



-  **FUNDING & COMPETITIONS**
-  **PROJECTS**
-  **EVENTS & NETWORKING**

NVN Production Readiness 2023 Competition Briefing



www.nichevehiclenetwork.co.uk



Aims of this briefing

To help you to understand:

- Scope and eligibility criteria
- Timelines and deadlines
- Application process

Please note, this briefing will only cover the current Production Readiness competition.

We are not in a position to comment on any potential timing for a future earlier stage (Proof of Concept) collaborative R&D competition at this stage.



Production Readiness 2023 Competition

- Lead applicant must be an SME
- Consortium must include 3-4 partners
- Project duration of up to 9 months
- Total project costs up to £600k
- Up to 50% grant funding
- Successful projects must start on 3rd July 2023

Entry Criteria: Applicants should **already have completed (and can evidence) Proof of Concept level prior to commencement**, with an initial physical technology demonstration already built. Production Readiness projects should aim to advance both the technology and manufacturing towards pre-production readiness, with demonstration on a UK niche vehicle.

It is also expected that all Production Readiness applicants can clearly articulate their **intended route to market, and target Start of Production (SoP) date.**





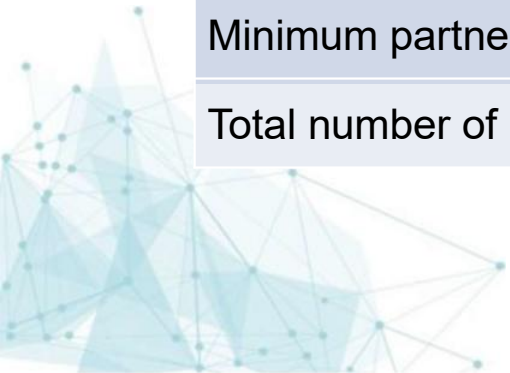
Competition Timing

	NVN Production Readiness 2023
Competition opens	17/03/2022
Bid submission deadline	24/04/2023 (17:00 GMT)
Assessment period	25/04/2023 – 09/05/2023
Initial feedback to applicants by	15/05/2023
Interview panel presentations (selected bids)	05/06/2023 – 07/06/2023
Winners notified by	09/06/2023 (subject to Funder Approval)
Due diligence and project contracting	Completed by 30/06/2023
Project starts	03/07/2023
Project completes	31/03/2024
Final report submission	30/04/2024



Competition Funding

	NVN Production Readiness 2023
Maximum total project cost	£600,000
Minimum total project cost	£300,000
Maximum grant intervention rate (per partner)	50%
Maximum total project grant	£300,000
Max. lead partner (SME) share of project	50%
Max. large company share of project	30% (1 large partner) 50% (2 large partners, where 1 is a Niche OEM)
Minimum partner share of project	10%
Total number of partners (including Lead)	3 or 4



Eligibility Criteria

- Collaborations must be business-led and address the specific requirements of the competition
- All funded activities must be undertaken in the UK by UK-registered companies
- **A clear route to market for the end-product must be identified**, with a focus on niche vehicle technologies
- The lead partner must be a UK-registered SME (including Micro) company active in the UK niche sector
- Organisations cannot lead or be a partner in more than one submitted bid
- Large companies, RTOs, Universities or University Group Companies cannot be the lead applicant
- Only one large organisation can be included as a project partner in each bid, unless the consortium includes a niche vehicle manufacturer/Tier-1 supplier/vehicle fleet operator in addition to an RTO, University or University Group Company

Technology Scope

Projects need to demonstrate the accelerated development of technologies based around one or more of the following areas, directly applicable to on-road or off highway, zero emission UK niche vehicles:

- Electric machines
- Power electronics
- Energy storage and energy management systems
- Fuel cells and associated systems
- On-board hydrogen storage
- Lightweight vehicle body, chassis and powertrain structures *
- Aerodynamics for improved energy efficiency *
- Other disruptive on-vehicle technologies that enable progression towards net zero

Light weighting and aerodynamics projects must be able to demonstrate **significant vehicle-level benefits, such as range extension, reduced energy consumption and/or negating the weight impact of adopting zero emissions propulsion systems*



Technology Scope – Exclusions

The following technologies are specifically **out of scope and ineligible** for funding in this competition:

- Development of AI systems, autonomous systems & associated software
- Conversions of internal combustion engines (ICE) to run on gaseous / alternative / zero carbon / synthetic 'e' fuels
- Activities related to any conventional engine R&D work – including range extenders
- Hybridization technologies
- Fuels & lubricants
- Off-board vehicle charging solutions, including Vehicle to Grid





Vehicle / Sector Types

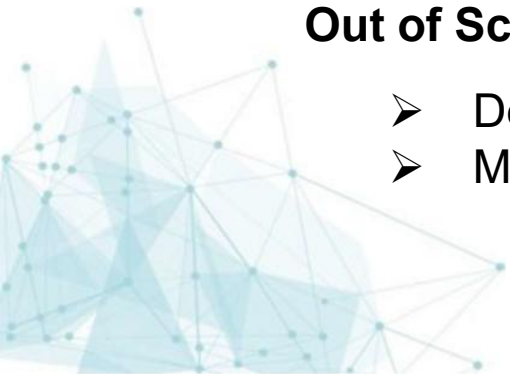
In Scope:

Powered, wheeled or tracked vehicles used on-road or off-highway, with niche vehicle applicability:

- E-bikes, e-trikes, e-cargo bikes, (including last mile delivery), e-scooters
- Motorbikes, quadricycles, cars, light commercial vehicles, taxis, last mile delivery vehicles
- Buses, commercial, municipal, agricultural & construction vehicles
- Special purpose vehicles (ambulances, fire & rescue etc)
- Driverless vehicles and PODs

Out of Scope:

- Dedicated motorsport and race vehicles
- Marine, rail, aerospace and drones



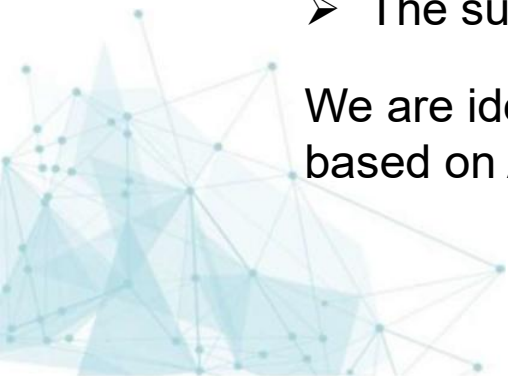


Entry & Exit Criteria

We expect that the technologies to be developed through this competition **will already have achieved the proof of concept level typical of an early stage R&D project, with a physical technology demonstration completed.** Successful Production Readiness projects should aim to advance both the technology and manufacturing towards pre-production readiness, such that by project end:

- Test and demonstration have been completed
- The technology has been proven in the intended vehicle application
- The performance has been validated
- Pilot production (or equivalent) capability has been developed
- Cost targets have been shown to be viable
- The supply chain requirements have been identified

We are ideally looking for projects to demonstrate TRL 6-8 and MRL 5-7 by completion, based on Automotive Technology and Manufacturing Readiness Levels





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Application Process





Application Process

Applications must be submitted online via the NVN Gateway, where you can also download the Application Pack which contains the following documents:

- Applicant guidance notes
- 'Annex A' project finances template
- Collaboration agreement template
- Project plan template
- Risk register template
- Frequently asked questions

The competition uses a **10-question application format** and provides an indication of the type of information we are expecting to see included in your response. Please bear in mind each question has a limit on the number of words that can be submitted, so **try to be clear, concise & factual with your responses.**

You will also be able to upload attachments to certain questions to support your application and provide further details. Limits on file size and format for attachments are clearly identified.

Lead Applicant

In collaborative R&D projects, the leadership role is crucial in achieving a successful outcome and subsequent exploitation. The lead partner chooses the other project partners - partners are defined as organisations that together form a consortium to work on a specific project within the NVN Programme. Consideration should be given to what capabilities are required to deliver the project and potential routes to market for the technologies developed or applied within the project.

- The lead partner must be a UK SME or Micro company active in the UK niche sector
- The lead partner is responsible for preparing and submitting the bid
- The lead partner chooses the other project partners and forms the consortium
- The lead partner is responsible for delivering the Collaboration Agreement
- The lead partner is responsible for managing the project
- The lead partner is responsible for communication with NVN throughout the project life
- Organisations cannot lead or participate in more than one submitted bid
- Large companies, RTOs, Universities or University Group Companies cannot be the lead applicant





Collaboration Agreement

The Lead Partner is responsible for ensuring that the collaboration is subject to a legal agreement between all the project partners. This is primarily to ensure that the intellectual property rights (IPR) of each partner resulting from the project are clearly defined before the project is assessed. It is anticipated that any developed IPR would normally be accessible to all project partners on a shared royalty-free basis.

Subcontractors must be legally excluded from sharing the project IPR.

A standard Collaboration Agreement template is supplied as part of the Application Pack, which can be amended as the consortium determines. Please note that **this must be submitted in final (unsigned) form with the bid**. The lead partner must ensure that, subject to the bid being successful, all partners will sign the Collaboration Agreement without further amendment. Please note that NVN is not a party to the consortium's Collaboration Agreement.

Projects will not be permitted to commence until a signed Collaboration Agreement between all parties is in place.



Financial Details

The provided 'Annex A' spreadsheet template must be used to submit the project costs for all consortium members. Organisation names and sizes must be Details of how costs should be calculated, and what is eligible or not eligible can be found in the Guidance notes document.

However, costs must be populated based on the following categories:

- Labour
- Overheads (max 20% of the labour costs)
- Travel and Subsistence
- Software
- Capital Equipment
- Materials
- Subcontracts

The cost phasing across the three quarters must also be populated for all applicants.



Ineligible Costs

The following costs are ineligible and should be excluded from any part of the project costs and any overhead calculations:

- Input VAT
- Dividend payments
- Use of blended labour rates inclusive of overheads
- Discretionary bonuses or performance related payments of any kind
- Time spent not working directly on the project (e.g. sick, non-productive time or training days)
- Forecasted pay increases
- Interest charges, bad debts, profits, advertising, entertaining
- Hire purchase interest and any associated service charges
- Advertising and marketing costs/activities
- Profit earned by a subsidiary of a project partner or by an affiliated company undertaking work subcontracted out under the project
- Inflation and contingency allowances (as an overall arbitrary percentage) additional to eligible costs – however reasonable inflation rates can be included in labour and material cost estimates
- The value of existing assets such as IPR, data, software programmes and other exploitable assets that any of the collaborators contribute towards the project
- Project audit/legal fees – the legal costs of setting up the project or the collaboration and costs associated with conducting audits or making grant claims are ineligible
- Royalties or payments to third parties associated with preparing project applications

Assessment & Approval Process





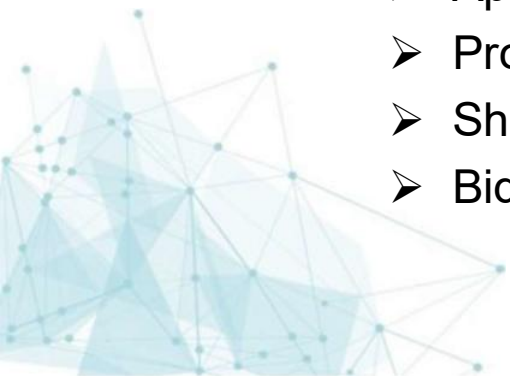
Bid Assessment & Award Process

Stage 1: Independent assessment of written bids

- A minimum of 4 Assessors will assess each submission
- Each of the 10 questions scores equally
- Projects are scored and then ranked according to quality & merit
- Bids rejected at this stage will be notified, with assessor feedback

Stage 2: Interview panel

- Selected submissions are invited to an in-person panel interview
- Applicants make a short project presentation followed by a Q&A session
- Projects scores are updated by the Assessors and a revised ranking produced
- Shortlisted projects are reviewed with the respective funders
- Bids rejected at this stage will be notified, with assessor feedback



Bid Assessment & Award Process

Stage 3: Due diligence

- Financial checks are carried out to ensure applicant suitability for funding
- We are unable to award organisations that are considered to be in financial difficulty (prohibited subsidy)
- Projects invited to the Stage 2 Interview Panel (as above) may be asked for certain financial information in advance of the Interview Panel

Stage 4: Formal offers & contracting

- Grant offer letters are issued by email to each successful consortium member
- Applicants sign & upload (along with finalised collaboration agreements) to NVN Gateway
- Projects will not be permitted to commence until all required documentation is in place





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Live Projects





Live Projects

Projects start: 3rd July 2023

Projects end: 31st March 2024

- All projects are required to completed a monthly RAG status with supporting comments via the NVN Gateway (completed by the lead applicant)
- Formal quarterly monitoring meetings (face to face) which all consortium members are expected to attend
- A final project summary report must be submitted by the lead applicant no later than one month after project completion
- Quarterly grant claims are submitted individually by each consortium member via the NVN Gateway, and paid in arrears





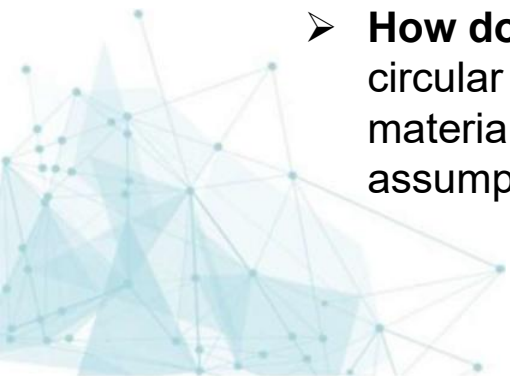
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What Makes a Project Fundable?



Important Considerations (1)

- **Please carefully read the Applicant Guidance notes before starting your application**
- Is the content and focus of your project clearly aligned with the published scope and eligibility criteria? Is it directly applicable to zero emission UK niche vehicles?
- Is your technology at the right readiness level for the competition – **have you already achieved (and can evidence) proof of concept demonstration?**
- For projects with a primary focus on light weighting or aerodynamics have you clearly explained how it will deliver significant vehicle-level benefits? **We are not looking to fund marginal component level improvements.**
- What novelty is there in your idea? Have the novel steps already been taken and proven? Describe the areas of technical and/or commercial innovation; try to be specific and be clear what differentiates your product from a technical or commercial standpoint.
- **How does the project support the transition to Net Zero**, including sustainability and/or circular economy principles? This could include factors influencing the selection or processing of materials, and end of life. How robust is the basis for any claimed CO₂e benefits – have the assumptions been clearly defined and explained?



Important Considerations (2)

- Describe the market in terms relevant to your intended product; **what evidence is there that the market will want it?** Will the timing be right for maximising its exploitation potential?
- How will it compare to current or future competitor products? Do you know what they have under development? Will they affect your sales?
- **What is your route to market and target start of production (SoP)?** Are you selling directly, through a higher tier, and is the supply chain going to be in place? **What evidence can you present that you objectively understand the price the market is prepared to pay?**
- **Please give sufficient detail for the assessors to clearly understand what work will actually be undertaken, assuming they have no prior knowledge.** Explain how the technology or concept works from an engineering standpoint,
- Be clear about your starting point – how has learning from a previous Proof of Concept project influenced the proposed approach? What are the opening TRL & MRL levels?
- The technical approach needs to give confidence that you will address the technical challenges in a logical, efficient and realistic way – including project phasing, gateways/milestones, work packages, responsibilities, outcomes.



Important Considerations (3)

- The project management approach needs to be complementary; is there a good management structure, is it collaborative, are partner roles clear? **The Gantt chart is crucial and needs to bear close scrutiny; include important dependencies and avoid unrealistic compression of key tasks in the later stages.** Every year we see evidence of unrealistic timings, leading to delayed vehicle builds and testing not being completed within the planned project duration.
- How have you selected the consortium? When describing the consortium be factual, objective and remember the context; be straightforward about company status, especially if you're pre-trading / start-up. How is the consortium's 'whole' greater than 'the sum of its individual parts'?
- Are the partners' skills complementary? Do the partners have any experience of working with one another? If so, in what context? Are there gaps, and are these covered by subcontractors? Have you agreed on the terms of collaboration?
- Do you have a realistic and objective perspective on what could go wrong on the project and the extent that these risks can be mitigated or managed? Good risk identification, realistic ratings, appropriate mitigation and a strong risk management ethos are what is required. **An initial Risk Register must be supplied with your application.**



Important Considerations (4)

- **Be very clear about what physical and virtual outputs you are committing to produce, as you will be monitored against them.** Is it a prototype system, or a system installed into an advance prototype or pre-production vehicle? **Vehicle-level demonstrations can only be on a zero emission UK niche vehicle.**
- **Be clear who owns which assets after the project completion** – both tangible and intangible; especially vehicles & IPR
- How will hardware be used during & after the project? Is sufficient time allowed for it to be useful? Will it be safe to demonstrate and what type of demonstration are you planning? What will happen to the vehicle after the project is completed? How long will it be available for dissemination purposes? Is there a firm commitment to provide the vehicle for project use?
- Please indicate your team's willingness to participate in dissemination activities, including the NVN Symposium and LCV Show. Specify the nature of your dissemination, including seminar presentations, press features, poster and desk-top displays, simulations, vehicle static displays and drive demonstrations. You should state any known constraints you will have (technical, operational, commercial).



Important Considerations (5)

- Explain why you need grant funding; **How does the project ‘add value’ to ALL the partner businesses?** Be as objective as possible – are your metrics credible?
- **We cannot fund ‘business as usual’ bids** (routine product development or your core business)
- Check that the split of funding between partners relates directly to who is paying for what – including parts procurement, supply of free issue parts, vehicles, subcontracting and testing. The overall sharing of the grant is subject to limitations, depending on the size of each organisation (see guidance)
- The **most common cause of project failure is disputes arising between partners** – often with partners falling out because there was **not enough clarity on roles, responsibilities, expectations, and IP arrangements BEFORE the project commenced**. A lack of regular communication can lead to misunderstandings, and partners do sometimes withdraw and want to take their hardware with it, or OEMs change their mind about providing a vehicle. What early preventative steps have been taken to avoid these issues occurring?
- Projects will not be allowed to commence until a signed Collaboration Agreement is in place.





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Contacts / Links





Contacts / Links

Funding gateway: <https://gateway.nichevehiclenetwork.co.uk>


Competition queries: nvn@cenex.co.uk

NVN LinkedIn group page queries: nvn@cenex.co.uk

Gateway registration issues, passwords & general IT support:
technical@mg.nichevehiclenetwork.co.uk





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Thank you



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