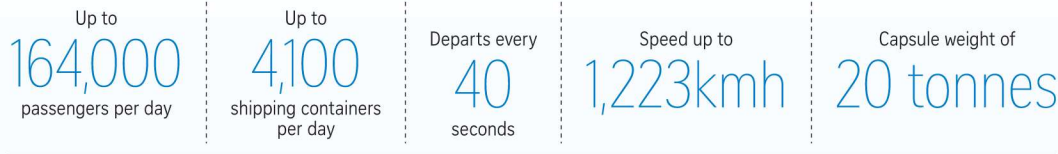


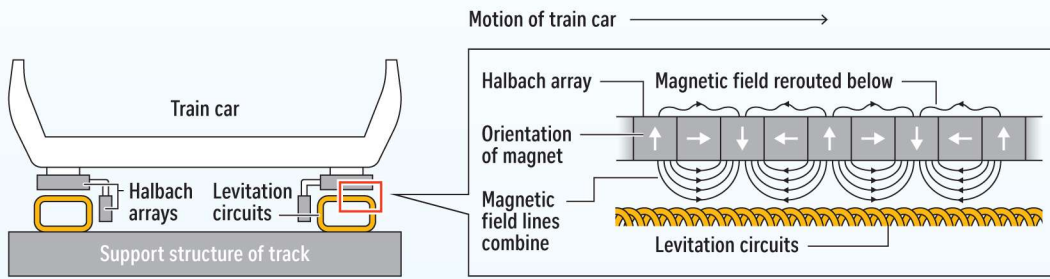
The future of transportation

The idea of travelling in a capsule hurtling at supersonic speed is fast becoming a reality. Hyperloop Transportation Technologies (HyperloopTT) is on the brink of a historic breakthrough in mobility with the launch of its first Hyperloop system in Abu Dhabi by 2020.



THE HYPERLOOPTT

Hyperloop is a transport system that takes passengers and cargo capsules through a network of low-pressure tubes between cities at airplane speeds. California-based company HyperloopTT is one of several Hyperloop contenders that have sprung up to deliver on the transportation vision.



Smooth, faster journey

- Hyperloop is all about removing the two things that slow down regular vehicles: friction and air resistance. To do away with the former, you make the capsule hover above its track, like a magnetic levitation (maglev) train.
- The system is silent and emission-free.

How maglevs work

- HyperloopTT will use a passive magnetic levitation system, which uses strong permanent magnets to generate levitation, instead of power-hungry electromagnets used in standard maglev systems.
- On the underside of a capsule is a flat, rectangular array of magnetic bars called a Halbach array (named after its inventor Kalus Halbach). The bars are arranged in a special pattern so that the magnetic field lines combine to produce a very strong field below the array.
- The track is embedded with closely packed coils of insulated wire. When those magnets move over conductive arrays in the track, they create a magnetic field that pushes the capsule up, no current required.

The low-pressure tubes

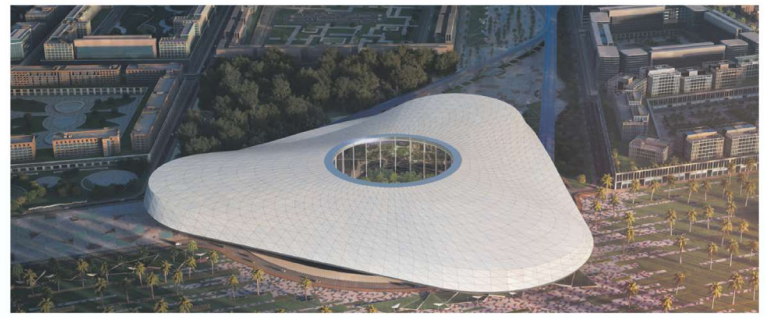
- The tracks are enclosed inside tubes connecting the stations. The capsule will travel – or float – on a frictionless magnetic cushion within the tubes.
- Air inside the tube will be removed frequently to create a low pressure similar to airplane cruising altitude. Because there is less stuff to push through, a hyperloop needs only a little bit of energy to maintain the capsule's speed.

Augmented windows

- Display realistic simulation of the outside world and travel information



Full-scale passenger Hyperloop capsule Quintero One presented by Hyperloop Transportation Technologies on Oct 2 in El Puerto de Santa Maria, Spain.



Artist rendering of how the Hyperloop station in Abu Dhabi could look.

Dewdrop station

Hyperloop terminal station prototype, circular guidance and operating system

Platform

- Can handle about 3,600 passengers per hour
- Each gate can manage 180 people per hour



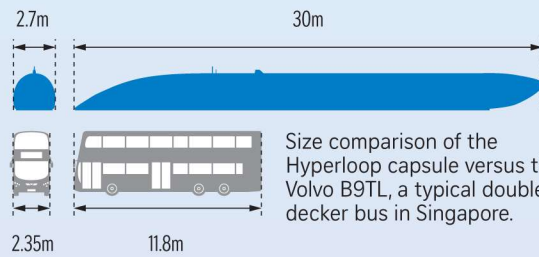
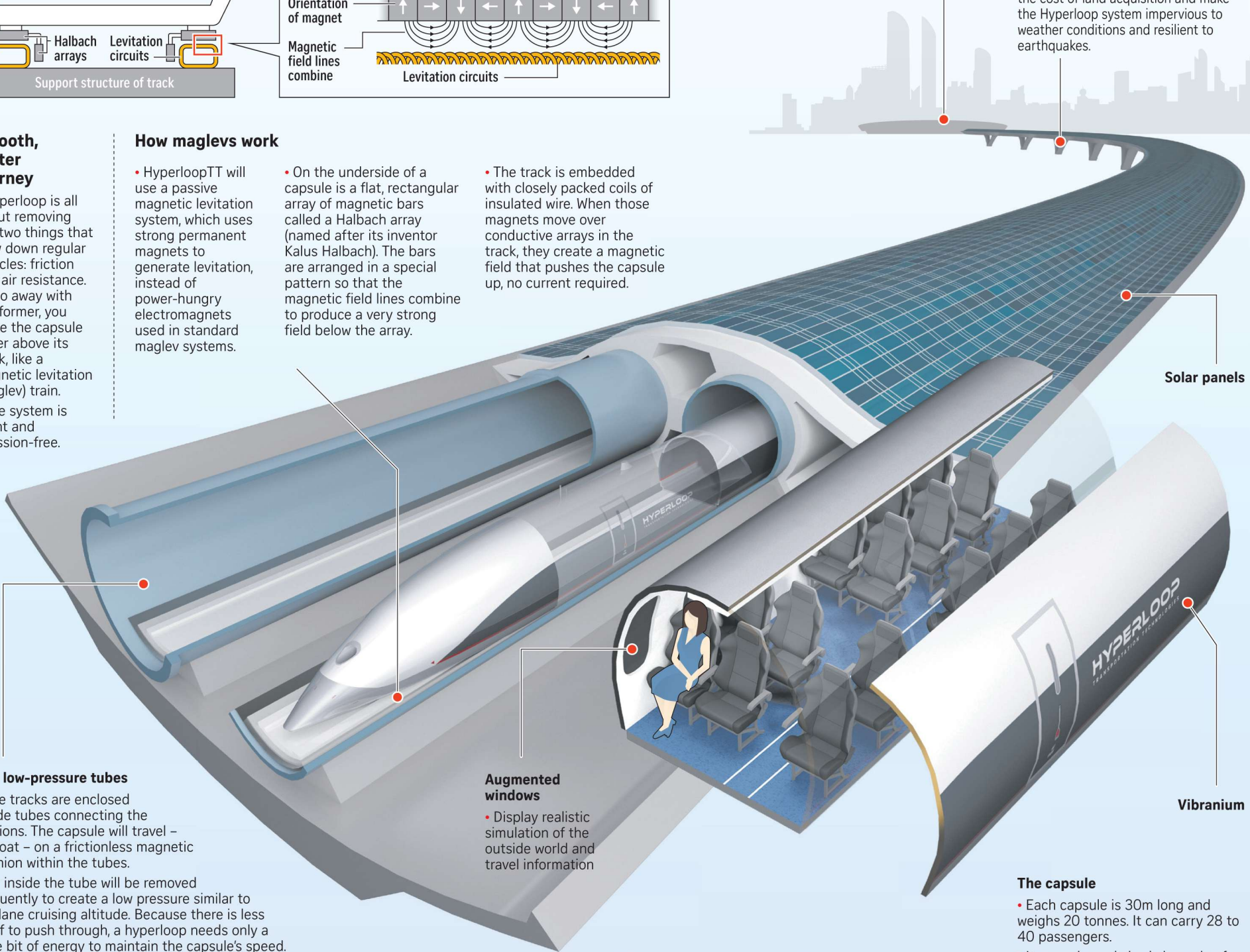
The world's first commercial HyperloopTT system will be located at Al Ghadeer near Al Maktoum Airport, in Abu Dhabi, and the Expo 2020 site. It is slated to operate in time for the expo.



Tubes being transported for research and development in Abu Dhabi.

Pylons

The elevated reinforced concrete pylons and beams above the ground will reduce the cost of land acquisition and make the Hyperloop system impervious to weather conditions and resilient to earthquakes.

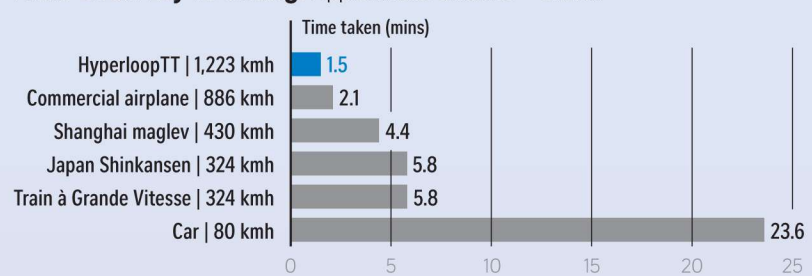


Size comparison of the Hyperloop capsule versus the Volvo B9TL, a typical double-decker bus in Singapore.

The capsule

- Each capsule is 30m long and weighs 20 tonnes. It can carry 28 to 40 passengers.
- Its aerodynamic body is made of a composite material called Vibranium that the company claims is 10 times stronger and five times lighter than steel.
- The skin is embedded with sensors that can wirelessly transmit data on stability, temperature and integrity of the capsule to the control station.

From Boon Lay to Changi



*NOTE: Time is based purely on distance and average speed of the vehicle. It does not take into account acceleration, deceleration, traffic or weather conditions.