



## ROI Analysis

Intel® Centrino® with vPro™ Technology and  
Intel® Core™2 Processors with vPro™ Technology

Construction

# Mortenson Reduces IT Support Costs by Building on Intel® vPro™ Technology

Mortenson Company is a privately-held commercial and industrial construction company that has been serving its customers since 1954. Mortenson operates as a diversified construction organization and is currently recognized in *Engineering NewsRecord* as the 27<sup>th</sup> largest general builder in the country.

Mortenson leads the industry in using 3D/4D virtual design and construction technology, and has been named by the *Information Week 500* nearly every year since 2002 for the use of technology in its national network of project sites and offices.

Mortenson's project operations extend into 47 states and a number of select international locations. The company constructs a wide variety of commercial and industrial projects, ranging from corporate offices to healthcare, high-tech manufacturing and network/data facilities, as well as sports, hospitality, federal, municipal, and educational facilities. Additionally, Mortenson specializes in constructing renewable energy resources and is one of the nation's largest wind power builders.

Mortenson's business environment is constantly changing. Tight deadlines, remote locations, and fluctuating sites require quick resolution to PC equipment issues. To meet these business needs, Mortenson's IT staff initially deployed Intel® vPro™ technology<sup>1</sup> across its laptop base in Basic Mode. However, wanting to take advantage of increased security and remote activation of new or replacement PCs, Mortenson needed to upgrade to Advanced Mode for future desktop and laptop deployments.

### TCO/ROI investigation

While Mortenson has a total PC environment of approximately 1,800 systems, the ROI study was calculated over a 4-year period and is based on their current support base of approximately 574 systems<sup>2</sup> which includes 228 PCs with Intel vPro technology. The number of PCs with Intel vPro technology is expected to grow by 25% a year for the next 4 years through Mortenson's normal refresh cycle.

In evaluating the activation of Intel vPro technology-based PCs, Mortenson's IT staff concluded they would gain the greatest benefits by reducing IT support costs and end-user downtime. For example, by leveraging LANDesk's tight integration with Intel vPro technology, Mortenson can improve their current re-imaging processes by taking advantage of the remote management capabilities built into PCs with Intel vPro technology. It is estimated that through remote re-imaging, Mortenson could reduce travel and IT support time in half – **from nearly 3 hours to approximately 1½ hours**. This reduction could result in a projected savings of \$15,120<sup>3,4</sup> in IT costs over 4 years, while freeing up IT support staff to address more critical issues.

In addition to improved re-imaging processes, Mortenson's IT support staff can also focus on reducing end-user downtime due to hardware and software issues. By taking advantage of the remote management capabilities within Intel vPro technology, they can reduce the time required to transport, diagnose and repair their PCs. This is especially significant as the majority of Mortenson's PCs are often scattered in remote locations, and are mission-critical in

### Key findings from ROI analysis

- **Positive ROI of 1,131% over 4 years** by deploying PCs with Intel® vPro™ technology with a **break-even point achieved in 12 months**.
- **Savings of \$7,184 by year 4 through power savings in shutting off 25% of machines left on** and taking advantage of the remote capabilities built into PCs with Intel vPro technology.
- **End-user projected savings of \$71,617 through improved productivity**<sup>6</sup>

ensuring building specifications are available when needed. With this technology, Mortenson could realize **savings of \$71,617<sup>5,6</sup> over 4 years in reduced end-user productivity losses.**

Mortenson's investigation also demonstrated improved energy conservation. Intel vPro technology coupled with LANDesk's system console enables PCs to be powered on, patched and then powered off. This capability allows Mortenson the opportunity to **power off the estimated 25% of their PCs left on**, resulting in approximately **16,821 KWH<sup>7,8</sup>** in energy savings over 4 years, with a projected cost savings of **\$7,184.**

Today, Mortenson's IT staff already does an outstanding job of using remote remediation in solving their software issues. With their current centralized IT staff model, a large amount of their time is

spent shipping PCs back and forth to remote locations or waiting on vendor field support for diagnosing and repairing systems. Currently, it takes an average of **2 trips and 1 to 2 hours** to diagnose and resolve software issues. On average, the impact on end-users is **16 hours** of lost productivity, with Intel vPro technology this is expected to be reduced by half.

## Positive ROI results

With a positive ROI of **1,131%** and a break-even point achieved in 12 months, Mortenson could realize more efficient operations through reduced desk-side visits and improved end-user and IT staff productivity upon activation of PCs with Intel vPro technology.

**Table 1. Results of ROI investigation**

Use case	Without Intel® vPro™ technology	Estimated savings with 100% PCs with Intel® vPro™ technology				Estimated savings with 100% Intel® vPro™ technology
	Year 0	Year 1	Year 2	Year 3	Year 4	Totals
200 PCs		350 PCs	500 PCs	650 PCs	800 PCs	
Re-imaging support costs	\$11,088	\$9,576	\$8,064	\$6,552	\$5,040	\$15,120 in savings over 4 years using Intel vPro technology for re-imaging
Re-imaging savings		\$1,512	\$3,024	\$4,536	\$6,048	
Power cost	\$1,834	\$38	\$38	\$38	\$38	\$7,184 in cost savings by powering off the remaining 25% of PCs with an average 98% savings for these PCs
Power saving shutting remaining 25% of PCs off		\$1,796	\$1,796	\$1,796	\$1,786	
End-user productivity cost	\$39,322	\$30,966	\$23,888	\$17,916	\$16,931	\$71,617 savings in end-user productivity should be realized by using Intel vPro PCs and solutions to reduce downtime <sup>9</sup>
Productivity savings		\$8,356	\$15,434	\$21,406	\$22,391	
<b>Total costs<sup>10</sup></b>	\$7,306					<b>Break-even point: 12 months</b>
<b>Total benefits</b>	\$93,921					
<b>Net savings</b>	\$86,615					
<b>Net Present Value (NPV)<sup>11,12</sup></b>	\$57,173					
<b>Return on Investment (ROI)<sup>5,6</sup></b>	1,131%					

<sup>1</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 [www.intel.com/technology/platform-technology/intel-amt/](http://www.intel.com/technology/platform-technology/intel-amt/).

<sup>2</sup> All information was provided by Mortenson Construction unless otherwise noted.

<sup>3</sup> Field support rate \$42 USD per hour.

<sup>4</sup> Tickets are based on data provided by Mortenson Construction for the current year with an average of 8 tickets per month/96 per year that required a desk-side visit to re-image a machine.

<sup>5</sup> Assumed 16-hour down time and a 50% reduction or 8 hour per event possible with Intel® vPro™ technology capabilities.

<sup>6</sup> End-user hourly rate \$32 USD per hour.

<sup>7</sup> Power savings based the remaining 25% of the Intel® vPro™ technology PCs being shut down for 12 hours a day.

<sup>8</sup> Power rate was arrived using the US energy site data found on the Internet to get the average rounded up rate of .10 cents per KWH. [www.eia.doe.gov/cneaf/electricity/epm/table5\\_6\\_b.html](http://www.eia.doe.gov/cneaf/electricity/epm/table5_6_b.html).

<sup>9</sup> Implementation cost is the incremental increase of an Intel® vPro™ technology-enabled PC. Cost for team based on 40 hours at \$42 an hour.

<sup>10</sup> Return on investment (ROI) calculations are based on the company's annual refresh rate for PCs. Calculations based on the difference between the company's typical PC and a PC with Intel® vPro™ technology. Costs for PCs purchased over and above the typical annual refresh rate are based on the full cost of the additional PCs with Intel vPro technology.

<sup>11</sup> Return on investment (ROI) results and projections include savings from improved user uptime and productivity gains.

<sup>12</sup> Projected NPV assumes a 15% discount rate.

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