

Design brief

Background

The national rail network in the UK is run as a series of private franchises. Overcrowding on busy routes in and out of cities during the peak hours is a commonly reported issue in the press. Less reported but also of concern to the rail companies is the unused capacity during off-peak times.

As part of their franchise agreements, the train operating companies (TOCs) are obliged to maintain a minimum service level during off-peak times to ensure connectivity of the towns and villages that their routes serve. As a result, the TOCs are obliged to run services that in some cases are almost entirely empty. The TOCs are therefore interested to know if there is any additional potential revenue they could make from this unused train capacity.

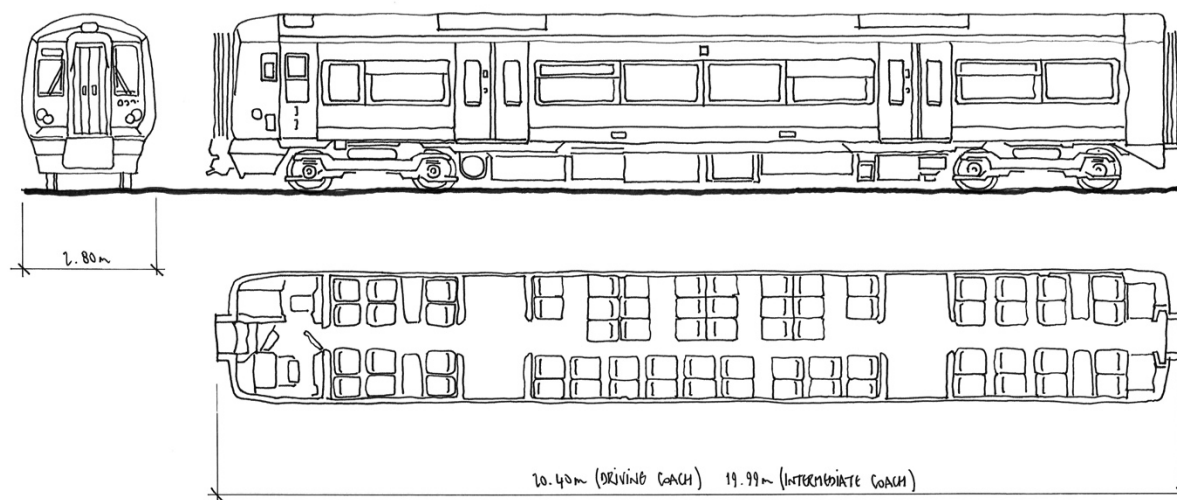


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Design brief

Develop proposals for how rail operators in the UK can monetise their off-peak rail capacity in a self-financing way.

Useful information



MAX. SPEED = 160 km/h

SEATED PASSENGERS = 242 TO 282 (4-CAR UNIT)

Most off-peak capacity is to be found on short- and medium-distance lines running on suburban routes and stopping services between large towns. These services tend to be trains made up of electric multiple units or diesel multiple units. A multiple unit is a set of carriages, usually three or four, which work together in a group. Longer trains can be made up coupling together two or three multiple units. The units themselves are not subdivided.

The morning peak is the busier and shorter than the afternoon peak which is spread out over more time. The quietest time tends to be around 11am. The last service out of major cities tends to be quite busy.

TOCs are private share-holder owned organisations. They can raise funds for capital investment, but can only do so on commercially viable projects.

In the early 20th century, London Underground tried to build off-peak use on its passenger lines by promoting day trips for parents with young children. This approach is still used today by TOCs, and it can be assumed that this market is now mature.