

STATION INNOVATION ZONE *YEAR 3*

Application Guidance



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What is the Station Innovation Zone?

The Station Innovation Zone is a unique opportunity to test and trial new solutions and technologies in a real-world environment at Bristol Temple Meads Station.

As part of Connected Place's Catapult's wider Station Innovation Zone Programme, the Station Innovation Zone Competition aims to select and trial cutting-edge innovations which serve as a showcase for rail technology buyers and investors.

Our shared vision is to shape the station of the future - a proud, efficient gateway that reflects local identity, fosters inclusivity, and enables effective transit through its spaces.

Competition Overview

Connected Places Catapult and Network Rail are running a third Station Innovation Zone competition in order to select a series of trials as part of the Station Innovation Zone at Bristol Temple Meads, supporting SMEs to test new ways of improving various aspects of the passenger experience.

The Station Innovation Zone competition consists of two phases, with Phase One beginning in November 2024, and Phase Two beginning in February 2025.

In Phase One, up to 8 SMEs will each receive £4,000 to develop a proposed trial plan during the first two months of work. Upon completion of a trial plan, up to four SMEs will be chosen to proceed to Phase Two.

In Phase Two, up to four chosen SMEs will move forward to live trials over a six-month period at Bristol Temple Meads Station, with each SME receiving up to £45,000 to support deployment at the station.

We encourage all innovators with the relevant solutions to apply, regardless of whether they have experience in rail or not.

All successful applicants will also receive business development and technical trial support, as well as the opportunity to showcase their technology at relevant industry events.

Key Application Information

Applications will close at 17:30 on **Tuesday 24th September 2024**.

Late submissions will not be considered.

1. Carefully read this guidance document before preparing your application.
2. Complete your application form on our online application page.
3. Only information in your application form will be assessed. No other documentation should be attached to your submission unless this is requested.
4. Keep within the maximum word counts noted in each section of the application form. Any content that exceeds the word count limit will be disregarded.
5. Please note that by submitting an application, you accept that any resulting offer shall be subject to the provisions of this guidance document, and the terms and conditions set out on the Opportunity Page.

Applicants who require assistance in completing the application or alternative forms of accessing the application should contact Innovation Funding Manager, Anna Kerr, via anna.kerr@cp.catapult.org.uk as early as possible during the open application process to allow for appropriate support.

We recommend contacting us at least 10 days before the competition closure.

Bristol Temple Meads Station - Testbed Site

A testbed is an approach that removes barriers to innovation by giving innovators access to user groups and real-world contexts so they can develop, test, and showcase new or existing products and services without the usual risks.

Bristol Temple Meads station will remain the testbed site for this year's Station Innovation Zone, enabling participants to develop and potentially trial their innovation in a real-station environment.

The original Engine Shed and Passenger Shed at Bristol Temple Meads are still there today. Both were built by the railway innovator Isambard Kingdom Brunel and were opened in 1840. The main station that is in operational use today was built slightly later around 1870.

Please note that the entire station has Grade 1 listed status. -As such, any change to the station fabric (permanent or temporary) will require Listed Building Consent. Network Rail and Connected Places Catapult can advise and support you to develop your trial in a way

that minimises this impact. Whilst not excluding any trials that require consent, we would strongly recommend that your proposals are developed in a way that does not require this.

[The Station Map](#) shows gate lines, along with entrances and exits, platforms and retail offerings. Access to Platforms 5-15 is provided through a passenger subway. Waiting rooms and cafés are available on some platforms.

There are many improvement schemes currently taking place in the station. These include significant refurbishment of roofs, rooms and platform canopies; a full electrical rewire of the station; and the building of new entrances and retail facilities. As such, some parts of the station may be more difficult to enter than others, and some additional resource may be needed to interface your trial with these schemes. Network Rail and Connected Places Catapult will advise you fully throughout your proposal.

Also, some of the systems and screens within the station may require additional agreement with the owner where these are not owned or operated by Network Rail. We will support you with this.

We would suggest a visit to the station to ensure you are familiar with the layout and that your proposal/solution will work. If you wish to do this, please get in touch.

Important Notes from Network Rail

We are seeking solutions to our challenges that can be delivered in Bristol Temple Meads. Some of your proposals might reflect particular characteristics and opportunities within the station and wider area - however, your idea should also show the potential to be applicable to the wider network and industry.

Please note that this is a live station environment, therefore Network Rail may require successful applicants to undertake a series of assessments on, but not necessarily limited to, data protection, digital connectivity, accessibility, security, inclusivity, reputational impact. Further details of these assessments will be provided to successful Phase One applicants.

Kindly note that if you are successful in running your trial at Bristol Temple Meads, you will be required to manage the trial throughout, with specifically agreed levels of support from Connected Places Catapult and Network Rail SIZ team.

Please ensure you note in your application if you think you will need any additional specific support from members of the Network Rail or GWR teams at the station and what type of support this would be i.e. access to data, staff interviews, staff participation etc.

Areas Network Rail Cannot Support:

Bristol Temple Meads station is one of the most iconic stations in the Wales & Western region. It is also one of its busiest and most strategically important. Due to the vital role the station plays in the day-to-day running of the railway, there are certain parts of the station and railway systems we cannot support through the Station Innovation Zone:

- Any signaling systems or dispatching of trains
- Access to the live railway – no trials to extend beyond the yellow line on platforms
- Any trial that would affect our ability to operate the station in a safe and effective way
- Trials that require significant management/participation from station staff to administer
- Projects on-board trains – the Station Innovation Zone is targeted at the station environment
- Access to CCTV, Security Protocols or Evacuation Procedures
- Trials that have been held in rail elsewhere – unless there is a demonstrable benefit or there is a unique case study offered by Temple Meads

Eligibility

The Station Innovation Zone Competition is open to micro, small, and medium-sized enterprises.

In order to apply:

- You must be a UK-registered business, preferably based in the West of England.
- Your innovation solution must be at least TRL (Technology Readiness Level) 5 or higher.
- Your solution must address one of the identified challenge areas
- You must be willing to travel for face-to-face meetings in Bristol.
- You must be willing to provide some match-funding, either in-kind (e.g. labour, materials etc.) or through your own funding.
- There is not a minimum or maximum match-funding amount; if selected, we will request evidence such as letters of support, confirmation emails etc. As previously stated, we encourage all innovators with the relevant solutions to apply.

We are particularly interested to hear from innovators with applicable solutions developed in other sectors which have the potential to apply to rail. For any question, or if in doubt, please get in touch with the team.

Equality, Diversity, and Inclusion (EDI)

Promoting equality of access to the competitions and supporting a diverse portfolio of companies is integral to Connected Places Catapult. We seek to ensure that the organisations we work with are also committed to demonstrating EDI practices in both current and future projects and operations.

We recommend all applicants demonstrate their commitment to EDI as best as possible in their application.

Equality, Diversity, and Inclusion defined:

- **Equality:** Involves allocating resources based on the requirements of diverse populations, thereby facilitating the realization of their optimal abilities.
- **Diversity:** Encompasses the inclusion, engagement, and acknowledgment of the distinct needs of individuals from varied social, economic, cultural, and ethnic backgrounds, as well as different genders, abilities, sexual orientations, religions, and more.
- **Inclusion:** Entails the creation of an environment where individuals or members of groups feel embraced, heard, esteemed, supported, and empowered to achieve their utmost potential, irrespective of their background, identity, or disabilities

Equality, Diversity and Inclusion is fundamental to how Network Rail serves its passengers and customers. If you are successful, you will need to complete a Diversity Impact Assessment for your proposal. This will make sure sufficient consideration has been given to making rail inclusive to all. More details of Network Rail's strategy for this can be found [here](#)

Challenges

Challenge Development Process & Principles

The Station Innovation Zone (SIZ) at Bristol Temple Meads annually presents a series of challenges aimed at leveraging innovation to boost rail ridership.

This year's challenges are designed to enhance the station experience by focusing on four core principles which will embody the stations of the future: **safety, seamlessness, sustainability, and sociability.**

Using these four principles, Connected Places Catapult and Network Rail have design challenges which support the development of innovative solutions that address various operational and user experience aspects, ultimately making rail travel more appealing and accessible to a broader audience.

The primary aim of these challenges is to use innovative approaches to increase rail ridership. This involves developing solutions that improve accessibility, sustainability, personal security, and the overall station experience, thereby making rail travel a more attractive and viable option for diverse passenger demographics.

Network Rail are seeking solutions designed for Bristol Temple Meads, meaning you should try to make your trial plan as tailored to the station's specific needs as possible.

Categorising Your Innovation

This year's challenges give applicants the opportunity to categorise your solution as **one of two** specific types of innovation.

Front-of-House Innovation - consists of solutions that directly improve the station user experience, these are innovations people will experience (see, hear, feel, interact with) in the station environment.

Back-of-House Innovation - consists of solutions that make rail better, simpler, and greener, these innovations improve the effectiveness of rail by better understanding issues and improving operations.

Please see below this year's list of challenges for Station Innovation Zone.

Challenge One – The Accessibility Challenge

Front of House Innovation Opportunity:

There have been significant improvements regarding accessibility across UK stations, but there remain barriers that dissuade or prevent people with different needs from travelling by rail.

We are looking for innovations that can support stations by **tackling accessibility 'barriers to travel.'**

This might be addressed by:

- Improving navigation in what can be an intense environment

- Improving confidence in receiving necessary assistance
- Adding inclusive design features and inclusive facilities that cater for specific personal needs

We are especially interested in innovations that make accessibility a ‘default’ rather than an additionality.

Things that are in scope:

- Innovations that support any demographic(s) which are less likely to travel by rail (see the table on the evidence page)
- Innovations that increase access to a dignified and positive customer experience at the station

Things that are out of scope:

- Wayfinding apps, which have been tested previously at the station.

Back of House Innovation Opportunity:

Many solutions to improve accessibility are not making an impact. Better engaging with, instilling confidence in and gaining feedback from end-users can build understanding and impact.

We are looking for innovations that can support stations by maximising the impact of accessibility.

This might be addressed by:

- Building a better and a wider understanding of accessibility needs.
- Better communicating the provision of accessibility and promoting confidence in accessibility.
- Involving and enabling feedback from people with accessibility needs

Things that are in scope:

- Station user flow and accessibility needs analysis or accessibility auditing for a wide range of accessibility needs
- Engagement platforms to identify pain points
- Supporting staff to better provide passenger assistance

Things that are out of scope:

- Innovations that solely focus on physical accessibility
- Assisted booking apps

Challenge Two – The Personal Security Challenge

Front-of-House Innovation Opportunity:

Research suggests that the nature of an environment such as a train station, can affect how safe it is perceived, while reducing opportunity for perpetration.

We are looking for innovations that can support stations by **creating an environment that feels safe and secure.**

This might be addressed by:

- Providing quality lighting and connectivity
- Enabling good maintenance and upkeep of an environment
- Raising confidence in bystander/staff intervention in crime
- Providing video surveillance (especially with visible monitors)

Things that are in scope:

- Innovations that improve the upkeep of the station environment
- Innovations that enable the communication or education of intolerable behaviour, or how to be an active bystander.
- Novel to rail innovations known to increase the perception of safety, such as lighting, CCTV or similar solutions

Things that are out of scope:

- Personal security apps, as these do not necessarily increase the perception of safety of an environment

Back-of-House Innovation Opportunity:

Under reporting of criminal incidents and other problematic behaviours on the transport system contributes to a larger misunderstanding of the issue.

We are looking for innovations that can support stations by **making it easier for people to report feeling unsafe and analysing the results.**

This might be addressed by:

- Making it easier to report how safe people feel or felt
- Better understanding what specifically makes people feel unsafe at a micro level (e.g. At Bristol Temple Meads)
- Supporting decision making and data analysis of feedback

Things that are in scope:

- Innovations that educate about how to report crime or unsafety
- Innovations that enable station users to feedback on crime or unsafety, or giving feedback on how safety can be improved.

Things that are out of scope:

- Innovations that replicate, replace. or frustrate the procedures for reporting emergencies (to police or other authorities.)

Challenge Three – The Green Challenge

Front-of-House Innovation Opportunity:

Travelling by rail is better for the environment than driving. Compared to cars and planes, train travel emits up to 10 times less carbon than car travel. Attracting passengers who would otherwise use cars or planes is a way to improve environmental outcomes.

We are looking for innovations that can support stations by making the station engaging, ecological and enjoyable.

This might be addressed by:

- Creating and supporting green, calm and biodiverse spaces
- Supporting active travel to and from the station
- Showcasing or hosting green local businesses and community initiatives

Things that are in scope:

- Niche to rail solutions that support biodiversity
- Solutions that can host local businesses and community initiatives
- Innovations that support or encourage active travel in and around Bristol Temple Meads

Things that are out of scope:

- Innovations that do not bring a new offering to rail stations

Back-of-House Innovation Opportunity:

Train stations, such as Bristol Temple Meads, are complex environments with high resource use. Without an understanding of how resources are being used, it is difficult to understand where savings can be made.

We are looking for innovations that can support stations by **supporting data driven solutions to inform decision making.**

This might be addressed by:

- Using IoT sensors or meters to build a holistic understanding of the station regarding sustainability
- Enabling decision making through data analysis
- Using innovative resource generating or saving technologies

Things that are in scope:

- Data sensors for tracking resource usage
- Water saving, recycling or clean power generation devices
- Solutions that can integrate into our existing BTM digital twin infrastructure

Things that are out of scope:

- We have implemented an energy management digital twin, so similar solutions would replicate existing work.

Open Challenge

We are looking for innovations truly novel to the rail environment but can help contribute to a safe, seamless, social and sustainable station of the future, by aligning with Network Rail priorities.

Network Rail priorities include:

- Preventing people from getting on the tracks and reducing vandalism.
- Delivering a simpler, better and greener railway.
- Adapting and responding to changing commuter habits.
- Managing an ageing infrastructure.
- Listening to what customers and communities need and responding.

Our Future Station Vision:

- The station of the future will be a proud, efficient gateway to the place it serves, reflects local identity and is open and inclusive to all.
- It convenes people, businesses and culture without compromising on purpose: effective transit through its spaces.
- Our vision is to design a safe, sociable, seamless and sustainable station that enables both social and financial prosperity.

Things that are out of scope:

- Innovations that have already been seen or tested at UK rail stations.
- Innovations that do not support Network Rail in the delivery of its priorities.
- Innovation typologies already tested or used at Bristol Temple Meads, including:
 - LIDAR crowd monitoring solutions
 - British Sign Language screens
 - Wayfinding apps for indoor spaces
 - Journey Assistance apps/platforms
 - Neurodiverse passenger assistance apps
 - Rentable office pods
 - Carbon capture panels
 - Computer vision inspection software for hazard prediction
 - VR assisted staff training programmes

Further information

For more information about Network Rail priorities, read more about the Control Period 7 delivery plans [here](#).

How your Application is Assessed

After the deadline (17:30 Tuesday 24th September), only applications that meet the eligibility criteria and scope of the competition will be formally assessed.

Connected Places Catapult and Network Rail will consider your application against the programme and challenge fit, and we reserve the right to declare applications as unsuccessful and out of scope.

Applications will be assessed against the scoring criteria, detailed below.

Applications that progress to the assessment stage will be reviewed by a mixture of assessors. Assessors with a broad knowledge across different areas of industry and

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

Following the initial assessment, a number of applicants will be shortlisted for interview. During the interview, you will be asked to discuss your application and how you would deliver the project effectively.

Interviews will take place in October 2024. With regret, we will be unable to accommodate individual requests for interview slots. You will be provided with interview guidance.

The final decisions will be made upon completion of all interviews.

Notification of Assessment Outcome & Feedback

If you **are** offered an interview but are unsuccessful, you will be informed and you can request feedback.

If you **are not** offered an interview, Connected Places Catapult are unlikely to be able to provide feedback due to the high volume of proposals expected.

Successful Applications

If you are successful at interview, and consequently accept a place on the programme, you will be sent a conditional contract that you must sign and return, along with any additional documentation that is requested within stated timelines.

There will then be a kick-off meeting to discuss the details of the project and how Connected Places Catapult and Network Rail will support you during the project delivery period.

Scoring Criteria

This section details the assessment scoring criteria that assessors will use for the technical review.

The applications will be marked on their responses against the following four criteria:

Criteria	Weight
Solution & Trial Proposal	40%
Impact	30%
Traction & Financials	20%
Team	10%

Solution and Trial Proposal

This assessment criterion looks at the uniqueness, feasibility, market potential, and overall viability of your proposed solution which must be clearly outlined and evidenced.

Impact

This assessment criterion looks at the potential / expected impact of your proposed solutions, which is paramount to identifying innovations that can truly transform the station environment and advance the transportation sector.

Traction & Financials

Your innovation must offer transformative potential for the rail industry but also demonstrate practical feasibility, investment readiness, and its potential for sustainable growth.

Team

Your proposal should clearly describe the roles, skills and relevant experience of the team and how they will be crucial to the delivery of the solution.

Project Reporting

Trial Proposal

At the end of the Phase One, you will be expected to produce a trial proposal that details your plan for developing and/or testing your technology or solution at Bristol Temple Mead station.

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. Further guidance will be provided.

Progress Reporting

Throughout the programme you will be required to provide regular reports highlighting progress, opportunities, issues, and risks.

Final Report

At the end of Phase Two, you will be expected to provide a final report detailing your outcomes, impact, and future exploitation plans. At the end of your project delivery period, you will be expected to provide a final report detailing your outcomes, impact, and future exploitation plans

Payment Schedule

Phase One

For Phase One, there will be up to £4,000 available for you to develop and write your trial proposal for your innovation at Bristol Temple Meads Station.

You will receive 50% upfront and 50% upon completion of your trial proposal.

This funding will be given as grant funding, therefore will be subject to Minimum Financial Assistance. Minimum Financial Assistance requires you not to have received more than £315,000 in public funding within the last 2-3 financial years, including the current one.

Only fees incurred between project start and end dates will be paid.

Phase Two

For Phase Two, up to £45,000 of funding is available to conduct a full trial at Bristol Temple Meads Station.

Phase Two will be conducted as pre-commercial procurement, meaning you will be required to raise invoices with us in stages.

An up-front payment of 80% of the total trial cost will be made within 30 days of you raising your first invoice.

At the end of the project, the remaining 20% of your funding will be paid once your final project report has been approved and you have raised your second and final invoice with us.

The purchase of the following would be eligible:

- Staff and/or consultancy resource
- Equipment & Materials – installation costs

- Laboratory/Testing Costs.
- Travel & Subsistence

Rates for staff time should be inclusive of overhead costs of up to 20% of overall staff costs.

Salary rates must be justified and appropriate, reflecting market values.

You can also add costs under the category of 'Other'. These will be agreed if they are shown to be fully justifiable and represent value for money.

We kindly advise you to keep all receipts and invoices relating to your project.

Only fees incurred between project start and end dates are acceptable to charge to the project.

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 as possible. The closing date for applications is fixed and will be **17:30 on Tuesday 24th September 2024.**

Key Dates

- Competition Open – Wednesday 18th July
- Application Support Webinar - Thursday 1st August 2024
- Competition Close – 17:30 Tuesday 24th September 2024
- Notification to Shortlisted Applicants – Mid-October 2024
- Interviews - Late October 2024
- Contracts Issued – Early November 2024
- Phase One Project Start – November 2024
- Phase One Project End Date – January 2025
- Phase Two Project Start Date – February 2025
- Phase Two Project End Date – July 2025
- Showcase at Bristol Temple Meads – Late Summer / Early Autumn 2025

Contact Details

If you have any questions about the programme, please contact Anna Kerr, Innovation Funding Manager via anna.kerr@cp.catapult.org.uk

We wish you all the best with your application.