Indian Health Service

Building Business Process Models

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AUGUST, 2024

Meet Our Speakers

Dr. Howard Hays

Chief Medical Information Officer (CMIO)
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Marcie Platero, RN

Nurse Informaticist
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Robert Lario, PhD

Business Process Consultant
IHS Office of Information Technology

Topics

IHS Health IT Modernization Overview
Dr. Howard Hays

Workflow Research & Alignment Plan Overview
Marcie Platero, RN

Workflow Research & Alignment Plan Process
Robert Lario, PhD

IHS Health IT Modernization Overview

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Need for Health IT Modernization

After a system-wide analysis and Tribal Consultation/Urban Confer, the IHS determined the need to fully replace RPMS in order to fulfill its mission.

INTERNAL FINDINGS

Outdated System

The Resource and Patient Management System (RPMS) has served the I/T/U for **more than 40 years**.

Creates Challenges

Technology advances, the regulatory environment, and the distributed deployment model created **significant challenges** for RPMS development and operations.

Significant Dependencies

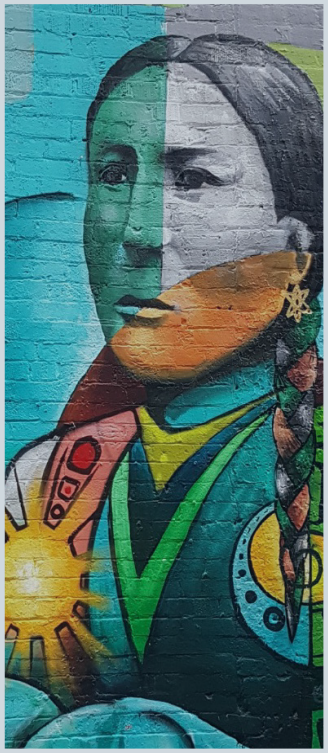
The U.S. Department of Veterans Affairs' **VistA system is scheduled for replacement** – affecting the IHS dependencies.

EXTERNAL FINDINGS

Unsustainable

The HHS/IHS Health IT Modernization Research Project (2018-19) confirmed that **RPMS is unsustainable**.

Several independent audits **identified challenges in the current health IT systems** to inform future Modernization efforts.



Executive Summary

To fulfill its mission to deliver comprehensive health care across Indian Country, the IHS will provide an enterprise electronic health record solution to Tribes, urban Indian organizations, and IHS sites of care.

Sustainable Funding

from Congress to maintain and operate a modernized health IT infrastructure.

Stabilize Support

through an enterprise approach that includes staff training, business processes, and technology maintenance.

Liberate Data

to ensure it is accessible across the enterprise by clinicians, patients, and partners alike to improve safety, quality, and patient outcomes.

Selected Enterprise EHR Vendor

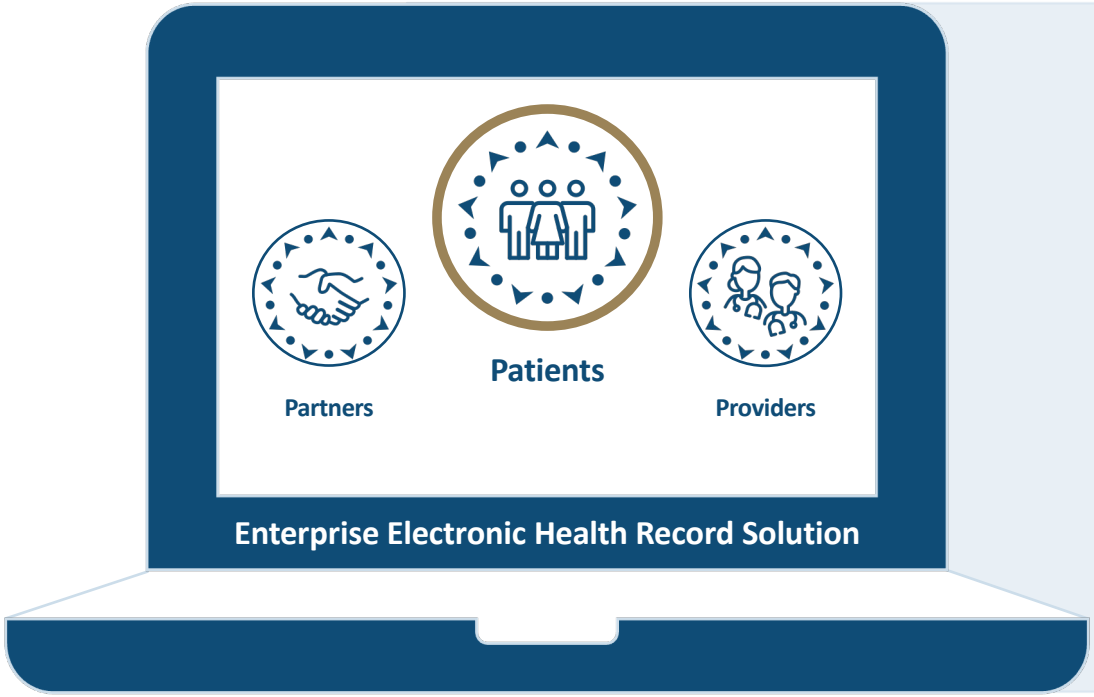
The IHS selected **General Dynamics Information Technology, Inc.** (GDIT) to build, configure, and maintain the new IHS enterprise EHR solution that uses Oracle Health technology

GENERAL DYNAMICS
Information Technology

ORACLE
Health

Competition was full and open, rigorously adhered to Federal Acquisition Regulations, engaged hundreds of I/T/U end-users in product demonstrations, and culminated in a 10-year Indefinite Delivery / Indefinite Quantity contract with GDIT.

Improve Patient Care & Coordination



Provide the best possible EHR, managed by its users, for its users, that will drive high-quality health care through sustainable, modern, and easy to use tools

Workflow Research & Alignment Plan Overview

Marcie Platero, RN
Nurse Informaticist
IHS Office of Information Technology

The WRAP Project in IHS

- IHS has a lot of divergence in common processes because RPMS is highly configurable
- Transition to a new system will be smoother if current processes are well understood and aligned
- Convene domain-specific subject matter experts (SME) and informaticists in virtual work sessions to develop and validate “shared best practice” workflows a variety of common, critical, and high-risk processes
- Develop a series of business process diagrams that describe preferred workflows, and use these diagrams to inform configuration, training, and change management for the new systems
- Experience gained doing process modeling can be leveraged further to model more cognitive workflows, e.g. clinical decision support

Benefits of WRAP

- Enterprise-focused project provides an **opportunity to improve standardization** across IHS
- Opportunity to identify and **align with evidence-based best practices**
- Opportunity to **incorporate these workflows into current systems** (RPMS EHR), even before migration to new EHR
  - **Compliance with RPMS standardization could be a selection factor for migration**
- Understand where significant process changes will occur, so that **training is optimized and targeted** to ensure users have successful transition
- **Maximize preparedness** for new solution

WRAP Engagement & Participation

WRAP Success Factors

Field Engagement
Engaging the field to enable successful techno-social change

Comprehensive Service Lines
Prioritized workflows, consolidated approach

Effective Partnership
WRAP enables a collaborative partnership among I/T/U users, our contractors, and EHR vendor

Business Process Modeling to Date

Service Lines	WRAP Sessions	Models
25	312	84

SME Engagement

12,300+	2,200+
Total Participant Encounters (2021 – Present)	Unique Participants (2021 – Present)

WRAP Service Line Analysis

Care Delivery Services
47 models

1. Anaesthesia (3 models)
2. **Emergency Department (3 models)**
3. Hospitalization (1 model)
4. Labor Delivery Recovery Postpartum (4 models)
5. Patterns and Subprocesses (8 models)
6. Primary Care (6 models)
7. Residential Treatment Centers (2 models)
8. Substance Use Disorder (3 models)
9. Surgery (12 models)
10. Swing Beds (1 model)
11. Telehealth (3 models)
12. Urgent Care (1 model)

Support Services
25 models

1. Community Health Aide Program (3 models)
2. Employee Health (5 models)
3. Imaging (1 model)
4. Laboratory (4 models)
5. Medication Management and Administration (5 models)
6. Nutrition (4 models)
7. Problem List, Allergies, Medications, Procedures, Immunizations (3 models)

Business Services
12 models

1. Consults and Referrals (1 model)
2. Patient Portal (1 model)
3. Population Health (1 model)
4. Public Health (5 models)
5. Reporting (1 model)
6. Revenue Cycle Management (3 models)

Emergency Department (ED) Point of Care Ultrasound (POCUS)

- Important tool for clinicians in acute care settings
  - Gives clinical information far beyond standard physical exams
  - Enhances real-time decision making at the bedside of sick and injured patients
  - Does not require input from radiology services
- Declared a “fundamental component” of emergency medicine practice by The American College of Emergency Physicians
- POCUS training required in Emergency Medicine residency programs and in physician practices
- Training on POCUS is quite variable depending on training program
  - Alignment needed to ensure consistent practice, documentation, & quality

Use Case of IHS Service Line

ED Point of Care Ultrasound (POCUS)

Currently, IHS & many other health systems lack the ability to:

- Place the order for POCUS scans in EHR
- Associate POCUS exams with current procedural terminology codes
- Document POCUS findings in a consistent format
- Archive images
- Create opportunities for quality control and feedback

Use Case of IHS Service Line

ED Point of Care Ultrasound (POCUS)

WRAP's Emergency Department workflows:

- Facilitated configuration of the legacy IHS EHR
- Created ED POCUS workflow
- Aided IHS Health Information Management (HIM) in recognizing the need to capture ED POCUS procedures
- Assisted with charge capture and third-party collections

Use Case of IHS Service Line

Workflow Research & Alignment Plan Process

Robert Lario, PhD
Business Process Consultant
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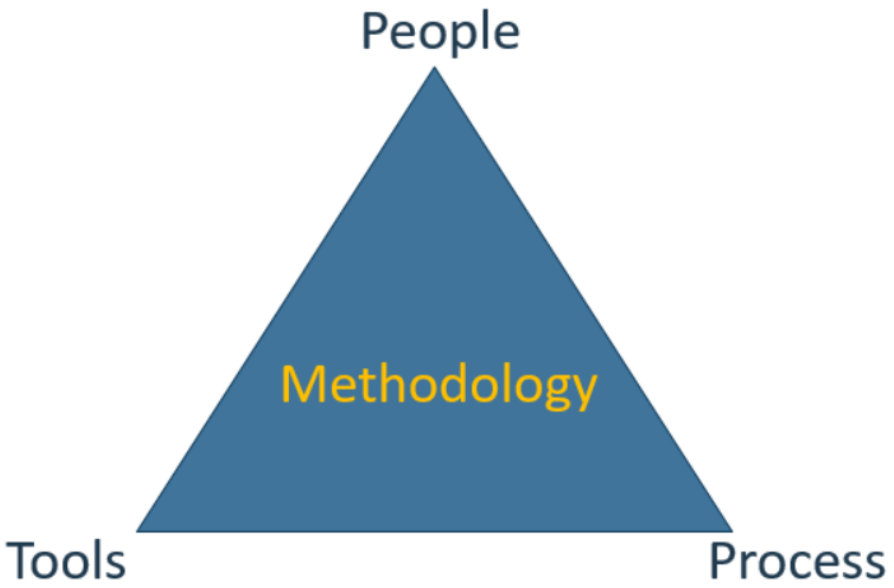
WRAP Methodology

- A systematic approach used to solve problems or achieve objectives across various fields

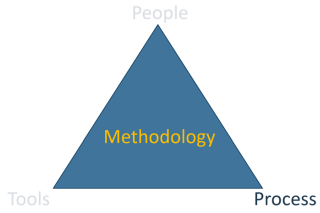
- Ensures efforts are practical, results are repeatable, and objectives are met in a structured manner



Process: Structuring Success

- The sequence of steps, practices, and guidelines to be followed
- Systematic processes help identify, assess, and mitigate risks early in the project lifecycle, increasing the likelihood of success
- Establishes benchmarks and standards for deliverables, facilitating continuous improvement and consistency in output quality
- While processes provide structure, they also need to be adaptable to changes in project scope, market conditions, or technology

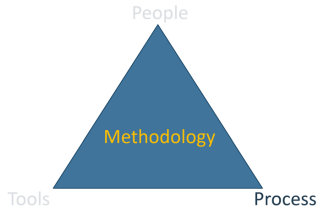
Iterative review allowing for continuous feedback and refinement of the process



Sequential Enhancement

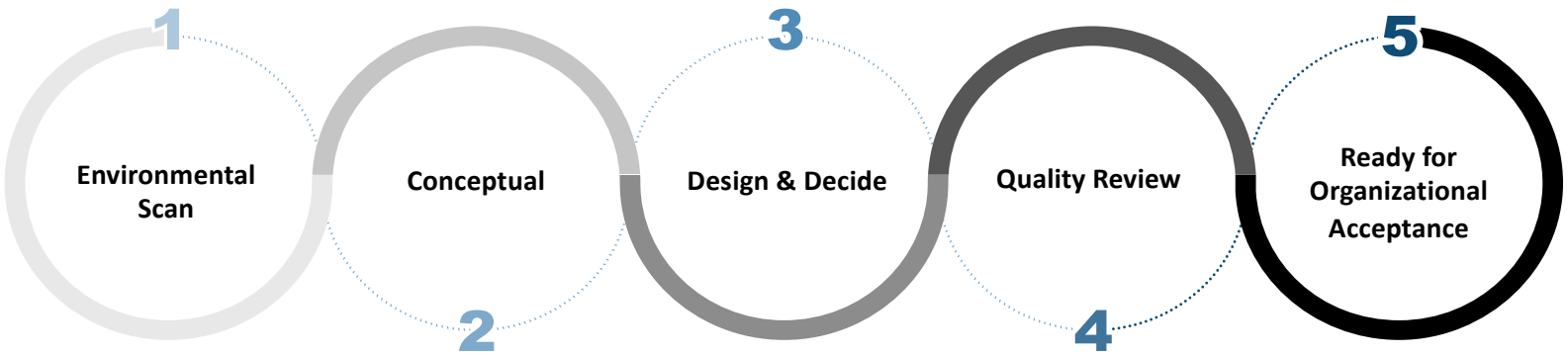
Process: Production Line

- Sequential Stages: Each stage within the WRAP production line is designed to perform specific enhancements or modifications to the workflow definition, contributing to its gradual development toward the final workflow
- Input-Output Mechanism: The output of one stage becomes the input for the next, ensuring a smooth and continuous flow of production
- Quality Control and Assurance: At each stage, quality checks are performed to ensure that the product meets predefined standards before moving to the next phase. This is crucial for maintaining the integrity of the workflow
- Flexibility and Scalability: While the process appears sequential, it is agile and iterative



Process: WRAP Production Line

A multi-step production line process to produce rigorous, consistent, and simplistic business process models



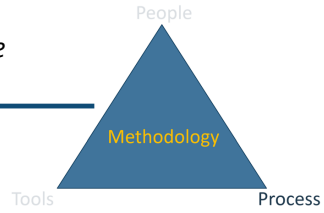
to collect internal and external information

to form an overarching understanding of each model

to map out the future state with IHS SMEs

to perform final review of models for clinical and technical accuracy

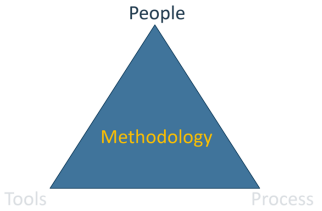
to approve models for Governance review and share with EHR vendor



People: The Heart of Methodology

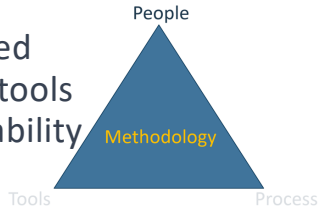
- People are the driving force behind the execution of methodologies, turning plans into reality
- The competencies and knowledge that individuals bring are crucial for navigating challenges and ensuring quality execution
- Success is often a result of collaborative efforts. Effective teamwork amplifies problem-solving capabilities and innovation
- Understanding and navigating the emotional and cultural dynamics of a team can enhance collaboration and overall project success

While tools and processes are foundational, people bring methodologies to life



People: Roles

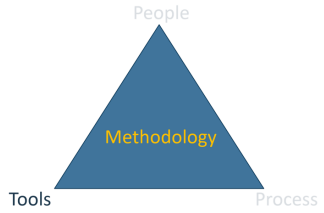
- Subject Matter Expert
  - Brings a wealth of clinical or administrative knowledge. Their deep understanding of healthcare workflows, patient care, and administrative procedures is essential for identifying and detailing the processes to be modeled
- Facilitator
  - Acts as the intermediary between the SME and the Modeler, guiding the knowledge capture process. This role requires strong interpersonal skills to effectively manage the interaction between the SME and the Modeler, ensuring that the knowledge is accurately translated into the model
- Modeler
  - Responsible for converting the knowledge shared by the SME into a structured and detailed model using DSLs like BPMN. This role demands a high level of proficiency with modeling tools and languages, a keen eye for detail to represent processes accurately, and the technical ability to translate complex healthcare scenarios into explicit, understandable models



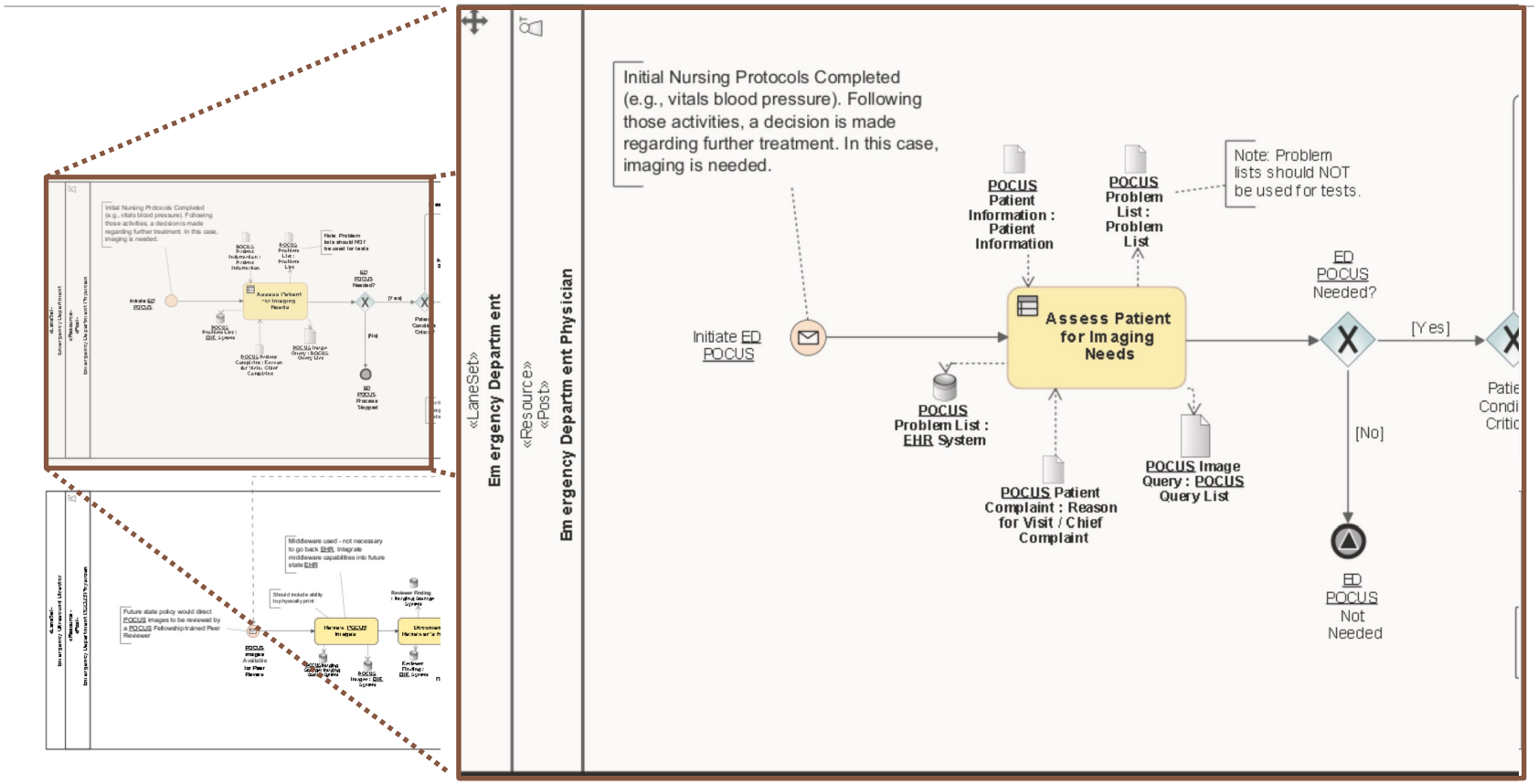
Tools: Empowering Execution

- Tools are the instruments or software that facilitate task execution within a methodology
- Examples: From physical equipment to software applications (e.g., Git, JIRA, Mural)
- Enhance efficiency, accuracy, and communication; provide a means for consistent and scalable work execution
- Reuse, Consistency, Integration, Reporting

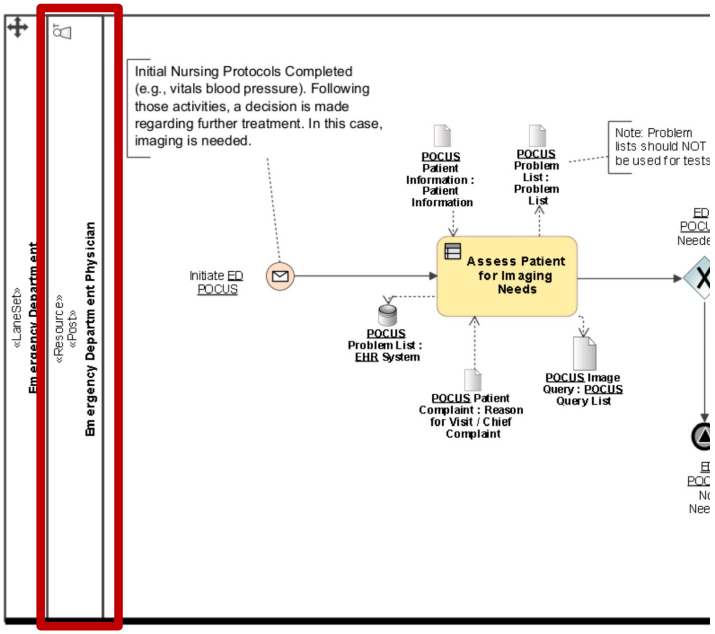
It is essential to success that the tools employed connect the People to the Process

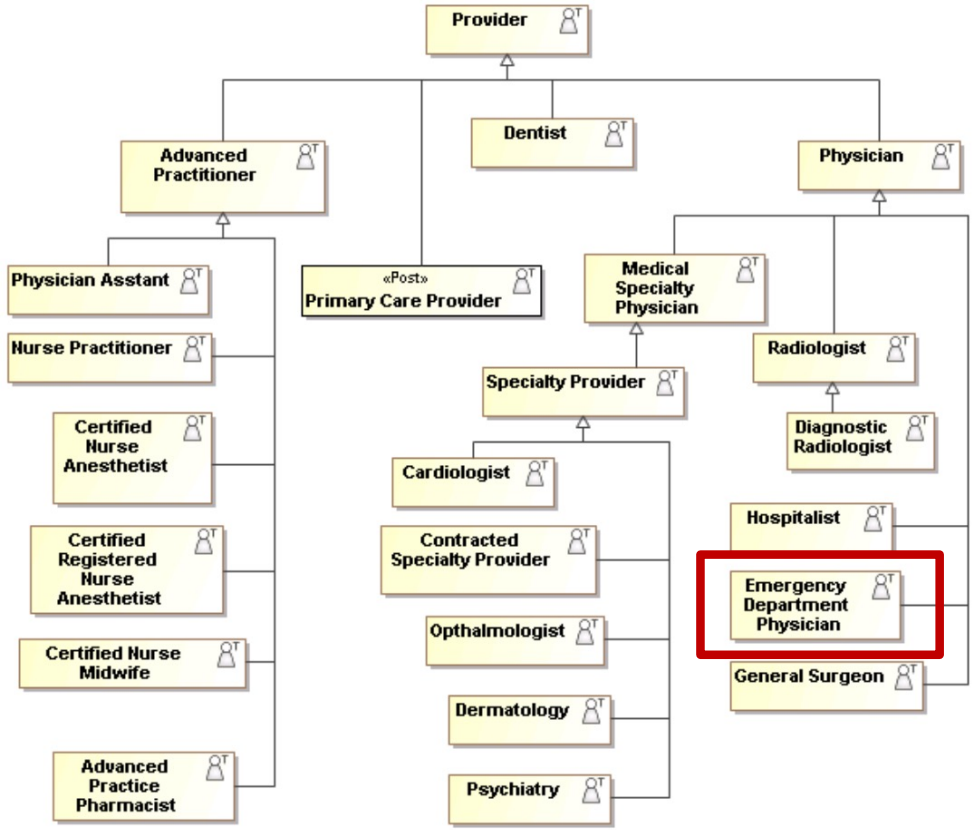


Example: ED POCUS

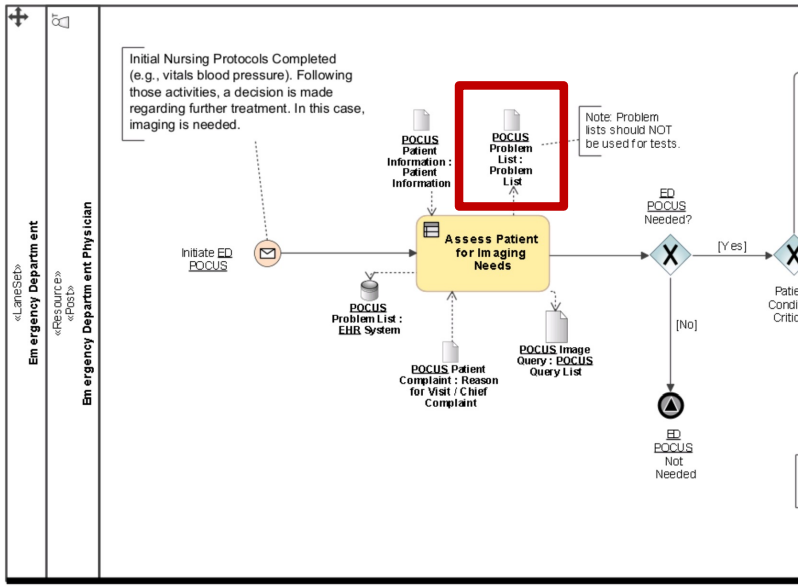


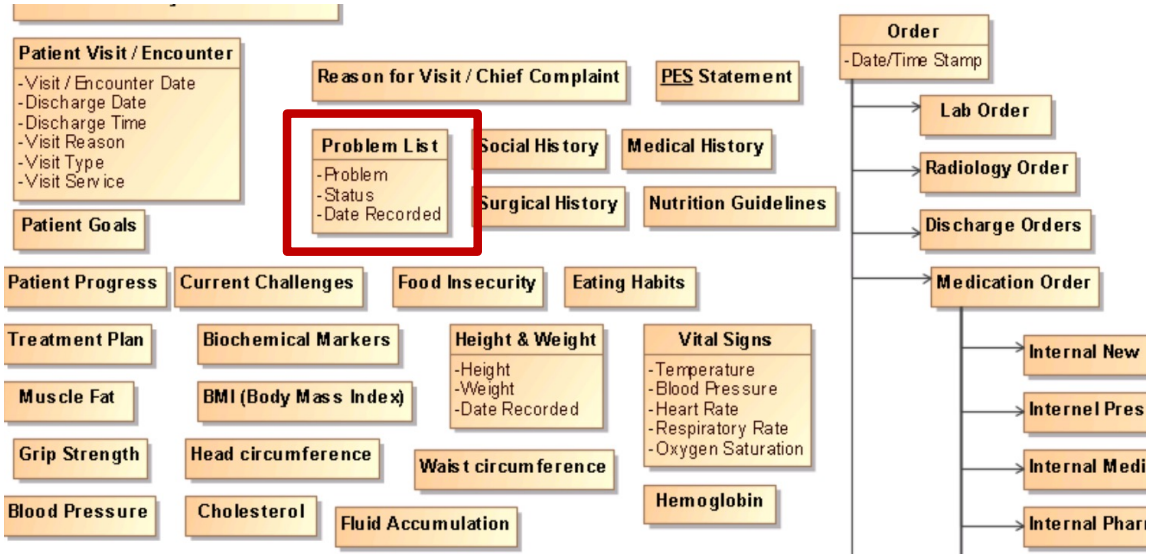
Tools: Standardize Library of Roles



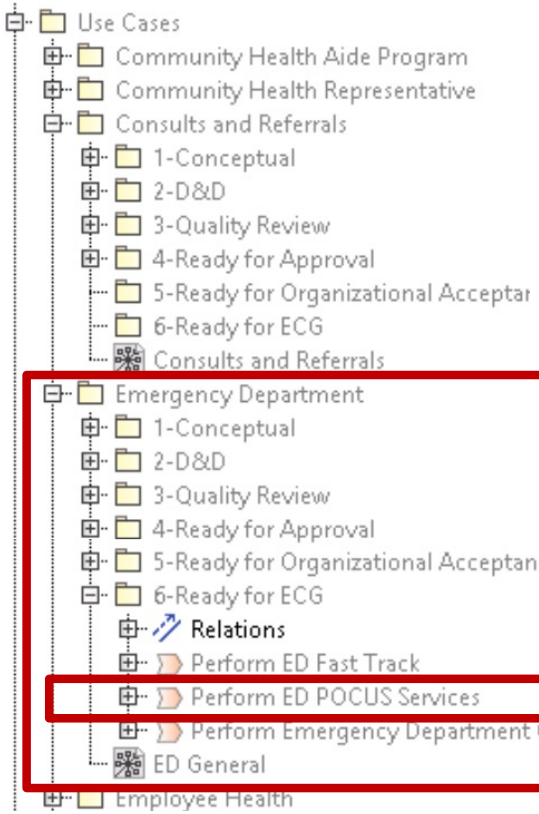


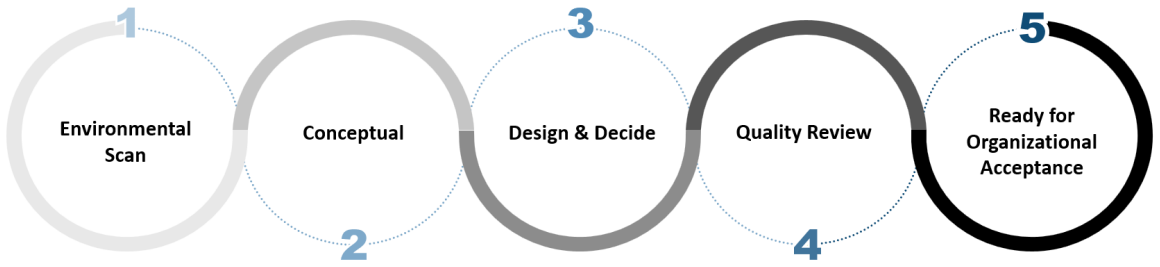
Tools: Standardize Library of Data

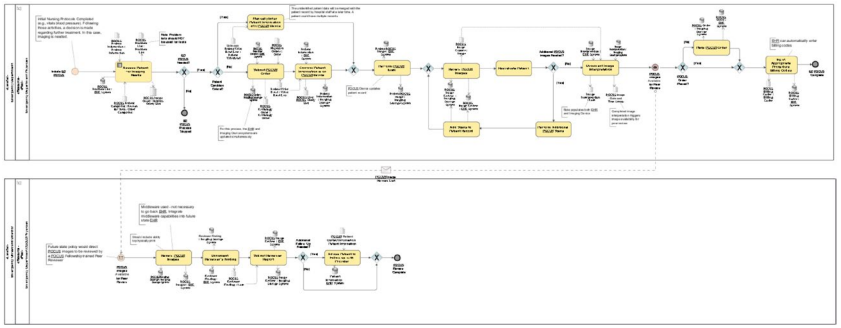




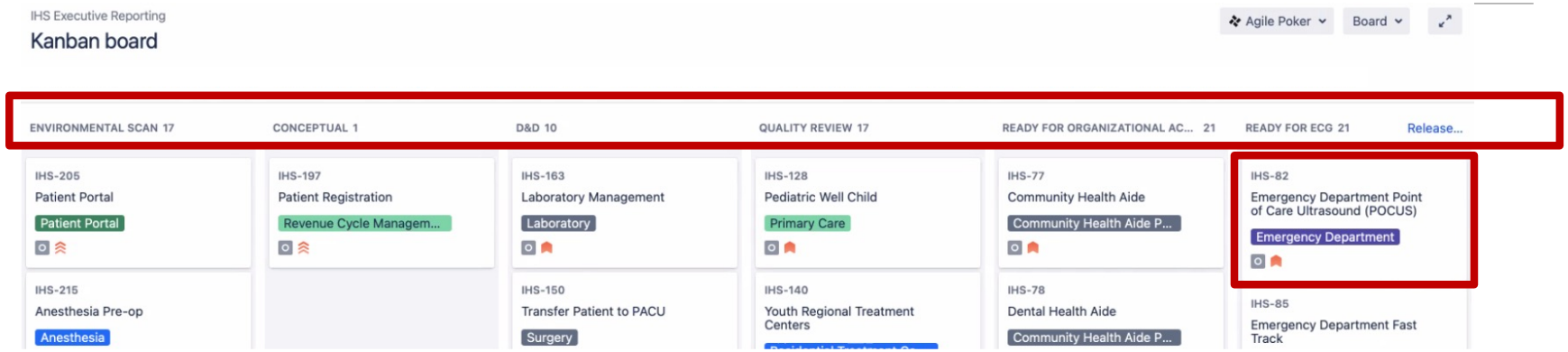
Tools: Standardize on Production Line

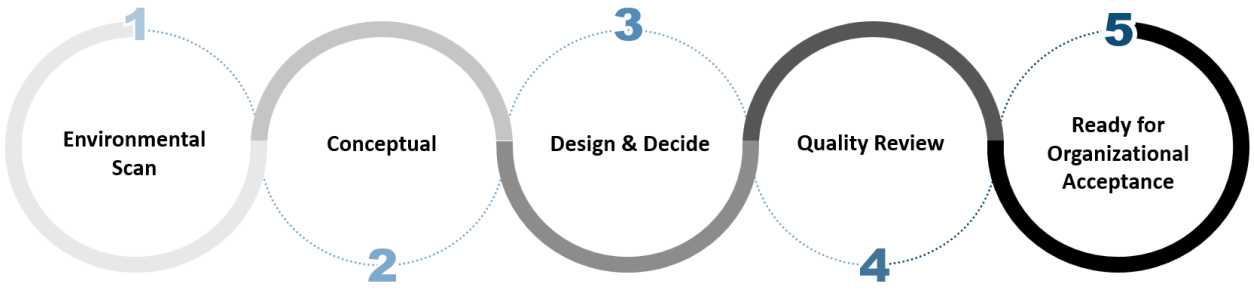






Tools: Standardize on Production Line





WRAP by the Numbers

Business Process Modeling to Date

Service Lines	WRAP Sessions	Process Models	Roles	Data Objects
25	312	84	162 *	277 *

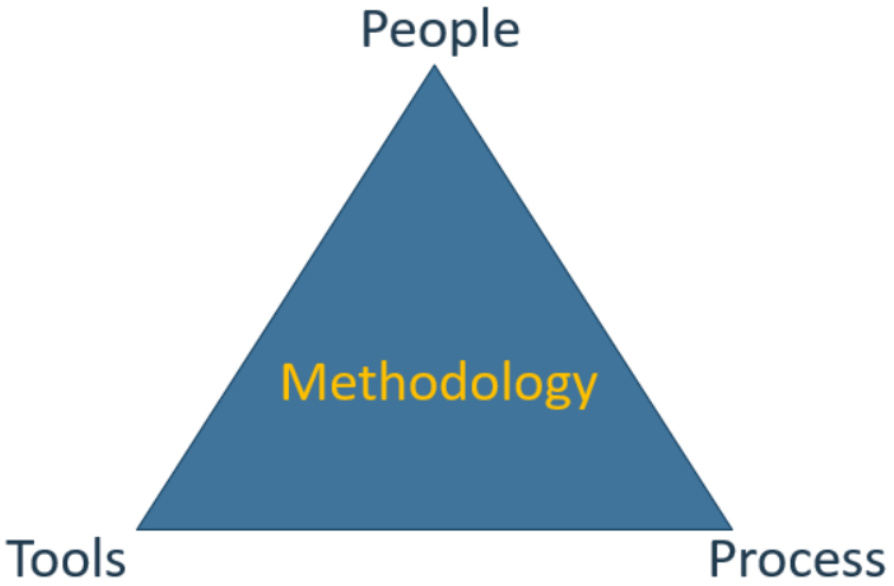
SME Engagement

12,300+	2,200+
Total Participant Encounters (2021 – Present)	Unique Participants (2021 – Present)

* Roles and Data Objects are hierarchal and not all are directly used

WRAP Methodology Provided

- Clarity and Direction
- Efficiency and Productivity
- Coordination and Collaboration
- Quality and Consistency
- Risk Management
- Scalability and Adaptability
- Measurement and Improvement



IHS Mission

To raise the physical, mental, social, and spiritual health of American Indians and Alaska Natives to the highest level

IHS Vision

Build healthy communities and quality health care systems through strong partnerships and culturally responsive practices

Questions?

Please email the Modernization Program at Modernization@ihs.gov

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Thank You

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Next Steps

Register for the Modernization Summit

Take the Modernization Awareness Survey

<<Coming Soon>>

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