



# Medical Device Procurement in a Connected Environment

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- Executive Director, Strategy & Innovation
- 27 years with Providence
- 38 years in HTM
- Professional Roles
  - Biomedical Technician
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# Conflict of Interest Slide

There are no real or apparent conflicts of interest to report.



# Presentation Overview

Medical device and imaging modality procurement has become increasingly more complex as these devices and systems are deployed in a connected environment. Ensuring that clinical, technical, and service priorities are achieved through the selection and deployment process is equally complex. This presentation will provide an end-to-end procurement process which identifies key partners, review elements, and potential barriers.

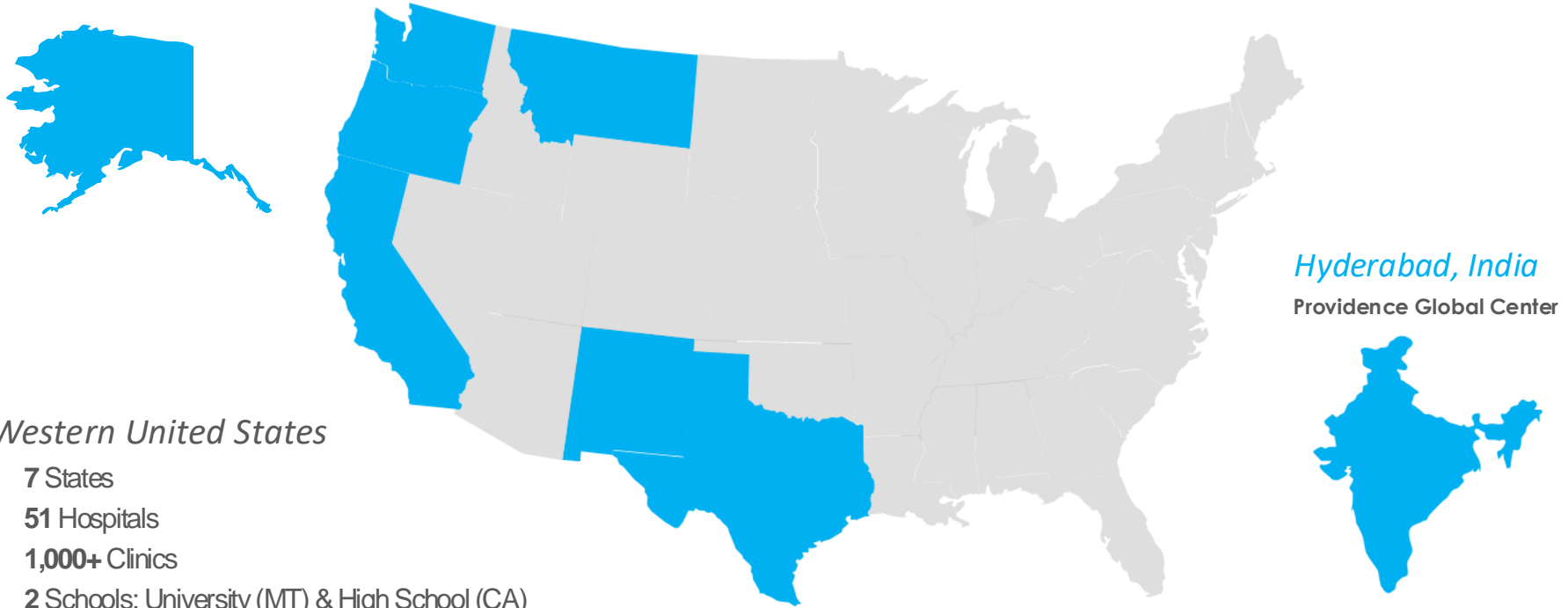


# Agenda / Key Topics

- Introduction to Providence
- Problem & Goal Statements
- Our Approach
- Reference Architecture
- Service & OS Lifecycle
- Addressing Culture
- Vendor Management Strategy
- Next Steps
- Time for Q & A



# Who is Providence?



## *Western United States*

- 7 States
- 51 Hospitals
- 1,000+ Clinics
- 2 Schools: University (MT) & High School (CA)
- 18 Supportive Housing Facilities
- 1 Credit Union

*Hyderabad, India*  
Providence Global Center

# Technology Implications

700K+

NETWORK-  
CONNECTED  
DEVICES

60K

NETWORK-CONNECTED  
MEDICAL DEVICES

400K

MEDICAL DEVICES

- Multiple healthcare systems coming together over time
  - Wide variety of technologies & platforms
  - Differences in technology lifecycles

# Problem Statement

Disassociated and siloed procurement processes for medical devices, clinical applications, and IT Technology used in the clinical environment are creating variance, integration and security challenges, service issues, and additional cost.

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Why is this a problem?

- Limited capital dollars
- Significant technical debt and cyber vulnerabilities
- Misaligned priorities across enterprise
- Barrier to innovation
- Resource drain

# Goal Statement

Establish an end-to-end medical device selection, procurement, and implementation process with required reviews and approvals to enable a more clear and efficient process and improve service delivery to our clinical caregivers.

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What does this resolve?

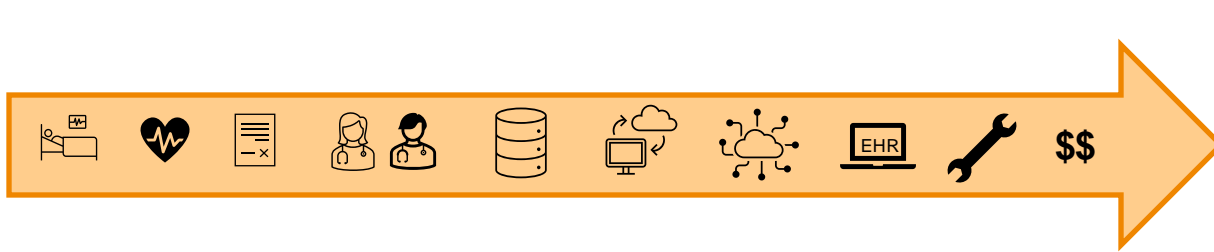
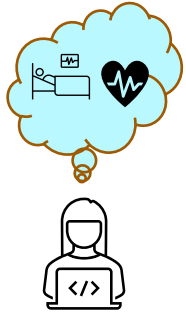
- Informed capital lifecycle funding
- Standards alignment / clinical care, medical devices, security, infrastructure
- Purpose vs. Preference
- Speed of business
- Enables innovation

# Approach toward desired state

1. Establish a single procurement process or workflow / reduce the “inputs”
2. Align clinical care and technology standards / “End-to-End”
3. Ensure engagement of key stakeholders
4. Establish standards in key modalities and equipment types
5. Simplify process for caregivers
6. Develop status and feedback loops
7. Consistent and repeatable
8. Develop capital lifecycle & technology roadmaps

**What we found on the journey...**

# The “Challenge”



## Finance

- Capital Budget
- Spend Authority
- Local Operations

## Sourcing & Contracting

- T's & C's
- Price Management
- Vendor Management
- Device Standards

## Clinical Engineering

- Service Management
- Deployment
- Support Accountability
- Compliance

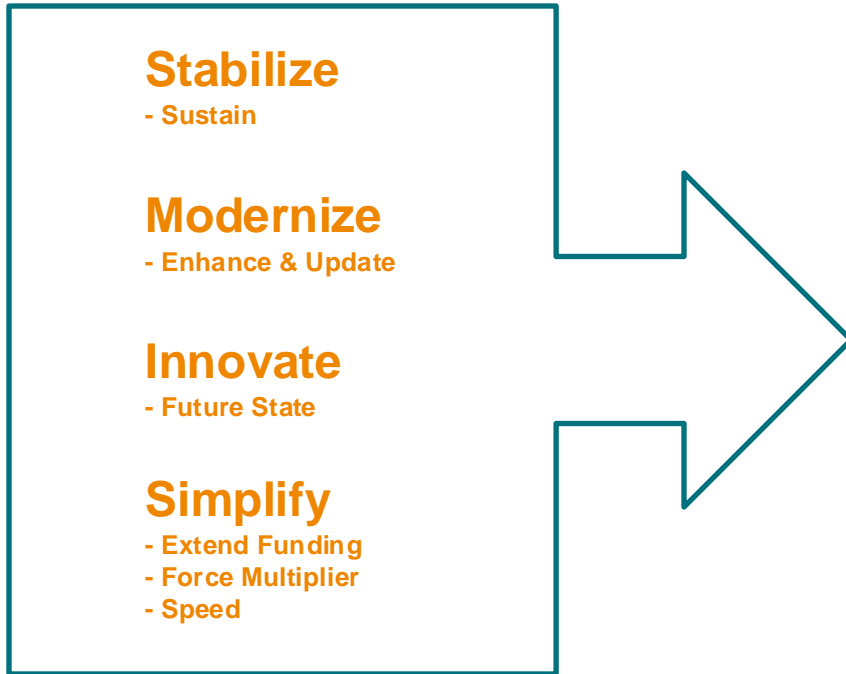
## Information Services

- Infrastructure
- Device Integration
- Clinical Applications
- IT Standards
- Cybersecurity

# Organizational Goals

Clinical, Technology, & Data

Workflow, Outcomes, & Insights



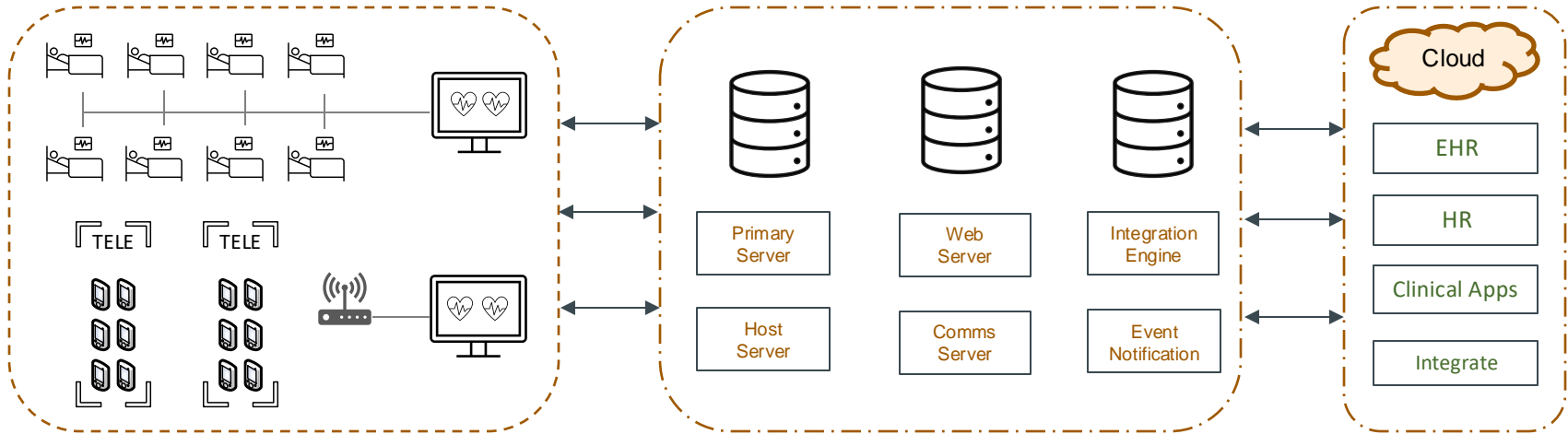
**Purpose vs Preference**

**Transformational vs Transactional**

# Reference Architecture / Physiological Monitoring Devices

Bedside and Clinical Space:  
Standard Devices and Support Model

Enterprise Applications and Data Management:  
Scalable, Safe, and Secure

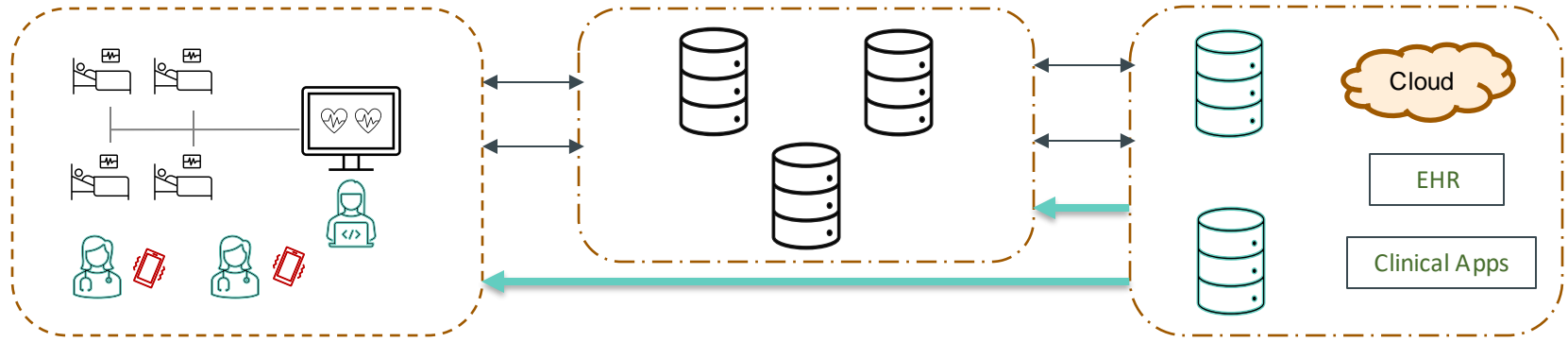


Monitors, modules, telemetry,  
wireless, and central surveillance

Aggregate, integrate, convert,  
transfer, archive, and distribute, plus  
alarms and alert communications

# Reference Architecture / Clinical Care & Data

## Alignment to clinical needs & driving care innovation



### Objectives:

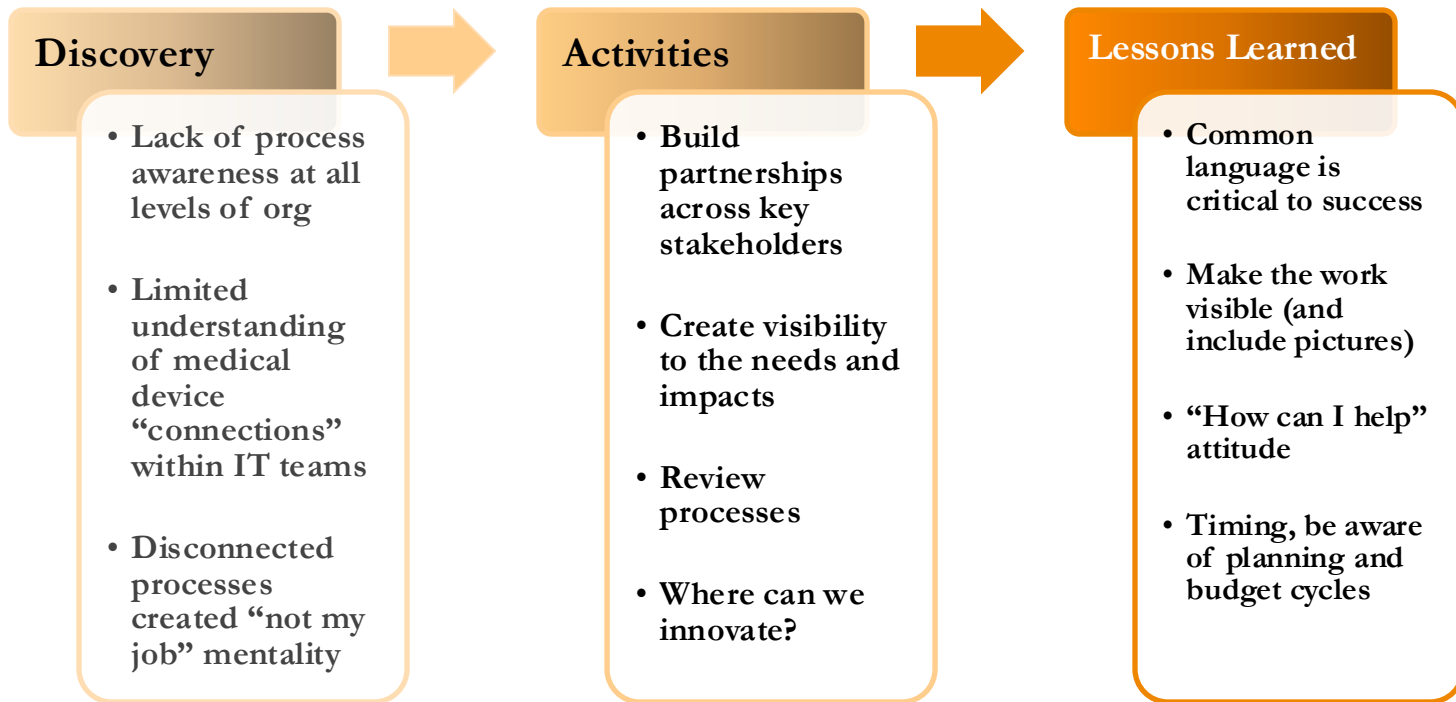
- ✓ Create a standard for each Care Area to be used across all 51 Ministries (e.g., ICU, ED, Peri-Op, Tele)
- ✓ Increase automation to reduce nursing burden with administrative tasks
- ✓ Better visualization of data for clinical action
- ✓ Ability to flex up or down and support shifting patient acuities
- ✓ Centralize across ministries or geographies

# New Costs in the Capital Lifecycle

Service & Support Lifecycle		Support Year																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Equipment / Modality Service Lifecycle	Manufacturer Useful Life																	
	Manufacturer End-of-Life																	
	Manufacturer End-of-Support																	
	Providence Useful Life																	
	Providence Typical Use																	
	Providence End-of-Life																	
	OS Lifecycle																	
	Software Lifecycle																	

- 💰 Operating System (OS) management may occur multiple times during lifecycle
- 💰 Operational/control software refresh to align to current clinical standard
- 💰 Software/hardware refresh adds to service maintenance agreements
- 💰 Service software support licensing
- 💰 Impacts of software, system, and/or infrastructure updates within the “chain” / End-to-End

# Culture & Awareness / Internal



# Vendor Management

## Activities

- Align Providence strategies with key vendors to drive change
- Creation of a Vendor Management Council
- Establish scorecards & regular business reviews
- Strengthen partnerships

## Challenges

- Strategic Voices: Who are the “right” stakeholders?
- “Measuring” the vendors
- Technology alignment
- Danger of attempting to solve everything at once

## Lessons Learned

- Identify technology, clinical service, and strategy first
- Vendor responsiveness varies widely (expect delays)
- Define your “North Stars”
- Stay intentional, these discussions can drift

# Next Steps...

- Building and Refining the Process
  - ❑ “End-to-End”
  - ❑ Building the prioritization scorecard
  - ❑ Alignment of clinical, technology, and technical strategies (future state)
  - ❑ Opportunities for innovation
- Capturing the Data
  - ❑ Visibility to technical standards
  - ❑ Visibility to medical device standards / catalog
  - ❑ Access to completed work
- Building Partnerships
  - ❑ Internal & external
  - ❑ Strategic vendor partnerships



# Thank You!!

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**Don't Forget  
the Survey**

