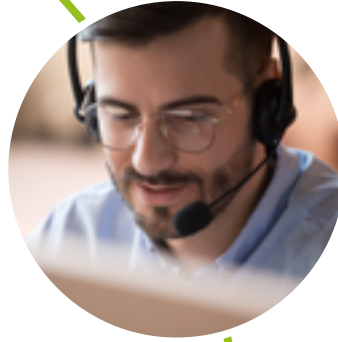




Connaught

CONVERGED SOLUTIONS



Buyer's Guide to CCTV



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Introduction

Managing security services within a business can feel overwhelming in a world with increasing options and changing technology. The shift in work models and the increase in business utility bills means that managers like you are now expected to deliver more, with less resource. With a wide spectrum of CCTV technology on the market, you need the information to make the right decision, based on the needs of your company and its stakeholders.

Here's the question. In today's complicated climate, is your video surveillance properly protecting you or is it unsafe and leaving you vulnerable? This guide will help you decide how to get the best solution for your business.

You'll discover:

- ✓ How to choose a product
- ✓ How to choose a supplier
- ✓ The surveillance traps to avoid



How to choose a product

With so many different options available, there are two key steps to choosing the right product for you:

Work out what you already have

Map out your site

The most important resource for getting the best from your CCTV setup is to have a clear and comprehensive sitemap. This should include every part of your premises, including the perimeters and surrounding areas you would like to be covered by video surveillance.

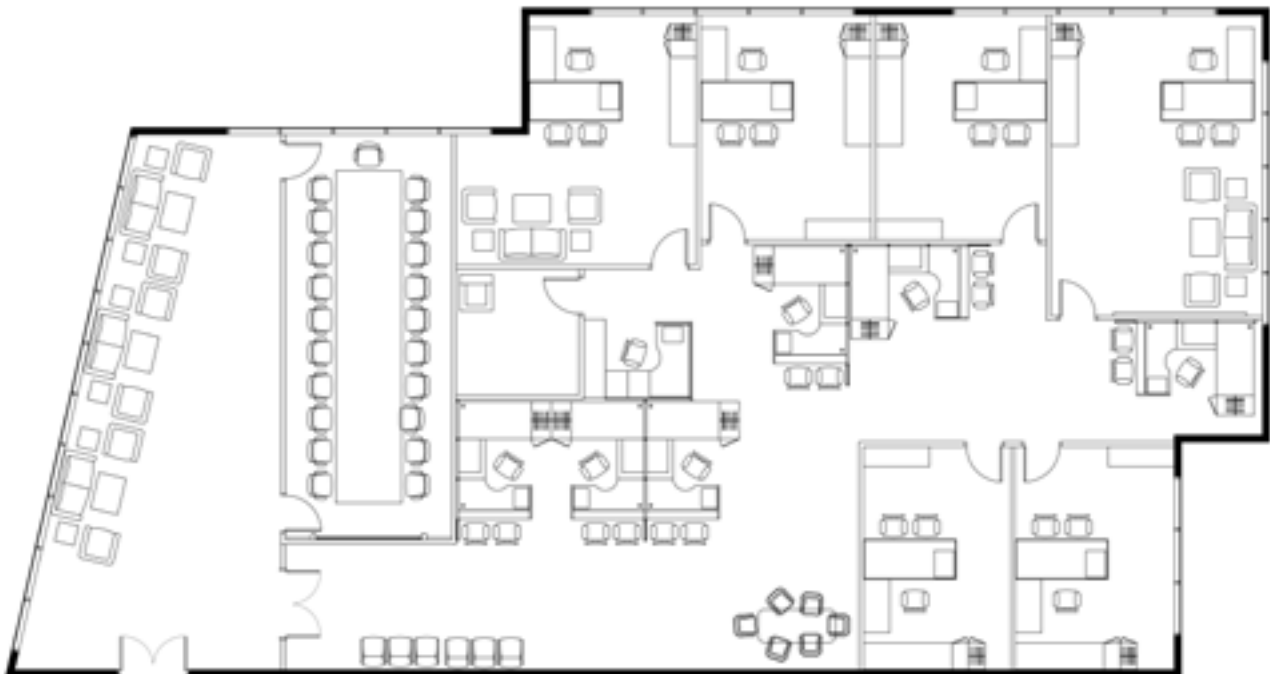
It makes sense to have one plan for internal areas and one for external, as these will have different requirements.

Once you have this marked out, you can use it to identify where cameras should be placed and at which angles they need to be to cover the areas you want. Drawing the coverage of the camera on these maps (by angle and distance) will allow you to identify any blind spots.

Alongside this, break up areas of your site on a list (for example, Car Park, Reception Area, Rear Entrance). Next to these areas, you can create a better understanding of your site by asking yourself the following questions:

- How much traffic does this area have, and does this traffic include vehicles?
- How well lit is this area?
- How easy is this area to access?
- Is this area used by visitors or members of the public, or exclusively by your organisation staff?

Knowing the answer to these questions will form your Site CCTV profile and allow you to identify any potential issues, which you can then prioritise in your video surveillance solution.



Cameras

If you already have a video surveillance setup in place, the next step is to audit the quality and condition of the camera units themselves.

Count how many cameras there are and where they're placed. Then work through each camera, identifying the following information.

Is the image quality on the unit clear enough for your needs? Some areas will require higher resolution cameras, to capture images in clear detail. Pay attention to how many MPs (megapixels) your camera unit offers, and check images to see if they are clear. 5MP is the most common resolution to allow for clear imagery, so any cameras lower than this may need updating, and the higher the resolution, the better the picture quality will be.

Does the camera cover the range or angle you need? Different types of camera unit will allow for different coverage. For example, bullet cameras excel at long range whereas turret cameras can be placed to cover a wider angle. Knowing which type of camera you are using will indicate whether you are getting the coverage you need.

Is the camera working well? As with all technology, cameras need to be serviced and maintained in order to function at their best. Audit whether the camera unit is working as expected, or whether it is showing signs of aging or malfunction.

Cabling and systems

CCTV setups are usually delivered over two styles – analogue and IP (Internet Protocol).

Analogue setups involve analogue cameras, which send image data to a Digital Video Recorder (DVR) over cables. This data is then converted to a digital format by the DVR and stored. In order to watch the footage, a DVR will need to be connected to a monitor or router to be broadcast.

IP setups comprise of IP cameras, which record footage in a digital format at the camera unit, and then send that over an internet connection to a Network Video Recorder (NVR) for storage with no conversion process. This footage can be accessed remotely or connected to a monitor depending on the needs of your business.

Knowing which of these two setups you currently have in place will allow you to choose the best way to improve your current system and choose compatible cameras, recorders and storage.

How is your footage stored?

Take an audit of how much storage you currently have for your CCTV footage. Does your system allow you to record for a long enough period without having to manually delete previous storage to make space for new recordings?

Recording of video surveillance footage can be done in multiple ways, such as microSD cards in individual (IP) camera units, external hard drives attached to recorders or cloud storage over the internet. Knowing how you currently retain these recordings and whether this solution is sufficient is key to understanding what you will need to improve your system.

How do you access your footage?

Different organisations will have different requirements for who can access their recorded CCTV footage. By law, CCTV recordings must be stored securely and only accessed by authorised personnel. Make a list of who in your organisation is permitted to have access to video surveillance data and their purpose for viewing. For example, reception staff may require a monitor showing live footage from the camera outside the building to anticipate whether a visitor can be granted access, but only directors may be allowed to access footage from cameras which show videos of PIN access on secured doors.

Using a router, both analogue and IP systems can allow for remote access to footage, so log whether this is currently available on your site, and whether it is needed. Alongside a viewing station on site, remote access to live feeds can be extremely valuable to directors to check in the event of an alarm being triggered out of hours.



Work out what you need

Once you have built a CCTV profile for your business, you will have some understanding of what you are looking for in a new solution. It can be helpful to separate these into the following categories:

Administrative

Looking at your surveillance profile from the last step, you should now be able to answer the following questions:

How many cameras do you need? Your audit may have identified that you have areas which aren't currently covered by a camera and your sitemap will allow you to count the total number of cameras required.

What type and resolution should these cameras be?

As well as identifying whether you need analogue or IP equipment, you will be able to decide what resolution you need for each camera and the type of camera for the scope and range of its location.

Cost and budget

With the cost of living rapidly rising, budget is more of a concern than ever for purchasing managers looking for top value security.

Using your sitemap, you can identify the priority areas for camera placement, and then build your CCTV system over time, adding cameras with budgetary restrictions. Generally speaking, starting at the perimeter of your site and covering all key entrance and exit points is a good starting place for a surveillance system.

Another good tip for managing cost is to identify areas where you can use a lower resolution camera, 2MP for example. Areas which are rarely used, such as basement stairwells, may not require full detail or excessive features, if only used for occasional monitoring.

Visibility and awareness

The mere placement of security cameras can act as a powerful deterrent against intruders and anti-social behaviour. Knowing that recording is taking place and actions are visible to staff is known to minimise risk without the actual footage being needed.

Bullet cameras are traditionally used for this purpose, due to their high visibility, traditional design and hard-wearing build. Pan-tilt-zoom (PTZ) capabilities, where the camera unit can move and zoom, can enhance these units to cover large areas and long ranges.

In the case that you need more inconspicuous cameras, high quality dome cameras built inside glass domes are perfect for this purpose, blending into surroundings while offering large area, vandal-resistant service.

CCTV law stipulates that data subjects (those recorded on footage) should be made aware that recording is taking place, so it is prudent to ensure you have appropriate signage up on your premises in order to remain compliant.



Features

With ever-advancing security technology, there are many key features available you may want to include for your CCTV setup.

Areas with cameras should ideally be well-lit, to enable the camera to pick up the best possible image. In order to combat this, night-vision cameras come with lighting built into the camera unit, to offer usable footage in dark areas and overnight. Full-colour night vision cameras use a combination of standard and infrared lighting, which means that viewers can identify clothing or vehicle colours on images in the event of a security breach.

Storage use can also be reduced by taking advantage of motion sensor technology. These cameras will only begin filming in the event that they are triggered by motion in the scope. Smart motion detection can use artificial intelligence technology to react only to certain types of motion (such as human or vehicle) meaning less likelihood of irrelevant triggers such as leaves or birds.

Taking this even further, targeted Intelligent Video Systems (IVS) allow you to define a rule (for example, identifying one area within a camera range which should not contain personnel) and then can send an alert or email to managers if this rule is breached.

When using cameras to deter intruders and anti-social behaviour, the use of Three-In-One Camera (TIOC) technology combines flashing lights, alarm functions and two-way audio, to allow you to communicate with unauthorised entrants. These units give off ambient light in poorly lit areas, and can send notifications to managers when the camera is triggered.

In areas where vehicles are recorded and tracked, Automatic Number Plate Registration (ANPR) can scan vehicle plates and check them against a database of authorised vehicles, triggering an alert or integrating with access control to allow or deny entry.

Integration

IP cameras will seamlessly integrate with your internet and the availability of security apps for mobiles, on Android and iOS, mean that you can access remote viewing and trigger notifications remotely. The benefit of this is that managers can have peace of mind whilst working from home or out-of-hours.

CCTV systems can also be integrated with door access control systems, which can trigger cameras to start recording when a secured door is opened, either with or without a key or proximity token.

The advent of High-Definition Composite Video Interface (HDCVI), which combines audio, video and data over traditional cabling, means that you can combine IP cameras with an analogue infrastructure if you are looking to add a specific IP camera on an existing system.



How to choose a supplier

Demonstrations and explanations

CCTV surveillance can be a minefield of jargon and technical terms, which can be overwhelming when all you want to do is protect your people and premises.

The best suppliers will take the time to meet with you to explain the process of implementing a new security system. You should be able to access demonstrations and view trial footage and software to really be sure that you are getting the right solution for you.

If at any point you feel like you need further information, your supplier should be available to explain in a straightforward and accessible way.

Service delivery experience

The growth of video surveillance has led to a rise in suppliers claiming to offer the best solution for your needs. Be wary of companies who cannot demonstrate that they have the experience of successfully implementing these solutions in organisations similar to yours. Security suppliers should have access to case studies to show this, and there's no substitute for experience in an ever-changing CCTV market.

Sub-contractors

Another question to ask a potential security supplier is whether they use subcontractors to install their CCTV solutions. Whilst there can be benefits to outsourcing certain functions (such as HR or IT), having a security supplier who directly employs, trains and manages their technical staff shows that they take full ownership of prioritising expertise and knowledge of these subjects in-house. It also means that the administrative staff for your supplier will have access to diaries and be able to contact engineers in the event of any issues without any third parties being involved.

Maintenance and support

Unless you have the time, interest and skillset to fully self-manage your CCTV system, it is essential that you choose a supplier who can offer you ongoing support, training and maintenance following install.

Lots of surveillance solutions offer impressive benefits and full functionality, but without any additional support. These systems often incur large charges for changes, assistance and callouts once installed, so this is an important element to clarify before signing any contracts.

Suppliers who offer drop-in access to engineers, annual service visits to clean cameras and access to how-to guides will offer you far more value long term than those who don't.

Clarity

Having all of the information upfront from your supplier is key to remaining in control of your security solution. You should choose a supplier who will give you all the details of what your contract contains, upfront, from the first day to the end date. Ask your supplier how renewals are handled, what is included in your charges and what falls outside of the contract, so you don't end up with any unpleasant surprises.



Surveillance traps to avoid

- ✘ Avoid cheap-looking camera deals which come without compatible recording devices or sufficient storage for the camera resolution.
- ✘ If you have an older system which is no longer fit for purpose, fitting expensive new cameras to this system is unlikely to offer much benefit, and it may be more cost-effective to look at upgrading your system
- ✘ Make sure you know what's included in the package and whether maintenance, servicing and support are available over the term of the contract



How can we help you?

If you'd still like help navigating the world of video surveillance, Connaught can help. Get in touch and we will give you clarity and control over your security solutions.



Connaught Converged Solutions

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