



ROI Analysis

Intel® Core™2 processor with vPro™ technology

Telkomsel

Telecommunications

Positive ROI of 180% with More Reliable, Secure, Scalable IT Using PCs with Intel® vPro™ Technology

Telkomsel is the leading operator of cellular telecommunications services in Indonesia.¹ The company offers its subscribers the largest network coverage of all cellular operators in the country and provides network coverage for approximately 95% of the country's population. Telkomsel is also the only provider to serve all of Indonesia's provinces and regencies, including Sumatra, Java, and Bali/Nusra.

Telkomsel's IT department maintains and manages PCs in almost 100 buildings, including regional offices, telecommunication centers (such as mobile switch centers and base stations), service points, and sales offices. The company has been growing rapidly – subscribers increased from 1.7 million in 2000, to 48 million in 2007.¹ In the same timeframe, the company's gross revenues increased by a factor of 12.¹ With an expectation that growth will continue, Telkomsel has a critical need to sustain business growth and ensure service quality by making their IT structure more reliable, secure, and scalable. A key issue they wanted to address is that round-trip time for a site visit is almost 4 hours, and downtime of PCs in sales offices costs the company \$20/hour in revenue losses.¹ Since customer sales and other services rely heavily on PCs, a key priority is to speed up or shift more IT work off-hours in order to reduce downtime and revenue losses from tasks that interrupt users.

After learning about the remote management capabilities of PCs with Intel® Core™2 processors with vPro™ technology, Telkomsel replaced 1,600 of their machines (about 36%) with PCs with Intel®

vPro™ technology.² The company then investigated the return on investment (ROI) delivered by the new PCs for several key IT tasks: off-hours patch management, remote asset tracking, and remote diagnostics and repair.

Since deploying the PCs with Intel vPro technology, Telkomsel has already seen significant savings – about \$36,000 in maintenance and management costs in the first eight months, with only 1,600 PCs with Intel vPro technology.³ The company has projected savings of over \$390,000 over the next three years, a positive ROI of 180% across 4 years, and a break-even point within 1 year.³

TCO/ROI investigation

Telkomsel's investigation was conducted in a distributed environment with 96 sites and 4,500 desktop PCs, of which 1,600 (36%) were PCs with Intel vPro technology. Data was analyzed for eight months, for several IT tasks: PC auditing, hardware/software inventory check, patch deployment, remote hardware/software problem resolution. Data was then projected for three years, with the assumption that the number of PCs would grow approximately 3.5% per year, and that the company would deploy approximately 1,600 (36%) PCs with Intel vPro technology each year as part of a regular hardware refresh cycle. ROI was calculated conservatively, for only the specific service tasks of PC auditing, inventory check, patch deployment, and hardware/software problem resolution.

Key Findings from ROI Analysis³

- **Positive ROI across 4 years of 180%** by deploying PCs with Intel® vPro™ technology to support off-hours patch management, inventory and asset tracking, and remote diagnostics and repair.
- **Break-even point achieved within 1 year.**
- **Projected cumulative savings for the company of over \$430,000** across 4 years.

Positive results

Telkomsel is extremely pleased with the improvements already being delivered and the projected benefits of the built-in hardware-based capabilities for remote management in the PCs with Intel vPro technology:

- Increase the number of hardware problems diagnosed remotely from 17% to 58%³
- Increase the number of software problems resolved down the wire from 80% to 97%³
- Speed up inventory checks by 99%³

- Achieve 99% saturation during remote hardware/software inventories from PCs with Intel vPro technology.³

Based on the results of their investigation, Telkomsel is excited about completing their deployment of PCs with Intel vPro technology. The company expects to be able to use the remote management capabilities to speed up many more tasks and scale IT services to support even greater business growth.

For more information

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

Table 1. Comparison of service costs and ROI when using PCs with Intel® vPro™ technology^{3,4}

Use case	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	
		1,600 (36% of total PCs) Intel vPro PCs	3,208 (72% of total PCs) Intel vPro PCs	4,821 (100% of total PCs) Intel vPro PCs	4,821 (100% of total PCs) Intel vPro PCs	
Hardware problem resolution	985 hours	757 hours	608 hours	437 hours	437 hours	Hardware resolution: 59% faster
	280 deskside visits	205 deskside visits	167 deskside visits	116 deskside visits	116 deskside visits	Deskside visits for hardware problems: 61% fewer
Software problem resolution	2,775 hours	2,637 hours	2,700 hours	2,715 hours	2,715 hours	Deskside visits for software problems: 88% fewer
	200 deskside visits	100 deskside visits	82 deskside visits	27 deskside visits	27 deskside visits	Average software resolution time: 9% less
Patch management	9,799 hours	7,348 hours	7,228 hours	6,118 hours	6,118 hours	Patching: 42% faster
	4,563 deskside visits	1,949 deskside visits	1,720 deskside visits	376 deskside visits	376 deskside visits	Deskside visits: 92% fewer Cumulative 4-year savings: \$75,000
Hardware/software inventory	174 hours	21 hours	17 hours	1 hour	1 hour	Inventory: 99% faster
	45 deskside visits	3 deskside visits	2 deskside visits	1 deskside visit	1 deskside visit	Deskside visits: 99% less Inventory failures: less than 1%
Audit	279 hours	109 hours	75 hours	1 hour	1 hour	Audits: 99% faster
	72 deskside visits	24 deskside visits	19 deskside visits	1 deskside visit	1 deskside visit	Deskside visits: 99% less Audit saturation: 99% saturation
ROI Projections						
Overall NPV costs	N/A	\$48,000 cost	\$89,000 cost	\$127,000 cost	\$127,000 cost	Break-even point: year 1 ^c
Overall NPV benefits	N/A	\$54,000 savings	\$139,000 savings	\$254,000 savings	\$359,000 savings	Positive ROI: 180% in year 4 ^{c,d}
Net NPV	N/A	\$6,000 savings	\$50,000 savings	\$127,000 savings	\$232,000 savings	

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

^b Data is the result of projections.

^c ROI is calculated based on only four IT processes: PC audit, hardware/software inventory, patch management, and hardware/software problem resolution. ROI calculations include an analysis of actual trouble tickets: 80,000 tickets per year, with 2,000 tickets hardware or software problems escalated level 2. ROI calculations also include a four-year projection to identify continued trends from taking advantage of the hardware-based capabilities of Intel vPro technology, a 3.5% inflation rate, and a conservative 15% "hurdle" or discount rate.

^d ROI results and projections do not include savings from improved user uptime or productivity.

¹ All content about Telkomsel was provided by Telkomsel.

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 Telkomsel 2008 Deployment of PCs with Intel® Core™2 processor with vPro™ technology, conducted in 2008, at the company's distributed sites in Indonesia.

⁴ Source: Where limited data around hardware was available, Intel internal and industry standards were provided. In order to understand the changes in inventory across time, three impacts were documented and applied: refreshes, repairs, and growth. Refresh cycle and growth rate were provided for analysis. Repair numbers were provided by the franchise or inferred from the data collection and Intel's understanding of system behavior.

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