Committee report

Operational Safety and Security: Award of Contract for New CCTV and Access Control System

Committee Operations Committee

Date of meeting 26 August 2016 **Date of report** 16 August 2016

Report by Assistant Chief Executive (Operations)

1. Object of report

To recommend that the Committee approve the award of contract for a new SPT wide CCTV and access control system by accepting the "CCTV option" tender contained within the Rolling Stock, Signalling and Control Systems Manufacturing and Supply Agreement (MSA) between SPT and the Ansaldo STS/Stadler Bussnang AG Joint Venture (JV).

2. Background

2.1 CCTV Option with Rolling Stock Contract (MSA)

Members will recall from the recently awarded Rolling Stock, Signalling and Control Systems MSA contract that it includes for the installation of CCTV on the new trains, and at the new Operational Control Centre (OCC).

The MSA also included an option for the replacement of the wider CCTV system throughout the existing SPT Subway (i.e. stations and depot), bus stations and other corporate sites. It also included for the upgrade and integration of the access security systems and new help points in Subway. This was tendered in this manner to ensure full integration with not only the new subway rolling stock and signalling system but also the wider SPT estate.

As noted in the contract award paper approved by the Partnership on 4 March 2016, the contract allowed for a period of time post contract award for SPT to review the proposed option and finalise negotiations on the tendered price. These negotiations have now been concluded such that a recommendation can now be made on exercising this option to award a contract variation for the design, supply and installation of an integrated CCTV and Security system.

2.2 Needs summary

The CCTV systems currently installed throughout the SPT estate are a vital part of the safe and secure operation of SPT services, assisting in the prevention and detection of crime and anti-social behaviour, and supporting the robust management and day to day operation of both Subway and Bus. As part of its regulatory

requirements and obligations, SPT provides monitoring and surveillance capability across its estate and video evidence of incidents and developing issues occurring on SPT property. In addition the access and security systems protect SPT assets from unauthorised entry, supporting the safety of staff, passengers and members of the public.

The current SPT CCTV systems consist of various types of equipment that are predominantly analogue based. The architecture is based on centrally located video recording and control technology that is now life expired and therefore increasingly difficult to maintain. Some of the equipment is approaching 20 years of continuous service, causing further issues in obtaining on-going technical support.

Furthermore there are some areas of limited coverage throughout the SPT estate which cannot be addressed in the current system, due to there being very limited expansion capability. A level of upgrade and replacement has been undertaken as part of previous refurbishment programmes, but this still has difficulties with old legacy analogue based systems and their integration with new modern digital systems that have been brought into specific areas that have undergone refurbishment.

Currently control room staff manages CCTV and security using multiple hardware and software systems and interfaces, which results in additional workload when responding to incidents and hence has in built inefficiencies, which can be overcome with a new modern digital system.

2.3 Overview of new system requirements

The new integrated digital CCTV system will replace the life expired equipment with modern and improved equipment based on ‘Commercial off the Shelf’ technology, increasing the spares and support availability and reducing maintenance costs. The new system will also replace the current multiple systems on the network with a single integrated camera network, reducing issues due to incompatibility between the various systems and proving a single interface to control room staff.

The Subway and depot access and security systems have also been in place for over 10 years and like the CCTV system, are not integrated under a single control system. Furthermore there are areas within the Subway that currently require manual lock and key facilities to appropriately secure, which will benefit from a more automated system.

Broomloan Depot has a standalone Perimeter Intrusion Detection System (PIDS) which can detect and alert control room staff of attempts to scale or cut the depot perimeter fencing. However due to the system being standalone, it also requires a separate interface to manage and requires additional actions from the control staff to view images of the affected area. Further, when the Subway migrates to Unattended Train Operation, a large proportion of the yard will be designated an automatic area and will be unmanned, therefore increasing the risk of unauthorised access.

The new PIDS will therefore provide enhanced detection capability and increased video surveillance coverage that will better support the security of the future unmanned depot areas, while integrating perimeter intrusion detection and surveillance into one interface for control room staff.

3. Outline of proposals

3.1 Scope of works

The tendered CCTV Option proposes to replace the existing analogue CCTV & Security infrastructure with a modern digital network based system, fully integrated with the rest of the new Control Systems being provided under the Rolling Stock & Control Systems MSA contract. The general scope of work is summarised as follows:

- Replacement/installation of new CCTV surveillance systems at:
  - All 15 Subway Stations;
  - Broomloan Depot;
  - Subway P&R Car Parks, to include:
    - Kelvinbridge;
    - Shields Rd; and
    - Bridge St.
  - SPT managed Bus Stations, to include:
    - Buchanan St;
    - Govan;
    - Hamilton;
    - East Kilbride;
    - Greenock; and
    - Partick.
  - Corporate locations, to include:
    - 131 St Vincent St office; and
    - Seaward St Store.
- Upgrade of PAC access system at:
  - All 15 Subway Stations; and
  - Broomloan Depot.
- Provision of Passenger Help Points at:
  - All 15 Subway Stations;
- Upgrade to Perimeter Intruder Detection (PID) system at:
  - Broomloan Depot;

Provision of Body Worn cameras

3.2 Key features

The JV has selected Edinburgh based IndigoVision as the proposed supplier of the CCTV system. They have been chosen on the basis of offering the most suitable product solution for SPT's requirements. The key features and advantages identified for SPT are:

1. A standard and integrated solution across all SPT assets which will allow viewing of any CCTV images from either Bus or Subway control rooms;
2. Capability to combine control of various security and surveillance functions through a single system;
3. Full software integration of the CCTV and Security system with the Station Management System providing a seamless interface to control room staff;

Resilient and redundant distributed architecture that avoids single points of failure common in centralised solutions;

4. Fully Internet Protocol (IP) based system with built in cyber security functionality and with the ability to allow access to other agencies (e.g. Community Safety Glasgow) under data protection requirements;
5. Open architecture that can retain and integrate the existing IP CCTV cameras into the system; and
6. Video analytics at selected key locations which will provide advanced warning and intelligence capability in critical situations and scenarios; such as the identification of misplaced packages and passengers in unauthorised areas.

3.3 CCTV operation and control

The new system will replace existing analogue cameras with an increased number of High Definition (HD) cameras while retaining and integrating existing HD cameras installed as part of Subway station refurbishment works, resulting in a significant increase in the number of CCTV cameras deployed across the SPT estate.

It is proposed that each site has a local networked video recorder, which will allow recording of local images, with a new CCTV workstation and control keyboard to allow the option of local monitoring and control at the site.

The Subway CCTV system would utilise the new communications network installed as part of the MSA contract to provide secure connectivity between each site and the OCC at Broomloan Depot. For the Bus Stations that are not connected to the Subway communications network, the JV would utilise the existing corporate network connections in place at each site, to allow images from Bus Stations and corporate locations to be viewed at Buchanan St.

The new system provides for viewing and control functionality through two dual screen dedicated CCTV operator workstations located at Buchanan St Bus Station, with the viewing and control functionality for Subway provided as part of the MSA scope. This ensures that CCTV images produced by the Subway system can be viewed from Bus and vice versa, should this be required for operational reasons.

3.4 Subway access and control system

The proposal includes an upgrade to the Access & Security system that currently exists within the Subway and at Broomloan Depot, which will include the replacement of the existing PAC controlled access points with new secure entry access points.

Within Broomloan Depot the proposal includes the replacement of the existing obsolete PIDS with a new enhanced detection system. This would be integrated with the PIDS covering the new OCC and the new Construction Depot and Test Track, to be provided as part of the MSA scope.

The entire Access and Security system will be integrated into the CCTV software platform to provide seamless control capability for control room staff.

3.5 Passenger help points

Within the Subway stations Passenger Help Points would also be installed, with associated fixed cameras that will allow control staff to see and hear help point users during calls.

3.6 Body cameras

To provide video evidence and recording capability during incidents or emergency situations, the option also proposes 20 standalone body cameras to be worn by SPT staff as and when required. As the purpose is to capture video images solely for evidence, these would not be connected to the Integrated CCTV system.

3.7 Phasing of works

The JV has proposed the delivery of the CCTV and security in Subway stations and Broomloan depot to be consolidated in line with the main signalling and control works. This is due to a number of key dependencies of the CCTV on the main MSA scope. These include:

- Completion of the new communications network;
- Construction of the OCC, new depot areas and test track to allow installation the new PIDS; and
- Commissioning of the OCC viewing and control facilities.

When scheduling the delivery of Subway CCTV and Security systems, consideration must also be given to the on-going Subway station modernisation works, with Cessnock and Kelvinbridge already scheduled for refurbishment in 2016-17.

The delivery of CCTV for Bus Stations and Corporate offices can be delivered separately to suit operational requirements, as there is no reliance on the Subway infrastructure.

A detailed programme will be agreed with the contractor on contract award, with the outline dates for delivery including implementation of the Bus and Corporate CCTV systems completion anticipated at the end of 2017/ early 2018.

3.8 Tendered costs

The tendered cost for the delivery of the CCTV and Security system specified within the CCTV Option was £3,246,499.95. This was documented within the MSA as the cost for the CCTV Option, should the option be exercised.

Through the course of negotiation with the JV there have been a number of alterations made to the scope, with the final scope improving on the original tendered scope and price, including:

- Increasing the number of digital cameras across the SPT estate (12% increase);
- Increasing the number of access points within the depot;
- Introducing an analytics capability at Buchanan Bus Station; and
- Increasing video storage capabilities across the network.

Following finalisation of the scope then further negotiations took place on the original tendered cost with the final price negotiated down to £3,170,500. This represents additional value from the increased scope whilst also a lower price from the original tendered option and is therefore deemed to represent best value for SPT.

4. Conclusions

The final CCTV and Security proposal submitted by the JV has been assessed to provide best value to SPT. It will provide a standard, interoperable and integrated CCTV solution across the SPT estate taking into account the automated nature of the future subway system and the requirements to replace the current life expired equipment.

5. Committee action

The Committee is recommended to approve the exercising of the MSA CCTV Option for the design, supply and installation of the integrated CCTV & Security system with a contract variation value of £3,170,500.00 (excl. VAT).

6. Consequences

Policy consequences	*None identified.*
Legal consequences	*The award of this contract is made through the implementation of the 'CCTV Option' as defined in the terms of the Manufacture and Supply Agreement between Ansaldo STS France & Stadler Bussnang AG and Strathclyde Partnership For Transport.*
Financial consequences	*The costs of the CCTV option can be contained within the existing Subway Modernisation and SPT CCTV System Upgrade capital budgets and revenue costs for supply of spares being contained in revenue budgets for subway, bus and corporate.*
Personnel consequences	*None identified.*
Equalities consequences	*None identified.*
Risk consequences	*Reduction in risk of not meeting security and safety requirements through non-replacement of the current system and reduction in risk of incompatibility of the new signalling and control system with the CCTV and Security system.*

Name	**Eric Stewart**	**Name**	**Gordon Maclennan**
Title	**Assistant Chief Executive (Operations)**	**Title**	**Chief Executive**

For further information, please contact *Willie Delaney, Senior Project Manager* on *0141 333 3142*.