ICE2025

IMAGING CONFERENCE & EXPO

FEBRUARY 22-24, 2025 • ORLANDO, FL

Transforming Diagnostic Imaging – Trends, Challenges, and Solutions

February 23, 2025

ICE2025

IMAGING CONFERENCE & EXPO

Francis Vonder Haar

VP & GM Imaging, PartsSource, Inc

Agenda

- Health System Challenges
- Inaugural HTM Report Findings
- Innovative solutions
  - Service Labor Staffing, Training and Advancement
  - Imaging Parts Solutions
- Reenvisioning the Future

“We cannot solve our problems with the same thinking we used when we created them.”

-Albert Einstein

Hospitals and Health Systems are Facing Unprecedented Challenges

More pressure than ever to reduce cost while delivering high quality care

66%

Hospitals expect supply costs to grow

20%

Spike in Labor Costs due to Labor Shortages

1%

Median hospital operating margin in 2024

>50%

Hospitals expect capital spending to be flat in 2025

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.

Inaugural State of HTM Insights Report

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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 or their ERP system

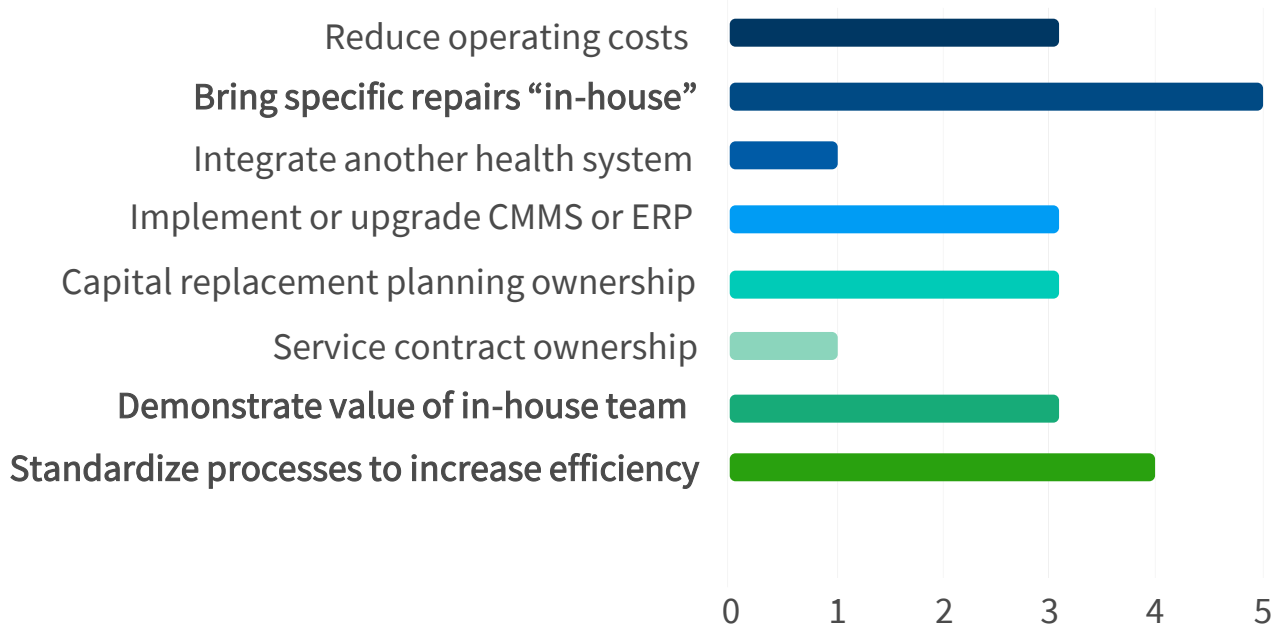
06 Taking ownership of capital replacement planning

07 Integrating with another health system

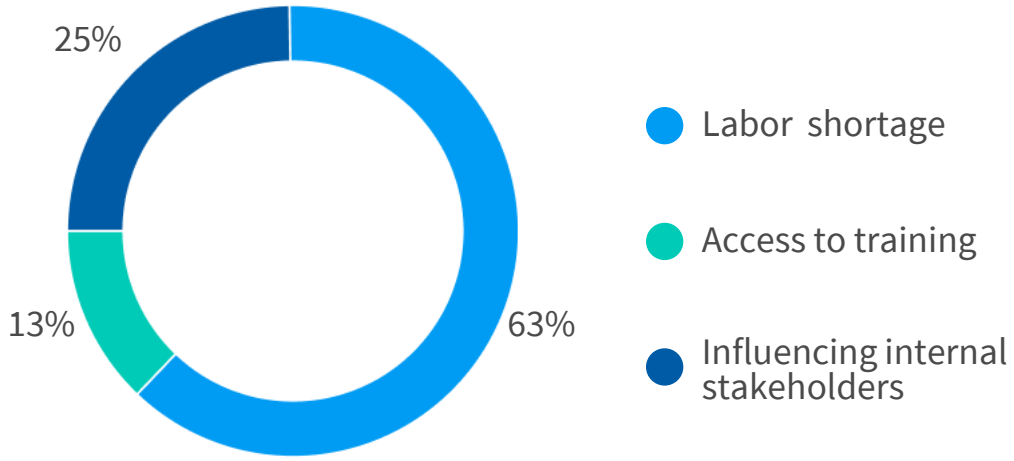
08 Taking ownership of service contracts

Top Goals and Challenges

What are your top goals for 2025? (select top 3)



What is your most significant challenge to achieving 2025 goals?



Key Findings

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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.

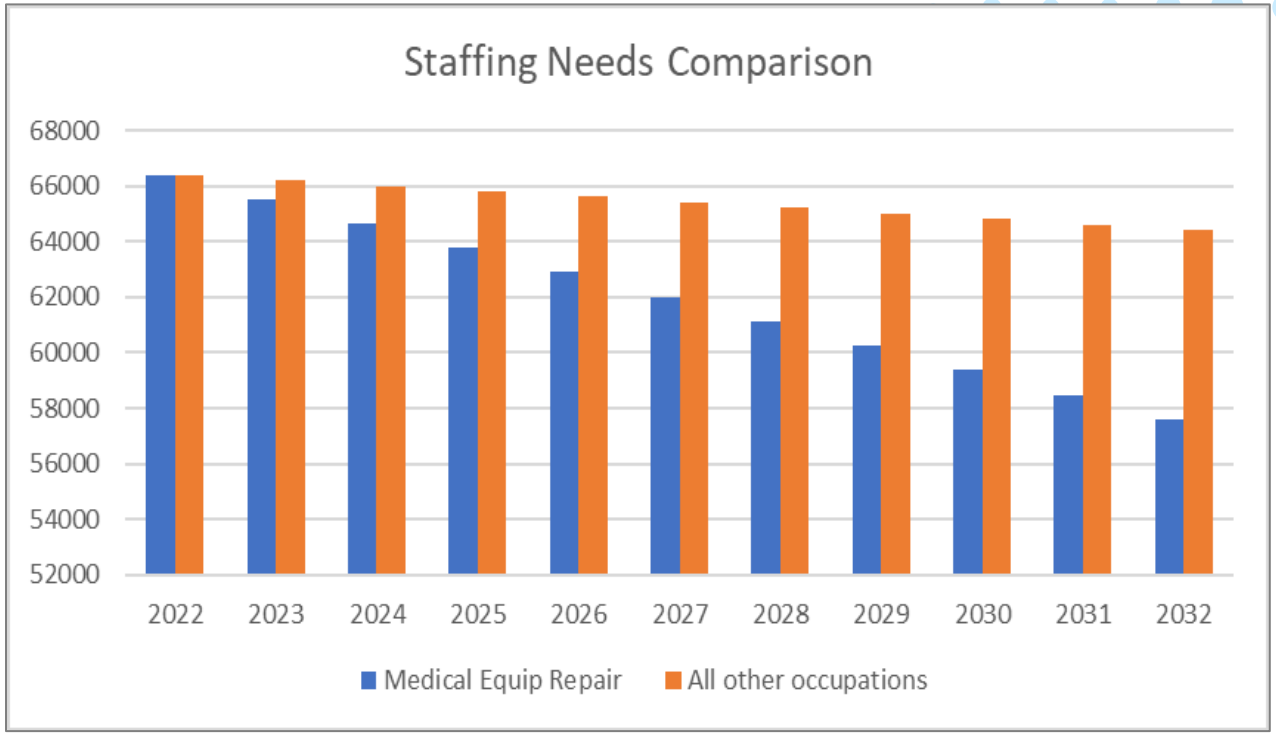
The key findings include:

- **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
- **Economic uncertainty driven** by inflation, tariffs, and recession worries
- **Frequent and uncontrollable supply chain disruptions** impacting operations

Staffing Outlook

Today's Dynamic Imaging Labor Trends

- Medical Equip Repair demand projected to increase 13% per US BLS
- Rate for all other occupations @ 3%
- Retiree impact is significant
- Limited new applicants in education programs



Key Finding 2

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

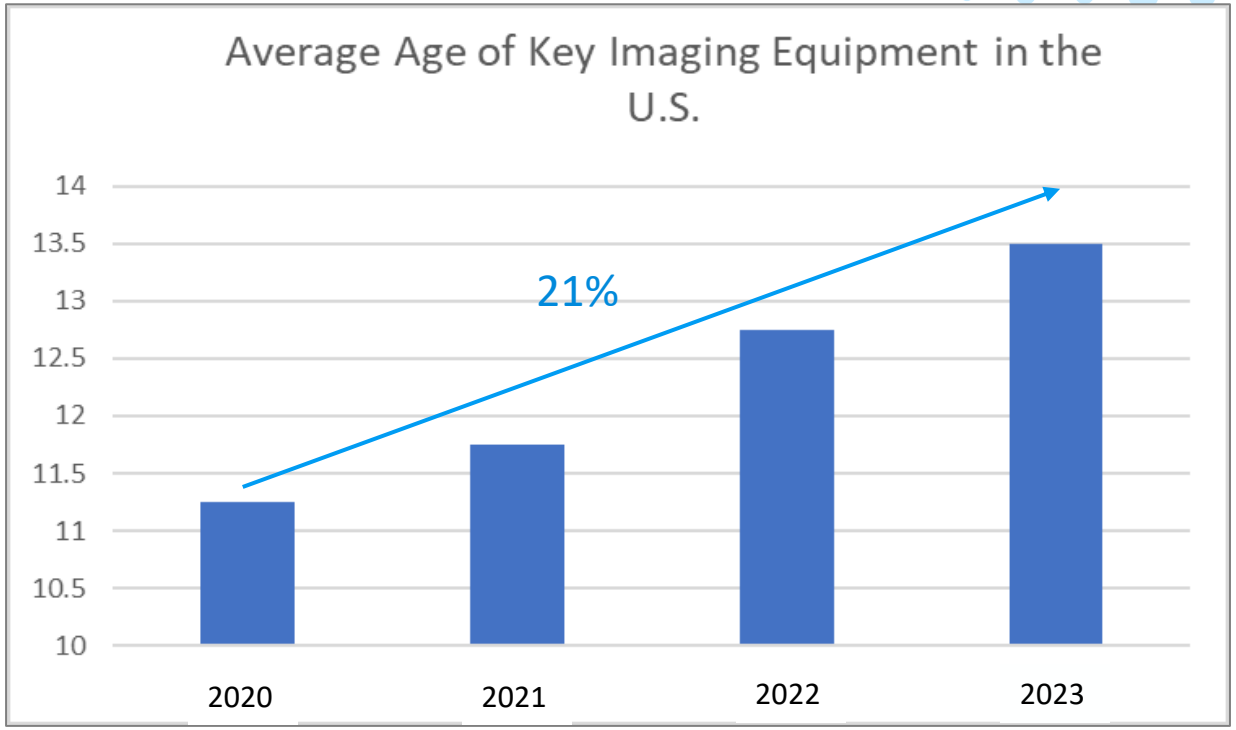
HTM leaders face intense pressure to reduce costs while ensuring maximum clinical equipment availability.

The key findings include:

- **Delaying asset retirement** to extend equipment lifespan.
- **Optimizing purchasing behaviors** to uncover cost-saving opportunities.
- **Sourcing high-quality, lower-cost parts** to reduce expenses.
- **Evaluating service strategies** to balance cost and performance.
- **Implementing granular budgeting** and forecasting for better financial planning.
- **Developing formal medical equipment and HTM service strategies** to drive efficiency and reliability.

Extending Equipment Lifetimes

- Year over year increases in average age
- Budget constraints extend usage
- Increased maintenance and repair costs
- Parts and service availability challenges
- Higher risk of downtime due to age

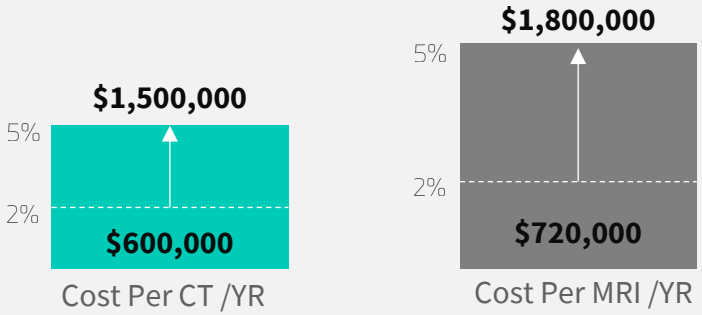


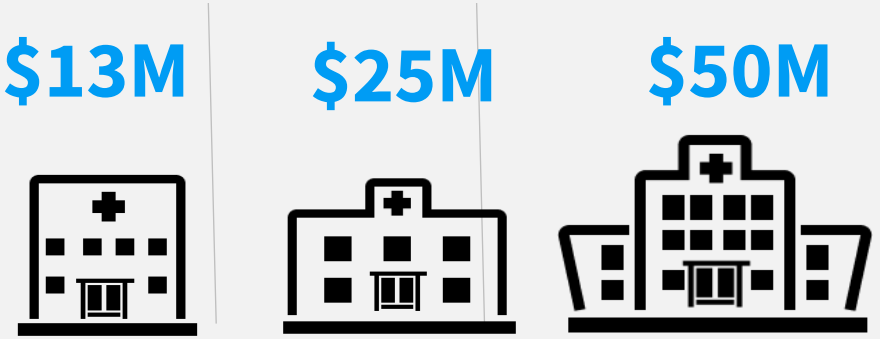
Includes: PET/CT, MRI, CT, Lin Acc.

Effect of Uptime on Healthcare

Downtime impact on the bottom line

2-5% Imaging Downtime Annually





ANNUAL COST OF IMAGING EQUIPMENT DOWNTIME

Includes: PET/CT, MRI, CT, Lin Acc.

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:

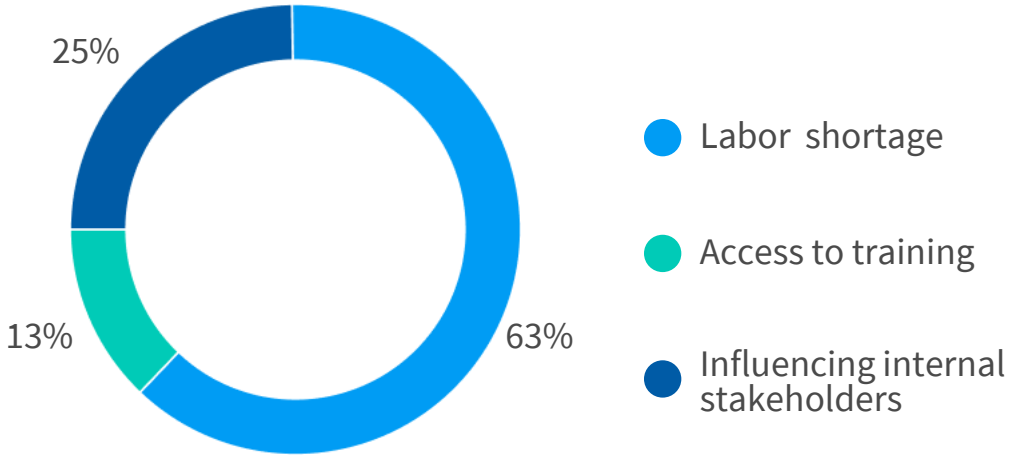
- **Data drives key decisions** on equipment replacement, parts purchasing, and service strategies.
- **Historically, HTM relied on** clinician preference and institutional knowledge.
- **Actionable data is crucial** for effective decision-making.
- **HTM leaders face data limitations** due to broad asset categories, low model depth, and regional/staffing variations.
- **Robust data sets are needed** to operationalize a more strategic HTM approach.

Inaugural State of HTM Insights Report Findings

HTM Leaders identified **“Labor Shortage” as the top challenge** to achieving 2024 goals.

63%

What is your most significant challenge to achieving 2025 goals?



Labor and Service Solutions

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Talent & Staffing Pain Points

There is a significant **talent shortage** as biomedical technicians approach retirement age; currently, **40% of biomedical equipment technicians (BMETs) are 55 or older**, and 22% are over 60.

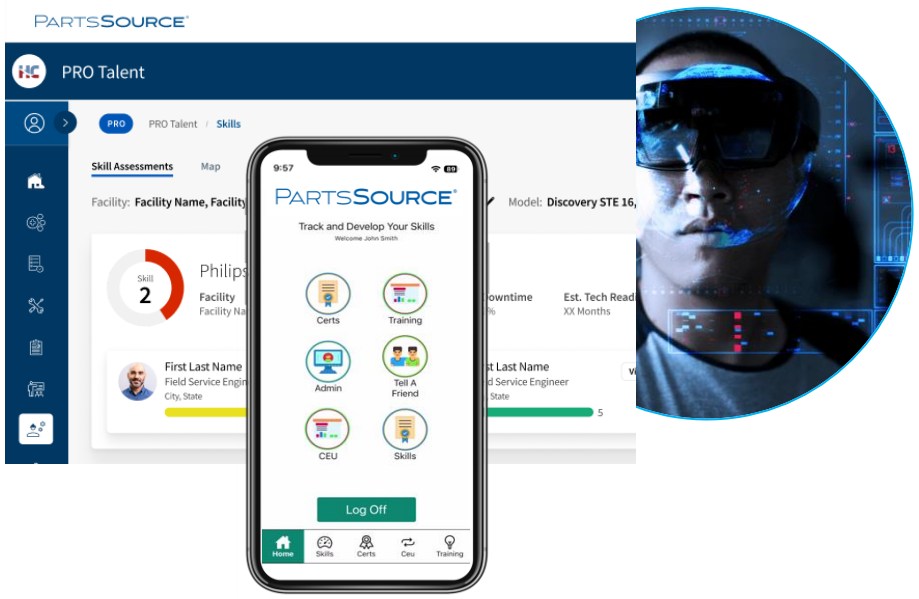
Inefficient staffing and **onboarding** processes can take **10 to 12 months to place an effective technician**, negatively impacting equipment uptime and service costs.

Many HTM leaders rely on unsophisticated talent management practices, with over **80% relying on Excel or homegrown solutions**. This reliance leads to gaps in skill management & development.

Low satisfaction with limited training options, with **60-80% of the training budget allocated to product-specific training with OEM's**. Access to service manuals and service keys is contingent upon utilizing these OEM training programs.

Creating a Sustainable and Scalable Training Agenda

Evaluation



Competency Mapping
Data-driven Approach
Nuanced Visibility
Increase ROI

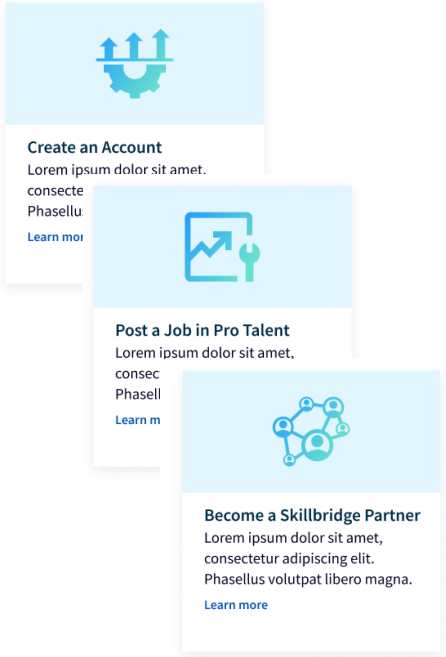
Onboarding

Foundational Training
Accredited/Quality Training
Decrease Time to Competency

Training

Hybrid Training Solutions
(Immersive VR & Traditional)
Entry-Level to Advanced
Stackable & Effective

Recruitment



Exclusive Partnership
White Glove Approach
Talent Matching
Integrated Job Board

Training Centers of Excellence

HTM Equipment Training

- MET – onboard faster
- Ventilators
- Patient Monitors
- Infusion Pumps

Imaging Service Training

- X-ray
- Portables
- C-Arms
- Cardiac
- Women's Health
- Ultrasound
- CT
- Nuc Med
- MRI

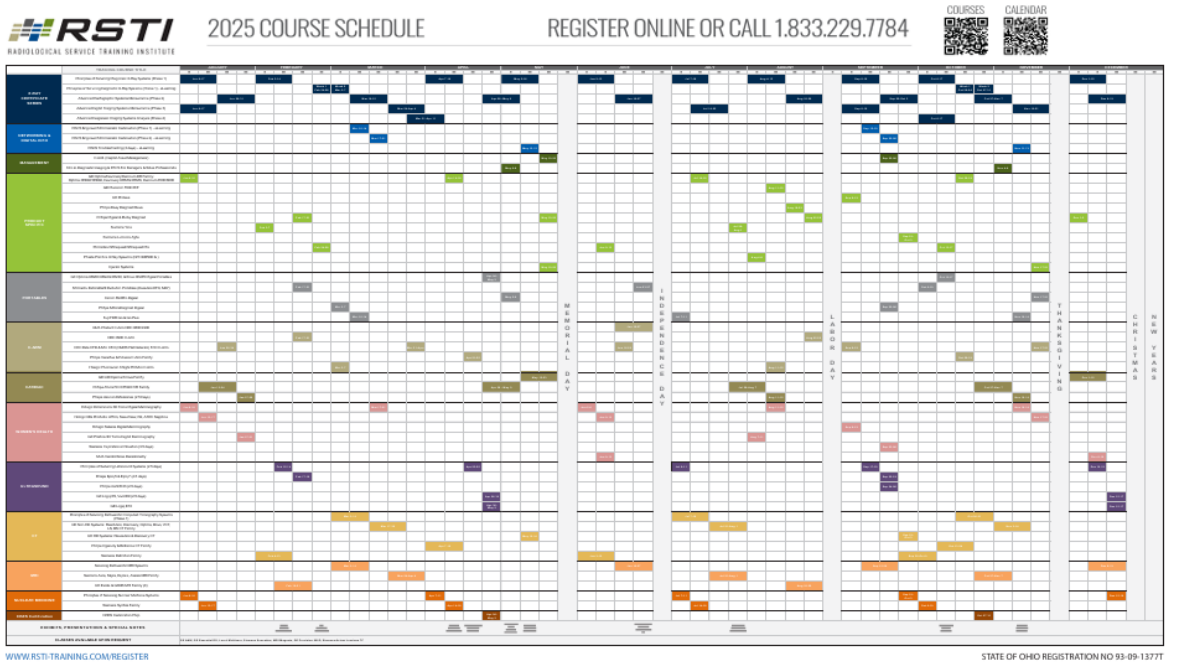
Auament vour Capabilities

Train your existing team

- 133 annual training courses
- 87 makes and models

Expand your team

- SkillBridge approved courses
- GI Bill approved courses
- Registered Apprenticeship Program (RAP)



21 CFR and AIAT

- AIAT – what is this?
    - **A**ssemble-**I**nstall-**A**djust-**T**est
- Applies to radiation-producing equipment
- 21 CFR 1020.30 sets requirements for what manufacturers are required to provide
- Manufacturers provide instructions adequate to assure compliance of their components
- “all of the information necessary to ensure the products will comply with applicable performance standards when assembled, installed, adjusted and tested”
    - Instructions/manuals
    - Service software (where applicable)
    - Service keys (where applicable)

21 CFR and AIAT

The three major brands give access

- GE
  - Online access to Common Documentation Library (CDL)
    - Provides access .PDF documentation download
    - No registration required
  - OEC: GESAK USB Key – System ID specific
- Philips
  - Online access to InCenter
  - Registration required by e-mailing PDF form
  - Provides access .PDF documentation & service software
- Siemens
  - Contact Siemens Uptime Center by phone
    - Provide system Function Location (FL)
  - Service key will be provided to perform AIAT function within Syngo service software

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On-Demand Webinar

Common Service Contract and Key Myths vs. Reality to fully understand this topic

Right to Repair … Gaining Ground Across the US

Alaska
Alabama
Arizona
California
Colorado
Connecticut
Delaware
Hawaii
Illinois
Indiana
Kentucky
Massachusetts
Maine
Michigan
Minnesota
Missouri

Mississippi
New Hampshire
New Jersey
New York
North Carolina
Ohio
Oklahoma
Oregon
Pennsylvania
Rhode Island
Tennessee
Utah
Vermont
Washington
West Virginia

31 active states pursuing R2R decisions

Specific Medical Device right to repair is also getting traction as momentum grows

Re-envisioning Imaging Parts

PARTSSOURCE®

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
- In urgent situations, providers may feel pressured to pay any price for a replacement part, often from the OEM
- That decision can be based on assumptions rather than objective information

Is it the right decision?

Cost and Quality - Parts

- **Historically, HTM purchasing decisions were driven by clinician preference**, institutional knowledge, and influence from OEMs.
- **Today, providers can leverage data to make informed, cost-effective decisions** without compromising urgency.
- **Key data elements** that providers need to make the right decision are:

01 Quality Return Rates (QRRs) of OEM replacement parts

02 QRRs of compatible replacement parts

03 Potential Savings

If a compatible part has a QRR equal to or better than an OEM part and costs less, choosing it may be a smart, data-driven decision.

Cost and Quality - Parts

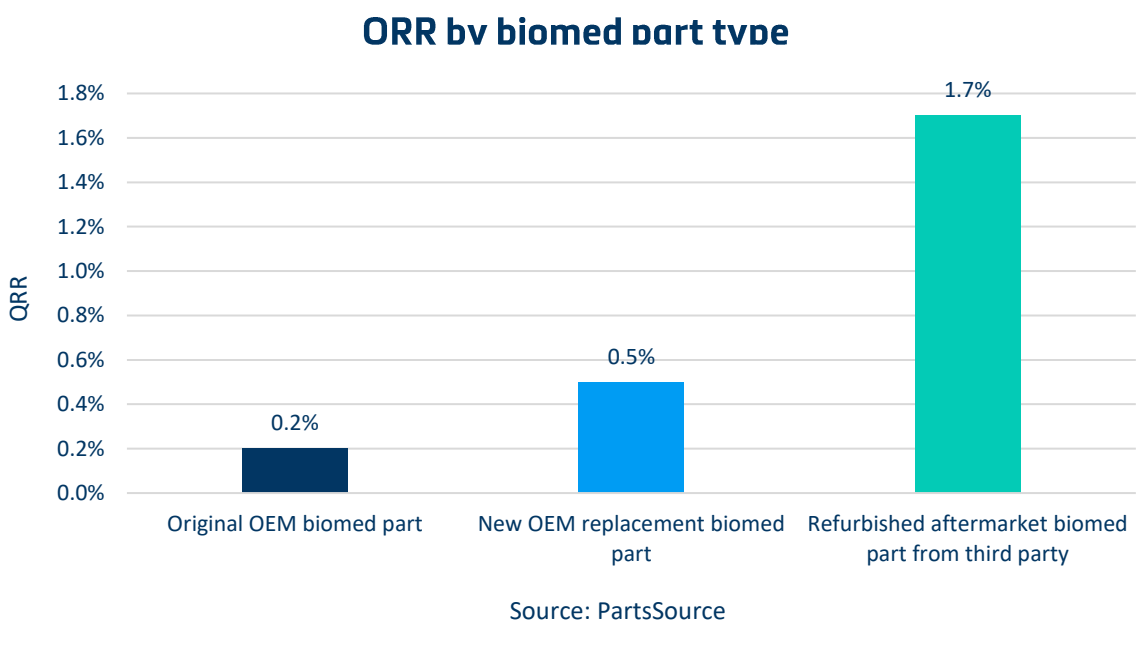
We track all three data elements of all replacement parts for OEMs and non-OEM vendors and organize them by more than 20 medical equipment categories.

Biomedical and Imaging QRRs:

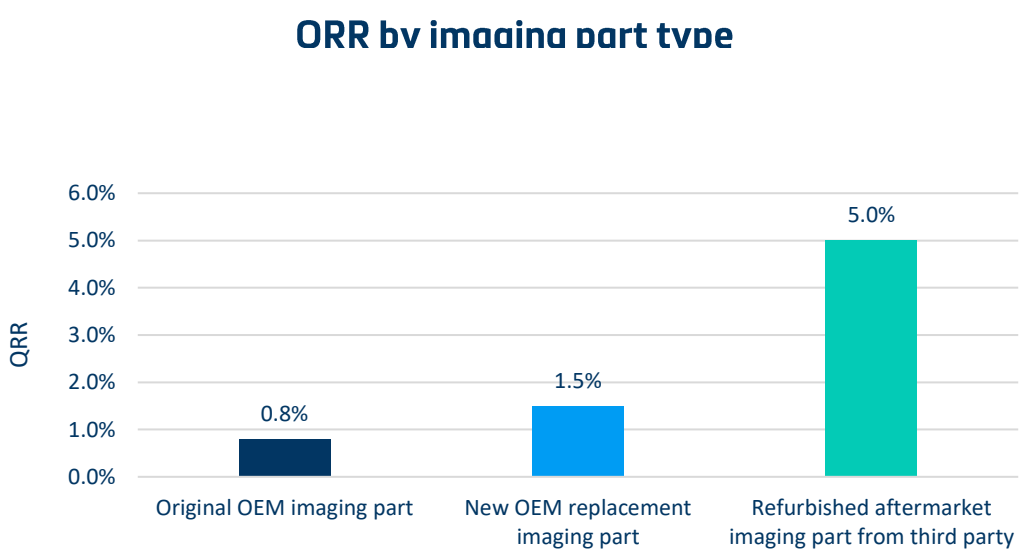
Original OEM Parts

New OEM Equivalent Parts

Refurbished Parts



Source: PartsSource



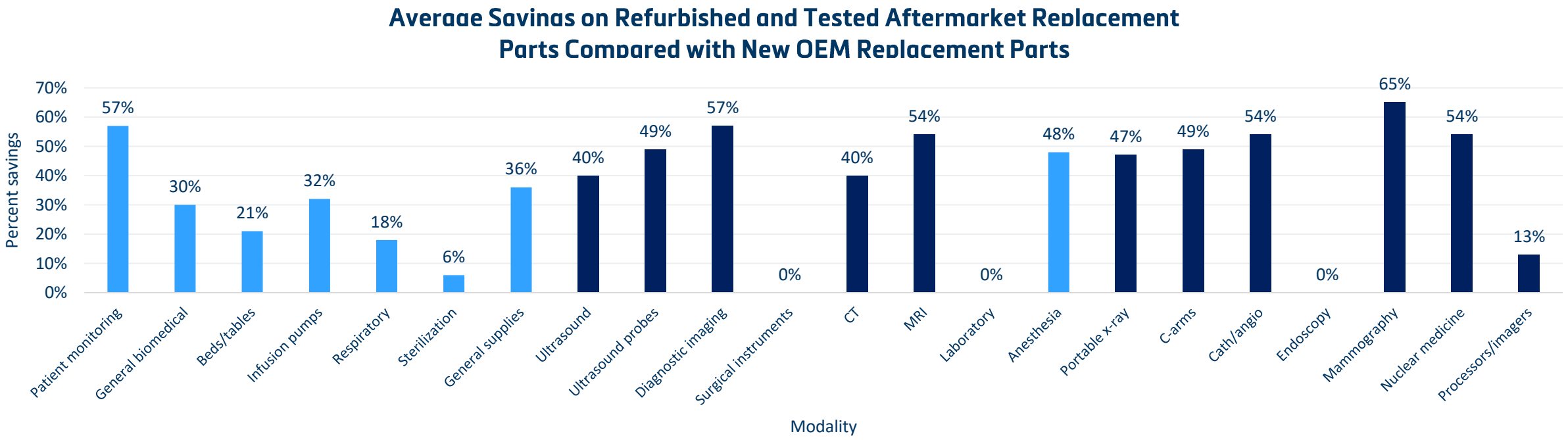
Source: PartsSource

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.

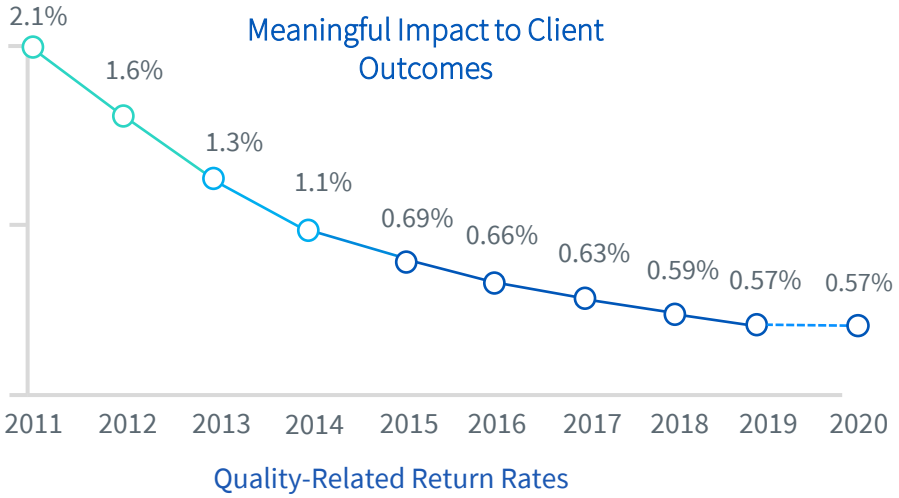


Evidenced-Based PRECISION Procurement®

3 Billion Data Elements in Longitudinal Warehouse | **Over a Dozen Quantitative Factors** | **Thousands of Suppliers and Millions of SKUs** | **Best Choices at Purchase Point** | **Repeatable Quality Outcomes**

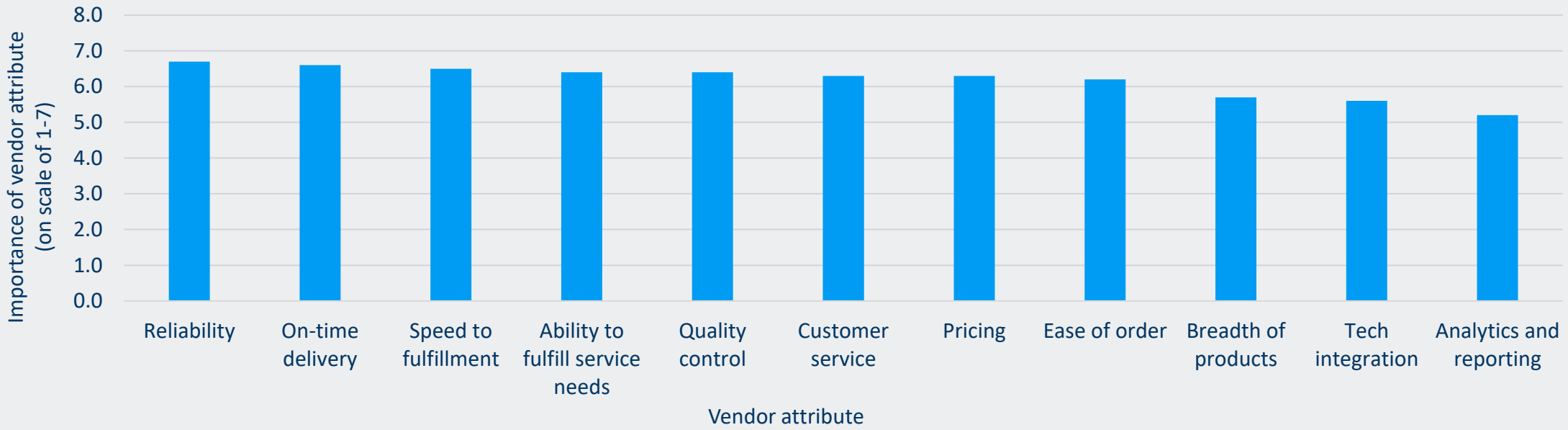
Longitudinal Data Warehouse

99.5% Quality Acceptance Rate



70% of orders require overnight or faster shipping

Cost and Quality - Parts

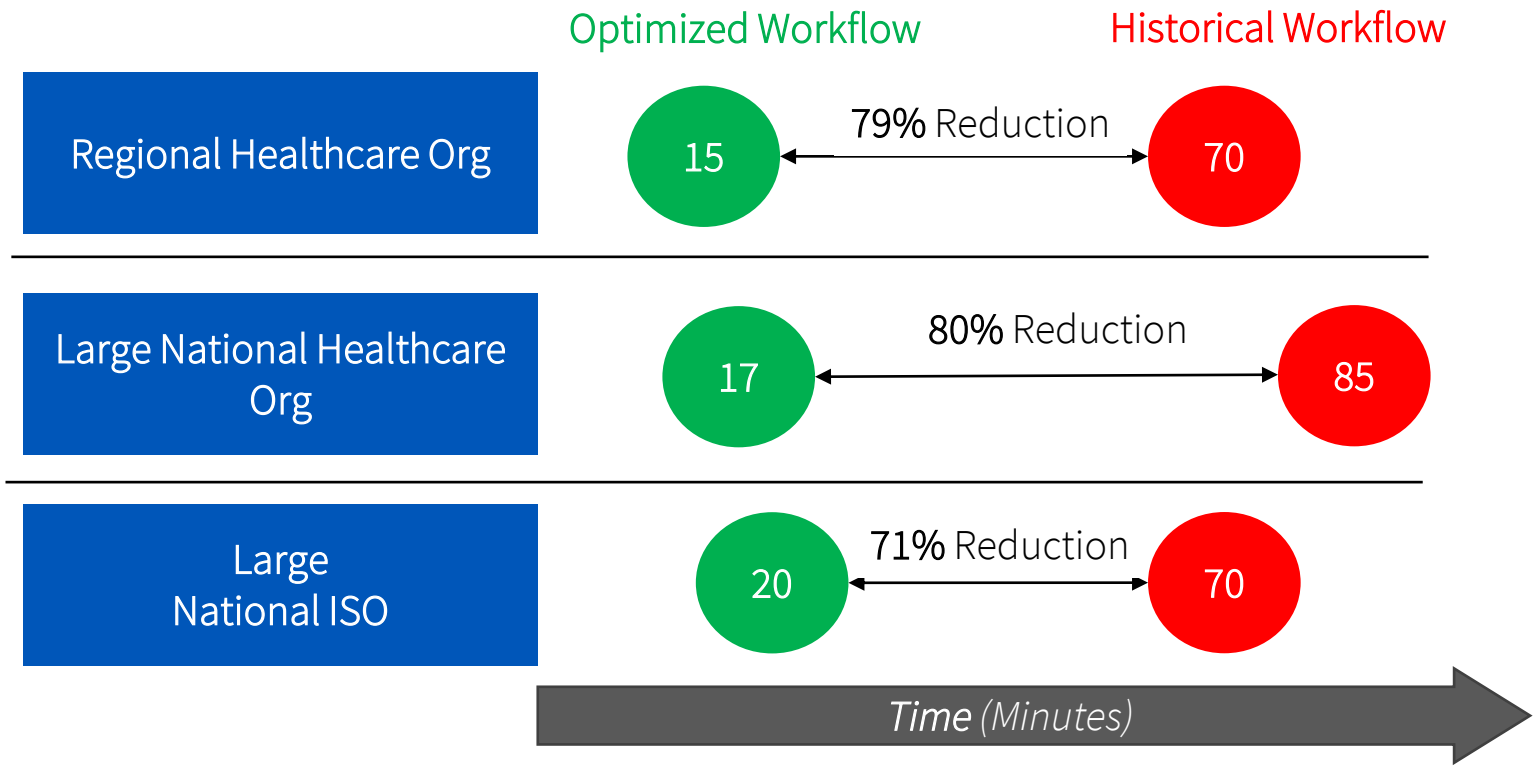


Q: *How important are each of the following attributes for your company when choosing an imaging equipment replacement parts provider?*

Traditional imaging parts purchasing can be optimized with a data-driven, evidence-based, and tech-enabled approach.

Drive Meaningful Operational Efficiency

A tech-enabled platform drives time savings



The right technology drives significant, consistent time savings across a range of customer organizations

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

- End-of-life status
- Location and critical access needs
- Availability of redundant equipment
- Repair speed, parts & labor, to maximize uptime & revenue

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

Envisioning The Future

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We Must Prepare for the Future Today

Last 10 Years

Accelerating Access to Business-Critical Resources

- Digitizing
- Streamlining
- Integrating
- Automating
- Consolidation

Next 10 Years

Accelerating Speed to the Right Diagnosis & Expanding Capacity

- Data Insights & Decision Support
- Real-time Asset Health Monitoring
- Remote Service Support
- Maximizing Equipment Capacity
- Utilization + Availability = Revenue

The Evolution of Clinical Technology Tools

Simple Analog	Complex Analog	Simple Digital	Complex Digital
• Manual Data Collection • Written Documentation • Difficult Archive/Recall • Working Hardest	• Consolidated Data Pool • Variable Interpretation • Difficult Archive/Recall • Still Working Hard	• Systems of Record • Best of Breed/Recall • Little Interpretation • Working Smarter	• Enterprise Activation • Decision Support (Dx) • Clinical Pathways (Tx) • Active Surveillance • Predictive Risk Mgmt

Embracing the Future for Improved Outcomes

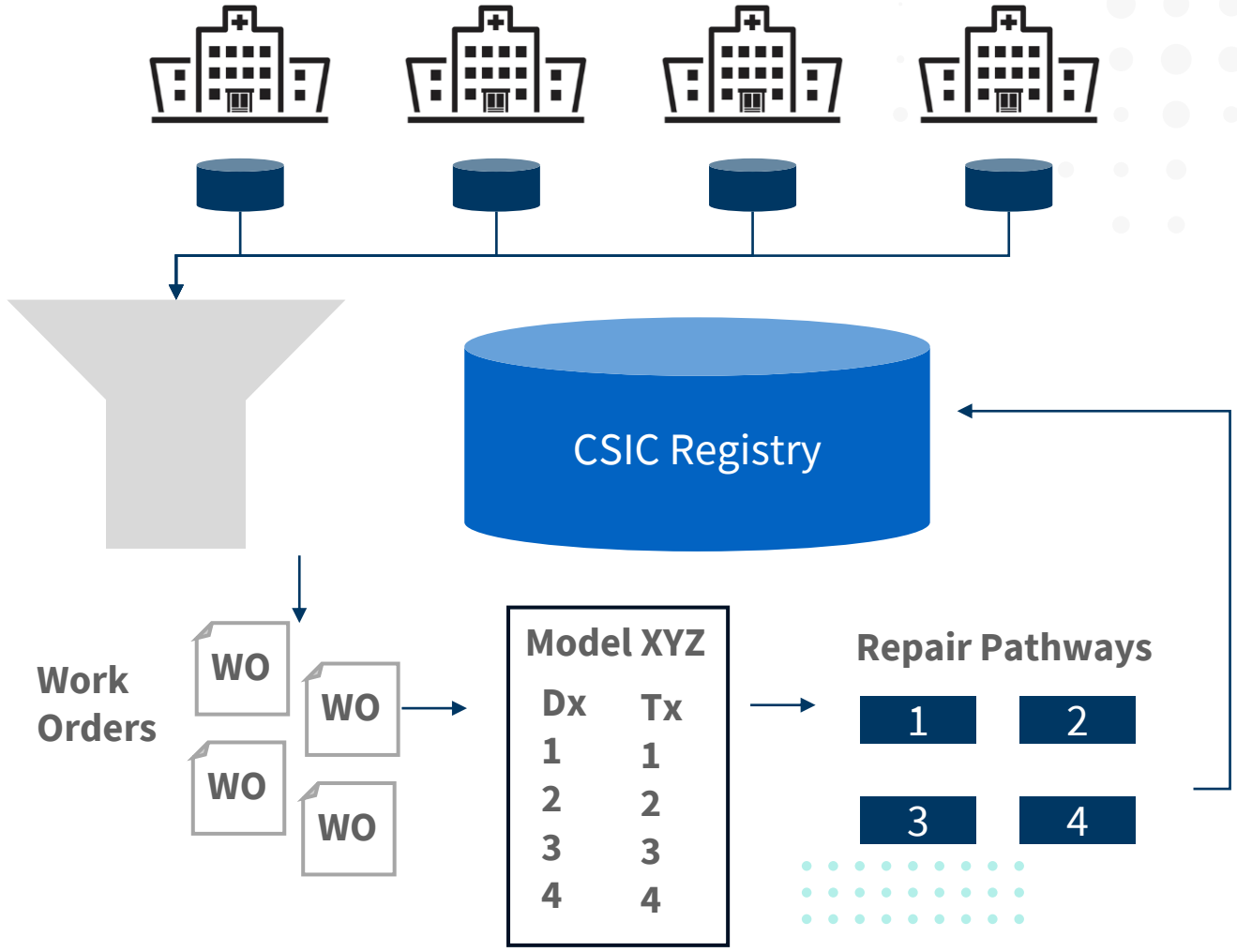
Past State of HTM	Future State of HTM
Across-the-board budgeting	Budgeting by individual equipment modality
Buying majority new OEM parts	Buying high-quality compatible or refurbished parts
Buying replacement parts is art	**Buying replacement parts is science**
Full-service original equipment manufacturer (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

Clinical Service Improvement Consortium (CSIC)

Objective:
- Build Knowledge Management registry to accelerate Technician “Differential Diagnosis’ and ‘Repair Pathway’ [Problem-Solution DB]

Methodology:
- Multi-Site, Multi-CMMS, National Clinical Engineering Teams
- De-identified Source Data
- Build LLM & Train ML models

Product:
- PartsSource Funded Infrastructure
- Storage, Curation, AI and UI
- Output: Collaborative-accessible knowledge database



State of Healthcare Technology Management Insights Report

Our Community Will Continue to Grow, Learn and Improve Together

Thank You!

Ensuring Healthcare is Always On®