

## transit business

# How to maximize your video surveillance system investment

**W**hen planning an investment for transit video surveillance, the bid price should be treated as just one component of an overall purchasing strategy as operating costs vary widely. In this Q & A session, **Rodell Notbohm**, a seven-year veteran of manufacturing on-board video surveillance systems for **Apollo Video Technology**, addresses the factors that influence total cost of ownership and discusses strategies to make the most of capital grants to keep operating costs low.

### **METRO: OTHER THAN EQUIPMENT PRICE, WHAT COSTS SHOULD BE ACCOUNTED FOR?**

**Notbohm:** Regardless of the system used, operating costs can be a large expense and aren't always obvious. There can be significant personnel costs associated with training, maintenance and trouble-shooting, as well as obtaining and archiving desired video from a system. The more sophisticated the search capabilities of the system are, and the easier the system is to use, the less time and therefore personnel cost is dedicated to it.

Compatibility is also a large factor. We have seen many cases where agencies have outfitted a portion of their fleet with a camera system, and just a few months or years later, they are forced to adopt a completely new system because the manufacturer's own system isn't backward compatible. This can result in the agency being required to replace their old systems so they are compatible with the newer technology. Compatibility is also vital to employ new technology when the agency desires upgrades to its existing system, such as adding streaming live video back to headquarters or GPS- and time-tagging of video. Even litigation can be a hefty hidden cost — an unreliable system can have an impact in the courtroom and contribute to a judgment against the agency, if the system does not work properly or does not collect the

information needed to protect the agency.

### **WHAT CAN BE DONE IN THE PURCHASING PROCESS TO KEEP A LID ON OPERATING COSTS?**

Many agencies receive grant money, often from the FTA or stimulus funds, and some agencies even receive insurance money for outfitting a fleet or facility with surveillance. The initial mentality is, typically, to use as little of that capital funding as possible and select the "low bid." However, agencies should assess the inverse relationship between capital cost and operating costs.

Typically maximizing the "free money" available for capital results in lower operating costs for the agency. For example, selecting the low bid often results in the purchase of a less expensive, yet lesser quality system typically with a shorter warranty period and less manufacturer support included. Most agencies find this type of system will suffice initially, however in subsequent years when fatigue from the vibration, temperature and power fluctuations set in, required repairs must be funded out of the operating budget.

In addition, a less feature-rich system utilizes more hours for troubleshooting, offloading and locating desired video clips adding to the operating costs. If an agency is forced into a "low bid" situation, the agency should ensure that their technical specifications and scope of work are drafted, so that the most effective and efficient system is purchased to meet their needs, including lower operating costs.

### **HOW DO AGENCIES' NEEDS CHANGE AFTER AN INITIAL DEPLOYMENT?**

As we see video and recording technologies rapidly evolve year after year and surveillance equipment becomes more sophisticated, it's common to see the needs and wants of transit agencies change. Once the cameras are installed, many agencies begin to seek the added benefits

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of real-time video feeds, additional cameras, GPS technology, video management software and motion detection. Because replacing technology just to gain certain functionalities is costly, agencies may want to plan for a system that offers an upgrade path rather a replacement path.

### WHAT IS A REASONABLE LIFE EXPECTANCY OF A NEW SYSTEM?

The life expectancy varies significantly depending on the manufacturer and the individual system that is selected, so this is definitely a question that should be asked by the agency during the initial stages of the procurement process. More


often than not, agencies elect to replace or upgrade their systems, because of new technology or features, before their systems need to be replaced due to age.

### WHAT ARE COMMON REPAIR ISSUES AND HOW CAN THEY BE REDUCED FROM THE START?

Most of the issues are the result of the equipment not being designed for mobile applications. For example, there are still many systems designed for a fixed facility-type application that have been modified for use in transit and rail vehicles. You can very quickly run into a situation where you are spending a significant amount of your operating budget on repair and maintenance. Because video is often only downloaded when an event arises, many agencies are surprised to find out how long the video system wasn't recording when they go back to download video.

It's important to have a recurring system check by either integrating with other on-board devices to link with health reports or have a separate DVR health reporting system in place. Likewise, a system that is installed but not operating correctly can give a false sense of security to passengers and the agency and, in the event of a passenger lawsuit, this disrepair could weigh on the jury's decision.

### WHAT CAN WE EXPECT TO SEE FROM DVR MANUFACTURERS OVER THE NEXT FEW YEARS?

I think we will see more cameras per vehicle with much higher resolution on each camera and faster and more sophisticated ways to stream video to operations centers and beyond, such as to police vehicles and to smart phones. We recently released an iPhone/iPad app that does just this. Accelerometers are becoming a more common requirement — these can be used to alert transit managers to something unusual on a bus and aid in driver training. With all of this technology in the field, it is likely we will see fleet monitoring services offered to transit agencies. And, more drivers will be monitored by cameras. The public is demanding means to prevent texting and other driver distractions, and cameras are an obvious deterrent. 

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[rpek@brccoachandtransit.com](mailto:rpek@brccoachandtransit.com)

[www.brccoachandtransit.com](http://www.brccoachandtransit.com)