



ITES

Part of the **UK-India** Net Zero
Innovation Virtual Centre

Challenge call supporting documentation



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Innovate
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CATAPULT
Energy Systems

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1 ITES introduction



Energy Systems Catapult, in partnership with the Indian Institute of Science, is leading the [Innovating for Transport and Energy Systems](#) (ITES) initiative.

ITES is a landmark UK-India collaboration addressing key challenges around the decarbonisation of transport and the wider energy system. It drives joint research into specific sustainable transport issues and enables the piloting, support and scale up of new solutions.

The current challenge call will also see ITES partner with renowned innovation accelerators, [Social Alpha](#).

The ITES initiative is:

- Engaging with and supporting industry in developing solutions for hard to decarbonise parts of the transport system collaboratively or linking them to innovators
- Considering the whole systems aspects of transport challenges, from consumer acceptance to supporting infrastructure and impact on the energy generation system
- Looking to link leading Indian and UK research organisations, building on success of the Innovating for Clean Air (IfCA) programme and provide a springboard for UK and Indian innovators to trial their solutions in a low-risk environment
- Offering innovators access to technical skills, expertise and funding to support them trialing their solutions and bring them to market
- Offering links to conduct knowledge exchange between UK and Indian organisations

2 Context



In India, transport currently contributes to 10% of India's total fuel combustion, of which 90% comes from passenger transport. 18% of deaths are attributed to air

pollution, and vehicle activity and CO₂ emissions are projected to quadruple by 2050¹. India is committed to Net Zero by 2070, but is currently the third-largest carbon emitter globally (although low in terms of per capita emissions). Transport is one of the fastest growing emissions sectors, and Heavy-Duty Vehicles (HDVs) and cars contribute 60% of total road transport emissions. Freight and passenger volumes expected to grow by 6% annually until 2030, triple the Organisation for Economic Co-operation and Development (OECD) average.

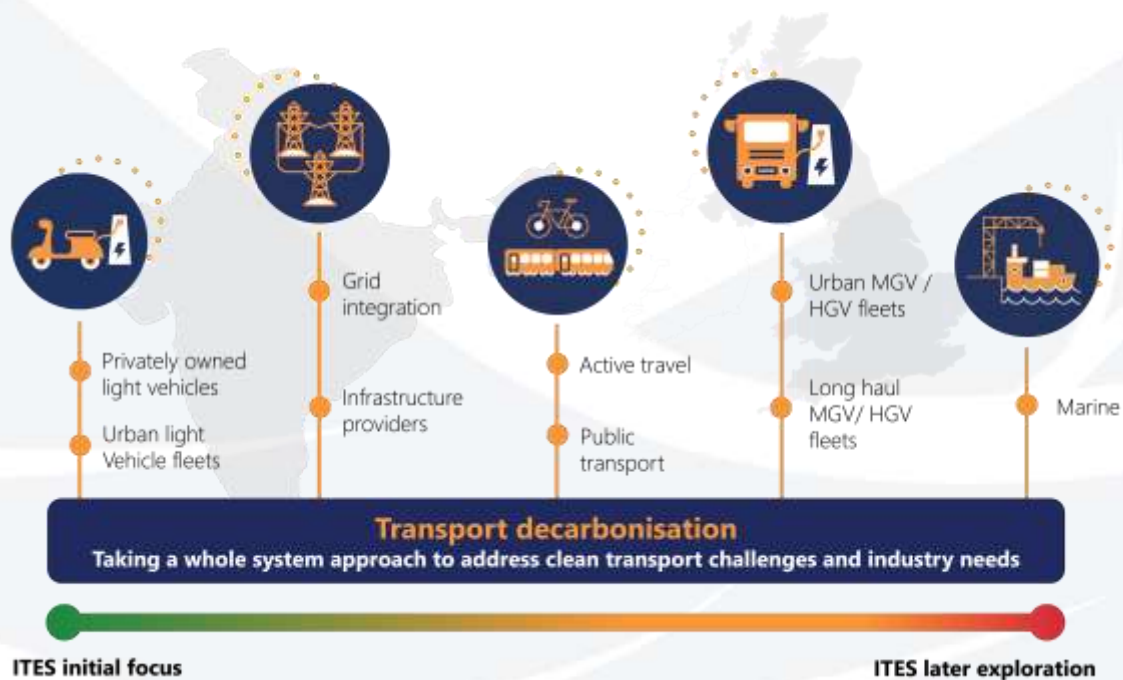
Although the specific transport decarbonisation challenges faced in India and the UK do vary, there are also a number of common elements and shared problems. Given the scale of the global Net Zero transition challenge, collaboration and sharing of expertise and solutions is likely to prove crucial.

ITES initiative aims to be the go-to support organisation for UK clean transport and energy innovators interested in the Indian market.

3 Sectors and themes



In order to support and accelerate the Indian Net Zero transition and foster innovation between the UK and India, ITES aims to address transport system decarbonisation challenges across the sectors outlined below:



¹ <https://www.carbonbrief.org/the-carbon-brief-profile-india/>

Building on existing networks and previous experience in India, alongside extensive research and stakeholder engagement, ITES has identified six themes covering India's biggest Net Zero transition challenges. These are:



4 Opportunity



ITES has identified several innovation focus areas as priorities for its activities over the next two years. The immediate innovation priorities that have been identified are:

- Battery management systems
- Battery recycling
- Battery swapping
- Biofuels
- Charging solutions and propositions
- Consumer engagement and outreach
- Energy storage & delivery
- Energy systems flexibility management
- EV fleet management
- Grid stability

- Hydrogen
- Maritime & port systems
- Microgrids
- Micro-mobility
- Public transportation & planning
- Rail
- Site-based / campus-based energy management
- Shared mobility
- Smart-charging

We're particularly interested in innovators in energy / flexibility management systems as we are scoping a potential pilot in India in this area.

Innovators with a solution outside of these focus areas but still addressing transport and energy system decarbonisation are welcome to apply.

Innovators may benefit from ITES's ongoing collaboration with [Social Alpha](#), which will give them opportunities to engage with relevant events, innovators and stakeholders in India.

The programme is seeking UK innovators working in these spaces to apply to this challenge call in order to begin addressing some of India's key transport and energy system decarbonisation challenges. The initiative is looking for applicants wishing to participate in a range of activities including:

- **Research sprints** to develop analytical capability and tools
- **R&D sprints** to develop applied solutions
- **Demonstration / pilot projects** for close to market solutions
- **Incubation / acceleration programs** for focused business support

We would like to invite interested parties ("Innovators") to come forward with transport decarbonisation solutions in the identified innovation focus areas outlined to apply to participate in this ongoing challenge call.

5 Key requirements and available support



ITES will support successful applicants in a variety of ways, depending on eligibility. Innovators will be offered a bespoke programme that may include:

- Incubation support to support your commercial capabilities and positioning
- Masterclasses
- Small amounts of grant funding

- Pitch development support
- Networking and relationship building
- Partner matching with Indian entities
- Real world testing, pilot and demonstration projects
- Resources including market research

The key requirements for application to this challenge call are:

- Innovators are a UK-based SME
- Innovators are developing technologies and solutions under the focus areas
- Innovators have an interest in the Indian market

6 Application and review process



We will review applications and conduct applicant interviews on a continuous basis until spaces have been filled. As such, SMEs are encouraged to submit their application as soon as they are able.

For any questions about the application process, please contact us at ites@es.catapult.org.uk.



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Energy Systems Catapult

7th Floor, Cannon House

18 Priory Queensway

Birmingham

B4 6BS

es.catapult.org.uk

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