Description of an ‘Edubox’:

A portable box allowing access to Jisc’s bespoke roaming service Eduroam and in some cases, the Janet network, to be reached in areas where there is cellular connectivity, allowing learners, staff and researchers to connect to Eduroam and other Jisc supported networks in ‘hard to reach’ areas.

Introduction:

When universities and colleges had to close their sites during coronavirus lockdowns, many students couldn’t access reliable connectivity, and so couldn’t access education or educational networks traditionally accessed whilst on campuses. Learners struggled to cover the costs of the mobile phone data they needed to complete their work remotely, faced unreliable Wi-Fi, or had to battle housemates and family members over bandwidth.

Jisc’s latest student digital insights survey found that 63% of students in higher education (HE) and 49% in further education (FE) experience poor Wi-Fi connection, and 24% in HE and 16% in FE struggle with mobile data costs when learning online.

Jisc has worked hard, in collaboration with sector stakeholders, to explore a range of options focused primarily on improving the cost and connectivity of learners via the Government and Scottish Government. Most recently, Jisc offered all local authorities a govroam roaming service, to have eduroam enabled at no charge. Jisc is still committed to ensuring the 71 local authorities in England make the most of the opportunity to enable eduroam to be broadcast across public spaces. However, the patchiness of regional connectivity and the cost to some learners remains a long-term barrier to accessing online education equally.

Jisc’s solution - ‘Edubox’ - portable Eduroam:

A portable box allowing for the Eduroam network – providing secure and seamless internet access - to be reached in areas where there is cellular connectivity, allowing learners, staff and researchers to connect to Eduroam and other Jisc supported networks in ‘hard to reach’ areas.

The key factors are firstly, the strength of the connectivity to the cellular network and secondly, the level of traffic accessing the network via the Edubox. One Edubox placed in a school and
**connected to the existing local LAN/WLAN** can support 100 users in the building with no issues. A 5G connection will provide a similar experience and speed as accessed by learners on Jisc’s networks (1GB), 4G can provide 50-80MB territory.

Edubox’s can be reprofiled to work with the Govroam network in a similar fashion. Work is currently being undertaken to see if the Janet network can be brought into buildings via the Edubox technology.

**Case Studies:**

1. A leading university in the southwest is refurbishing a major site which includes a complete back to bones overhaul. The site has no running water, variable power and no network but people are working on site from the university. Jisc & Cradlepoint provisioned a portable Eduroam solution that immediately delivered an Internet service to the building allowing staff to work as if they had roamed into another facility, with a stunning 200mb+ 5g connection in the city center.

2. A Birmingham School was struggling to get any connectivity with multiple delays for Fibre to a new building and asked for Jisc’s assistance. Jisc & Cradlepoint delivered a 5G solution bringing the Janet network to the site in a matter of days with some amazing 5G speeds being reported and allowing the new building to operate normally with the Local network facilities.

**Wider Context**

**APPG Data Poverty**

The *All-Party Parliamentary Group for Data Poverty* was established in February 2021 with Jisc as a founding member and held its inaugural meeting in July 2021. The stated purpose of the Group is: To bring parliamentarians together with regulators and internet providers to build support for social tariff broadband products and explore long-term solutions to data poverty in Britain. Chaired by Darren Jones MP, Jisc will actively feed into the APPGs work including bringing our own ideas of solutions to alleviate data poverty across the UK.