ADOA-ADHS MEDSIS Project:

Report 3 Assessment Report

Prepared for: Arizona Department Of Administration

Prepared by: Info-Tech Research Group
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INFO~TECH RESEARCH GROUP

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Background

The Arizona Department of Administration (ADOA) was established by the Arizona State Legislature in 1973 to support the operation of state government. As the administrative and business operations hub of state government, ADOA provides medical and other health benefits to state employees, processing claims when employees get injured, maintaining office buildings for employees to work in, purchasing goods and services needed to conduct business, providing information technology and telecommunication services for employees, and much more. These centralized support services enable state agencies to focus their efforts on their own unique missions.

The current Medical Electronic Disease Surveillance Intelligence System (MEDSIS) solution has been modified over several years to adapt to Arizona's changing needs in disease surveillance and intelligence. Overtime, this has created challenges with accumulated technical debt, lack of scalability to meet current and future data needs, poor user experience, and inability to meet the needs of a growing user base with complex and competing priorities.

Additionally, the Arizona Department of Health Services (ADHS) has worked to reduce the number of disease surveillance systems that must be maintained by integrating surveillance for these and emerging diseases into MEDSIS. The MEDSIS system needs to be modernized to address the above challenges and be adaptable to efficiently meet the changing disease surveillance needs of the State and the Agency. MEDSIS's modernization aims to achieve the Agency's goal of sharing data with public health partners to strengthen the overall public health system with early warning detection, rapid response, outbreak management and establishment of trends in morbidity and mortality.

The State of Arizona Information Technology Authorization Committee (ITAC) would like an experienced and vendor-agnostic IV&V firm to partner with the State's project team. The objective of IV&V participation in project activities is to review plans and deliverables, ensure the Program adheres to the Project's master schedule, ensure overall project governance and planning is sufficient, identify gaps and suggest mitigation actions, and assist with conflict resolution between ADOA, the Vendors, and the Program's internal teams.

IV&V will issue reports that include findings, recommendations, progress on suggested actions, and an overall assessment of project plan viability (point-in-time), and project delivery practices being used to manage the Project.

Executive Summary

The State of Arizona (the "State") is working with the Arizona Department of Health Services (AzDHS) and the selected Vendor to modernize the existing MEDSIS system to address the challenge of reducing the number of disease surveillance systems by integrating surveillance for these and emerging diseases into MEDSIS. MEDSIS modernization is required to address the above challenge and be adaptable to efficiently meet the changing disease surveillance needs of the State and the Agency.

This independent assessment reviewed the Project documentation and interviewed key stakeholders. Because the outstanding represents such a large impact on the Project, this assessment has been completed under the assumption that the Change Request (CR) is approved unless otherwise noted. **The result of this assessment indicates that the Project has re-baselined and built out a robust schedule based upon a deeper understanding of the full requirement set needed for the Agency (AzDHS) to achieve its goals in replacing / modernizing legacy MEDSIS functionality. The State and the Vendor project team completed a holistic review of each identified EPIC and confirmed its Minimum Viable Product (MVP) status and, through a dual architect double-blind approach, determined its level of effort. The result is a deep understanding of the remaining work. Additionally, the Project's dashboarding and monitoring have improved, which will allow the Project team to leverage its historical information to predict a realistic velocity through to project close. The timeline includes both schedule and financial contingencies (10%) which can be easily monitored and reported upon. The ancillary workstreams (i.e. data migration, OCM, testing) have reviewed their planning and adjusted where required to reflect the additional functional complexity. The Project has removed its Pilot Phase and instead is focusing on expanding its UAT stakeholder base and increasing the UAT length. This will reduce planning complexity but will require additional granular planning from the UAT and OCM teams. The Project has a known set of potential risks (ref. slide 10: Initial / Onset Risk Summary) which it should monitor and track.**

Key Findings: Plan Viability	Key Findings: Project Delivery Practices
• With the departure of the legacy Product Owner, DHS is exploring opportunities to right-size MEDSIS project roles. • Additional areas within DHS remain single-threaded related to MEDSIS project work (i.e., architecture). These areas could be at risk for burnout due to over-allocation and ongoing operational pull. • The Project's originally selected API testing tool encountered PII retention issues. The identification of this issue resulted in the immediate re-evaluation and reselection of the Project's API testing tool. • A robust change control process has been implemented to support requirements development and ensure adherence to the true MVP of the new MEDSIS solution. • The Project team, inclusive of the Vendor, is working towards documenting and socializing the Critical Success Factors. • The nature of the solution (Cloud-based microservice architecture) implies that triaging emergent issues post-implementation will require a multi-member (SWAT) team-based approach.	• The Executive Leadership and sponsorship teams remain actively involved. • The recent CR includes some concession of vendor services. • The Project may have been able to produce a product on the existing timeline, but larger EPICS would have been missing critical business functionality and the original PIJ would not have been satisfied. • The drop-dead due dates for UAT planning are still required. • Due to the breadth of change required, each user-story was individually reviewed by the Product Owner, and its effort was determined through a double-blind architectural review. Where opinions differed on the level of effort, the higher effort was taken. • Assumptions for the Change Request (CR) need to be added to risk management logging for downstream monitoring. • Key supporting business teams are facing staffing shortages. These project risks need to be noted and mitigation planning should be put in place.

Assessment Findings & Recommendations

Assessment Component Health Trend

	Assessment Component	Report 1	Report 2	Report 3	Report 4	Report 5	Report 6
Plan Viability	1. Completeness of Plan	⇨	⇩	⇧			
	2. Timeline	⇨	⇩	⇧			
	3. Staff Levels and Skills	⇨	⇨	⇩			
	4. Design and Security	⇨	⇩	⇨			
	5. Technical Platform and Interfaces	⇨	⇩	⇧			
	6. Implementation Methodology	⇨	⇨	⇨			
	7. Business Implementation Approach	⇨	⇨	⇨			
	8. Data Management/Migration/Conversion	⇨	⇧	⇧			
	9. Testing and Quality Assurance	⇨	⇨	⇨			
	10. Organizational Change	⇨	⇨	⇨			
	11. Post-Implementation Readiness	⇨	⇩	⇧			
Project Delivery Practices	12. Project Governance	⇨	⇩	⇧			
	13. Financial Management	⇨	⇩	⇨			
	14. Vendor and Oversight Management	⇨	⇩	⇨			
	15. Schedule Management	⇨	⇩	⇧			
	16. Scope Management	⇨	⇩	⇧			
	17. Risk Management	⇨	⇩	⇧			
	18. Resource Management	⇨	⇩	⇧			
	19. Communication Management	⇨	⇩	⇨			
	20. Documentation and Deliverable Management	⇨	⇨	⇨			

Report 3 Assessment Summary

Report 3	Plan Viability	Key Observations
⇧	1. Completeness of Plan	In the last reporting period, the Project has re-baselined the high-level Project roadmap which contains additional complexity required to ensure a robust and sustainable new MEDSIS solution. The roadmap/planning are awaiting approval from oversight bodies.
⇧	2. Timeline	The original project timeline is no longer viable due to the increase in the complexity of originally identified critical MVP requirements. The proposed re-factored timeline with the new solution's Go-Live of July 2025 is viable given the known scope.
⇩	3. Staff Levels and Skills	The departure of the legacy Product Owner, DHS is exploring opportunities to right-size MEDSIS project roles. Areas within DHS are single-threaded related to MEDSIS project work (i.e., architecture / informatics) and could be at risk for burnout or pulled operationally.
⇨	4. Design and Security	The Project's originally selected API testing tool encountered PII retention issues. The identification of this issue resulted in the immediate re-evaluation and reselection of the Project's API testing tool.
⇧	5. Technical Platform and Interfaces	The new MEDSIS platform has been designed as a scalable solution that can adapt to the Agency's future needs. The MEDSIS design decentralizes and decreases the risk of sole-source technical resource reliance but will also increase the complexity of issue resolution.
⇨	6. Implementation Methodology	**Ref. slide 20: Implementation Methodology** for a list of project refinements that resulted in increased planning viability, velocity, and efficiency. The project has a robust change control process to support its SDLC and ensure adherence to the true MVP.
⇨	7. Business Implementation Approach	**Ref. slide 21: Business Implementation Approach** for noted BPIs as a result of new MEDSIS. The Project continues to involve business users at appropriate stages for signoffs. The Project team is working on documenting and socializing Critical Success Factors
⇧	8. Data Management/Migration/Conversion	Substantial progress has been in creating and detailing the data migration planning. Additionally, ample progress has been made in the conversion cycles. **Ref. slide 22: Data management/Migration/Conversion** for risks related to this component.
⇨	9. Testing and Quality Assurance	The Project's re-baselined schedule has removed the Pilot Phase, extended UAT, and expanded the stakeholder set to include external people of interest. This will reduce planning efforts but increase UAT planning and OCM efforts.
⇨	10. Organizational Change	The OCM planning and activities are largely vendor-led. The Vendor has excellent knowledge of AzDHS's specific needs due to previous projects. The OCM roadmap has been refactored. The UAT stakeholder set will need to be confirmed via UAT planning.
⇧	11. Post-Implementation Readiness	The nature of the solution (Cloud-based microservice architecture) implies that triaging emergent issues post-implementation will require a multi-member (SWAT) team-based approach. Project re-baseline efforts have delayed the requirements for cutover planning.

Report 3 Assessment Summary

Report 3	Project Delivery Practices	Key Observations
⇧	12. Project Governance	The demarcations of duties between the Product Owner and the Project Manager (PM) should be revisited. The onboarding of a new PO is an opportunity to right-size the PM responsibilities. Executive Leadership and sponsorship teams remain actively involved.
⇨	13. Financial Management	The CR is reflective of the additional time and expense the Vendor is projecting. The Project would not have been able to complete the additional required complexity (scope) within the original budget. A 10% cost contingency is built into the financial forecast.
⇨	14. Vendor and Oversight Management	The Vendor/State partnership remains a project strength. The recent CR includes some concession of vendor services. The Vendor is regularly performing internal audits to ensure the project plan is viable including LOE checks and risk reviews.
⇧	15. Schedule Management	The high-level sprint roadmap detailing delivery dates for all planned EPICS. Each sprint is subdivided into user-stories which have been double-blind vetted for LOE. The velocity required to maintain the story points has been vetted through past averaging.
⇧	16. Scope Management	Due to the breadth of change required, each user-story was individually reviewed by the PO, and its effort was determined through both a Vendor and State double-blind architectural review. Where opinions differed on the LOE, the higher effort was taken.
⇧	17. Risk Management	Risk management processes are strong; with sufficient logging of required information and meeting cadences to support the Project's risk profile. Planning assumptions for the Change Request (CR) need to be added to risk management logging for downstream monitoring.
⇧	18. Resource Management	A project RACI should be revisited given the recent departure of key AzDHS project personnel. AzDHS has single-threaded resources. These resources are always at risk of being pulled into emergent or overburdened operational areas.
⇨	19. Communication Management	The departing Product Owner is a lynchpin in project communication. With their departure, additional care will be required to review stakeholder registries and ensure communication breadth. Communication planning was updated to reflect the Change Request (CR).
⇨	20. Documentation and Deliverable Management	The infrastructure team was well supported through the departure of the supporting vendor resource. The KT sessions were long and structured to support End-to-End requirements. The Project repository is reasonably well organized, and the taxonomy is appropriate.

Report 3 Assessment Summary

Key Recommendations:

The current assessment includes several recommendations for the Project to position its solution for success:

Staff Level & Skills / Resource Management:

- Monitor for increased work burden on single-threaded resources.
- Monitor for impacts on project work and velocity due to key resource turnover.
- Conduct gap analysis on skill sets required to support the new system post-implementation.
- Determine post-implementation OCM needs.
- Ensure the demarcations of duties between the new Product Owner and Project Manager are reflective of the new actual.
- Review and update the Project's RACI to ensure it is reflective of new actual and communicated out.

Learning and Development:

- Ensure KT session outputs are measurable.
- Contemplate need for KT session documentation.
- Crosswalk training documentation planning to project tools.

Risk Management:

- Document, monitor, and mitigate the risk of reference data updates being performed outside the legacy MEDSIS database via a manual process.
- Ensure all role-specific resource risks are documented / pre-existing role-specific risk severity and mitigations are reflective of actual.
- Ensure planning assumptions for the re-baselined implementation are documented and regularly reviewed within the risk process.
- Ensure understaffed business team risks are noted.

Planning:

- Complete UAT Planning.
- Ensure UAT planning dovetails with OCM.
- Ensure drop-dead due dates for UAT strategy / planning are documented and socialized.
- Socialize UAT plan.
- Ensure Communication Plans include UAT stakeholders.

Report 4 IV&V assessment will occur in October.

Initial / Onset Risk Summary

Potential Programmatic Risks:

At program onset, the IV&V practitioners identified the following risks as the most critical to the program's success:

- **Assumptions around Agency velocity to support (1/3rd story points) are not vetted.**
  - A reasonably large percentage comprising key component deliverables are expected to be developed by the State team. The skills required to complete this at the determined velocity have not been vetted.
- **Training / KT requirements are not road-mapped and confirmed.**
  - State contributions are required to deliver portions of functionality. The training / KT requirements are not cross-walked to schedule / tool requirements. Additionally, the tool to measure retention of knowledge is absent.
- **Product Owner changeover could impact velocity.**
  - The current Product Owner has been supporting the legacy system for a substantial period of time. The incoming Product Owner could impact project velocity in unanticipated ways.
- **UAT test availability has not been confirmed.**
  - UAT strategy and planning is not complete. It is difficult to determine whether there are sufficient testers with sufficient availability at this stage.
- **UAT stakeholders will require more lead time to be onboarded to test.**
  - External product testers often require additional training on solution navigation, and project tools, to move through testing. Their testing velocities are often less then project counterparts.

Initial / Onset Risk Summary Cont'd

Potential Programmatic Risks:

At program onset, the IV&V practitioners identified the following risks as the most critical to the program's success:

- **Unsure of triaging support tools in remote environments**
  - External testers will occasionally struggle to determine their part in triaging issues (against bugs, missed requirements, wrong requirements). The triaging process may need to be simplified to move these testers through cases.
- **The schedule includes a reduction in velocity during holidays, but the State's development team is expected to increase velocity over Holiday periods.**
  - The end-of-year period often includes more vacation then in other periods. The State resources are expected to ramp velocity during a period in which they may not be fully engaged.
- **Key resources are single-threaded.**
  - Like the product, many State resources are single-threaded. The loss of these key resources could result in significant impacts on velocity.
- **The Agency has some competing / parallel product/project deliveries.**
  - It is feasible that these competing / parallel initiatives have hidden critical path dependencies which could create delays and/or could pull critical, single-threaded, resources to solve emergent, unforeseen, issues.
- **Post-implementation change support.**
  - The Project is expected to continue the development of potential enhancements post-implementation. Workstreams for Development, QA, and deployment are considered, but Organizational Change Management (OCM) has not been considered. This could leave key stakeholders uninformed.

Appendix A: Independent Assessment Process

Independent Assessment Process

Gather Baseline Information

- Review Project Documentation, including:
  - CIO Briefing Reports
  - Weekly Status Reports
  - Program Finance Slides
  - Work Stream Work Plans
  - Contractor Organization Chart
  - Risk Register
  - Roadblock Register
  - Decision Log
  - IV&V Tracking List
- Conduct Stakeholder Interviews

Perform Analysis

- Analyze Findings
- Determine Any Gaps
- Score Each Plan Viability & Project Delivery Practices Component:
  - Trend = Improved
  - Trend = Sustained
  - Trend = Regressed
  - Green = Strong Health
    - Yellow = Moderate Health
    - Red = Poor Health
- Assess Progress of the Previous Month's Recommendations

Develop Report

- Share Best Practices
- Report Key Findings
- Report Progress on Previous Month's Recommendations
- Report This Month's Recommendations

Appendix B: Detailed Assessment

1. Completeness of Plan

Best Practices

- Track against a baselined plan that includes all in-scope phases.
- Validate estimates.
- Identify and monitor the critical path of the project.
- Review and obtain key stakeholders' sign-off.
- Document project interdependencies/dependencies and constraints.
- Track against identified milestones.
- Each component of the project plan or work breakdown structure is assigned to a single point of responsibility.
- Perform regular risk assessment/review of the plan.
- Refactor plan as appropriate when tolerances are exceeded.

Key Findings

Report 2 ⇩ Report 3 ⇧

- In the last reporting period, the Project has re-baselined the high-level Project roadmap. This roadmap contains the additional complexity required to ensure a robust and sustainable new MEDSIS solution.
- The Project solicited input from the following key resources to confirm planning viability and buy-in: AzDHS Executive Leadership, Business Sponsorship, Product Ownership, and Technical SMEs.
- The Project's high-level roadmap and planning are awaiting approval from oversight bodies.
- OCM and Data Migration planning has been adjusted to reflect the new planning.
- UAT planning has not been completed. The Project is encouraged to define and document its UAT strategy early.

Previous Recommendations

		Progress
1.1	Define due dates for missing planning.	• Partial
1.2	Confirm and approve high-level Project/Product roadmap.	• Complete
1.3	Prioritize desired features/EPICS and map it back to the high-level roadmap.	• Complete
1.4	Revisit planning assumptions.	• Complete

Report 3's Recommendations

New

1.5 Complete UAT Planning.

Ongoing

1.1 Define due dates for missing planning.

2. Timeline

Trend = Improved | Green = Strong Health
Trend = Sustained | Yellow = Moderate Health
Trend = Regressed | Red = Poor Health

Best Practices

- Develop a complete project schedule with all tasks, activities, resources, effort and duration.
- Break the project down into major phases and sub-phases.
- Break sub-phases down into tasks and sequenced in the most logical manner.
- Share timeline with sponsor, stakeholders and project team.
- Keep the project on schedule within 10%.
- Ensure sufficient time exists to complete the project if managed well.

Key Findings

Report 2 ⇩ Report 3 ⇧

- The original high-level project timeline with a planned Go-Live of September 2024 is no longer viable due to the increase in the complexity of originally identified critical MVP requirements.
- Without a timeline extension, there is a risk that the remaining development time will not be adequate to form a product.

Assuming the change request is approved:

- The proposed re-factored timeline with the new solution's Go-Live of July 2025 is viable given the known scope.
- Due to the nature of the highly complex and customizable new MEDSIS solution, the re-baselining has allotted a 10% contingency to account for any unplanned requirement complexities.
- The Project's new timeline impact on related initiatives (i.e. DMI) is being explored.

Previous Recommendations		Progress
2.1	Update timeline following recommendation 1.1 as required.	• Partial
2.2	Determine risks to timeline of gapped planning.	• Complete
2.3	Determine timeline risks for interface communications.	• Complete
2.5	Contemplate re-baselining with a combination of current information and assumptions to ensure funding availability and project viability.	• Complete

Report 3's Recommendations

Ongoing

2.1 Update timeline following recommendation 1.1 as required.

3. Staff Levels and Skills

Best Practices

- Project resources (Program Manager and delivery team) have previous experience with projects of this nature.
- Create a staffing plan that matches required skills to those available and gaps as well as how to fill those gaps.
- Give team members regular feedback on the project performance that evaluates both their performance and interpersonal skills.
- Create options for if there is a shortage on time or knowledge from the resources on the project.
- Appropriately on-board resources.
- Appropriately engage external stakeholders.
- Ensure roles and responsibilities are clearly defined and adhered to.

Key Findings

Report 2 ⇨ Report 3 ⇩

- In the next reporting period, the Project will lose the key MEDSIS SME. A candidate has been identified as the new Product Owner and is moving through the Agency's hiring processes.
- With the departure of the legacy Product Owner, DHS is exploring opportunities to right-size MEDSIS project roles.
- Additional areas within DHS remain single-threaded related to MEDSIS project work (i.e., architecture). These areas could be at risk for burnout due to over-allocation and ongoing operational pull.
- The State informatics team has several openings. The team may struggle to support operational work, let alone key project deliverables / approvals.
- The Vendor has onboarded the following resources:
  - Learning and Development,
  - SLDC Resources,
  - Business Analyst.

Previous Recommendations

	Previous Recommendations	Progress
3.1	Conduct gap analysis on skill sets required to support new system post-implementation.	• Partial
3.2	Develop a formal training plan.	• Partial

Report 3's Recommendations

New

3.3 Monitor for increased work burden on single-threaded resources.

3.4 Monitor for impacts on project work and velocity due to key resource turnover.

Ongoing

3.1 Conduct gap analysis on skill sets required to support new system post-implementation.

3.2 Develop a formal training plan.

4. Design and Security

Best Practices

- Identify and classify data that falls under the Personally Identifiable Information (PII).
- Review the Systems Security Plan and validate its function and compliance with statewide information security program, statewide data classification policy, and the contingency planning policy.
- Identify and assess internal and external risks to the security, confidentiality, and/or the integrity of its information assets.
- Select and implement appropriate physical, administrative, and technical security controls to minimize the risk identified.
- Leverage a "Security By Design" approach, ensuring design decisions encapsulate security needs through a structured security review.

Key Findings

Report 2 ⇩ Report 3 ⇨

- The Project's originally selected API testing tool encountered PII retention issues. The identification of this issue resulted in the immediate re-evaluation and reselection of the Project's API testing tool.
- The Agency is developing specific Penetration Testing standards to raise its baseline security requirements higher than State-specific requirements. If Penetration Testing is to occur on the MEDSIS platform while in development specific scheduling discussions need to occur.
- The State and Vendor have projected the cloud costs through implementation and post-go-live. The State and Vendor are aligned on cost. Leadership has been informed of downstream cloud-specific support costs.

Previous Recommendations		Progress
4.1	Determine not-to-exceed cloud costs.	• Complete
4.4	Identify and confirm new MEDSIS security roles.	• Complete
4.5	Assign specific ownership of MEDSIS Project security management.	• Complete
4.6	Confirm downstream ownership of MEDSIS Product security management.	• Partial
4.7	Consider upgrading the security approach to include threat condition modelling, cyber security threat modelling, and penetration testing.	• Partial

Report 3's Recommendations

Ongoing

4.6 Confirm downstream ownership of MEDSIS Product security management.

4.7 Consider upgrading the security approach to include threat condition modelling, cyber security threat modelling, and penetration testing.

5. Technical Platform and Interfaces

Best Practices

- Develop a technology implementation plan
- Ensure the technology delivery process is planned to align with the internal customer's timeline need and constraints (e.g., adjust release to periods of down time in customer business cycle)
- Document technology and support requirements
- Develop and monitor key technical and support metrics
- Review documented architectural information and determine necessary integration and interfaces
- Engage external entities for interface development (as needed)
- Mitigate technical constraints – hardware, software, resources

Key Findings

Report 2 ⇩ Report 3 ⇧

- The lack of planning to support the original vision of the "Pilot Period" in advance of Go-Live necessitated a re-evaluation of this approach. As a result, there was a decision to remove this period from the project plan as part of the re-baselining efforts.
- The new MEDSIS platform has been designed as a scalable solution that can adapt to the Agency's future needs.
- The MEDSIS design decentralizes and decreases the risk of sole-source technical resource reliance but will also increase the complexity of issue resolution.
- The infrastructure team has developed specific planning to cross-train resources on cloud infrastructure. This has reduced support / release risk downstream.

Previous Recommendations

		Progress
5.2	Monitor any risks of the gapped Agency Enterprise Architect position.	• Ongoing
5.3	Document single-threaded release management risk.	• Complete
5.4	Contemplate resource redundancy for MEDSIS release management.	• Complete
5.5	Ensure knowledge transfer planning includes: • Release Management, • Security Management, • Changes to Agency's Release Management processes.	• Complete

Report 3's Recommendations

Ongoing

5.2 Monitor any risks of the gapped Agency Enterprise Architect position.

6. Implementation Methodology

Best Practices

- Document business implementation approach.
- Confirm alignment with sponsor and stakeholders on approach.
- Schedule resources for in planning, demo, and approvals.
- Evaluate the design products for adherence to the project design methodology and standards.
- Establish staged process for business to signoff on user stories, solution modelling, design, and build.
- Verify that design can be traced back to system requirements.
- Track against identified implementation tasks and document risks.

Key Findings

Report 2 → Report 3 →

- The refinements to the Project's implementation methodology resulted in increased planning viability, velocity, and efficiency via:
  - Re-estimation of requirement level of effort (double-blind),
  - User stories were broken down to a more granular level,
  - Noted critical interdependencies of lower-level user stories,
  - Increased level of detail for user story acceptance criteria,
  - Qualitative approach to reporting on progress and status (technical burndown chart).
- A robust change control process has been implemented to support requirements development and ensure adherence to the true MVP of the new MEDSIS solution.
- With the departure of the MEDSIS SME and the subsequent addition of stakeholders, the process and documentation for review, sign-off, and approval of requirements and demos will need to be revisited and updated.

Previous Recommendations		Progress
6.1	Monitor the new sign-off process to ensure project requirements meet business needs.	• Complete
6.2	Additional rigor around project/product road mapping is required.	• Complete

Report 3's Recommendations

N/A

7. Business Implementation Approach

Best Practices

- Determine the in-scope business processes for improvement (BPI)
- Document the strategic need (e.g., make the business case) for process improvement in each functional area
- Confirm management backing, resources, skills, and incentives necessary for effective change
- Redesign business systems to achieve improvement in critical measure of performances, such as cost, quality, service, and speed
- Identify potential barrier to change as a result of improvements
- Document and convey potential area of resistance and risks to the project Organization Change and Post-Implementation teams

Key Findings

Report 2 → Report 3 →

- Noted Business Process Improvements (BPIs) as a result of the new MEDSIS solution include:
  - The increase in required data field enforcement to future-proof downstream data quality requirements,
  - Backend code flexibility of the new MEDSIS will support future enhancements or add-ons to business functionality.
- The Project continues to involve business users at appropriate stages for signoffs.
- The Project team, inclusive of the Vendor, is working towards documenting and socializing the Critical Success Factors (CSF).

Previous Recommendations

		Progress
7.1	Ensure DHS signoff of backend demos.	• Complete
7.2	Ensure high-level strategy captures executive CSF	• Ongoing
7.3	Ensure mid-level strategy captures workflow/business CSF.	• Ongoing

Report 3's Recommendations

Ongoing

7.2 Ensure high-level strategy captures executive CSF.

7.3 Ensure mid-level strategy captures workflow/business CSF.

8. Data Management/Migration/Conversion

Best Practices

- Identify current data sources, domains, integrations, warehouses, databases, analytics engines, reports and dashboards.
- Assess existing data governance mechanisms.
- Evaluate new and existing database designs to determine if they meet existing and proposed system requirements.
- Design databases to improve data integrity and system performance, as well as for maintainability, scalability, upgradable, and other factors affecting performance and data integrity.
- Develop and implement plans and software for data migration.

Key Findings

Report 2 ⇧ Report 3 ⇧

- Substantial progress has been made in the previous reporting period in creating and detailing the migration planning. Additionally, ample progress has been made in the conversion cycles. The following risks still exist:
  - The Legacy MEDSIS is code frozen, but reference data is being updated. A manual effort to update the Project on adjustments to reference data creates risk,
  - The availability of business resources to perform data validation tasks is hampered by resource constraints,
  - The effort to validate has not been communicated in a quantifiable number,
  - Data cleansing activities need rigor.
  - Interaction with the DMI program needs continuous monitoring.
- PII issues occurred in the most recent reporting period. The Agency (AzDHS) will need to ensure central data governance policies are well communicated to the Project team.

Previous Recommendations

		Progress
8.1	Finalize data migration strategy, including data quality review.	• Complete
8.3	Confirm data cleansing requirements.	• Partial
8.4	Document State specific duties for data management, migration and conversion.	• Complete
8.5	Clearly define the State vs. Vendor demarcation of duties within the MEDSIS Data Migration Strategy	• Complete
8.6	Catalog impacts and adjust MEDSIS Data Migration Strategy / planning resulting from scope complexity changes.	• Partial
8.7	Confirm Data LOE strategy/planning assumptions are reflective of new actual.	• Partial
8.8	Consider tying the data conversion/migration tracking tool's stage-gated status reporting back to specific schedule forecasts.	• Complete

Report 3's Recommendations

New

8.9 Document, monitor, and mitigate the risk of reference data updates being performed outside the legacy MEDSIS database via a manual process.

Ongoing

8.3 Confirm data cleansing requirements.

8.6 planning Catalog impacts and adjust MEDSIS Data Migration Strategy / resulting from scope complexity changes.

8.7 new Confirm Data LOE strategy/planning assumptions are reflective of actual.

9. Testing and Quality Assurance

Best Practices

- Develop a Quality Management Plan at the beginning of the project:
  - Actively manage quality throughout project delivery.
  - Address quality as it pertains to project resources, deliverables, and solution functionality, usability, and maintainability.
- Dedicate ownership and resources to a software QA function.
- QA has an appropriate level of independence from the solution.
- Build and maintain a Test Plan with dependencies and milestones.
- Build acceptance criteria for each feature. Establish a review, feedback, and signoff process for requirements and deliverables.
- Ensure that change requests are made with appropriate timing.

Key Findings

Report 2 → Report 3 →

- The Project's re-baselined schedule has removed the Pilot Phase, extended UAT, and expanded the stakeholder set to include external people of interest. This will reduce planning efforts but increase UAT planning and OCM efforts.
- The Project's QA workstream is a combined effort of vendor and DHS employees.
- Due to the timeline extension, UAT planning has been paused. Specific due dates for planning have not been socialized. Accountable parties should be confirmed.
- The QA velocity was recently impacted by new tooling. This is not expected to impact the Project's critical path.
- A key priority for the new Product Owner's onboarding will be the assignment of and monitoring of, data validation approvals.

Previous Recommendations		Progress
9.1	Develop UAT Plan.	• In progress
9.2	Confirm integration testing expectations.	• Complete
9.3	Denote demarcation of duties between DHS QA team members and Vendor QA team members.	• Complete
9.4	Socialize UAT Plan.	• No
9.5	Monitor QA workstream for high-level risks to project timeline and quality.	• Complete

Report 3's Recommendations

Ongoing

9.1 Develop UAT Plan.

9.4 Socialize UAT Plan.

10. Organizational Change

Trend = Improved | Green = Strong Health
Trend = Sustained | Yellow = Moderate Health
Trend = Regressed | Red = Poor Health

Best Practices

- Build and maintain the following plans with detailed activities and high-level dependencies and milestones:
  - Organizational Change Management Plan
  - Communication Plan
  - Training Plan
- Address key points such as stakeholder analysis, change network, change champions, engagement, quick wins, bright spots, risk factors, emotional appeals, and cultural and environmental factors.
- Dedicate time to internal project change management.

Key Findings

Report 2 → Report 3 →

- The OCM planning and activities are largely vendor-led. The Vendor has excellent knowledge of AzDHS's specific needs due to previous projects.
- The OCM roadmap has been refactored:
  - The Pilot Phase has been removed,
  - The UAT period was extended with a phased approach,
  - The stakeholder set has been revisited,
  - Additional time to develop curriculum has been added,
  - Outreach to stakeholders has occurred earlier.
- The UAT stakeholder set will need to be confirmed via UAT planning.
- The OCM deliverables are highly dependent on business sign-off. The changeover of Product Owners does represent a potential risk to OCM planning and should be closely monitored.
- Post-implementation change management functions at the Agency are unclear. An Office of Strategic Initiatives (OSI) exists but does not appear to have direct responsibility or accountability for this project.

Previous Recommendations		Progress
10.1	Contemplate potential impacts to OCM planning.	• Complete
10.2	Confirm OCM planning is reflective of current project status.	• Complete
10.3	Create a post-implementation support Training Plan.	• Partial

Report 3's Recommendations

New

10.4 Ensure UAT planning dovetails with OCM.

10.5 Monitor business sign-off of deliverables.

10.6 Determine post-implementation OCM needs.

Ongoing

10.3 Create a post-implementation support Training Plan.

11. Post-Implementation Readiness

Best Practices

- Plans for post-implementation to commence in advance of go-live.
- For iterative deployment to production, post-implementation plans are also incremental.
- Ensure adequate business and technology training for end users.
- Establish and schedule post-implementation review process.
- Assessing the quality of deliverables, benefits realization, and organizational impact.

Key Findings

Report 2 ⇩ Report 3 ⇧

- The nature of the solution (Cloud-based microservice architecture) implies that triaging emergent issues post-implementation will require a multi-member (SWAT) team-based approach.
- The Project has identified a team of State employees who will provide solution support. The infrastructure and QA teams are currently supporting active project sprint work. The Stateside Architect has been instrumental in supporting level-of-effort calculations and determining the end-state design. The remaining developers will be supporting up to 1/3rd of the Go-Live story points.
- The Knowledge Transfer (KT) is occurring via scheduled (with ad hoc content) KT sessions. There have been no attempts to measure the success of these sessions. Additional documentation rigor is likely required for to prepare and support the Stateside technical teams in the future.
- Adjustments to project planning have delayed the requirements for cutover planning.

Previous Recommendations

		Progress
11.1	Develop cut-over plan, set date, knowledge transfer, and related communications to the State.	• Closed
11.2	Assess post-implementation resourcing requirements and organizational structure.	• Complete
11.3	Include lead time for training State resources on net new software to support post-implementation efforts (e.g., ReactJS).	• Complete

Report 3's Recommendations

New

11.4 Ensure KT session outputs are measurable.

11.5 Contemplate need for KT session documentation.

12. Project Governance

Best Practices

- Obtain buy-in and input early in project planning.
- Establish governance entities as needed: A right-sized PMO as support and oversight for all PM activities, a Steering Committee, a Change Control Board, and a Solution Architecture Group.
- Schedule and hold value-added meetings with the above stakeholders.
- Develop and implement standard templates and processes.
- Create and distribute regular program and project status updates.
- Capture and distribute meeting minutes for formal meetings.
- Communicate variance analysis for schedule, budget, and effort.
- Document project successes for recognition and announcement.

Key Findings

Report 2 ⇩ Report 3 ⇧

- The demarcations of duties between the Product Owner and the Project Manager (PM) should be revisited. The onboarding of a new Product Owner is an opportunity to right-size the PM responsibilities.
- The Executive Leadership and sponsorship teams remain actively involved.
- The recent Change Request (CR) is an aggregation of work that has been approved by all relevant parties (i.e. individual functions approved by the Product Owner, larger aggregations of work have been approved by project executives).
- With the scope reasonably finalized, the Project dashboarding reporting on the velocity of development is greatly improved and is considered accurate.
- Solution architecture does not formally meet, but roles are identified and informal hand-offs of work product for approval are occurring.

Previous Recommendations

		Progress
12.1	Formalize the change control processes.	• Complete
12.2	Ensure all key PMO team members are present for high-level project planning / strategy discussions.	• Partial
12.3	Assign and empower a DHS project team member to facilitate decisions around what is in vs. out of scope.	• Complete

Report 3's Recommendations

New

12.4 Ensure the demarcations of duties between the new Product Owner and Project Manager are reflective of the new actual.

Ongoing

12.2 Ensure all key PMO team members are present for high-level project planning / strategy discussions.

13. Financial Management

Best Practices

- The project management environment adequately supports data gathering for financial reports.
- Financial standards and procedures have been established for the project and are being followed.
- Project expenditures can be tracked and compared with specific line items of the project budget.
- Plan out the invoicing schedule when dealing with multiple vendors, for example by staggering or aligning their deliverables and payments, depending on project funding and cash flow.

Key Findings

Report 2 ⇩ Report 3 ⇨

- The Change Request (CR) is reflective of the additional time and expense the Vendor is projecting.
- The Project would not have been able to complete the additional required complexity (scope) within the original budget.
- A 10% cost contingency is built into the financial forecast.
- Financial reporting is technically sufficient for project size. The maturity of the reporting could improve by tying financial use to product / deliverable outputs.
- The Project has reduced costs by reviewing its toolset and selecting less expensive options.

Previous Recommendations

		Progress
13.1	Evaluate and confirm the impact of scope complexities versus the original budget.	• Complete
13.2	Confirm available funds to support additional scope complexity.	• Complete
13.3	Improve the Project's operational budget management and tracking processes via more granular reporting and metrics.	• No
13.4	Improve the Project's operational budget management and tracking processes via a holistic project financial dashboard.	• No
13.5	Ensure financial contingency through to close of the refactored plan.	• Complete

Report 3's Recommendations

Ongoing

13.1 Evaluate and confirm the impact of scope complexities versus the original budget.

13.2 Confirm available funds to support additional scope complexity.

13.5 Ensure financial contingency through to close of the refactored plan.

14. Vendor and Oversight Management

Best Practices

- Clearly define obligations of vendors and external contractors (terms, conditions, statement of work, requirements, standards, development milestones, acceptance criteria, delivery dates, etc...).
- Monitor adherence to all agreements.
- Determine if sub-contractors or other external sources of project staff in project development are needed.
- Ensure subcontractors have the required skills, personnel, plans, resources, procedures, and standards to meet their commitment.
- Ensure that proprietary tools used by subcontractors do not restrict the future maintainability, portability, and reusability of the system.
- Track and review prime and subcontractor performance and results.

Key Findings

Report 2	⇩	Report 3	⇨

- The Vendor/State partnership remains a project strength.
- The recent Change Request (CR) includes some concession of vendor services.
- Role demarcation between State and Vendor has been clarified.
- IV&V recommendations have been communicated to the Vendor team.
- The Vendor is regularly performing internal audits to ensure the project plan is viable including LOE checks and risk reviews.
- The Vendor is highly engaged and is frequently updating the State with sprint updates, burndown financial information, etc.
- IV&V needs through to new project close will need review.

Previous Recommendations

		Progress
14.1	Clearly define the demarcation of duties between Vendor and DHS resources for all in-sprint project work.	• Complete
14.2	Improve dashboarding and reporting granularity to oversight bodies.	• Complete
14.3	Ensure visibility on IV&V report to key Project stakeholders.	• Complete
14.4	Consider responding to all IV&V recommendations irrespective of impact rating.	• Ongoing
14.5	Analyze current contractual SOW against the proposed project scope to ensure deltas are understood.	• Complete

Report 3's Recommendations

New

14.6 Confirm IV&V requirements through to project close.

Ongoing

14.4 Consider responding to all IV&V recommendations irrespective of impact rating.

15. Schedule Management

Best Practices

- Create a high-level schedule that identifies the major milestones and the dependencies between work components.
- Create a detailed work breakdown structure that includes all the work required to complete the project requirements.
- Regularly review the schedule to track actual versus baselined.
- A critical path analysis has been performed on the project schedule to identify activities on the critical path.
- Update the schedule to reflect any changes with project interdependencies/dependencies.

Key Findings

Report 2 ⇩ Report 3 ⇧

- The Project has created a high-level sprint roadmap detailing the delivery dates for all planned EPICS. Each sprint is appropriately subdivided into user-stories which have been double-blind vetted for level of effort. The velocity required to maintain the story points has been vetted through past averaging. The primary risk drivers to forecasted velocity are:
  - Insufficient bandwidth for business to support project activities,
  - Onboarding of the new Product Owner,
  - Stateside development delivery velocity is unvetted,
  - External project requirements pulling key resources (i.e Architect).
- The Project's recent Change Request (CR) is due to a larger-than-expected complexity in the replacement of critical business functionality currently available within the legacy solution.
- The drop-dead due dates for UAT strategy / planning are still required.

Previous Recommendations		Progress
15.1	Ensure State specific deadlines are on master project plan.	• Partial
15.2	Determine due date for re-baselined schedule	• Complete
15.3	Assess and monitor potential scope complexity risks in remaining EPICS.	• Complete
15.4	Monitor DHS resources' ability to meet in-sprint velocity requirements.	• Ongoing

Report 3's Recommendations

New

15.5 Ensure drop-dead due dates for UAT strategy / planning are documented and socialized.

Ongoing

15.1 Ensure State specific deadlines are on master project plan.

15.4 Monitor DHS resources' ability to meet in-sprint velocity requirements.

16. Scope Management

Best Practices

- Document the project scope, including both in-scope and out-of-scope items. All in-scope deliverables are identified and reflected in the project plan.
- Project requirements have been clearly documented and are reviewed with the project team and the customer regularly.
- Change control procedures have been defined and documented for managing changes to the project plan.
- Approved changes to the baselined project plan are communicated to the project team and the customer.

Key Findings

Report 2 ⇩ Report 3 ⇧

- No new EPICS were introduced into the re-baselined project however user-story points have increased by a factor of 2.5 due to the additional complexity of the solution found while determining the end-state.
- Due to the breadth of change required, each user-story was individually reviewed by the Product Owner, and its effort was determined through both a Vendor and State double-blind architectural review. Where opinions differed on the level of effort, the higher effort was taken.
- The solution was reviewed End-to-End (i.e. all EPICS) to ensure the end-state scope is effectively complete.
- The Project may have been able to produce a product on the existing timeline, but larger EPICS would have been missing critical business functionality and the original project justification would not have been satisfied.
- Ancillary planning (i.e. testing, reporting, OCM) have reviewed their scope and adjusted where required.

Previous Recommendations		Progress
16.1	Implement a CCB.	• Partial
16.2	Establish a new methodology for capturing the remaining unknown scope complexities within the remaining EPICS.	• Complete
16.3	Establish a holistic requirement prioritization strategy.	• Complete
16.4	Create and define the Project roadmap.	• Complete
16.5	Create and define the post go-live Product roadmap.	• Partial

Report 3's Recommendations

Ongoing

16.5 Create and define the post go-live Product roadmap.

17. Risk Management

Best Practices

- Clear responsibility for risk management is assigned.
- Clear process for raising risks is established.
- Risks are documented and evaluated for probability and impact.
- Distinguish between risks and issues.
- Assign issues for resolution with realistic dates.
- Track relevant risk mitigation plans and issue resolution plans.
- Establish regular risk and issue reviews.
- Track specific team risks as well as overall project level risks.

Key Findings

Report 2 ⇩ Report 3 ⇧

- The Project's risk management process is strong. The logging supports the required information, and the meeting cadences are sufficient to support the Project's risk profile.
- The Risk escalation process is reasonably well understood and has been communicated appropriately.
- Some role-specific risks are technically absent.
- The project carries a substantial risk of a failure to deliver *if* the noted Change Request (CR) is not approved.
- Planning assumptions for the Change Request (CR) need to be added to risk management logging for downstream monitoring.

Previous Recommendations

		Progress
17.1	Ensure key project workstream resources are informed and utilizing the risk management process.	• Complete
17.2	Improve raising resource-specific risks.	• Ongoing
17.3	Improve planning, financial, external, and internal assumption logging.	• Ongoing
17.4	Improve documenting high-level timeline risks.	• Complete
17.5	Monitor MEDSIS-specific issues and actions.	• Complete

Report 3's Recommendations

New

17.6 Ensure all role-specific resource risks are documented / pre-existing role-specific risk severity and mitigations are reflective of actual.

17.7 Ensure planning assumptions for the re-baselined implementation are documented and regularly reviewed within the risk process.

Ongoing

17.2 Improve raising resource-specific risks.

17.3 Improve planning, financial, external, and internal assumption logging.

18. Resource Management

Best Practices

- Delegate responsibility for project objectives and success factors based on work expertise and workload.
- Establish clear tasks and activities for each project team member so they know what needs to be accomplished.
- An organizational breakdown structure has been created to show lines of responsibility.
- Estimates for business resources are planned and documented.
- Review and maintain a stakeholder register to identify which stakeholders to communicate with.

Key Findings

Report 2 ⇩ Report 3 ⇧

- Given the recent departure of key DHS project personnel, the overall project RACI should be revisited, aligned, and communicated to the broader project team.
- The AzDHS project team has single-threaded resources. These resources are always at risk of being pulled into emergent or overburdened operational areas. Risks should be specifically noted for key roles.
- To mitigate the risk of knowledge loss, the Project is prioritizing requirements documentation for key features and EPICS. The Vendor is supporting this effort by bringing on additional resources to accelerate the pace (i.e. BA)
- Key supporting business teams are facing staffing shortages. These project risks need to be noted and mitigation planning should be put in place.

Previous Recommendations

		Progress
18.2	Assess the addition of unplanned resources as a mitigation strategy.	• Complete
18.3	Monitor any downstream velocity impacts from recent Vendor onboarding/offboarding.	• Complete
18.4	Contemplate and mitigate the risk of the key single-threaded DHS technical resource.	• Ongoing

Report 3's Recommendations

New

18.5 Review and update the Project's RACI to ensure it is reflective of new actual and communicated out.

18.6 Ensure understaffed business team risks are noted.

Ongoing

18.4 Contemplate and mitigate the risk of the key single-threaded DHS technical resource.

19. Communication Management

Best Practices

- Actively follow through with an established communications plan.
- Project status review meetings are held regularly with IT leadership and relevant business stakeholders.
- Variance analysis for schedule, budget, and effort is communicated regularly.
- Follow through with communication protocol on how information is transmitted. The protocol should include who is responsible for maintaining and monitoring stakeholder communication, and the frequency and format of the communication plan.

Key Findings

Report 2 ⇩ Report 3 ⇨

- Change management, and therefore external communications, remain a project strength.
- The Project has begun to reach out to a wider stakeholder set. How those communications will dovetail into the identification of testers and support needs for UAT is unclear.
- The departing Product Owner is a lynchpin in project communication. With their departure, additional care will be required to review stakeholder registries and ensure communication breadth.
- An increase in reporting rigor has allowed the Project to better communicate the status of development workstreams. Specific case may be required to ensure non-story work (i.e. planning) is represented in status reviews.
- The Project has reviewed and updated all communication planning to reflect the Change Request (CR).

Previous Recommendations

		Progress
19.1	Review Communication Plan against additional requirements	• Complete
19.2	Assess impacts of scope complexity on the Communication Plan.	• Complete
19.3	Assess impact on the change canvases for the broader stakeholder groups due to scope complexity.	• Complete

Report 3's Recommendations

New

19.4 Ensure Communication Plans include UAT stakeholders.

20. Document and Deliverable Management

Best Practices

- Agreed upon document templates, naming conventions, and document sharing procedures used by all stakeholders.
- A secure single repository is used to store and organize project documentation, ensuring that documents are findable. This source is accessible to all relevant project stakeholders.
- Draft deliverables are provided with adequate time for review before being issued as final.
- Quality control and acceptance processes apply to deliverables as needed. Finance must be involved in these processes where deliverables are tied to payment milestones.

Key Findings

Report 2 ⇨ Report 3 ⇨

- The infrastructure team was well supported through the departure of the supporting vendor resource. The KT sessions were long and structured to support End-to-End requirements.
- General architecture or system support KT sessions appear ad-hoc and would benefit from structured support.
- The Project would benefit from performing an exercise to crosswalk tools / skills to a KT plan to minimize gapping risks.
- The Project repository is reasonably well organized, and the taxonomy is appropriate.
- Project repository version controls are sufficient for long-term documentation needs.
- The Vendor project repository has been accepted as the single source of truth.

Previous Recommendations

		Progress
20.1	Aggregate project document repositories.	• Complete
20.2	Define State-specific documents/standards for specific project areas.	• Complete

Report 3's Recommendations

New

20.3 Crosswalk training documentation planning to project tools.

Appendix C: List of Interviewed Stakeholders

List of Interviewed Stakeholders

Name	Project Role
ADHS	
Amy Lai	MEDSIS Program Manager – Product Owner
David Gilbert	COO – Stakeholder
Jason Marcotte	Systems/Network Manager – Stakeholder
Joe Enos	Applications Architect - Arch/Lead Dev (MEDSIS)
Laura Erhart	Informatics Section Lead – Business Project Sponsor
Luke Evans	PMO Manager – Stakeholder
Neelima Pinninty	Sr. QA Assurance Analyst
Ravi Pitti	Interim CIO – Technical Sponsor
Demiter Pekin	Application Development Manager
Travis Gross	QA Manager
Theresa Esco	Sr. IT Project Manager
Susan Robinson	Chief Business Intelligence Officer – Executive Project Sponsor
Kaite Walsh	Informatics
Morgan Johnson	Informatics
Vendor – Slalom	
Alicia Chavez	Senior Consultant – OCM Lead
Bear Parcknett	Senior Consultant – Learning & Development
Ben Warsa	Senior Consultant – PM/Solution Owner
Franz Ruijters	Senior Director – Accountable Executive
Gina Fata	Principle Consultant – OCM
Jessica Call	Senior Consultant – Business Analyst
Sam Sinno	Lead Architect/Solution Architect
Somen Saha	Engagement Lead – Senior Solution Owner
Sowmya Peddada	Principal Consultant – Quality Engineer Lead
ADOA	
Charles Brown	Deputy CIO – ADOA
Haleh Farhadi	ASET/Head of Enterprise PMO
Haley Greenberg	Engagement Manager
J.R Sloan	CIO – ADOA
Leslie Carey	Oversight Analyst – ADOA
Simone Berg	ASET Oversight