

**EUROPEAN  
SILK ROAD  
SUMMIT**

29 NOV - 1 DEC 2023

BUDAPEST, HUNGARY

“How Hyperloop in Turkey  
brings Europe and Asia closer  
together

30 Nov 2023



**EXPERT SPEAKER**

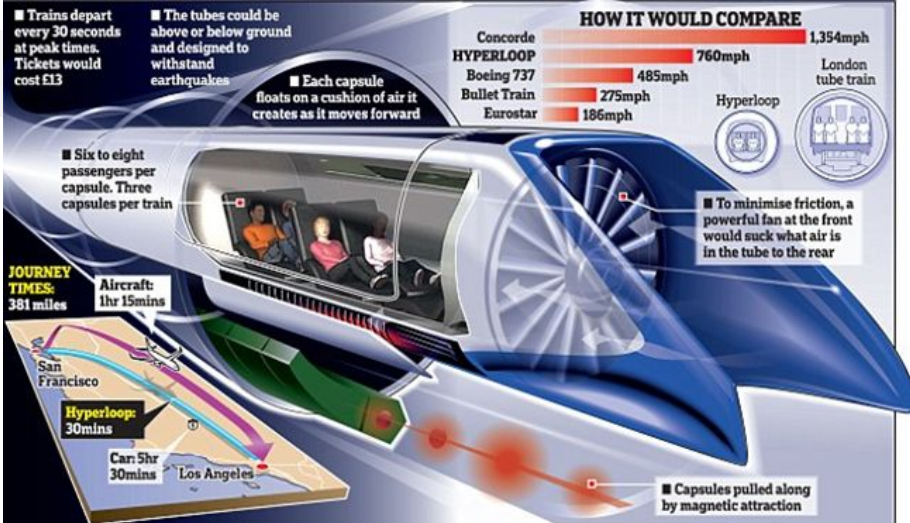
**Mehmet Örgen**

Hyperloop Leader & Corporate Affairs  
Director, Erciyas

[silkroadsummit.eu](https://silkroadsummit.eu)

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# Hyperloop | 10th Anniversary 2013-2023



## HOW THE HYPERLOOP WORKS

Elon Musk said that if the Concorde, a railgun and an air-hockey table had a three-way, the hyperloop would be the love child. Here's a look inside Hyperloop Tech's high-speed cargo pod.

**COMPRESSOR** Mounting a giant compressor fan on the front of the capsule is what makes the hyperloop possible, transferring huge volumes of air away from the nose. Without it, the pod would be pushing all the air in front of it, like a syringe, or you'd have to spend big bucks on a bigger tube. Respect the Kantrowitz limit—the top speed allowable given a tube-to-pod-area ratio.

**VACUUM TUBE** Capsules will travel in a near-vacuum to reduce drag significantly. Valves and pumps will keep internal air pressure at about 100 Pascals, or one-thousandth the air pressure at sea level. A little nitrogen may be injected into the tube as a desiccant.



**AIR BEARINGS** The capsule will ride on a cushion of air pumped from the bottom of lunch-tray-size sleds. Landing gear may need to be deployed as it comes to a stop.

**PAYLOAD** Hyperloop Tech's cargo capsule will be about 70 feet long, big enough to hold a standard 40-foot intermodal container. The capsule should weigh about 68,000 pounds and could theoretically accelerate from zero to 750mph in less than a minute.

**PROPULSION** The Hyperloop capsule speeds along a "magnetic river" propelled by linear induction motors spaced along the tube or installed as a continuous strip. Linear induction, used on maglev trains and the Toei Oedo Line in Tokyo's subway, has no moving parts and low maintenance costs.



### Steel Pipe



### Railways & Logistics



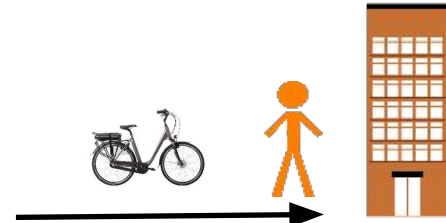
### Energy



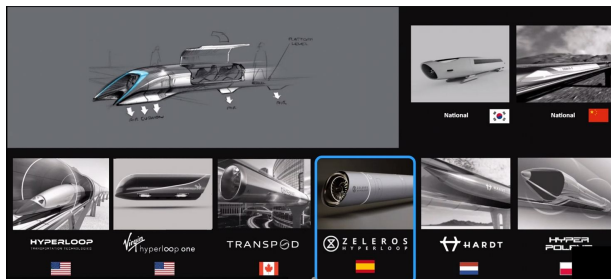
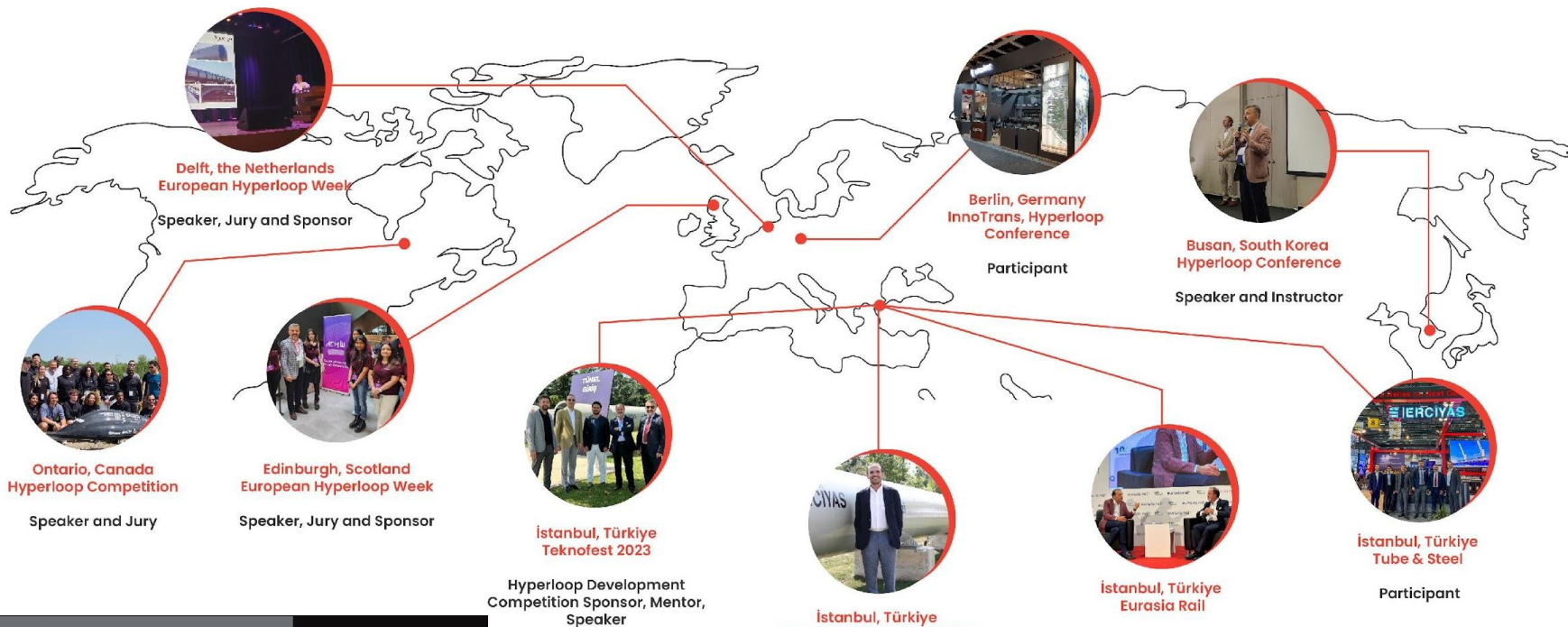
### E-Mobility



## Hyperloop







## Erciyas Steel Pipe-Çımtaş Çelik İmalat Montaj ve Tesisat A.Ş.-HyperloopTT

The production of specially equipped and high-tech steel pipes required by HypeloopTT's **fully functional real-size 5 km. prototype line.**



HYPERLOOP TT

**TEKNOFEST** #MILLİ TEKNOLOJİ HARLESİ

### TÜBİTAK RUTE HYPERLOOP DEVELOPMENT COMPETITION

APPLICATION DEADLINE 7 March 2022  
COMPETITION 15-19 AUG. 2022

T.C. SANAYİ VE TEKNOLOJİ BAKANLIĞI TÜBİTAK RUTE TÜRKİYE TEKNOLOJİ SAKINI

ERCIYAS TÜBİTAK RUTE TDD ERCIYAS

Test Tunnel  
Lining Platform  
Entrance  
Pre-Race Control Area

**20 Teams from,  
37 TUR universities**



## COMPETITIONS

MODEL SATELLITE COMPETITION	ROCKET COMPETITION	ROCKET COMPETITION	UNMANNED AERIAL VEHICLE COMPETITION
FLYING CAR COMPETITION	TURKISH NATURAL LANGUAGE PROCESSING COMPETITION	HELICOPTER DESIGN COMPETITION	SWARM ROBOTS COMPETITION
ENVIRONMENT AND ENERGY TECHNOLOGIES COMPETITION	CAREERS IN RESEARCH AND INNOVATION COMPETITION	JET ENGINE DESIGN COMPETITION	FIGHTER UAV COMPETITION
BIOTECHNOLOGY INNOVATION COMPETITION	TOURISM TECHNOLOGIES COMPETITION	EDUCATIONAL TECHNOLOGIES COMPETITION	TECHNOLOGY FOR INCLUSION COMPETITION
SMART TRANSPORTATION COMPETITION	EFFICIENCY CHALLENGE ELECTRIC VEHICLE DEVELOPMENT COMPETITION	SMART AI-DRIVEN SCALE DEVELOPMENT COMPETITION	AGRICULTURAL TECHNOLOGIES COMPETITION
AGRICULTURAL UNMANNED AERIAL VEHICLE COMPETITION	UNIVERSITY STUDENTS RESEARCH PROJECTS COMPETITION	TRAVEL HACKATHON	ARTIFICIAL INTELLIGENCE IN TRANSPORTATION COMPETITION
HIGH SCHOOL STUDENTS POLYVALENT RESEARCH PROJECTS COMPETITION	ROBOTICS COMPETITION	HACK BLACK SEA	UNMANNED AERIAL VEHICLE SYSTEMS COMPETITION
ISTANBUL INTERNATIONAL INVENTIONS FAIR	DATA TECHNOLOGIES COMPETITION IN INDUSTRY	TAKE OFF INTERNATIONAL STARTUP SUMMIT	ARTIFICIAL INTELLIGENCE IN HEALTHCARE COMPETITION
HYPERLOOP DEVELOPMENT COMPETITION	HIGH SCHOOL STUDENTS CLIMATE CHANGE RESEARCH PROJECTS COMPETITION	TUBA-TEKNOFEST PHD SCIENCE AWARDS	CHIP DESIGN COMPETITION

APPLICATION DEADLINE FEBRUARY 28'22

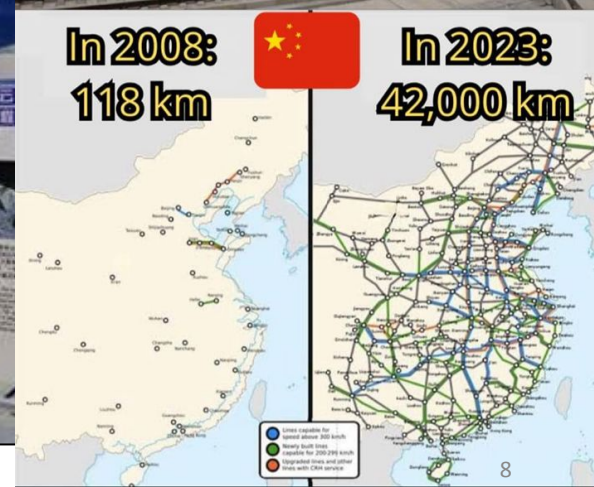




**17 Teams,**  
**26 TUR universities**



# Hyperloop | HYPERLOOP CHINA- 2 km Test Track Nov 2022 and Jan 2023





## A global hyperloop network

Vision 2050



### Global Hyperloop Network 2050

- The first commercial route in 2029 (a pilot cargo route in the Netherlands)
- The pilot projects in other regions (Middle East, Asia and US) in 2030 and 2031
- After the pilots are successful (12 years of operations), construction of continental networks commences, along major transport corridors (existing and planned)
  - TEN-T corridors in Europe (optimized in line with hyperloop speed performance)
  - Planned high-speed corridors outside of Europe
- The network initially grows at low pace till 2040
- By experiencing the first network effects, materializing benefits of the first corridors, and improving the construction efficiency by 2040, the development of the network accelerates by 2050 there are 17,000 km of hyperloop lines in Europe

**2040:**

- Europe: 5,500 km
- Asia: 5,500 km
- North America: 4,200 km
- Africa: 2,000 km
- South America: 1,400 km

**2050:**

- Europe: 17,000 km
- Asia: 33,000 km
- North America: 20,000 km
- Africa: 17,000 km
- South America: 10,000 km
- Australia: 6,000 km

**Global Hyperloop Network 2050**

Hyperloop lines

- Completed 2030 - 2040
- Completed 2041 - 2050
- Under development
- Planned

# Hyperloop Today

Hyperloop has generated strong interest among global Governments and corporations, with investments launched **exceeding 2B€**.



The Line 120km | Oxagon | Red Sea - KSA



286m/s Test infrastructure in Jinan, China



6-10 kilometer track in Castilla la Mancha, Spain



690M€ tender: Saemangeum, Korea



Turkiye's 400 meter test track, Gebze campus.



Hyperloop Project IIT Madras, India



900m open air test track in Poland





## Contact



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