

BREAKING Speed barriers!

Making India proud, the Hyperloop India team from BITS Pilani is flying to the US on August 15, to participate in the SpaceX event - Hyperloop Pod Competition II to be held on August 25-27 at Hawthorne, California - that will throw open the doors of a fifth, future mode of transport to the world

BHARATI PAWASKAR

The young engineering students in India are at work, trying to make a high speed vehicle which works on the principle of magnetic levitation designed to carry people at speed of around 1000 km per hour. In a one of a kind competition in the world, where the fifth mode of transport (apart from the current road, rail, water and air) will be a reality, young masterminds from India are participating in August 2017.

The eight students from BITS Pilani Goa campus who will be among the team are Dhruv Mahajan, Harikrishnan R Unnithan, Sairaj Khope, Sreejith Pisharody, Vinambra Bhatiya, Utkarsh Sarawgi and Kartik Kulgod. The initial team has now expanded, and has included the best engineering minds from engineering and business schools of India - BITS Pilani University, IIM Ahmedabad and Indian School of Business, National Institute of Design, RV College of Engineering and St Xavier College (Mumbai).

"We have built a prototype of hyperloop-like travelpod which can travel at 1000 km/hour. We will be testing this soon. Our pod is going to run in a one-mile long vacuum tube at SpaceX headquarters at California," says an eager and excited Sairaj Khope. A third year engineering student at BITS Pilani Goa campus pursuing BE (Hons) in Electronics and Instrumentation.

Sairaj, also a member of the University-wide team that worked on building the hyperloop pod in India for the competition, is leaving for US on August 15 with 18 other team mates. There are 10 non-testing members too. The team is the only Indian team that has been selected in the top 24 finalists who would compete with each other with their pods.

"During our two month working period, we were supported and mentored by experts in infrastructure, logistics, transportation and data collection from Workbench Projects, Hyperloop One and many others. We are grateful to persons like Pavankumar, Anupama Gauda and Jitendra Dauda who mentored and advised us at various stages of our work. They offered significant support in building the pod," recalls Sairaj.

This new transportation system needed to be safer, faster, lower cost, more convenient, immune to weather, sustainably self-powering, resistant to earthquakes, not disruptive to those along the route. Is there truly a new mode of transport - a fifth mode after planes, trains, cars and boats - that meets those criteria and is practical to implement? Initially, it was just an idea that was floated by Tesla CEO Elon Musk in 2013. After catching attention from the media and the community, it got momentum. Now with pods ready for testing, the dream concept is only a few steps away from turning into a reality.

Team Hyperloop India required

HYPERLOOP INDIA

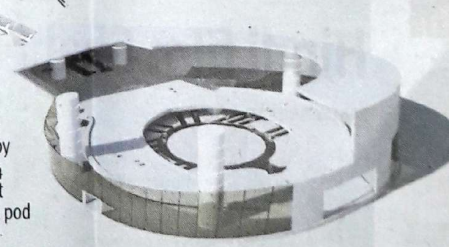
- Only team from India
- Only two countries selected from Asia, India and Japan to participate in the competition
- Team collected Rs 35.8 lakh through crowdfunding
- Worked on the prototype of the Pod for 24x7 at Bangalore
- Eight students from BITS Pilani (Goa campus) are a part of the Hyperloop India team that flies to the US on August 15

The competition

Team Hyperloop India will be competing for the SpaceX Hyperloop challenge at its final contest on August 25-27 at Hawthorne in California. It is the first and only team from India, and one of the two from Asia selected by SpaceX from among the top 24 finalists to build the super-fast mode of transport and race its pod alongside worldwide teams.

THE HYPERLOOP CONCEPT

Founded by a team of 60 students led by Team lead Sibesh Kar from BITS Pilani, Team Hyperloop India later expanded into a multi-disciplinary 150-member strong think tank with students supported by mentors and experts from various organisations. The concept is based on the fifth mode of transportation "Hyperloop" proposed by Tesla CEO Elon Musk, which would enable passengers to travel between cities at over 700 miles per hour through a system that would propel a passenger vehicle or cargo vehicle at jet speeds through a pod-like or steel tube vehicle, due to magnetic levitation in near-vacuum using a linear electric motor.



Rs 30 lakh to build the pod prototype and make it to California for the final contest which they managed to raise through crowdfunding. "We raised funds through crowdfunding campaign and Team Reflexes from US (BITS alumni) sent us 12500 dollars. The amount raised by crowdfunding was Rs 35.8 lakh when the campaign ended on August 9," states Sairaj.

"The manufacturing process of our pod happened at Ripple Technologies in Bangalore where Miracle Electrical Devices helped with the entire electrical and electronic testing and assembling," says Sairaj, 20.

The initial team expanded and included the best minds from top engineering and B schools of the country including BITS Pilani University, Indian School of Business and IIM Ahmedabad.

The students are supported and mentored by experts in transportation, logistics, infrastructure and data from organizations like Hyperloop One, MapmyIndia, SKF, Start-up India, Invest India, Workbench Projects, RITES, BMCL, Jindal Aluminium, Peenya Industries Association, NITI Aayog, Ripple Technologies and DP World India.