

Hyperloop

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Why in news?

Virgin Group and Maharashtra Govt have signed a new MOU to build a hyperloop between Mumbai and Pune.

Hyperloop



- It is a still untested mode of transport system based on the idea mooted by Elon Musk.
- It involves building a near-perfect vacuum tunnel or tube, a railway track and a vehicle that floats above the track on magnetic levitation.
- A payload- passengers or cargo, accelerates through electric propulsion and gains speed due to extremely low friction.
- Air caster skis at the bottom support the pod which sandwiches the passenger compartment between an air compressor upfront and a battery compartment at the rear.
- The skis float under high pressure on a thin layer of air, reducing the rolling resistance and allowing for high-speed travel of the tubes.
- Such capsules are designed to be driverless with projected velocities as high as 1,000 km/h.
- Linear induction motors control the velocity of the pod along the tunnel.
- Capsule speed is determined by electronically aided acceleration and braking.
- In 2018, the Maharashtra government approved Virgin Hyperloop One-led consortium's plans to develop a high-speed line between Mumbai and Pune.
- The Pune-Mumbai line, which will be roughly 150km long,

will run from the Bandra-Kurla Complex commercial centre in Mumbai to Wakad, a suburb of Pune.

- It can shrink the travel time between the two cities to under 30 minutes, instead of the 3.5-hour drive that it currently is.