Meeting: Police Committee – For information	Date(s): 4th April 2019
Subject: Secure City Programme – Update and Road Map for Development	Public
Report of: Commissioner of Police and Town Clerk Pol_24-19	For Information
Report author: T/Det. Supt. Pete Digby and Richard Woolford, Town Clerk	

Summary

This report provides stakeholders with an overview of the strategic vision for the Secure City Programme [SCP] and the means by which the vision will be attained, through the implementation of a series of complementary work strands. SCP is complex and multi-phased; each phase of development is broken down into multiple stages and work packages that will take between 5-7 years to deliver.

The 1st Phase of SCP covers the next 3 years of planning and implementation, and will deliver a fully modern Ring of Steel, a new JCCR function and an open IT platform that will allow all security and safety components to be fully integrated and centrally managed. The IT platform will make greater use of all legacy technologies and stakeholder intelligence to allow significantly-improved situational awareness across the entire City. Subsequent Phases (in years 4 and beyond) will be based on the foundations and infrastructure that will be established during Phase 1.

Each stage of development will provide enhanced operational capability. Improved operational efficiencies will be established as a gradual and ongoing process as part of each stage of completion.

The programme is intentionally broken down into discrete, attainable and achievable work packages to both reduce complexity and bring business benefits into being far sooner than would otherwise be the case through adopting a "Big Bang" approach.

The programme's focus is to leverage both the potential for funding from 3rd parties (for example, the commercial sector) and the integration of their assets (such as their CCTV) into the overall solution. This approach will derive far better return on investment to all stakeholders.

This report also identifies the works that have been undertaken to date.

Recommendation(s)

Member are asked to note the report.

Main Report

Background

1. The SCP was launched in January 2018 (Pol 01-18 refers). Members will recall that it encompasses the previous Ring of Steel and Safer City programme which includes, and works in partnership with, the City of London Corporation (CoL) 'Smart City' programme.

2. The SCP consists of 6 strands, all of which focus on fully supporting
   - COL and CoLP Corporate Plans
   - COL Transport Strategy
   - COL Local Plan 2036
   - City Police Vision 2025

3. The SCP, is an in a scoping phase as a programme of work and seeks to achieve support and validation as a Programme within the Corporation of London and CoLP change portfolios and governance. However, it is acknowledged that the strands of JCCR, IMS-DRS, and parts of physical infrastructure (Transport, Street lighting, Protection of public realm) are already recognised within CoL and CoLP as projects[*1]. SCP seeks to build upon and broaden those strands, and add two further strands of CCTV hardware and future technologies, with later Cyber-theme layers across all strands. Bringing these together and creating one ambition will see the best opportunities to become the safest city in the World

4. Since January 2018 the following works have been undertaken:
   - Established a framework structure for the delivery of the programme
   - Collation and prioritisation of User Requirements through a series of stakeholder work shops
   - Development of road map for implementation
   - Business Analysis activities on core components of the JCCR component
   - Established Governance Structure

5. Progress to date has been impacted on by several factors, including:
   - Limited availability of appropriately skilled resources
   - Competing demands on resources from other projects and programmes.

6. Those issues have now been resolved. Members approved £257,503 funding for the initial development of the SCP in January 2018, with £129,514 remaining as of 26 Nov 2018. The residual funding is sufficient to maintain the SCP team until 1 April 2019, after which additional funding will be required to ensure the programme meets its stated objectives in a timely manner. The programme Team is currently preparing a Gateway 1-2 paper, for consideration by Members during February 2019, to allow the programme to be taken to the next stage of development.

[*1] – Further details of IMS-DRS, JCCR and Physical Infrastructure are provided in paragraphs 14-16 inclusive, below.

7. It should be noted that given the scale, complexity, multi-faceted technological components and dynamic nature of the programme, it is appropriate to approach the programme through small manageable work strands – thereby minimising risk to delivery - rather than adopting a "Big Bang Approach". Each Stage of development will deliver enhanced operational capability and will form the foundations of future stages of development, by establishing open and inter-operable technology platforms. In this manner, each tranche of funding will contribute to the end-vision, with no nugatory investment being incurred throughout the programme. For this reason, members are requested to note that there will be multiple applications for funding throughout the programme.

Current Position

8. Out of necessity the Secure City Programme, due to its complexity and far reaching implications for both CoL and COLP, is a 5-7 year programme. It is not possible to clearly map out the latter stages of the programme at this point in time, as technology will move on rapidly as the programme matures. Key to being able to harness technology enhancements in later years, is the ability to integrate with new capabilities as and when they mature to the extent that they can be transitioned to live operations. With this in mind, the initial SCP focus is to build an open architecture solution and prioritise works, in preparation for the latter stages of SCP.

9. The initial 3 years of the programme seeks to:
   • Complete the stabilisation of the Ring of Steel with an upgrade to the legacy CCTV systems
   • Develop 5-7 year CCTV Strategy for the City that seeks to harness 3rd party (specifically, the business community) CCTV capability, such that all stakeholders can derive maximum return on investment
   • Establish a new integrated operating platform for city-wide security operations, known as the Security Management System [SMS].
   • Establish the new JCCR (as a working demonstrator to attract 3rd party collaboration, integration and investment).
   • Establish a resilient, expandable and durable data security infrastructure to protect all SCP systems, and those of connected 3rd parties, from cyber attack.
   • Pilot emerging technologies that can support the wider strategic objectives of CoL and CoLP.

10. The SCP team has scoped the work strands in order to assess funding and resourcing requirements and these will be captured and then follow the normal Gateway process, subject to approvals. The initial programme aims to achieve the following critical milestones
   • Q1 2019: Submission of Gateway 1-2
   • April 2019: Mobilisation of small programme team to take the programme to Gateway 3-4 stage (by July 2019)
   • Oct 2019: Completion of 1st round of funding approvals (Gateway 5)
   • Nov 2019 – Jan 2022: Completion of 1st Phase of Secure City Implementation
   • Future Phases will be developed as the programme evolves and matures.
   .

11. This programme team is working very closely with several departments within the CoL in order to deliver the desired outcomes, to ensure that we collectively support the overall vision and desire of both organisations such that the City remains a safe place to live, work, study and visit along with making it at the same time the safest city area in the world.

12. To achieve the aims of the programme it will require:
   - Scoping of the range of available options to enhance security within the Square Mile. This is work in progress but substantially complete.
   - Developing business cases for an integrated, future-proofed and fully costed security proposal for the Square Mile, and lastly,
   - Identifying public and private sector investment partners who wish to realise this shared vision.

13. Across the programme, as aforementioned, there are 6 complementary work strands which are detailed below. These have been derived from a series of stakeholder workshops over the summer of 2018 from which we have identified some 120 plus operational and functional requirements across the programme. These have been distilled, categorised, prioritised and assigned to the most appropriate work strand.

14. The work strands will also provide 'shape' to the overall ambition and vision. These have recently been reviewed and added to, to ensure that this programme caters for the future demands of a 21st Century City and reflect the technology support requirement under the strand of "Cyber":

   - Joint Contact and Control Room (JCCR)
   - Ring of Steel Stabilisation and Compliance
   - CCTV Hardware
   - Physical Infrastructure
   - Future Technologies
   - Cyber (new work strand)

15. In **Appendix 1**, we include various infographics depicting the core deliverables under the 1st Phase of Delivery of SCP (ie over years 1-3).

16. Significant progress has been made on the following:

   - Interim JCCR. The programme is currently finalising the technical options with Agilisys to allow both the CoLP Control room staff and City of London's Contact Centre to move into the new facilities based at Bishopsgate Police Station. It should be noted that significant delays were incurred throughout summer of 2018, due to technical challenges and the high costs associated with trying to run Contact Centre software applications from the CoLP data network. A far more cost-effective solution has now been identified and this is now being progressed. It is expected that the move into Bishopsgate will now occur in April 2019. The SCP will also support the location, design and introduction of the future Joint Contact & Command Room along with third party data input, support and funding.

- **Ring of Steel Stabilisation and Compliance**. **IMS-DRS** (Integrated Management System - Digital Recording system) is the replacement for the legacy CCTV Video management system. It is nearing the final stages of development and testing. The system is expected to go live in early April 2019 with significant activity having been undertaken over the last three months to integrate the IMS-DRS with the CoLP network. The Ring of Steel camera system is now reaching its end-of-life use and requires modernisation (as set out in **CCTV Hardware** below). It will also require a review of its placement as the landscape of the City of London's roads and vehicular access will change in line with the acceptance and implementation of strategic documents and plans such as the CoL Transport Strategy and Local Plan 2036.

- **CCTV Hardware**. The current CoLP/CoL CCTV estate requires reviewing, updating and, within this SCP Phase 1 scope, modernising. This includes the identification of new sources of third party CCTV data to integrate with. Following the initial camera upgrade programme (to replace the existing end-of-life systems), further camera deployment will only be required, when the availability of 3rd party surveillance systems does not meet joint COL/CoLP operational needs. An outline road map for developing CoL access into City-wide camera systems is now being developed. This approach will derive maximum return on investment, through optimising the use of third party CCTV and access control capabilities, where this adds operational value to Secure City stakeholders. The programme will identify, through a gap analysis process those third party systems that should be targeted for integration with the CoL CCTV infrastructure.

- **Physical Infrastructure**. This is being led by the Department of Built Environment of the CoL, and the SCP team is working very closely to support this strand to enhance delivery of the security components of both the Transport Strategy and Local Plan 2036.

- **Future Technologies**. Critical to the successful outcome of the future technologies work strand is the establishment of an integrated Security Management System (SMS). The SMS will provide the platform for ingesting multiple third party data sources, alarms and intelligence, with the ability of overlay incoming data sources onto intelligence to provide enriched situational awareness to stakeholders across both the CoL and CoLP. The SMS is at concept design stage and subject to ongoing discussions with CoL Procurement. The programme is looking at options to deliver a Proof of Concept (POC) for SMS. The SCP is also looking at longer term potential options for deploying emerging technologies into SMS that will further enhance joint CoL/CoLP operational capability. However, SMS is a pre-requisite for being able to use such sensors and data streams cost effectively.

- **Cyber**. This strand impacts across the 5 other strands and will act as an enabler as well as having the requirement to protect those using it in the City from an attack. It is also an acknowledgement that in time the cyber environment will enable the strands to be routinely used as Business As Usual (BAU) from a safe environment within it. It is therefore pivotal that this is addressed through its own strand rather than within Future Technologies due to its importance and impact. The SCP will work closely with the IT Department to ensure that respective roadmaps are complementary and dependencies are fully understood.

Delivering the Secure City engagement plan

17. Appreciating the importance of both effective stakeholder engagement and gathering best practice from around the world, the SCP engagement plan will seek to partner with public and commercial organisations - to increase the reach of this work and to explore potential funding options. These will include the use of trusted media outlets with an international readership.

18. The plan will also seek to test the public appetite for adopting new technologies and approaches to security – the dimension of civil liberties. Accordingly, established third sector organisations working in this area will be invited to participate and collaborate to ensure that future plans are devised around a public consensus on the way forward.

19. The SCP has recently appointed a new Programme lead, supported by a Subject Matter Expert, a part time Business Analyst and a Project Manager. It has been overseen by the Senior Responsible Officer (SRO), Commander Operations and Security from the outset. The SRO and Programme lead will ensure the development of a 5 – 7 year strategic vision with key milestones throughout the programme against each work strand. The initial scoping has been completed, and will be presented to Members for approval in Q1 2019, by way of a Gateway 1-2 paper.

Options

20. Phase 1 of the SCP is focussed on completing the stabilisation of the Ring of Steel, through the
    - Upgrade of the CoL camera infrastructure to a digital platform that will allow the City to make operational benefit of now common-place complementary technologies such as video analytics and facial recognition. The existing cameras will not work with such technologies. The camera upgrade will also deliver to all stakeholders radically improved image quality, thereby enhancing situational awareness and evidential integrity.
    - Establishing the future JCCR Vision and developing the concept of joint working, thereby maximising resource utilisation
    - Establishing an integrated Security Management System that will allow Stakeholders to share data and intelligence and improve overall City-wide situational awareness and respond to incidents and issues far faster, as resources will be enabled with more timely, comprehensive and accurate information upon which to base their decision making.

- Continued development of the CoL Hostile Vehicle Mitigation programme
- Wide-scale integration of 3rd party CCTV systems into the Security Management System, deriving a quantum leap in surveillance capability and coverage, at a fraction of the costs that would otherwise be incurred through developing a dedicated CoL/COLP standalone CCTV infrastructure.

21. The following table outlines some of the high level benefits of undertaking the Phase 1 works

Work Strand	Project	Benefits	Dis-benefits	Risk of not doing
CCTV Hardware	CoLP Camera Upgrade	Take advantage of complementary tech (Face Rec/ Video analytics); Enhanced image quality.	Cost. Need to build security zone.	1980's technology; Compromised investigative capability.
	PIA/ Review of existing estate/ Review of 3rd party systems	Compliance; Take full advantage of 3rd party systems; Lower cost; better surveillance coverage	Minor costs; 3rd party CCTV ingest requires security zone	Non-compliance; Failure to optimise ROI on 3rd party systems
	Security Zone	Maintain data integrity of corporate network	Cost, Latency	Will never move forward [COL & 3rd party] CCTV integration.
	3rd party CCTV/ACS integration	Lowest Cost; greatest coverage; Optimise investmentsmade by 3rd parties; Enhanced partnership with City Communities	Need to establish Security Zone	Lost opportunity
	Bridge Cameras	Reduction in elapsed time in notifying potential suicide attempts	Money may be better spent elsewhere at this time	Potential loss of funding (Bridge House Trust)
	Integration of COL Cameras with IMS-DRS	Reduced staff and capital costs; Establish POC/ Show case to 3rd parties	Comparatively minor costs of integration	Lost opporrtunity; Own-goal! Higher operational costs
IMS-DRS	Disaster Recovery System	Enhanced resilience	Cost; Possibly Overkill bearing in mind SLAs on BT	Operational resilience
JCCR	Establish Show-Home for "Future JCCR"	Demo capability for further funding (3rd parties); Removes dependency on Fleet Place and need to wait 7 years	Cost.	
	Integration of COL Cameras with IMS-DRS	Reduced staff and capital costs; Establish POC/ Show case to 3rd parties	Comparatively minor costs of integration	Lost opporrtunity; Own-goal! Excessive operational costs incurred by COL through standalone systems
	Back-up JCCR	Improved operational resilience	Costs	This is the elephant in the room
Physical infrastructure	Police Boxes of the future	Higher police visibility; Deterrent effect.	Costs	Existing entry points need attention. Broken window syndrome
	New HVM	Deliver as part of the Transport Strategy.	Costs	Compromise to security of Public Realm
Future Technology	Security Management System and integration with MPS CAD/ICCS	Agregated Intelligence; Enhanced Situational Awareness; Far improved operational efficiency; All information in one place	Cost.	Stay in the 1990's; Disparate standalone technlogies
	Technology Trials integrated with SMS	Minimal costs as back end systems are already in place (SMS)		Not using SMS to full potential

Figure 1: High level benefits summary and risk analysis of SCP Phase 1 works

Proposals

22. This report sets out the road map for delivery of SCP under the 1st phase of development and implementation.

23. The Phase 1 works will establish a future-proofed, resilient and expandable infrastructure that will support the City's security aspirations and requirements for the long term approach.

24. The Phase 1 works are set out in the main body of the report, and are considered essential if the security vision as set out in the Transport Strategy is to be achieved.

Corporate & Strategic Implications

25. The SCP fully supports the following CoL and CoLP Strategic aims
    - COL and CoLP Corporate Plans
    - COL Transport Strategy
    - COL Local Plan 2036
    - City Police Vision 2025

26. Working as a true partnership (CoL, CoLP, Business Community) SCP aims to create an environment [City-wide] where people using our streets and public spaces are safe and feel safe. The SCP team will work with all stakeholders to ensure that any security measures deployed as part of the programme delivery will be sympathetic to the aesthetics of the environments into which they will be deployed. Significant changes to the City's street-scape are envisioned, as part of the drive towards greater mobility and accessibility to all, the intended reduction of vehicular traffic into the Square Mile and the desire to attain a higher degree of pedestrianised access.

27. The SCP team are evaluation emerging technologies than will potentially support not only the enhanced security function, but will also support City Logistics and Operational Management; our basis of design is very much anchored on building a single technology solution set that will support all stakeholders' requirements. An example would be LiDAR technology that can provide a highly accurate security tracking capability (when linked with CCTV) but can also be used to accurately assess (in real time) footfall and crowd dynamics. Such capability will be of significant benefit to security and the CoL Dept. Built Environment colleagues alike.

Implications

28. The SCP is significant undertaking.

29. Initial cost evaluations are being undertaken for Phase 1 and will be articulated vai the relevant committees and Gateway processes once the definite user requirements and quantities have been validated. However, Members are asked to note that capital costs will continue to be value-engineered as the programme progresses, thereby ensuring value-for-money solutions. A separate cost model will equally reflect relevant revenue thereby presenting Total Cost of Ownership (TCO).

30. An initial risk assessment has been undertaken, which will be further developed as part of the next stage of the programme. High level risks and mitigations (in brackets) include:
  - Stakeholder engagement/ buy-in (close collaboration and co-working with Stakeholders. Programme to be run on a one-team ethos basis)
  - Funding (Early delivery of SMS and new JCCR show home to attract 3rd party investment).
  - IT not on board. (Once scope has been outlined will need a full-on campaign to ensure IT Vision aligns with SCP).
  - Inappropriate resources/ team to deliver ("Right people for the right job" approach. A small team will be proposed, thereby reducing costs, but it will be formed of appropriately skilled personnel).
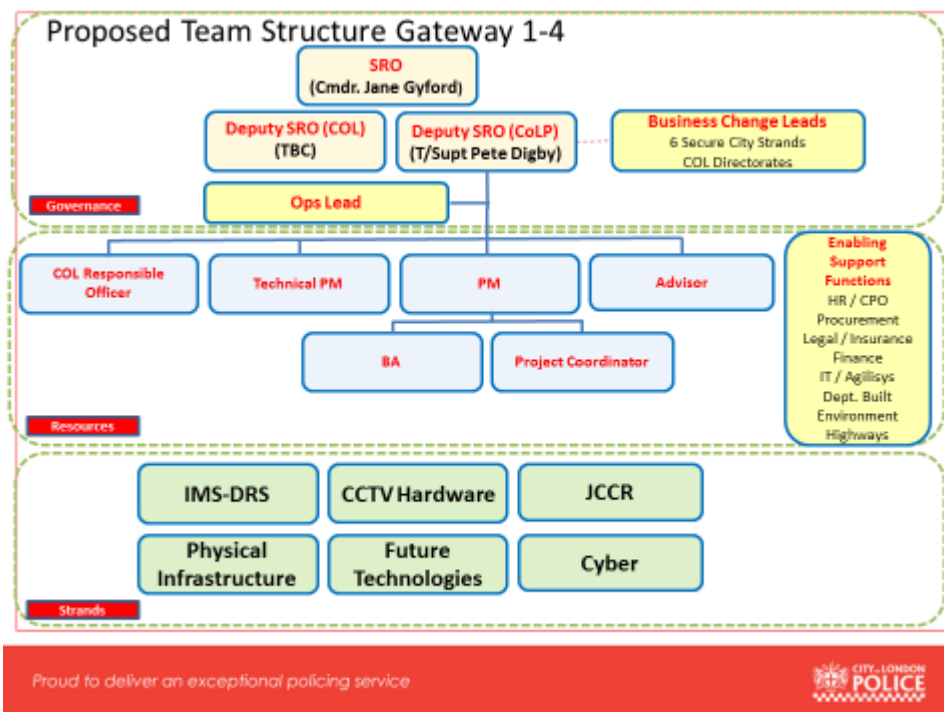 - The project team envisaged for the next stage of Phase 1 of the programme is detailed below.

Figure 2: SCP – Proposed Impact on Resources

31. Funding will be required to cover the following non-FTC/FTE personnel
  o Project Manager
  o Technical Project Manager
  o Business Analyst
  o Advisor
  o Project Coordinator

32. Costs of all other team resources are covered. This team is expected to be in place between April-November 2019.

33. The SCP has engaged with CoL Procurement to ensure that the programme is fully compliant and operating within Procurement, Legal and Contractual guidelines.

34. It has been agreed that the procurement of the SMS will need to be the subject of a full OJEU process, and this has been accommodated within the overall programme timelines.

Conclusion

35. SCP is a major undertaking that will support the COL vision under the Transport Strategy. The SCP strategic road map of implementation will ensure that the core building blocks are in place to support the adoption of emerging technologies in future years that will allow the City to become one of the safest and most secure cities in the world but in a manner that creates a welcoming and pleasurable place in which to work, visit and live.

36. SCP is a highly complex programme, but the road map that has been developed has broken core and fundamental components into "bite-size" pieces that collectively will form the back bone of the City's security function for many years to come.

37. The programme is ambitious, but nevertheless achievable.

Appendices

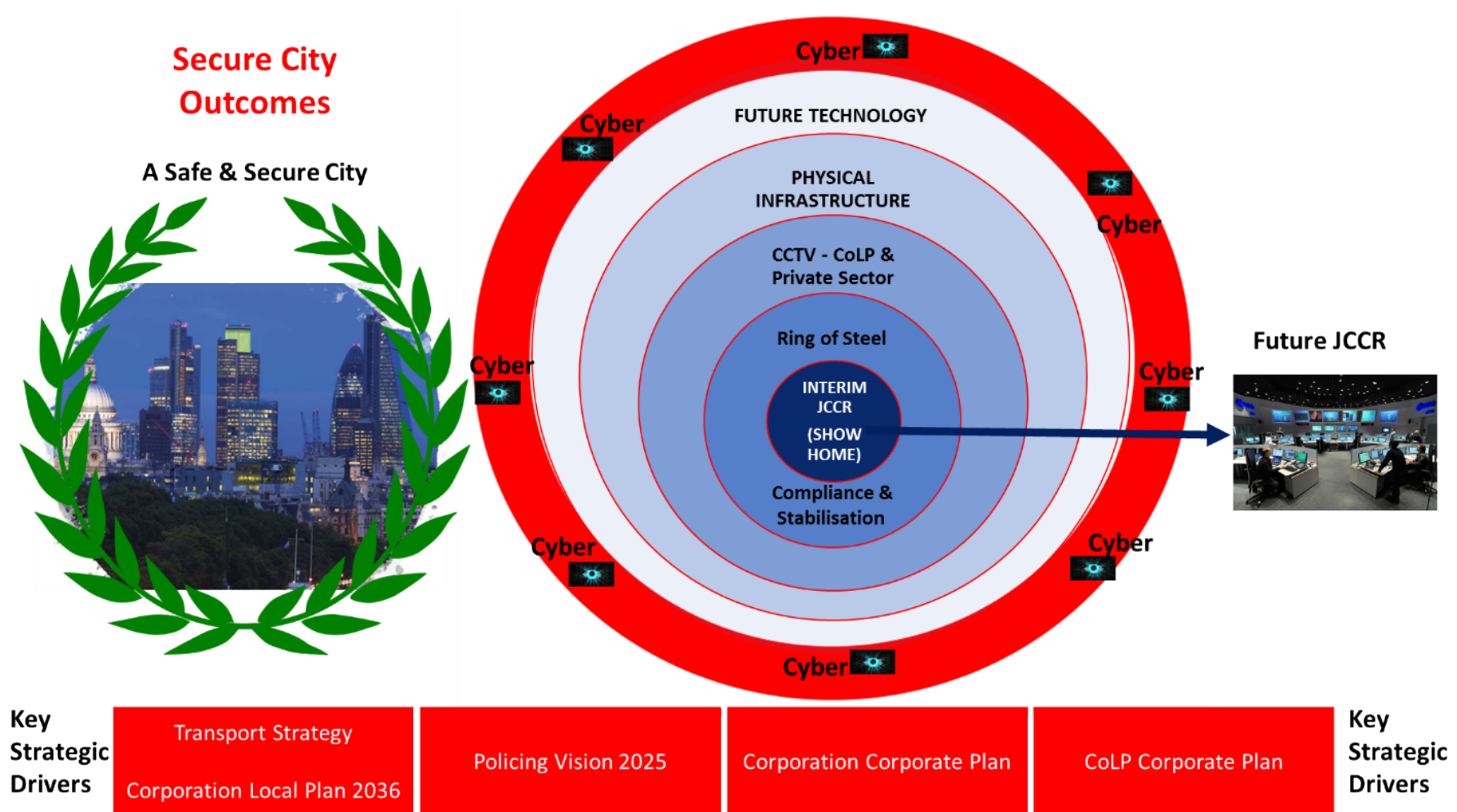38. Appendix 1 – Priority works to be addressed under SCP Phase 1

Figure 3: SCP – 6 Complementary Work Strands

Figure 4: SCP – Priority Work Stream (1) Establishing the new JCCR and the integrated Security Management System

City Wide CCTV

IMS-DRS

COL CCTV

3rd Party CCTV

Video Analytics

Face Rec

Key Strategic Drivers

Transport Strategy

Corporation Local Plan 2036

Policing Vision 2025

Corporation Corporate Plan
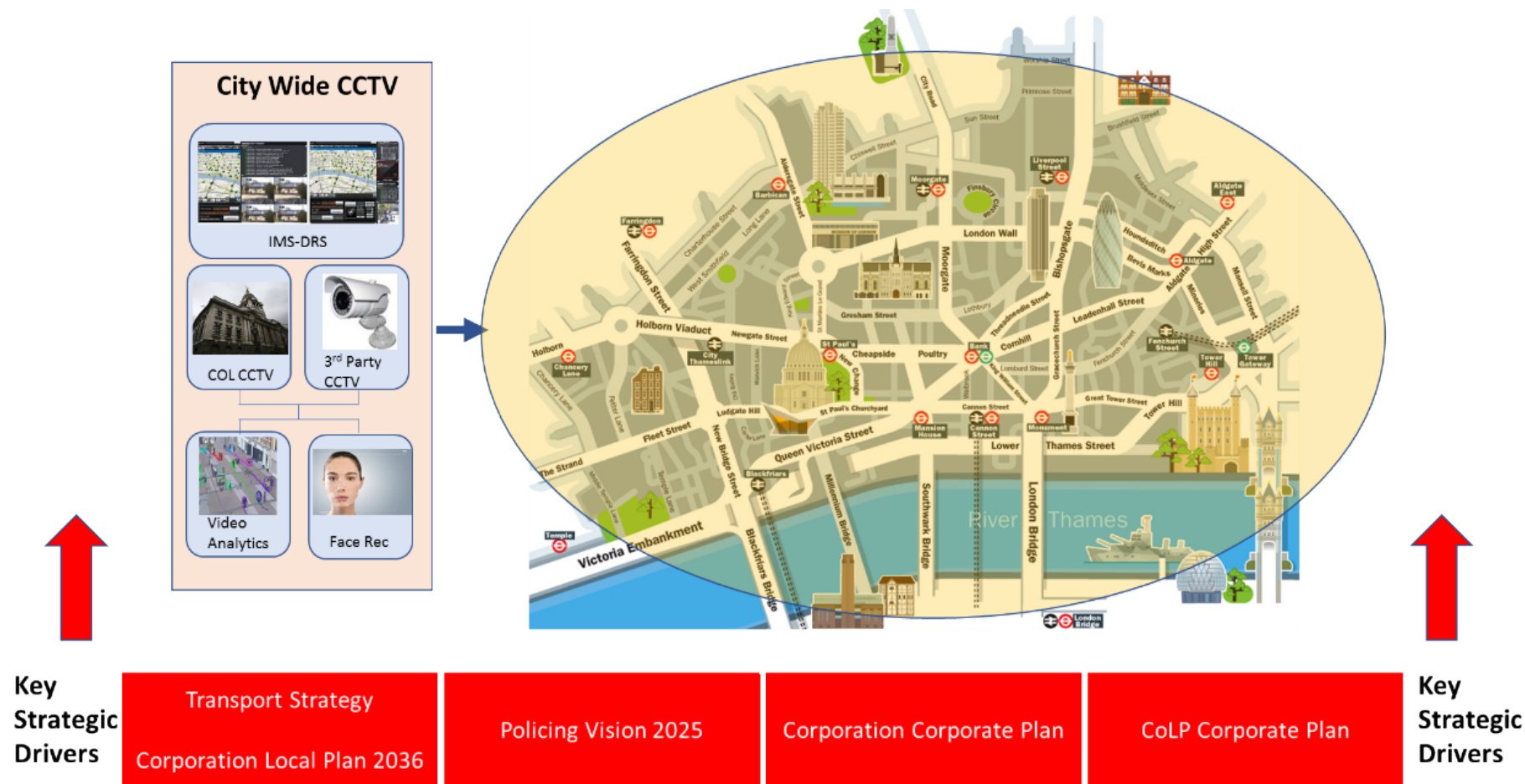
CoLP Corporate Plan

Key Strategic Drivers

Figure 5: SCP – Priority Work Stream (2) COL CCTV Upgrade and Building the ability to ingest 3rd party CCTV and Access Control

Figure 6: SCP – Priority Work Stream (3) Supporting COL establish the vision under Transport Strategy and Local Plan 2036

Future Technologies

Technology	Reference
Data Analytics	SMS.6.1
LiDAR	SMS.6.2
Crowd Dynamics	SMS.6.3/4
Footfall	SMS.6.5
Risk	SMS.6.6
ANPR	SMS.6.7
HVM	SMS.6.8
AFR	SMS.6.9
Lighting	SMS.6.10
Signage	SMS.6.11/12
Help Point	SMS.6.13
CBRN	SMS.6.14
Air Quality	SMS.6.15
Traffic	SMS.6.16
Drone/Counter drone	SMS.6.1?

Key Strategic Drivers

Transport Strategy
Corporation Local Plan 2036

Policing Vision 2025

Corporation Corporate Plan

CoLP Corporate Plan

Key Strategic Drivers
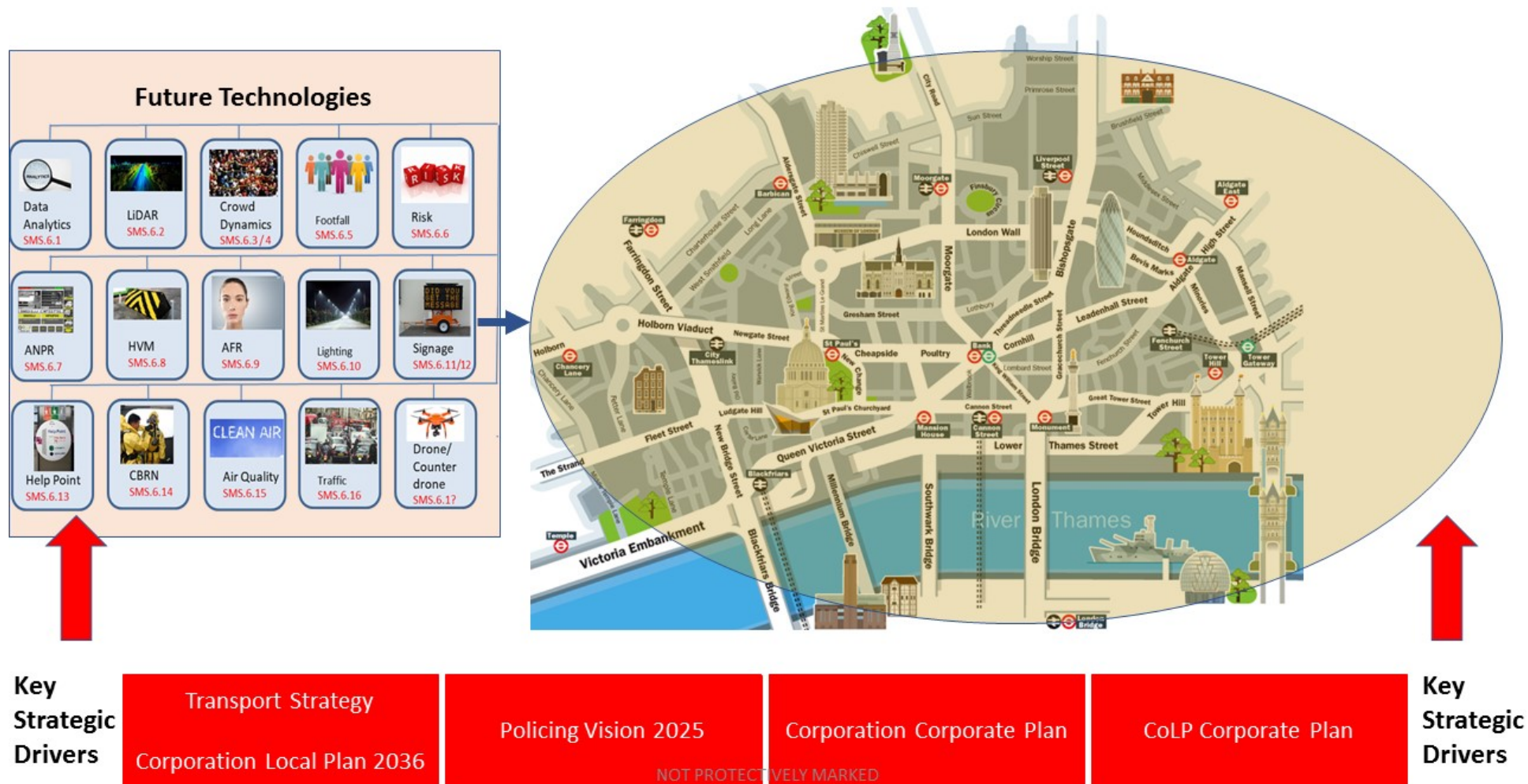
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Figure 7: SCP – Priority Work Stream (4) Building on the Secure Management System established in Priority Work Stream (1)

Background Papers

Background papers include:
- Pol 01-18 Secure City Update – January 2018
- COL and CoLP Corporate Plans
- COL Transport Strategy
- COL Local Plan 2036
- City Police Vision 2025
- CoLP Strategic Threat and Risk Assessment

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