

# Apologies for the late arrival ...

The bullet train is 50. Why has it not caught on, asks Christian Wolmar

The opening of the first high-speed line, the Japanese Shinkansen, ushered in a new era of rail travel but it has taken a surprisingly long time for the concept to spread. Indeed, 50 years later, there are still barely a dozen countries that boast trains that can be described as high-speed. And while there are lots of schemes in the offing, the huge cost and long lead times are proving a barrier for their rapid spread.

The definition of high-speed train services is, loosely, lines on which passenger trains run at a top speed of at least 250kph (155mph) on dedicated tracks. The high-speed network, therefore, is the motorway system of the railways with fast services, limited stops and uninterrupted tracks. The aim behind the Japanese system, as implied by its name – Shinkansen means new trunk line – was not so much high speed as extra capacity and, in a way, the reduced journey times were an added bonus.

The building of the inaugural 300-mile Shinkansen between Tokyo and Osaka was stimulated by the Olympics in Tokyo in 1964 but had long been mooted. Construction had started in the 1930s but was abandoned at the outset of the Second World War. The impetus was the severe overcrowding on the old route that could not take any more trains. That indeed is a common misconception behind high-speed trains. Their genesis has often been in

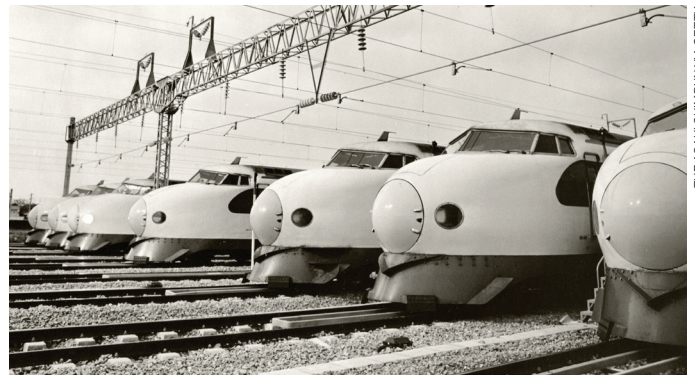
the recognition of the need for extra capacity and then the logic of high speed becomes obvious: if a new line is being built, it might as well be high speed, taking fast passenger trains and leaving the local and freight services to the old line.

Japan has a topography and demography that are particularly suited to high-speed rail services. The bulk of the population is concentrated in large cities along the coast of Honshu, a very favourable distribution for intense railway operations. The line was both a technical and commercial success but subsequent attempts to build others met opposition from local residents which led to delays, although Japan can now boast 1,665 miles of high-speed line.

The advantages that Japan enjoyed may help to explain why other countries, with a different population distribution, took so long to follow its example. Certainly the technology was available. It was in France, which had taken the lead in electrification, that the idea first took root in Europe.

As with virtually all high-speed lines, the TGV was a political project. What better opportunity to show off French technology?

**‘High-speed rail projects often face a bumpy ride’**



Japan's topography and demography are suited to high-speed trains

As in Japan, the line linked two populous cities, Paris and Lyon. When the Sud-Est line opened in 1983, France became the second country in the world to have a high-speed line, almost three decades after the Japanese.

Given the cost and the need to override objections, which perhaps are rooted in antagonism to a technology that is seen as old-fashioned, high-speed rail projects often face a bumpy ride in gaining acceptance. Governments have to be confident enough to push them through. They are the ultimate *grands projets*. Consequently there is a tendency for governments to announce schemes before any assessment of their viability has been undertaken.

It is no accident that China, now the world leader in terms of mileage, does not need a democratic mandate to push through schemes. In democratic US, by contrast, high-speed rail projects are either mired in controversy over cost and environmental effects or have been shelved.

The most interesting case is

Spain where support from the two main political parties has resulted in a policy of ensuring every significant town is no more than 50km from a high-speed line station. Other countries are joining the party such as Poland, Russia and Saudi Arabia, while in Britain the proposal for a second high-speed line, to add to the meagre 67-mile link between St Pancras and the Channel Tunnel, has faced considerable opposition despite cross-party support.

The advent of high-speed lines has been successful in Japan and France but elsewhere, in such places as Taiwan and South Korea, passenger numbers have not matched expectations. The case for high-speed projects can, therefore, at times be uncertain and it will be politics, rather than sober assessment, that will determine its growth over the next 50 years.

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