

FBC for DfT CRSTS Grant Funding

BCIMO has a need to outsource the development of a Full Business Case that will be submitted to the UK's Department for Transport for City Region Sustainable Transport Settlement (CRSTS) grant funding for the following.

The Very Light Rail National Innovation (VLRNIC) has been established with ERDF and LEP funding to be a unique, world-class, test, research and development facility, focussed on advanced cost reduction technologies and innovations in Light and, in particular, Very Light Rail. Now operational, it can be considered as a national rail research asset. BCIMO is the not-for-profit research and technology organisation that was created to launch and operate the centre.

The VLRNIC now requires additional funding to lead and deliver a programme of R&D to develop the technologies, become a collaborative incubator space for regional SMEs, innovators and technology providers who can contribute to the growth of the burgeoning Very Light Rail industry - reducing the operational costs of public transport schemes to include, but not limited to, Coventry VLR.

The model follows the hugely successful formula followed by the UK Government's Catapult network and others, including HoribaMIRA and UTAC (Millbrook) in the automotive industry. There is an immediate opportunity to recreate this in the rail industry with an urgent focus on cost reduction and introducing mid-TRL-level technologies.

Vehicle drivers are a huge contribution to the operational costs of mass transit. The UK Government, with strong industrial and academic support has led the way in the development of advanced automated technologies. In fact, nearly a decade ago, it established the Centre for Connected and Autonomous Vehicles (CCAV) - with a focus on international leadership in the regulations and integration of connected and self-driving technologies in the automotive industry. Many of the companies involved in this already operate in the West Midlands. With that success in mind, it is proposed that these technologies could be adapted to the very light and light rail industries. The first step of this process is to conduct R&D in a controlled, but representative environment at the VLRNIC.

This request for funding is made of three discreet but closely integrated areas of focus:

Approx £5m for research and development to demonstrate a self-driving light rail vehicle at normal operating speeds and with platform edge technology (PET) integrated into the autonomous control system at the VLRNIC. This will enable the industry to reduce OPEX costs of Mass Transit in future and develop opportunities for UK based R&D to take global leadership in this aspect of rail innovation.

Approx £3.5m to build new SME incubator and innovation space at the VLRNIC for the VLR and wider Rail industry to collaborate, develop new technologies and support economic growth in the Black Country and wider West Midlands. This will enable the Centre to attract more suppliers to be able to locate in Dudley to collaborate and grow the industry. It will also support the long-term business plan by creating revenue to enable the Centre to become self-sustaining.

Approx £2.0m to install world-leading equipment and facilities at the VLRNIC in support of the growth of technologies in the VLR and wider rail sector. It is anticipated this will include telecommunications, digital twins and other platforms for technology development. This will enable R&D to take place to develop technologies to support the reduction of both CAPEX and OPEX costs of mass transit.