



ROI Analysis

Intel® Core™2 processor with vPro™ technology

Panyu People's Hospital

Healthcare

99% Remote Inventory Success and Reduced Service Costs Using Intel® Core™2 Processors with vPro™ Technology

Panyu People's Hospital, located in the city of Guangzhou, is the largest public hospital in the Panyu district in the People's Republic of China.¹ The hospital serves a geographic area with a population of 1.6M, employs 1,500 people including 500 physicians, consists of 19 hospital departments, and supports services across many branch clinics.

One issue with IT services is that 40% of the PCs in the hospital's in-patient hospital areas are in use 24/7, so there are no off-hours periods in which to maintain or manage PCs. User downtime costs the hospital \$26/hour in revenue loss, but can also have serious consequences for physicians and patients.¹

In December 2007, Panyu Hospital began refreshing their aging collection of 800 desktop PCs with new PCs with Intel® Core™2 processors with vPro™ technology.² The hospital then studied the return on investment (ROI) realized by deploying the PCs across their 19 sites.³ Based on the results of their investigation, Panyu Hospital is excited about the advanced performance of the PCs, and is particularly pleased with the way the built-in remote management capabilities in the PCs are helping their

IT department improve centralized services. The hospital has already seen service costs go down and revenue losses decline. For example, based on their ROI investigation, the hospital projects that the cost of inventories will drop 99%, from \$2,880 to \$27 per inventory. With a positive ROI of 27% projected over five years, Panyu Hospital is eager to complete their full deployment and activation of PCs with Intel® vPro™ technology by 2009.³

TCO/ROI investigation

Panyu Hospital's investigation was conducted in an environment with 800 desktop PCs, of which 100 were PCs with Intel vPro technology. Data was analyzed for three key IT service tasks: PC inventory, hardware diagnostics, and software diagnostics and repair. Data was then projected for four years, with the assumption that the hospital would continue to grow steadily as a business at 8% per year and would deploy approximately 900 additional PCs with Intel vPro technology by 2009.³ The hospital expects to refresh approximately 250 PCs (25%) each year after 2011 as part of their typical hardware refresh cycle. ROI was calculated conservatively, for only the three service tasks.

Key Findings from TCO/ROI Analysis³

- **Positive ROI of 27% over 5 years**, after deploying PCs with Intel® vPro™ technology to support inventories, hardware diagnostics, and software diagnostics and repair.
- **Break-even point achieved in 4 years.**
- **Projected savings of up to 99% in asset inventories** by remotely accessing the out-of-band, persistent hardware asset information stored in the protected memory built into PCs with Intel vPro technology.

Positive results

Since deploying the PCs with Intel vPro technology, Panyu Hospital is realizing lower IT costs and improved management of their PC environment as compared to their previous, non-Intel vPro technology environment (see Table 1):

- Increase remote resolution of hardware-related problems from 30% to 40%, and increase remote resolution of software-related problems from 30% to 50%.³
- Reduce help-desk support costs from \$7.88 to \$5.72 per PC per year – a 27% reduction in costs.³
- Save \$12.27 per PC per year in revenue from increased uptime due to improved remote hardware diagnostics and software diagnostics and repair.³

- Speed up inventories by 97%, reduce the cost of inventories by 91%, increase inventory accuracy to 99%, and virtually eliminate the need for manual inventories and audits.³

The hospital is already looking at implementing other capabilities of Intel vPro technology, such as hardware-asset inventory and remote power-up for improved patching. The successful deployment of the PCs with Intel vPro technology, and the benefits of lowering IT costs and reducing revenue losses are expected to influence other public health organizations in the province.

For more information

For more information about PCs with Intel Core 2 processor with vPro technology, visit www.intel.com/vpro

Table 1. Cost and ROI analysis for IT tasks via Intel® vPro™ technology^{3,4}

	Without Intel® vPro™ technology	PCs with Intel® vPro™ technology					Estimated savings with 100% PCs with Intel® vPro™ technology
	Year 0 ^a	Year 1 ^a	Year 2 ^b	Year 3 ^b	Year 4 ^b	Year 5 ^b	
PCs with Intel vPro technology	0	100 (13%) Intel vPro PCs	193 (30%) Intel vPro PCs	991 (100%) Intel vPro PCs	1,093 (100%) Intel vPro PCs	1,193 (100%) Intel vPro PCs	
Help-desk support costs before Intel vPro technology	\$788 per PC per year	\$761 per PC per year	\$740 per PC per year	\$5.72 per PC per year	\$5.72 per PC per year	\$5.72 per PC per year	Help-desk support cost per PC: 27% less
Support-cost and revenue savings	N/A	\$700 savings	\$1,000 savings	\$5,000 savings	\$16,900 savings	\$20,200 savings	Average annual costs: 18% less with 100% vPro Cumulative 5-year savings: over \$43,000
Inventory IT staff required	5 technicians	5 technicians	4 technicians	1 technician	1 technician	1 technician	IT resources required: 80% less
Inventory worker-hours required	640 hours	541 hours	447 hours	20 hours	22 hours	24 hours	Inventory tasks: 97% faster Inventory costs: 99% lower
Inventory savings	N/A	\$300 savings	\$900 savings	\$3,500 savings	\$7,200 savings	\$8,500 savings	Cumulative 5-year savings: over \$20,000
ROI Summary							
Overall NPV costs ^c	N/A	\$3,000 cost	\$4,700 cost	\$22,200 cost	\$2,700 cost	\$2,600 cost	Break-even point: year 4 ^c
Overall NPV benefits ^c	N/A	\$1,000 benefits	\$1,700 benefits	\$6,800 benefits	\$17,100 benefits	\$18,200 benefits	Positive ROI: 27% in year 5 ^c

^a Data in Q1, Q2, and Q3 is the result of measurements; data in Q4 is the result of projections.

^b Data is the result of projections.

^c ROI is calculated based solely on the IT areas of remote inventory, hardware diagnostics, and software diagnostics and repair; and assumes an 12% discount rate.

¹ All content about Panyu People's Hospital was provided by Panyu People's Hospital.

² PCs with Intel® Core™2 processor with vPro™ technology include powerful Intel® Active Management Technology (Intel® AMT). Intel AMT requires the computer system to have an Intel AMT-enabled chipset, network hardware and software, as well as connection with a power source and a corporate network connection. Setup requires configuration by the purchaser and may require scripting with the management console or further integration into existing security frameworks to enable certain functionality. It may also require modifications of implementation of new business processes. With regard to notebooks, Intel AMT may not be available or certain capabilities may be limited over a host OS-based VPN or when connecting wirelessly, on battery power, sleeping, hibernating or powered off. For more information, see www.intel.com/technology/platform-technology/intel-amt/.

³ Source: The Panyu People's Hospital 2007-2008 Pilot of PCs with Intel® Core™2 processor with vPro™ technology, conducted in 2007 and 2008, at the hospital's distributed sites in the Panyu district, People's Republic of China.

⁴ Source: Where limited data around hardware was available, Intel internal and Industry standards were provided.

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