

ECONOMIC VALUE ANALYSIS (EVA) ON THE TOTAL COST OF OWNERSHIP OF GE HEALTHCARE LOGIQ 9 ULTRASOUND IMAGING EQUIPMENT

An evidence-based approach to considering the economic benefits of comprehensive service contracts compared to billable hourly service (T&M) and in-house biomed resources.



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BACKGROUND

Many hospitals and other healthcare facilities are migrating away from original equipment manufacturer (OEM) support of medical equipment through an annual comprehensive service agreement. The de-facto initial purchase of the service contract and subsequent annual renewals are increasingly being replaced by less comprehensive service options available from both OEMs and independent service organizations (ISOs). In addition, many facilities are staffing up their clinical engineering departments and budgets to in-source equipment maintenance and service with in-house staff. The need to reduce hard costs from increasingly squeezed budgets is encouraging healthcare facilities to change procurement strategies and accept more economic risk when considering their various options for post-warranty equipment service and support.

An evidence-based approach towards equipment maintenance and service is valuable to guide HTM professionals in decision-making that best balances economic risk and costs. Getting a clear picture of the overall long-term total costs of ownership for medical equipment such as imaging equipment can be challenging. For example in ultrasound imaging equipment, variations in maintenance practices, age of equipment, multiple service providers, and the quality of preventative maintenance practices all factor into the overall total costs of ownership of this equipment. Detailed reporting of all parts purchases and service calls associated with each unit serial number can be challenging to obtain.

In short, a fact-based approach that considers actual field experience of a specific model of equipment would help inform and advise health technology management professionals to choose the best method for their facility: OEM or ISO comprehensive service contracts, billable hourly service by OEMs or ISOs, or transferring service completely to in-house HTM resources.

TOTAL COST OF OWNERSHIP EVA STUDY

Alpha Source, the service provider for certain models of GE Healthcare ultrasound imaging equipment, conducted a retroactive data study of the Logiq 9 installed base of equipment using the actual service experience of units under a contract from GE Healthcare. The purpose of this study was:

- To determine the overall average annual cost to support the Logiq 9 model of ultrasound imaging equipment during the period of 2011-2014. This average annual cost, which includes OEM services provided under annual contract including service calls and associated travel fees, phone technical support, and replacement parts furnished by the OEM, is defined to be the **total cost of ownership for Logiq 9 equipment**.
- To compare this average total overall cost of ownership to a competitively priced annual **comprehensive coverage service contract** offered through an ISO specializing in ultrasound modality (such as Alpha Source).
- To determine the likelihood that **customers will experience a net gain or net loss** on the annual cost of the comprehensive coverage service contract compared to competitively priced hourly billed (T&M) service.
- To monetize the **economic risk and financial exposure** that the average Logiq 9 customer might experience without relying on the comprehensive coverage service contract to smooth out the annual parts and service expenditures on their ultrasound imaging equipment.

METHODOLOGY

The study was based on a retrospective review of the 3-year service and parts history of a significant portion of the GE Healthcare Logiq 9 installed base of ultrasound imaging equipment. The installed base for this study consisted of 673 ultrasound units used in hospitals, physician offices, and imaging centers across the country during the period 2011-2014. Each of the units in the study was under a GE Healthcare contract and serviced either by GE Healthcare or by Alpha Source. Every service event including on-site service calls, travel time, preventative maintenance, phone support, and replacement parts was tracked by unique equipment ID within a robust database. For purposes of assigning a value to each service event under an annual contract, a market-competitive hourly rate of \$250.00/hour was assigned to each service call, travel hour and phone support hour. Replacement parts used to repair or maintain each unit were valued at the OEM list price.

Each of the units in the study had a service history for a complete 3 years. Tracking service history within a consistent time period is essential to normalize the naturally wide variations in service expenses from year to year. This average annualized expense or the total cost of ownership on the combined service and parts usage was then compared to the annual fees offered by OEMs and ISOs for comprehensive coverage service contracts.

RESULTS

The analysis of annual expenses from the 3-year parts and service history of the Logiq 9 ultrasound equipment revealed the following:

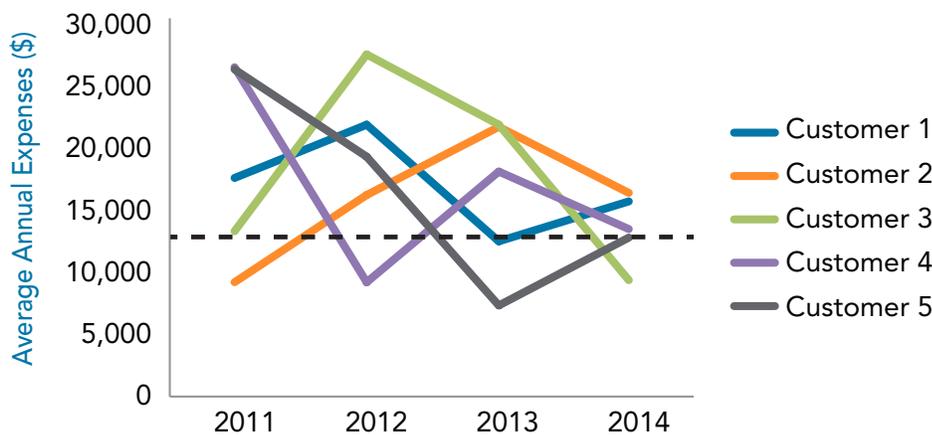
- On average, a Logiq 9 user can expect to spend **\$9,800 per year in parts and service fees** to support the unit. This is a total annual combined spend on both parts and service.
 - Of this total, \$6,300 is spent on replacement parts which include transducer probes, electronic parts and other miscellaneous replacement parts.
 - On average, customers experience 14 billable hours of combined service labor, travel costs, and phone technical support per year. This is valued at \$3,500 per year based on a \$250.00/hour rate for billable hourly service.
- Although the average total annual spend in service and parts is \$9,800 per year, **the range of expenditures is wide**. The high end of this range is over 5 times (5X) the average annual spend or \$51,230 per year.
- The **year-to-year variability of customer spending is high**. The results of this study showed that 23% of customer units required a spend that was 50% higher than the average and 10% of customer units required double or more (2X) the average annual spend in any one given year.
- About **30% of customers would spend less** and **70% of customers would spend more** on a competitively priced comprehensive coverage service contract compared to purchasing parts and T&M service without a contract. The Alpha Source Logiq 9 contract list price of \$12,410 was used for this comparison.

CUSTOMER EXAMPLES

To further explore the economic value of an annual contract, the actual combined parts and service spending for five sample customer units during the period 2011-2014 was examined and is shown in Figure 1. This actual customer spending is compared to a competitively priced comprehensive coverage service contract. (The Alpha Source list price for a Logiq 9 Comprehensive Coverage Service Contract of \$12,410 was used for this comparison.)

Figure 1 shows the potentially wide variations in customers' spend from year to year. Customers #3, #4 and #5 spent 2X more than the contract price of \$12,410 in 2011 and 2012. Customer #2 spent 70% more than the contract price in 2013. In some years, Customers will spend less than the annual contract; in fact, all Customers except Customer #1 had at least one year where spending was below the contract level. However, when totaling these customers' actual expenditures over this time period, **all 5 customers would have spent less with a fixed priced contract** compared to equivalently purchased parts and service without a service contract.

FIGURE 1: Sample customer Logiq 9 parts and service expenses



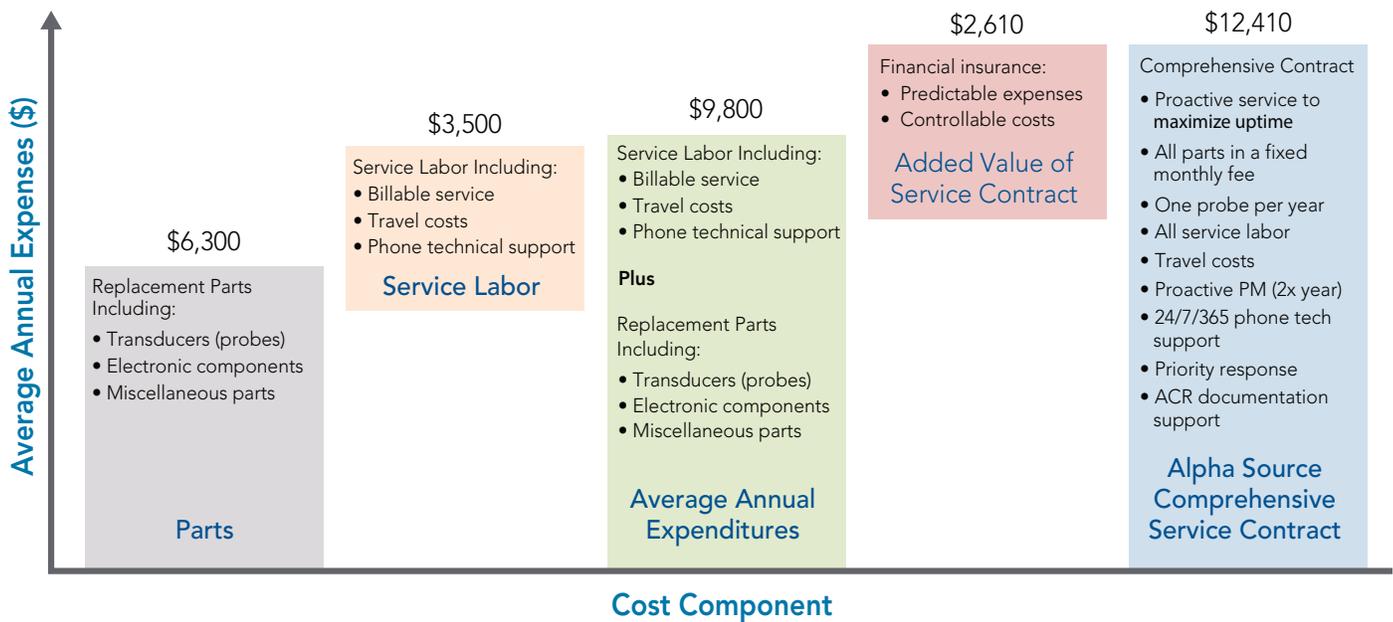
CONCLUSION

The competitively-priced **comprehensive coverage service contract is a cost-effective method** for maintaining EOSL GE Healthcare Logiq 9 ultrasound equipment based on a 3-year historical review of actual customer expenditures. These contracts act as financial insurance against widely varying, unpredictable annual maintenance expenses. Contracts offer peace of mind not only for meeting your financial budget responsibilities but also for maintaining your equipment by a team of qualified service engineers with ultrasound expertise. Comprehensive contracts often provide priority response times and 24/7/365 technical support to minimize equipment downtime. Maintaining the equipment with proactive preventative maintenance and quality replacement parts will reduce your total cost of ownership, reduce equipment downtime and maximize the value of your asset for many years.

ALPHA SOURCE COMPREHENSIVE COVERAGE SERVICE CONTRACT

The Comprehensive Coverage Service Contract from Alpha Source offers significant economic value compared to T&M or in-house resourcing of ultrasound equipment maintenance and support. The price of a Logiq 9 contract offers an attractive value based on the average customer’s experience in the Logiq 9 installed base.

FIGURE 2: Value Components of the Alpha Source Comprehensive Service Contract:



The Alpha Source Comprehensive Coverage Service Contract is designed to help you achieve maximum productivity and uptime for your ultrasound imaging equipment. It provides parts coverage, proactive scheduled preventative maintenance, probe care and replacement, priority response, after-hours phone technical support and documentation support to meet both American College of Radiography (ACR) and The Joint Commission requirements.

The features and corresponding benefits of the Alpha Source Comprehensive Coverage Service Contract are as follows:

FIGURE 3: Alpha Source Comprehensive Coverage Service Contract

Feature	Benefit	Impact on Patient Care
All parts and labor in a fixed monthly fee, includes one probe per system	Predictable monthly expenses acts like an insurance policy	Controllable, predictable costs keep care costs down
Alpha Care™	Expert care to extend the life of your aged equipment	Confidence and peace of mind in EOSL equipment
Proactive, preventative maintenance 2 x year	Catch issues early to prevent downtime	Smooth patient scheduling with less downtime
ALPHA PM™	Documents image quality and equip performance	Image quality suitable for excellent patient care
PM and service documentation meets ACR/JC needs	Cuts time you need to prepare documentation	Maintain accreditations. More time for patient care.
Priority service response time; 24/7/365 phone support	Restore uptime quickly	Return to normal patient scheduling quickly
Cloud-based data storage	Secure and available documentation	Supports accreditation requirements
25% off list prices for replacement probes	Cost reduction	Lower costs meet cost reduction goals

CONTACT ALPHA SOURCE AT 1-800-654-9845 to learn more about how our nationwide team of trained and certified service engineers and our stocking inventory of parts can help you achieve the highest economic value from your ultrasound equipment.

Notes:

1. All repair data is tracked by individual equipment serial numbers. Individual units were de-identified and the data was made anonymous prior to analysis.
2. GE Healthcare did not sponsor, conduct or participate in the study, the analysis of the information or the drafting of the findings. All statements and representations made herein are solely those of Alpha Source.

ABOUT THE AUTHORS

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ABOUT ALPHA SOURCE, INC.

Located in Milwaukee, Wisconsin, Alpha Source, Inc. provides innovative solutions in healthcare technology management to customers around the world. Established in 1986, Alpha Source is an ISO13485:2003 certified and FDA GMP compliant medical device manufacturer with an emphasis on medical equipment service and biomed parts distribution and logistics. Alpha Source has been one of the INC 5000 fastest growing companies for the past five years. For a complete company description, [VISIT WWW.ALPHASOURCE.COM](http://WWW.ALPHASOURCE.COM) OR CALL 800-654-9845.