STRATEGIC REPORT ON
IMPROVING THE EFFICIENCY & EFFECTIVENESS
OF PUBLIC-SPACE CCTV IN SCOTLAND

Justice Analytical Services

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BACKGROUND TO THE INSTALLATION AND GROWTH OF CCTV

The growth of public-space CCTV in Scotland has its foundation in a series of independent capital funded projects for the most part led by the Scottish Government and Local Authorities stretching back from the early 1990’s to 2005. From the outset, these systems have therefore grown independently of each other with neither technical nor operational linkages in place, installed mainly to provide solutions to local problems with little integration of technologies, procedures or use of performance measures. The day-to-day operation and the strategic utilisation of public-space CCTV in Scotland has essentially evolved through differing practices and differing models of service delivery.

Scotland’s public space CCTV lies separate, but part of, the U.K.’s position as the major user and installer of CCTV across Europe. The development of public-space CCTV in England has also been led by a series of unconnected capital investments in excess of £170M; made available by the Home Office and has led to what critics have described as “unstrategic development” of systems. This same criticism may well be directed within Scotland where capital funding was made available from the Scottish Government and used to install fixed camera systems without defined response strategies, outcomes or evaluation measures being put in place. Importantly, no long-term revenue funding plans have been developed to maintain and/or sustain the operation of these systems.

In this report, consideration has been given to the operation of public-space CCTV systems at both operational and strategic levels. Surveys have shown strong public support of CCTV which is often seen by the public as a panacea to problems of crime and anti-social behaviour in local communities. There has been a fragmented “problem led” approach to camera installations where availability of funding and public and political support has driven a single dimensional solution without any strategic or integrated approach to intelligent and appropriate responses to the activities caught “live” on cameras.

Underpinning the whole issue of public perception and support for public-space CCTV is the discussion on CCTV’s role and capability as a proactive and/or reactive resource. At the core of this issue is whether public support is based upon the often erroneous belief that the cameras are universally subject to regular, routine and systematic monitoring by staff 24hrs per day, 365 days per year. The lack of revenue monies has directly impacted upon staffing levels and therefore the quality and extent of proactive CCTV monitoring. The marketplace is developing a range of “intelligence led” CCTV products e.g. utilisation of motion detection, voice and/or light intervention systems. These are being ‘trialled’ principally in England and Glasgow, but are rarely used in all public-space networks.

Many CCTV control rooms, particularly those operated by local authorities, are, and have been, developed additionally to be multi-purpose 24 hr alarm, repair and contact centres. Consequently, there is a risk that monitoring resources become too diluted and impact adversely upon the primary resourcing and quality of CCTV monitoring.

The role of the police is a major factor in the operation and success of CCTV as a resource to fight crime and fear of crime. Importantly there are core differences in approaches between police forces across Scotland with some keen to own and operate camera systems while others have planned and implemented the removal of CCTV systems from their police stations back to the council and/or independent trusts. At the same time the creation of police “contact centres” and the introduction of the “airwaves” radio system have changed the nature of channels of communication and information from CCTV control rooms to police response resources.

The technical capability of CCTV is evolving so we must recognise that systems are developing ‘artificial intelligence’ and by using biometrics and digital rather than analogue platforms CCTV is no longer simply a resource to watch activities but is being developed as a predictor of behaviour and so has a potential role as an intervention tool.
What this report sets out

This report sets out the issues and challenges facing the operation and management of public-space CCTV across Scotland. It recognises the importance of public-space CCTV to partner organisations as a tool to improve the quality in local communities.

There is no doubt that this service has been supported and sustained financially by both police and local authorities. This investment is underpinned by a core of committed CCTV managers and operators who strive daily to deliver high quality services, monitoring and recording CCTV images 24 hours per day.

CCTV cameras are an intelligence source which depend on other partners to provide appropriate and effective responses to the images / information they generate.

This report supports the operation of the current framework of public-space CCTV cameras across Scotland and seeks to define what would / should be “best practice” in operational and strategic terms.

Underpinning this review is the question of what does / should the public expect as an outcome from the existing backbone of cameras and whether the current utilisation of this technology fully supports crime prevention, detection and community safety initiatives.

**Definition of “public-space” CCTV** - Closed Circuit Television is used as a security tool by the public and private sector varying in size & scale from domestic systems installed by homeowners to city/regional size camera systems. CCTV has historically been used to protect property as a replacement for traditional manned guarding services and slowly has evolved to its present role as a resource used by the police to deal with criminality. The remit of this review is to consider those systems on the public streets across Scotland. There are other large CCTV systems owned and managed by housing associations, transport authorities, shopping centres and universities which in simple camera numbers outsize the public-space cameras but these are out with the scope of this review. The current and future operation of these commercial systems is relevant to overall surveillance so it is recommended that future discussion on “best practice,” the operational / strategic utilisation and integration of systems and information be cascaded and shared with these important service providers.


**REVIEW STRUCTURE**

In setting out to review public-space CCTV in Scotland the starting point must be to recognise and respond to the clear lack of information on the size, operation, utilisation and potential of these systems as information sources and policing / community safety tools.

To respond to this a “landscaping” questionnaire was issued to each of the 32 Scottish Local Authorities through the Justice Division of the Scottish Government. The results of this have developed an understanding of the “footprint” of public-space CCTV in Scotland.

The results of this survey are contained in a separate report.

1) **Operational Framework**

**ISSUE - (a) The “footprint” of public-space CCTV systems across Scotland** - To date there are no clear measures of the basic operational or performance levels within CCTV control centres across the country. The Scottish public space CCTV “landscape survey” has provided profiling information of the public space CCTV systems across Scotland and baseline data for future comparison and analysis. The survey was co-ordinated through the Scottish Community Safety Network and SCCJR of Glasgow University.

**ISSUE - (b) Standards & Accreditation** - Public-space CCTV is an industry that operates on a local level with little in place to promote a standardisation of approach or joined-up working in the operation and management of CCTV systems between and among neighbouring authorities / operation centres. Some national standards and accreditation are available for control rooms operating either as CCTV and /or alarm receiving centres but these are not universally, nor routinely, in use. Expert advice is not freely available and there is little exchange of best practice among service providers with a strong dependence on installers and sales reps. promoting their own “unique” products with all the problems of integration this approach brings. Many CCTV centres have never been subject to formal evaluation of their service standards nor any measure of “value for money” and self assess and report on their “successes”.

1.01 - **Recommendation** - There should be a requirement for CCTV operations to undertake systematic and regular evaluations to re-assure public confidence in the transparency of their processes and their adherence to legislative requirements. It should be possible to create a template of performance indicators and measures to enable a national performance framework to be created.

1.02 - **Recommendation** - Consideration should be given to the creation of a Scottish national CCTV group to develop and support best practice and partnership working across Scotland.

1.03 - **Recommendation** - Use of Nacoss/NSI, BS5979 and other recognised industry standards should be encouraged to set operational principles within CCTV control centres and establish a set of performance comparators.

**ISSUE - (c) The ownership and management of CCTV systems across Scotland** - There is no single strategic approach to organisational control or management frameworks for public-space CCTV and the operation and ownership of CCTV systems is continuing to evolve and change without a national guiding strategy.

**Stage 1** - Initially CCTV control rooms were located in police stations with police officers operating cameras, managing the system and alone deciding the level and nature of response to incidents. The advantage of this model of service delivery was that the police had a strong commitment to CCTV at both senior and local level and were comfortable and confident in communicating information between officers controlling cameras and officers in the street. Where civilian staff were then employed to monitor the cameras, because they were located in the police station and under supervision of police
officers, there was the same commitment and support from the police. In some areas this model of service delivery continues today.

**Stage 2** - Since circa. 2002 the removal of camera systems from police stations created a change in working relationships with CCTV operatives. In some cases there have been communication issues with the loss of the close contact of co-location. There have also been problems and delays in introducing radio /communication links between CCTV operators and police and problems presenting CCTV images where the officers cannot see the images from the cameras and are dependant solely upon information being relayed by CCTV operators.

**Stage 3** - With the introduction of police “contact centres” the ability to see and share images, access to police radios and general joint -working has been under further pressure. The use of support staff, perhaps with limited experience of police services or knowledge of CCTV has again affected the “handshake” between CCTV operators in control rooms, staff in contact centres and police officers on the streets.

It is relevant to consider how these differing ownership and operational policies impact on the strategic utilization and integration of technologies and service efficiency. It is also important to comment on how well CCTV is being used and could be developed as a national resource for counter terrorism. From the past experience of the London bombings it became evident that camera ownership and management held at a local “borough” level reduced the opportunity to provide a city-wide snapshot of current threats.

Although there was the ability to retrieve information from the many local authority systems, however, sourcing this urgently needed data was hampered with staff requiring to travel to different locations and access a wide range of images and information held on a multiplicity of compression mediums and platforms. In response to these issues a “command centre” structure is now being developed that would allow the police to centrally access, view and control live and recorded information across the city. This model is already under discussion among Scottish police services with at least one force developing the ability to “pull” control of public-space cameras into an emergency control/command centre to respond to major incidents. There is currently strong public support of CCTV in Scotland and this could be affected where all ownership and operating decisions were solely in the hands of a single major partner e.g. the police. This “ownership” issue should include and consider public perception/ reassurance issues in respect of current public concerns about a “big brother” society and the states capability to supervise, watch and control its citizens through using technology and the new concept of “dataveillance”

**1.04 - Recommendation** - A Scotland wide strategic approach should be developed that maximises the day to day operation and utilisation of public-space CCTV at a local level.

**1.05 - Recommendation** - Decisions on technologies and equipment must allow and support a platform of images and information that can be easily accessed to allow the police service and other partners to respond on a strategic level to major emergencies and the threat of terrorism.

**1.06 - Recommendation** - When considering changes to who should “own and manage “ public-space CCTV in Scotland it will be important to ensure public support is maintained and to address public civil liberty concerns and potential for perceptions of a state led “big brother” approach to surveillance.
ISSUE - (d) Monitoring of CCTV - Within the sector there are operational and strategic discussions on public-space CCTV as a pro-active or solely re-active resource. There is a naïve and widely held assumption that all cameras are being watched and are maintained to a standard that allows quality images to be captured. CCTV control rooms, old and new-build, do not constantly present every camera to a monitor which would allow pro-active monitoring of all cameras by operators. The size and quality of images being presented vary to such an extent that some pictures are simply not useful for detection and / or identification. Control rooms are not always staffed for the full 24 hours per day. CCTV cameras are not routinely “patrolling” but tend to be “parked” i.e. static, though in some control rooms a systematic approach and use of “hot spots” on a 24hr clock does provide a more strategic approach to image/information gathering.

Of importance the overall standard of monitoring provision must meet the expectations of partner organisations and the wider community. Developments in technology with motion detection and intelligent motion detection capabilities are coming onto the market such that if integrated into CCTV monitoring systems would offer operators in the future a “heads-up” to activities within the camera range. The upgrading of CCTV systems though will require future capital and revenue investment.

The opportunity to utilise light sources and both recorded and “live” voice from the control room may change the role and nature of public-space CCTV’s historic watching role to having the ability to intervene, distract and dissipate offending behaviour as it happens.

These developments in technology will be particularly relevant to multi-function CCTV control rooms where operators are tasked with a range of functions (e.g. community alarms, intruder alarms, repairs, A.S.B. help line etc) in addition to monitoring of cameras. The CCTV community must consider how to respond to the public perception that cameras are always continuously being watched.

1.07 - Recommendation - In principle all cameras, live and operational in the system should be presented to a monitor in the CCTV control room all the time with a size / resolution “fit for purpose”.

1.08 - Recommendation - The control room should be staffed 24/7 with sufficient resources to monitor the cameras and undertake other duties where allocated.

1.09 - Recommendation - CCTV providers should deliver a pro-active monitoring service to meet public expectations and where this is not in place, the community and partner organisations must be informed through signage and public information.

1.10 - Recommendation - The knowledge base and awareness of CCTV operations to these evolving technologies must be grown to ensure that the financial investment and public confidence in these systems is maximised.

ISSUE - (e) Recruitment, training and development of CCTV operators - Historically the recruitment and training of CCTV operators had been a low priority for operating organisations. In some instances, jobs in CCTV control rooms were partly used to redeploy misplaced staff from elsewhere within the organisation, without any aptitude or selection process and then these staff given only “hands-on” training.

Since 2000 more formal accredited training has been offered through City & Guilds but there has been limited uptake in this training. The Security Industry Act introduced the need for formal training and licencing to “public-space CCTV surveillance” to England and this became a legal requirement in Scotland from November 2007. However, the legislation currently allows exemption from this standard and there is a danger that constrained training budgets may prompt some public-space CCTV operations to use these exemption opportunities to avoid both training and operator licencing.

The current position in Scotland is therefore private contractors providing CCTV monitoring services have been required to respond to the legislation and have invested in training their staff while many CCTV operators employed particularly by local authorities remain untrained and unlicensed. There is also little
formal technical and management training available in and therefore the opportunity to grow and “professionalise” this sector are at present limited.

The security industry has historically been poorly paid and tainted with links to informal and/or illegal working practices and service providers/contractors. The development of S.I.A. licencing could be utilised as a platform to challenge both this perception and its reality and, at the same time, bring forward new employment opportunities for unemployed in security and CCTV services.

1.11 - Recommendation - Nationally accredited training should be mandatory and the licencing requirement should be extended to include all public-space CCTV operators to create a level playing field for the public and private sectors.

1.12 - Recommendation - Working with the SQA and awarding bodies, qualifications should be developed to professional this service at operator, technician and management levels.

1.13 - Recommendation - In recognising and responding to the job opportunities that exist and continue to grow in this sector, further opportunities to develop training schemes to include the unemployed in job ready / licence training should be developed.

ISSUE - (f) Vetting of CCTV staff - Historically most public-space CCTV operations ensured that all their staff were vetted through Disclosure Scotland to “Enhanced Disclosure” standard. More recently it was decided that CCTV operators should no longer be vetted to this level and only "Basic Disclosures" were to be issued by Disclosure Scotland. The wide-ranging nature, scope and abilities of the staff and the technology in use and the need for public re-assurance in this “surveillance society” requires a reverting to the higher standard of enhanced disclosures. At the same time the vetting process should be monitored and managed to include all staff, management and volunteers who operate CCTV at any time.

1.14 - Recommendation - All staff operating and managing public-space CCTV systems should be vetted through Enhanced Disclosures and with a record keeping system in place that is subject to regular external checks.

ISSUE - (g) Communications - CCTV control rooms depending solely on operator’s intuition and skills to “find” incidents are not making the best use of either the technology or the operator. For a CCTV control room to operate efficiently and effectively it requires access to information to direct CCTV cameras to incidents particularly as they happen. Some control rooms have links to police radio systems (to listen and / or transmit) and receive information and direction from council departments, other partner agencies and in some instances the public themselves. In some areas, council staff and local housing associations officers can contact the control room to have cameras directed to respond to incidents as they happen, making their own staff safer particularly when dealing with graffiti removal and/or anti-social behaviour.

The switch to Police use of “airwaves” radio systems should have brought benefits to communication. However, problems of licencing, technology and the costs caused the rollout of this important resource to be patchy across Scotland and its use for two-way communication is mixed – although is now improving.

The importance of CCTV operations to receive “incoming” intelligence underpins the ability for “Intelligence led” and responsive CCTV monitoring plus incident management. There is ongoing debate within the sector on the advantages versus disadvantages of allowing the public to contact the control room directly. Innovative ideas such as accepting texts and e-mails have been piloted (there should be already a contact/telephone number on the signage at camera locations to meet Data Protection regulations)

1.15 - Recommendation - As a minimum requirement all CCTV control rooms should have access to listen to police radio broadcasts and a national policy on the use of two-way communication should be established.

1.16 - Recommendation - Opportunities to develop streams of “incoming intelligence” with partner organisations should be developed through information sharing agreements.
1.17 - **Recommendation** - The opportunity to accept and receive calls/contact directly from the public should be considered / developed as a mechanism to promote public support and confidence in public-space CCTV.

**ISSUE - (h) Incident logging** - The practice and approach to logging of incidents is as wide and varied as the basic definition / understanding of what makes an “incident”. An incident may be something as simple and mundane as a lost dog or as serious as a murder being caught live by a camera.

The seven police forces until recently had different incident definition, management and logging systems, however recognising the benefits of having one uniform system which would could link across Force boundaries, has led to the Police to adopting one system, called STORM MA, for the future. Changeover to this one system approach is currently in progress across the seven Forces.

The public space CCTV operations, however have no commonality of approach to either describing incidents or when / what to log as an incident. Some organisations tend not to formally log incidents; others adopt a paper based log. Others have put in place a more systematic recording mechanism and in the best examples operate computer based systems which can report and provide comprehensive analysis on incidents by type, camera location, ward, date/ time etc.

Just as important as what is recorded as an “incident” is the willingness and ability of the CCTV centre to share images / information with partner organisations. Some have developed detailed Information Sharing Protocols with partner organisations such as council departments, housing associations etc while others seem to be more hesitant or unable to share data. For clarification the legislation, Data Protection, Human Rights etc do not prevent the proper and proportionate sharing of CCTV held “sensitive personal data” and so should not be used as an excuse for poor partnership working. Poor practice in information sharing may hinder response / intervention partners delivering appropriate and quick responses which may then adversely affect community perception and support for public-space CCTV.

1.18 - **Recommendation** - A standard approach to describing / tagging incidents should be developed to allow incident management and analysis on a local and national basis.

1.19 - **Recommendation** - Computerisation of incident logging and integrated reporting mechanisms would allow national information models and performance to be compared and measured.

1.20- **Recommendation** - The concept model of “one image, many uses” would benefit from CCTV control centres having in place formal Information Sharing Protocols with a raft of partner organisations to facilitate information and image sharing within the structures permitted by legislation.

**ISSUE - (i) Responding to CCTV incidents** - At the core of any CCTV review it should be remembered that CCTV cameras have never ‘jumped down’ and arrested a single individual. It is through the utilisation of their images and information, when properly used by partner organisations intervening and responding to crime, anti-social behaviour etc, that the role of CCTV is fully recognised.

Historically the sole responder to incidents / crimes etc caught on CCTV has been the police, but some thought and discussion should be given to the impact and effect of other partner organisations taking on this role particularly for low level anti-social behaviour etc. There are examples of good practice where community wardens, graffiti squads, housing association staff, anti-social behaviour officers intervene either immediately or as part of a more structured integrated response. Importantly it remains routine to install new fixed and / or mobile CCTV cameras without any properly thought through response options/solutions in place. Recognition should also be given to the growth of CCTV cameras in the public domain with that many of these cameras catch previously unreported crime and that the resourcing impact these “newly” detected incidents will have on the police and other emergency services to immediately provide a visible and effective response.

1.21 - **Recommendation** – Future proposals to install new fixed or mobile CCTV cameras should include a detailed response strategy supported by relevant intervention/ response partners.
1.22 - **Recommendation** - Where the CCTV cameras are to be installed to tackle crime then the police should be involved in any proposed installation and should make a commitment of resources to respond within reportable and recorded timescales.

1.23 - **Recommendation** - Partner organisations should put in place a range of appropriate response options to “make a difference” that can be seen and recognised by partners and the community.

1.24 - **Recommendation** - Where appropriate and systematic response strategies cannot be put in place, new CCTV installations should not be promoted and indeed existing sites should be subject to review to ensure cameras continue to be in places of need.

**ISSUE** - (j) **The technology - Camera images and compression methods** - Behind the simple ability to send an image from a camera to a control room sits a jigsaw of equipment to gather, monitor, record and playback the image.

CCTV technologies operate in an open market of competing products and standards where unstructured developments create blockages to integration and information retrieval & sharing. Although central and local government and the police have all contributed to the purchase of differing CCTV hardware there has been little attempt to define standards, unify specifications or ensure compatibility of systems across both local authority or Police/emergency service boundaries.

The current position is that even local authorities sharing boundaries cannot “pass” information and certainly cannot carry out “live” cross-boundary pursuits of people or vehicles. This is shown within one police force area where exist four and more incompatible digital image/storage platforms which prevent even historical cross local authority boundary searches. The development of digital storage systems, to replace analogue (tape based) systems, could offer the opportunity for improvements in the quality and accessibility of information and evidence.

Currently there are a wide range of manufacturer digital storage systems and a mix of compression methods/standards which has lead to incompatible systems becoming the norm within the industry. This causes real delays and operational problems for police investigations in retrieving quality image evidence plus the use of image evidence in the courts and wider justice system. This diversity and lack of universal technology standards acts to undermine the value and effectiveness of CCTV evidence.

What is needed is an “integrator” that would allow all systems to share data across their operational areas to local and national partners in particular the police for cross-boundary and major incidents. Digital storage systems could be utilised as the platform that would enable the integration of systems. The ability to undertake cross-boundary searches, both live and historic, is crucial when dealing with serious crime and terrorism / counter terrorism measures.

In future strategic planning and the upgrading of obsolescing systems, recognition should be given to the evolving “artificial intelligence” that sits behind CCTV, which brings additional problem-solving capabilities to the technology. ANPR (Automated number plate recognition) systems are now commonplace. Facial recognition systems are still in development and perhaps need to evolve as 3D images before they are more robust. Motion detection systems have been in use particularly for property protection, and the development of ‘intelligent’ motion triggered detection will again provide access to data / information to highlight irregular patterns of behaviour.

1.25 - **Recommendation** - For partners to work together to develop a standardisation and compatibility of digital recording/storage systems that would promote information retrieval and information sharing protocols.

1.26 - **Recommendation** - The ability to undertake live and historic cross LA/Police boundary searches particularly in response to serious crimes and terrorism should be a building block of any new system.
1.27 - Recommendation- In advance of further investment in the “next generation” of CCTV systems and recording mediums, manufacturers should be encouraged to unify CCTV operating systems, develop industry standards e.g. image compression and retrieval, or an integration product should be developed to make image retrieval easy across differing systems.

1.28 - Recommendation- A platform should be developed to allow CCTV system managers access to emerging technologies that both develops the CCTV community’s knowledge base and allows best practice to be shared.

1.29 - Recommendation- The opportunity to create a technological partnership approach to the development of a common digital platform should be considered at a strategical level by the police service, CCTV system owners and the CCTV industry.

**ISSUE - (k) The technology - Transmission technologies**- Traditional analogue CCTV transmits images over co-axel cable, wireless or often in the case of public-space CCTV, over dedicated fibre cables. Fibre optic technology provides high quality pictures but is limited by its point-to-point approach, which restricts and directs the transmission of images to and from single pre-determined locations with little or no flexibility.

CCTV over IP (Internet Protocol) sends information as packet data onto an IP network. The initial development of CCTV over IP has been within environments with pre-existing I.T. networks and infrastructures. Therefore, council buildings, universities etc, where network /server based I.T. systems are in place have taken the opportunity to utilise this I.T. backbone as the transmission method.

Early attempts at CCTV over IP were resisted by I.T. managers, due to the file size / bandwidth requirements of CCTV images. At the same time, the early systems suffered from quality and latency issues that reduced the usability and visibility of the images being presented to the CCTV operator and the question of the security of the data was open to discussion. CCTV cameras themselves are now moving from analogue to digital products and this facilitates and simplifies many of the technical issues and problems.

The use of IP in public-space CCTV systems is still evolving and the use of broadband and web browsing technologies opens up the opportunities to share/send images to and from more than one centre or partner organisation.

1.30 - Recommendation- Set up a working group with CCTV practitioners and industry professionals, to review the technology in the marketplace, with a view to develop a common set of operating standards/technical specifications (including an investigation of the feasibility of developing CCTV over IP as a sustainable and secure transmission environment for public-space CCTV) for use in future CCTV systems in across Scotland. This should be done in partnership with The Home Office to ensure cross border compatible CCTV systems.

**ISSUE - (l) Gathering and utilisation of CCTV as evidence for / to court** - The ability of CCTV cameras to collect high quality images and present these through an auditable “chain” to be used as evidence in court is a basic requirement of any camera system. Historically evidence is/ was produced in tape form with playback available through standard VHS and super VHS tape recorders. The chain of evidence required for court proceedings is/ was protected by simple, often manual tape logging systems held within CCTV control rooms. Playback is/ was made available in the court by using video recorders being moved between courts as required. The introduction of digital technology should be a catalyst to improve accessibility and the quality of image evidence now stored digitally. Unless the Police and Justice organisations have the financial resources to upgrade their equipment it will become increasingly more challenging for the police, procurator fiscal’s office and the court to source then access with ease digitally recorded information / images.

The differing technologies and the need for access to computers and / or DVD players have meant that at times evidence may not be used fully in the process: procurator fiscals may not be able to view digital images while assembling evidence / case summary; the police may be prevented from easily checking images as...
they record incident details into a log book; and the court may be unable to view evidence due to lack of playback equipment.

The technology exists to securely network the CCTV images “live” into police, procurator fiscal and court systems and so make a ‘quantum’ leap jump in capability. However, perhaps because of the lack of joined up strategy and funding, much of the current discussion focuses on replacing video tape players with CD/DVD machines in offices and the court so the real opportunity to jump to stream “live” data from secure digital storage “warehouses” is not being fully considered.

1.31 - Recommendation - Further discussions are required between these major partners to support the integration of the use of CCTV images into the prosecution and court processes and make the best use of the available technologies.

ISSUE - (m) **Signage of public space CCTV systems** - There is a legal requirement to signpost areas in which CCTV is in operation. A failure to properly sign the “curtilidge” will deem the system as “covert” and change the nature of operational requirements of the system (R.I.P.S.A) Signage can suggest that the system is operational and monitored 24/7 and can create an expectation that the areas covered by these cameras are under “live” surveillance and therefore an expectation of safety. It is not unusual for mobile cameras to be switched off to save battery power. Also where cameras are not presented to a control room 24/7 and / or not monitored proactively by CCTV operators - this is a false premise and should be clearly shown in any signs.

1.32 - Recommendation - All public space should be adequately signposted in terms of current legislative standards.

1.33 - Recommendation - All public space should be appropriately signposted in terms of hours cameras are being watched to both re-assure and inform the public.

2) **Strategic Framework**

ISSUE - (a) **The deployment/locations of cameras** - The footprint of installed CCTV across Scotland has formed through a mixture of strategic and past un-strategic decisions evolving from local community, police and elected member pressures. Often CCTV was seen as the “first choice” solution partly due to the past availability of funds but also due to the strong public and political support for CCTV. Again the decision to install cameras has tended to be made in isolation and without discussion on response strategies. The current “landscape” of CCTV across Scotland is one of a now aging population of cameras and decisions on the relevance of location and issues of “fitness for purpose” need to be addressed to meet operational procedures / codes of practice and changing data protection legislation.

2.01 - Recommendation - CCTV system operators should have in place a visible process to review camera locations against a series of performance measures to justify the ongoing siting of individual cameras.

2.02 - Recommendation - A more strategic approach to new camera installations should be developed to include a range of alternative solutions, a response strategy to deliver solutions and an analysis of outcomes.

ISSUE - (b) **Fixed and mobile cameras** - Fixed CCTV cameras on bespoke poles or on wall brackets are the traditional and often only method to deliver CCTV onto the public streets. These cameras make use of hard-wired fibre/ cable to generate images back to a control centre. These installations are both slow and expensive to deliver and much discussion has been generated on “displacement” theories. Until recently, the technology available via mobile cameras using wireless-based solutions have been unreliable and offered poorer quality images in comparison to the robust, quality systems delivered through the use of fibre/ cabling. New systems using 3G and/or GPRS mobile phone technology and true wireless (not requiring “direct line of sight”) are now available with much greater reliability.
2.03 - **Recommendation** - The sustainable use of technology that can respond to peripatetic anti-social behaviour and crime is likely to become more important in helping to improve community safety, effectively manage incidents and tackle crime. Consequently, the use and availability of developing technologies of 3G telephony and WiFi should be given serious consideration for future CCTV growth/replacement and monitoring centre investment.

2.04 - **Recommendation** - When installing both fixed or mobile CCTV systems, response strategies and measures of success/outcomes should be put in place jointly between the providers and users of CCTV.

**ISSUE - (c) Integration with relevant policies & strategies** - CCTV is a tool which should also be used as a source of information and intelligence to help inform and support policing, community safety and anti-social behaviour strategies. The role of CCTV as a policing tool has changed and developed as the technology has changed and the police have moved to intelligence led/problem solving policing. Within local authorities there are mixed approaches to integration and joined-up working between community safety, anti-social behaviour and CCTV teams and there can be blockages to awareness and information sharing of CCTV images.

2.05 - **Recommendation** - Partner organisations should develop integrated strategies that include the use of CCTV information/images into their core business.

**ISSUE - (d) Responsive to the needs and aspirations of the community** – Currently, there is a high level of public, police and political support for public-space CCTV across Scotland. It has been oversold in the past, as a panacea to stop anti-social behaviour and solve crime. When well managed and integrated into response strategies of the police and other partner agencies it can improve the quality of life in local communities. At present it is a form of postcode lottery whether you live in an area with CCTV, whether the CCTV is monitored, whether every incident is systematically recorded and forwarded “live” or later to the police and/or other partners to investigate and respond.

CCTV has the potential to be used as a resource to improve the quality of life in local communities with linkages into housing and community planning policies and frameworks.

Past research has shown overwhelming support of new CCTV installations by local communities who believe that it will immediately impact on local problems of street drinking, youth disorder and crime. The same research suggests that support for CCTV can diminish over the first few months of operation if much of the anti-social behaviour continues due to the lack of planned response to incidents by the emergency services and other partners.

2.06 - **Recommendation** - The installation of CCTV should be strategically planned to deliver real solutions that can be recognised and identified by local communities as successful outcomes of the use of CCTV.

Note: CCTV may well not be the sole best solution to a local problem but more effective when integrated as a tool in a toolkit of measures targeting a specific local community problem.

2.07 - **Recommendation** - Systematic feedback from the community should be available and fed into key performance indicators to measure and report on the outcome of CCTV installations.

**ISSUE - (e) Consultation with the CCTV system owners and managers** - Across Scotland there is currently no national ‘practitioner/CCTV users group’ to share information and best practice or to consult on future local and national policies. There is a U.K. CCTV Users Group which is well managed and recognised within the industry and by the Home Office and other major partners.

At present only a small number of Scottish CCTV organisations are members and/or participate in the UK forums and conferences. There is a “West of Scotland CCTV” group but again attendance at this is limited by
geographic boundaries. Criminals do not stop at local authority or national boundaries so CCTV systems and ‘intelligence’ needs be to be able to reach across boundaries too.

2.08 - Recommendation - There is a need to promote active participation in either a Scottish national “users” organisation, or the established UK wide group, to act as a point of reference to the industry in Scotland and as a resource to develop best practice across the sector plus joined up strategy across geographic boundaries.

ISSUE - (f) The use of CCTV in response to terrorism - Bearing in mind the terrorist attack at Glasgow airport and the recognised need for pre-incident and post-incident information gathering, comment on the role of CCTV in this process is relevant. There is a naive view that the introduction of digital recording systems will simplify the data processing and retrieval processes. With the multiplicity of manufacturers, compression mediums etc access to recorded images may well be both difficult and slow to obtain. Where video tape recording is in use there are examples of the police seizing up to 1800 tapes at the one time to respond to a single terrorist incident. Most digital storage systems would struggle to offer the ability to transfer or download this size of database.

At the time of the bombings in London it became routine for the police to take away the master/ original recording medium where they were unable to download information either at all or very slowly and only after additional equipment was sourced. An unintended outcome of having removed a CCTV’s master system resulted when a further terrorist incident took place and there was no CCTV recording capability left in place.

2.09 - Recommendation - Public funds should be used to ensure the CCTV systems installed optimise the easy retrieval of quality CCTV image evidence and ensure the continued operational capability of the CCTV system following retrieval. This is a complex area requiring a specialist, technical review of existing and emerging technologies, consequently future procurement decisions should be required to ensure both ease of intelligence data/ image retrieval and seamless continued operation.

3) Legislative Framework

Key Elements -

(a) Data Protection Act 1998
(b) Human Rights Act 1998
(c) The Regulation of Investigatory Powers (Scotland) Act 2000 [RIPSA]
(d) The Freedom of Information Act 2000
(e) The Private Security Industry Act 2001
(f) The Criminal Procedure (Scotland) Act 1995
(g) The Criminal Justice (Scotland) Act
(h) The Health & Safety Act 1974

ISSUE - (a) to (h) - It is outside the remit, and un-necessary here, to go into a detailed analysis of each piece of legislation. It is more important to understand the standards and sometimes conflicting approaches that these rules/laws have on the operation of CCTV.

The Data Protection Act establishes minimum standards for the operation of overt public-space CCTV.

RIPSA actually sets out how to instal and mange covert CCTV in a proper and legal manner while overriding the protections of family life and privacy embodied in the Human Rights Act.

The Data Protection Act is the most important piece of relevant legislation and should be used to a greater extent to secure and improve the quality of public-space CCTV systems. At its core, the legislation promotes “proportionality” and the concept of “fit for purpose”, two themes and standards which should underpin the installation and operation of all public-space CCTV cameras.
CCTV has often been the only solution put forward in communities to deal with problems of crime and anti-social behaviour and once installed these cameras may in time become only partially monitored, lacking in routine maintenance and unable to gather quality images for evidential purposes. Ineffective cameras are unlikely to promote a sense of community safety.

Further developments of the Data Protection legislation are already under consideration and these will likely impact on CCTV operations requiring a more systematic approach to reviewing existing camera installations to measure and assess ongoing need for cameras to remain in place.

3.01 - Recommendation - Develop a clear understanding of the relevant legislation within the CCTV sector and put in place information and advice sources to operating organisations, their partners and the community.

4) Funding Framework

ISSUE - (a) Central government capital funding - Historically funding was in the form of bids/grants for capital monies alone. Often funds were made available for only CCTV initiatives and this led to a lack of strategic thinking in terms of alternative/better solutions. This created a high demand and at the same time a cycle of unrealistic expectation as to what CCTV could achieve where installed in isolation from other services, partners and integrated solutions. Funds were also notionally made available through a range of sources - Quality of Life Fund; New Neighbourhood Fund; Community Safety Partnerships and these financial resources have either not actually been made available to CCTV service providers or often used for short-term growth rather than underpinning the ongoing financial sustainability of existing CCTV operations.

ISSUE - (b) Revenue funding – There have been significant instances where CCTV managers have found themselves in ‘crisis’ with little continued revenue funding in place to pay for staff, equipment, maintenance etc. A wide range of business growth and diversification strategies to source funding have therefore been developed. More commonly within local authorities where CCTV control rooms may operate 24/7, they are seen as a resource to be used also to provide cover for any “out-of-hours” service e.g. housing repairs reporting, community alarm, intruder alarm and property CCTV monitoring etc. This financial need to source alternative revenue may well act to dilute the volume and quality of pro-active CCTV monitoring as CCTV staff become diverted to undertake these other fee earning functions.

ISSUE - (c) Funding from police service - There has been no national policy on funding and each police force makes a local decision as to whether to provide CCTV funding. Many offer support “in kind” by providing police officers to operate CCTV and/or to act as liaison/evidence officers. Revenue funding has been made available through “the Chief Constable’s Grant” and recently for updating / developing systems with a focus on digital recording/storage systems. No scientific measure of “savings” generated to the police through utilisation of CCTV has been undertaken to measure time/costs/hours saved in the investigation and detection of crime. It is, therefore, at present difficult to put a cost/benefit charging / pricing model in place but this area is worthy of further investigation.

ISSUE - (d) New funding strategies - There has been little effort to integrate the installation of public-space CCTV into Local Authorities business and departmental service strategies. Examples of this include: - new build housing developments, public houses, clubs, off-sales in known “trouble spots” facing problems of anti-social behaviour, graffiti, disorder, crime etc. and some of these private sector organisations contribute to the provision of CCTV surveillance to promote safety/help manage incidents. There are recent examples of local authorities making use of planning and licencing regulations and procedures to operate a “polluter pays” type approach requiring installation/funding for public-space CCTV and/or other measures (links to radio systems) to minimise the impact these new developments have on the community.
ISSUE - (e) **Sustainable funding strategies** - There are no long-term funding strategies in place at central or local government level to sustain and/or strategically grow the footprint of public-space CCTV across Scotland.

For the most part local authorities are currently meeting the major share of operational costs and there are only small scale roll-out programmes for new cameras across Scotland. Any future funding should initially focus on sustaining the existing camera installations where they have been subject to formal evaluation and review processes and continue to have relevance to the policing and community safety agendas. At the same time decisions / approvals for new CCTV installations should be focused on delivering integrated responses and solutions that can be measured against performance standards.

4.01 - **Recommendation** - Funding for existing CCTV systems across Scotland should be urgently reviewed. Aside from advancing digital technology, across Scotland several CCTV systems are becoming technologically obsolete or beyond economical repair. Due to funding restrictions not all cameras are continually displayed to a monitor and/or fully monitored or maintained to a ‘fit for purpose’ standard particularly in the smaller public space systems where budgets are particularly constrained.

4.02 - **Recommendation** - Where major partners offer funding, more detail and direction on spending proposals should be put in place to achieve compatibility in the technologies in use.

4.03 - **Recommendation** - The opportunities to utilise planning legislation and licencing regulations to promote public-space CCTV and wider community safety strategies should be considered and included as a matter of routine in the development application and licencing processes.

4.04 - **Recommendation** - All future funding should be integrated through recognised partner agencies – Community Planning/ Community safety partnerships, Scottish Business Crime Centre, Police/ emergency services and with those Trusts that exist separately to provide public space CCTV surveillance. All primary stakeholders should be involved in the decision process and camera installation should be linked to intelligence led response strategy/ initiatives.

5) The Information Commissioner - Code of Practice - January 2008

This report was drafted and in discussion throughout 2007 and it is not surprising that there are similarities of key and core issues / concerns for Scotland between this review and this published “CCTV data protection code of practice”

In particular the Commissioner comments on :
- Decision making process for the introduction of CCTV and concerns about justification, benefits and proportionality.
- The management frameworks in place for installing and operating CCTV systems requires to be pro-active in delivering information on locations, performance and review.
- The quality and accessibility of CCTV images to identify and prosecute offenders needs to be assured.
- Developments in the technology balanced against the protection of individual rights - intrusion v privacy.

These are key themes and issues separately identified by this review and the comments of the Information Commissioner, underpinned by legislation, requires CCTV managers and to respond to these concerns.
6) **Summary** – A framework for improving the future efficiency and effectiveness of CCTV

The recommendations set out within this report should be used as a platform for more specific review and action. A detailed action plan would need to be put in place to generate discussion within the CCTV community and to develop operational and strategic standards and best practice across the sector. Lessons learned and good practice should be made available to the large CCTV operations (transport centres, universities, shopping malls etc) not included in the core of this review but recognised as key partners to creating safe and secure communities.

**The process**

A ‘Technical Group’ of police and public-space CCTV managers and experts should be formed to review the technologies in use to include:-

1. quality of images
2. accessibility of images to partners and as evidence
3. use of new technologies- facial recognition, intelligent motion detection, voice and light integration
4. digital technology - standards and mediums
5. development of a partnership to create a digital storage platform across operational boundaries

A Strategy Group of partner organisations should be created to consider setting a national framework for the operation, management and strategic utilisation of public-space CCTV across Scotland. This group could be led by the Scottish Government and include representation from:-

- The police service; local authorities; Scottish Community Safety Network; British Transport Police; the Scottish universities security managers forum; West of Scotland CCTV users group;

This group would consider:-

- public confidence and perception as to the operation of CCTV
- the role of CCTV in crime prevention, investigation and prosecution processes
- the current successes and failures in the operation and management of CCTV systems
- the opportunity to create cross-boundary information and image platforms to meet the operational and strategic needs of partner organisations.

A National CCTV Users Group of CCTV managers of “public-space” CCTV systems and including managers from CCTV systems in universities, shopping malls, transport centres, and airports.

This group would consider:-

- development of “best practice”
- operational procedures and codes of practice
- training and licencing of staff and managers
- promotion of integration and sharing of information to relevant partners
6) “Blue Sky” Thinking

A) UTILISING THE CCTV “FOOTPRINT”

In discussing the current and future role of public space CCTV there is both the need and opportunity to consider how his resource is used and could be better utilised as a community resource. It is important to include all CCTV systems and other relevant and emerging technologies in mapping out how solutions could be developed and integrated that improve the quality of life in local communities.

Examples
The camera “footprint” watching and recording information on the public streets includes cameras installed for:-

- traditional “public space”
- traffic light monitoring
- bus lane management
- shops and shopping malls
- railway & bus stations
- universities

There is a continuing increase in the numbers of CCTV cameras in our streets particularly for traffic management (e.g. speed cameras, bus lane management and cameras being linked to traffic lights at every corner). University campuses, transport and shopping centres operate and manage large numbers of CCTV cameras many of which cover the public streets.

All these cameras may, on purpose or just fortuitously, record crime and disorder but generally it is only in response to major incidents are these images collected and utilised to pursue/ identify offenders. A more systematic approach to gathering information and images generated by these systems would be beneficial to tackling crime and disorder. Currently, the major issues in respect of system incompatibilities and the ease of assembling data would need to be addressed.

There has been some criticism of “misuse” of cameras installed for community safety and policing being used to manage traffic etc. In reality this argument could be inverted with a requirement placed upon all other CCTV systems on public streets to be available to the public-space CCTV centres and their partners to respond to minor and major issues (from anti-social behaviour to counter terrorism).

B) PUBLIC-SPACE CCTV CONTROL CENTRES

These control rooms are the key resource for CCTV image gathering and information sharing and for delivering “live” information to generate immediate and appropriate police responses. Each local authority across Scotland tends to build there own control room, even where this means capital expenditure possibly in excess of £1 million. Since few organisations have any long term revenue / sustainable funding in place for the aging cameras already in need of maintenance and replacement, a model of shared provision may provide a better model sharing CCTV provision across local authority boundaries.

This local and solitary approach is made worse when neighbouring authorities / CCTV operations purchase their own choice / type of digital storage system which actually block information sharing opportunities with the police and other partners.

There is currently no real inter-authority discussion on basic systems, standards or protocols. However, real scope for joint working and an inter-authority shared service approach to the building of CCTV control rooms. The concept of a single, or shared, control & command centre with public-space, university, local authority, transport and shopping mall cameras, all being presented, monitored and recorded on common platforms is achievable and should be considered as a strategic objective. This approach would also free-up public sector
funding from building more control rooms to addressing today’s issues of quality and the sustainability of present CCTV operations.

Although not necessarily an appropriate solution for cities such as Glasgow and Edinburgh, a good example of smaller local authorities deriving economies of scale and the benefits of a shared service approach exists in the model adopted by Clackmannanshire, Falkirk and Stirling local authorities’ in partnership with Forth Valley Police, where one central monitoring service covers three local authority areas.

C) LINKAGES TO “TAGGING” TECHNOLOGIES

Any initial discussion on “tagging” focuses on personal views and press reports on the failures of this technology for the management of early release prisoners and sex offenders. More recent public debate has considered the use of tags for members of the community in need of supervision for their own protection. (e.g. the Alzheimer’s Society cautiously supported the possible use of this technology.)

The signalling and receiving technology within existing CCTV camera poles could be utilised to generate “alarms” when tags are in camera areas and inform or when necessary intervene in serious incidents.

CCTV operators could inform relevant partners of tag activations and actually follow and record the individual to aid e.g. the appropriate support, police or ambulance response. With “voice enabled cameras” now available at some camera points, a person under surveillance could be informed that their situation or anti-social behaviour was under ‘supervision’.

D) CCTV AS AN INTERVENTION TOOL

The traditional role of public space CCTV has been to record information / images and pass these to relevant partners (often the police) as required. Situations do arise however where CCTV operators observe offences occurring “live” on their monitors, trigger an alert but without a speedy or appropriate on the ground response; often because of resource constraints. Systems have been installed to make use of light and voice as intervention tools. From the camera position a spot light can be shone on the offender and/or the operator can activate a speaker attached to the camera (and turned directionally with the camera) to inform of the presence and monitoring of CCTV (e.g. in practice this has already been used to prevent the escalation of street drinking and fighting into major gang violence.)

Potential exists to make more intelligent and measured use of CCTV as an intervention tool. This would change the traditional role of CCTV but could provide an additional resource to help deliver immediate and recognisable quality of life improvements.
Recommendations - in summary

Operational

1.01 - Recommendation - There should be a requirement for CCTV operations to undertake systematic and regular evaluations to re-assure public confidence in the transparency of their processes and their adherence to legislative requirements. It should be possible to create a template of performance indicators and measures to enable a national performance framework to be created.

1.02 - Recommendation - Consideration should be given to the creation of a national Scottish CCTV group to underpin and support best practice and partnership working across Scottish CCTV operations.

1.03 - Recommendation - Use of Nacoss/NSI, BS5979 standards etc should be encouraged to set operational standards within CCTV control centres and establish a set of comparators.

1.04 - Recommendation - A Scotland wide strategic approach should be developed that maximises the day to day operation and utilisation of public-space CCTV at a local level.

1.05 - Recommendation - Decisions on technologies and equipment must allow and support a platform of images and information that can be easily accessed to allow the police service and other partners to respond on a strategic level to major emergencies and the threat of terrorism.

1.06 - Recommendation - When considering who should “own and manage “public-space CCTV in Scotland it is important to maintain public support and understand the fear of a state led “big brother” approach to surveillance.

1.07 - Recommendation - In principle all cameras, live and operational in the system should be presented to a monitor in the control room all the time with a size / resolution “fit for purpose”

1.08 - Recommendation - The control room should be staffed 24/7 with sufficient resources to both monitor the cameras and undertake other duties where required and allocated.

1.09 - Recommendation - CCTV providers should deliver a pro-active monitoring service to meet public expectations and where this is not in place, the community and partner organisations must be informed through signage and public information.

1.10 - Recommendation - The knowledge base and awareness of CCTV operations to evolving technologies must be developed to ensure that the financial investment and public confidence in surveillance systems is maximised.

1.11 - Recommendation - Nationally accredited training should be mandatory and the licencing requirement should be developed to include all public-space CCTV operators to create a level playing field for the public and private sectors.

1.12 - Recommendation - Working with the SQA and awarding bodies, qualifications should be developed to professional this service at operator, technician and management levels.

1.13 - Recommendation - In recognising and responding to the job opportunities that exist and continue to grow in this sector, further opportunities to develop training schemes to include the unemployed in job ready / licence training should be developed.

1.14 - Recommendation - All staff operating and managing public-space CCTV systems should be vetted through Enhanced Disclosures and with a record keeping system in place that is subject to regular external checks.
1.15 - **Recommendation** - As a minimum requirement all CCTV control rooms should have access to listen to police radio broadcasts and a national policy on the use of two-way communication should be established.

1.16 - **Recommendation** - Opportunities to develop streams of “incoming intelligence” with partner organisations should be developed.

1.17 - **Recommendation** - The opportunity to accept and receive calls directly from the public should be considered / developed as a mechanism to promote public support and confidence in public-space CCTV.

1.18 - **Recommendation** - A standard approach to describing / tagging incidents should be developed to allow incident management and analysis on a local and national base.

1.19 - **Recommendation** - Computerisation of incident logging and integrated reporting mechanisms should be put in place to allow national information models and value for money performance to be compared and measured.

1.20 - **Recommendation** - To promote the model of “one image, many uses” CCTV control centres should have in place formal Information Sharing Protocols with a raft of partner organisations to facilitate information and image sharing within the structures permitted by legislation.

1.21 - **Recommendation** - Any proposal to install new fixed or mobile CCTV cameras must include a detailed response strategy supported by relevant partners.

1.22 - **Recommendation** - Where the CCTV cameras are to be installed to tackle crime then the police should be involved in any proposed installation and should make a commitment of resources to respond within reportable and recorded timescales.

1.23 - **Recommendation** - Partner organisations should put in place a range of appropriate response options to “make a difference” that can be seen and recognised by partners and the community.

1.24 - **Recommendation** - Where appropriate, and if systematic response strategies cannot be put in place, new CCTV installations should not be proceed and existing camera sites should be subject to a continued suitability review.

1.25 - **Recommendation** - Partners should work together to develop a standardisation and compatibility specification of digital recording/storage systems that would promote unified information retrieval and information sharing protocols.

1.26 - **Recommendation** - The ability to undertake live and historic cross LA/ Police boundary searches particularly in response to serious crimes and terrorism should be a building block of any new system.

1.27 - **Recommendation** - In advance of further investment in the “next generation” of CCTV systems and recording mediums, manufacturers should be encouraged to unify CCTV operating systems, develop industry standards e.g. image compression and retrieval, or an integration product should be developed to make image retrieval easy across differing systems.

1.28 - **Recommendation** - A platform should be developed to allow CCTV system managers access to emerging technologies that both develops the CCTV community’s knowledge base and allows best practice to be shared.

1.29 - **Recommendation** - The opportunity to create a technological partnership approach to the development of a common digital platform should be considered at a strategic level by the police service, CCTV system owners, Crown office and the CCTV industry.
1.30 - Recommendation- A review of the technology in the marketplace should be undertaken to include an investigation of the feasibility of developing CCTV over IP as a sustainable and secure transmission environment for public-space CCTV.

1.31 - Recommendation - Further discussions are required between these major partners to support the integration of the use of CCTV images into the prosecution and court processes and make the best use of the available technologies. A working group should be established to resolve issues.

1.32 - Recommendation - All public space should be adequately signposted in terms of current legislative standards.

1.33 - Recommendation - All public space should be appropriately signposted in terms of hours cameras are being watched to both re-assure and inform the public.

Strategic

2.01 - Recommendation - CCTV system managers should have in place a visible process to review camera locations against a series of performance measures to justify the ongoing siting of individual cameras.

2.02 - Recommendation - A more strategic approach to new camera installations should be developed to include a range of alternative solutions, a response strategy to deliver solutions and an analysis of outcomes.

2.03 - Recommendation - The sustainable use of technology that can respond to peripatetic anti-social behaviour and crime is likely to become more important in helping to improve community safety, effectively manage incidents and tackle crime. Consequently, the use and availability of developing technologies of 3G telephony and WiFi should be given serious consideration for future CCTV growth/ replacement and monitoring centre investment.

2.04 - Recommendation - When installing both fixed or mobile CCTV systems, response strategies and measures of success / outcomes should be put in place jointly between the providers and users of CCTV.

2.05 - Recommendation - Partner organisations should develop integrated strategies that include the use of CCTV information / images into their core business.

2.06 - Recommendation - The installation of CCTV should be strategically planned to deliver real solutions that can be recognised and identified by local communities as successful outcomes of the use of CCTV. Note: CCTV may well not be the sole best solution to a local problem but more effective when integrated as a tool in a toolkit of measures targeting a specific local community problem.

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3.01 - **Recommendation** - Develop a clear understanding of the relevant legislation within the CCTV sector and put in place information and advice sources to operating organisations, their partners and the community.

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END.