



# ROI Analysis

Intel® Centrino® processor with vPro™ technology  
Public Utilities

## Utility District Achieves Positive ROI of 82% and Improves User Productivity by Deploying Intel® vPro™ Technology

One of the nation's largest publicly owned utilities serves a 900-square-mile area in a high-density population county.<sup>1</sup> The utility employs 2,300 workers in seven major locations and several small locations, and manages almost 2,500 PCs, including 465 notebooks which are used for business productivity applications and customer services. An award-winning and internationally recognized leader in innovative programs and services, the public utility is particularly noted for its energy-efficiency programs, renewable power technologies, and sustainable solutions for a healthier environment.

Typically, a significant number of 419 of the utility's notebooks are used by workers who are on the road in a utility truck, taking measurements from substations, at a customer site, or working from home. (Additional systems located in sensitive areas are managed by a different organization within the public utility.) With so many notebooks mobile or off-site at any given time, remote patching and problem resolution has been costly and challenging. Until recently, approximately 128 patching issues per year required that a technician go to a particular building—a 30-minute travel time for the technician—where mobile workers would bring their notebooks for patch resolution.<sup>2</sup> Software problems on notebooks—approximately 36 per year—average 1.5 hours to resolve because of the remote sites technicians often have to visit.<sup>2</sup>

Since deploying notebooks with Intel® Centrino® with vPro™ technology, the utility's information technology (IT) technicians have been able to remotely patch and remediate virtually all notebooks anytime, regardless of location.<sup>3</sup> Site visits traditionally required for patching

have been virtually eliminated. This has lowered the utility's cost of patching notebooks by approximately 98%.<sup>4</sup> Based on detailed information from the utility's return-on-investment (ROI) investigation of notebooks with Intel® vPro™ technology, the utility projects additional savings of over \$10,000 per year in software problem resolution once the fleet of 419 mobile systems is fully refreshed to notebooks with Intel vPro technology.<sup>4</sup>

The utility has already seen a positive impact on user productivity when managing notebooks with Intel vPro technology. The public utility projects savings of over \$15,000 just in user productivity over 3 years, based on faster remote problem resolution and improved user uptime.<sup>4</sup> The break-even point was reached in only 9 months, and a positive ROI of 82% is projected over 3 years.<sup>4</sup>

### TCO/ROI investigation

The public utility's ROI investigation was conducted in an environment with 419 notebooks, of which 127 (30%) were notebooks with Intel vPro technology. Data was analyzed for only the two use cases of remote patching and software problem resolution. Data was then projected for 2 years (the utility's refresh cycle is 3 years), with the assumption that the utility would not increase the number of PCs being managed, and that the utility would refresh the rest of their notebook fleet with notebooks with Intel vPro technology. Gains in user productivity were calculated conservatively by applying a 50% discount rate to the actual results. ROI was also calculated conservatively for only the two service tasks of patching and software problem resolution.

### Key findings from ROI analysis

- **Positive ROI across 3 years of 82%** by deploying notebooks with Intel® Centrino® with vPro™ technology to support remote patching and remote software problem resolution.<sup>4</sup>
- **Break-even point achieved within 1 year.**<sup>4</sup>
- **Projected cumulative savings for the company of over \$60,000** just by eliminating technician travel time for patching and software problem resolution for notebooks.<sup>4</sup>

## Positive results

The utility is very pleased with the savings in technician travel time and the immediate improvement in user uptime being delivered through Intel vPro technology. The public utility is planning to refresh their nearly 2,000 desktop PCs with Intel® Core™2 processor with vPro™ technology in 2010. Because technicians routinely perform more work—such as reimaging and BIOS updates—on desktop PCs than on notebooks, the utility is extremely interested in implementing

Intel vPro technology for desktop systems in order to see even greater savings. The utility is also planning to take advantage of the built-in remote power-up capability of Intel vPro technology to improve power management. The utility intends to keep systems powered down when not in use, and remotely power up PCs off-hours only when IT service is needed. This will help the public utility reduce power consumption, power costs, and carbon footprint even further.

**Table 1. Comparison of service costs and ROI for patching and software problem resolution<sup>4,5</sup>**

Use case	Without Intel® vPro™ technology	Notebooks with Intel® vPro™ technology			Estimated savings with 100% notebooks with Intel® vPro™ technology
	Year 0 <sup>a</sup>	Year 1 <sup>a,b</sup>	Year 2 <sup>b</sup>	Year 3 <sup>b</sup>	
		127 (30% of total notebooks) Intel vPro notebooks	419 (100% of total notebooks) Intel vPro notebooks	419 (100% of total notebooks) Intel vPro notebooks	
<b>Use case: patching</b>					
IT support costs for patching	\$7,003 cost	\$25,061 cost	\$124 cost	\$128 cost	Annual travel time: 99% less
Savings with Intel vPro technology	NA	\$2,153 savings	\$7,090 savings	\$7,086 savings	Average patching costs: 98% less
User productivity costs of patch cycles	\$7,003 cost	\$361 cost	\$371 cost	\$394 cost	Cumulative 3-year savings: \$36,845 savings
Productivity savings with Intel vPro technology	NA	\$6,853 savings	\$6,843 savings	\$6,820 savings	
<b>Use case: software problem resolution</b>					
IT support costs for OS or application hang	\$4,941 cost	\$3,713 cost	\$865 cost	\$891 cost	Annual travel time: 99% less
Support cost savings with Intel vPro technology	NA	\$1,228 savings	\$4,172 savings	\$4,297 savings	Average annual software support costs: 81% less
User productivity costs for OS or application hang	\$6,763 cost	\$3,713 cost	\$917 cost	\$945 cost	Software problem resolution: 82% faster
User productivity savings with Intel vPro technology	NA	\$1,841 savings	\$6,257 savings	\$6,445 savings	Cumulative 3-year savings: \$24,240 savings
<b>ROI summary</b>					
Overall NPV costs	NA	\$29,102 cost	\$0 cost	\$0 cost	Break-even point: year 1
Overall NPV benefits	NA	\$12,074 benefits	\$21,559 benefits	\$19,475 benefits	Positive ROI: 82% in year 3 <sup>c,5</sup>
Cumulative NPV	NA	(\$17,028) savings	\$4,532 savings	\$24,006 savings	

<sup>a</sup> Data is the result of measurements.

<sup>b</sup> Data is the result of projections.

<sup>c</sup> ROI is calculated conservatively, based on only the two use cases of remote patching and software problem resolution for notebooks. ROI calculations include a two-year projection to identify continued trends from taking advantage of the hardware-based capabilities of Intel vPro technology on notebooks, a 3% inflation rate, a conservative 15% "hurdle" or discount rate for ROI and NPV calculations, and a conservative 50% discount rate for user productivity gains.

For more information about notebooks with Intel Centrino with vPro technology or desktop PCs with Intel Core 2 processor with vPro technology, visit [www.intel.com/vpro](http://www.intel.com/vpro)

<sup>1</sup> All content about the public utility was provided by the public utility.

<sup>2</sup> The public utility's knowledge base.

<sup>3</sup> PCs with Intel® Centrino® 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, [www.intel.com/technology/platform-technology/intel-amt/](http://www.intel.com/technology/platform-technology/intel-amt/).

<sup>4</sup> Source: The public utility's 2008 ROI Investigation of notebooks with Intel® Centrino® with vPro™ technology, conducted in 2008, at the utility's distributed and mobile sites.

<sup>5</sup> Source: Where limited data around hardware was available, Intel internal and Industry standards were provided.

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