

Sponsorship Pack 2023/24

University of Warwick
Student Rail Team



Who Are We?

WARWICK
THE UNIVERSITY OF WARWICK

Warwick Rail is a student project, led by 4th-year engineering students, building a scaled-down locomotive to take part in the annual IMechE Railway Challenge at Stapleford. The locomotive is electrically operated and powered by lithium-ion batteries, designed to run on a 10 ¼" gauge track. The project was fortunate to have been able to purchase a 70m test track on campus last year for testing and demonstration. The team has competed multiple times in previous years, however hasn't been able to attend since 2018. We are on track to make it to the 2024 competition with a fully working and competitive locomotive.

However, we need financial support to help get us there.



2023/24 Team (Daniel Collier, Harry Knight, Lydia Carlisle, Alex Crawley, Emanuele Ardillo, Alwyn Whalley, Taran Tiwana, Noby Philip Roys)

The IMechE Railway Challenge

The IMechE railway challenge has been bringing together students and graduates for the last 13 years to test skills and expertise in design, manufacturing, project management, and business. Teams design and manufacture their locomotive whilst working to strict rules and technical specifications, with an annually-changing set of challenges. This year's competition is taking place in June at the Stapleford Miniature Railway in Leicestershire.

More information about the challenge is available here:

<https://www.imeche.org/events/challenges/railway-challenge>

Whilst the team has every intention and desire to make it to the competition, there is always a chance the team do not make it this year due to unforeseen circumstances.

Why Sponsor Us?

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Investing in Talent

We are a team of extremely passionate and hard-working engineering students from a range of different disciplines. With a shortage of future rail engineers, you'll be investing in future generations of dynamic and innovative engineers who could benefit your industry or business.



Brand Visibility

The competition is attended by delegates and teams from top rail firms and universities, and the team would like to promote your brand and job openings on social media and to other students and academics. The engineering hall where the students work is constantly visited by business people, engineering leaders, and political figures where the projects are all on show.

Community and STEM Promotion

The educational benefits of the project continue well beyond our team. The team actively takes part in outreach events with local schools, teaching students about rail engineering and careers in engineering. We are also running an extra-curricular team, allowing even more students to get involved with the project and attend the competition.



Previous or current sponsors of the project include: Catapult High Value Manufacturing, West Midlands Rail Executive, Chiltern Railways, RS Components, Horizon Fuel Cell Technologies, Morgan Advanced Materials, Spectron Gas Control Systems, Arcola Energy, Acorn Printing, EBC Brakes, 4QD Electric Motor Control, and RoboteQ Motor Controllers.

Our Locomotive

The team are on track and eager to make it to the challenge with a competitive locomotive. The team inherited an unreliable and not fully-functional design and have 3 key aims between now and June:

- A new control and electrical system.
- An improved and more-compliant braking system.
- A fresh 'new look' and enhanced waterproofing.

The design incorporates regenerative braking, e-stop braking, lithium-ion batteries, safety lighting, and a safety controller.

The competition this year will, for the first time, judge the aesthetics of our design - so **there's never been a better time to sponsor the project and include your branding.**



Your
Logo
Here

(Graphics to be decided)



Previous Warwick Rail Team locomotives.

The Warwick Rail project is a fantastic opportunity for MEng students to gain experience of project management and delivery set in an industrial context. From team working to systems engineering, and programming to presentations, the participants must deliver a working and safe 1/5th scale locomotive for an international competition managed by the IMechE. The competition, held in June in Leicestershire over a long weekend, allows university and company teams to come together and compete at the highest level. The current Warwick locomotive utilises a clean full electric solution using state-of-the-art battery technology.

Darren Hughes Associate Professor, University of Warwick
Design Engineer, Coventry Very Light Rail

The student projects are a framework for the students to back up their academic knowledge with hands on experience. We're not just talking about the core engineering skills for automotive and engineering - this is every aspect of working in industry. So students that come down here have chance to work on not just the vehicles and go to the competitions, but they can work on outreach, they can work on HR, they can learn about procurement, they can learn about design, they can learn about FEA and simulations. All the things that you're required to do - the hands-on skillsets you'll need in industry in the future.

David Cooper Technical Advisor / Student Projects Lead,
WMG

Help Support Us

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warwick.ac.uk/fac/sci/eng/meng/railchallenge/

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