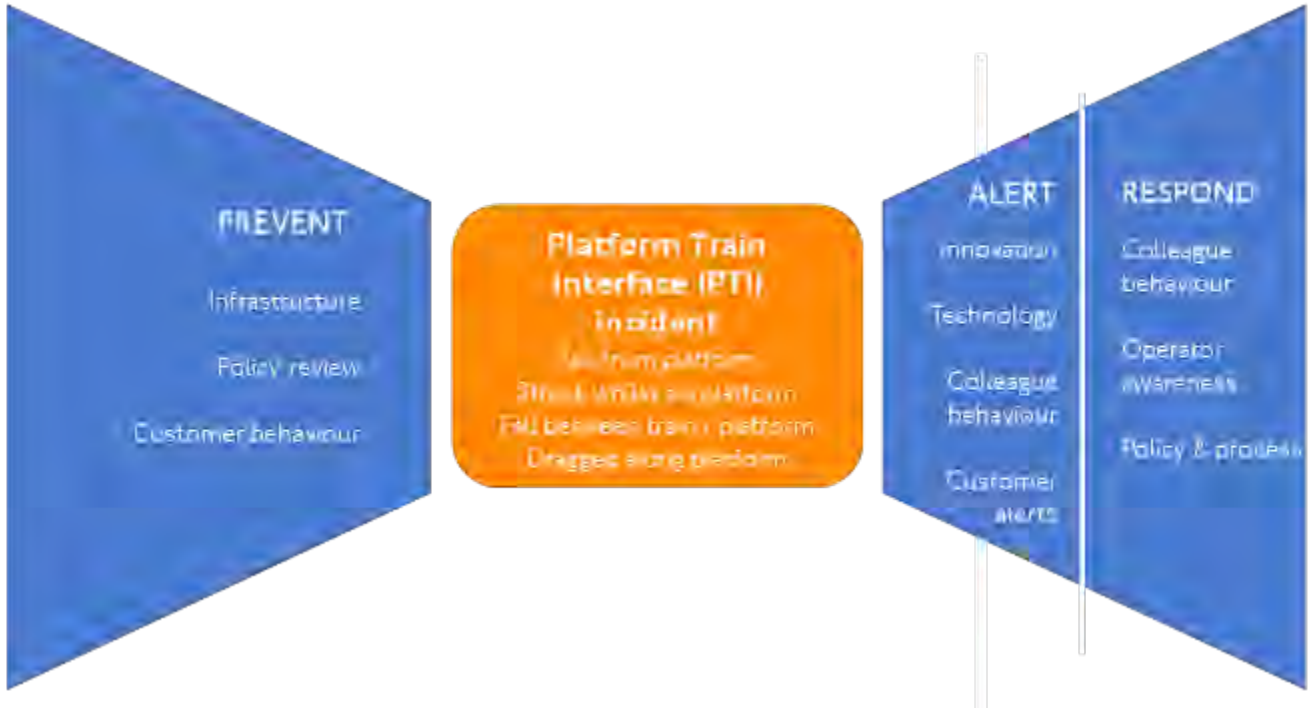
TfL x First of a Kind

PTI & Personal Safety

The Platform Train Interface (PTI)

By 2030, TfL aims to reduce the number of customers killed or seriously injured on the TfL network by 50%. By 2041 we aim to have zero deaths and serious injuries across our network.

The safety risk to our customers is higher when they are boarding or alighting our trains, at the PTI.



By 2030, TfL aims to reduce the number of customers killed or seriously injured on the TfL network by half. By 2041 we aim to completely eliminate these deaths and serious injuries.

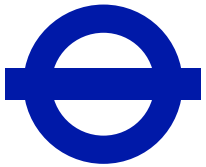
The safety risk to our customers is higher when they are boarding or alighting our trains, at the PTI.

PTI risks

Network Fatality Risk

Higher ***Lower***

Event	Platform Train Interface	Track Trespass	Platform Train Interface	Track Trespass	Platform Train Interface	Platform Train Interface
Scenario	Customer falls from the platform	Unauthorised access to track via platform	Customer struck by train whilst on the platform	Unauthorised access to track via non-platform	Customer falls between train and platform	Customer dragged along the platform
% contribution to network fatality risk	**17.93%**	**17.85%**	**5.88%**	**4.75%**	**4.70%**	**0.88%**



PTI solution focus areas

Yes

- Detection of PTI falls when the train is not in the platform
- Detection of falls between the gap
- Detection of trespass events

No

- Maintain dwell time, not reduce/increase
- Modifying platform nosings & train fleets
- Interfacing with signalling systems on the LU
- Platform-based video analytics

Personal Safety

Tackling violence against women and girls

- Transport is the backbone of London
- Millions of women and girls travelling every day on public transport, walking and cycling
- London's public transport system is a safe, low crime environment
- Safety and security is at the core of what TfL does
- Tackling sexual offending/ harassment is a priority for TfL and police partners
- Well established programmes to deal with offending on public transport and in taxi and private hire vehicles
- More focus is needed on walking and cycling

Safety and security measures

- Thousands of transport staff who are trained and equipped to support customers
- £180m investment in dedicated policing for transport network – over 2,500 police and police community support officers
  - British Transport Police
  - City of London Police
  - MPS Roads and Transport Policing Command
- 500 TfL enforcement officers
- Designing out crime through infrastructure improvements
- Extensive CCTV network and Body Worn Video (BWV)
- Data Disclosure Team to support police investigations
- Data and analysis to inform interventions
- Crime prevention and safety messaging
- Help points and passenger alarms
- 24/7 control rooms with links to police

Programme: Comms and engagement

- Zero tolerance to sexual harassment
- Bystander intervention
- Safer Travel at Night
- White Ribbon
- Face to face engagement activity
- Stakeholder involvement

WHITE RIBBON ACCREDITED
WORKING TOGETHER TO END MALE VIOLENCE AGAINST WOMEN

Programme: Examples of key projects / actions

Canning Town station feasibility station

- Extensive & meaningful engagement
- Report finalised with TfL for review
- Recommendations (community connections and physical improvements) being worked through

Staff training

- Zero tolerance to sexual harassment training for customer-facing staff
- Produced in partnership with Rail Delivery Group, BTP and VAWG practitioners
- Bus driver diversity training – starts end of 23/24

Project Guardian school sessions

- London Transport Museum delivers sexual harassment sessions for year 9 students
- Delivered to boys and girls
- Programme being expanded – min 600 sessions; 28k students
- Delivered in partnership with RTPC and BTP
- Excellent feedback (from schools and young people)

Rich customer insight to inform approach & actions

- Women's Safety Audits (joint project with MOPAC)
- Research to understand VAWG when cycling
- Extensive research to understand women and girls experiences on public transport network

Innovation and technology improvements

- Innovation challenge for tackling VAWG through on-bus technology
- CCTV standard updated, retention period extended to 31 days for new systems
- Audit of existing LU stations being planned to apply standard to existing CCTV
- Improving help point functionality

Bus shelter trial

- Enhanced lighting and CCTV at bus shelters (20 locations)
- Range of different locations to be selected

HS2

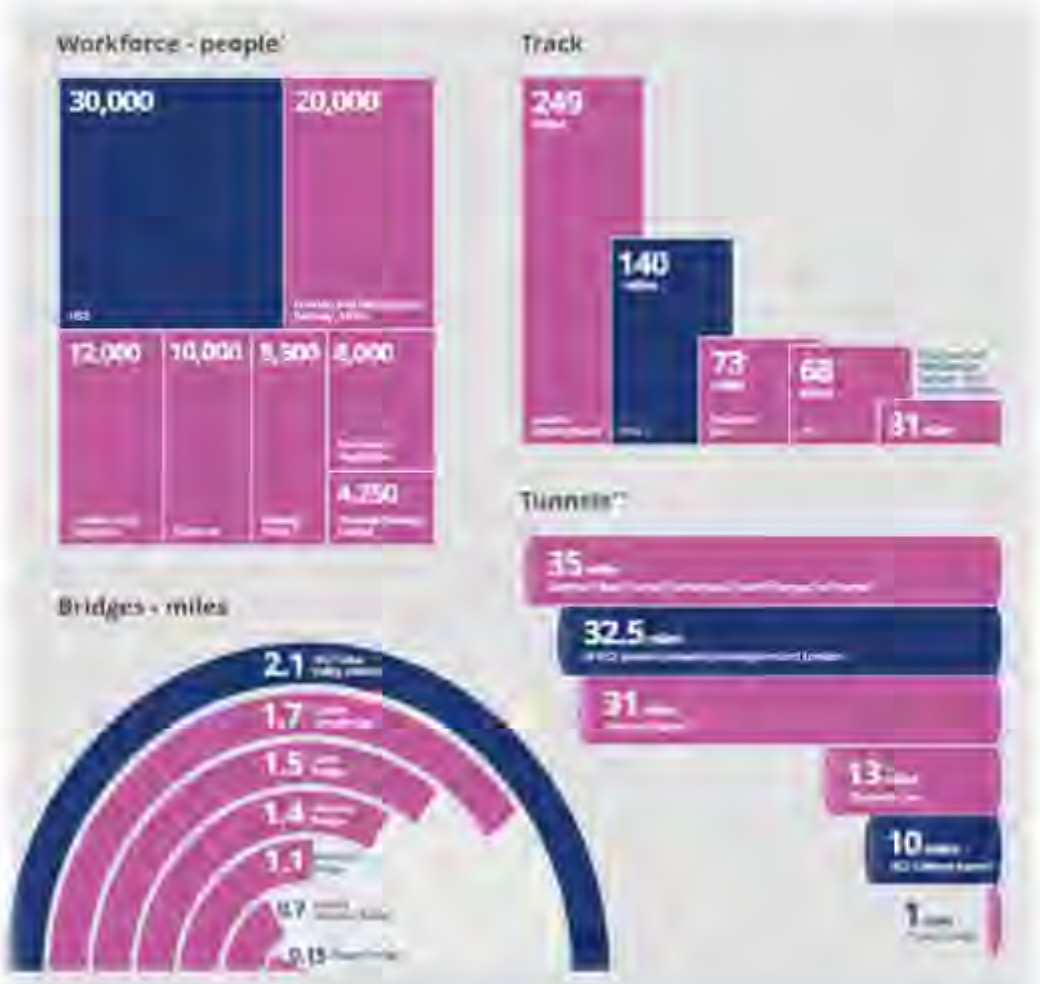
First of a Kind 2025

AI for Complex Processes

An Introduction to HS2

HS2 is the largest infrastructure project in the UK – and produces data to match

Innovate at HS2



- Twice as long as the Elizabeth Line or HS1
- More tunnel than the Channel Tunnel
- 230km track route
- 2 depots
- 32 miles of tunnel
- 4 new stations

Why AI...

Key Complexities

- **Multiple stakeholders**: Government bodies, private companies, and suppliers.
- **Vast, unstructured data**: Information from sensors, project plans, contracts, and safety reports. Structured and unstructured data from dozens of contractors, all using different tools, systems, and formats.
- **Highly regulated environment**: Safety-critical procedures and strict compliance requirements.
- **Operational complexity**: Scheduling, cost management and risk mitigation. Data also needs to be handed over, verified and assured repeatedly.

How AI Can Help

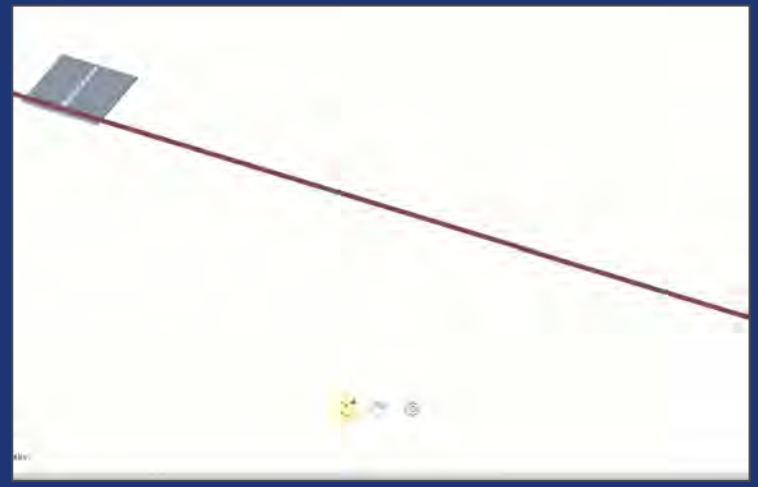
- **Automation**: AI-driven workflows for approvals, scheduling, and reporting.
- **Predictive Analytics**: Forecasting delays, cost overruns, and maintenance needs.
- **Optimisation**: AI-powered simulations for **scheduling, resource allocation, and route planning**.
- **Data Processing**: AI techniques to integrate structured & unstructured data from multiple sources.

AI at HS2 – Proven to Deliver

Smart security cameras

AI-enabled CCTV detects when people or vehicles stray from approved routes and alerts a control room, reducing the need for on-site security and enabling a data-driven approach to safety.

Schedule optioneering



Leverages AI and machine learning algorithms to simulate and analyse construction schedules, helping project managers identify the most efficient way to complete tasks, minimize delays, and reduce costs

Design optimisation

A parametric design tool that tests millions of structural combinations, optimising entire viaduct systems for carbon, cost, and efficiency and cutting design time from weeks to hours.

HS2

Breaking Down the Challenge

Leveraging AI to Automate, Optimise, and Innovate

The rail industry is facing increasing complexity in managing large-scale infrastructure projects like High Speed Two (HS2) and Network Rail's renewal programs.

AI presents a unique opportunity to automate complex processes, optimise decision-making, and improve efficiency.

AI for Handover & Transitions

Multiple contractors and suppliers handling different project stages

Miscommunication leading to inefficiencies and project delays

Inconsistent documentation formats across supply chains

AI for Cost Verification & Assurance

Large infrastructure projects have complex cost structures

Cost overruns and inefficiencies are common

Manual verification is time-consuming and prone to errors

AI for Programme Schedule & Sequencing Optimisation

Project delays impact costs and passenger experience

Unpredictable variables like weather, supply chain issues, and workforce availability

Traditional scheduling tools lack adaptability

GCRE
Global Centre of Rail Excellence

MAKE TRANSPORT BETTER
REBUILD LOCAL PROSPERITY
RENEW AN AMAZING PLACE
ESTABLISH A NET ZERO RAILWAY

Global Centre of Rail Excellence

Rob Forde

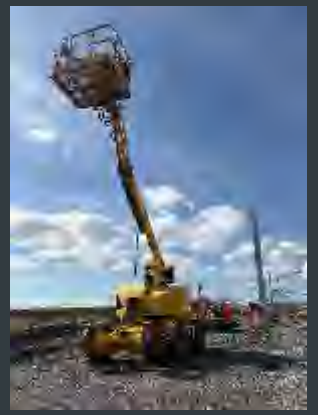
Director of Strategy and Skills
GCRE Ltd

GCRE
The Global Centre of Rail Excellence
GCRE is a purpose-built facility for world class rail and mobility research, testing and certification of rolling stock, infrastructure and cutting-edge net zero technologies that will serve markets across Europe, the Middle East and beyond
MAKE TRANSPORT BETTER
REBUILD LOCAL PROSPERITY
RENEW AN AMAZING PLACE
ESTABLISH A NET ZERO RAILWAY

Innovation at GCRE Already Underway:

- Last month GCRE showcased 12 projects through the £7.4m ‘Innovation in Railway Construction’ competition
- Funded by Department for Business and Trade. Teams tackling some of the biggest challenges in rail
- 200 individuals attended from across industry
- Clear evidence of teams finding new commercial leads, winning new customers and new investment in their companies.
- Event showed what GCRE is capable of doing on a much bigger scale
- https://www.youtube.com/watch?v=cKca1NFu1EM

GCRE Demonstration Day



FOAK Rail Innovators Day At GCRE

- The Global Centre Of Rail Excellence is inviting teams interested in taking part in the FOAK programme to a 'Rail Innovators Day' at the GCRE site in South Wales.
- The day will provide an opportunity for teams considering a programme application to meet the GCRE team and to discuss field testing and live demonstration opportunities at the site.
- The Rail Innovators Day will take place at the GCRE site from 10am to 4pm on Wednesday 7th May 2025 with an opportunity for a background briefing and inspection of the potential testing sites at the facility
- **Places are limited and booked on a first come, first served basis**
- Registration is open now through the QR code

Thank you

www.gcre.wales

company/gcreinnovation

GCRE

Global Centre of Rail Excellence

Name:

- Naomi Arblaster

Job Title:

- Head of SME Development

Organisation:

- BCIMO

Contact Details:

- www.bcimo.co.uk
- Naomi.Arblaster@bcimo.co.uk
- 07780 510695

INTRODUCTION
TO BCIMO

- Not-for-profit research and technology organisation (RTO)
- Unique, purpose-built, world-class centre for rail industry innovation

- Facilities include:
  - Rail Development & Test Site
  - Meeting & Events Spaces

RAIL TEST BED

INTRODUCTION
TO BCIMO

- Link to Rail Development & Test site at BCIMO
- Rail Development & Test Site - BCIMO

CLEAN FUTURES
BCMC
TRAM 16
16

CLEAN FUTURES
BCMC
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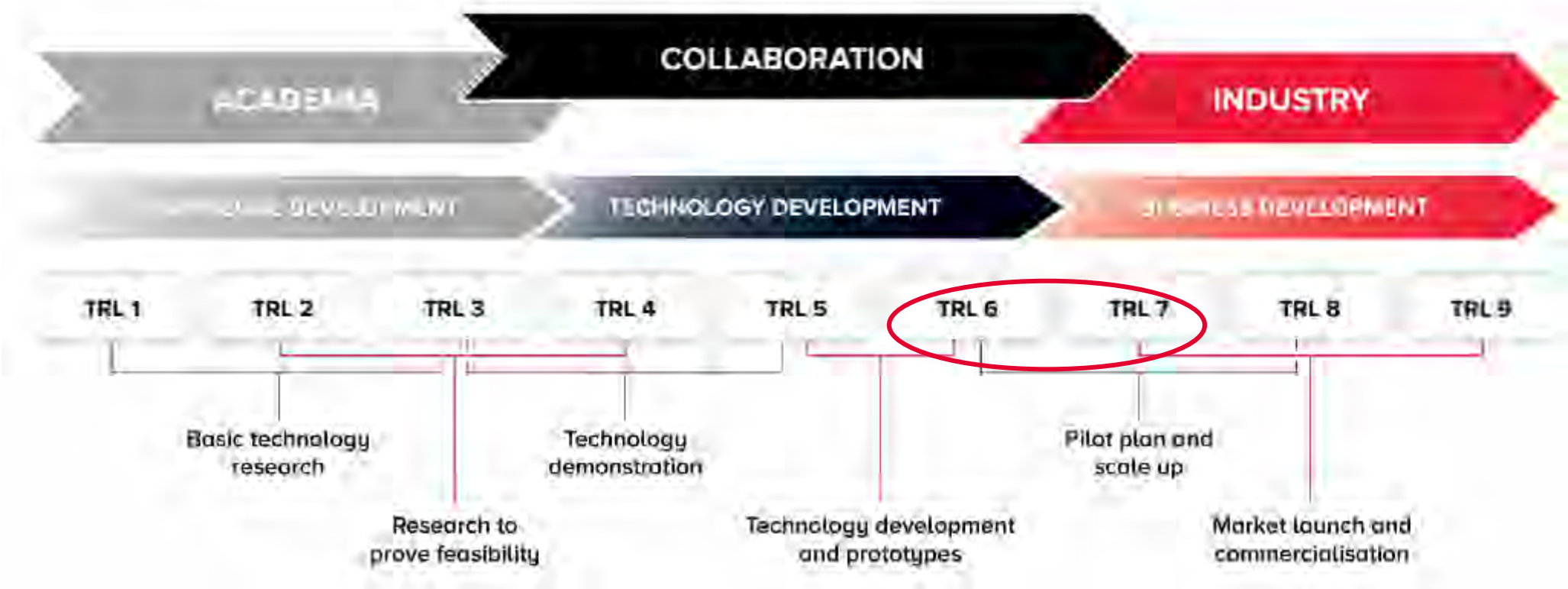
TRAM 16

16

СЛАВ LS60 E

BCIMO

TECHNICAL
SUPPORT



BCIMO

INTRODUCTION
TO BCIMO

- This video is a snapshot from a recent event we delivered as part of the Clean Futures Accelerator:
- Clean Futures Accelerator - Cohort 2 Demonstration Day - Highlights Video

DISSEMINATION
OPPORTUNITY

Welcome to the
Auditorium

VERY LIGHT RAIL
NATIONAL INNOVATION CENTRE

THANK YOU

BCIMO™

Long Marston – Past, Present and Future

Porterbrook acquisition of Long Marston in brief

In 2021, **Porterbrook signs headlease** for 135 acres of Long Marston site

11
Site buildings refurbished or replaced

Created dedicated **warm storage roads** with shore supply

Long Marston – Past, Present and Future

Newly refurbished offices and workshops

Porterbrook is committed to hosting Rail Live in Long Marston

Long Marston – Past, Present and Future

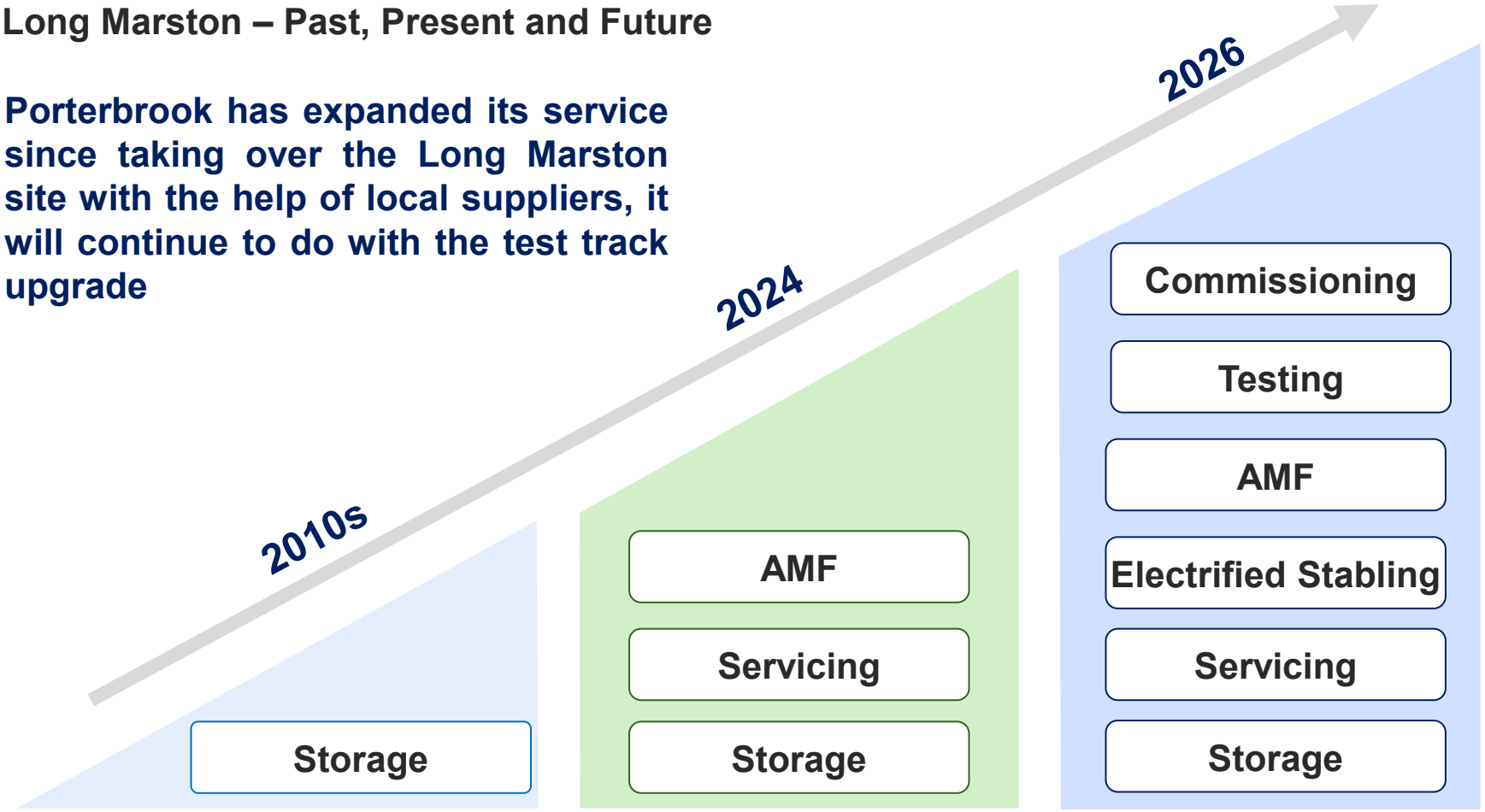
Our brand-new AMF opened in April 2023 following a £3m investment by Porterbrook

Long Marston – Past, Present and Future

Long Marston offers a wide range of storage solutions, including warm storage for high-value assets

Long Marston – Past, Present and Future

Porterbrook has expanded its service since taking over the Long Marston site with the help of local suppliers, it will continue to do with the test track upgrade



1. **Previous site offering**
2. **Current Porterbrook offering**
3. **Future Porterbrook offering**

In May, Porterbrook announced a major investment to the Long Marston test track

1

Test Loop

Upgrade existing and lay new track to support 50mph running

2

Signalling

Installation of signals to enable control of trains on and off the test loop

3

Energy

Electrification to 25kV of test loop and selected sidings

4

Infrastructure

Additional sidings with OHLE installed

Why invest?

> Improves deliverability of Porterbrook fleets

> Compliments existing business by enabling on site testing and commissioning of rolling stock

> Value add to customers to enable traction training of on-board staff

> Develops in-house warm storage offer

Q&A

Innovate
UK

Additional Support

Innovate UK

Innovate UK Business Growth

https://iuk-business-connect.org.uk/business-growth/

Innovate UK Business Growth (previously Innovate UK EDGE) is a key part of the UK innovation agency's deep investment in the pioneering businesses that drive economic growth. It is a publicly-funded service available to all high potential small to medium sized innovation-driven companies, including Innovate UK grant winners.

Exploit Innovation:
Grow your business by protecting your IP, improving innovation management and accessing the innovation ecosystem globally through us.

Source funding:
Grow and scale your business by accessing the right finance and funding for you and becoming investment ready.

Enter new markets:
Helping you to make connections to partners and leverage insights to expand into vertical and international markets and achieve scaling ambitions.

Ready to scale?
The Innovate UK Scaleup Programme helps the highest potential businesses realise their ambitions.

UKRI Innovate UK

Useful Information

- UKRI's General Guidance
- Innovate UK Business Connect's Good Application Guide
- Who we fund
- Collaboration Agreement Guidance: Lambert Toolkit
- Innovate UK: Shaping the Future

Funding opportunities

To find out more about the competitions currently available you can visit either the **Innovation Funding Service (IFS)** or the **funding finder** on the UKRI website. Through these links, you can review the competitions available and decide which ones may be right for you.

You can **sign up to our newsletter** to receive all the latest information on our competitions straight to your inbox or **register for email alerts** to get page updates from Innovate UK.

The government also offers **other opportunities for businesses to get finance and support**.
Innovate UK reserves the rights to host competitions on a needs basis and will adjust each competition criteria and scope accordingly. We may occasionally run closed competitions that are for invited applicants only. These are run based on the challenge requirement or need.

UKRI Innovate UK

We’d love your feedback

We’re considering a change to the applicant briefing process for our competitions.

Please let us have your feedback on this briefing.

FEEDBACK SURVEY

Innovate UK

Contact

Customer Support Services

0300 321 4357 (Monday - Friday 9am-12pm and 2pm-5pm)

support@iuk.ukri.org

Innovate UK
www.ukri.org/councils/innovate-uk

Innovate UK Business Connect
www.iuk-business-connect.org.uk.org

Innovate UK Business Growth
www.iukbg.ukri.org

Innovate UK

Thank You

Innovate UK

Innovate UK

@weareinnovateuk