

City of Newport Beach Police Dept. Saves \$273,000 by Deploying APC's InfraStruXure™ Solution

IN BRIEF

- **Goal:** For the City of Newport Beach Police Department to buy and deploy a network critical physical infrastructure that provides reliable battery backup for the 911 system, jail, dispatchers, and other employees, while saving in purchase, deployment and maintenance costs.
- **Solution:** APC's InfraStruXure™, an Open, Adaptable and Integrated Power, Cooling and Rack System.
- **Results:** Reliability, plus a five-year benefit of \$273,000, composed of \$248,000 in maintenance savings, \$22,400 in increased availability of services, and \$2,800 in initial purchase costs.

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For the City of Newport Beach Police Department, uninterrupted availability to electricity on a 24/7 basis is essential to public safety. So when the department needed to replace its 10-year-old traditional network critical physical infrastructure, it had to find one that offered thorough reliability to back up the 911 system, the city jail, police dispatchers and other vital services. Yet the department, like municipal offices everywhere, operates within budgetary constraints. The department chose to replace its aging physical infrastructure equipment with APC's InfraStruXure™ because the unit offered reliability, easy maintenance, reduced service costs, greater availability of services, and a lower purchase cost than competing vendors.

NOTE: This case study was authored by the Case Study Forum. The Case Study Forum is dedicated to writing and publishing case studies for the IT community. The financial analysis that appears in this case study was performed by ITCentrix, the premiere software and services company for measuring and managing the business value of information technology investments. Results shown are not a guarantee of equivalent performance.

Benefits

Objective	Benefits Achieved
Reliability	Reduced the number of single points of failure.
Reduced service costs	Savings of \$248,000 over five years in reduced maintenance.
Ease of replacing	The department can service the unit itself, due to the system's modular design, and does not have to call in a specialist.
Maximization of space	The unit's compact design takes up 50 percent less space floor than the previous unit.
Provide expandability	The modular design of InfraStruXure™ makes it an easily scalable system.

The City of Newport Beach Police Department

The City of Newport Beach, California, is a 50-square-mile municipality with a population of 76,000 which grows to 250,000 during recreational months. The police department has 281 employees, of which 150 are commissioned officers. The department's 17 dispatchers answer an average of 250,000 calls a year.

Like police departments everywhere, the City of Newport Beach's has become heavily dependent on information technology systems. Its 911 system is a highly complex integrated computer system. Its dispatching system uses computers to help dispatchers better direct police officers. Its records management system provides field officers with real-time background checks. Detectives also use the system as a tool to help solve crimes. Additionally, at the jail, the system directs electronic surveillance devices and power doors 24 hours a day, seven days a week.

"APC's InfraStruXure™ is an absolutely critical piece of equipment for us. We have critical components attached to it such as our 911 system, our dispatch system and our jail. We don't have the luxury of going without power and so the APC system is essential to our operations."

CAPTAIN TIMOTHY RILEY
SUPPORT SERVICES DIVISION
CITY OF NEWPORT BEACH POLICE DEPT.

The Challenge: Reliability on a Reasonable Budget

Power must be available to the department every minute of every day. If the electricity fails, the 911 system cannot function; the dispatchers cannot reach police officers to alert them to crimes; detectives and officers cannot do background checks; the jail systems will not work; and the normal work of the department cannot continue. The safety of the public is at stake, so 24-by-7 power is critical.

Several years ago the department recognized that it had to replace its more than 10-year-old traditional network critical physical infrastructure, which provided electricity to the department in the case of a power outage until a backup generator begins working. The existing unit was aging, and the department needed a more reliable solution. Additionally, the system was not expandable, and with the department upgrading its IT systems, it needed a system that could meet its expanded needs.

Making the Move to a New Solution

The department investigated its choices for a new physical infrastructure and narrowed down the selection to three vendors: APC, the existing vendor, and a third company.

Runtime was an important consideration, because the system must provide power for enough time until the backup generator begins working. APC's system had the capability to power the entire department for 35 minutes, while the competing vendors' runtimes were 21 minutes and 30 minutes.

Purchase price was also important. APC's InfraStruXure™ costs \$54,000, the existing vendor's system would cost \$64,000, and the third vendor's would cost \$93,000. But the purchase price of the system was a relatively small consideration when compared to the ongoing maintenance costs. APC offered a five-year, on-site extended warranty for \$8,200 for five years, and no competing vendor offered a similar warranty at any price. The department had been paying on average \$62,000 a year in preventative maintenance and other service costs.

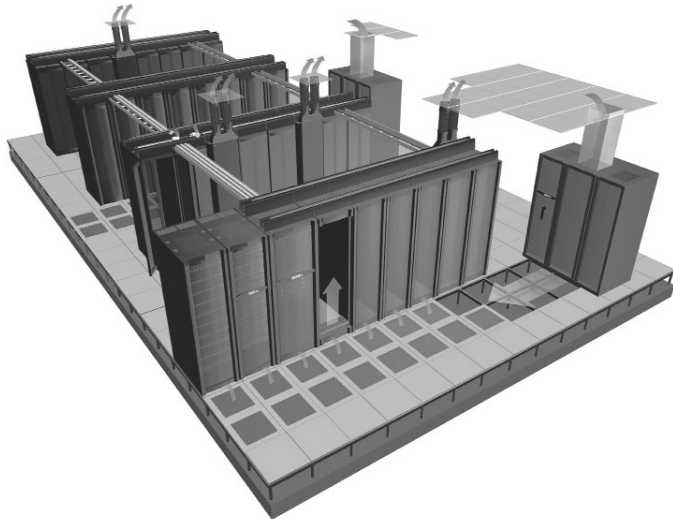
Based on cost alone, the choice was an easy one, because of the substantial savings offered by the APC system, especially in ongoing maintenance. But more than money went into the decision as well. The APC system was a better-designed unit, says Captain Timothy Riley of the Support Services Division, particularly in its use of floor space, which is at a premium. Its compact design used 50 percent less floor space than the previous system.

An Inside Look at the APC Solution

The City of Newport Beach Police Department chose the APC InfraStruXure™ architecture: an Open, Adaptable, Integrated Power, Cooling and Rack System. Figure 1 shows how it works.

The department chose APC's InfraStruXure™, a manageable, modular system that integrates power, cooling, management, and services within a rack-optimized design.

FIGURE 1: HOW INFRASTRUXURE™ WORKS



APC's InfraStruXure™ includes cooling, UPS, and management in a rack design. A UPS needs to be cooled, so hot air from the racks is pulled through the Air Removal Unit (ARU) into the ceiling plenum and returned to NetworkAIR FM unit, which cools the air. The cooled air is now routed from the floor to where it is needed by the Air Distribution Unit (ADU). The ADU distributes the air throughout the racks to keep the system at an optimal temperature. In addition to the UPS, racks and air-cooling system, InfraStruXure™ also includes the APC Enterprise InfraStruXure™ Manager, a server-based appliance that provides Web-based remote management of InfraStruXure™ devices via a single IP address.

The Bottom Line for the Department

The department's bottom line for the project: A cumulative benefit of \$273,000, 50 percent savings in floor space, easier maintenance, and no downtime.

Deployment of the APC's system "went very smoothly," according to Captain Riley. "From an electrician's standpoint, installation is much less complicated" than competing systems.

APC removed the existing UPS at no cost, and so the department did not have to pay to have it taken away. Because the old unit was considered hazardous waste, the police department would have had to pay for hazardous waste disposal.

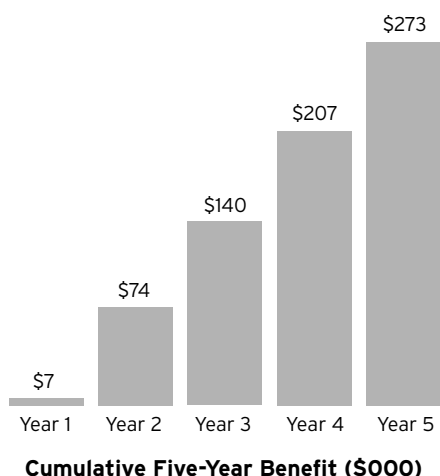
Maintenance is simple now due to the unit's modular design. Replacing a battery is a matter of pulling out an old one and sliding in a new one in. In the old system, the entire UPS had to be shut down just to replace a battery. Because of the new unit's ease of maintenance, department staff can handle replacing parts, instead of having to call in electricians and specialists.

Perhaps most important is that the system hasn't gone down a single time since installation – and reliability is the bottom line when it comes to the department's network physical infrastructure.

Business Analysis of the Solution

A detailed analysis of the implementation shows that the City of Newport Beach Police Department will recognize a cumulative benefit of \$273,000 over a five-year period by purchasing APC InfraStruXure™ compared with continuing with the existing vendor. The project had an immediate payback.

The following chart provides a business case for an APC UPS at the City of Newport Beach Police department versus upgrading the current system:



Project Summary							
Annual ROI for APC ISX	Infinite*						
Payback Period for APC UPS (months)	Immediate						
Cumulative 5 Year Benefit for APC UPS	\$273,200						
Savings in Start-up costs	\$2,800						
Project Costs (\$000)		Startup	Year 1	Year 2	Year 3	Year 4	Year 5
Hardware	\$53.0						
Services	\$8.2						
Total	\$61.2						
Benefits (\$000)							
Cost Savings	\$64.0	\$0.0	\$62.0	\$62.0	\$62.0	\$62.0	\$62.0
Productivity (value from incr. availability)	\$4.5	\$4.5	\$4.5	\$4.5	\$4.5	\$4.5	
Financial Analysis (\$000)							
Net Value	\$2.8	\$4.5	\$66.5	\$66.5	\$66.5	\$66.5	
Cumulative Value	\$2.8	\$7.3	\$73.8	\$140.2	\$206.7	\$273.2	
Net Present Value	\$200.4						
Annual ROI	Infinite*						
IRR	Infinite*						
Payback Period(months)	Immediate						
Key Performance Indicators (KPIs)							
Annual App. Value/Active User (\$)	\$125,440						
Annual Cost of APC UPS/Active User (\$)	\$137						
Savings in Start-up costs	\$2,800						

*Explanation of "Infinite": The ROI is infinite because the cost of achieving the benefits is essentially \$0 (\$61,200 in total project costs minus \$64,000 in cost savings equals -\$2,800).

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The \$273,000 is composed of \$248,000 in reduced service and maintenance costs, \$22,400 from increased availability of systems because of the reliability of InfraStruXure™, and \$2,800 in initial purchase savings.

Lessons Learned

The key in choosing the physical infrastructure, Captain Riley says, is not to just identify current requirements, but to look out several years and take into account a system's total cost of ownership. Factoring in service and maintenance costs over the lifetime of the system is vital to making the right choice.

The bottom line is that "service and reliability are essential," Captain Riley says. "Reliability is the key. We haven't had a single problem with InfraStruXure™ since we've installed it – it's far exceeded our expectations."

