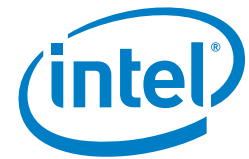


## ROI Analysis

Intel® Centrino® with vPro™ technology and  
Intel® Core™2 processors with vPro™ technology

Georgian College  
Education



# Canadian College Achieves 1,350% ROI Over 4 Years Across 7 Campuses by Deploying PCs with Intel® vPro™ Technology

Georgian College, the third largest cooperative college in Canada, is a progressive institution with a national reputation for balancing applied studies and practical experience.<sup>1</sup> Established in 1968, the college has the highest placement rates in the Ontario province and the top rank in student work experience in Canada. The college includes nine campuses, offers more than 60 post-secondary certificates and diploma degree programs, and serves approximately 36,000 students.

Georgian College has three information technology (IT) centers to monitor and maintain their 2,500 academic and staff PCs, but a key issue remains managing all PCs across the seven campuses and two additional sites. With the college's emphasis on practical experience, PC uptime is of high concern for students, since an unresponsive system can mean missing a critical lab or turn-in date for an assignment. For staff, missing a maintenance cycle can mean that PCs fall dangerously out of compliance, and work can be interrupted later by unpredictable problems and hangs.

Traditionally, the failure rate for remote reimaging of academic PCs has been 20%, because many PCs are powered off during reimaging cycles.<sup>2</sup> Similarly, administrative PCs have a 15% failure rate due to the PCs being powered down during updates.<sup>2</sup> Round-trip travel to campuses to power up, reboot, or repair PCs is costly – it can take 2 to 3 hours to reach the furthest sites.<sup>2</sup> In addition, one campus (Barrie) covers 140 acres, making deskside service

even more time-consuming. The college needed an IT solution that was secure and which improved remote management and user uptime across every campus.

In late 2008, Georgian College began refreshing systems with desktop PCs with Intel® Core™2 processor with vPro™ technology and notebooks with Intel® Centrino® with vPro™ technology.<sup>3</sup> The college then studied the return on investment (ROI) realized by deploying the PCs across their nine sites. Based on the results of their investigation, Georgian College is excited about the use of the built-in remote management capabilities of Intel® vPro™ technology. The college expects to save approximately \$104,000 Canadian just in help desk and travel costs for technicians. In addition, the college projects a *conservative* ROI of 1,353% over four years.<sup>4</sup>

### TCO/ROI investigation

Georgian College's investigation was conducted in an environment with approximately 2,500 PCs (1,500 academic PCs and 1,000 staff PCs), of which 279 had Intel vPro technology activated. Data was analyzed for three key IT service tasks: remote reimaging, software updates, and remediation. Data was then projected for three years, with the assumption of a 2% yearly growth in the number of PCs and that the college would refresh approximately 850 additional PCs each year with PCs with Intel vPro technology.<sup>4</sup> ROI was calculated conservatively only for the three service tasks, and based only on vehicular travel to and from each campus and not including travel time within campuses or buildings.

### Key findings from TCO analysis

- **Positive ROI of 1,353% over 4 years**, by using the remote power-up, remote boot, and other capabilities of Intel® vPro™ technology to eliminate site visits traditionally required for reimaging, software updates, and hardware and software diagnostics and repair.<sup>4</sup>
- **Break-even point achieved in 1 year.**<sup>4</sup>
- **Projected savings of approximately \$104,000** from reducing help desk calls and site visits to campuses.<sup>4</sup>

## Positive results

The ability to remotely access PCs with Intel vPro technology virtually any time is allowing Georgian College to eliminate a significant number of the help-desk calls and site visits traditionally required for remediation, reimaging, and software updates.<sup>4</sup> In turn, this is helping the college perform more work as automated, off-hours tasks. The college expects to achieve additional benefits by implementing business process changes that are likely causes of many remaining failures.

Georgian College is already in the process of full deployment of notebook and desktop PCs with Intel vPro technology by 2010. The college is now looking at ways to take further advantage of the built-in capabilities to improve power management and reduce infrastructure costs.

**Table 1. Cost and ROI analysis for reducing site visits via Intel® vPro™ technology<sup>4,5</sup>**

Use case	PCs without Intel® vPro™ technology	PCs with Intel® vPro™ technology				Estimated savings with 100% PCs with Intel® vPro™ technology
	Year 0 <sup>a</sup> 2,500 PCs	Year 1 <sup>a</sup>	Year 2 <sup>c</sup>	Year 3 <sup>c</sup>	Year 4 <sup>c</sup>	
		279 (11%) Intel vPro PCs	1,733 (68%) Intel vPro PCs	2,601 (100%) Intel vPro PCs	2,653 (100%) Intel vPro PCs	
IT travel costs for failed reimagings	\$4,660 costs	\$4,499 cost	\$2,472 cost	\$1,273 cost	\$1,311 cost	Annual costs: 75% less Cumulative 4-year savings: \$10,524 savings
IT travel savings	N/A	\$300 savings	\$2,472 savings	\$3,819 savings	\$3,933 savings	
Trouble tickets generated due to failed software upgrades	900 tickets	913 tickets	468 tickets	477 tickets	487 tickets	Failure rate: 50% lower Annual travel costs: 50% less
IT help-desk savings	N/A	\$275 savings	\$17,490 savings	\$27,891 savings	\$29,269 savings	Cumulative 4-year savings: \$74,933 savings
Site visits for hardware problem resolution	117 site visits	118 site visits	101 site visits	93 site visits	94 site visits	Site visits for hardware: 25% fewer
Site visits for software diagnostics and repair	128 site visits	129 site visits	54 site visits	14 site visits	14 site visits	Site visits for software: 90% fewer
IT travel savings for hardware and software remediation	N/A	\$226 savings	\$10,376 savings	\$16,545 savings	\$17,403 savings	Cumulative 4-year savings: \$44,550 savings
<b>ROI summary<sup>d,5</sup></b>						
Overall NPV costs	N/A	\$6,120 cost	\$0 cost	\$2,695 cost	\$0 cost	Break-even point: year 1 <sup>d5</sup>
Overall NPV benefits	N/A	\$800 benefits	\$34,226 benefits	\$36,488 benefits	\$33,274 benefits	Positive ROI: 1,353% in year 4 <sup>d5</sup>
Net NPV	N/A	(\$5,320) benefits	\$28,907 benefits	\$62,699 benefits	\$95,973 benefits	Cumulative 4-year NPV savings: over \$95,973

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

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

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

<sup>d</sup> ROI is calculated conservatively, based on only travel costs for the three use cases of remote reimaging, software updates, and remediation. ROI calculations include a three-year projection to identify continued trends from taking advantage of the two hardware-based capabilities (remote power-up and remote boot), a 3% inflation rate, and a conservative 15% "hurdle" or discount rate. Dollar values are in Canadian dollars.

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

<sup>1</sup> All content about Georgian College was provided by Georgian College.

<sup>2</sup> Source: Georgian College knowledge base.

<sup>3</sup> 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 <http://www.intel.com/technology/manage/iamt/>.

<sup>4</sup> Source: The Georgian College 2008 Pilot of PCs with Intel® Core™2 processor with vPro™ technology, conducted in 2008, at the college's distributed campuses and sites in Canada.

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

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