



# Executive Summary

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## **Analyzing the Economic Value of HPE ConvergedSystem 700 in Enterprise Environments**

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## About This Summary

This paper is a summary version of the *ESG White Paper: Analyzing the Economic Value of HPE ConvergedSystem 700 in Enterprise Environments*. Please refer to the full report for complete details on the project methodology, results, and analysis.

## Project Overview

ESG was engaged by HPE to develop a detailed economic analysis for HPE ConvergedSystem 700 -- a pre-engineered system optimized for virtual workloads and comprised of HPE servers, storage, and networking; the analysis is designed to help IT organizations at larger enterprises determine the potential relative costs and benefits of leveraging its pre-engineered ConvergedSystem 700 compared with a “present mode of operation” (PMO) that reflects either traditional built-by-customer virtual infrastructure based on discrete components or other converged and reference architecture approaches to infrastructure (alternative integrated systems). This analysis builds upon ESG’s evaluation of ConvergedSystem 700, in-depth interviews with technical stakeholders at HP, ESG qualitative and quantitative market research with converged infrastructure customers, and ESG’s general familiarity with converged infrastructure products currently available in the market. This analysis is designed to provide potential customers with a comprehensive picture of the potential direct and indirect cost and benefit drivers they should consider when evaluating a HPE ConvergedSystem 700 investment.

## Customer Benefits Summary

Based on ESG’s market research and economic value analysis, HPE ConvergedSystem 700 promises a number of benefits to both IT and business constituents in the areas of:

### ***Initial System Design, Integration, Deployment, and Configuration***

In a component-based IT infrastructure, the burden of solution design and integration falls on IT. With HPE ConvergedSystem 700, the responsibility of planning, designing, and integrating the system resides entirely with HP. Moreover, HPE performs ~180 configuration tasks at the factory prior to delivery, which eliminates many onsite tasks such as IP address assignment, raw storage initialization, and some cabling. Additionally, HPE conducts an onsite product orientation with each customer for every ConvergedSystem 700 delivered. These advantages dramatically decrease implementation times for the customer.

### ***Systems Maintenance, Support, and Management***

Most alternative integrated systems in the market today are pre-configured and pre-packaged components from multiple vendors. HPE ConvergedSystem 700 differs from these alternatives because all components originate from HP. This allows HPE to offer converged support to complement its converged system. HPE support provides direct access to solution experts to resolve issues in the shortest time, and with single a point of contact. Moreover, HPE has a global call management footprint and globally dispersed field engineers. By contrast, with alternatives, support issues may need to be escalated to any number of vendors, lengthening the time to resolution. Another area of value for HPE ConvergedSystem 700 is the proactivity of its support. Included within the standard support for HPE ConvergedSystem 700 are proactive health checks and system recommendations.

### ***Resource Management Including Storage and Network Management***

With respect to the ongoing management and administration of physical resources, HPE ConvergedSystem 700 offers a higher degree of automation than what’s possible with alternative infrastructure approaches. HPE OneView seamlessly integrates management and provisioning of servers, IP network, and SAN connectivity. Changes across all system components are automated and help to eliminate potential configuration errors and rework. Furthermore, HPE OneView exploits iLO capabilities for agentless discovery, monitoring, and change management such as BIOS settings. HPE OneView also includes built-in logic to show dependencies on pending changes, and prevents changes such as network or storage de-provisioning that would disrupt operations for system

components. Finally, most systems will incur some hardware change events over their lifetime. With ConvergedSystem 700, hardware components can be easily replaced while the system remains operational.

**VM Administration:**

With respect to the ongoing management and administration of virtual resources, HPE ConvergedSystem 700 also outstrips alternative scenarios. HPE OneView allows for template/automated provisioning and easy decommissioning of VMs. Furthermore, time required for change management tasks, including changing VM parameters, VM migrations, or updating guest OSes, is reduced from hours to minutes.

**Application Deployment:**

HPE ConvergedSystem 700’s ability to decrease IT staff resources required for solution planning, design, and installation is measured directly as an IT efficiency benefit. However, this benefit does not occur in a vacuum. A significant benefit of reducing the time required to implement and provision virtual infrastructure—and thus the applications reliant on that infrastructure—is speeding time to value for those applications.

**Application Support, Management, and Availability:**

A factory-integrated system such as HPE ConvergedSystem 700 is much less likely to have interoperability problems than a customer-integrated solution and is therefore more reliable over time. This benefit, coupled with the other support features mentioned, has a profound impact on application end-users.

**Lower Hardware and Software Costs:**

ESG utilized publicly available component pricing from vendors and VARs, as well as its own research on competitive integrated platforms for the enterprise market segment, when estimating alternative solution costs. ESG’s analysis concludes that HP’s ConvergedSystem 700 offers a more compelling price-performance ratio compared with many alternatives in the market.

**Economic Value Summary**

ESG developed a comprehensive financial model designed to estimate the impact of HPE ConvergedSystem 700’s benefits on a hypothetical enterprise. For the purposes of this analysis, ESG tuned its model assumptions to reflect a hypothetical enterprise environment (see Table 1).

*Table 1. Key Default Scenario Assumptions for Composite Enterprise*

Parameter	Default Assumption
Initial number of virtual servers at deployment	350
Annual growth of virtual servers	20-25% annually (or 77 VMs)
Assumed percent of applications that meet heavy/moderate/light workload profile	10% / 40% / 50%
Typical number of users for applications meeting heavy/moderate/light workload profiles	150 / 320 / 650
Number of virtual machines per CPU core for applications meeting heavy/moderate/light workload profiles	.5 / 1 / 4
Average amount of storage per virtual machine	100 GB
Average annual burdened cost – typical IT administrator	US\$80,000
Average annual burdened cost – typical employee (application user)	US\$65,000
Time horizon of analysis	3 years
Cost of capital	15%

HPE ConvergedSystem for IaaS model in use (if applicable)

ConvergedSystem 700

Source: Enterprise Strategy Group, 2014.

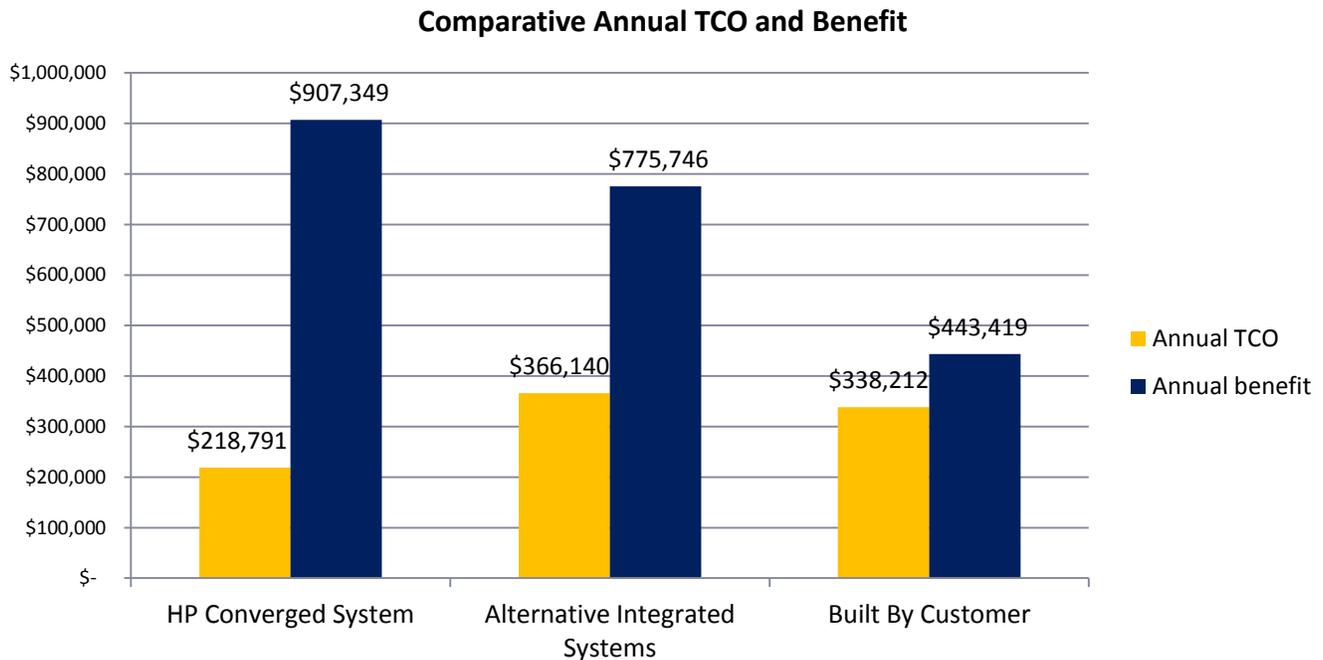
With the model parameters tuned to the default assumptions in Table 1, ESG’s analysis concludes that the net benefits of implementing an HPE ConvergedSystem 700 in an enterprise environment will greatly outweigh the associated costs. Table 2 shows the modeled return on investment (ROI), project payback period, net present value (NPV), annual total cost of ownership (TCO), and annual benefit over the time horizon for an HPE ConvergedSystem 700 deployment compared with similarly sized component-based and alternative integrated system approaches. As shown, HPE ConvergedSystem 700 is modeled to excel both in terms of system costs and benefits compared to alternatives (see Figure 1) resulting in an impressive 315% expected ROI.

Table 2. Economic Value Summary, HPE ConvergedSystem 700 versus Alternative Virtualization Approaches

Scenario	Project ROI	Payback Period (years)	Net Present Value (NPV)	Annual TCO	Annual Benefit
HPE ConvergedSystem 700	315%	.65	\$882,770	\$218,791	\$907,349
Alternative integrated system PMO	112%	1.52	\$367,587	\$366,140	\$775,746
Built-by-customer PMO	31%	2.56	\$(61,906)	\$338,212	\$443,419

Source: Enterprise Strategy Group, 2014.

Figure 1. Annual TCO and Benefit, HPE ConvergedSystem 700 versus Alternative Virtualization Approaches



Source: Enterprise Strategy Group, 2014.

## The Bigger Truth

Based on ESG's analysis, HPE ConvergedSystem 700 helps IT organizations maximize the value of virtualization, and aligns with the demands of enterprise applications and IT's transition to cloud consumption models. The factory integration, scalability options, and management capabilities enable businesses to achieve efficient time to value coupled tightly to:

- **IT administration savings** – due to significant reductions in the time and resources required to plan, design, install, configure, and manage virtual and physical infrastructure and applications.
- **Ease of management** – thanks to integrated management tools and the automation of common IT tasks (due to HPE OneView).
- **Improved application performance and availability** – as a result of reliable, pre-integrated, tested, and qualified components, plus proactive monitoring across the complete infrastructure stack.
- **Accelerated time to value** – thanks to the faster, more agile deployment of applications and virtual infrastructure and improvements in IT operations.
- **Increased user productivity** – due to faster application deployments and reduced application downtime.
- **IT efficiency and agility** – by aggregating compute, storage, and network assets into homogenous resource pools that can be dynamically managed, automatically provisioned, and easily scaled according to need.
- **Streamlined service and support** – because customers can rely on a single organization, as opposed to many, for infrastructure support and consulting services.

The HPE ConvergedSystem 700 offers a consumption model that has the potential to revolutionize the way businesses think about data center infrastructure investments and plans for future cloud consumption models. The system simplifies deployment, automates routine IT tasks, reduces the time to value, meets the performance demands of business applications and provides consistency to a unified cloud consumption strategy during the complete hardware lifecycle. The HPE ConvergedSystem 700 forms a foundation for private cloud and the basis for hybrid cloud adoption. Management tools help bridge multiple consumption models through a common set of automation policies. Most businesses do not gain a competitive advantage or drive significant economic value based on their IT infrastructure components. They accelerate growth through improved business processes and well-planned application implementations, which in turn drive productivity and business results such as increased revenue. As evidenced by the profile of the financial benefits afforded by virtual infrastructure solutions in ESG's financial analysis, this is the real promise of new integrated computing platforms. Consequently, IT should look beyond today's IT operational challenges that have them hamstrung deep into the inner workings and configuration of the individual infrastructure components, and begin to embrace automation and intelligence designed into today's integrated computing platforms. Virtual computing solutions that are faster to deploy, easier to manage, that can automatically react to change, and predictably expand and contract based on business requirements are essential if IT is to implement a strategy that will have the most significant economic impact on the organization.



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