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Integrated Systems Deployment Approach

Heather Woodward-Hagg, PhD

Acting Director, Veterans Engineering Resource Center (VERC)

National Program Office

Director, VA Center for Applied Systems Engineering

Agenda



- VHA as a Complex Adaptive System – Why it's Important to Understand and Manage
- System of Systems Approach – Goals and Key Questions
- System of Systems Approach – Value
- System of Systems Approach – How we do it
- Proposed Next Steps
- Recommended Approach and Timeline

VHA Healthcare as a Complex Adaptive System



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- Healthcare systems are complex adaptive systems. If permitted to, these systems adapt over time in response to changing physical, psychological or social conditions. Adaptations are self-organizing, with emergent patterns.
- Current VHA enterprise systems have evolved through adaptation (in contrast to intentional design and control), resulting in extensive fragmentation/customization across the enterprise and limited integration across systems.
- This adaptive design has resulted from gradual deviation from localized standards of practice as a result of a succession of small decisions, each a step away from the original norm and often based on empirical success from prior changes (and no obvious sacrifice of safety/quality). This is known as Normalization of Deviance and is a primary characteristic for organizations at risk for catastrophic systems failures.
- **Risk: Risk of failing to manage the system and subsequently repeating system wide failures**

System of Systems Approach Goals and Key Questions



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- The goals of the System of Systems Approach are to minimize redundancy within the system and to **maximize the potential for the customer to extract value from the system.** (contrast to clinical delivery)
- *Key Questions:*
 - *How to shift the paradigm of enterprise systems design/deployment away from adaptive design to intentional design and control of robust, highly integrated enterprise VHA systems?*
 - *How to balance design/control of enterprise VHA systems with local autonomy needed to maintain resiliency at the point of care delivery?*

System of Systems Approach

Why Important for IPT's work?



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- Taking a system of systems approach enables the IPT teams to evaluate the set of recommendations and initiatives and determine whether they will have the desired system impact.
- It enables the teams to ask – "where are the gaps and overlaps in making the system successful," answering the question of "do we want to implement all recommendations, and if not, what is our rationale?"
- It enables the teams to prioritize recommendations and initiatives against system success, which is *customer's ability to extract value from the system*.

System of Systems Approach

How do we do it?



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- Goal: maximize potential for the customer to extract value from the system
- Customer Focused – Human Centered Design
- Methods:
 - Customer Personas
 - Customer Journey Mapping (current state and future state)
 - Enterprise Service System Blueprint, including gaps / overlaps analysis
 - Multi-phase Rapid Deployment
- Facilitated sessions with system owners and subject matter experts

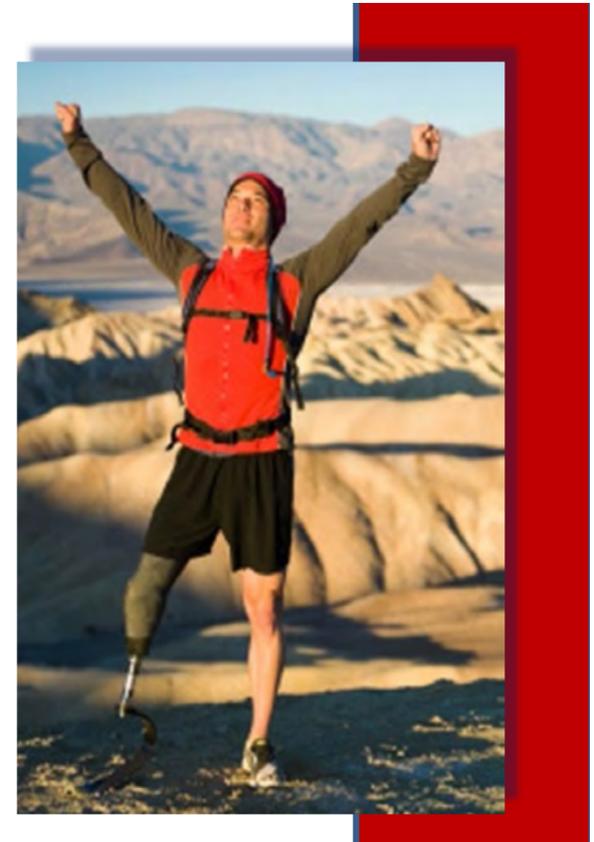
Human Centered Design



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Human Centered Design puts users at the center of a multi-stage problem solving process, with the goal to analyze and foresee their needs and desires in the system in order to effect **transformational** change.

Our Vision:
To design meaningful change **with** Veterans



Step 1: Develop Personas



- Personas are an abstract representation (i.e. model) or various user groups. They serve as a communication tool that helps to inform design decisions.



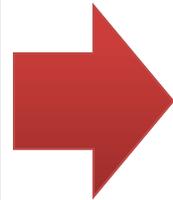
Persona Type: (2-5 word description)
Name: (use a realistic name)
Representation: (Primary/Secondary or %)

“Quote”

Day in the life: Tell us a little about this person using full sentences in narrative/story form. What does he/she want to accomplish? Family? Technology literacy? Chief concerns, complaints, DX...?..etc.

Age:
Era:
Gender:
Married:
Job:

<u>Fears & Frustrations</u>	<u>Values & Goals</u>	<u>How we can help?</u>
<ul style="list-style-type: none">Common objections during processWhat problem is stopping them?What are they worried about?	<ul style="list-style-type: none">Primary ValuesPrimary goalSecondary goalWhat do they hope to accomplish?	<ul style="list-style-type: none">How can we help them achieve their ideal experience?What is their ideal experience?What features or functions would the ideal experience have?





The Reluctant Aging Veteran
John Cooper

“I like hanging out with my fellow Veterans at the VA”

Day in the life: John is divorced, obese, and wheelchair bound on limited income coming in for a PACT and metal health appt. He finds it difficult to come to the VA, since he lives over an hour away and has to use the travel services. He hates revolving doors and crowds. He had a bad experience before, but this is his only option. He enjoys coming early to his appointment to socialize with his fellow Veterans.

Age: 65
Era: Vietnam
Gender: male
Married: divorced
Job: retired

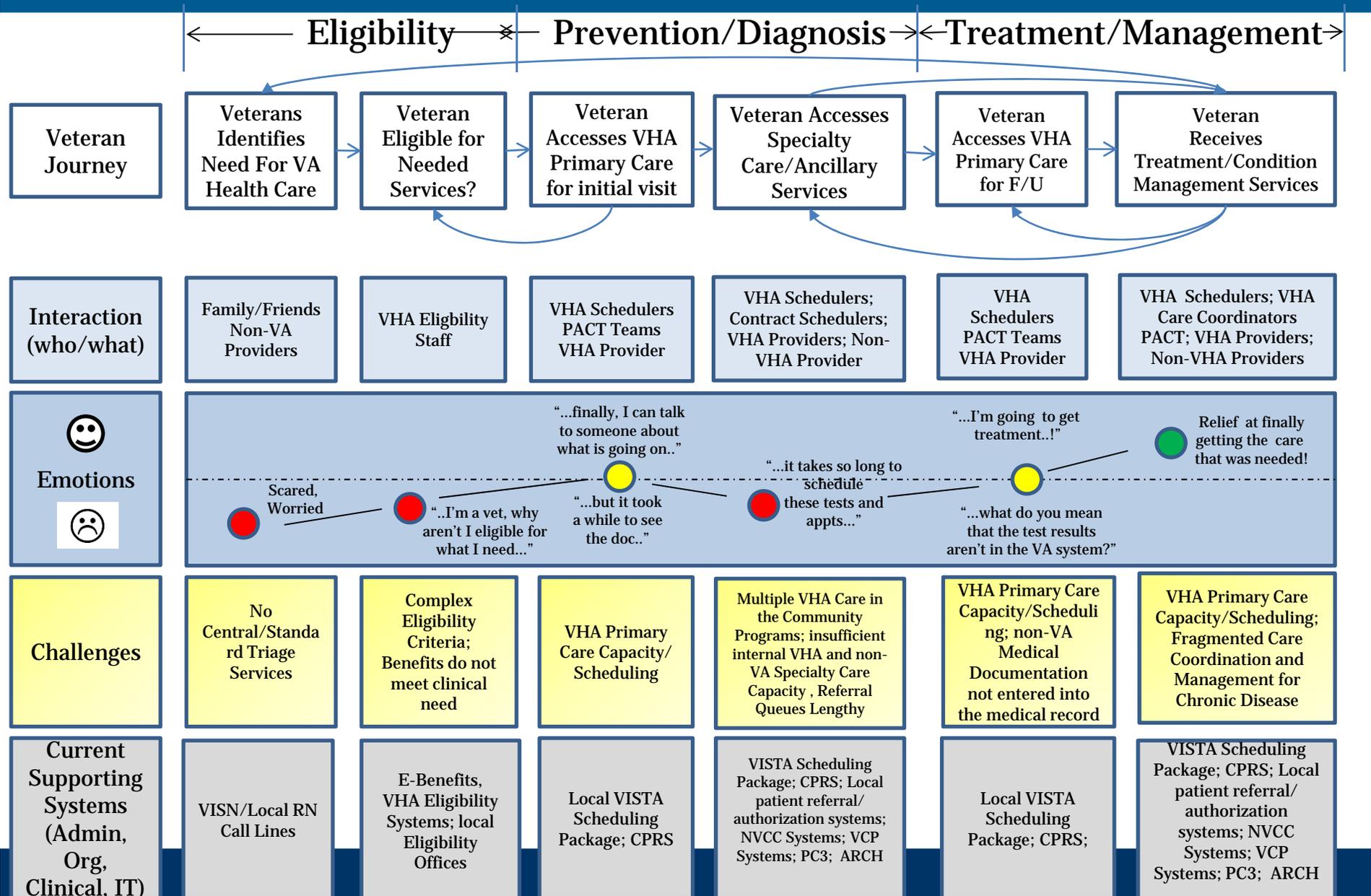
<u>Fears & Frustrations</u>	<u>Values & Goals</u>	<u>How can we (VA) help?</u>
<ul style="list-style-type: none">Fear of repeat of prior “Bad” VA experienceFear of receiving “bad” medical newsFeels he is dying soon and the end is nearHates loud noises and crowdsCan't navigate revolving doorsConfused by technology	<ul style="list-style-type: none">Get his medication and healthcareDoes not want to waitWants to lose weight & stop drinkingNeeds co-pay waiverSee his VSO for optionsWants to socialize	<ul style="list-style-type: none">Greeted by a knowledgeable personEasy in / out main door accessShort waiting in open, safe, and uncrowded spacesEasy to find where he is going with clear signage & transportation (e.g. golf cart)Supportive services easily available (e.g. VSO, Social Worker)

Step 2: Create a Current State Veterans Experience Journey Map of the System

(Current State – Outpatient/Non-Emergent)



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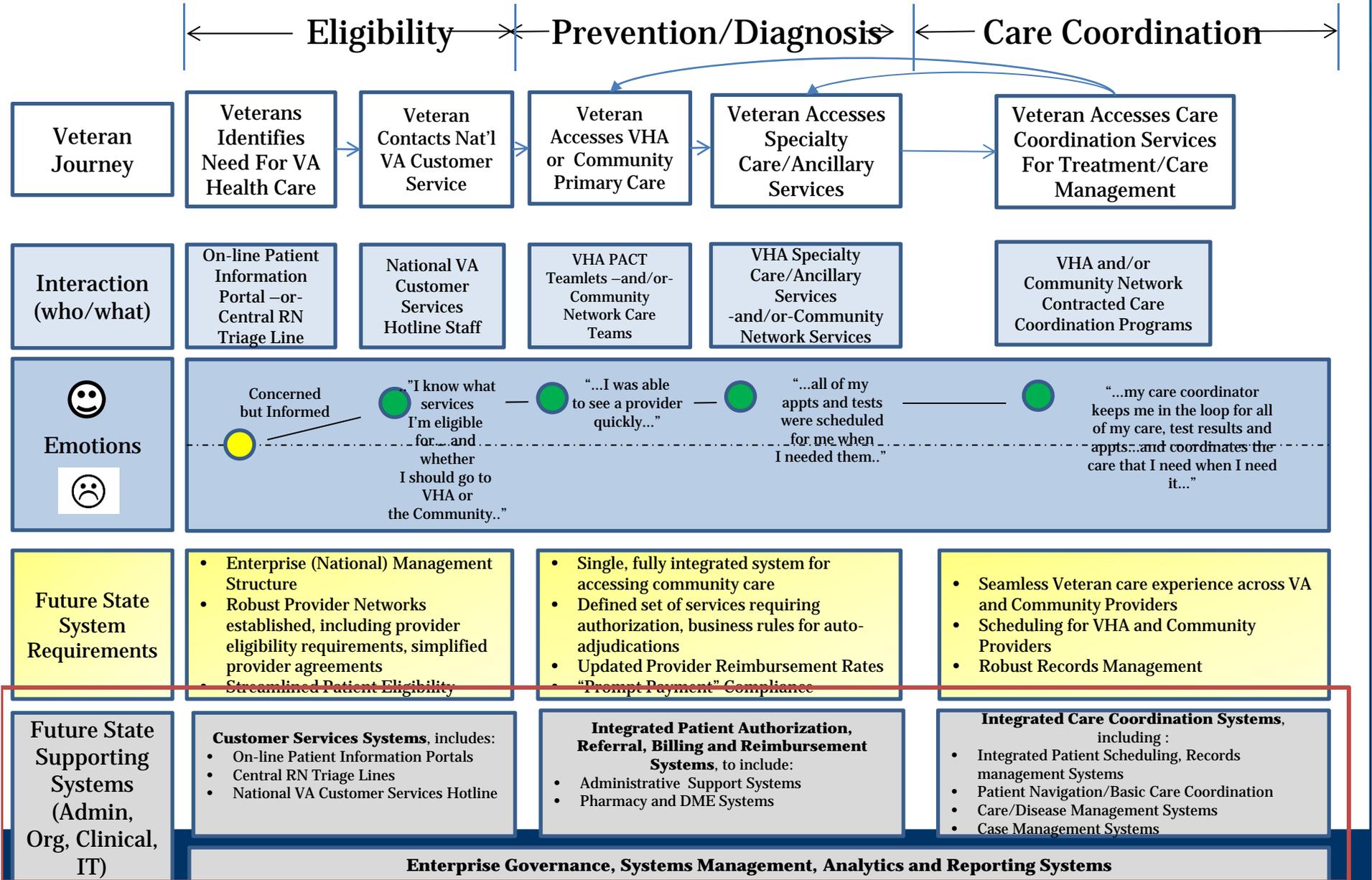


Step 3: Create a Future State Veterans Experience Journey Map

(Future State – Outpatient/Non-Emergent)



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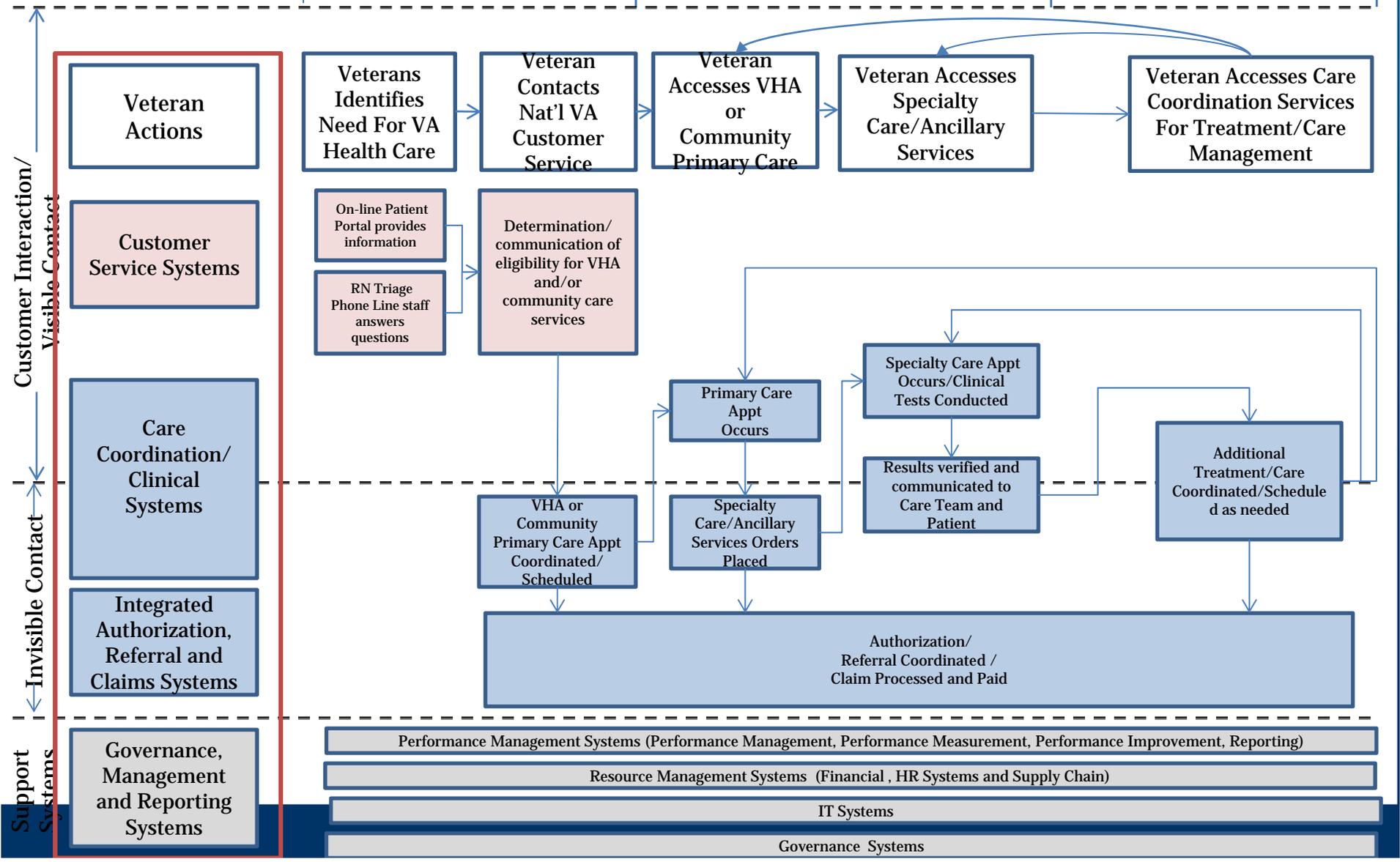


Step 4: Create a System Blueprint Access to Care (Future State – Outpatient/Non-Emergent)



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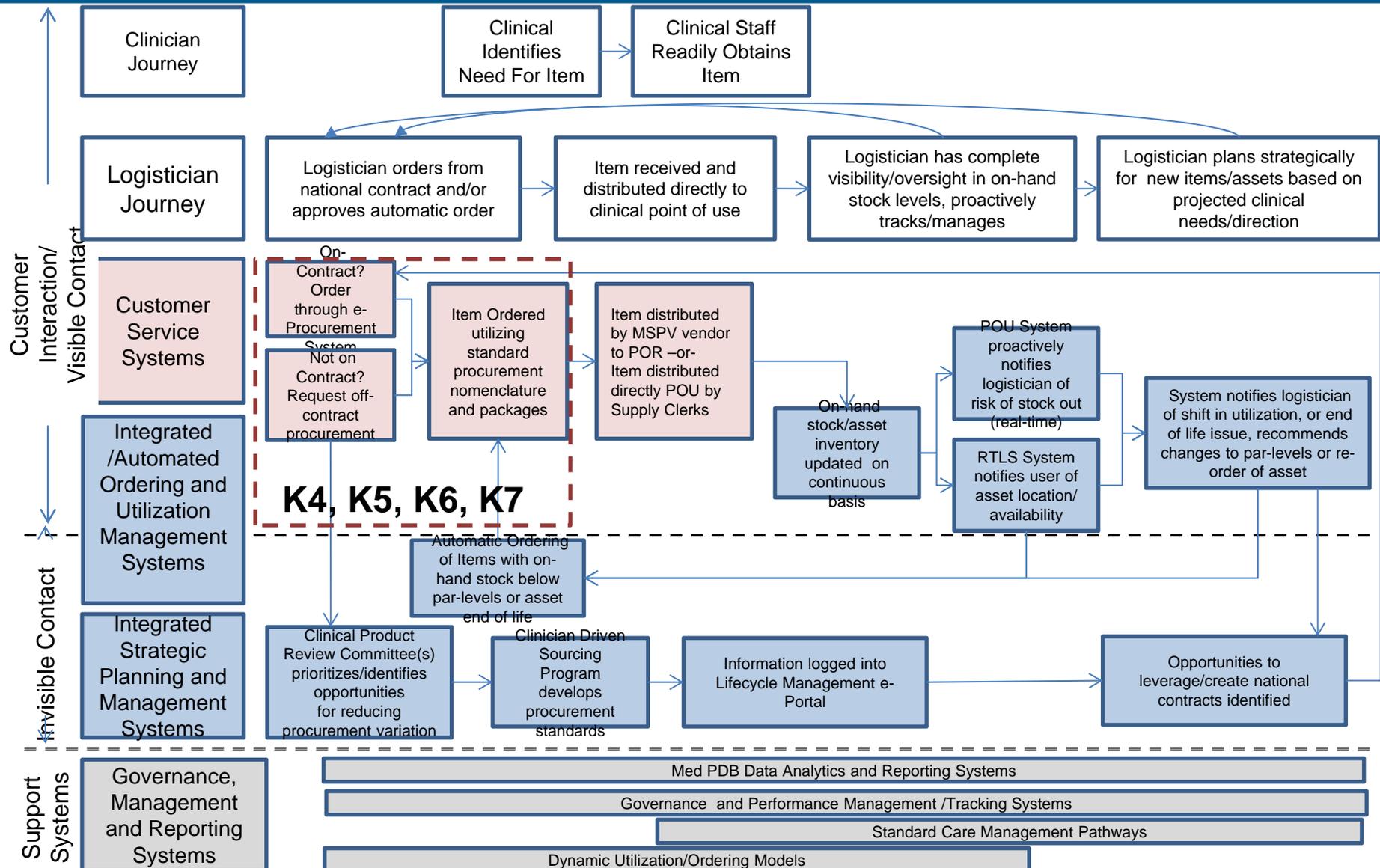
← Eligibility → ← Prevention/Diagnosis → ← Care Coordination →



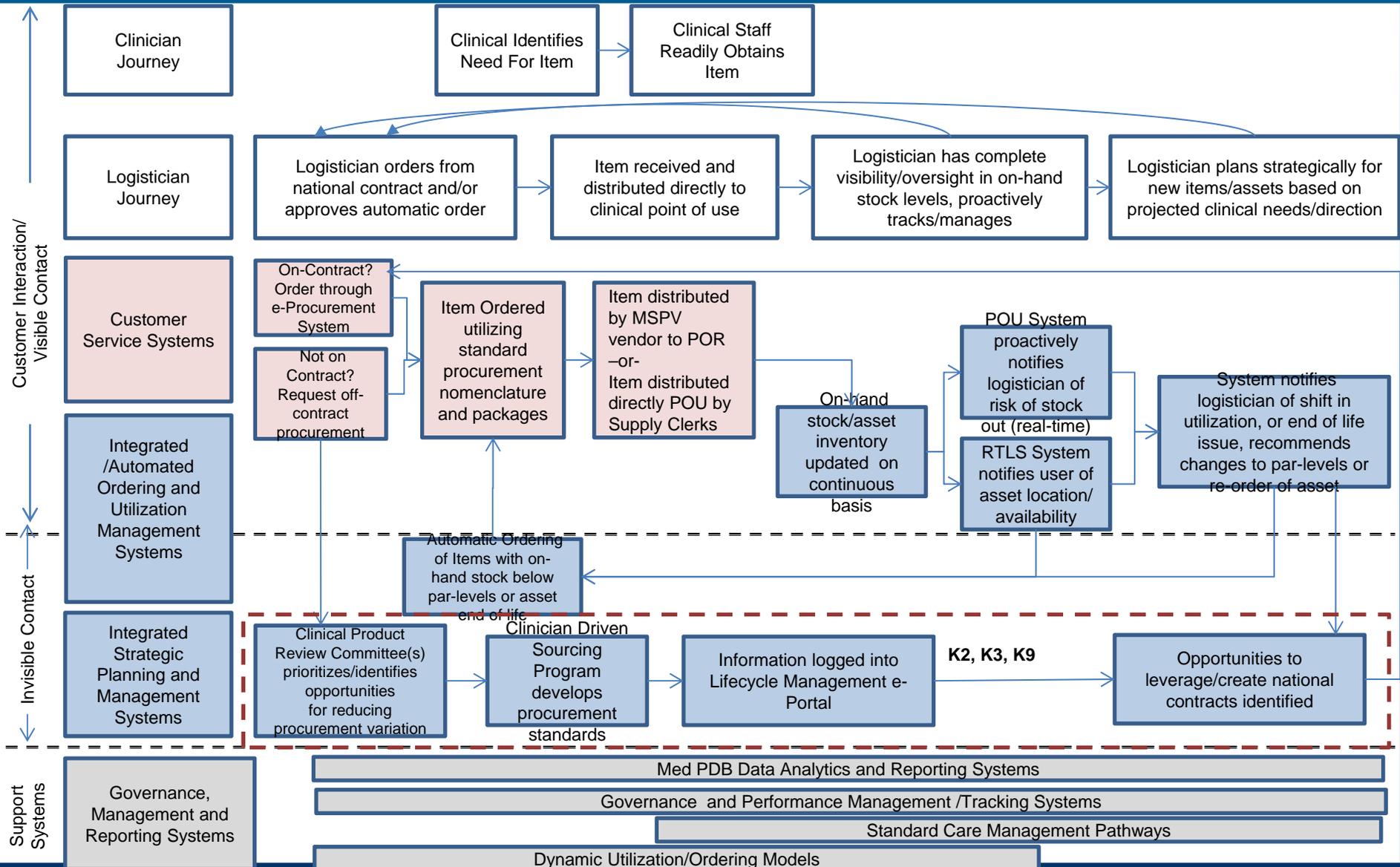
Supply Chain Logistics Modernization Current Systems Deployment - FY16

		Supply Chain High Level Process Steps/Supporting Systems								
		Plan		Source		Make/Deliver				
Assessment J Recommendations:		Type of Supply/ Equipment	Identify Need	Request	Acquire	Manage	Use	Maintain/ Track	Dispose	Replenish
5.2.1 Transform and consolidate VA's entire supply chain organization.		Expendables/ Non-Expendables	K.16 Integrated Supply Chain Architecture							
5.2.1a: Rationalize the organizational structure by consolidating entities into one integrated supply chain organization			K.15 Integrated Organizational Structure							
5.2.1.c Develop deep category-level expertise within the organization. 5.2.2.c Revise VA's approach to supply chain talent management.		Expendables/ Non-Expendables	K.10 Acquisition Management Framework/Facility Staffing Study Recommendations Deployment (VHA P&LO)							
5.2.2.b Standardize supply chain data and overlay user-friendly interfaces		Expendables/ Non-Expendables	K.12 GUI Overlay/FTT (VHA P&LO)				K.11 e-Commerce Capability			
5.2.1.b Establish robust performance management of supply and device procurement 5.2.2 Improve Key Enablers Required to Support the Transformation, IT, Data and HR 5.2.2.a Update or replace supply chain IT systems to make them fit for purpose. 5.2.3 Streamline, standardize, and integrate key processes. 5.2.3.c Standardize and simplify purchasing processes 5.2.3.a Expedite product selection and standardization in key product categories 5.2.3.b Rationalize contracting requirements wherever possible		Non-Expendables	K.2 Clinical Product Review Committee (CPRC) e-Portal (VHA P&LO + VERC)	K.6 Streamline Procurement	K.9 HTM LifeCycle Management Wave I, II, III (VHA P&LO + VERC)					
					K.3 Clinician Driven Sourcing (Cleveland Clinic Model)	K.5 Leverage Interagency Opportunities	Real Time Location System (RTLS)			
		K.1 MedPDB Analytics	K.4 MSPV-NG Systems (VHA P&LO)	SOARD (Maximo) Asset Management Systems (VHA P&LO)						
				K.7 Total Supply Support Wave I, II, III (VHA P&LO + VERC)						
5.2.3.d Systematically identify, collect data from, and propagate innovations		Expendables/ Non-Expendables	K.1 Supply Chain Integrated Operational Platform - IOP (VERC)							
			Minimally Viable Process/Systems (MVP/S)							
			Primarily Interfaced System							
			Fully Integrated System							

Example: Service System Blueprint (Future State – Integrated Supply Chain FY 16)



Example: Service System Blueprint (Future State – Integrated Supply Chain FY16)



Step 6: Create Multi-phased Deployment Plans



- Phase I - Minimally Viable Process/Systems (MVP/S): The MVP/S are the lowest level of standard process/systems that can be deployed across the enterprise with minimal resource investment (IT, personnel) while providing significant enhancement to currently provided services or products.
- Phase II - Interfaced System Deployment: The Interfaced Systems Deployment represents the next level of technical complexity within the deployment cycle and often includes introduction of new technologies or technology enhancements that are *interfaced* with the MVP/S introduced during Phase I.
- Phase III- Integrated System Deployment : The Integrated Systems Deployment is the final deployment phase. Fully or partially integrated systems (fully tested and refined during Phase II) are deployed at the enterprise level.





Backup Slides

VHA Key Initiatives alignment to Primary Systems (examples)



VHA Primary Systems (Notional)	VHA Key National Initiatives/Key Objectives (examples)				
	Open Access to Care	Implementation of Evidence Based Practice Standards	High Performing Network/Veterans Choice Program	Employee Retention/Recruitment	Supply Chain Modernization
•Customer Service Systems	X	X	X	X	X
•Care Coordination/Clinical Delivery Systems	X	X	X		X
•Clinical Application Systems	X	X	X		X
•Administrative/Business Systems	X	X	X	X	X
•Patient Safety Systems	X	X	X		X
•Performance Management Systems	X	X	X	X	X
•Resource Management Systems	X	X	X	X	X
•IT Systems	X	X	X		X
•Governance Systems	X	X	X	X	X

Changes to primary systems must be assessed for 1) alignment of across a specific key initiatives and 2) impact across all key initiatives utilizing those systems

"9-box" A3



Title: _____ Sponsor: _____ Coach: _____ Start Date: _____
 Owner: _____ Team Members: _____ Facilitator: _____ Updated on: _____ **A3**

1. Reasons for Action:

What are you talking about and why? What is the problem you are trying to solve?
 Clear, succinct background/problem statement serves as the "compass" for the project



Process Start: _____
 Process End: _____
 In Scope: _____
 Out of Scope: _____

2. Current State:

Where do things stand now? Facts, data, or metrics to indicate the problem:

attributes and process map picture

Relation to True North	Metric	Current State
People		
Service		
Quality		
Resources		

3. Target State:

What are the target conditions or measures? Establish target metrics (tied to box 2 of A3)

attributes and process map picture

Relation to TN	Metric	Current State	Target State
People			
Service			
Quality			
Resources			

4. Gap Analysis:

Why does the problem or need exist? What are the top contributors/root causes to the gap (tied to box 2 - 3 of A3)

Current State → GAP → Target State

Cause & Effect Diagram
5 Why's

Problem Statement	Direct Cause	Root Cause(s)

5. Countermeasures / Solution Approach:

Countermeasures - what do you propose to close the gap for those key processes?
 Ask how each root cause could be eliminated or minimized - at least 3 "hows" for each root cause

If we...	Then we expect...
Ex. Exam time ≠ proc. time	Adjust procedure times Modify xxx Add room for prep
Ex #2	Trial 1 Trial 2 Trial 3
Ex #3	Trial 1 Trial 2 Trial 3

6. Rapid Experiments:

Plan each experiment - what - who - when - where; Learn and improve as you go

Baseline	Target	Trial 1	Trial 2	Trial 3	Trial 4
Ex. Time to register: 13 min	5 min	12	7	13	4

Action photos during experiments

7. Implementation / Completion Plans:

What are the implementation plans? Who does what by when?
 Refine Standard Work, Train and Communicate

What	Who	By When

8. Confirmed State:

What were the actual results?
 Did you close the performance gap [does Box 8 = Box 3] - are we moving the metrics? Are we having the anticipated outcomes and sustaining them? Spread - how far, how fast? More Check-Act or new PDCA?

Pictures of "new" work

Relation to TN	Metric	Current State	Target State	Confirmed State
People				
Service				
Quality				
Resources				

9. Insights:

What were the insights or lessons learned?
 What's going well? What can be improved upon? What is the plan for improvement based on plus/delta? What new improvement opportunities and when will they be addressed?

What Worked Well? What Didn't Work Well?

Actions for Improvement:

Current State → GAP → Target State
 Where's the next big performance gap????

Team/Aim

Map/Measure

Map/Measure

Change

Change

Change

Sustain

Sustain

Sustain

Enterprise-Wide Knowledge Management Tool: The Hub

The Hub is a knowledge management tool developed through the VHA Veterans Engineering Resource Center (VERC), focused on continuous performance improvement. Scaling the Hub to an enterprise-wide platform will promote best practice sharing across administrations and staff offices, and enhance the capabilities of the Performance Improvement office through access to Field-level insights and successes.

Elements of the Hub



Models and capabilities to support evidence-based decision making, such as: Gap Analysis, Strategic Thinking, Capacity Planning, Cost/Benefit comparisons, Process Improvement, and Experimentation/Simulation



Opportunities to review, develop, and update operational plans to transition strategy into action and implement performance improvement



Metrics, dashboards, and toolkits to visualize and compare outcomes and metrics to national targets and strategies



Through the Hub, the Performance Improvement Office will create a enterprise-wide opportunity for the Field to continue driving performance improvement efforts. The Hub encourages users to capture current best practices and challenges while leveraging other elements within the platform to gain access to VA-wide performance improvement knowledge and tools for success.