Data-Driven Decision Making

To Increase Asset Availability and Reduce Costs

BY : CHRIS LANGMEYER, CBET, CHTM

HTM MIXER
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HTM Mixer

Introduction

- **Data is driving the future of healthcare**
- In today's economy, **expenses are rising faster than revenue** and margins are thinning
- **Doing more with less is the new norm** and modern HTM leaders are leveraging data in new ways to make an impact
- In this session we will discuss the drivers for a **shift to data-driven decision making** and actions HTM leaders from top health systems are taking to **overcome today's most pressing challenges**

66%

Hospitals expect supply costs to grow

20%

Spike in Labor Costs due to Labor Shortages

-15%

Predicted Operating Margin for Health Systems in 2027

>50%

Hospitals expect capital spending to be flat in 2024

Why is using data to drive decisions so important?

Data-driven decision making is essential because it helps you make decisions based on facts not feelings.

If you are in a leadership position, making objective, informed decisions is the best way to remain fair and unbiased.

The most informed decisions come from data that measures your goals **and** is available in real time.

Not every decision will have data to back it up, but the most actionable and impactful ones will.

Data Accuracy

- Bad data refers to data that is inaccurate, incomplete or inconsistent
- Detrimental impact on the outcome of decisions
- Risks include inaccurate conclusions, flawed strategies and missed opportunities
- Stems from various sources, such as data entry errors, outdated information, or poor data integration processes

What can you do?
Start with Data Governance. A set of policies, processes, and technologies that ensure the quality, security, and availability of an organization's data.

2024 HTM Leader Survey

We conducted a survey of HTM leaders across the country asking what their goals for this year and what challenges they are facing.

In ranked order, their top goals for 2024 are:

01 Bringing specific repairs in-house

02 Standardizing processes to increase efficiency

03 Demonstrating value of their in-house team

04 Reducing operating costs

05 Implementing or upgrading their CMMS (computerized maintenance management system) or their ERP (enterprise resource planning) system

06 Taking ownership of capital replacement planning

07 Integrating with another health system

08 Taking ownership of service contracts

Key Findings

Key Finding 1

Multiple Market Forces Buffeting HTM Leaders at Once

The market forces converging on HTM leaders and pointing to a data-driven future are many.

The key findings include:

- An aging HTM workforce, nearing retirement
- A growing shortage of HTM leaders as job growth outpaces new graduates
- A volatile economic climate for healthcare organizations characterized by higher operating costs and constrained reimbursement rates
- A fragile economic climate marked by inflation and recession worries
- More frequent and uncontrollable supply chain disruptions

Key Finding 2

Healthcare Organizations Are Placing Enormous Pressure on HTM Leaders to Hold Down Costs

There is tremendous pressure on HTM leaders to hold down costs, if not cut their budgets at a time when the clinical availability of medical equipment is paramount.

The key findings include:

- Delaying asset retirement
- Seeking savings by changing historic purchasing behaviours and patterns
- Looking for high-quality, lower cost parts
- Scrutinizing the relative costs and benefits of various service strategies
- Standardizing expectations across service contracts
- Adopting new and more granular budgeting and budget forecasting approaches
- Adopting formal medical equipment and healthcare technology service strategies

Key Finding 3

Data is essential for healthcare organizations to respond effectively to this new reality

None of the coping mechanisms are possible without access to credible, verifiable, accurate, and timely data.

The key findings include:

- Data is essential to making key, recurring decisions on replacing equipment to buying parts to how equipment is serviced
- The past state of HTM is characterized by clinician preference, institutional knowledge
- Data must be actionable to be of value to HTM leaders
- Given their incredible breadth of asset categories but relatively little depth by equipment model count, and variations caused by region, staffing and utilization differences, HTM leaders have limited data sets upon which to draw insights and take action. They need more robust data sets to operationalize this new approach to HTM

Opportunities

The research results underpin five data driven opportunities. Today we will focus on the two that we feel impact you the most.

01

Opportunity 1

Understand Inflationary Impacts to Inform Budget Planning

02

Opportunity 2

Optimizing Cost and Quality – Parts

03

Opportunity 3

Optimizing Cost and Quality – Service

04

Opportunity 4

Translating Availability Trends to Impact

05

Opportunity 5

Eliminating Complexity and Cost in Equipment Service

Opportunity 2:

Optimizing Cost and Quality - Parts

Cost and Quality - Parts

Goal

- Optimize cost and quality for parts procurement by evaluating quality return rates (QRR) across sources.
- It is helpful for providers to understand differences in the return rates between OEM and compatible medical equipment replacement parts and balance those differences with potential savings to make informed buying decisions.

Cost and Quality - Parts

- Time is of the essence when medical equipment goes down
- At that moment, most providers are willing to pay any price to an OEM for an original replacement part
- That decision can be based on assumptions and urgency.

Is it the right decision?

Cost and Quality - Parts

- The past state of HTM purchasing decisions is characterized by clinician preference, institutional knowledge and influence from OEMs.
- Instead, providers can make the right—and more cost-effective—decision based on data without losing that sense of urgency.
- Key data elements that providers need to make the right decision are:

01 The quality return rates (QRRs) of OEM replacement parts

02 The QRRs of compatible replacement parts

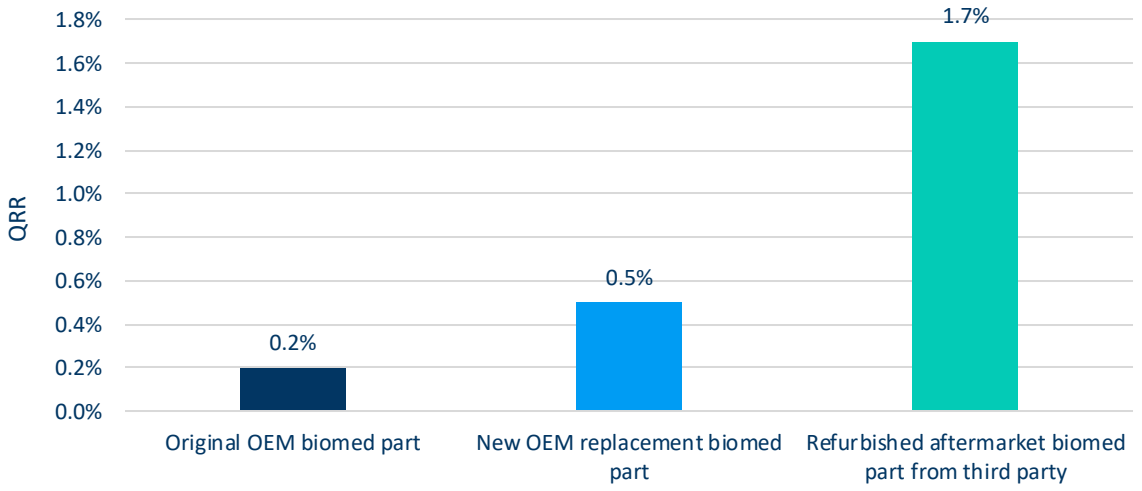
03 The potential savings from buying compatible versus OEM replacement parts

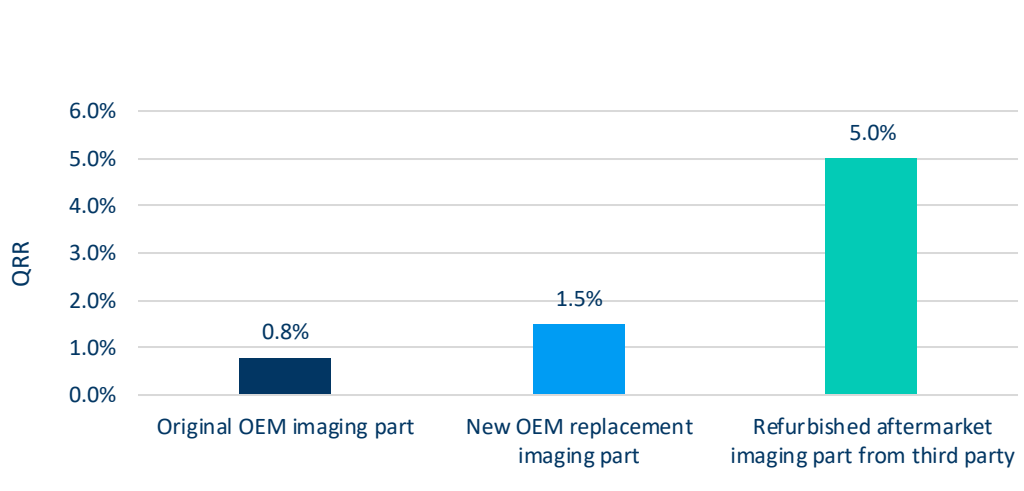
In theory, if a QRR of a compatible part is about the same or better than a QRR of an OEM part and the compatible part costs less, then that may be the right, data-informed decision to make.

Cost and Quality - Parts

We track all three data elements of all replacement parts for OEMs and third-party vendors in our database and organize them by more than 20 medical equipment categories.

The following two charts compare the QRRs of OEM parts, new OEM replacement parts and refurbished replacement parts from third-party vendors across biomedical and imaging modalities.



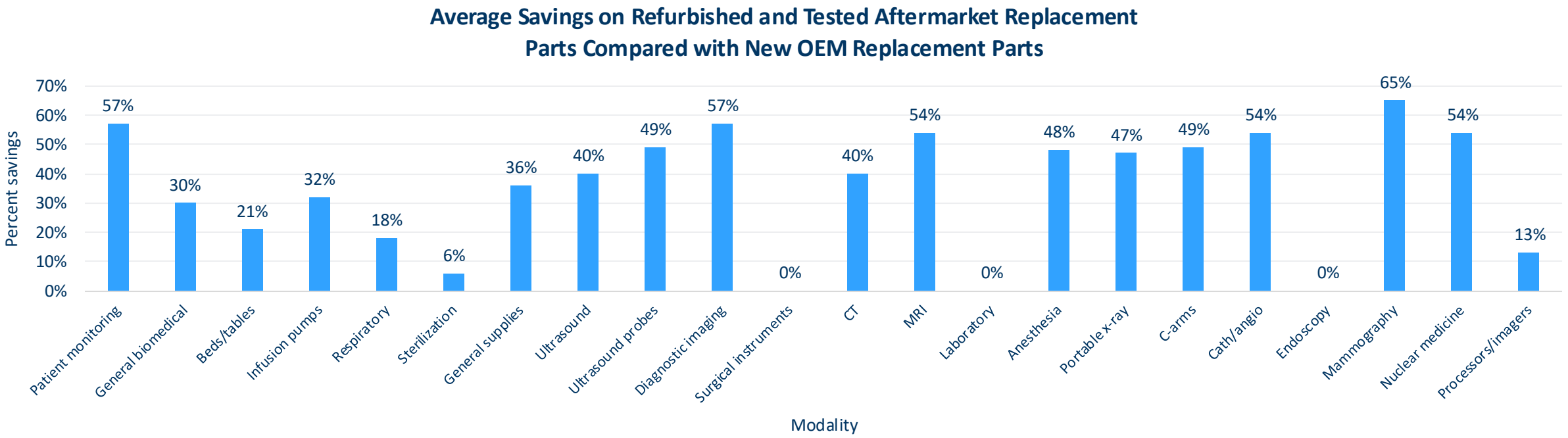


Cost and Quality - Parts

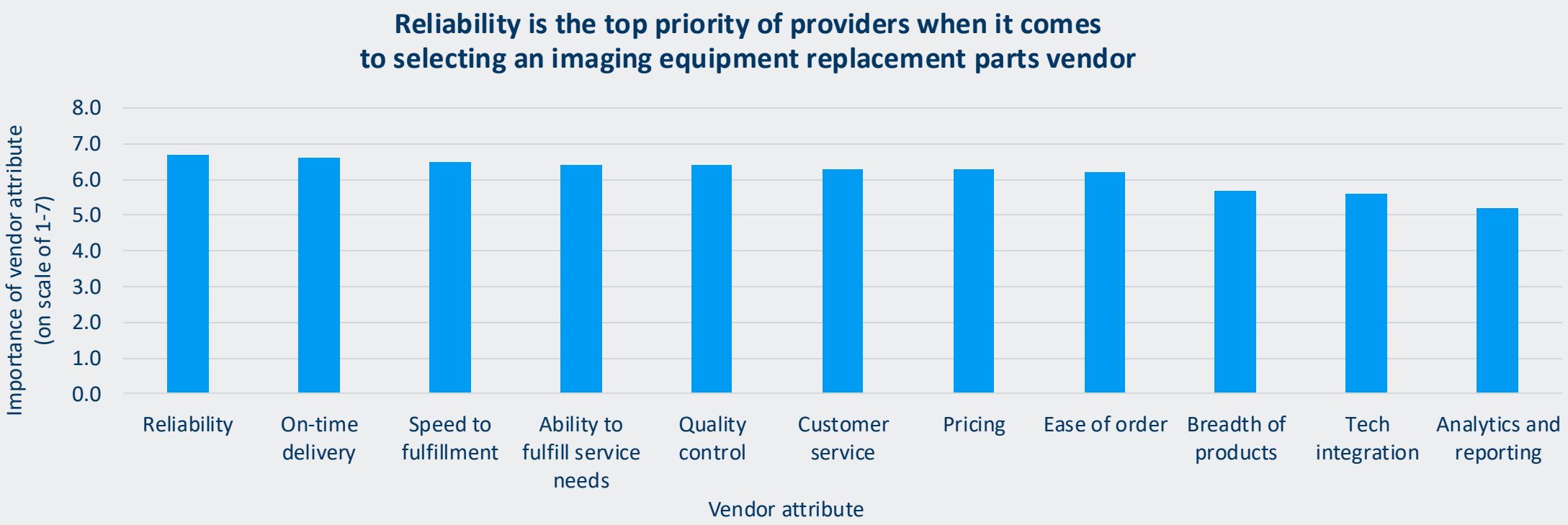
The big question…

Is the savings from buying lower priced refurbished and tested aftermarket parts from a third-party worth the risk of having a higher QRR on those parts?

The chart below displays the average savings from buying aftermarket for 22 medical equipment categories.



Cost and Quality - Parts



These engrained buying behaviors for purchasing imaging equipment parts could be optimized by a new data-driven, evidence-based and technology-enabled approach to medical equipment management.

Insights in Action

Look at the **overall budget impact** at the site and modality level

When the QRR is lower for OEM than for compatible, consider setting a threshold that makes sense for your organization, e.g., for new aftermarket parts we recommend a 1% tolerance threshold

Factor in part criticality or the need for redundancy into their considerations

For imaging equipment, consider several criteria

- Whether it's end-of-life equipment
- Location
- Whether access is critical
- Access to redundant equipment,
- Status of back up systems and how quickly the part will be delivered for maximum uptime and revenue

Select non-new high dollar OEM imaging part if the pricing differential exceeds a specified threshold. We recommend 15% or higher

Opportunity 5:

Eliminating Complexity and Cost in Equipment Service

Complexity and Cost - Service

Lack of insights into costs and peer-based service strategies for medical equipment maintenance and service contracts can add unnecessary costs and hamper productivity without guarantees of quality or performance.

- Providers can use benchmarked data to identify and reduce variations in contracts and simultaneously reduce costs and improve service and quality
- Lack of standardization can serve as a drag on each leg of the system's three-legged stool—access, cost and quality
- Complexity, variance and lack of transparency can hamper access, raise costs and negatively impact quality
- Given the fact that medical equipment service contracts comprise 50% or more of a typical HTM department's budget, optimizing this critical driver if clinical availability is key

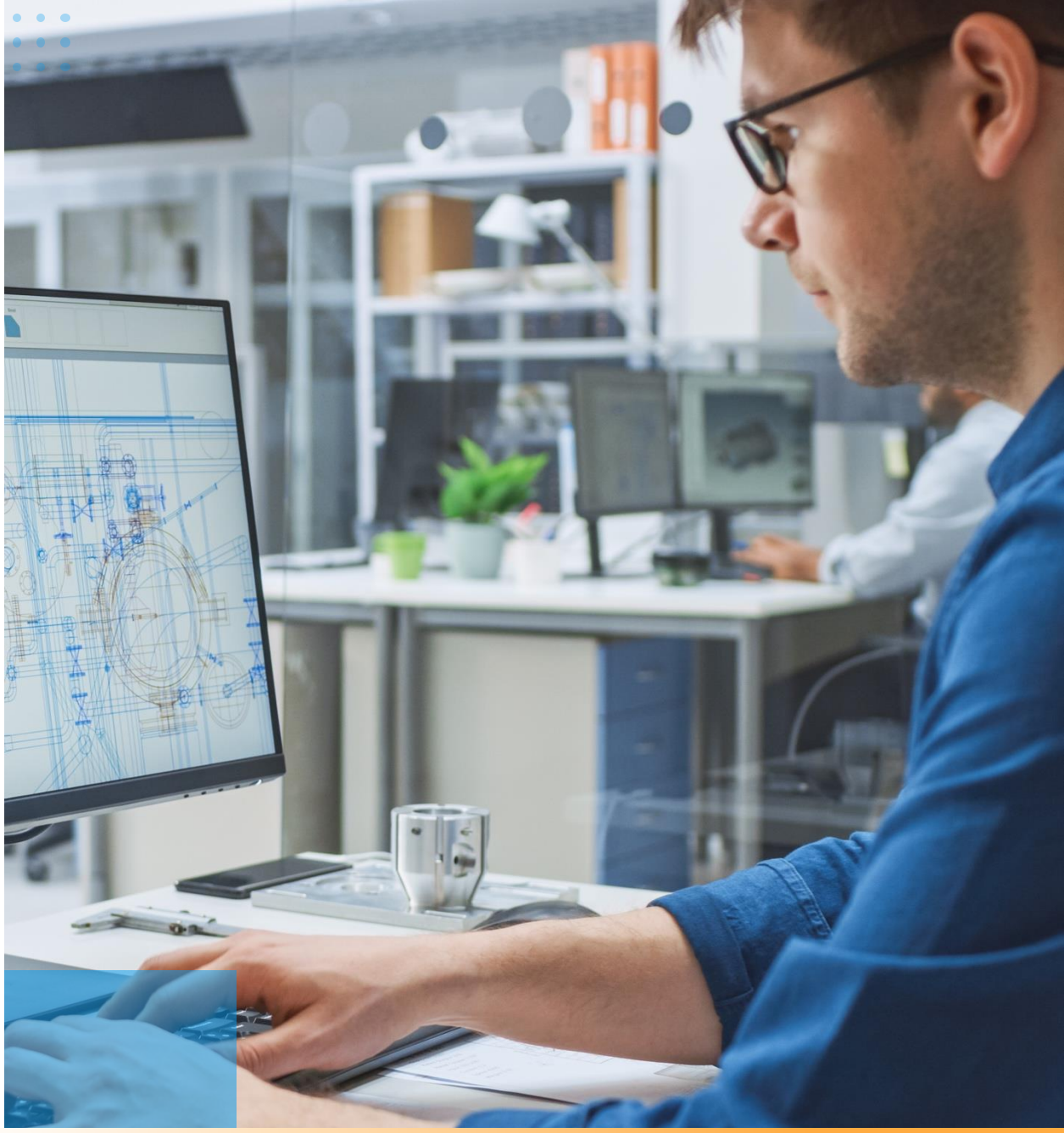
Complexity and Cost - Service

There is a move toward standardizing service contracts by modality and the terms and conditions within each service contract

That move is powered by data

Providers can use data to

- **Identify and reduce cost variances** in medical equipment maintenance and repair contracts
- **Identify valuable alternatives** and contribute to the overarching strategic objectives and business goals of their organization



Complexity and Cost - Service

We conducted an exclusive analysis of provider medical equipment maintenance and repair contracts from more than 100 hospitals to quantify the pain points, including time spent managing multiple contracts, lack of institutional processes for tracking performance, cost variance and service strategies by modality.

The study pool included:

- more than 100,000 individual service contracts
- more than 500,000 service events

Service Contract Profile Analysis

146

This is the average number of service contracts that providers manage.

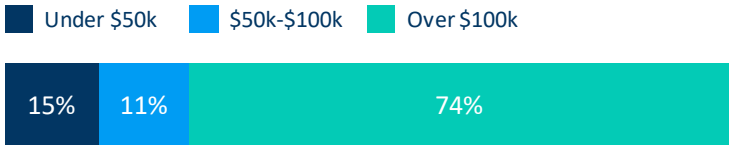
140

Under 1,000 beds
Min: 62
Max: 236

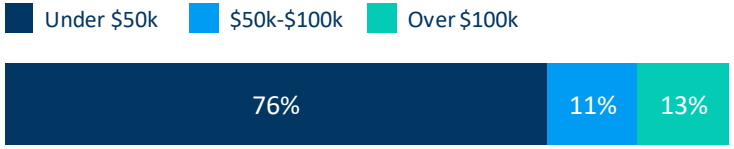
156

Over 1,000 beds
Min: 101
Max: 238

Stratification of Contracts by **Cost**



Stratification of Contracts by **Quantity**



Contracts are numerous.
The **vast majority are low-value contracts covering low-risk assets.**

What is the scope of the challenge?

As the chart illustrates, the average number of contracts per hospital was 146 and ranged from a low of 62 per hospital to a high of 238 per hospital, depending on bed size. Most of the contracts were low-value covering low-risk medical equipment assets.

Time and Motion Study

Team Impact

Price Band	Days to Complete	No. of Contracts	Total Team Days
Under $50k	100.8	111	11,189
$50k-$100k	100.8	16	1,613
Over $100k	100.8	19	1,915

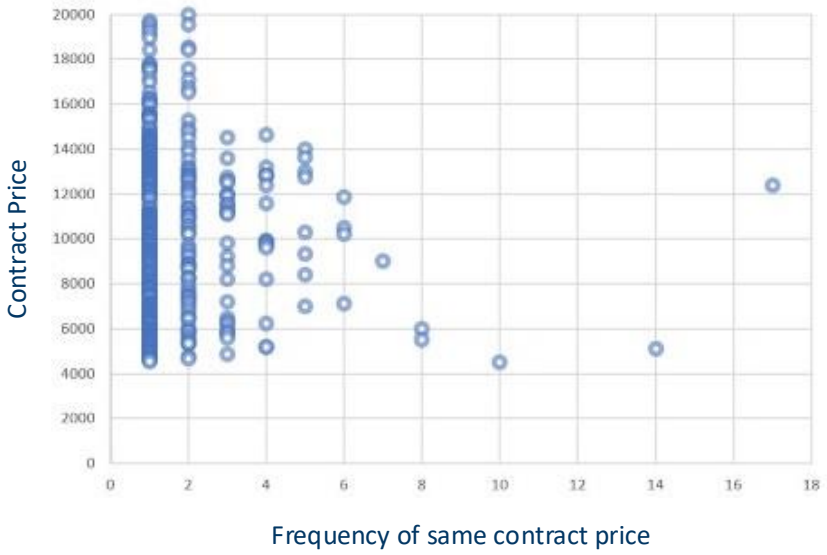
Process Intervals

Teams are spending up to **4 months per contract regardless of price band.**
In theory, lower impact contracts should require less effort.

The analysis also found that providers were spending as much time on negotiating and administering low-value contracts as they were on high-value contracts.

Asset Level Analysis

519 Unique contract prices for the same model



OEC 9900
Full-Service Contracts

57%

Range from Min to Max

$18,600	Max
$11,286	Mean
$10,800	Median
$7,920	Min

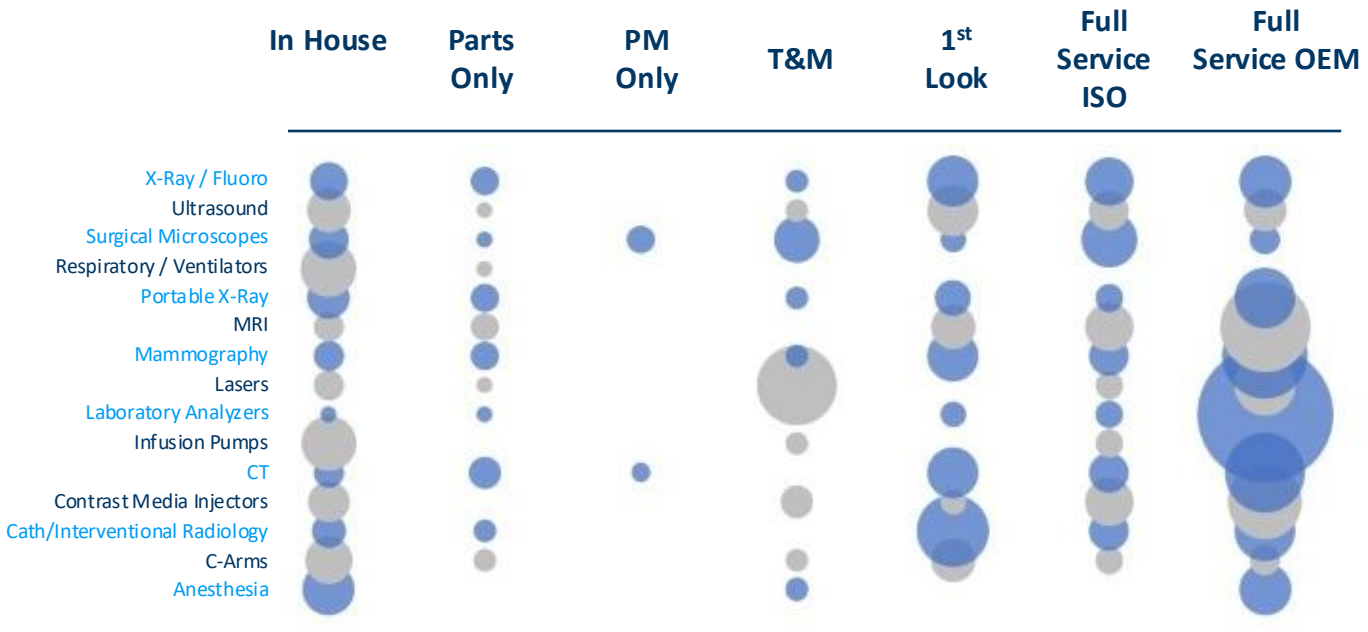
No true cost transparency results in systems
overpaying for full-service contracts and lack of standardization.

We found that providers in the analysis were paying 519 unique maintenance and repair contract prices for the same model of medical equipment.

Controlling for identical entitlements on the same model, the price of full-service contracts for the same model of medical equipment ranged from $7,920 to $18,600.

Service Contract Approach by Modality

The analysis found an extreme level of variation in the types of service contracts for 15 of the most common medical equipment modalities.



Extreme variation in strategy suggests **lack of a clear evidence-based data approach** to decision making.

The types of service contracts included:

In-house only, parts only, parts and maintenance only, time and maintenance only, first looks only, full-service ISO and full-service OEM.

This suggests the lack of a clear evidence-based approach to service contract strategies.

Cost of Service Data

Modality	Coverage Years	Average Full-Service Contract	Average T&M Spend	Savings %	Average Corrective Events
Model 1	463	$3,766	$1,534	59%	1.13
Model 2	962	$5,456	$3,362	38%	0.75
Model 3	694	$10,419	$7,221	31%	1.82
Model 4	615	$11,238	$7,877	30%	1.98
Model 5	334	$11,998	$9,844	18%	2.47
Model 6	340	$5,896	$4,958	16%	0.19

Financial cost/benefit analysis should influence contract strategy.
What data are you using to help make that decision?

The potential savings ranged from 16% to 59%.

Insights in Action

Consolidate and rationalize contracts with evidence-based insights

Create a **data-driven transition plan** to bring low-dollar, low-risk service in-house

Use **evidence-based outcome data** to lower contract costs by as much as 60%

Measure asset-level service costs and performance to evaluate contract strategy

Leverage **national benchmark data** to make evidence-based decisions

Key Takeaways

Opportunity 2:

Optimizing Cost and Quality – Parts

- Look at the overall budget impact at the site and modality level
- Consider a Quality Return Rate (QRR) and pricing differential thresholds

Opportunity 5:

Eliminating Complexity and Cost in Equipment Service

- Consolidate and rationalize contracts with evidence-based insights
- Create a data-driven transition plan to bring low-dollar, low-risk service in-house
- Use evidence-based outcome data to lower contract costs

Conclusion:

Embracing the future for improved outcomes

Data Is Essential for Healthcare Organizations to Respond Effectively to this New Reality

Embracing the future for improved outcomes

Past State of HTM	Future State of HTM
Across-the-board budgeting	Budgeting by individual equipment modality
Buying majority new OEM parts	Buying high-quality compatible or refurbished parts
Buying replacement parts is art	Buying replacement parts is science
Full-service original equipment manufacturer (OEM) service contracts on all equipment	"Right-sized" service contract strategy that meets service needs of individual equipment modalities
Lack of standardized nomenclature	Standardized nomenclature
Lone wolf, top-down management	Multidisciplinary, team-based management
Make buying decisions based on subjective, disconnected quality, cost and availability criteria	Make buying decisions based on three data-based criteria: quality, cost and availability
Non-reproducible tribal knowledge	Reproducible data-driven insights
Quality beats cost every time	Balance quality, cost and availability based on specific needs
Select vendors by reputation and word of mouth	Select vendors by objective verifiable performance criteria
Service contracts not connected to capital asset replacement strategy	Service contracts connected to capital asset replacement strategy
Zero risk tolerance	Criticality determines risk tolerance

It is time for HTM teams to leave the status quo behind and embrace the data-driven model

Thank you!

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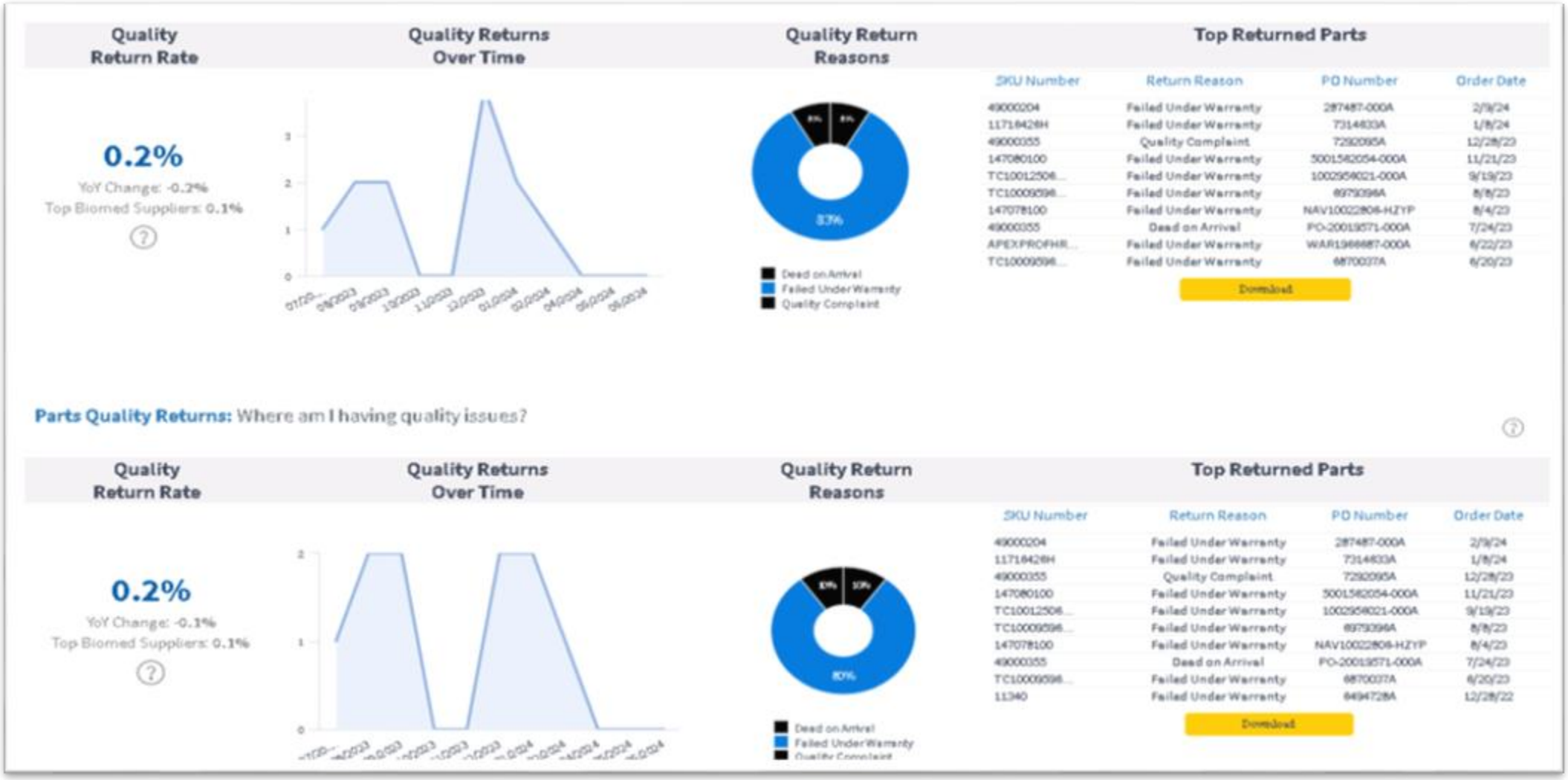
Connect with us at booth #49



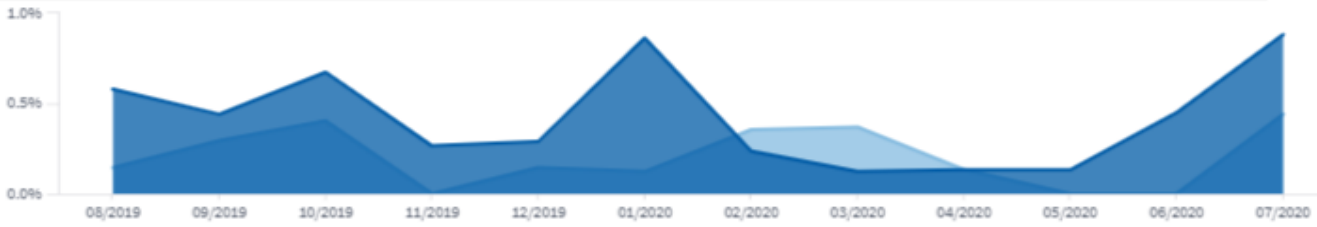
Sample Scorecard

Supplier Score: What is my overall Supplier Score?

How do the key scorecard metrics change over time?

97 Supplier Score

Choice Level	1
Top Biomed Suppliers	95



Description: PartsSource scores suppliers across key metrics to ensure a great customer experience. The score above represents the percentage of points captured in each of the metrics below. This score is used to choose the best supplier to win a customer's order. The maximum possible score is 100.

Quality Returns

0.2%
Goal: 0%
Threshold: 2%
Top Biomed Suppliers: 0.1%

Process Returns

0.4%
Goal: 0%
Threshold: 2%
Top Biomed Suppliers: 0.8%

Tracking Provided

99.9%
Goal: 100%
Threshold: 90%
Top Biomed Suppliers: 100.0%

Quotes Provided

99.5%
Goal: 90%
Threshold: 86%
Top Biomed Suppliers: 99.3%

Automated Quotes

98.5%
Goal: 95%
Threshold: 70%
Top Biomed Suppliers: 96.6%

Best Price %

98.0%
Goal: 95%
Threshold: 75%
Top Biomed Suppliers: 98.1%

Sample Scorecard