By using VMware's virtual machines in place of a physical datacenter, we could generate a net benefit of \$9.2 million over three years. Using their virtual systems will help us consolidate the size of our current datacenter size by 80% and reduce our costs during this hardware refresh period.

The key to this consolidation is virtualization of computer systems, which allows us to reduce our required size for a datacenter through virtual machines. These virtual machines are functionally identical to physical systems and can perform the same actions as their counterparts. By using VMware, we would reduce our datacenter size to 280 physical servers. With VMware technology we can have 80 of our physical servers run 10 virtual machines each. With an 80% reduction in our datacenter size we can reduce our costs on maintenance and hardware drastically.

Implementing this change will cost \$4.8 million, which includes server maintenance costs for both physical and virtual systems over a three-year period. Making this change will save us a \$14 million benefit over three years, which will generate a \$9.2 million net benefit over the same period.

## Reference

"Server Virtualization & Consolidation." *VMWare*, 28 Sept. 2018, www.vmware.com/solutions/consolidation.html

"What Is Server Consolidation? Why Should You Do It?" *SmartFile*, 14 July 2016, www.smartfile.com/blog/what-is-server-consolidation-and-why-should-you-do-it/

Dgulling. "The Benefits and Risks of Server Consolidation and Virtualization - Ocala, Gainesville, Orlando." *Verteks Consulting, Inc.*, 8 June 2017, <a href="www.verteks.com/2017/06/benefits-risks-server-consolidation-virtualization/">www.verteks.com/2017/06/benefits-risks-server-consolidation-virtualization/</a>