

Yale New Haven Health: A Journey to Systemization

Presenters:

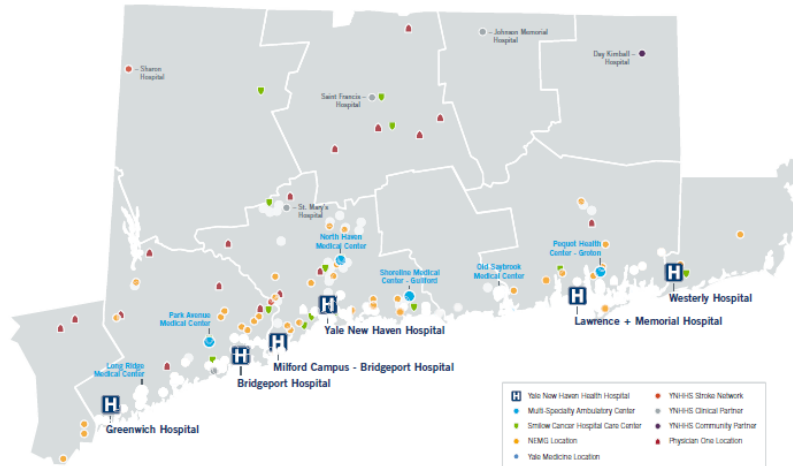
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Yale New Haven Health System - Overview

Formed in 1995 to enhance the quality and scope of healthcare services to residents of Connecticut, eastern New York, southwestern Rhode Island and beyond, YNHHS offers a full range of inpatient and outpatient care, from primary care to the most advanced treatments available anywhere in the world.

Yale New Haven Health System Hospitals and Clinical Affiliates



Facts & Figures FY2023

Key Metrics	Data
Total Licensed Beds	2,681
Inpatient Discharges	157,280
Outpatient Encounters	3,058,598
Total Assets	\$8.24B
Net Revenue	\$6.55B
Employees	30,811
Medical Staff	7,942

Vision

Yale New Haven Health enhances the lives of the people we serve by providing access to high value, patient-centered care in collaboration with those who share our values.

Mission

Yale New Haven Health is committed to innovation and excellence in patient care, teaching, research, and service to our communities.

Values

Integrity

Patient-Centered

Respect

Accountability

Compassion

Clinical Engineering at YNHHS



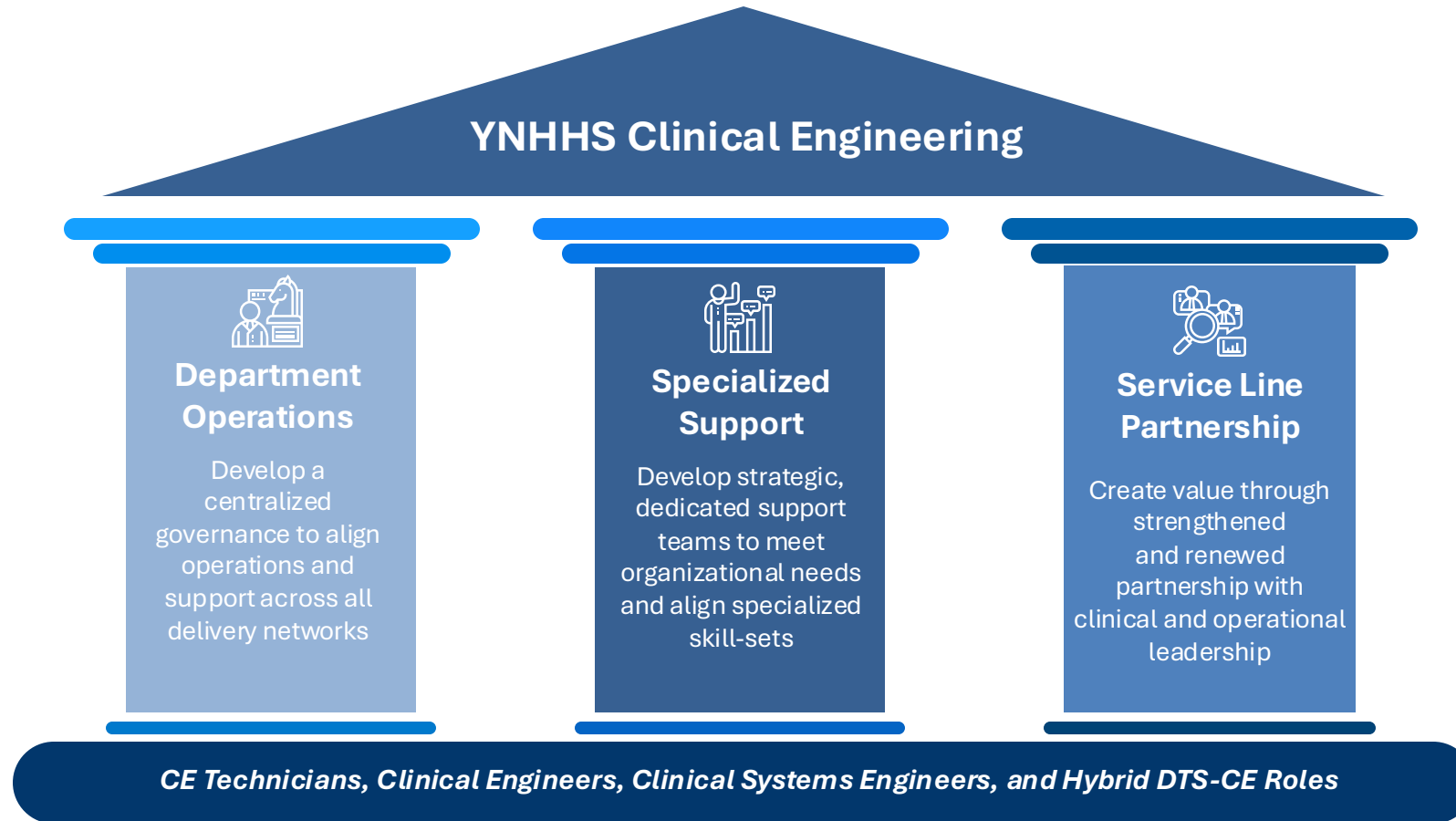
- Fragmented support structure
 - Combination of in-house and out-sourced resources
 - Different policies, procedures, MEMP, AEM



YNHHS CE Mission, Vision and Values

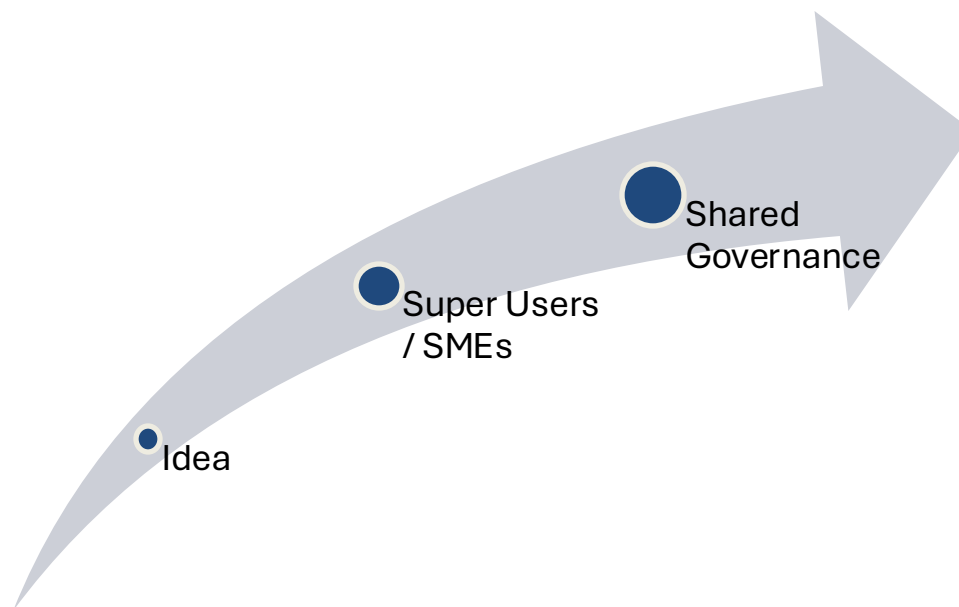
- **Mission:** To support innovation and excellence in patient care at Yale New Haven Health by ensuring safe and effective access to clinical equipment and technology integrations.
- **Vision:** Clinical Engineering delivers best in class healthcare technology services for our patients by demonstrating integrity, accountability, and teamwork
- **Strategies:**
 - Design a standardized healthcare technology management program to control and monitor equipment performance while managing service costs
 - Develop deep technical expertise by investing in Biomedical Equipment Technicians (BMETs) and Clinical Engineers
 - Proactively manage lifecycle of medical equipment in compliance with all regulatory requirements
 - Partner with clinical and operational teams to assess current and future technology needs
 - Improve clinical and operational efficiency through enhanced integrations between clinical equipment and information technology solutions

Strategic Department Operations Assessment



Getting the Basics Right

- Build trust with a strong foundation
- Leadership needed to provide the right tools to complete the job
 - Single computerized maintenance management system (CMMS)
 - Governing procedures for documentation, operations, and device lifecycle management



Specialized Strategic Support Shifts

Key Question: ***How can we do what we do well, better?***

Rationale: ***Grounding ourselves in our Mission, Vision and Values we look to design a standardized healthcare technology management program to control and monitor equipment performance while managing service costs.***

Largest Areas of Variance:

Internalize CE Support	Diagnostic Imaging	Ambulatory Off-Sites
Gaps		
Four (4) 3 rd Party Agents Managing Equipment throughout YNHHS	Limited to No In-House Imaging Support or Centralized Oversight	Three (3) 3 rd Party Agents Managing Equipment at Off-Site Locations
Financial Impact		
High	High	Low
Regulatory Impact		
High	Low/Medium	Medium

In-Sourcing Clinical Engineering

Key Issues:

- 25%+ of assets owned by YNHHS were not managed internally
- Internal audits flagged governance discrepancies and data integrity and completeness issues at 3rd party sites
- Costs continued to increase with limited added value

	YNHH	L+M	WH	BH	GH	Amb
Service Provider	In-House	In-House	In-House	3rd Party	3rd Party	3rd Party
CMMS	Nuvolo	Nuvolo	Nuvolo	3rd Party	3rd Party	3rd Party
Assets	32,302	8,198	2,343	10,173	5,583	N/A

In-Sourcing Success

Transition Timeline: ~18 months

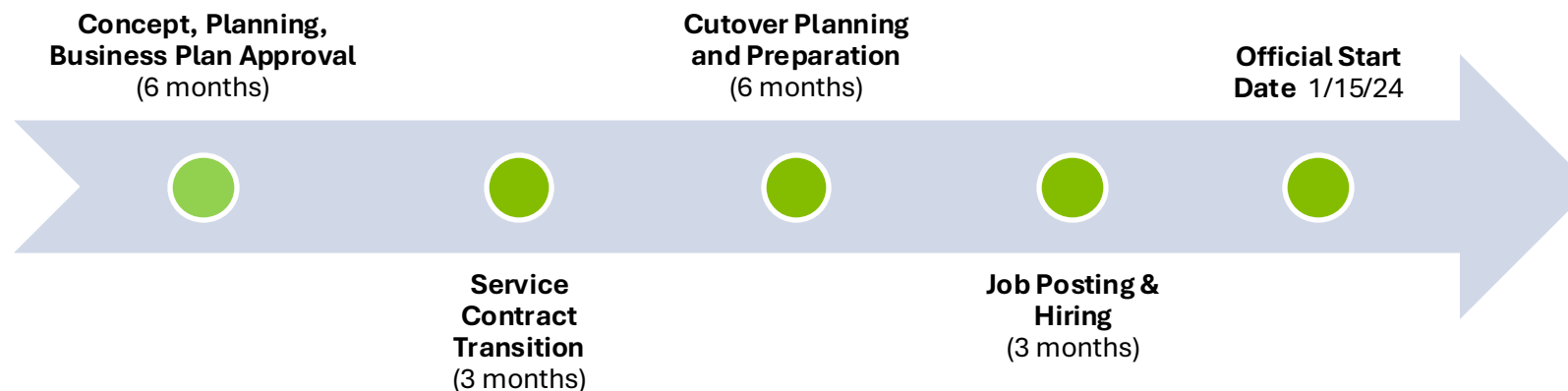
FTEs Hired: 19

Contracts Transitioned: 51

Financial Impact: Reduced costs by \$750k+ Year One

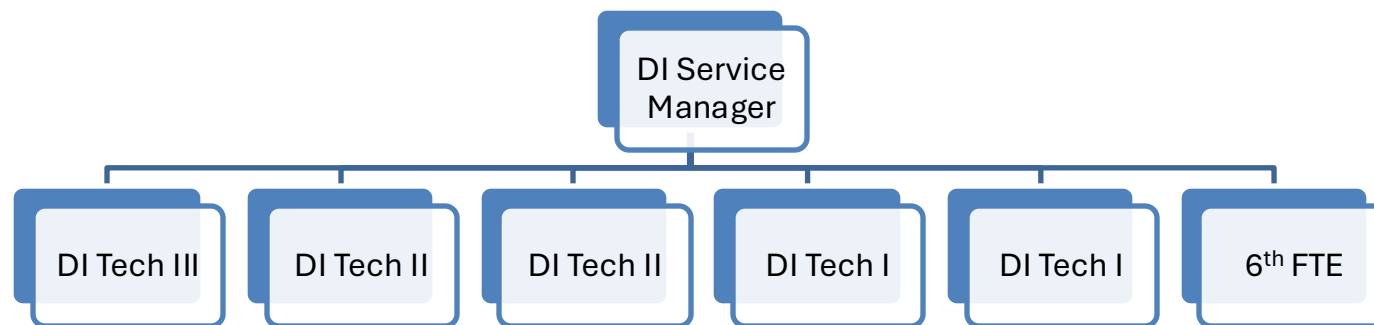
Regulatory Value: All YNHHS assets are managed by YNHHS staff under a single MEMP

“The smoothest transition of a support service team I have ever seen” – BH Leadership

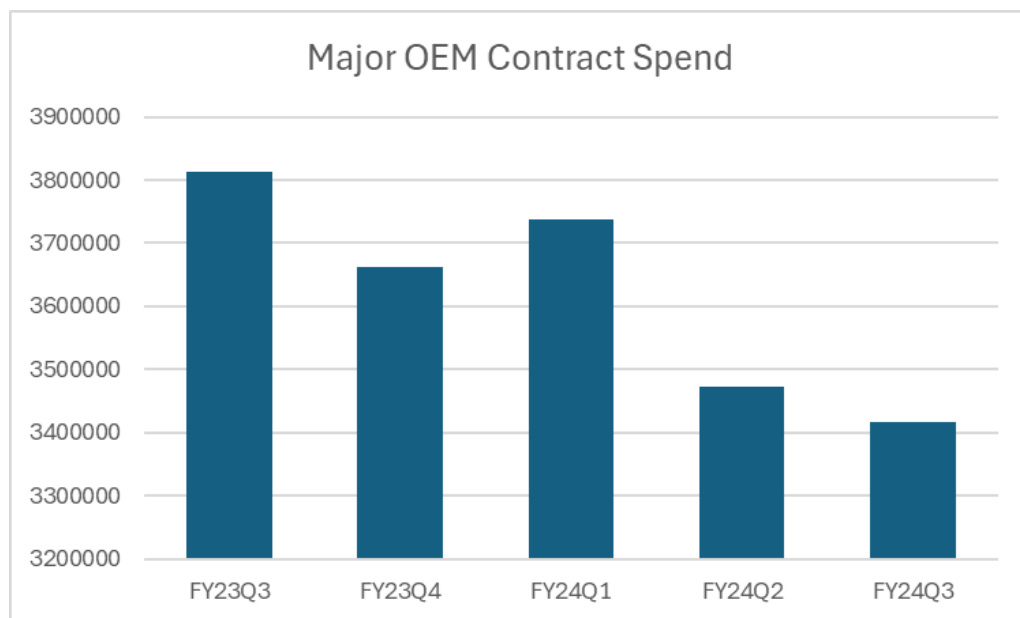


Build a Diagnostic Imaging Team

- Support EOL/EOS systems permitting the organization to generate longer useful life out of aging equipment
- Identify cost savings opportunities by assuming first tier support responsibilities for certain modality classes
- Demonstrate those savings through direct service, service coverage reduction and more proactive vendor management
- Develop a scalable diagnostic imaging support model across all DNs within 5 years
- Maintain OEM quality, exceed OEM response time, improve turn-around time
- Improve patient safety, reduce delays



Diagnostic Imaging Success



Financial Impact: \$962k in realized savings through contract reductions and effective management

Support Success: “For a long-time, I didn’t feel supported. The team you have developed has changed the way we are able to support our patients here at YNHH” – HVC Leadership

Build an Ambulatory Team

The YNHHS Ambulatory environment is a complex web of business units encompassing Northeast Medical Group, Yale Medicine, Hospital Outpatient Departments, and Yale New Haven Health Urgent Care and Home Health.

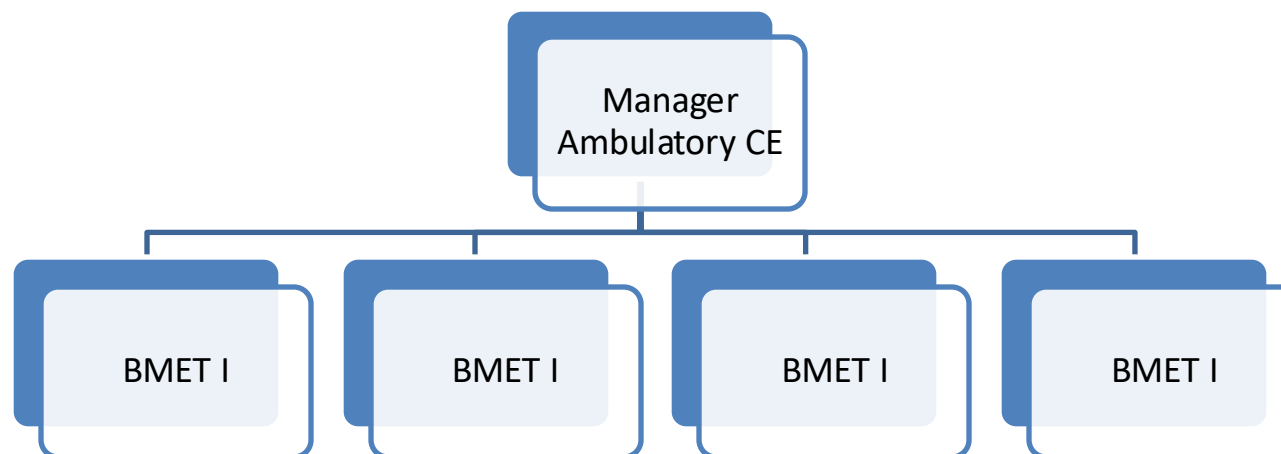
There are over 100+ unique locations serving over 3 million outpatient encounters each year.

Major Concerns:

Key Highlights	Feedback
Lack of SOPs	PMs, Vendor Oversight, Recall Management, Equipment Purchasing & Removal
Accountability Ownership	Limited to no engagement / oversight from YNHHS Clinical Engineering
Inaccurate Inventory	No inventory updates since July 2021 leading to inaccurate support and planning strategies
Lack of Transparency	Multiple CE service providers with siloed management of equipment contracts leading to inadequate services
Lack of KPIs	Currently, no requirements for vendor KPIs leading to an inability to capture timeliness in completion of work and monitoring T&M billables and general performance

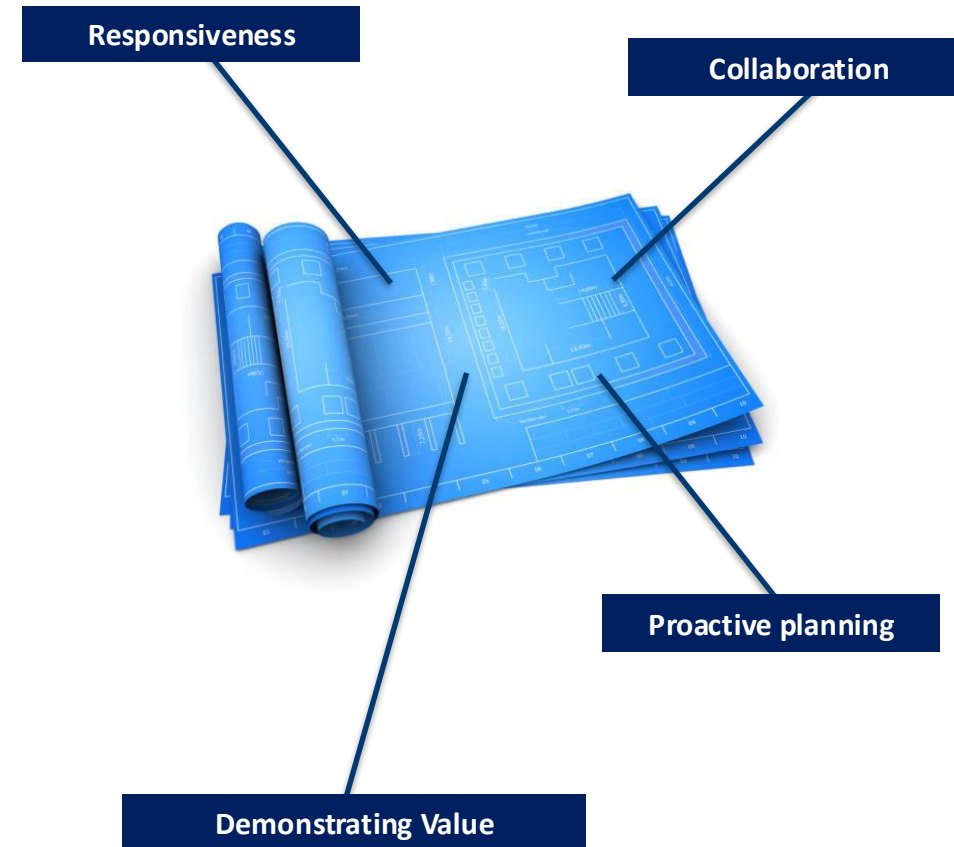
Continuing to Develop Ambulatory Support

- Continue to “re-inventory” sites to confirm data accuracy and integrity (managing 6k+ devices today)
- Align historically varied support strategies across ambulatory locations
- Strengthen relationships with key ambulatory leadership
- Standardize documentation regardless of a site’s regulatory status
- Invest in staff to ensure that the uniqueness of the ambulatory environment does not increase support challenges
- Manage geographic expectations for support that align both inpatient and outpatient CE teams

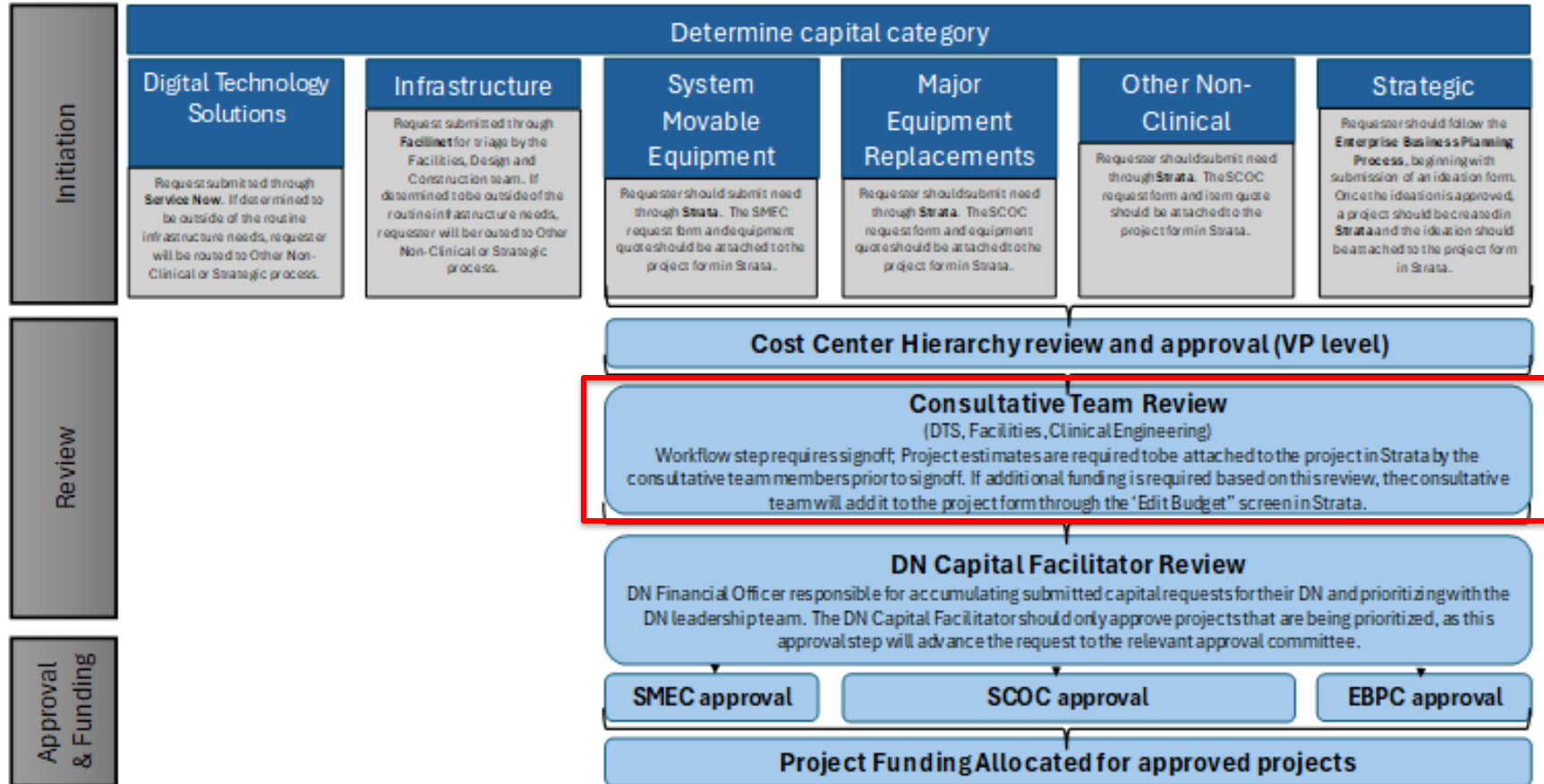


The Partnership Blueprint

- The biggest threat to standardization is non-standardization
- Importance of partnerships
 - Identify service line partners that share the same goal
 - Target high-impact areas (diagnostic imaging, perioperative services, heart & vascular, supply chain, facilities, radiation oncology)
- Start small, build trust
 - Deliver quality service and support

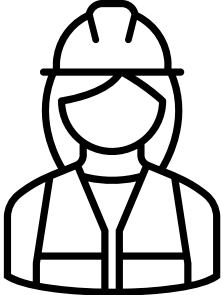


A Seat at the Table



Next Steps

Expand Specialized Services Offerings



Strengthening Strategic Partnerships

Uniform Care Team Experience

Questions?



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Thank you.