



# ROI Analysis

Intel® Core™2 Processor with vPro™ Technology  
Banco Bilbao Vizcaya Argentaria  
Financial

## Bank Achieves Positive ROI of 348% by Deploying Intel® vPro™ Technology

Banco Bilbao Vizcaya Argentaria (BBVA), headquartered in Madrid, Spain, is a multinational financial services group, the leading financial franchise in Latin America, and the fifteenth largest financial institution in the western world with a growing presence in both the U.S. and Asia. In Spain, BBVA is the country's second largest bank, employing 35,000 workers at approximately 4,200 branches across the country.<sup>1</sup>

BBVA's IT department in Spain manages thousands of PCs, including 23,000 desktop PCs across the country's 4,200 branches. One of the main tasks for the IT department is to transit data updates off-hours, from central offices to "server" PCs in branch offices. The process updates and readies PCs in branch offices before business hours begin. If an off-hours transmission fails, an employee must reboot the server PC and restart the transmission, while other employees wait for the transmission to complete before they can start work. A key goal for the IT department is to gain the ability to remotely recover from transmission failures in order to improve employee productivity during business hours.

In January 2008, BBVA in Spain began using PCs with Intel® Core™2 processor with vPro™ technology as server PCs in branch offices.<sup>2</sup> The bank was particularly interested in the hardware-based technology because of the encrypted remote boot capability (via integrated device electronics redirect, or IDER) built into the PCs. Since implementing Intel® vPro™ technology on their 23,000 desktop PCs, BBVA has been able to securely and remotely reboot every server PC after a transmission failure, then retransmit the required data – without employee involvement.<sup>3</sup>

BBVA is not only extremely pleased with the change in process and improvement in customer service (since more workers are available sooner to help customers), but very excited about the productivity gains – over \$180,000 – being delivered in the first year of deployment alone.<sup>3</sup> The bank in Spain is projecting the break-even point for Intel vPro technology within 1 year and a positive ROI of 348% over 5 years.<sup>3</sup>

### TCO/ROI investigation

BBVA's investigation was conducted in an environment with 4,200 sites distributed across Spain, and included 23,000 desktop PCs with Intel vPro technology, of which 4,200 PCs were configured to receive remote data and application updates from central offices. BBVA configured most of the PCs using the Intel vPro technology small- and medium-business (SMB) mode, at a cost of \$0.68 per PC, before sending the systems to branch offices. Because BBVA uses management software developed in-house, software implementation costs and IT training costs were minimal. Data was analyzed only for the one use case of remote booting PCs. Data was then projected for 4 years, with the assumption that the number of PCs in the company would remain constant. Gains in user productivity were calculated conservatively by applying a 50% discount rate to the minimum values in each range of data. ROI was also calculated conservatively, for only the one service task of remote booting PCs.

### Key findings from ROI analysis

- **Positive ROI within 5 years of 348%** by deploying PCs with Intel® vPro™ technology to support remote booting in order to remotely resolve issues with failed transmissions for software updates.<sup>3</sup>
- **Break-even point achieved within 1 year.**<sup>3</sup>
- **Projected cumulative NPV of over \$620,000** across 5 years for productivity gains.<sup>3</sup>

## Positive results

BBVA is extremely pleased with the results of their investigation. The bank is already in process to implement other capabilities of Intel vPro technology next year, such as “always-available” hardware and software inventory capabilities. BBVA is also on a path to implement improved power management based on the secure remote power-up capability of Intel vPro technology. BBVA expects to save significantly on power bills by allowing users to power down PCs when systems are not in use, while still allowing IT to remotely and securely power up PCs for off-hours data transmissions. The bank will also be deploying 4,000 more PCs with Intel vPro technology early next year to central offices.

There is an additional, interesting opportunity that BBVA is pursuing through Intel vPro technology: elimination of a layer of infrastructure. Instead of dedicating one PC per branch as a server PC, IT technicians can use Intel vPro technology to directly, remotely, and securely power up individual worker PCs for data transmissions, with confidence that any failed data transmissions can be quickly and remotely resolved. Since technicians can now push data and software updates directly to each PC, there is no longer a need for a local server function. BBVA believes streamlining their infrastructure will significantly reduce complexity, lower infrastructure costs, and further lower service costs across the company.

**Table 1.** Comparison of service costs and ROI for patching and software problem resolution<sup>3,4</sup>

Benefits and costs	PCs with Intel® vPro™ technology					Estimated savings with 100% notebooks with Intel® vPro™ technology
	2008 <sup>a,b</sup>	2009 <sup>b</sup>	2010 <sup>b</sup>	2011 <sup>b</sup>	2012 <sup>b</sup>	
Productivity gain via Intel vPro technology	\$181,670 gain	\$187,120 gain	\$192,734 gain	\$198,516 gain	\$204,471 gain	Break-even point: year 1 Positive ROI: 348% in year 5 <sup>c,4</sup> Cumulative NPV: over \$621,372 across 5 years
Overall NPV benefits	\$181,670 savings	\$170,109 savings	\$159,284 savings	\$149,148 savings	\$139,657 savings	
Overall NPV costs	\$178,468 cost	\$12 cost	\$8 cost	\$5 cost	\$3 cost	
Cumulative NPV <sup>c,4</sup>	\$3,202 savings	\$173,299 savings	\$332,575 savings	\$481,718 savings	\$621,372 savings	
Projected ROI	2%	97%	186%	270%	348%	

<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 one use case of remote booting PCs. ROI calculations include a four-year projection to identify continued trends from taking advantage of the hardware-based remote-boot capability, a 3% inflation rate, a conservative 10% “hurdle” or discount rate, and a conservative 50% discount rate for user productivity. Dollar values are based on a currency exchange rate of 1 Euro = \$1.3.

For more information about 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 Banco Bilbao Vizcaya Argentaria (BBVA) was provided by BBVA.

<sup>2</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. For more information, see [www.intel.com/technology/platform-technology/intel-amt/](http://www.intel.com/technology/platform-technology/intel-amt/).

<sup>3</sup> Source: The BBVA 2008 Pilot of PCs with Intel® Core™2 processor with vPro™ technology, conducted in 2008, at the bank’s distributed sites in Spain.

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

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