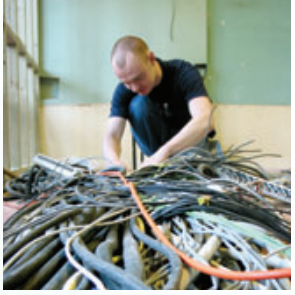
The Vantage of Seeing the Forest

TRUE COSTS

surveillance

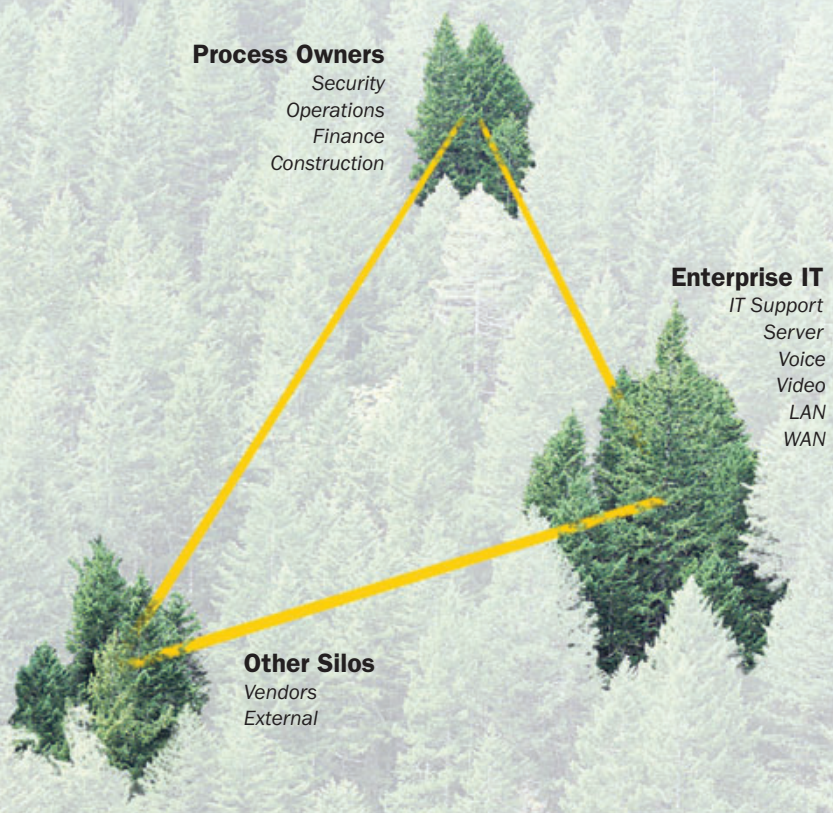
Rich, lush forests enclose many parts of the world. We see them as lush from a bird's eye view. Once within the forest, however, our awareness shifts to the trees, individually and in clusters, all competing for resources of water, soil nutrients, and sunlight to thrive. Overall, the managed growth and health of the forest comes from foresters and natural resource managers who understand the big picture – they know when and where to trim, transplant, or do controlled burns in order to maintain a lush forest. They are aware of the individual trees, but they make decisions based on the success of the forest as a whole.

Shifting from metaphor to reality, an incomplete picture of the costs required to design a complete video surveillance solution is misleading the security industry. Even experienced security veterans find themselves surprised when they assess the true costs of a complete surveillance system. The confusion is stemming from the way most companies budget dollars today: in functional silos of management. ›



Insufficient planning and use of legacy cabling can run your costs right through the roof.

Look beyond functional silos of management and identify all the components of a complete solution.



While they may provide some management conveniences, silos create barriers and boundaries, which are rarely crossed by surveillance system installers or security managers.

To see the true cost – which is essential in comparing CCTV and IP video technology – it's critical to look beyond functional management silos and identify all the components of a complete solution.

The Complete Solution

The most common mistake made by physical security industry members when comparing CCTV and IP video is basing purchasing decisions on the cost of the camera alone. This simple, but ultimately incomplete, analysis is guaranteed to lead to more of the same: a decision to stay with a CCTV solution that is designed to use proprietary software and single-purpose cabling.

Because IP cameras are typically more expensive than analog cameras, starting and stopping your cost assessment here will favor analog. But when you include all of the other components necessary to install a video surveillance system across all the functional management silos or departments in the organization, a much different – and more accurate – cost representation emerges.

At IPVS Knowledge, we use a practice called cost accounting to understand the total costs of technology architectures that cut across functional management silos.

Seeing is Believing

The numbers here would apply to a typical 85,000 square foot retail location containing 45 camera locations with an average CAP index for risk, which is the single most accurate predictor of loss, risk and crime. The component categories we use are listed on the adjacent checklist. Not included in this comparison are recording devices, storage or software. It also does not take into account setting up a loss prevention office. In the next issue of IPVS Magazine the article "TRUE COSTS part 2" will delve into these additional components.

One goal of the cost comparison is to determine the key performance measures (KPM). In this case, our KPM is the average cost per equipped camera location. The table below shows that the IP camera solution actually turns out to cost less. The IP cameras were $8,268 more to acquire, but the true costs of the IP solution was in actuality $10,052 less than the analog solution. The KPM cost with IP was $223 less per location when installed.

One clear advantage of IP-based video systems over CCTV is the less expensive cable infrastructure — fewer cables, shorter lengths and lower cable installation costs. The ratification of the IEEE 802.3af Power over Ethernet (POE) standard and adoption of the standard by IP camera manufacturers was essential to make this possible, eliminating the need to build out a single purpose power infrastructure. By reducing the complexity of the cable infrastructure, additional benefits are also gained. These benefits include fewer installation mistakes, less material waste, lower incidence of damaged equipment, and faster time to completion.

Surveillance Solution Cost Components

Camera assembly
- ✔ *Camera*
- ✔ *Lens*

Enclosure Assembly
- ✔ *Domes*
- ✔ *Mounts and Attachments*
- ✔ *Tile*
- ✔ *Bezels*
- ✔ *Fans or Heaters*

Signal and Power
- ✔ *MDF (Main Distribution Facility)*
- ✔ *IDF (Intermediate Distribution Facility)*
- ✔ *Cable Rack Assembly*
- ✔ *Patch Panel Assembly*
- ✔ *Patch Cable*
- ✔ *Power of Ethernet Switch Ports*
- ✔ *Conduit and Cable Pathways*
- ✔ *CAT5e or CAT6 Cable*
- ✔ *Termination Box Assembly*

Cabling Labor
- ✔ *Engineering Drawings And Schematic*
- ✔ *Project Management*
- ✔ *Aerial Lifts*
- ✔ *Installation*

Equipment Labor
- ✔ *System Design*
- ✔ *Project Management*
- ✔ *Aerial Lifts*
- ✔ *Installation*
- ✔ *Turn Up and Configuration*

The Result

Your organization is able to implement a video surveillance solution that meets current enterprise IT standards and has an extended life cycle. At the same time, you pay significantly less per installed location than if you had used a proprietary analog-centered technology — widely considered to be on its way out.

The best for less. Hard to beat that.

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Key Performance Measure

True Cost of a Surveillance Solution

Component Category	CCTV	IPVS	Difference
Cameras	$ 23,954	$ 32,222	$ –8,268
Fixtures	10,952	10,553	399
Signal and Power	18,430	11,810	6,620
Cabling Labor	17,594	7,540	10,054
Equipment Installation Labor	13,223	13,287	–64
Pre-tax Total	84,153	75,412	8,741
Tax & Shipping (Equipment only) 15%	12,622	11,311	1,311
Total cost for 45 camera locations	**96,775**	**86,723**	**10,052**
Cost per Equipped Camera Location	**$ 2,151**	**$ 1,927**	**$ 223**

Cameras attribute 37% of the overall cost, as illustrated in this IPVS solution, compared to about 25% in a CCTV installation.

For additional information on calculating key performance measures, contact IPVS Knowledge: KPM@ipvsknowledge.com