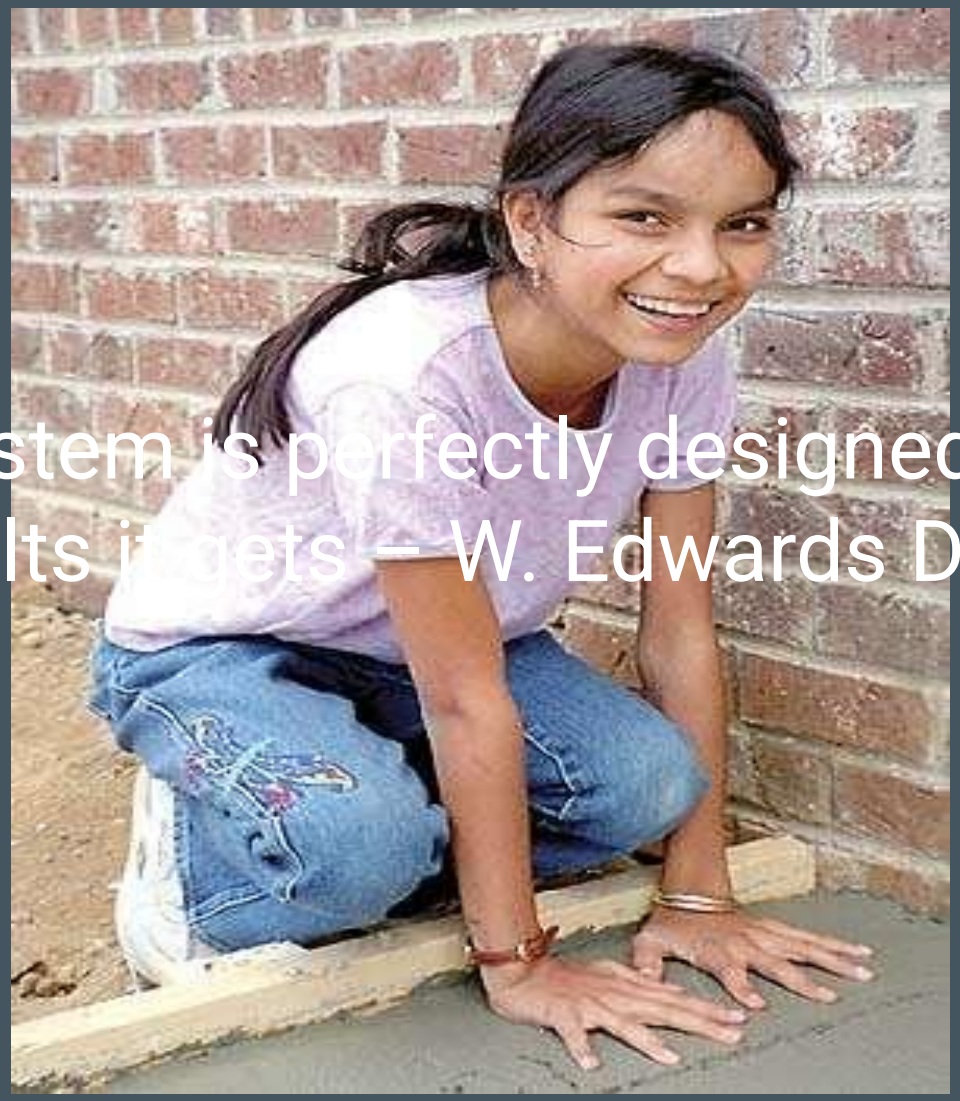
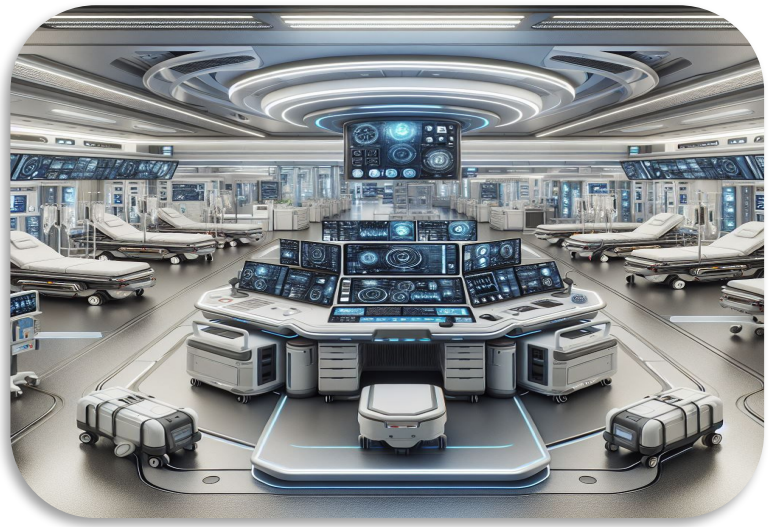
Institute for Healthcare Improvement

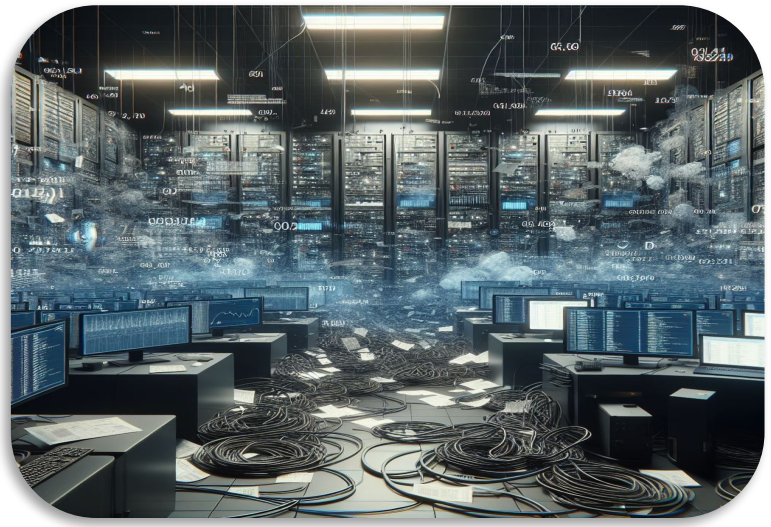
Care Operating Systems of the Future: Optimizing Leadership, Technology & Systems to Enable & Empower the Workforce



Every system is perfectly designed to get the results it gets – W. Edwards Deming

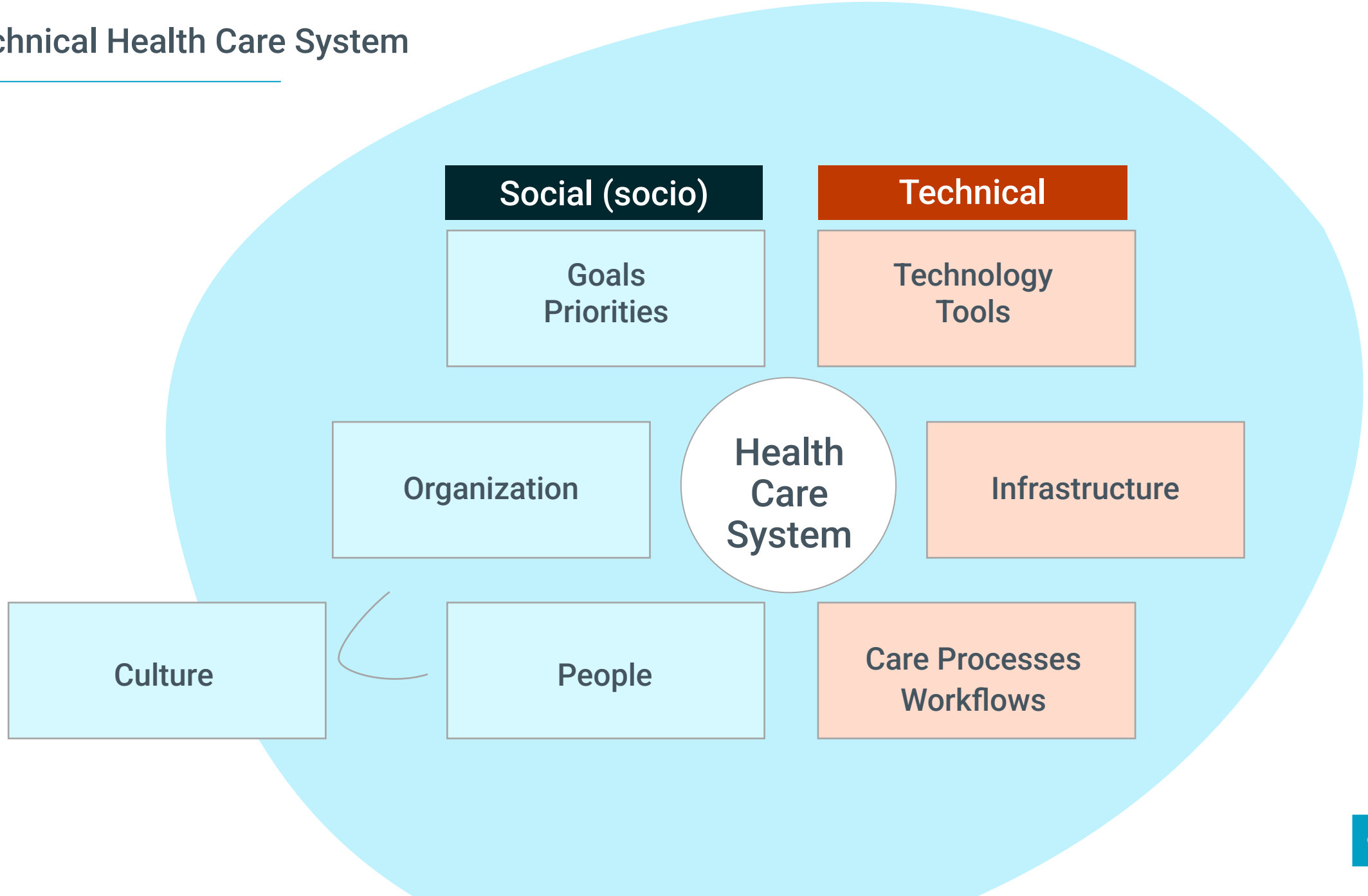
Consider This..



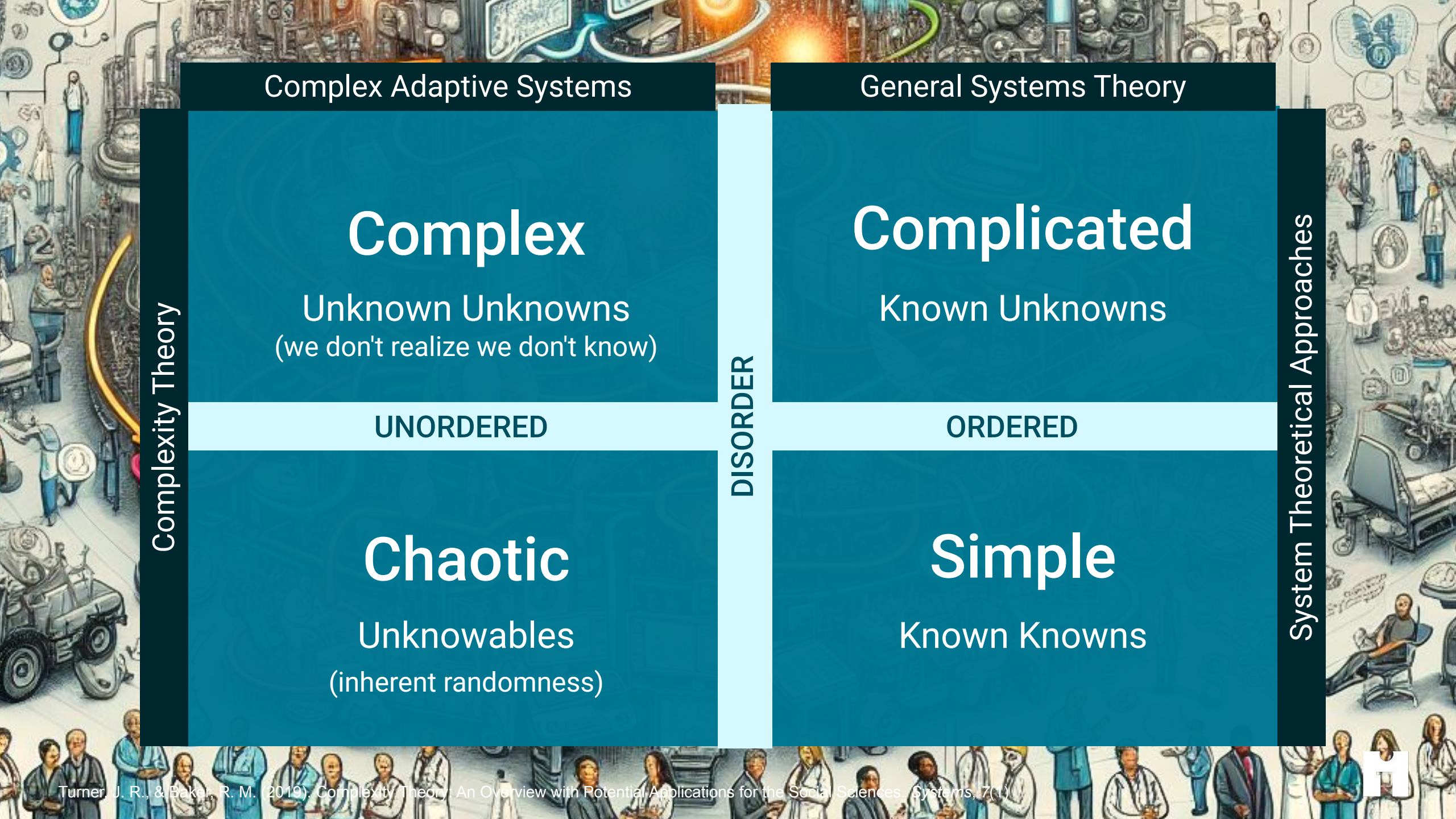


Systems & Complexity

Socio-Technical Health Care System



Complex Adaptive System



Turner, J. R., & Baker, R. M. (2019). Complexity Theory: An Overview with Potential Applications for the Social Sciences. *Systems*, 7(1).

Our Industry's Greatest Strength..

Core Characteristics of a Complex Adaptive System

Adaptation: Components learn and evolve over time. (e.g shifting care to telemedicine during the pandemic)

Emergence: System-level behaviors arise from local interactions and adaptations (e.g., Emergency Dept hall beds).

Core Characteristics of a Complex Adaptive System

Diversity of Agents: Multiple independent actors (e.g., patients, clinicians, administrators) with different roles, goals, and behaviors.

Feedback loops: Actions can reinforce or dampen future behavior.

Core Characteristics of a Complex Adaptive System

Nonlinearity: Small changes can have disproportionately large effects.

Exceeding Human Capacity

Organization

Training/Education

Surveys

Policies

Incentives

Staffing

Electronic Health Records

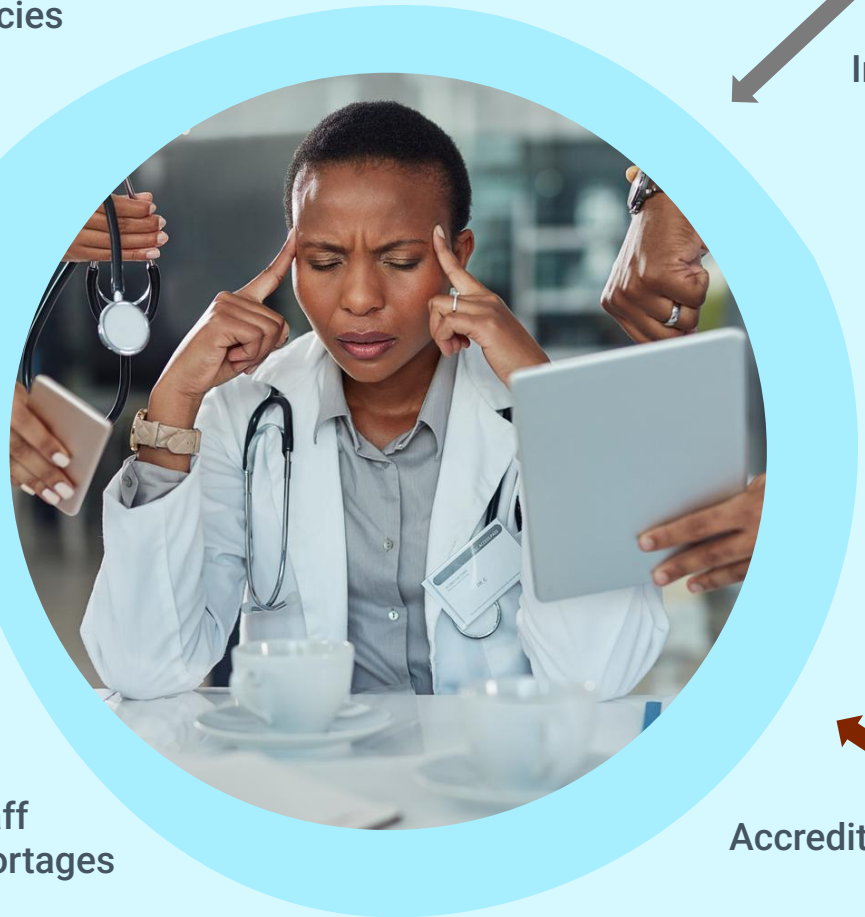
Documentation

Alerts

Billing

Downtime/Upgrades

Inbox messages



Technology/ Tools

CDS

Hardware

Devices

AI

Software

Data

Productivity

Finance Data

Outcomes

Operations Data

External Influences

Blood shortages

Pandemics

Staff shortages

Medication shortages

Regulators/ Government/ Payors

Policies

Surveys

Accreditation

Incentives

Overreliance On Our People Being Adaptive & Resilient

Safety

Quality

Experience

Equity

Cost

Efficiency and Productivity

Population Health

Impact of Poorly Designed Systems

- Workforce Stress
- Insufficient Care & Outcomes
- Financial Challenges

In a complex adaptive system, it's all about operations

By enabling continuous learning and adaptive re-design, Care Operating Systems help organizations embed resilience and reliability directly in clinical care

It’s about operations and doing what you say...

A Care Operating System is IHI’s approach to enable organizations to walking the walk.

IHI CareOS Model for Reliability

A care operating system provides the structure and processes to optimize operational workflows, technology, and data to enable clinicians to enable effective, efficient and informed care in a complex adaptive system

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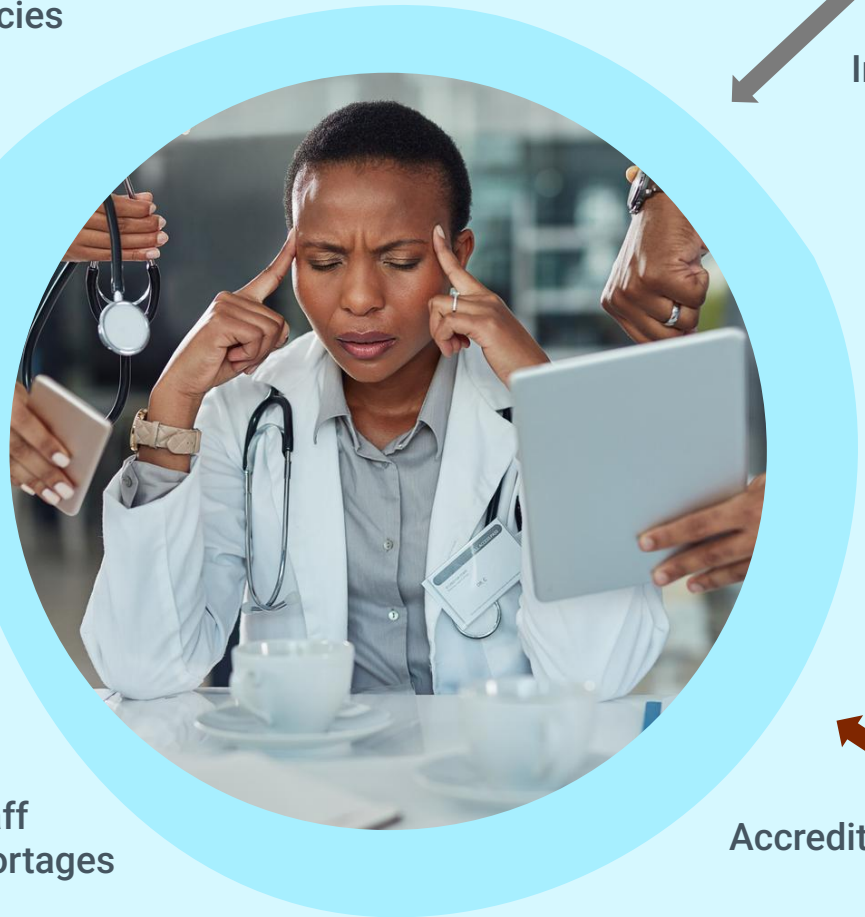

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The IHI CareOS Model Integrates, Connects & Organizes and protects

Organization

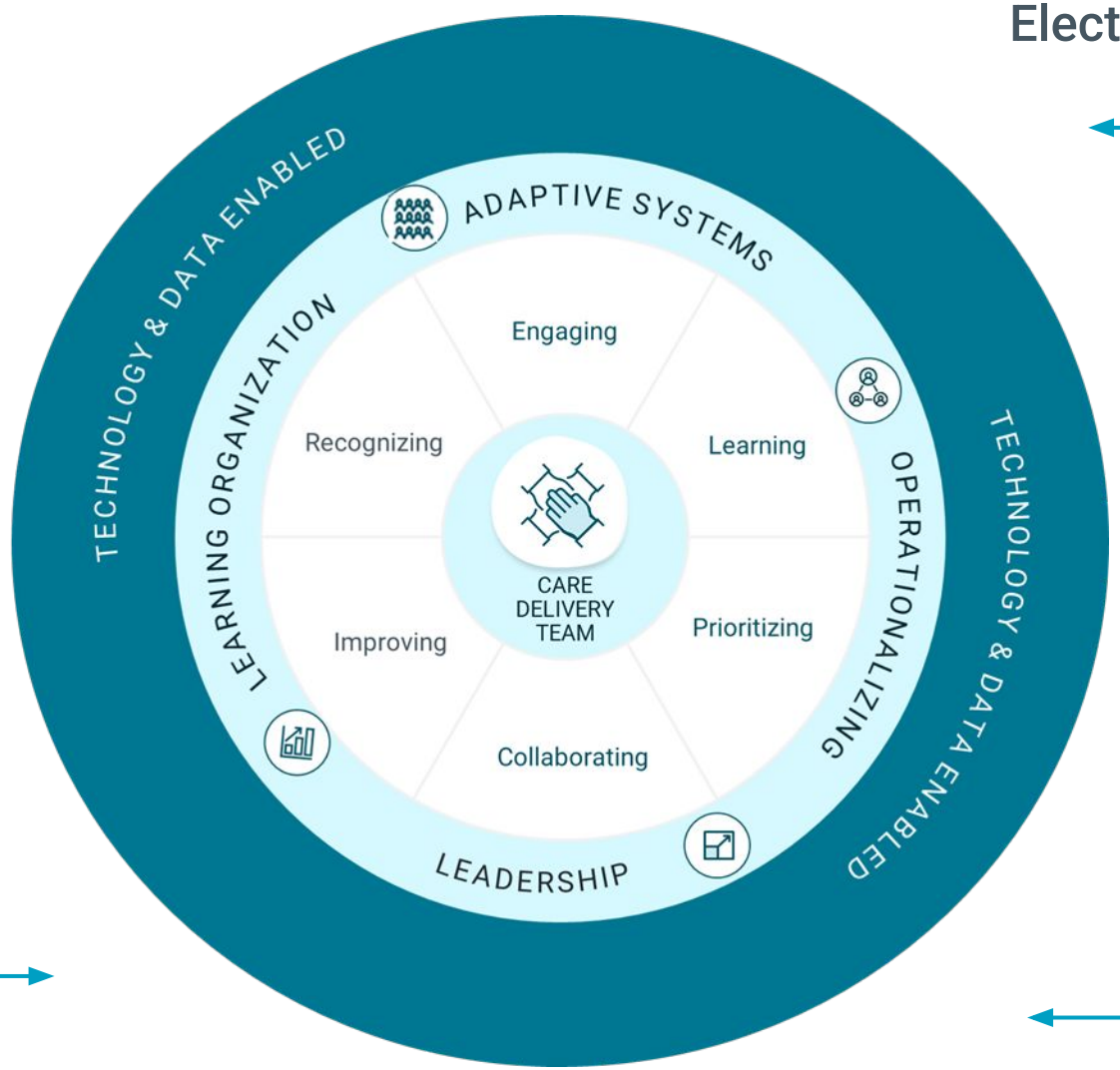
- Training/Education
- Staffing
- Incentives
- Policies

Technology/Tools

- Hardware
- Ai
- CDS
- Software
- Devices

External Disruptors

- Pandemics
- Blood shortages
- Medication shortages
- Staff shortages



Electronic Health Records

- Alerts
- Documentation
- Billing
- Inbox messages
- Handoffs

Learning

- Operations Data
- Finance Data
- Productivity

Data

Regulators/ Government/ Payors

- Accreditation
- Policies
- Surveys
- Incentives

Core Elements of a CareOS

1. **An Engagement Program**
   that drives organizational learning, joy in work, change
   + management and leadership development

2. **An Integration Strategy**
   gets the most the out of technology investments while ensuring
   + clinicians and leaders are enabled to deliver high-quality care

3. **An Improvement Structure**
   that ensures critical collaboration occurs between Operations, Quality, Analytics, and IT/Informatics

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= **Continual Proactive Improvement**
Capability for ongoing systems re-design to produce *real time* and *large-scale* sustainable improvement

Benefits of a Mature Operating System

Workforce – Restored joy in work, Engagement, Satisfaction

Outcomes – Improved quality, safety, equity, and experience

Value – Reduced cost, increased productivity, improved value on investments

IHI CareOS from theory…

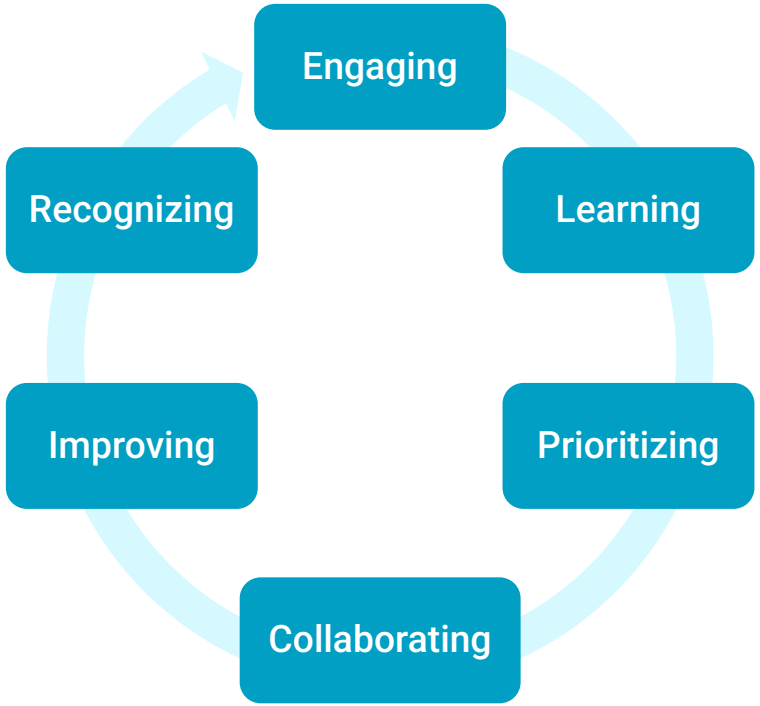
to practice

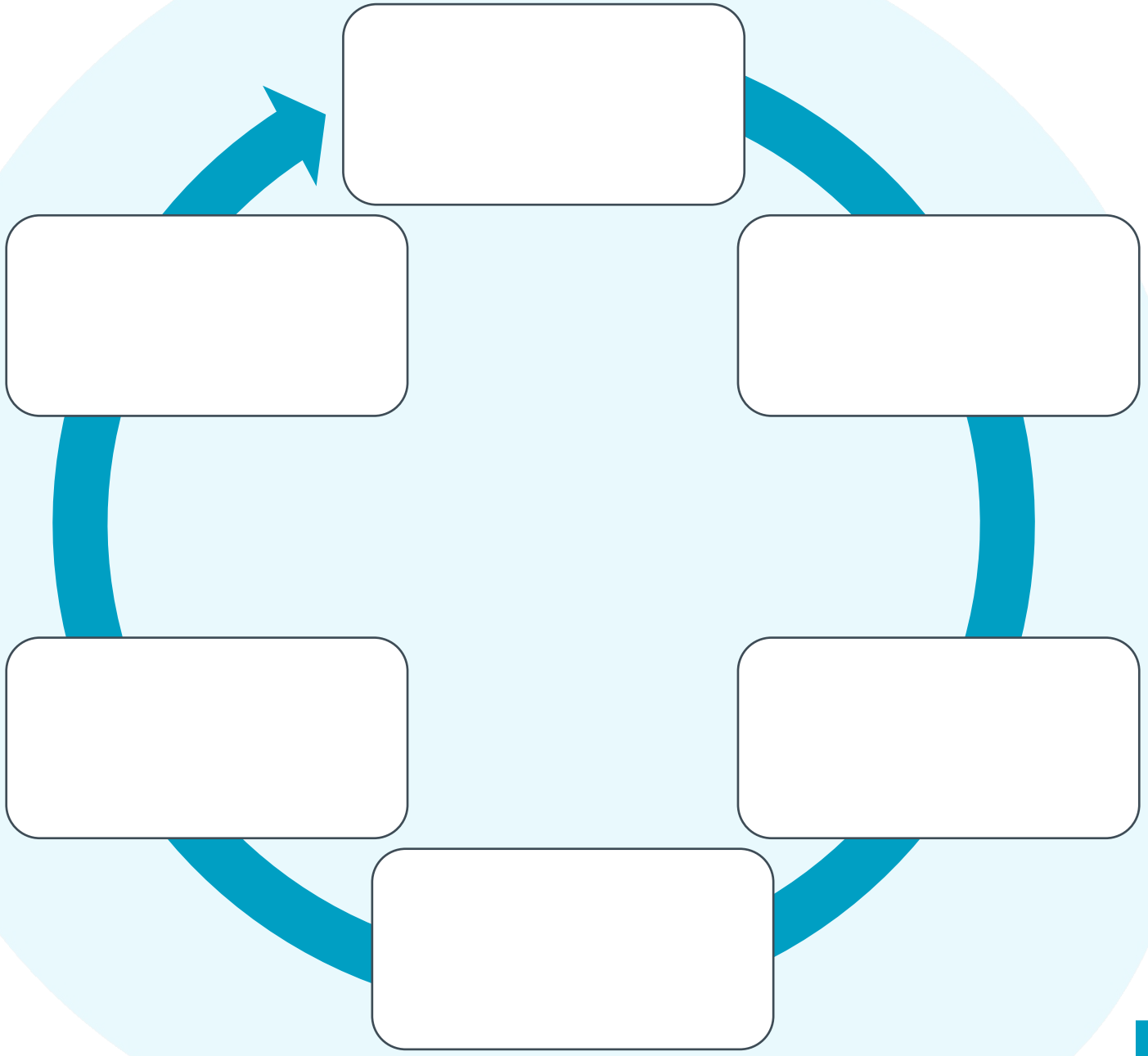
Evolution of Improvement Thinking..

Our primary approach to improvement is focused on projects and priority organizational initiatives

In a complex adapative system, we need focus on both real-time issue identification and improvement and larger scale enterprise improvement

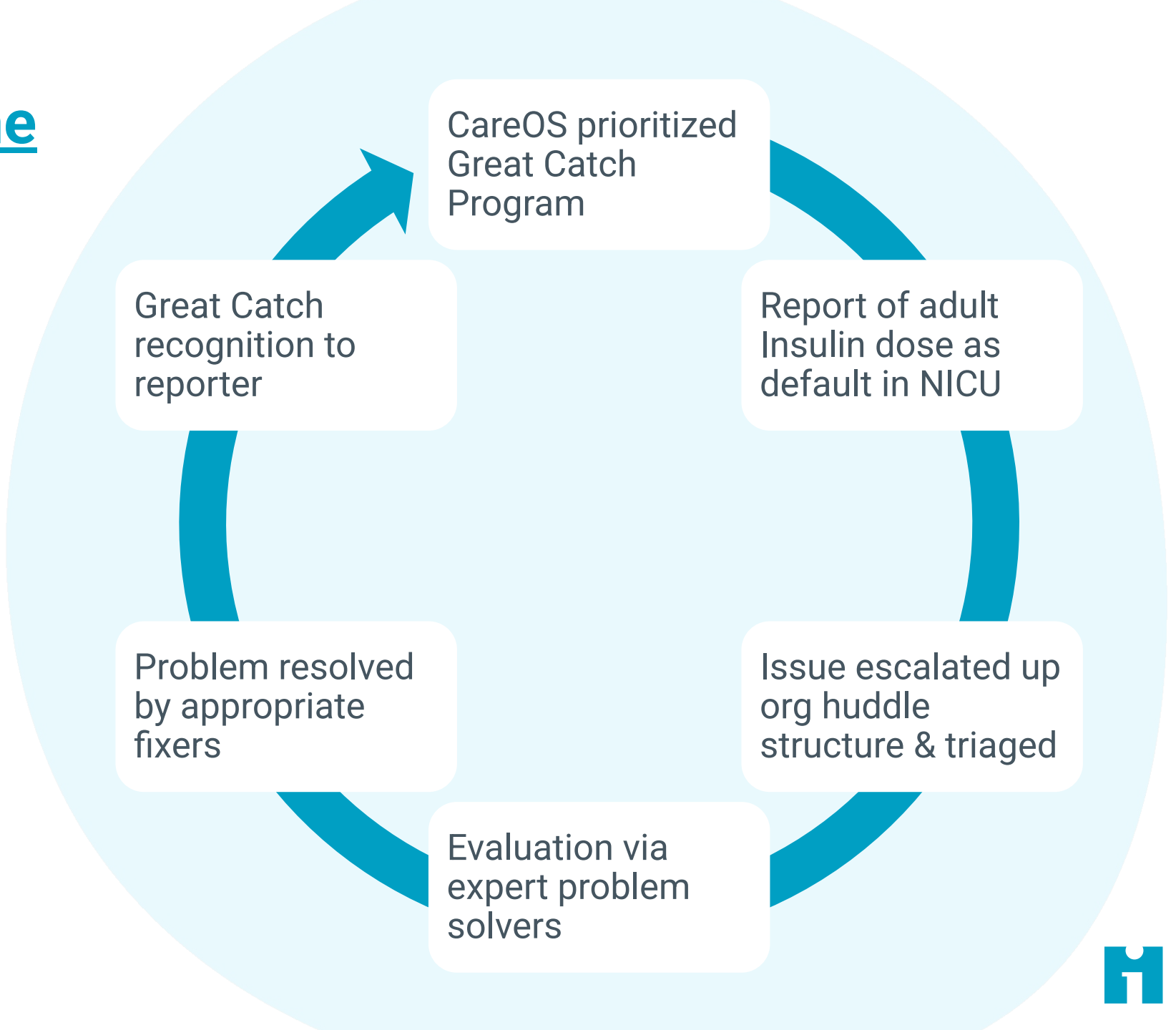
Example of real-time system re-design



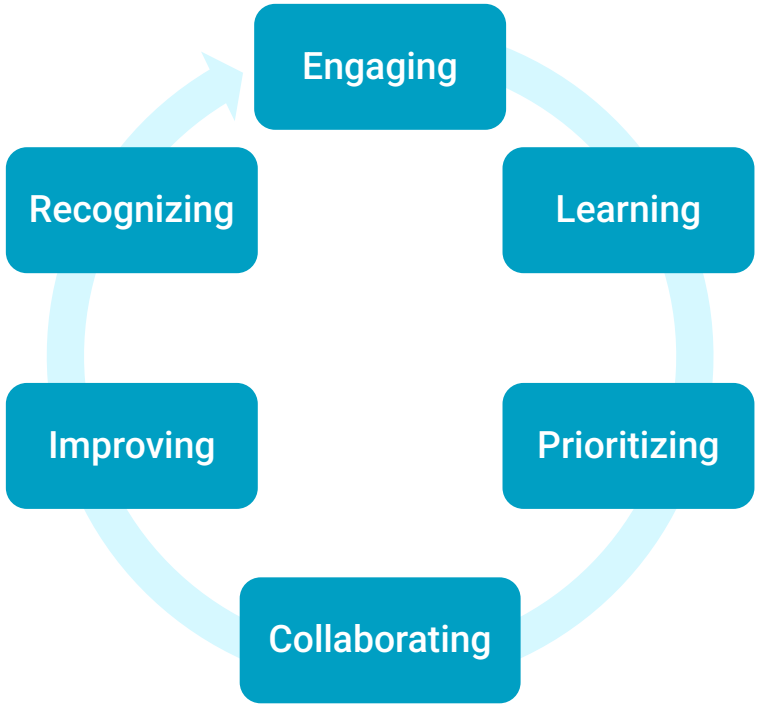


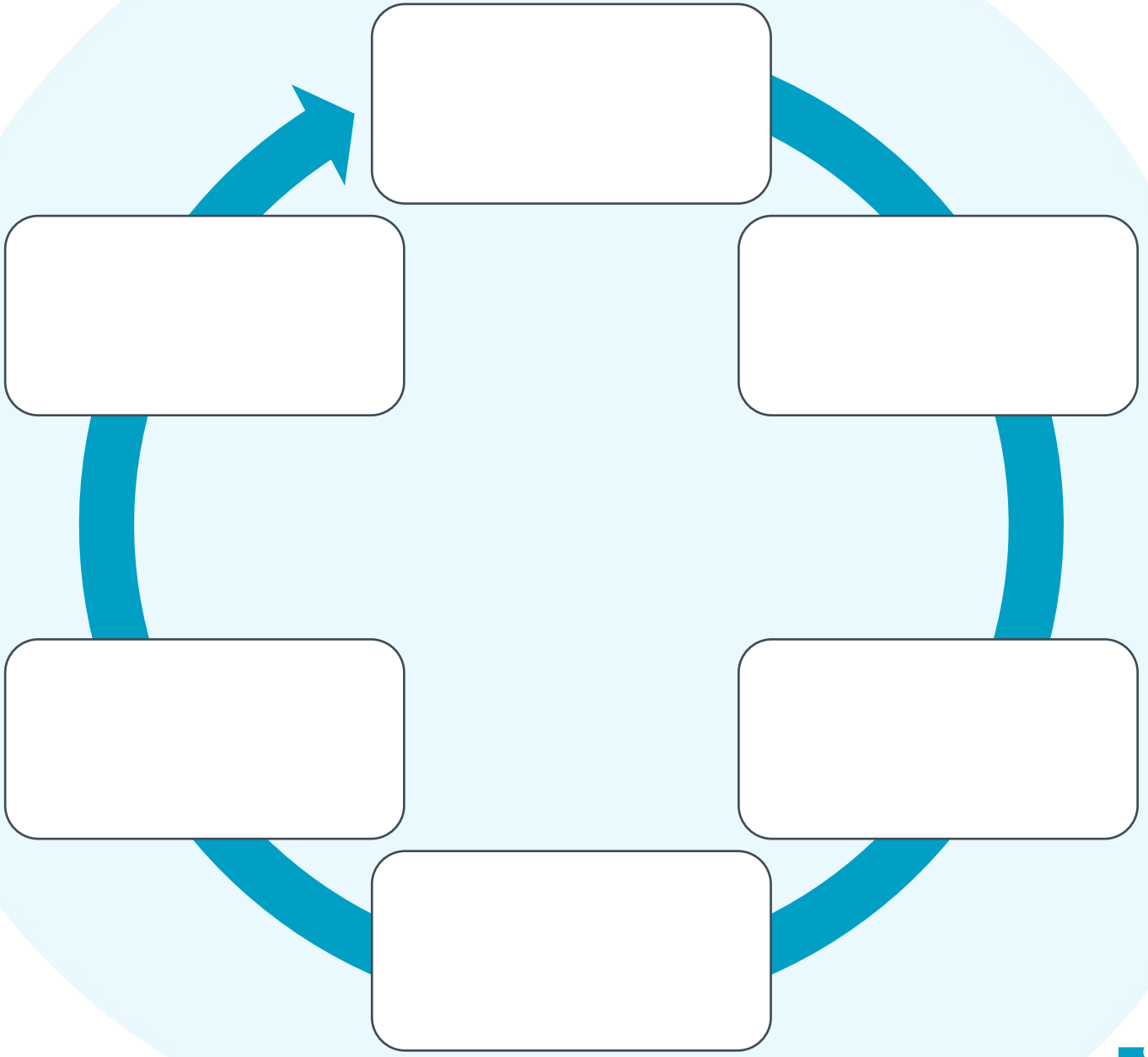
Example of real-time system re-design

- Identified and prevented harm
- Mitigated costs and poor pt exp.
- Scaled the improvement across the org
- Improved workforce engagement and satisfaction
- Improved culture



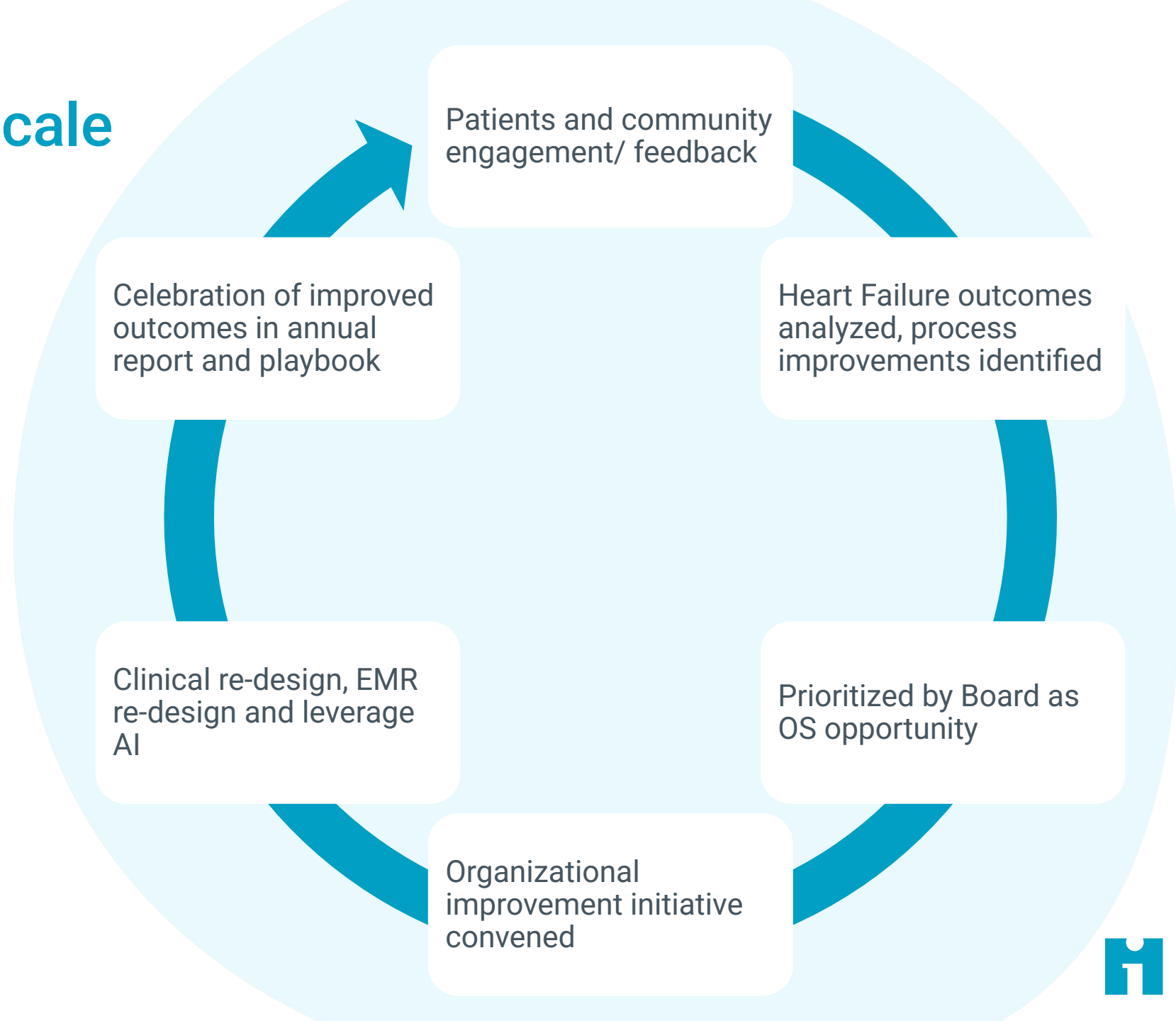
Example of Large-Scale System Re-Design



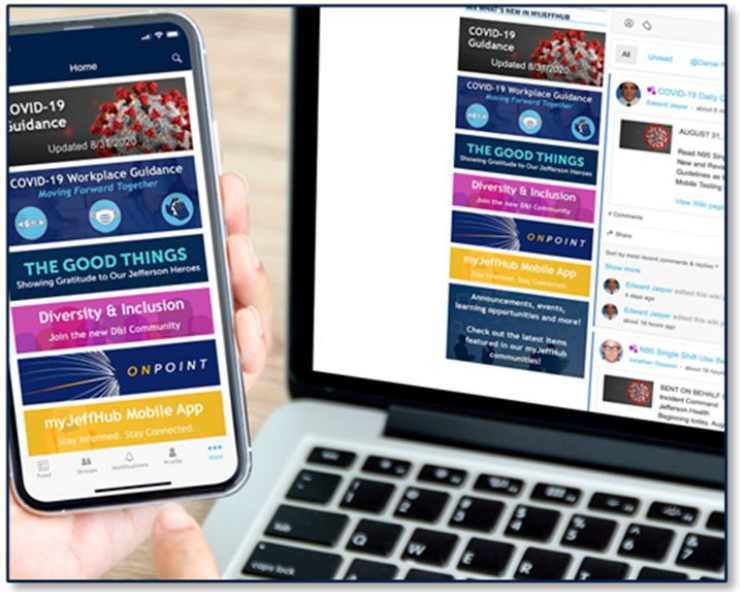


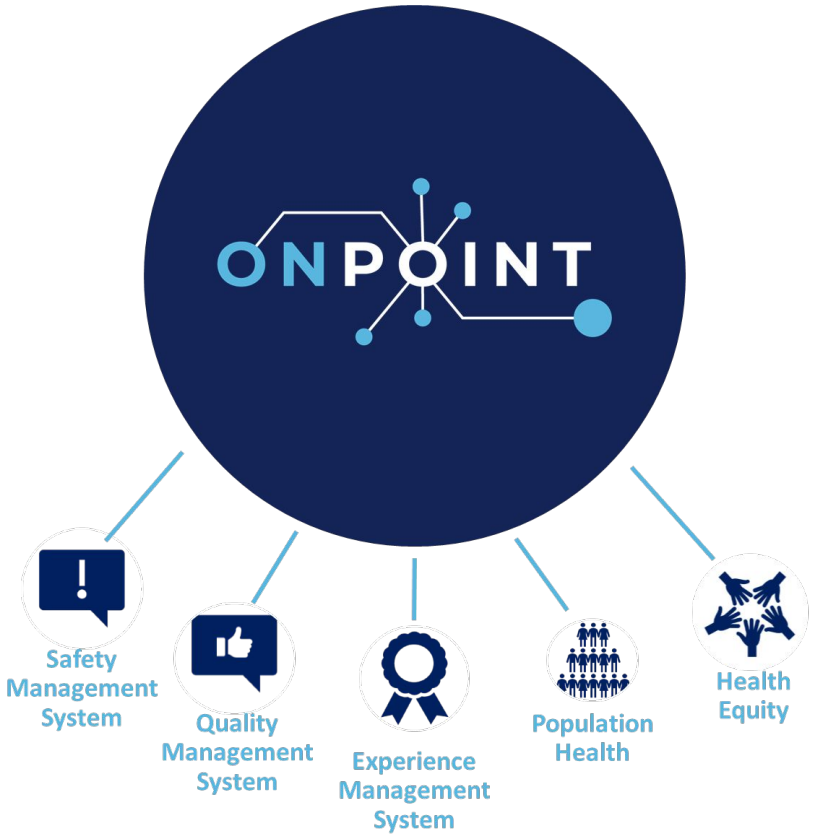
Example of Large-Scale System Re-Design

- Improved high impact patient outcome (mortality, readmit, LOS, costs)
- Improved value-based performance and revenue
- Community impact/reputational
- Improved patient satisfaction
- Improved culture

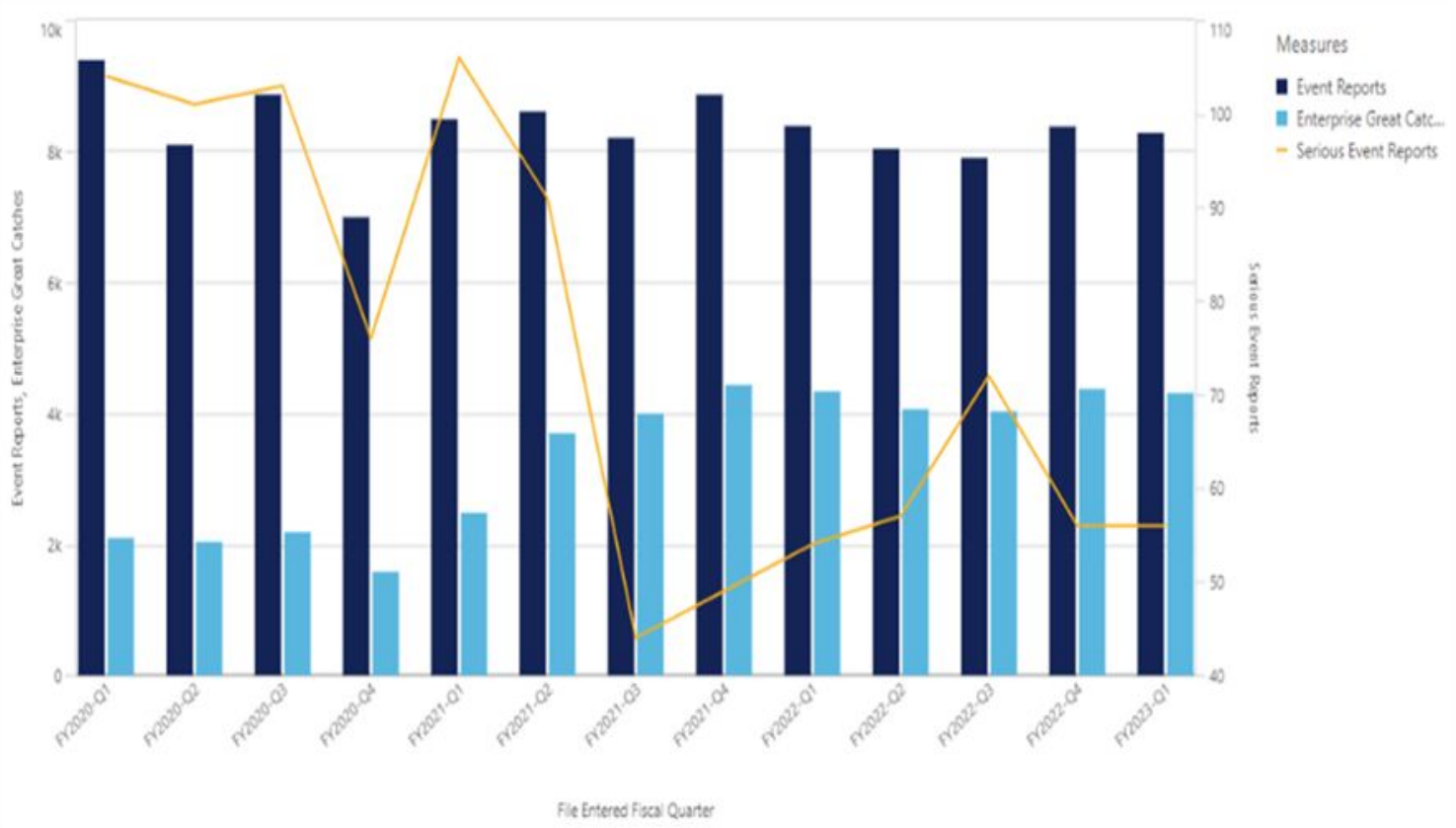


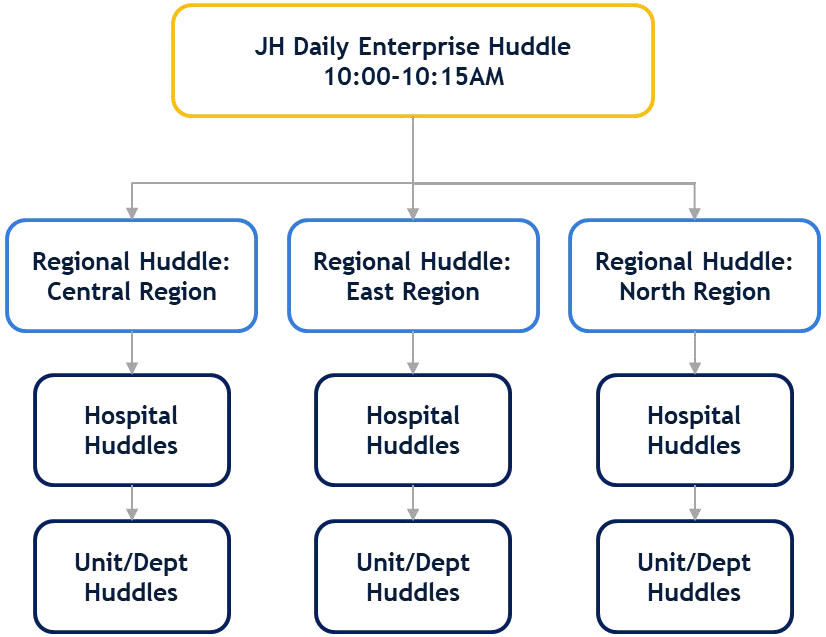
Engagement & Prioritizing



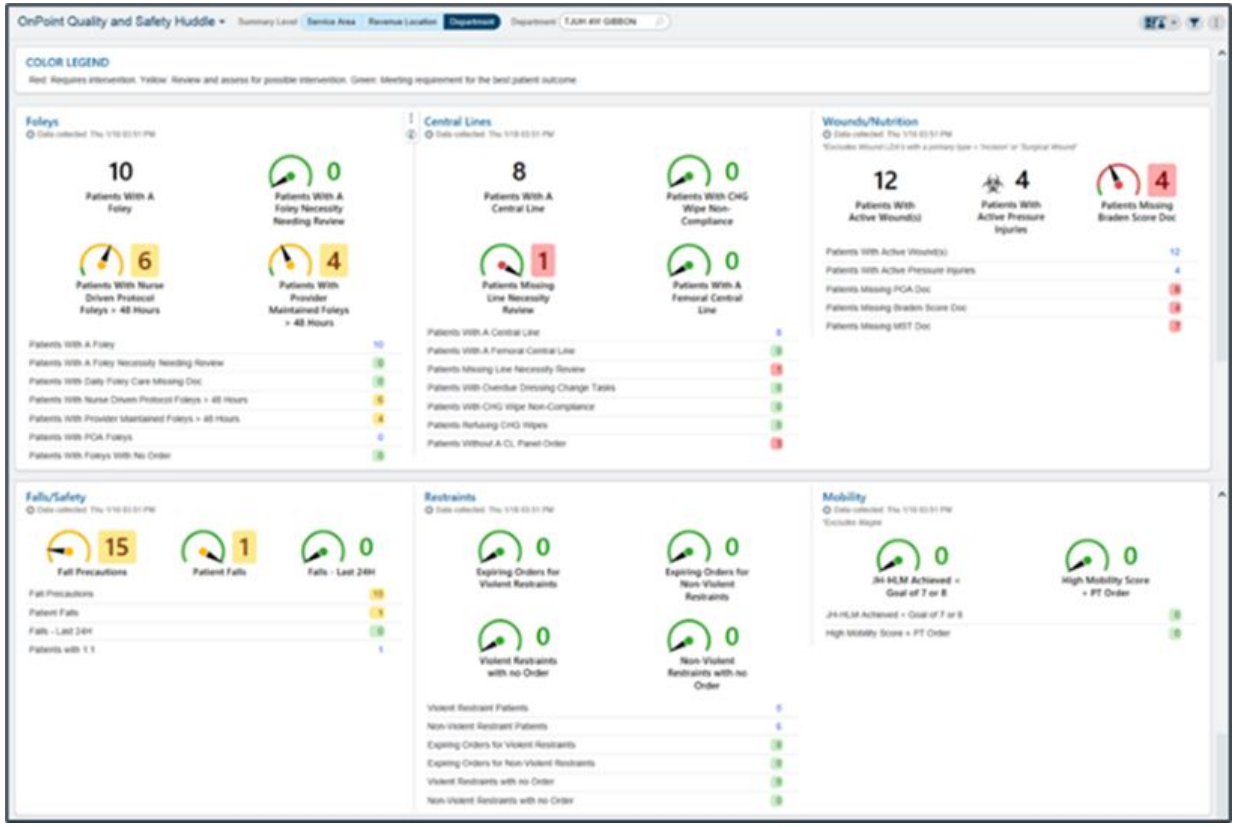


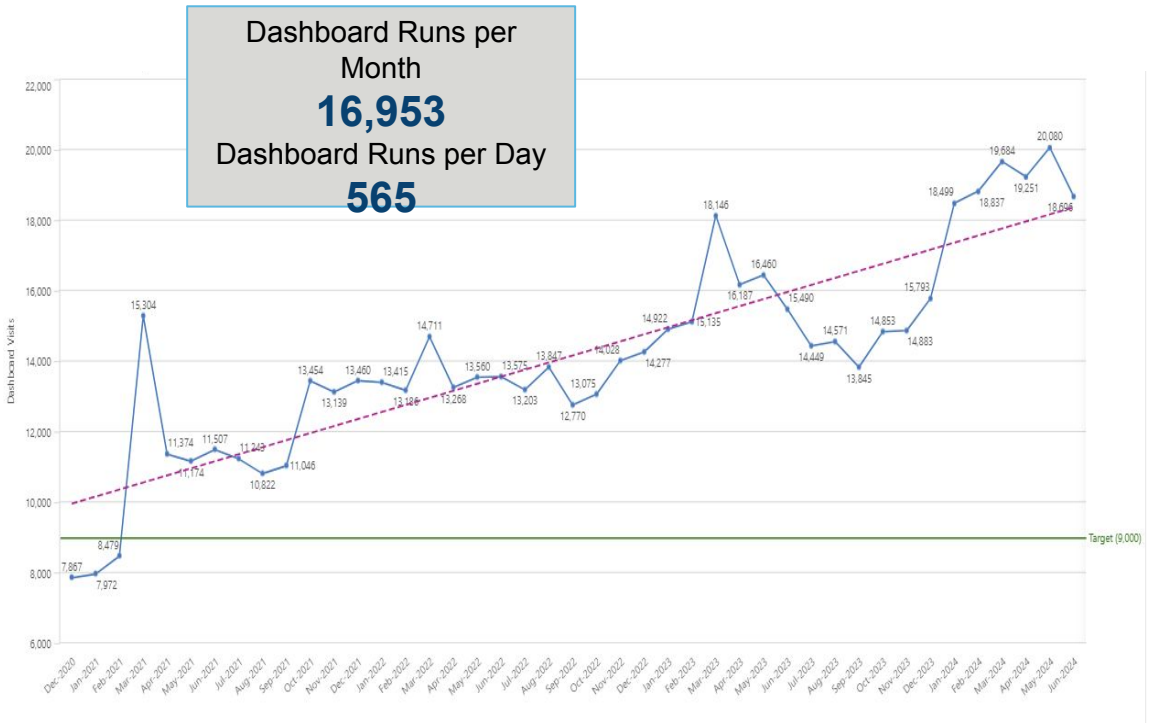
Learning and Adapting



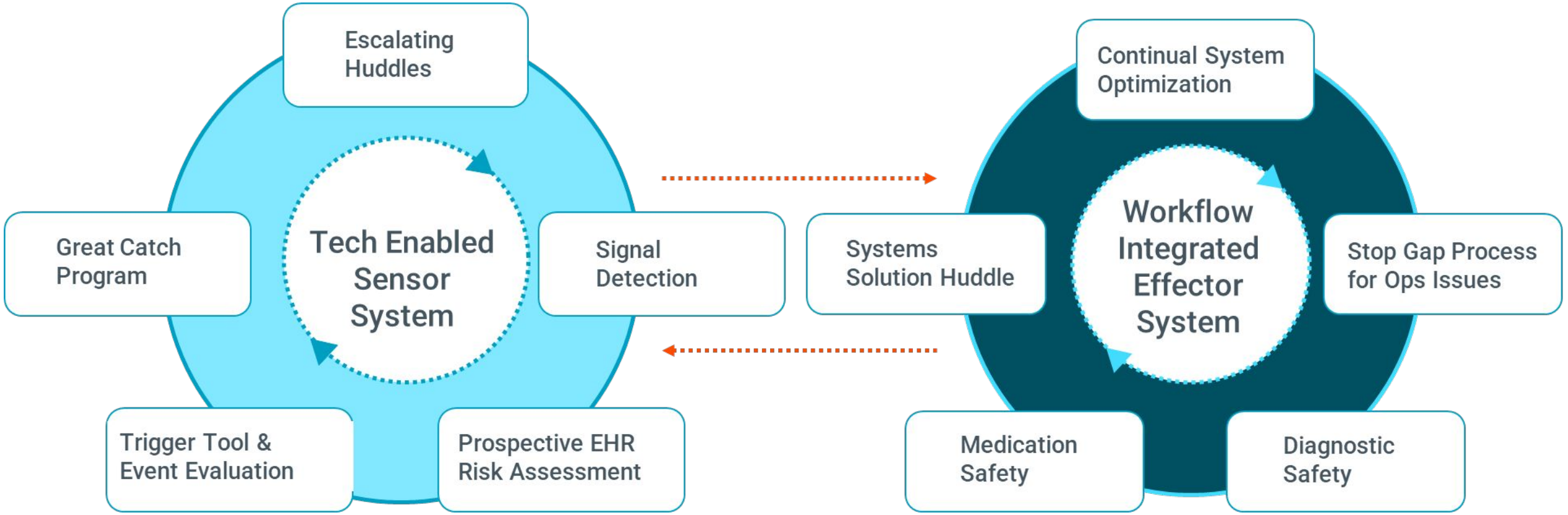


Insights Designed in Clinical Workflows

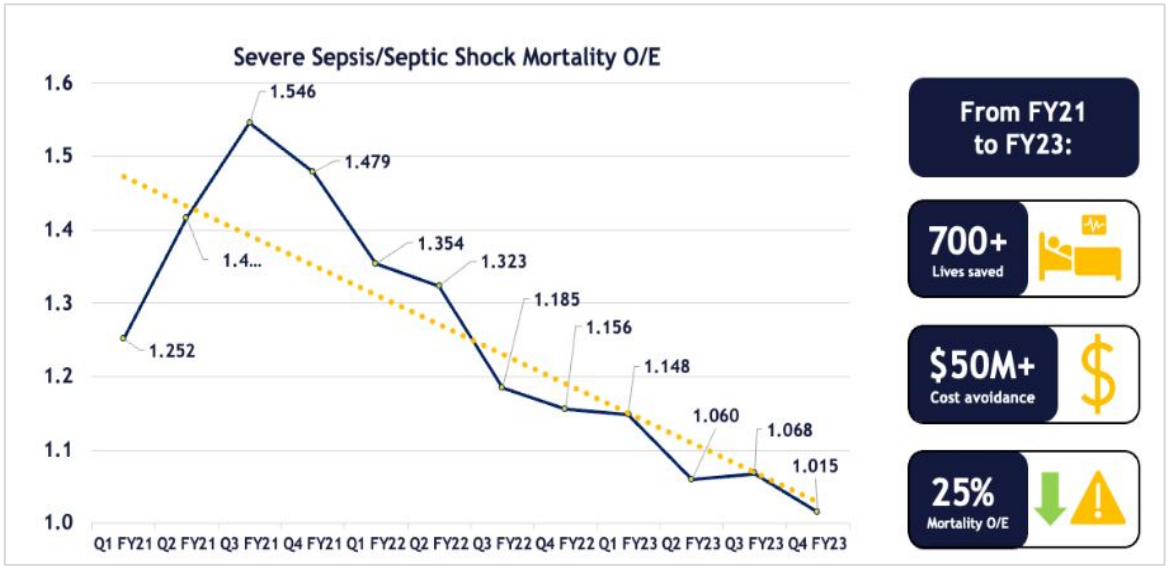


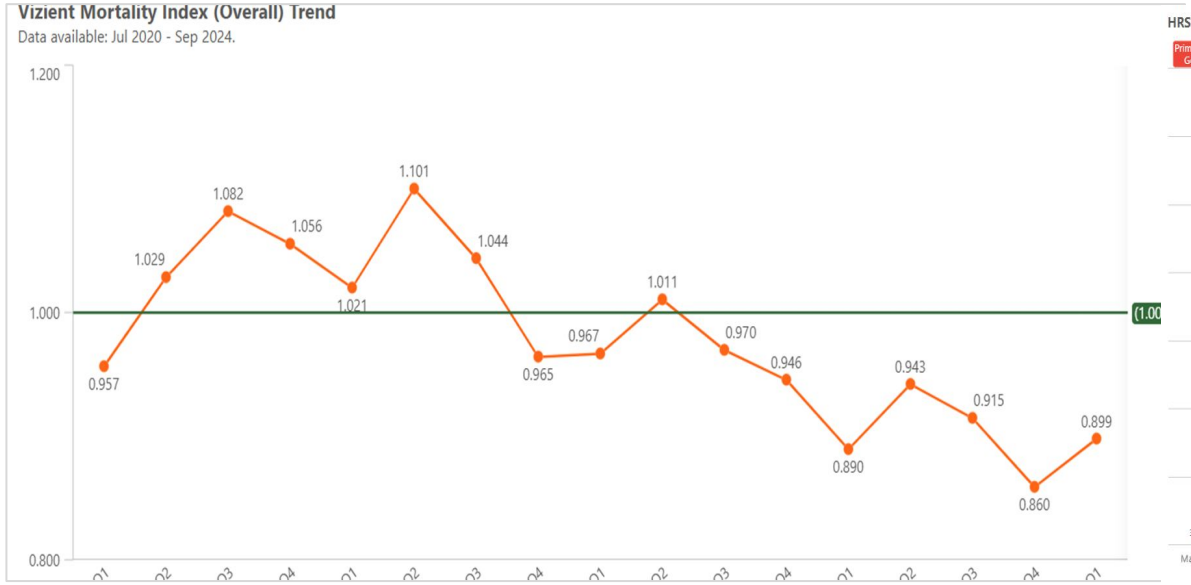


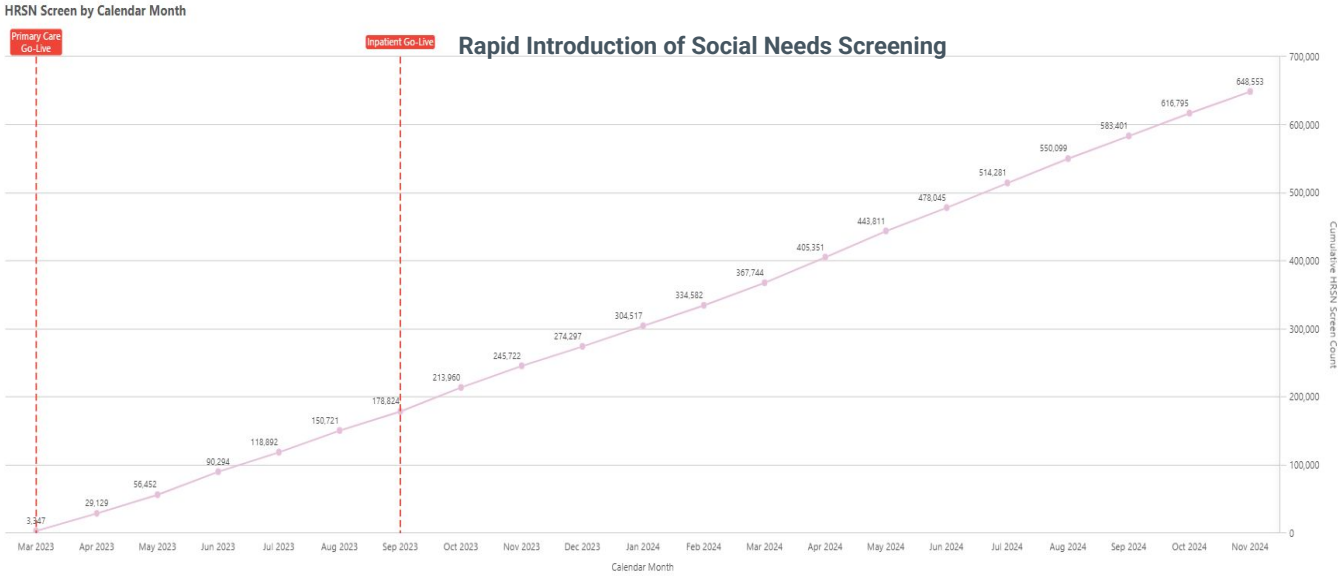
An Operationalized Safety Management System



CareOS Enterprise Results (18 hospitals)







Key Takeaways

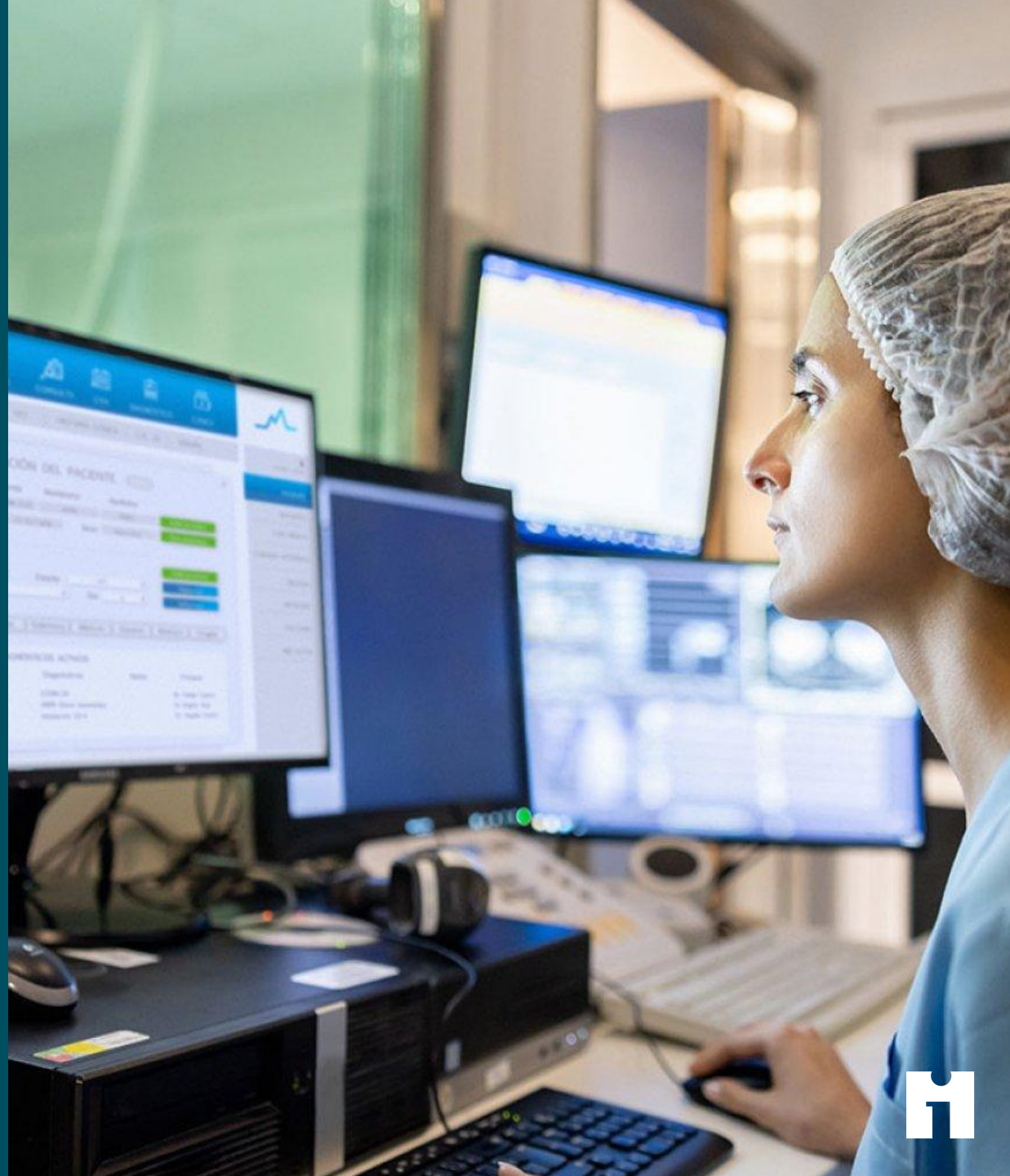
1. CareOS is not a Quality or IT initiative, it's about enabling optimal system performance (operations)

2. CareOS does not require specific technology. It's how you optimize and integrate the technology you already have

3. If you want an engaged workforce, you have to engage them.

Considerations

1. How is Operations, IT/Digital, and Analytics involved in improvement (both real-time and enterprise)?
2. How is your organization formally engaging your workforce in continual learning and improvement?
3. Are your teams getting the most out of the data and tech available?



Join us for an exclusive webinar

Chaos to Capability with Care Operating Systems

June 25, 1PM–2PM (UTC)

Join Dr. Don Berwick, Dr. Trish Henwood, and Josh Clark as they discuss how healthcare organizations can follow the lead of other highly reliable industries by committing to a care operating system approach that provides the critical infrastructure for: **Operational Resilience**; **Workforce Engagement**; **Technology ROI**; and **Sustainable System Redesign.**

Dr. Don Berwick
IHI

Josh Clark
IHI

Dr. Trish Henwood
Jefferson Health

Thank you!

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visit ihi.org