HM Government

RSSB A Better, Safer Railway

Dynamic Train Planning
Guidance Notes

1 Funding and eligibility

RSSB has allocated up to £3.1 million to fund innovative demonstrator projects as part of the 'Dynamic Train Planning' innovation competition. For a detailed competition brief, please consult the Competition Brief document available on the **competition hub.**

The competition is being run under Article 25 of the General Block Exemption Regulation. It is anticipated that applications received will be classified as industrial research. Table 1 sets out the maximum aid intensities that can be awarded by RSSB to organisations participating in consortia. These percentages represent the maximum allowable that RSSB can contribute to eligible project costs (see Annex C).

Category	Small & Micro Enterprise	Medium Enterprise	Large Enterprise
Industrial Research			
Base aid intensity	70 %	60 %	50 %
Additional aid intensity where: • The project involves effective collaboration, or • The results of the project are widely disseminated	80 %	75 %	65 %
Experimental Development			
Base aid intensity	45 %	35 %	25 %
Additional aid intensity where: • The project involves effective collaboration, or • The results of the project are widely disseminated	60 %	50 %	40 %

Table 1. Maximum Aid Intensities

The additional percentage points may be applicable depending on the precise nature of the project and collaboration involved. Further details can be found under **Article 25.**

Applicants will need to demonstrate value for money as part of their proposals. Proposals that provide better matched funding percentages than the maximums allowable will be considered favourably.

To be eligible for funding:

- Projects must fall under the 'industrial research' and/or experimental development' classification. Definitions of 'industrial research', 'experimental development', 'effective collaboration' and enterprise size are provided in Annex A.
- Collaborations must be business-led and address the specific requirements of the competition as outlined in the competition brief.
- It is expected that projects will last approximately 12 to 24 months. We are primarily looking to fund projects that are currently within TRL 4 to 7 (Technology

Readiness Levels (Annex B)).

- RSSB expects to fund 2 to 3 projects.
- International partners are welcome to join consortia as long as their involvement is justified in the proposal and the majority of the work takes place in the UK. Universities and research organisations are eligible to apply as part of consortia. The total costs for all universities and research organisations in a project will be capped at 30 % of the total project value. Proposals should be exclusive of VAT.

2 Competition format

The competition is a one stage competition, following evaluation and based on the moderated application ranking, the highest ranked applicants will be invited to present their proposal before a panel at RSSB, prior to final award decisions.

3 Evaluation criteria and process

The competition will be evaluated after all proposals are submitted and applicants will be notified of the outcome once the final funding decisions have been made. The evaluation will be based on a weighted marking system, as follows:

Criterion	Description	Weight
Solution	How well does the proposal meet the scope of the call; and how large are the expected benefits?	35 %
Delivery capabilities	How sound is the proposed approach to developing the solution? How effectively will the project be managed; and are the skills and capabilities of the consortium appropriate?	45 %
Finances	How appropriate is the proposal financially? Is the overall budget realistic and justified in terms of the aims and methods proposed, and does it comply with state aid funding requirements?	20 %

4 Awards

Applicants will be informed of the outcome of their application by the end of February 2020. All awards will be made as a grant, a copy of the grant terms is available on the competition hub: **https://rssb.wavecast.io/dynamic-train-control-and-planning**

5 Application process

If you wish to apply for funding for more than one project, you must use an additional application form for each proposal and submit separate applications.

Completed application forms must be emailed to researchcompetitions@rssb.co.uk **before 5pm on 3 January 2020.**

Please ensure that you allow plenty of time to submit your completed documents as the deadline is final. You will receive an email confirming that we have received your application. You will be informed of the outcome of the evaluation in due course, this may include a request to present your proposal to an evaluation panel.

6 Application form and guidance

This section explains the structure of the application form and offers guidance on the information to include in each section.

The application form structure is as follows:

- Section 1 Application Details
- Section 2 Contact Details of LO and consortium arrangements
- Section 3 Proposed Solution
- Section 4 Capability to Deliver
- Section 5 Funding
- Section 6 Other Public Funding Details
- Section 7 Extract for publication

The specific questions under each of the sections listed above are covered in the following tables with guidance notes. Your application form will be assessed according to how well it answers these questions.

It is important that you address and respond to each question clearly. The guidance below provides an explanation of what is required. However, it is not intended to be exhaustive and you should develop your own responses based on your own skills, knowledge and experience.

Notes:

- It is important that you complete each field and present a fully completed form
- The space provided in each field of the form is not fixed and you may extend the space of individual fields. However, the total document length MUST NOT exceed 20 pages (excluding Annexes), the Font Calibri 11 point must be used. Any illustrations and graphics should be referenced in the application form and provided as an annex (this Annex should not exceed more than 5 pages). The project Gantt chart (See Question 6) should also be submitted as an annex.
- When completing the application form, it is important to take into account that the space provided is to enable you to give as full a response as possible for each question. You are encouraged, therefore, to utilise all available space within the 20 page limit.

1. Application Details	
Field	**Guidance**
Project Title	Enter the full title of the project.
Brief Description	Enter a brief description of the project.
Project Timescales	Enter the planned duration.
2. Contact Details of LO and consortium arrangements	
Field	**Guidance**
Lead Organisation (LO)	The full name of the LO involved as part of the consortium.
Applicant Name and Position	Enter the contact name and job title for the applicant.
Organisation	Enter the full registered name of the LO and the company number (as provided by Companies House).
Address details	Enter the full address details of the organisation.
Website/phone/email	Enter the full email, phone and web contact details of the main point of contact.
Consortium arrangements:	
Organisation and details of each member	Enter each consortium member including the key contact details and specifically highlight their role and contribution to the project.
Proposed Solution	
Field	**Guidance**
Q1. What solution to improve Dynamic Train Planning does the proposal aim to develop?	Describe in detail the solution the project will pursue and how this will address the business challenge. Describe the current status of development of the solution, including its current TRL, and the TRL the solution is expected to be at the end of the project. Describe its novelty compared to existing solutions.
Q2. What are the potential benefits from this solution?	Describe the nature and size of potential benefits from this solution, including consideration of: • Both short and long term benefits that the solution should offer to industry and its customers • Commercial opportunities based on the dynamics and size of the market, and the actual and predicted growth rates. You might also wish to outline any benefits that may occur if the project is only partially successful.
Q3. How do you propose to demonstrate and quantify these benefits as part of the project?	Describe what approach you would adopt to demonstrate and quantify the potential benefits as part of demonstrating the solution.

Q4. What are the barriers to implementing the solution on the GB network?	Describe how the solution could be taken up in the GB rail network. You may wish to consider the following questions: • Are there any barriers to implementation? • If there are barriers what strategies might be employed to overcome these? • Are there key industry partners that you will need to engage to help bring forward implementation? • How might the project be progressed after this phase?
Capability to deliver	
Field	**Guidance**
Q5. What is your proposed approach for developing the solution?	Describe how you propose to develop and test the solution. You should identify and describe the relevant work packages required to deliver the project and key deliverables and milestones during the project.
Q6. Describe how your project will be managed, providing a detailed programme of work.	Describe in detail how your project will be managed within the consortia. Consider these questions: • is the project plan sufficient in comparison to the complexity of the project? For example, is there sufficient detail to understand the tasks involved and the resources required? • is the timing of key milestones realistic? • is there demonstration of sufficient resource commitment and capability to undertake the project? • are clear reporting lines identified?
Q7. Who will deliver the project? What is their role and what are their responsibilities and experience?	Describe the track record of each of the team members. Consider whether: • the project team has the right available mix of skills and experience to deliver the project successfully. • how the organisations working together will achieve more than if they were working individually. • If there is no formal collaboration between a supplier and a railway undertaking you should demonstrate how you have engaged your users of VSTP (i.e. TOC, FOC, NR) in the project through advisory groups etc.

Q8. What is the project's risk management strategy? What are the risks (technical, commercial and environmental) to the success of the project?	RSSB recognises that projects contain inherent risks, but seeks assurance that the projects it funds have adequate arrangements for managing this risk. Focus, therefore, on the arrangements for managing and mitigating risk. • Identify the key risks and uncertainties of the project and provide a detailed risk analysis for the project content and approach, including the technical, commercial, managerial and environmental risks as well as other uncertainties (e.g., ethical issues) associated with the project. The main risks should then be rated as High/Medium/Low (H/M/L). • State how the project would mitigate these risks. You should address all significant and relevant risks. Identify project management tools and mechanisms that will be implemented to provide confidence that sufficient control will be in place to minimise operational risk and, therefore, promote successful project delivery.
Funding	
Q9. What funding is required?	
Field	**Guidance**
Column 1 - Organisation Name	Please provide the full names of the (lead) organisation and any participants in the project consortium (organisation names as noted in Companies House).
Column 2 - Company Registration Number	Companies should provide the Company Registration Number (as noted in Companies House).
3 Enterprise Category	Please select your Enterprise Category. (SME definition is based on the EU definition (see Annex A). This may also be a research establishment.
4 Postcode	Please provide the postcode of each organisation participating in the project.
5 Contribution to the project by each organisation (£)	Please list the total contribution to be made to the project by each organisation. This should include the 'contribution in kind' such as equipment, facilities and reduced rates. You should identify the full commercial value of these items (excluding VAT).
6 Funding sought from RSSB	Please enter the funding sought from RSSB for each participant organisation for this competition. This should be the balance of the project costs (excluding VAT) to be incurred by each party to achieve the project milestones.

7 Other funding from public sector bodies	Please include any funding for the project from any other public sector bodies which has been applied for separately, and not as part of this competition. Funding from other public sector bodies might include other applications to research councils, other government departments, devolved administrations, other public sector organisations (e.g. Network Rail) and some charities. The purpose of this column is to provide RSSB with information on the total public funding for the project.
8 Total (£)	The total cost of the project – this is the sum of columns 5, 6 and 7.
Bottom Row Total (£)	The total of the final column will be entered here.
Q10. How are the costs justified and how do they add value?	Supporting information and explanation for project costs should be provided in this section of the form. Consider the following: • Is the budget realistic for the scale and complexity of the project? • Does the financial support required from RSSB fit within the limits set by the competition? • Is a financial commitment from other sources demonstrated for the balance of the project costs? • Has a realistic budget breakdown been provided? • Have any work package breakdowns been described and justified adequately? • Why the funding is required for the project to be able to proceed • Why RSSB funding would allow you to undertake the project differently (more quickly, on a larger scale etc.) and why this would be beneficial to the UK
Other Public Funding Details	
Field	**Guidance**
Table of funding from other public bodies	Fill in the sheet for all funding that has been received from other public funding bodies, giving details of the amount and the date received.
Extract for Publication	
Field	**Guidance**

Please provide a brief, public-facing description of the project. This should be no more than 300 words and describe the context and key principles behind your proposal. Should your project be successful, this information will be made public once the award is confirmed. We reserve the right to amend the description before publication if necessary.	To comply with Government practice on openness and transparency of public-funded activities, RSSB must publish information relating to funded projects. Please provide a short description of your proposal in a way that will be comprehensible to the general public. Do not include any commercially confidential information, for example intellectual property or patent details. Whilst this section is not assessed, provision of this public description is mandatory. Funding will not be provided to successful projects without this.

7 Summary of key dates

Formal launch	1 October 2019
Submission deadline	3 January 2020
Invitation to evaluation panel	w/c 27 January 2020
Presentations to the evaluation panel	w/c 3 February 2020
Applicants informed of outcome	w/c 10 February 2020
Work to start by	1 April 2020

8. Questions and enquiries

Any additional questions relating to the competition guidelines and the competition brief must be submitted by email to **researchcompetitions@rssb.co.uk.**

ANNEX A – Definitions

'Experimental development' means acquiring, combining, shaping and using existing scientific, technological, business and other relevant knowledge and skills with the aim of developing new or improved products, processes or services. This may also include, for example, activities aiming at the conceptual definition, planning and documentation of new products, processes or services.

Experimental development may comprise prototyping, demonstrating, piloting, testing and validation of new or improved products, processes or services in environments representative of real life operating conditions where the primary objective is to make further technical improvements on products, processes or services that are not substantially set. This may include the development of a commercially usable prototype or pilot which is necessarily the final commercial product and which is too expensive to produce for it to be used only for demonstration and validation purposes. Experimental development does not include routine or periodic changes made to existing products, production lines, manufacturing processes, services and other operations in progress, even if those changes may represent improvements.

'Industrial research' means the planned research or critical investigation aimed at the acquisition of new knowledge and skills for developing new products, processes or services or for bringing about a significant improvement in existing products, processes or services. It comprises the creation of components parts of complex systems, and may include the construction of prototypes in a laboratory environment or in an environment with simulated interfaces to existing systems as well as of pilot lines, when necessary for the industrial research and notably for generic technology validation.

'Effective collaboration' means collaboration between at least two independent parties to exchange knowledge or technology, or to achieve a common objective based on the division of labour where the parties jointly define the scope of the collaborative project, contribute to its implementation and share its risks, as well as its results. One or several parties may bear the full costs of the project and thus relieve other parties of its financial risks. Contract research and provision of research services are not considered forms of collaboration.

Enterprise size

The main factors determining whether an enterprise is an SME are staff headcount and either turnover or balance sheet total.

Company category	Staff headcount	Turnover	or Balance sheet total
Medium-sized	<250	≤ € 50m	≤ € 43m
Small	<50	≤ € 10m	≤ € 10m
Micro	<10	≤ € 2m	≤ € 2m

These ceilings apply to the figures for individual firms only. A firm that is part of a larger group may need to include staff headcount/turnover/balance sheet data from that group too.

Further information can be found in: European Commission. (2014, May 21). *Framework for state aid for research and development and innovation.* Retrieved from http://ec.europa.eu/competition/state_aid/modernisation/rdi_framework_en.pdf

ANNEX B - Technology Readiness Levels

TRL	Description	Stage Summary	In scope of competition
1	Basic principals observed and reported	Research	No
2	Technology concept and/or application formulated		No
3	Analytical and experimental critical function and/or characteristic proof-of-concept		No
4	Technology basic validation in a laboratory environment	Demonstrate	Yes
5	Technology basic validation in a relevant environment		Yes
6	Technology model or prototype demonstration in an operational environment		Yes
7	Technology prototype demonstration in an operational environment	Commercialise	Yes
8	Actual Technology completed and qualified through test and demonstration		No
9	Actual Technology qualified through successful mission operations		No

ANNEX C – Eligible Project Costs

The eligible costs of research and development projects shall be allocated to a specific category of research and development and shall be the following:

(a) Personnel costs: researchers, technicians and other supporting staff to the extent employed on the project.
(b) Costs of instruments and equipment to the extent and for the period used for the project. Where such instruments and equipment are not used for their full life for the project, only the depreciation costs corresponding to the life of the project, as calculated on the basis of generally accepted accounting principles are considered as eligible.
(c) Costs for buildings and land, to the extent and for the duration period used for the project. With regard to buildings, only the depreciation costs corresponding to the life of the project, as calculated on the basis of generally accepted accounting principles are considered as eligible. For land, costs of commercial transfer or actually incurred capital costs are eligible.
(d) Costs of contractual research, knowledge and patents bought or licensed from outside sources at arm's length conditions, as well as costs of consultancy and equivalent services used exclusively for the project.
(e) Additional overheads and other operating expenses, including costs of materials, supplies and similar products, incurred directly as a result of the project.