

Low-cost computing for education

South Africa's Western Cape Schools Bridge The Digital Divide

Schools throughout the world are faced with new challenges as computer skills become increasingly important in the digital age. Affordable access to computing technology has become a priority for many school administrators. South Africa's Western Cape school system found that the NComputing solution is an effective way to give more students access to computing and thereby bridge the digital divide.



Saint Andrews school in Western Cape South Africa uses the X-series.

Donated Computers Are Not A Solution

The Western Cape region of South Africa has over one million children in its K-12 school system. The region is economically poor and most of the schools cannot afford computing technology. Without access to computers and associated curricula, the Western Cape Education Department (WCED) was concerned that its students would not be ready to join the digital economy.

The WCED launched the ambitious Khanya Project to deploy PCs in the schools. Khanya's goal is to take the digital age into the schools and lives of nearly one million students in 1,570 schools throughout the Western Cape. The first stage of the project is to provide each school with at least one computer laboratory consisting of 20 to 40 PCs and peripherals that are networked and linked to the Internet. At the beginning of the Khanya Project, used PCs (donated) were deployed in the schools in an effort to save on deployment costs. However, the equipment was unreliable and difficult to maintain. In the Khanya annual report, the project director wrote:

"One of the early lessons learned is that refurbished (used) computers do not do justice to the project. Used computers have already reached a point where it is no longer cost-effective for an organization to maintain the equipment, and by giving such equipment to a poor school, where little technical expertise is available, one can expect break-downs, delays, and lack of funding to repair, all of which lead to disillusionment with the use of technology. The lesson that Khanya has learned is that one must give the best equipment possible to the poorest of the poor schools."

Challenge

Provide over one million students in 1,500 schools the tools to help bridge the digital divide.

Solution

Adopt the ambitious Khanya Project to provide each school with a functional computer lab using the NComputing X-series.

Impact

Extended school technology budgets and leveraged the excess capacity of their existing refurbished computers.

Partner

NComputing partner Yellow Penguin, a distributor in South Africa, helped the WCED identify the X-series as the solution to help accomplish its goals.

So how can an ambitious project like Khanya install new computing gear on its relatively small budget and still meet its ambitious objective to bring computing to a million students?

The Khanya Project turned to the NComputing X-series solution provided by Yellow Penguin, NComputing's distributor in South Africa.

Sharing Excess CPU Power

NComputing harnesses the unused power of a PC to share it among multiple users and it does so at a fraction of the cost of individual PCs. In addition to better use of processing power and lower acquisition cost, this highly efficient solution requires less electricity and less space at each desktop (users connect through devices that are smaller than a paperback book). Best of all, the NComputing solution is simple to install and maintain, with far fewer PCs to manage and update. All of the components in the X-series solution can be reused through multiple generations of PCs, saving time for IT administrators and saving money for school systems.

International Recognition

The Khanya Project concluded that the X-series is well suited to address the requirements of their computer laboratories and further stated:

"This technology can successfully be integrated into an existing Khanya laboratory providing an extension of the existing lab at a fraction of the cost. The X-series delivers the same full functionality as the existing Khanya computers."

Khanya noted the following features and functionality of the NComputing solution in their summary report:

1. Runs on Windows
2. Cat5 cable connects to the stations and includes power
3. Terminal boxes are small and can easily be secured
4. Installs easily via a PCI card into the shared PC
5. Lowers maintenance cost (smaller number of PCs)
6. Reduces the risk of theft of PC components
7. Requires less network cabling and electrical infrastructure

The report also stated that the "X-series can thus be seen as a more cost effective way of providing schools with computer laboratories, while the performance can be compared to that of a normal client network."

By deploying innovative and affordable solutions like those provided by NComputing, Khanya has enriched the lives of students and educators throughout the Western Cape. In fact, Project Khanya has received numerous national and international awards such as the Standard Bank Public Sector Innovation award. They were also the only finalist for the prestigious Stockholm Challenge Award from Africa. In addition, the National Department of Science and Technology recognized them as one of the top 100 IT-related organizations in South Africa.

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Khanya Project
Summary Report

