



5G Trial Update

Committee Strategy & Programmes

Date of meeting 20 November 2020

Date of report 4 November 2020

Report by Assistant Chief Executive

1. Object of report

The object of this report is to provide the Committee with an update on the progress of the 5G trial project to install 5G signalling within Subway tunnels.

2. Background

As members are aware, SPT was invited to participate in a 5G trial project in partnership with Cisco, the University of Strathclyde and an overseas partner in the South Korean Transport Agency. The trial is being funded by the Department of Digital, Culture, Media and Sport (DCMS) within the UK Government.

Cisco is leading on the key partner management and updates via a weekly progress meeting and a fortnightly communication meeting ongoing since late February this year. The progress meeting includes all technical partners with a clear focus on the milestone progress while a separate communications meeting considers all matters relevant to publicity of the “5G Rail” brand which encompasses all the partners.

The University of Strathclyde has now completed the design of platform equipment with SPT providing engineering support on design and onsite surveys. A 5G antenna and relevant transmitter has been installed within Buchanan station. Initial test has demonstrated promising results.

All partners are aware that the pilot exercise of the 5G trial cannot in anyway interfere or disrupt the ongoing Subway Modernisation Project, nor can impact on Subway operations. To minimise any potential conflict and provide support to the project partners, an internal project management team has been identified and appointed to ensure relevant stakeholders are kept appraised.

3. Outline of proposals

As we are now halfway towards the agreed 18-month programme, the key focus before the end of the calendar year is to finalise the design document for onboard equipment, which will include antenna, receiver and onboard transmitter for end user.

SPT is engaging with University of Strathclyde to look at the next stage of planning for testing with existing rolling stock. The University will also be working with other partners on the infotainment (AR/VR) application. SPT would expect the testing related to AR/VR

to take place in early 2021. Members are reminded that at this stage while the trial is considering the merits from an infotainment perspective, a successful pilot is also likely to have considerable benefits for SPT in maintenance terms, including the use of digital equipment if proven successful.

It is worth highlighting that the 5G bandwidth has no impact on SPT operational services, nor has it any impact on ANSTA JV's equipment for install of new signalling and control systems being introduced as part of the Subway modernisation programme.

Cisco is responsible of sharing information and project development with South Korea Transport Agency and mutual learning points will be shared.

A budget of up to £80,000 has been agreed with the partners to fund any costs incurred by SPT in undertaking the project.

4. Conclusions

Despite minor interruption to the programme due to Covid-19, the project is progressing well with SPT's team's full support. SPT will continue to engage with all partners and share the result with the Partnership during the next stage of work.

5. Committee action

The Committee is asked to note the progress of the international pilot project to assess the introduction of 5G connectivity within a subterranean environment.

6. Consequences

Policy consequences	<i>None at present.</i>
Legal consequences	<i>None at present.</i>
Financial consequences	<i>None at present.</i>
Personnel consequences	<i>None at present.</i>
Equalities consequences	<i>None at present.</i>
Risk consequences	<i>Risk mitigation considered related to Subway Modernisation.</i>

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