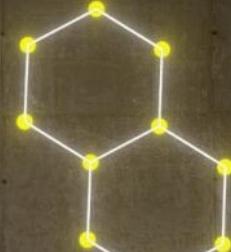


THE STUDENT-LED TRANSPORT REVOLUTION



Information Package



MANCHESTER
1824
The University of Manchester

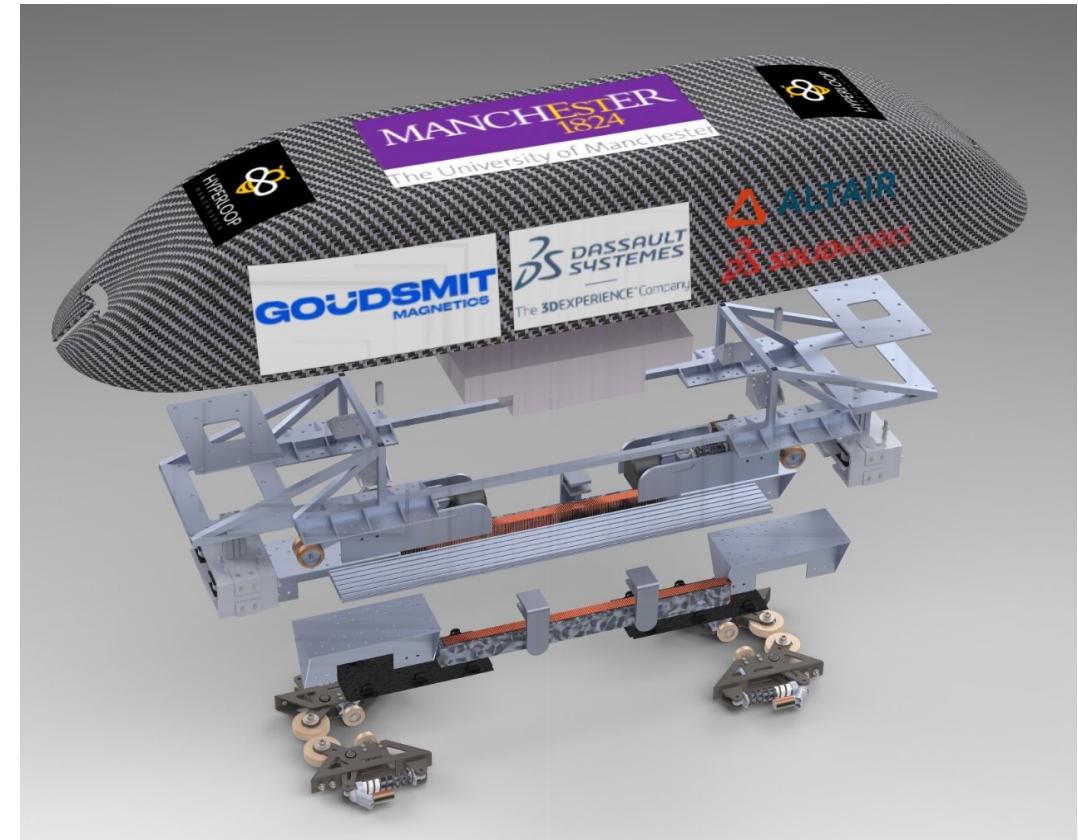


Who are we?

Hyperloop Manchester is a multidisciplinary student-led Hyperloop project organization aiming to compete in the Hyperloop competitions and to share our knowledge with people around the world.

The team was founded in 2019. In 2024-25, Hyperloop Manchester has **around almost 100 current team members** and vast number of alumni members from different nationalities and backgrounds.

One of our greatest achievement is earning recognition as a **top 5 finalist** in the esteemed **EHW competition** in 2021.



Hyperloop Manchester Alumni

To keep our precious community and make our network bigger year by year, we have created **Hyperloop Manchester Alumni**. Hyperloop Manchester Alumni has old members who have contributed our team with their passion and knowledge. Our alumni members still help our current working team when it is needed.

We organise an Alumni event once a year. This gives our current members a chance to expand their network scope, chase some opportunities in different industries, and learn more advanced details regarding the Hyperloop concept.



Purpose

As fully engaged students at the University of Manchester, our objectives are to design and build sustainable transportation, pioneer energy-efficient technology, and contribute toward zero carbon emissions, aligned with the university's objective of zero direct carbon emissions by 2038.

Hyperloop Manchester also focuses on knowledge-sharing on campus and within the university sphere. We plan to host seminars and lectures, in addition to collaborating with the Faculty of Teaching and Learning, embedding sustainability initiatives. Guided by the advice of our academic advisor, Dr Akin Atas, we work towards these objectives and contribute to the future of sustainable transport.



Accomplishments and Visibility

19

21/22

22/23

23/24

24/25

- **Founded** in October 2019 by two Turkish undergraduates, the idea soon attracted students from diverse programs ranging from physics, electrical engineering, and mechanical engineering.
- **Finalist** in European Hyperloop Week 2021. Team **placed in Top 5** in the Best Levitation Design category.
- First **Full-Scale Research** was completed in 2021.
- Continuous R&D. Won **Best Dissertation poster** award by Mechanical and chassis dissertation received departmental commendation.
- Built First Magnetic test rig to help test and prove the functioning of the Magnetic Levitation System in 2023.



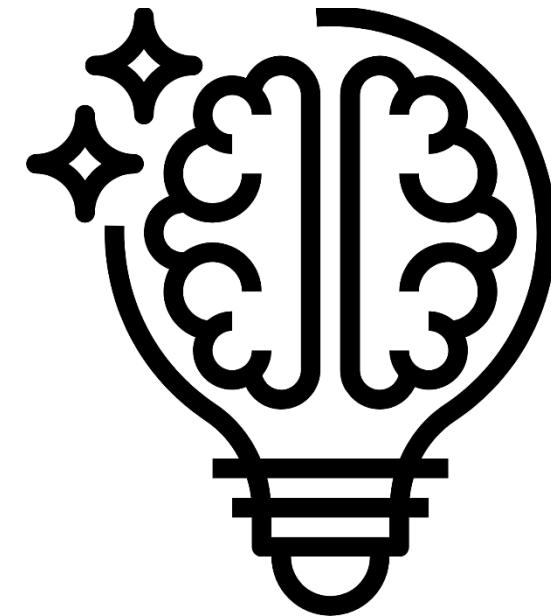
Values

- **Diversity** – The team consists of around 80 members from multiple nationalities and different backgrounds. Hyperloop Manchester highly believes that the key to the solution to the problems comes from different ideas.
- **Teamwork** – This is the core of Hyperloop Manchester. Everything in Hyperloop Manchester is done with teams and collaboration.
- **Passion** – Everyone in Hyperloop Manchester is allocated in their teams according to their interests and passions. Therefore, every member is passionate about their involvement in the team.



Values

- **Creativity** – Tasks in the team are based on the creative ideas and solutions to improve the aspects of the Hyperloop pod.
- **Innovation** – The value that essentially depicts the team is “innovation.” The team always aims to implement innovative applications in the designed Hyperloop pod and do research to continuously improve the Hyperloop structure.



What is Hyperloop?

Hyperloop is an exciting new concept in transportation that could change the way we travel between cities. Think of it as a high-speed train, but instead of running on tracks, it uses magnetically levitated pods that glide through tubes with very low air pressure. This setup drastically reduces air resistance and friction, allowing the pods to reach speeds of over 700 miles per hour.

Imagine travelling from one city to another in a fraction of the time it takes today what might be a six-hour drive could become a 30-minute Hyperloop journey. This system isn't just about speed; it's designed to be more energy-efficient and cost-effective than current options. By connecting cities less than 900 miles apart, Hyperloop has the potential to boost economies, reduce traffic congestion, and offer a sustainable alternative for regional travel.

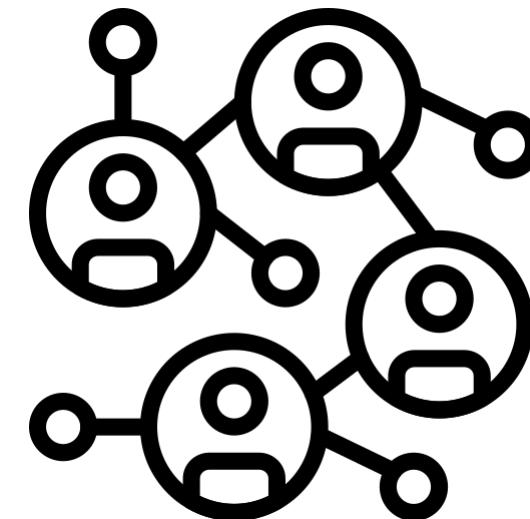


Team Structure

TECHNICAL TEAM

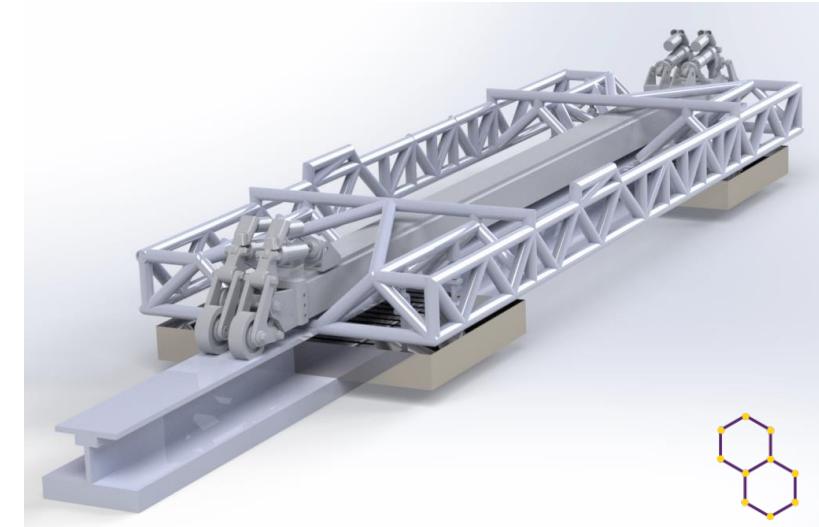


BUSINESS TEAM



Technical Team Structure

- Maglev
- Chassis
- Concept Team / Full-Scale
- Suspension
- Electronics
- Braking
- Business Team



Team Structure

Electronics

Function: Develop electronics and software for Hyperloop pod control and monitoring.

Achievements: Base station and prototypes are complete; ready for PCB design.

Plan: Finish PCB, finalize software, and run integration tests.

Concept & Full Scale

Function: Concept focuses on researching innovative technologies, with current interests in optimizing magnetic braking systems and LIM. Focuses on non-pod components like vacuum chambers and robotics.

Achievements: Expanding magnetic braking to optimizing Halbach arrays and exploring IronLev and LIMs.

Plan: Complete reports, advance promising projects to testing, and use data for initial sub-system designs.



Team Structure

Business

Function: Business Team divided into Marketing, Sponsorship and Event Management. Business team manages operational challenges and grow outreach of society.

Achievements: The team has secured various funding from private enterprises and internal university fundings.

Plan: We plan to host workshops and networking events in collaboration with our sponsoring partners.

Magnetic Levitation

Function: Designing a rotational and linear maglev system to see the change in varying arrays of magnets and its affects on magnetic force produced.

Achievements: Manufactured a rotational rig and written MATLAB code to assess researched data to analyse which array system is most efficient.

Plan: This year we will complete manufacturing of the linear rig and start to collect data from the rotational rig



Team Structure

Braking

Function: Design a friction braking system for emergency use during power outages.

Achievements: Team's greatest achievement Near-completion of a reliable system design.

Plan: Procuring standard parts and sending custom components for manufacturing. Assemble and create a working model by year-end.

Suspension

Function: Manages suspension systems for track stability and force absorption.

Achievements: Developed a new suspension design and sent parts for manufacturing, aiming for assembly this year.

Plan: Begin physical testing and assemble a full rolling pod with other sub-teams post-manufacturing.



Team Structure

Chassis

Function: Responsible for construction of pod's body and outer shell, ensuring subsystem integration.

Achievements: Completed the Chassis design last year. Designing and simulating the outer shell, collaborating on subsystem integration.

Plan: Complete outer-shell design and aim for manufacturing this year.



Sponsorship

Offerings

Brand Awareness and Visibility

- Your company logo will be displayed **on our pod**, merchandise items, exposure on our social media accounts and our press posters. The young students and university professors, will get to know your company.
- The Hyperloop team is confident that our pod will stand out as one of the top contenders in the upcoming two virtual competitions and one in-person **competitions**. We look forward to showcasing our achievements and gaining recognition across prominent media platforms.

Association with a prestige Academic Institution

- The University of Manchester is known worldwide for its academic excellence and research output. Associating with one of its societies reflects positively on the sponsoring company's brand, showcasing it as a supporter of high-caliber talent and academic success.

Talent Recruitment and Early Engagement

- Sponsoring Hyperloop provides companies with early access to top talent, enabling them to identify and cultivate future employees. Hyperloop comprises high-achieving, passionate, and proactive students with relevant skills, as well as an expansive, global alumni network excelling in diverse industries and companies.

What We Seek From Sponsors

Parts/Materials

- We are seeking in-kind contributions, such as materials and components for the manufacturing of our pod and software Licenses.

Financial Sponsorships

- Besides parts and materials, we are seeking for Financial Sponsorships to fund operation of society and purchase parts required.

Industry Insight and Market Knowledge

- Representatives from the business to give talks or host panel discussions on industry trends, future challenges, and innovations, broadening students' understanding of the field.

Industry Insight and Market Knowledge

- We are seeking financial support to cover the essential travel and accommodation costs required for our participation in upcoming competitions.



Competitions This Year

- **EHW**

Late July
Netherlands at Hyperloop
Center



- **Canada**

Late May
Virtual Participation



- **India**

Late Feb
Virtual Participation



Current Sponsors





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