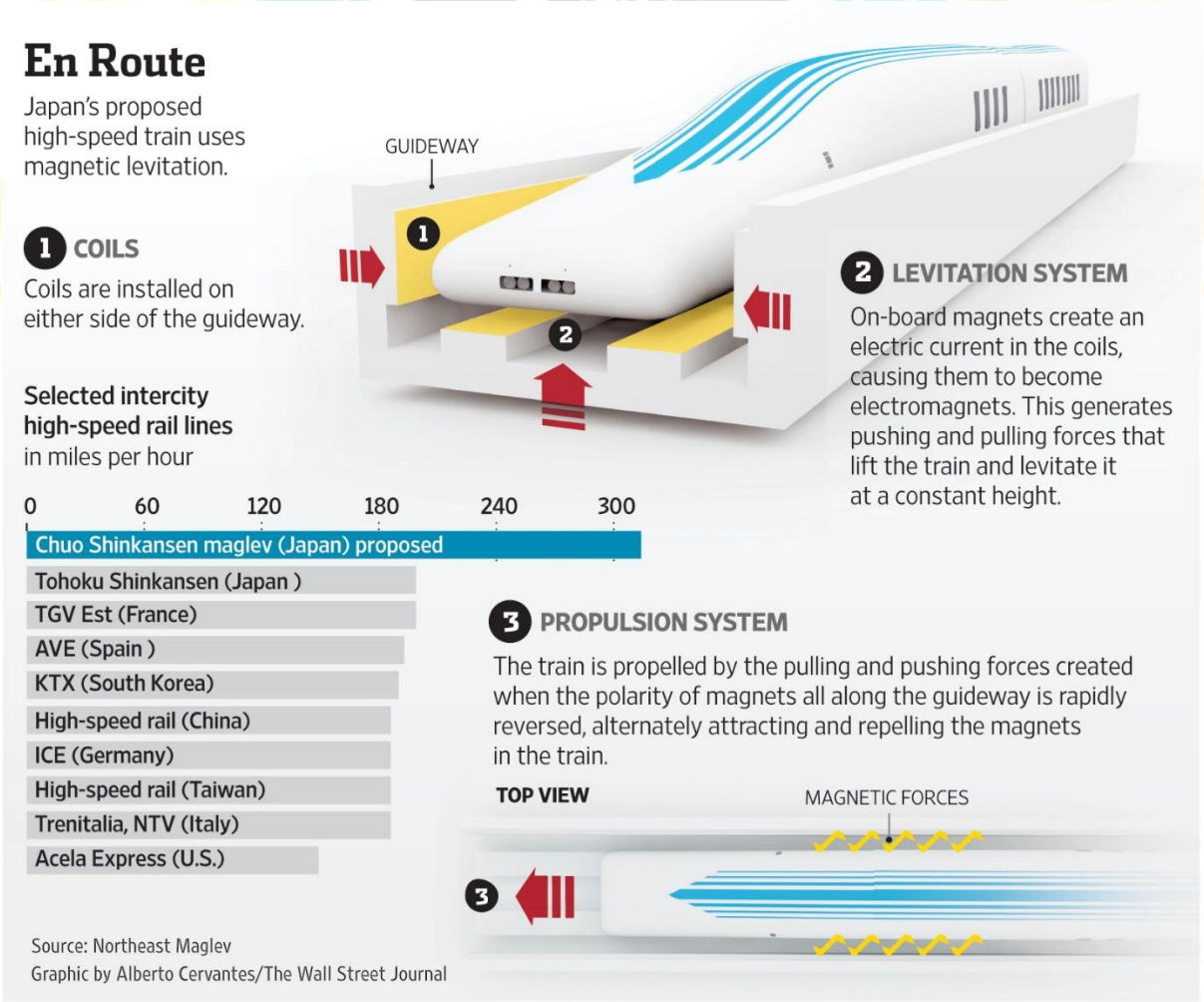
# MUMBAI-AHMEDABAD BULLET TRAIN CORRIDOR - GEOGRAPHY

**News:** The **Mumbai-Ahmedabad Bullet Train corridor** aims to bring the efficiency and speed of Japan's Shinkansen network to India. However, the National High Speed Rail Corporation Limited (NHSRCL) highlights unique environmental challenges that India must address, particularly extreme weather conditions in Gujarat and Maharashtra, including temperatures soaring to 50 degrees Celsius and high levels of dust and humidity.

## WHAT'S IN THE NEWS?

### About Shinkansen Bullet Train Technology

- Shinkansen (lit. new trunk line) is Japan's high-speed rail. It was opened for service between Tokyo and Osaka in 1964.
- The high-speed train service is known for its cleanliness, punctuality, and safety. Shinkansen has record of zero fatal passenger accidents.



## Key-features:

**Speed:** up to 320 km/h (200 mph)

- They feature highly advanced technologies such as aerodynamic design and air suspension.
- They are electric multiple-unit trains that derive their power from an overhead wire system.
- Japan has successfully exporteditsits “high quality” rail infrastructure to Taiwan, India, Europe and the UK in the past.

## Concern:

- Japan’s Shinkansen operates in a **mild climate**, while India’s harsher conditions pose significant risks for high-speed rail (HSR) technology.
- Taiwan is the only other nation to successfully implement Shinkansen technology, benefiting from similar weather patterns.
- This raises the question of whether India can adapt this advanced technology to its unique environment.

## Mumbai-Ahmedabad Bullet Train Project

- Mumbai-Ahmedabad High-Speed Rail Corridor (MAHSRC) is famously known as the **bullet train project.**
- India's first-ever shinkansen project, currently under construction, will link Mumbai, the country’s financial capital, with Ahmedabad, the largest city in Gujarat.
- The 508-km Mumbai-Ahmedabad bullet train corridor will feature 12 stations, with eight in Gujarat and four in Maharashtra.
- **The stations in Gujarat** will be located at Sabarmati, Ahmedabad, Anand, Vadodara, Bharuch, Surat, Bilimora, and Vapi.
- **Maharashtra** will host stations at Boisar, Virar, Thane, and Mumbai.
- Construction began in April 2020, with the 352 km section through Gujarat expected to be fully operational by 2027.