

# Canada & UK Net Zero Value Chains – Transportation – Competition Briefing Event

7<sup>th</sup> of April 2022

**Matthew Moss**

**Maritime Lead**

**Innovate UK KTN**

[www.ktn-uk.org](http://www.ktn-uk.org)



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# House Keeping

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- All participants will be muted throughout the webinar presentations
- Please use the chat box for networking and the Q and A box for any questions.
- For any technical issues, please contact Olivia Brown
- You can access a transcript by clicking on the “live transcript button”
- The webinar will be recorded, and you will be sent the link, along with any other information, shortly after the webinar



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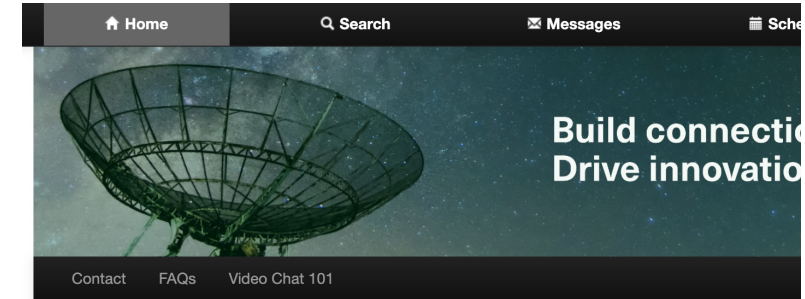


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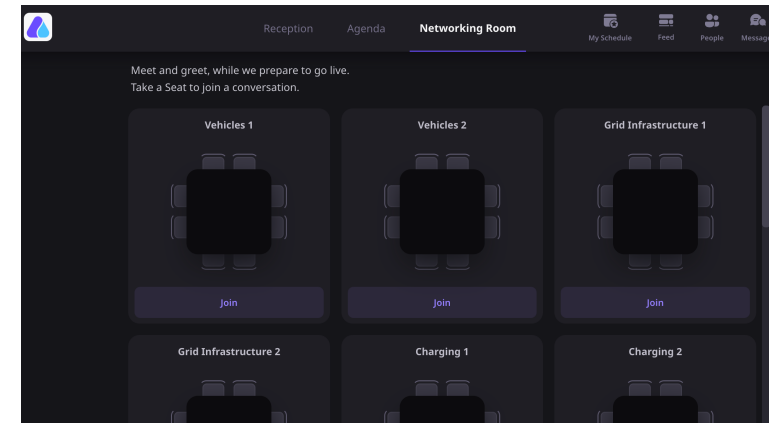


# Networking

- Please sign up to our meeting mojo and create a profile.
- You can then review profiles and message to arrange a meeting.
- This will be open until the competition closes
- <https://canadauk-netzero-valuechains.meeting-mojo.com/>
- Networking event on 25<sup>th</sup> April
- 2 hour event with speed networking
- Attend if you are looking for partnerships across the Atlantic!
- <https://web-eur.cvent.com/event/42da4c77-32c5-4e15-8b29-e190ca226761/summary>



## Canada & UK Net Zero Value Chains - Transportation



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# Agenda

Time(GMT)	Time(PST)	Title / Organisation	Speaker
16:00	08:00	Welcome	<b>Matthew Moss</b> , Maritime lead, Innovate UK KTN
16:05	08:05	Introduction to the Canada-UK Partnership	<b>Geoff Ledingham</b> , Program Advisor, Industrial Research Assistance Program, National Research Council Canada (NRC IRAP) and <b>Brendan Vickers</b> , Partnership Manager North America, Innovate UK
Competition Scope			
16:15	08:15	Competition Scope	<b>Francesca Iudicello</b> , Programme Manager – Automotive Zero Emission Vehicles, Innovate UK and <b>Kasturi Narayanan</b> , Industrial Technology Advisor, NRC IRAP
16:35	08:35	Q and A	All
Applications			
16:50	08:50	How to Apply	<b>Léonie Hyppolite</b> , International Program Officer, NRC IRAP <b>Abbie Wood</b> , Portfolio Manager, Competitions Team, Innovate UK
17:20	09:20	Q and A	All
17:30	09:30	Next steps and close	<b>Matthew Moss</b> , Maritime lead, Innovate UK KTN



# **Introduction to the Canada-UK Partnership**

# Canada-UK Net Zero Value Chains for Transportation

Canada and the UK have a long history of strong partnerships in science, technology and innovation, with thriving networks of researchers, universities and R&D intensive companies.

In 2018 the NRC and UKRI signed a comprehensive Memorandum of Understanding (MOU) which established four initial priority sectors for cooperation:

- Advanced Manufacturing
- Agriculture Technologies
- Clean Technologies
- Quantum Technologies

# Canada-UK Net Zero Value Chains for Transportation

Since then, NRC IRAP and Innovate UK have conducted several joint competitions resulting in collaborative R&D projects valued at more than \$30M CAD.

Today we are addressing the 'Clean Technologies' area by launching this Collaborative R&D Programme with c. £4m funding to support the Transportation sectors.

We will give you a brief overview of our two organisation before we address the specifics of the CR&D Competition:



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# National Research Council (NRC) Canada





**We advance  
scientific  
and technical  
knowledge**

**We support  
government policy  
objectives**

**We support  
business  
innovation**





**National network of  
researchers and facilities**  
performing research and technical  
services with partners

**Delivers national  
funding program**  
The Industrial Research  
Assistance Program

# National Research Council Canada Industrial Research Assistance Program (IRAP)

# NRC IRAP - Industrial Research Assistance Program



## **Provide advice, connections, and funding**

to help Canadian small and medium-sized businesses increase their innovation capacity and take ideas to market

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## **Serve over 9,000 clients annually**

(advisory services, funding or referrals) across all industry sectors and fund over 3,000 clients (FY 2020-2021)

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## **Link innovative Canadian SMEs to global value chains**

and support their growth by providing access to current technology and business market intelligence on priority industry sectors

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## **Support youth**

with employment programs



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# National Research Council Canada IRAP International

# NRC IRAP International

## Supporting SMEs through international expansion



Provide guidance, linkages, referrals and advice on international engagement

Collaborate with Canadian and international partners for matchmaking and co-innovation opportunities

Facilitate Partnering Development Activities (PDAs)

Conduct missions in bound and out bound

Provide Canadian SMEs with financial and advisory support for co-innovation projects with their international collaboration partners.



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# Introduction to Innovate UK and UKRI

# UK Research and Innovation

We work with the government to invest over £7 billion a year in research and innovation by partnering with academia and industry to make the impossible, possible.

Through the UK's nine leading academic and industrial funding councils, we create knowledge with impact.



**UK Research  
and Innovation**

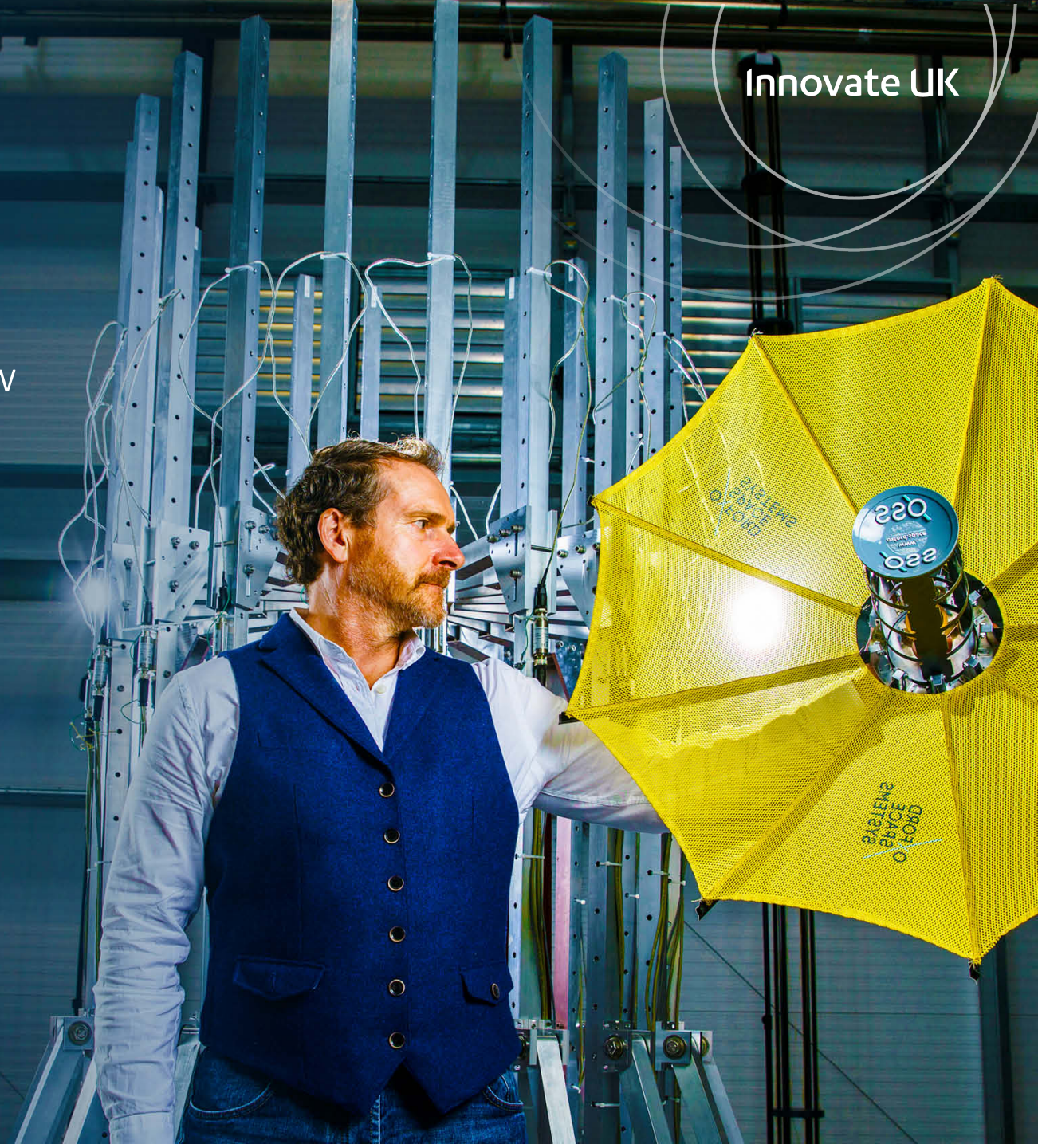


# Innovate UK

Innovate UK

Innovate UK drives productivity and economic growth by supporting businesses to develop new ideas.

We connect businesses to the people that can help them, and fund businesses and research collaborations in all economic sectors, value chains and UK regions to accelerate innovation.



Investment of  
**£4.6bn**  
since 2007



Industry match  
funding taking  
the total value of  
projects above



**£7.5bn**

Up to

**£21.2bn**



in added value  
to the economy

Up to

**£7**



for every £1  
we've invested

We've funded over

**15,000**

projects



**11,800**

unique  
organisations  
involved



**9 jobs**

at each  
organisation  
involved



**100,000**

jobs created in total  
since 2007





# Innovation is the key to UK's future growth and prosperity

UK ranks 4th in Global Innovation Index 2021

Innovation accounts for up to 50% of labour productivity growth

Firms that persistently invest in R&D have higher productivity

Innovating companies are more likely to export and generate growth

# Canada-UK Net Zero Value Chains for Transportation

We strongly believe that international collaboration can play a valuable role in addressing some of the global concerns that businesses face today, such as:

- Conflict and fuel shortages/prices
- Climate change and global warming
- Critical minerals and other resource availability
- Disrupted supply chains
- Pandemic preparedness and health issues



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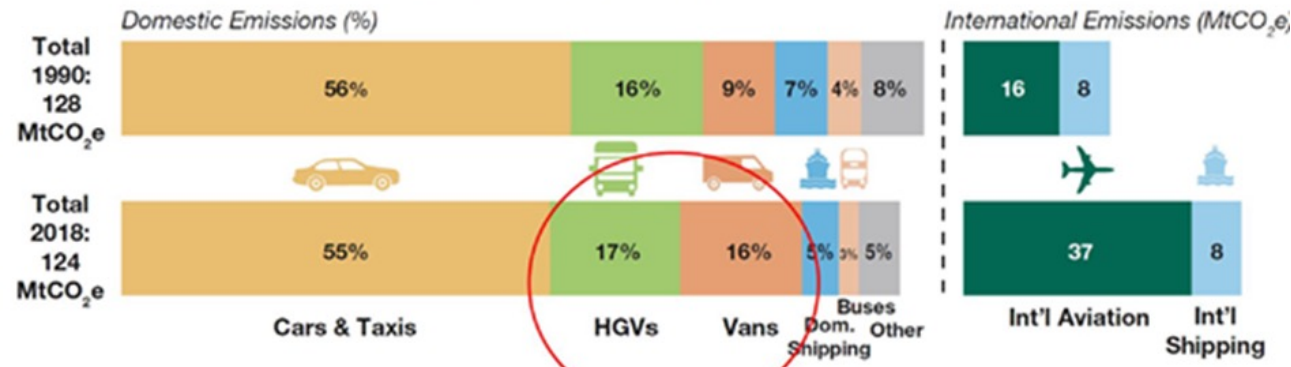
# Scope

Dr Francesca Iudicello  
Programme Manager  
Zero Emission Vehicles  
Innovate UK

Mr Kasturi Narayanan  
Industrial Technology Advisor  
National Research Council of  
Canada

# Net Zero Carbon Transport

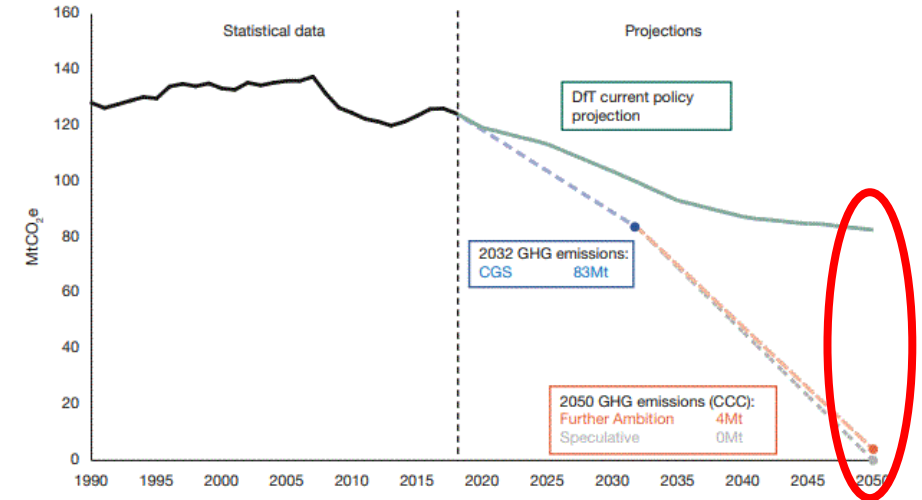
UK Transport GHG emissions by mode, 1990 and 2018



## Key commitments:

- End of sales of new petrol and diesel cars and vans by 2030
- End of sales of new non-zero tail pipe emission buses & HGVs (HGVs <26T by 2035 and >26T 2040)
- Electrify railway lines by 2050 and remove all-diesel-only trains by 2040
- Phase out sales on new non-zero emission domestic shipping vessels and accelerate development of zero emission technologies & infrastructure

Figure 18: DfT's latest domestic GHG emissions projections based on current policies, compared to Clean Growth Strategy (CGS) targets and CCC Net Zero 'Further Ambition' and 'Speculative' scenarios<sup>11</sup>





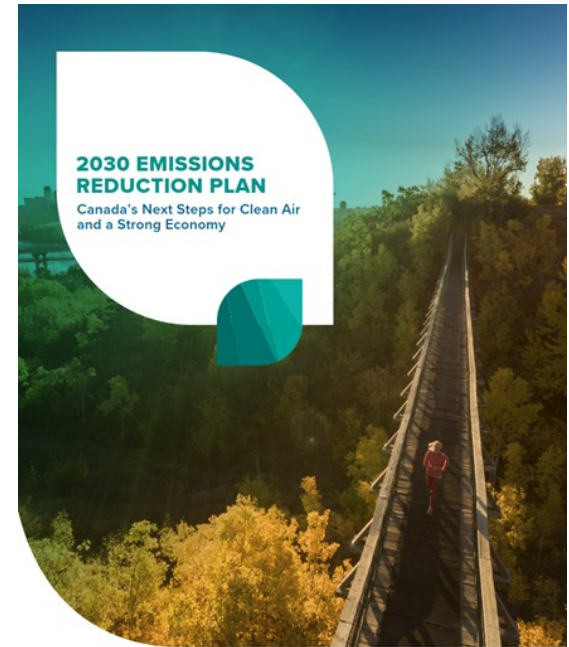
# Canada's Policy Position

- Canada's 2030 Emissions Reduction Plan
  - 100% of sales of light duty will be ZEV by 2035
  - 100% of sales of heavy duty will be ZEV vehicles by 2040
- Capitalize on the global shift toward ZEV
  - Vehicle production, battery production
  - From mining, to manufacturing, and recycling



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# Canada-UK Net Zero Value Chain –Transportation

Innovate UK will work with the National Research Council of Canada Industrial Research Assistance Program (NRC IRAP) to invest a combined total of up to £4 million in innovation projects in automotive, rail and maritime

The **AIM** of this competition is to foster and support collaborative research and development (CR&D) through Canadian and UK partnerships

Your project can address on-vehicle, including locomotives, or on-vessel technologies, processes, or technology-based services, around 4 Specific Themes:

1. Low and zero emission propulsion
2. Advanced sustainable materials and manufacturing
3. Highly disruptive technologies
4. Assistive technologies and control systems



# Canada-UK NZVC – Your Project

Your project must:

- have a grant funding request of no more than £300,000 allocated to UK organisations
- have a grant funding request of no more than CA\$500,000 allocated to each eligible Canadian SME
- start by 1 January 2023
- end by 31 December 2024
- last between 12 and 24 months

# Canada-UK NZVC - Scope

## Automotive

- niche and mainstream on-road vehicles and off-road vehicles
- Including: mopeds, motorcycles, passenger and goods vehicles and trailers, agricultural, construction and special use vehicles

## Rail

- all locomotive classes including those for freight and passenger carrying services and carriages

## Maritime

- range of ship types from small vessels to large cargo carriers

Technology transfer projects from other transport or energy sectors, or projects that span across multiple sectors are welcome

# Canada-UK NZVC – Project Requirements

Your project must:

- develop on-vehicle or on-vessel technologies that deliver net zero solutions, speeding up their introduction to the market
- justify how the technology improves overall vehicle or vessel efficiency and lifecycle CO2 emissions
- validate the technology in a relevant environment, for example in a testbed or through a development mule or adapted current production vehicle or vessel for higher maturity technologies
- deliver the technology at a lower cost than today without compromising safety or capability
- consider approach to manufacturing including at the target scale and using advanced processes
- show a clear route to market including appropriate business models to exploit the technology commercially and identify an appropriate end customer(s)
- show a reduction of the environmental impact of the technology including resource efficiency and end of life options such as recycling, remanufacturing or reuse

# Canada-UK NZVC – Specific Themes

- Your application must focus on at least one of the Specific Themes.
- If your project spans more than one theme, you must select the one that reflects the majority of work and clearly state the other themes within your application.
- If your application does not directly fit with the themes described, you can contact Innovate UK or NRC IRAP who will be able to advise on eligibility.

Your project can focus on one or more of the examples listed for each theme.

# Canada-UK NZVC – Specific Themes

## Theme 1: Low and Zero Emission Propulsion

1. power electronics, machines and drives (PEMD) systems for electrified powertrains for vehicles, locomotives or vessels, including retrofitting of fossil fuel internal combustion engine (ICE) vehicles to EVs or FCEVs
2. hydrogen and fuel cell (FC) technologies
3. low emission carbon neutral propulsion, including range extenders (ICE or FC) and hydrogen ICE
4. energy storage technologies (including batteries) and energy management software and controls
5. energy efficient electrification for traction and non-traction rail vehicles, and bi-mode locomotives (hydrogen and battery powered)
6. vessel propulsion that uses batteries, fuel cells, hybrids, or engines with low carbon alternative fuels such as hydrogen, methanol or ammonia
7. on-vessel power generation and fuel production to reduce GHGs, e.g. wind turbines, solar panels and synthetic fuel production

# Canada-UK NZVC – Specific Themes

## Theme 2: Advanced Sustainable Materials and Manufacturing

1. sustainable lightweight materials, including processes, composites and joining, for vehicle and vessel panels and structures
2. additive manufacturing processes for complex structural vehicle and vessel components
3. advanced methods for corrosion resistance and durability improvement in multi materials including composites, metal, and ceramic blends, and novel materials
4. materials and manufacturing processes for batteries, fuel cells and PEMD
5. extraction or recovery, recycling and remanufacturing reuse processes for critical valuable materials used in devices such as fuel cells, batteries and electric powertrains

# Canada-UK NZVC – Specific Themes

## Theme 3: Highly Disruptive Technologies

1. technologies or processes that significantly increase the efficiency of the powertrain or reduce the energy demand of auxiliary systems
2. advanced design methods and tools for aerodynamic vehicle (or hydrodynamic vessel) designs, including simulation and modelling, and design for manufacture
3. energy transmission technologies that efficiently deliver power to vehicles or vessels such as battery recharging and connectivity
4. novel electrochemical catalysts or membranes for the conversion of CO<sub>2</sub> emissions into low or net zero carbon fuels including syngas and ethanol
5. on-board hydrogen technologies to power the drive, or auxiliaries in passenger or freight rail systems
6. technologies that optimize rail vehicle ventilation systems and climate control for healthier travel

# Canada-UK NZVC – Specific Themes

## Theme 4: Assistive Technologies and Control Systems

1. autonomous mobility technologies from platooning, to ADAS and last mile delivery solutions that provide direct and indirect efficiency savings
2. technologies that increase safety and operational efficiency via in-service remote health monitoring
3. smart shipping technologies delivering quantifiable energy efficiency savings and GHG emission reductions
4. technologies to support automated train and track inspections such as machine vision and AI
5. optimisation of fleet energy efficiency



# OUT OF SCOPE

Projects out of scope:

- not covered by any of the 4 specific themes
- focus on the aviation sector
- focus on micro-mobility
- focus on development of fossil fuels or zero carbon fuels and their combustion
- focus purely on production scale up activities and supply chain development
- focus on factory-based vehicles, including forklift trucks
- focus on physical infrastructure including those which support low and zero emission vehicles and vessels, for example vehicle charging
- involve R&D related to products, processes, or technological-based services with military or non-peaceful applications
- are business as usual projects
- are dependent on export performance
- are dependent on domestic inputs usage



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# Scope Q&A



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# Eligibility criteria

# Previously submitted applications

This competition **does not** 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 <u>not</u> materially different from one you have submitted before (but it can be updated based on the assessors' feedback)	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: <ul style="list-style-type: none"><li>✓ has been updated based on assessor feedback</li><li>✓ <u>and</u> is materially different from the application submitted before</li><li>✓ <u>and</u> fits with the scope of this competition</li></ul>

# Eligibility criteria

Project eligibility	<p><b>To <u>lead</u> a project your organisation must:</b></p> <ul style="list-style-type: none"><li>• be a UK registered business of any size</li><li>• partner with a Canadian registered small or medium enterprise (SME) (500 or fewer employees)</li></ul> <p>or</p> <ul style="list-style-type: none"><li>• be a Canadian SME</li><li>• partner with at least one grant claiming UK registered SME</li></ul>
Canadian orgs	<p>Canadian SMEs must be successful in the Expression of Interest to be eligible to apply</p> <p>* Registration deadline: <b>9 May 2022</b></p> <p>* Expression of Interest submission deadline: <b>13 May 2022</b></p>
Total grant	<ul style="list-style-type: none"><li>• no more than <b>£300,000</b> allocated to UK organisations</li><li>• no more than <b>CA\$500,000</b> allocated to <u>each</u> eligible Canadian SMEs</li></ul>
Project start	<ul style="list-style-type: none"><li>• start by <b>1 January 2023</b></li><li>• end by <b>31 December 2024</b></li></ul>
Project length	between <b>12 and 24</b> months

# Eligibility criteria

To collaborate with the lead, your organisation must be one of the following:

- UK registered business of any size
- UK registered academic institution
- UK registered research and technology organisation (RTO)
- Canadian SME
- Canadian research organisation (on a self-funded basis or as subcontractor)

\* Applicants from UK academic institutions or RTOs cannot claim more than **30%** of the UK's total grant requested

\*\* Subcontractors are limited to no more than **20%** of your organisation's total eligible costs

# Eligibility criteria

- Your collaboration must include at least one grant claiming UK registered micro, small or medium-sized enterprise (SME) and one eligible Canadian registered SME.
- Projects should have a balanced contribution of the total eligible project costs among the partners from the participating partner countries.
- No one country or project partner can represent more than **70%** of the total project cost.
- The majority of the project work must be undertaken in the **UK and Canada**.
- Your proposal must demonstrate a clear intention to commercially exploit the results of the project domestically or globally.

# Making more than one application

- A UK business can only lead on **one** application but can be included as a collaborator in **one** further application.
- A UK business that is not leading an application can collaborate on a maximum of **2** applications.
- A Canadian SME may only participate in **one** application either as a lead or partner.
- Academic institutions or RTOs can collaborate in any number of applications.



# Key Dates

Timeline	Dates
Competition opens	<b>4 April 2022</b>
Briefing event	<b>7 April 2022</b>
Matchmaking event	<b>25 April 2022</b>
Canadian EoI registration deadline	<b>9 May 2022</b>
Canadian EoI submission deadline	<b>13 May 2022</b>
IFS submission deadline	<b>29 June 2022, 5pm UK time (9am PDT and 12pm EDT)</b>
Applicants informed	<b>16 September 2022</b>



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# **Innovation Funding Service (IFS)**

# Search for a funding competition and review criteria

## Canada-UK Net Zero Value Chains - Transportation

UK registered businesses and Canadian SMEs can apply to collaborate on joint R&D projects that enable the transition to net zero for the automotive, rail, or maritime sectors.

### Eligibility

This competition is open to Canada-UK collaborations only.

To lead a project your organisation must:

- be a UK registered business of any size
- partner with a Canadian SME

or

- be a Canadian SME
- partner with at least one grant claiming UK registered SME

### Open now

Opened: 4 April 2022

Closes: 29 June 2022

Funding competition

## Canada-UK Net Zero Value Chains - Transportation

UK registered businesses and Canadian SMEs can apply to collaborate on joint R&D projects that enable the transition to net zero for the automotive, rail, or maritime sectors.

**Competition opens:** Monday 4 April 2022

**Competition closes:** Wednesday 29 June 2022 5:00pm

[Start new application](#)

Or go to [your dashboard](#) to continue an existing application.

Summary

[Eligibility](#)

[Scope](#)

[Dates](#)

[How to apply](#)

[Supporting information](#)

### Description

Innovate UK, part of UK Research and Innovation, will work with the National Research Council of Canada Industrial Research Assistance Program (NRC IRAP) to invest a total of up to £4 million in innovation projects. These will enable transition to net zero for the automotive, rail, or maritime transportation sectors.

The aim of this competition is to foster and support collaborative research and development (CR&D) through Canadian and UK partnerships. Your proposal must demonstrate high potential for commercialisation, address a technological challenge and target large global markets.

This competition closes at 5pm UK time (which is 9am PDT and 12pm EDT) on 29 June 2022.

# Lead Applicant: create an account

The lead applicant must create an account:

- **Canada registered SMEs**

Select 'no' to 'Are you based in the UK?'

Enter your organisation's details

- **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 (UK and Canada)**

Enter your information manually



GOV.UK Innovation Funding Service

BETA This is a new service – your [feedback](#) will help us to improve it.

[Back](#)

Create your account

### Your organisation

Your organisation must be UK based to receive funding from Innovate UK

**Business**

**Find your organisation on Companies House**  
Enter your organisation name or registration number

**Companies House search results**  
Select your organisation from the options below

[NOMENSA LTD](#)  
04214477 - Incorporated on 10 May 2001  
13 Queen Square, Bristol, BS1 4NT

GOV.UK Innovation Funding Service

BETA This is a new service – your [feedback](#) will help us to improve it.

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## Please sign in or create an account

**Used this service before?**  
Please sign into your Innovation Funding Service account.

**New to this service?**  
If you haven't used the new Innovation Funding Service before you will need to create an account.

### Innovation Funding Service Sign in

Email address  
**Please enter your email address.**

Password  
**Please enter your password.**

[Show](#)

[Need help signing in or creating an account?](#)

**My email and/or password isn't working**

If you applied previously using the old service, you will need to create a new account.

[Forgotten your password?](#)



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# Project Details

**Application Team** - Collaborators can invite organisations who you are working with on the project. Contributors can invite colleagues from your own organisation to help you complete your application

**Application Details** - Title, timescales, research category, innovation area

**Subsidy basis** - Will the project, including any related activities, you want Innovate UK to fund, affect trade between Northern Ireland and the EU? All participants must complete this section.

**Equality, Diversity and Inclusion** - External survey to complete

**Project Summary** - Short summary and objectives of the project including what is innovative about it

**Public Description** - Description of your project which will be published if you are successful

**Scope - How does your project align with the scope of this competition?** - If your project is not in scope it will be immediately rejected and will not be sent for assessment

# Application Questions

Application form		Appendix?
Question 1	Applicant location (not scored)	No
Question 2	Themes (not scored)	No
Question 3	Equality, diversity and inclusion (EDI) (not scored)	No
Question 4	Need or challenge	No
Question 5	Approach and innovation	Yes - optional
Question 6	Team and resources	Yes - optional
Question 7	Market awareness	No
Question 8	Outcomes and route to market	No
Question 9	Wider impacts	No
Question 10	Project management	Yes - mandatory
Question 11	Risks	Yes - mandatory
Question 12	Added value	No
Question 13	Costs and value for money	Yes - mandatory



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# Application finances



## Are you requesting grant funding?

### Your project costs

Provide the project costs for XXXXXXXXXXXXXXXX

Only your organisation can see this level of detail. All members of your organisation can access and edit your project finances. We recommend assigning completion of your project finances to one member of your team.

[Open all](#)

Labour	£178,017 +
Overhead costs	£35,603 +
Materials	£0 +
Capital usage	£0 +
Subcontracting	£0 +
Travel and subsistence	£6,000 +
Other costs	£0 +
TOTAL PROJECT COSTS	£219,620

**NOTE:** Canadian organisations must:

- say NO to requesting grant funding
- enter zeroes in this section

# Project cost summary

Project cost breakdown								
	Total	Labour	Overhead costs	Materials	Capital usage	Subcontracting costs	Travel and subsistence	Other costs
<b>Barry Shaw Experts Ltd</b> Partner	£230,162	£84,052	£16,810	£90,550	£0	£35,000	£3,750	£0
<b>EMPIRE LTD</b> Lead organisation	£331,442	£222,414	£44,483	£11,750	£13,000	£36,795	£3,000	£0
<b>University of Bath</b> Partner	£19,762	£8,104	£5,731	£412	£0	£0	£504	£5,011
<b>Total</b>	<b>£581,366</b>	£314,570	£67,024	£102,712	£13,000	£71,795	£7,254	£5,011

This is the level of cost detail that the assessors will see during the assessment process.

Ensure the highlighted costs in the summary are only **UK organisation** project costs.

Canadian organisations must enter zeroes.

All organisations can see a summary of project costs.

# Checking your finances are complete

## Finances Summary

**The following organisations have not marked their finances as complete:**

- EMPIRE LTD



[Return to the finances section to complete your finances](#)

This application cannot be submitted unless finances have been marked as complete by all partners.

		Total costs	% Grant	Funding sought	Other public sector funding	Contribution to project
<b>Barry Shaw Experts Ltd</b> Partner	✓	£230,162	70%	£161,113	£0	£69,049
<b>EMPIRE LTD</b> Lead organisation	⚠	£282,655	70%	£197,859	£0	£84,797
<b>University of Bath</b> Partner	✓	£239,114	0%	£0	£0	£239,114
<b>Total</b>		<b>£751,931</b>		£358,972	£0	£392,959

All organisations have marked their finances as complete.

Ensure the highlighted costs fit the criteria for this competition with a maximum total grant of **up to £300,000 for UK organisations.**

UK research organisation participation is no greater than **30%** of the total UK grant requested.

**IFS DOES NOT VALIDATE YOUR TOTAL GRANT REQUEST**


# Terms and Conditions

Before you can submit your application you must agree to the draft terms and conditions.

## Terms and conditions

You must agree to these before you submit your application.

[Award terms and conditions](#)

 Incomplete

Review and submit

 [Print your application](#)



I agree to the [full terms and conditions](#) set out by the funding authority. I understand I need to agree to the final contract if my application is successful.

Agree and continue



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# Submitting your application

# Editing a submitted application

[test](#)  
Application number: 242  
Competition: 599 Covid de minimis round 2

Awaiting assessment


Application submitted  
[Reopen](#)

Reopen by clicking here

**Terms and conditions**  
You must agree to these before you submit your application.

[Award terms and conditions](#) ✓ Complete

Review and submit

 [Print your application](#)

Remember to  
press 'Submit  
application' again

**Terms and conditions** [Open all](#)

[Award terms and conditions](#) ✓ Complete +

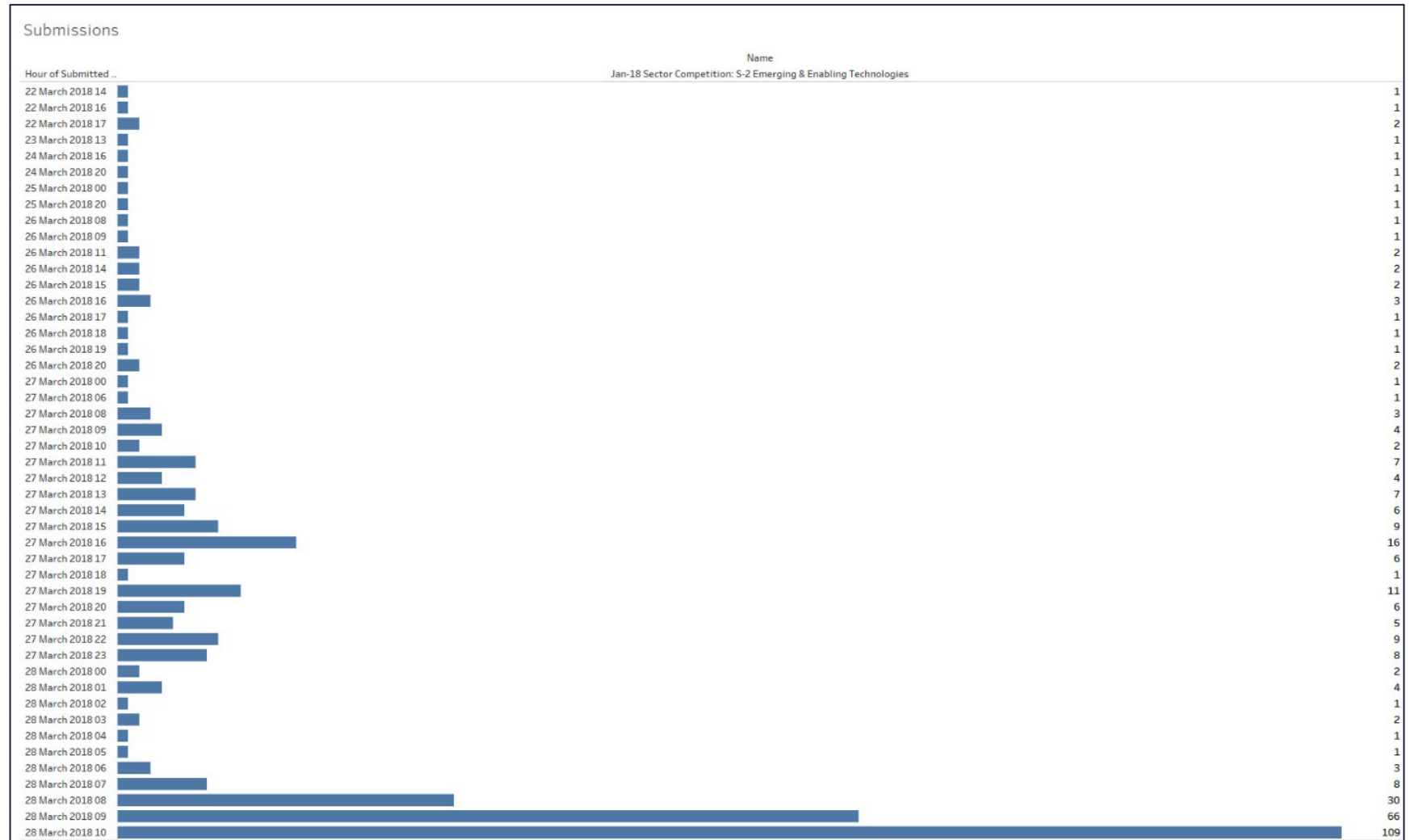
Submit application

Need help with this service? [Contact us](#)

# Submit your application early!

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.







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# Assessment

# Dual assessment process

All eligible applications will be assessed by independent assessors in both the UK and Canada.

## What do they look for?

- **Clear and concise** answers
- **The right amount of information**
  - not too much detail
  - no assumptions
- **Quantification and justification**
- A proposal that presents a **viable opportunity for growth, a level of innovation that necessitates public sector investment** and has the right **team and approach** to be successful

# Scoring

- We review scores to check assessors are adhering to our guidelines and scoring fairly
- At Innovate UK, where we feel a score is unjust and not supported by feedback, we may remove that score as an outlier and update the total score for the application
- Please be aware that both low and high outliers may be removed and as a result scores may increase or decrease

**If outliers are removed, we are unable to reflect this change in the scores you receive as part of your feedback due to this decision being reached outside the Innovation Funding Service system**

# Note on feedback

- The feedback is compiled using the written comments of the UK independent assessors who review and assess the applications
- It is intended to be constructive in nature and to highlight both the strong as well as the weak areas of your application
- Please bear in mind that because applications are assessed by a number of assessors, you may receive information which appears to be conflicting. This may reflect their different interpretations of the proposal that you submitted
- It must also be noted that you may score highly but are not awarded funding. In such instances it could be that your proposal simply fell below the funding threshold, with others achieving a higher merit score overall, or your proposal did not succeed at the portfolio review



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# Canada requirements: application process, funding

# Canadian Eligibility Requirements

The Canadian SME applicant must:

- be an incorporated, for-profit SME operating in Canada
- have 500 or fewer full-time equivalent employees
- pursue growth and profit by developing and commercializing innovative, technology-driven new or improved products, services or processes in Canada
- have a differentiated and protectable technology that could become competitive in global markets
- have sufficient working capital and resources to undertake a multi-year R&D collaboration and commercialize the results
- be committed to significant growth through international market expansion

Preference may be given to SME applicants who:

- have a minimum of 15 full-time equivalent employees
- have commercialized 1 or more products domestically or internationally
- have greater than \$500,000 CAD in annual revenue

# Canadian Expression of Interest

## Canadian Key Application Deadlines

- **May 9, 2022:** registration deadline
- **May 13, 2022:** Expression of Interest (EOI) form submission deadline

To register and receive an EOI form:

<https://nrc.canada.ca/en/irap/about/international/index.html?action=view&id=110>

## **Canadian SME applicants must be an NRC IRAP clients**

- If you are an active NRC IRAP client, work with your NRC IRAP Industrial Technology Advisor (ITA)
- If you are **NOT** an NRC IRAP client, please contact NRC IRAP at 1-877-994-4727
- EOIs will be evaluated by the Canadian SME applicant's NRC IRAP ITA and NRC IRAP International Office.



# International Consortium Project Proposal

- Only qualifying Canadian applicants will be invited to submit the more detailed international consortium project proposal (Innovate UK IFS project application) in collaboration with their UK project partners.
  - Canadian SME applicants that submitted an IFS project application but did not submit an EOI and were not invited to ICCP will be disqualified.
- The lead Canadian applicant will be provided all templates needed to submit the project application package.
  - **NRC IRAP Canadian SME Annex / Project Financial Cost Breakdown**
    - Salary costs, contractor costs, travel costs, other project costs
    - Benefits to Canada
  - **International Consortium Agreement** template
    - Roles and responsibilities of each consortium member, project management framework, division of intellectual property rights, confidentiality and publication agreements, and liability clauses
- No one country and/or organisation can represent more than **70%** of the total project cost.

# Canadian Funding

- Eligible Canadian SMEs may receive up to **50% reimbursement of eligible project costs** (labour, contractor and travel) up to a **maximum funding of \$500,000 CAD**.
  - Canadian SME applicants must be eligible for funding as NRC IRAP clients before they can be considered for funding through this call for proposals. For more information on NRC IRAP eligibility and becoming an NRC IRAP client, please contact NRC IRAP at 1-877-994-4727.
- Additional Canadian organizations (research institutes, universities, government laboratories, research and technology organizations, large enterprises and other companies) may participate on a **self-funded basis or as subcontractors**.



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**UK requirements:  
subsidy control, application  
finances, academic partners**

# Compliance with the UK Subsidy Control Regime

On 1 January 2021, the UK left the EU and is no longer subject to EU laws on State aid. We draw your attention to the guidance issued by BEIS: [Complying with the UK's international obligations on subsidy control: guidance for public authorities](#). Please be aware this is a living document and may be updated by BEIS as time progresses.

The set rules (typically GBER) which we previously relied on for the limits of what we could award, have now been replaced by internal decisions based on the new BEIS Subsidy Control Regime, and on policy, which will in turn set out bespoke eligibility requirements for each funding opportunity.

Innovate UK is offering funding for this competition in line with the UK's obligations and commitments to Subsidy Control. To ensure that Innovate UK remains compliant with the UK's international Subsidy Control duties in respect of:

- the EU-UK Trade and Cooperation Agreement;
- Article 10 of the Northern Ireland Protocol (successful applicants which are affected by the Northern Ireland Protocol will be funded in line with EU State aid regulations)
- Article 138 of the Withdrawal Agreement (some Union law applicable after 31 December 2020 in relation to the UK's participation in Union programmes and activities)
- the Subsidies and Countervailing measures within the WTO (ASCM)
- any other Free Trade Agreements active at the time of award

All awards will be conditional on compliance at all times with the UK's International obligations on Subsidy Control - this will be reflected in the terms and conditions of any award.

# Due diligence for UK Subsidy Control Regime

Under the Subsidy Control Regime, we will carry out financial health checks and going concern assurances on your organisation.

## Certify you are eligible

When submitting an application, you must certify that you are eligible for funding. If you are unsure, please take independent legal advice before applying. Should you be successful, we will complete these financial checks and assurances before confirming the grant offer.

For more information on company sizes, please refer to the [Company accounts guidance](#).

Further information is available on our website in the general guidance.

# Eligibility Criteria - EU State Aid Regulations – Northern Ireland Protocol

If you are an applicant who is conducting activities that will affect trade of goods and/or electricity between Northern Ireland and the EU as envisaged by [Article 10 of the Northern Ireland protocol](#), then you must apply under European Commission State aid rules.

## Undertaking in Difficulty

For applicants subject to the European Commission State aid rules, you will be required to prove that they were not an “Undertaking in Difficulty” (UiD). We will ask for evidence of this.

This test applies to:

- companies that are more than 3 years old
- companies where more than half of its subscribed share capital has disappeared as a result of accumulated losses.
- your parent or holding company

## Certify you are eligible

When submitting an application, you must certify that you are eligible for State aid. If you are unsure, please take legal advice before applying. Should you be successful, we will apply this test as part of our viability checks before confirming the grant offer.

Further information is available on our website in the [general guidance under state aid](#).

If you are applying for an award funded under State aid Regulations, the definitions for company size are set out in the [European Commission Recommendation](#) of 6 May 2003.

# Eligibility Criteria: Funding Opportunities

In this competition we are funding industrial research and experimental development projects.

**For industrial research projects, you could get funding for your eligible project costs of:**

- up to 70% if you are a micro or small organisation
- up to 60% if you are a medium-sized organisation
- up to 50% if you are a large organisation

**For experimental development projects which are nearer to market, you could get funding for your eligible project costs of:**

- up to 45% if you are a micro or small organisation
- up to 35% if you are a medium-sized organisation
- up to 25% if you are a large organisation

**For research organisations conducting fundamental research you could get funding for your eligible project costs of up to 100%.**

For general guidance on what our research categories are please visit:

<https://www.gov.uk/guidance/innovation-apply-for-a-funding-award#categories-of-research-and-development>



# Other Innovate UK projects

If you have an outstanding final claim or Independent Accountant Report (IAR) on a live Innovate UK project, you will not be eligible to apply for grant funding in this competition, as a lead or a partner organisation.

If you applied to a previous competition as the lead or sole company and were awarded funding by Innovate UK, but did not make a substantial effort to exploit that award, we will award no more funding to you.

If you applied to a previous competition as the lead or sole company and failed to comply with grant terms and conditions.



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# **Application finances for UK organisations**

# To claim funding

Your business does not have to be UK registered with Companies House when you apply but it must be registered before you can receive funding.

You are unable to claim funding if:

- you are an overseas organisation, so your company number begins with FC
- your organisation is setup as a branch, so your company number begins with BR
- you are a collaboration with no formal structure of ownership or control, so your company number begins with ML
- you are a Crown Dependency:
  - if your company is based in Jersey, your company number begins with JE
  - if your company is based in Guernsey
  - if your company is based in the Isle of Man

# British Overseas Territories

You are also unable to claim funding if your company is based in any of the British Overseas Territories (BOTs):

- Anguilla
- Bermuda
- British Antarctic Territory
- British Indian Ocean Territory
- British Virgin Islands
- Cayman Islands
- Falkland Islands
- Gibraltar
- Montserrat
- Pitcairn Islands
- Saint Helena, Ascension and Tristan da Cunha
- South Georgia and the South Sandwich Islands
- Turks and Caicos Islands

# Cost categories

## Your project costs

Provide the project costs for XXXXXXXXXXXXXXXX

Only your organisation can see this level of detail. All members of your organisation can access and edit your project finances. We recommend assigning completion of your project finances to one member of your team.

[Open all](#)

Labour	£178,017 +
Overhead costs	£35,603 +
Materials	£0 +
Capital usage	£0 +
Subcontracting	£0 +
Travel and subsistence	£6,000 +
Other costs	£0 +
TOTAL PROJECT COSTS	£219,620

# Labour

## Eligible:

- staff working directly on project
- paid by PAYE
- NI, pension, non-discretionary costs

## Ineligible:

- dividends
- bonuses
- non productive time
- overtime

**Labour**£25,862 —

You can claim the labour costs of all employees you have working on your project.

► [Labour costs guidance](#)

If your application is awarded funding, you will need to account for all your labour costs as they occur. For example, you should keep timesheets and payroll records. These should show the actual hours worked by individuals and paid by the organisation.

Working days per year

Number of staff and roles within the project

Role within project	Gross employee cost	Rate (£/day)	Days to be spent by all staff at this grade	Total costs	
<input type="text" value="Project Manager"/>	<input type="text" value="50000"/>	£216	<input type="text" value="120"/>	£25,862	<a href="#">Remove</a>
<input type="text"/>	<input type="text" value="0"/>	£0	<input type="text" value="0"/>	£0	<a href="#">Remove</a>

[Add another role](#)

Total labour costs **£25,862**

# Overheads

## Innovate UK's definition

Additional costs and operational expenses incurred directly as a result of the project. These could include additional costs for administrative staff, general IT, rent and utilities

## Indirect (administration) overheads

Please ensure they are additional and directly attributable to the delivery of the project

## Direct overheads

- e.g. office utilities, IT infrastructure, laptop provision not covered by capital usage
- must be directly attributable to the project
- provide detailed breakdown together with methodology/basis of apportionment

### Overhead costs

£ 44,483 ▲

You can incur overhead costs associated with those directly working on the project as well as indirect (administration) overheads. To be eligible both overhead categories need to be directly attributable to the project. The indirect overheads need to be additional as well as directly attributable. Note that there are certain cost categories/activities which are not eligible. To find out which costs are ineligible/eligible refer to our [project costs guidance](#).

► [Overheads costs guidance](#)

- ☐ No overhead costs
- ☒ 20% of labour costs
- ☐ Calculate overheads

### Calculate overheads

If you feel your overheads are higher than 20% you may calculate a value using the Innovate UK model in the spreadsheet available below. The model shows you which types of indirect costs associated with your project you may claim. For support with this option, please contact our Customer Support Service on 01793 44 2700. Any value claimed under this model will be subject to a review. This will assess the appropriateness of your claim if your grant application is successful.



#### Download the overhead calculation spreadsheet

Download as an Excel document [overhead calculation spreadsheet.xlsx \(16KB\)](#)

Download as an Open Office document [overhead calculation spreadsheet.ods \(10KB\)](#)

### Upload your completed spreadsheet

No file currently uploaded

+ Upload

# Material costs

Please be clear on what the materials are: just putting 'consumables' does not provide enough detail.

If insufficient information is provided, we will request more information should you be successful, which may delay your project start date.

**Materials**£10,000 —

You can claim the costs of materials used on your project providing:

- they are not already purchased or included in the overheads
- they are purchased from third parties
- they won't have a residual/resale value at the end of your project. If they do you can claim the costs minus this value

[Please refer to our guide to project costs for further information.](#)

► [Materials costs guidance](#)

Please provide a breakdown of the materials you expect to use during the project

Item	Quantity	Cost per item (£)	Total	
<input type="text" value="Software"/>	<input type="text" value="1"/>	<input type="text" value="10000"/>	<b>£10,000</b>	<a href="#">Remove</a>
<input type="text"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<b>£0</b>	<a href="#">Remove</a>

[Add another materials cost](#)

Total materials costs **£10,000**



# Capital equipment usage

## Eligible:

Used in the project or shared with day-to-day production.

Calculations will need to be in line with your accounting practices.

Even if the equipment is depreciated fully over the life of the project this must be added under capital equipment.

Capital usage

£750 —

You can claim the usage costs of capital assets you will buy for, or use on, your project.

► [Capital usage guidance](#)

Please provide a breakdown of the capital items you will buy and/or use for the project.

---

Item description

Laptop

New or existing item

☒ New ☐ Existing

Depreciation period (months)

24

Net present value at the start of your project or the price you bought it for (£)

2000

Residual value at end of project (£)

500

Utilisation (%)

50

Net cost

£750

# Subcontractors

Justified and quantified.

Subcontractor costs are limited to no more than 20% of your organisation's total eligible costs.

You can use subcontractors from overseas but must make the case in your application as to why you could not use suppliers from the country providing your funding.

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

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

# Travel and subsistence

## Eligible:

Costs must be directly linked to the project.

Please breakdown your costs as follows:

- Travel
- Accommodation
- Subsistence

If you have an annual trip to visit the parent company this is not an eligible cost.

**Travel and subsistence** £ 3,000 ▲

You should include travel and subsistence costs that relate to this project.

Purpose of journey or description of subsistence cost	Number of times	Cost each (£)	Total (£)	
Travel to robotics labs for testing	12	100	£ 1,200	<a href="#">Remove</a>
monthly project meetings	12	150	£ 1,800	<a href="#">Remove</a>

[Add another travel cost](#)

Total travel & subsistence costs £ 3,000

# Other costs

Costs that could not be added under previous headings

Do not double count

Patent filing costs for new IP – SMEs **up to £7,500**

## Other costs

£ 0 ▲

Please provide details of any project costs which cannot be covered by the other cost categories.

► [Other costs guidance](#)

Please note that legal or project audit and accountancy fees are not eligible and should not be included as an 'other cost'. Patent filing costs of new IP relating to the project are limited to £7,500 for SME applicants only. Please provide estimates of other costs that do not fit within any other cost headings.

### Description and justification of the cost

### Estimated cost (£)

0

[Add another cost](#)

# Consortium example

## Worked example – £400k total cost project:

Project costs for 4 partners (1 UK Large, 1 UK SME, 1 UK university and 1 Canadian SME, doing industrial research.

Org Type	Org Size	Total Eligible Project Costs	Maximum % of eligible costs which may be claimed as a grant	Innovate UK Grant	Project Contribution
UK business	Medium	£130,000	60%	£78,000	£52,000
UK business	Large	£200,000	50%	£100,000	£100,000
Canada SME	SME	0	0	0	0
UK university	HEI (80% FEC)	£70,000	100%	£70,000	nil**
<b>Total</b>		<b>£400,000</b>		<b>£248,000</b>	<b>£152,000</b>
** 20% FEC not to be shown as a contribution					



Research base costs	£70,000
Research base % of total grant requested (cannot exceed 30%)	<b>28.2%</b>



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# **UK registered academic partners**

# Why Je-S?

We use the Research Councils' Joint Electronic Submission System (Je-S) to collect academic finances.

The Je-S system automates the collection of Full Economic Costs (FEC) based costs from academic partners and tells them exactly what numbers should be used in the application form for their costs.

Also to collect project finance details from non-HEIs (e.g. RTOs) that are claiming they are carrying out academic quality work and want to be funded on an FEC basis.

Using Je-S means that Innovate UK follows standard Research Council guidelines on funding universities and enables Research Councils to easily co-fund Innovate UK projects.

**The Je-S system is completely separate from Innovate UK and we cannot advise on its usage.**

# Project costs – academic partners

Enter the TSB reference number here. →

Enter the TSB Contribution column figures from *your* J-eS output document into the project costs section of the application.

Upload the Je-S with council status form as a PDF at the bottom of the screen.

**Any queries, contact Je-S Helpdesk (not Innovate UK)**

- [jeshelp@je-s.ukri.org](mailto:jeshelp@je-s.ukri.org)
- 01793 444164

<b>TSB reference</b> This number is found at the top of your Je-S form	
<input type="text" value="My REF"/>	
<b>Financial resources</b> Please enter the following costs from the summary of resources section on your Je-S form	
<b>Directly incurred</b>	<b>TSB Contribution (please refer to the TSB contribution column)</b>
Staff	<input type="text" value="11"/>
Travel & subsistence	<input type="text" value="22"/>
Other costs	<input type="text" value="33"/>
<b>Subtotal</b>	<input type="text" value="£ 66"/>
<b>Directly allocated</b>	
Investigators	<input type="text" value="44"/>
Estates Costs	<input type="text" value="55"/>
Other costs	<input type="text" value="66"/>
<b>Subtotal</b>	<input type="text" value="£ 165"/>
<b>Indirect costs</b>	<input type="text" value="77"/>
<b>Exceptions</b>	
Staff	<input type="text" value="88"/>





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# **Project setup for successful applicants**

# Notification

## **If you are unsuccessful in this competition**

You can use the feedback from the assessors to develop your idea and apply into another competition that allows previously submitted applications

## **If you are successful in this competition**

- the UK participants will need to progress through the Project Set Up stage
- any Canadian lead must coordinate this
- you will be assigned a Delivery Executive who will guide you through the Project Set Up process
- you will have 7 days to complete the project team, project details and bank details
- you will then have **98** days to complete project set up – funding may be withdrawn if this is not completed within this timeframe

**The lead applicant will receive all requests for information. If this is a Canadian SME, they will need to facilitate the progression of project setup on behalf of their UK partners.**

# Project set up

All communication will be through IFS. Ensure contact details are kept up to date.

Lead applicant must provide collaboration agreements and exploitation plans if applicable.

Any UK partners with individual total project costs of **up to** £50,000 must provide evidence with a Statement of Expenditure (SoE).

Any UK partners with individual total project costs **above** £50,000 must provide evidence with an Independent Accountants Report (IAR).

# Project delivery

All grants are paid **quarterly** in arrears and are only paid following **quarterly** reporting and necessary audits.

Claims can only be made for costs incurred and paid between the project start and end dates.

Monitoring of the project includes a visit from the appointed Monitoring Officer.

## **EDI statement**

Diversity and Inclusion is a priority at both Innovate UK and the National Research Council of Canada, and we welcome and encourage applications from people of all backgrounds. We are committed to making our application process accessible to everyone. This includes providing support for people who have a disability or long-term condition and face barriers applying to us. If you would like any support, please contact Innovate UK's Customer Support Service on 0300 321 4357 or [support@iuk.ukri.org](mailto:support@iuk.ukri.org) or contact NRC IRAP International Office at [IRAP.International.PARI@nrc-cnrc.gc.ca](mailto:IRAP.International.PARI@nrc-cnrc.gc.ca).



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# Q&A

# Contact

## Customer Support Services

0300 321 4357 (Monday - Friday 9:00am – 12pm and 2:00pm - 5pm)

[support@iuk.ukri.org](mailto:support@iuk.ukri.org)

## National Research Council of Canada Industrial Research Assistance Program (NRC IRAP)

### International Office:

[IRAP.International.PARI@nrc-cnrc.gc.ca](mailto:IRAP.International.PARI@nrc-cnrc.gc.ca)

## Innovate UK EDGE

<https://www.innovateukedge.ukri.org/>

## Innovate UK KTN (Knowledge Transfer Network)

[www.ktn-uk.co.uk](http://www.ktn-uk.co.uk)

## Innovate UK

<https://www.gov.uk/government/organisations/innovate-uk>

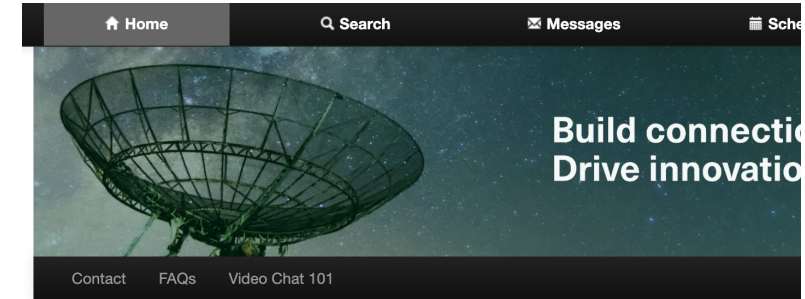


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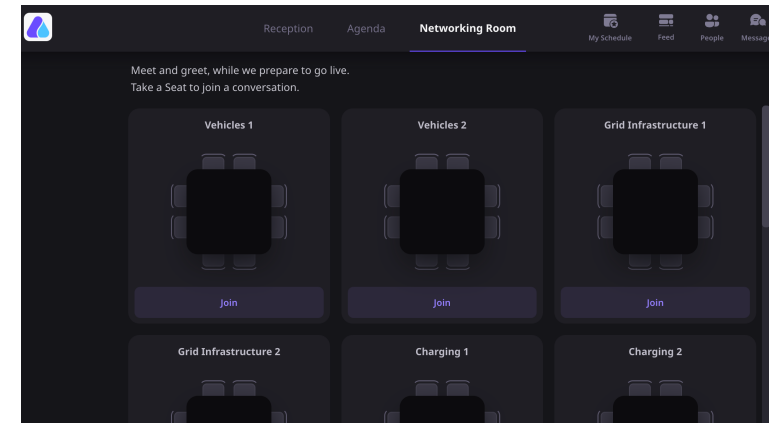
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# Networking – Reminder!

- Please sign up to our meeting mojo and create a profile.
- You can then review profiles and message to arrange a meeting.
- This will be open until the competition closes
- <https://canadauk-netzero-valuechains.meeting-mojo.com/>
- Networking event on 25<sup>th</sup> April
- 2 hour event with speed networking
- Attend if you are looking for partnerships across the Atlantic!
- <https://web-eur.cvent.com/event/42da4c77-32c5-4e15-8b29-e190ca226761/summary>



## Canada & UK Net Zero Value Chains - Transportation



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# Thank you



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# Appendix

# Funding

## Funding rules

The level of funding awarded will depend upon the type of organisation and the type of research being undertaken in the project

Funding is calculated by the project participant

IFS will advise the maximum grant % you can request based upon your answers to:

- type and size of organisation
- research category defined by the lead applicant in the Application Details section of the application

\*Remember the maximum total grant request for UK participants in a project is **£300,000**

<b>Organisation or type of activity</b>	<b>Industrial research</b>	<b>Experimental development</b>
UK business (economic activity)	Micro or Small – 70% Medium – 60% Large – 50%	Micro or Small – 45% Medium – 35% Large – 25%
UK research organisation (non-economic activity)	Universities – 100% (80% of Full Economic Costs)  Other research organisations can claim 100% of their project costs	Other research organisations must: <ul style="list-style-type: none"> <li>• be non-profit distributing and</li> <li>• disseminate the project results and</li> <li>• explain in the application form how this will be done</li> </ul>
Research organisations (undertaking economic activities) Organisations receive funding related to the size of their organisation	Micro or Small – 70% Medium – 60% Large – 50%	Micro or Small – 45% Medium – 35% Large – 25%