



Stage 2 Preliminary Assessment

California Department of Technology, SIMM 19B (Rev. 2.1), Revision 5/21/2018

2.1 General Information

Agency or State Entity Name:	
Department of State Hospitals	
Organization Code:	
4440	
Proposal Name:	
Pharmacy Modernization	
Department of Technology Project Number:	4440-127

2.2 Preliminary Submittal Information

Contact Information:	
Contact First Name:	Contact Last Name:
Douglas	Newcomb
Contact Email:	Contact Phone:
Douglas.Newcomb@dsh.ca.gov	916.573.0489
Preliminary Submission Date:	Preliminary Assessment Transmittal:
7/15/2019	(Include transmittal as an attachment to your email submission.)

2.3 Stage 2 Preliminary Assessment

2.3.1 Impact Assessment

	Yes	No
1. Has the Agency/state entity identified and committed subject matter experts from all business sponsors and key stakeholders?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Are all current baseline systems that will be impacted by this proposal documented and current (e.g., data classification and data exchange agreements, privacy impact assessments, design documents, data flow diagram, data dictionary, application code, architecture descriptions)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Does the Agency/state entity anticipate needing support from the California Department of Technology (CDT) Statewide Technology Procurement (STP) to conduct market research for this proposal (Market Survey, Request for Information)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Does the Agency/state entity anticipate submitting a budget request to support the procurement activities of this proposal?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Could this proposal involve the development and/or purchase of systems to support activities included in Financial Information System for California (FI\$Cal) (e.g., financial accounting, asset management, human resources, procurement/ordering, inventory management, facilities management)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Does the Agency/state entity have a designated Chief Architect or Enterprise Architect to lead the development of baseline and alternative solutions architecture descriptions?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Will the Agency/state entity's Information Security Officer be involved in the development and review of any security related requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Does the Agency/state entity anticipate performing a business-based procurement to have vendors propose a solution?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

2.3.2 Business Complexity Assessment

Business Complexity:	2.0	Business Complexity Zone:	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
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2.4 Submittal Information	
Contact Information:	
Contact First Name:	Contact Last Name:
Douglas	Newcomb
Contact Email:	Contact Phone:
Douglas.Newcomb@dsh.ca.gov	916.573.0489
Submission Date:	Project Approval Executive Transmittal:
7/15/2019	(Include transmittal as an attachment to your email submission.)
Submission Type:	
<input type="checkbox"/> New Submission	<input type="checkbox"/> Updated Submission (Post-Approval)
<input checked="" type="checkbox"/> Updated Submission (Pre-Approval)	<input type="checkbox"/> Withdraw Submission
Reason: Other	
If "Other," specify: Updates from CDT review and RFI responses	
NOTE: The previous document file was corrupted. The data has been transferred to this new template.	



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Sections Updated (For Updated Submissions Only) – (check all that apply)

<input type="checkbox"/> 2.1 General Information	<input type="checkbox"/> 2.10.6 Implementation Approach
<input type="checkbox"/> 2.2 Preliminary Submittal Information	<input checked="" type="checkbox"/> 2.10.7 Architecture Information
<input type="checkbox"/> 2.3 Stage 2 Preliminary Assessment	<input checked="" type="checkbox"/> 2.11 Recommended Solution
<input type="checkbox"/> 2.3.1 Impact Assessment	<input type="checkbox"/> 2.11.1 Rationale for Selection
<input type="checkbox"/> 2.3.2 Business Complexity Assessment	<input type="checkbox"/> 2.11.2 Technical/Initial IT Project Oversight Framework Complexity Assessment
<input type="checkbox"/> 2.4 Submittal Information	<input type="checkbox"/> 2.11.3 Procurement and Staffing Strategy
<input checked="" type="checkbox"/> 2.5 Baseline Processes and Systems	<input type="checkbox"/> 2.11.4 Enterprise Architecture Alignment
<input type="checkbox"/> 2.5.1 Description	<input checked="" type="checkbox"/> 2.11.5 Project Phases
<input type="checkbox"/> 2.5.2 Business Process Workflow	<input checked="" type="checkbox"/> 2.11.6 High Level Proposed Project Schedule
<input checked="" type="checkbox"/> 2.5.3 Current Architecture Information	<input type="checkbox"/> 2.11.7 Cost Summary
<input checked="" type="checkbox"/> 2.5.4 Current Architecture Diagram	<input type="checkbox"/> 2.12 Staffing Plan
<input type="checkbox"/> 2.5.5 Security Categorization Impact Table	<input type="checkbox"/> 2.12.1 Administrative
<input type="checkbox"/> 2.6 Mid-Level Solution Requirements	<input type="checkbox"/> 2.12.2 Business Program
<input type="checkbox"/> 2.7 Assumptions and Constraints	<input type="checkbox"/> 2.12.3 Information Technology (IT)
<input type="checkbox"/> 2.8 Dependencies	<input type="checkbox"/> 2.12.4 Testing
<input checked="" type="checkbox"/> 2.9 Market Research	<input checked="" type="checkbox"/> 2.12.5 Data Conversion/Migration
<input checked="" type="checkbox"/> 2.9.1 Market Research Methodologies/Timeframes	<input type="checkbox"/> 2.12.6 Training and Organizational Change Management
<input checked="" type="checkbox"/> 2.9.2 Results of Market Research	<input type="checkbox"/> 2.12.7 Resource Capacity/Skills/Knowledge for Stage 3 Solution Development
<input type="checkbox"/> 2.10 Alternative Solutions	<input type="checkbox"/> 2.12.8 Project Management
<input type="checkbox"/> 2.10.1 Solution Type	<input type="checkbox"/> 2.12.8.1 Project Management Maturity Assessment
<input type="checkbox"/> Recommended	<input type="checkbox"/> 2.12.8.2 Project Management Planning
<input type="checkbox"/> Alternative	<input type="checkbox"/> 2.12.9 Organization Charts
<input type="checkbox"/> 2.10.2 Name	<input checked="" type="checkbox"/> 2.13 Data Conversion/Migration
<input type="checkbox"/> 2.10.3 Description	<input checked="" type="checkbox"/> 2.14 Financial Analysis Worksheets
<input type="checkbox"/> 2.10.4 Benefit Analysis	
<input type="checkbox"/> 2.10.5 Assumptions and Constraints	

Summary of Changes:

Updated financials in 2.11.7

Condition(s) from Previous Stage(s): S1BA approved January 8, 2019 without conditions

Condition #
Condition Category	Select...
Other, specify
Condition Sub-category	Select...
Other, specify
Condition	
Assessment	Select...
Other, specify
Agency/state Entity Response	
Status	Select...
Other, specify

Select + to add conditions.



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2.5 Baseline Processes and Systems

2.5.1 Description

The Department of State Hospitals (DSH) manages the nation's largest inpatient forensic mental health hospital system. Its mission is to provide evaluation and treatment in a safe and responsible manner, seeking innovation and excellence in state hospital operations, across a continuum of care and settings. DSH is responsible for the daily care and provision of mental health treatment of its patients. DSH oversees five state hospitals (Atascadero, Coalinga, Metropolitan – Los Angeles, Napa and Patton) and employs nearly 11,000 staff. Additionally, DSH provides services in jail-based competency treatment programs and conditional release programs throughout the 58 counties. In FY 2017-18, DSH served 11,961 patients within state hospitals and jail-based facilities, with average daily censuses of 5,897 and 227 respectively. The conditional release program (CONREP) maintains an average daily census of approximately 654. In accordance with *Coleman v Brown*, a federal class action lawsuit, DSH continues to designate 336 beds at three of its state hospitals, Atascadero, Coalinga, and Patton for the treatment of mentally-ill prisoners for patients referred by CDCR.

The Department of State Hospitals proposes to implement pharmacy modernization with the implementation of an enterprise-wide solution for all five state hospitals. This proposal meets the stated objectives in the Stage 1 Business Analysis document with the following elements: Inventory (medication) control, medication repackaging and dispensing, secure management of controlled medications, accurate patient billing information, pharmacy data integration across all five hospitals and modifications to the existing application environment and architecture to support new hardware and software.

The business drivers for Pharmacy Modernization are best explained with a review of the current pharmacy practices which will reiterate the need for a standardized pharmacy solution:

- Medication inventory is received at the hospital pharmacy and manually recorded by a pharmacy technician prior to be stored in the pharmacy until an order for the medication is received. Medications are inventoried bi-annually. Controlled medications are inventoried quarterly.
- Medication orders which require re-packaging for dispensing to patients are initiated with a written, paper order and faxed to the hospital pharmacy. (The exception is Napa State Hospital which uses the Physicians Ordering System (POS) application to receive medication orders.) Preparing the medication for dispensing requires several layers of manual validation by pharmacists and pharmacy technicians to ensure accurate medication and dosage is packaged for each patient.
- Dispensing medications to the patients require a unit's nursing staff member to manually sign for all medications received for the unit. Any medications not administered to a patient are documented on a paper form which is returned to the Pharmacy initiating another manual process to determine if a credit may be requested. Additional paper documentation is required daily to account for the dispensing of controlled medications
- Throughout the business processes, data is manually entered into the Pharmacy Hospital Operations application and ultimately completes the medication prescription validation. This triggers the generation of claims data which is the input for the billing process. The billing systems, which are not in scope of this project, are external systems developed by the Department of Developmental Services (DDS) and the Cost Recovery System (CRS).
- Finally, the interoperability of patient data across each of these business process groups is also of paramount importance. Patient data must be exchanged internally within hospital units and departments, across hospitals and their respective departments, as well as with external agencies, community hospitals and regulatory bodies as required by law.

This project supports DSH strategic plan goals of enhancing the reliability and efficiency of state programs and improving business operations and services with efforts to optimize and standardize Pharmacy Hospital Operations.



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The Pharmacy Modernization project also aligns with the California Health and Human Services Agency (CHHS) Strategic Plan by improving communication within DSH and utilizing electronic oversight methods.

2.5.2 Business Process Workflow

					
As-Is Medication Dispensing & Security	As-Is Medication Dispensing & Security	As-Is Medication Inventory Work Flow	As-Is Medication Inventory Work Flow	As-Is Medication Order Processing	As-Is Medication Order Processing
					
As-Is Patient Billing Work Flow.pdf					

Business Function/Process(es)		Pharmacy Operations		
Application, System or Component		Pharmacy Hospital Operations (PHO)		
COTS, MOTS or Custom		Custom application		
Name/Primary Technology:		Pharmacy Hospital Operations (PHO)		
Runtime Environment	Cloud Computing Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If "Yes," specify:	Platform as a Service (PaaS)
	Server/Device Function	Mainframe		
	Hardware	Mainframe Servers		
	Operating System	z/OS		
	System Software	Natural Programming Language, ADABAS DBMS		
System Interfaces		Admission, Discharge and Transfer (ADT), Cost Recovery System, ADABAS DBMS, ADDS, FastPack		
Data Center Location		State data center operated by CDT		
Security	Access (check all that apply)	<input type="checkbox"/> Public <input checked="" type="checkbox"/> Internal State Staff <input type="checkbox"/> External State Staff <input type="checkbox"/> Other, specify:		
	Type of Information (check all that apply)	<input checked="" type="checkbox"/> Personal <input checked="" type="checkbox"/> Health <input type="checkbox"/> Tax <input checked="" type="checkbox"/> Financial <input checked="" type="checkbox"/> Legal <input checked="" type="checkbox"/> Confidential <input type="checkbox"/> Other, specify:		
	Protective Measures (check all that apply)	<input checked="" type="checkbox"/> Technical Security <input checked="" type="checkbox"/> Identity Authorization and Authentication <input checked="" type="checkbox"/> Physical Security <input checked="" type="checkbox"/> Backup and Recovery <input type="checkbox"/> Other, specify:		
Data Management	Data Owner	Name: Uyen Nguyen Title: Clinical Operations Advisory Council Pharmacist		
	Data Custodian	Business Program: Pharmacy Operations Name: Lisa Chuck Title: PHO Lead Business Program: Technology Services		
Business Function/Process(es)		Patient Specific Medication Billing		
Application, System or Component		Department of Development Services (DDS) Cost Recovery System (CRS)		
COTS, MOTS or Custom		Custom application		
Name/Primary Technology:		CRS		
Runtime Environment	Cloud Computing Used?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If "Yes," specify:	



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	Server/Device Function	Mainframe	
	Hardware	Mainframe Servers	
	Operating System	z/OS	
	System Software	dB2 Cobol	
System Interfaces		ADT, PHO, CRS	
Data Center Location		State data center operated by CDT	
	Other, specify	Click here to enter text.	
Security	Access (check all that apply)	<input type="checkbox"/> Public <input checked="" type="checkbox"/> Internal State Staff <input checked="" type="checkbox"/> External State Staff <input type="checkbox"/> Other, specify:	
	Type of Information (check all that apply)	<input checked="" type="checkbox"/> Personal <input checked="" type="checkbox"/> Health <input type="checkbox"/> Tax <input checked="" type="checkbox"/> Financial <input checked="" type="checkbox"/> Legal <input type="checkbox"/> Confidential <input type="checkbox"/> Other, specify:	
	Protective Measures (check all that apply)	<input checked="" type="checkbox"/> Technical Security <input checked="" type="checkbox"/> Identity Authorization and Authentication <input checked="" type="checkbox"/> Physical Security <input checked="" type="checkbox"/> Backup and Recovery <input type="checkbox"/> Other, specify:	
Data Management	Data Owner	Name: Angela Griffith	
		Title: PCRS Section Chief	
		Business Program: Billing	
	Data Custodian	Name: Don Chipman	
		Title: IT Manager	
		Business Program: Department of Development Services (DDS) Billing	
Business Function/Process(es)		Patient Care	
Application, System or Component		Physician Order Entry (POS)	
COTS, MOTS or Custom		Custom application	
	Name/Primary Technology:	POS	
Runtime Environment	Cloud Computing Used?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If "Yes," specify:
	Server/Device Function	Application Server	
	Hardware	Physical	
	Operating System	Windows 2012 r2	
	System Software	Adabas/Natural	
System Interfaces		ADT, ODS	
Data Center Location		State Data Center host at CDT	
	Other, specify	Agency/state data center operated by Agency/state entity	
Security	Access (check all that apply)	<input type="checkbox"/> Public <input checked="" type="checkbox"/> Internal State Staff <input type="checkbox"/> External State Staff <input type="checkbox"/> Other, specify:	
	Type of Information (check all that apply)	<input checked="" type="checkbox"/> Personal <input checked="" type="checkbox"/> Health <input type="checkbox"/> Tax <input checked="" type="checkbox"/> Financial <input checked="" type="checkbox"/> Legal <input checked="" type="checkbox"/> Confidential <input type="checkbox"/> Other, specify:	
	Protective Measures (check all that apply)	<input checked="" type="checkbox"/> Technical Security <input checked="" type="checkbox"/> Identity Authorization and Authentication <input checked="" type="checkbox"/> Physical Security <input checked="" type="checkbox"/> Backup and Recovery <input type="checkbox"/> Other, specify:	
Data Management	Data Owner	Name: Edward Halsell	
		Title: Hospital Administrator, DSH Napa	
		Business Program: Clinical Operations	
	Data Custodian	Name: Melkamu Habtemariam	
		Title: IT Manager, DSH Napa	
		Business Program: Technology Service Division	



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Business Function/Process(es)		Data Management	
Application, System or Component		Operations Data Store (ODS)	
COTS, MOTS or Custom		Custom application	
Name/Primary Technology:		SQL	
Runtime Environment	Cloud Computing Used?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If "Yes," specify:
	Server/Device Function	Database Server, Patient replication data from Mainframe	
	Hardware	Physical	
	Operating System	Windows 2008 R2	
System Software		SQL	
System Interfaces		POS, ADABAS Database	
Data Center Location		Other, specify Agency/state data center operated by Agency/state entity	
Security	Access (check all that apply)	<input type="checkbox"/> Public <input checked="" type="checkbox"/> Internal State Staff <input type="checkbox"/> External State Staff <input type="checkbox"/> Other, specify:	
	Type of Information (check all that apply)	<input checked="" type="checkbox"/> Personal <input checked="" type="checkbox"/> Health <input type="checkbox"/> Tax <input type="checkbox"/> Financial <input type="checkbox"/> Legal <input checked="" type="checkbox"/> Confidential <input type="checkbox"/> Other, specify:	
	Protective Measures (check all that apply)	<input checked="" type="checkbox"/> Technical Security <input checked="" type="checkbox"/> Identity Authorization and Authentication <input checked="" type="checkbox"/> Physical Security <input checked="" type="checkbox"/> Backup and Recovery <input checked="" type="checkbox"/> Other, specify: Advanced Encryption Systems (AES)	
Data Management	Data Owner	Name: Rob Schaufenbil	
		Title: Assistant Deputy Director, Clinical Operations	
		Business Program: Clinical Operations	
	Data Custodian	Name: Rob Schaufenbil	
		Title: Assistant Deputy Director, Clinical Operations	
		Business Program: Clinical Operations	
Business Function/Process(es)		Patient Registration	
Application, System or Component		Admission-Discharge-Transfer (ADT)	
COTS, MOTS or Custom		Custom application	
Name/Primary Technology:		ADT	
Runtime Environment	Cloud Computing Used?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If "Yes," specify:
	Server/Device Function	Mainframe	
	Hardware	Mainframe Servers	
	Operating System	z/OS	
System Software		Natural Programming Language, ADABAS DBMS	
System Interfaces		Pharmacy Hospital Operations	
Data Center Location		Other, specify State Data Center host at CDT	
Security	Access (check all that apply)	<input type="checkbox"/> Public <input checked="" type="checkbox"/> Internal State Staff <input type="checkbox"/> External State Staff <input type="checkbox"/> Other, specify:	
	Type of Information (check all that apply)	<input checked="" type="checkbox"/> Personal <input checked="" type="checkbox"/> Health <input type="checkbox"/> Tax <input checked="" type="checkbox"/> Financial <input checked="" type="checkbox"/> Legal <input checked="" type="checkbox"/> Confidential <input type="checkbox"/> Other, specify:	
	Protective Measures (check all that apply)	<input checked="" type="checkbox"/> Technical Security <input checked="" type="checkbox"/> Identity Authorization and Authentication <input checked="" type="checkbox"/> Physical Security <input checked="" type="checkbox"/> Backup and Recovery <input checked="" type="checkbox"/> Other, specify: Advanced Encryption Systems (AES)	
Data Management	Data Owner	Name: Stephanie Perez	



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		Title: COAC Health Information Management Lead
		Business Program: Patient Registration
Data Custodian		Name: Rich Desideri
		Title: ADT Lead
		Business Program: Technology Services Division
Business Function/Process(es)		Pharmacy Operations
Application, System or Component		Automated Drug Dispensing Systems (ADDS)
COTS, MOTS or Custom		Commerical off-the-shelf (COTS)
Name/Primary Technology:		Medication dispensing
Runtime Environment	Cloud Computing Used?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes," specify:
	Server/Device Function	Automated drug dispensing equipment
	Hardware	MS Windows Server, Dispensing Cabinet
	Operating System	MS Windows 2016
	System Software	SQL
System Interfaces		Inventory Management, Corepoint
Data Center Location		
Other, specify		OTECH
Security	Access (check all that apply)	<input type="checkbox"/> Public <input checked="" type="checkbox"/> Internal State Staff <input type="checkbox"/> External State Staff <input type="checkbox"/> Other, specify:
	Type of Information (check all that apply)	<input checked="" type="checkbox"/> Personal <input checked="" type="checkbox"/> Health <input type="checkbox"/> Tax <input checked="" type="checkbox"/> Financial <input checked="" type="checkbox"/> Legal <input type="checkbox"/> Confidential <input type="checkbox"/> Other, specify:
	Protective Measures (check all that apply)	<input checked="" type="checkbox"/> Technical Security <input checked="" type="checkbox"/> Identity Authorization and Authentication <input checked="" type="checkbox"/> Physical Security <input checked="" type="checkbox"/> Backup and Recovery <input type="checkbox"/> Other, specify:
Data Management	Data Owner	Name: Kanwal Singh
		Title: Applications Chief
		Business Program: Technology Services
Data Custodian		Name: Kanwal Singh
		Title: Applications Chief
		Business Program: Technology Services

2.5.4 Current Architecture Diagram



2.5.4 Pharmacy Architecture Rev 3.p

2.5.5 Security Categorization Impact Table



2.5.5 Pharmacy -Security Categoriza

SECURITY CATEGORIZATION IMPACT TABLE SUMMARY

SECURITY OBJECTIVE	LOW	MODERATE	HIGH
Confidentiality	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Integrity	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Availability	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2.6 Mid-Level Solution Requirements



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Attachment: Attach file to email submission.



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2.7 Assumptions and Constraints

Assumptions/Constraints	Description/Potential Impact
Scope, objectives, roles and responsibilities and approach is agreed to and understood by all parties.	All parties must agree to scope, objectives, roles and responsibilities and approach to move forward.
All facilities have proper networking capabilities and infrastructure to support this effort.	Financial impact of this assumption is low since the Medical Grade Network project has completed. DSH is providing necessary redundancies to support related network connectivity.
DSH executive management and staff are engaged and committed to the success of this project.	Without stakeholder buy-in and executive sponsorship, there is a risk of clinical staff adoption.
Existing Local Area Networks (LAN) and Wide Area Network (WAN) infrastructure will be used where possible.	Additional network coverage will be evaluated as needed.
The project will adhere to a formal schedule.	Keeping to a formal project schedule is necessary given the size and financial impact of the project.
Bi-directional communication between project team and stakeholders throughout the organization regarding objectives, plans and plan revisions will occur.	Without bi-directional communication, the project risks delay due to planning revisions.
Qualified DSH project staff have been identified and committed to this project for the expected goals and timeline to be met.	Given the scope and impact of the project, experienced project staff and outside consultants, as appropriate, will meet goals and objectives within the timeline.
A project infrastructure will be defined and maintained throughout the project.	Existing infrastructure will be involved throughout the project.
The project team will identify and manage project risks and assumptions through the project life cycle.	Risk management will be ongoing throughout the project and a project manager will serve as risk manager.
Appropriate DSH resources are available and will be allocated to this effort as required.	Without proper staffing a large project may experience significant delays.
Supporting contracts and procurements will be completed on schedule.	Delays in contracts and procurements will create overall project delays.
The project implementation will minimize disruptions to the daily operations and will not impede public access to the participating hospitals.	DSH will establish a 'clinical cutover' plan and other transitional business processes to minimize disruption of daily operations.
Organizational change management activities will speed adoption and help mitigate organizational disruption.	DSH will leverage and build upon existing organizational change management plans to prepare staff and systems to mitigate the impact of large-scale change.
Select + to add assumptions/constraints.	

2.8 Dependencies

Element	Description
HL-7 Training	Developer and tester training to ensure the integration efforts are compliant with HL-7 protocols for maximum integration efficiencies.
Current Medicare claim interface specification	Developer and tester training to ensure the billing data created is compliant with current Medicare claim interface data.
Select + to add dependencies.	

2.9 Market Research

2.9.1 Market Research Methodologies/Timeframes



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Methodologies Used To Perform Market Research (check all that apply):	
<input checked="" type="checkbox"/> Request for Information (RFI)	<input type="checkbox"/> Trade shows
<input checked="" type="checkbox"/> Internet Research	<input checked="" type="checkbox"/> Published Literature
<input checked="" type="checkbox"/> Vendor Forums/Presentation	<input type="checkbox"/> Leveraged Agreements
<input checked="" type="checkbox"/> Collaboration with other Agencies/state entities or governmental entities	<input checked="" type="checkbox"/> RFI:
Time spent conducting market research:	Over 1 Year
Date market research was started:	12/19/2014
Date all market research was completed:	7/31/2019
2.9.2 Results of Market Research	



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In 2014, the first look at system-wide implementation of automated dispensing cabinets came from a formal research report for an Electronic Health Record (EHR) by DSH. Gartner, a leading information technology research and advisory company, was contracted to develop the report. Although the report focuses on EHR, their expertise and experience with integrated automated dispensing cabinets that integrate with EHR systems using the international standard communication protocol, Health Level-7 (HL7), for nursing station medication rooms (“med rooms”) was solicited. At the time of this research, through DSH interviews with clinical subject matter experts about existing workflows and technology, it was discovered that there were automated dispensing cabinets in all med rooms at DSH-Patton and DSH-Coalinga, but none at the other three state hospitals, DSH-Napa, DSH-Atascadero, and DSH-Metropolitan. After their report, which contributed to a baseline set of requirements, DSH-Napa purchased night lockers and a controlled drug vault and DSH-Atascadero purchased a night locker to meet their immediate needs. This equipment was purchased from more than one vendor.

Between December 2016 through July 2018 additional market research was conducted. During this time, DSH-Sacramento Executive Management created a Medication Cabinet Steering Committee (MCSC) to develop an in-house market analysis for a standardized, enterprise approach to Automated Drug Dispensing System (ADDS). The MCSC was made up of Pharmacy, Patient Cost Recovery (PCR), Nursing, Administration and Technology Services Division (TSD) staff. This effort led to the adoption of ADDS standards across all state hospital locations.

Also, during this time, a subcommittee from DSH-Atascadero, comprised of subject matter experts (SME) in pharmacy, nursing, administration, Electronic Health Record (EHR) advocates and Technology Services Division (TSD) staff was tasked to evaluate the current market leaders of ADDS. Of the five leading market leaders, the team received responses from three vendors. These vendors were subsequently invited to DSH-Atascadero in early 2017, to receive an introductory tour of the hospital pharmacy and unit medication rooms to help them understand the initial needs at DSH-Atascadero.

In late spring 2019, it was determined that a Request for Information (RFI) could be beneficial and was released in June 2019 and completed at the end of July 2019. The following comparative matrix is the result of the DSH team’s analysis of the responses, meeting results and the 2019 RFI; they are grouped by function and Pharmacy Modernization stated objectives.

Function	Response		
	Vendor 1	Vendor 2	Vendor 3
Objective #1 – Inventory			
Real-time inventory monitoring	Y	Y	Y
Reconciliation	Y	Y	Y
Reporting	Y	Y	Y
Access control	Y	Y	Y
Compliance	Y	Y	Y
Activity tracking	Y	Y	Y
Dashboards	N	Y	Y
Remote access	N	Y	Y
Work flow optimizations	N	N	Y
Charge captures	N	Y	Y
Analytics for Periodic Automatic Replenishment (PAR) levels	N	N	Y
Objective #2 – Repackage			
Limited single item access	Y	Y	Y
Customizable	N	Y	Y
Medication filled location, unit, or pharmacy	Unit	Unit	Pharmacy
Footprint small, medium, large	Medium	Large	Customizable



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Portability	N	N	Y
Objective #3 & #4 – Dispensing & Security			
Restricted inventory access for nursing staff	Y	Y	Y
Barcode scanning	N	Y	Y
Label printing	Unit	Unit	Pharmacy
Restrict dispensing	Medium	Large	Customizable
Locking draws	N	Y	Y
Countbacks	Y	Y	Y
Analytics	N	N	Y
Compliance	Y	Y	Y
Objective #5 & #6 – Billing & Data Integration			
HL-7 compliant	Y	Y	Y
Multiple National Drug Codes per medication and dosage	N	Y	Y
Technical	Response		
	Vendor 1	Vendor 2	Vendor 3
Integrated components <ul style="list-style-type: none"> • Inventory control • Packaging machine • Controlled drug vault 	Y	Y	Y
Server	One server per location – does not support multi-hospital environment	Single Enterprise server – supports multi-hospital environment	Single Enterprise server – supports multi-hospital environment
Operating system compatibility	MS Windows server 2008 with service pack 2 (v15 or higher) MS Windows 8 compatible	MS Windows server 2008 with service pack 2 (v15 or higher) MS Windows 10 compatible	MS Windows server 2008 R2/2012 MS SQL server 2008 R2/2012 MS Windows 10 compatible
Device dimensions	22.8" W x 27.6D x 39.4" H	26.5" W x 27" D x 77" H	22.8" W x 27" D x 55" H
Life span	<u>Hardware</u> : ~10 to 15 years <u>Software</u> : Continued release cycles base on service contract	<u>Hardware</u> : 15 years <u>Software</u> : Continued release cycles base on life of hardware	<u>Hardware</u> : ~5 to 8 years <u>Software</u> : Continued release cycles for a five-year term
Business – Non-Functional	Response		
	Vendor 1	Vendor 2	Vendor 3
Functionality	<ul style="list-style-type: none"> • Limited Single Item Access • Compartment space per set 	<ul style="list-style-type: none"> • Standard Single Item Access • Compartment space is customizable 	<ul style="list-style-type: none"> • Standard Single Item Access • Compartment space is customizable



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	<ul style="list-style-type: none"> Medication must be filled at each location. Availability of coils for single dose-controlled drug dispensing, but must be filled at the MedSelect cabinet Standard footprint Not configurable 	<ul style="list-style-type: none"> Medication can be filled at central location. Any medications not in the controlled drug container must be filled at Vendor Two Larger footprint Reconfigurability Reconfigurability 	<ul style="list-style-type: none"> Medication can be filled at central location. Any medication not in the ADDs cart can be replaced using controlled access trays from central location to distribution point Customizable footprint Reconfigurability
Customer service/maintenance	<u>Phone Support:</u> Average <u>Field Support:</u> Poor <u>Hardware Maintenance:</u> Average <u>Software Maintenance:</u> Poor	<u>Phone Support:</u> Above Average <u>Field Support:</u> Average <u>Hardware Maintenance:</u> Average <u>Software Maintenance:</u> Above Average	<u>Phone Support:</u> Average <u>Field Support:</u> Above Average <u>Hardware Maintenance:</u> Average <u>Software Maintenance:</u> Above Average
Contract Requirements	Existing contract with no issues for additional procurement.	Company would not originally accept the State's terms and conditions. Note: Company states that this process has been streamlined for future procurements	No issues were discovered while performing initial costing.
Training	Y	Y	Y
Research & Development	Poor R&D Note: This is problematic with new regulations coming out for automated dispensing cabinets. Company has low market shares and long-term viability may put the state at risk.	Excellent R&D	Excellent R&D Note: Software updates guaranteed only for 5 years. May need to purchase new equipment to continue to receive updated software, although life of equipment would be expected to be 10 years or more.

The MCSC began their organization change efforts by meeting with Pharmacy Managers at all sites to develop a mid-level set of requirements. The team created a cost analysis for one time and ongoing cost over five-year cost for all three ADDs vendors. A lease option is available which only one out of the three vendors responded back with a pricing model. The three vendors were asked to visit all sites for evaluation of equipment needs and provide equipment recommendations for all unit medication rooms. This was



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presented to DSH administration in November 2017. While gathering additional market research KLAS research group who specializes in Healthcare IT (HIT), released in their February report “Best in KLAS 2018” which clearly identifies the top four ADDs vendors. Of the top four vendor DSH has been working with the responsive companies to provide detail site survey in July 2018 to get up to date specifications and dimension for latest products for each site.

In conclusion, two of the three vendor’s inventory system will result in several benefits, including a net savings in labor costs, a significant reduction in waiting time for first doses and a reduction in dispensing errors. It will also minimize the disruption of pharmacists engaged in the direct provision of pharmaceutical care. Overall two of the three vendors met most of the requirements, however one vendor (as shown on the above matrices) met or exceeded the requirements and some key features included the security-controlled medication trays that allows for medication fulfillment central which reduces the need for additional pharmacist and clinical staff. One vendor clearly meets inventory control requirements and provides for the best option for a consistent user interface that would facilitate pharmacy staff efficiency. When an EHR solution is chosen the system will be able to integrate using HL-7 interface adapters that will further expand the longevity of this current investment.

2.10 Alternative Solutions

2.10.1 Solution Type

Recommended

2.10.2 Name

Lease Option of a Commercial Off-the-Shelf (COTS) hardware and software

2.10.3 Description

This alternative solution proposes leasing hardware and software from a commercial off-the-shelf (COTS) vendor, the integration of pharmacy data from all five hospitals and the modifications to the existing application environment/architecture necessary to integrate with the new pharmacy system.

The scope of this alternative solution meets the stated business objectives with the following functionality: Inventory (medication) control, medication repackaging and dispensing, secure management of controlled medications, accurate patient claims information used for billing, pharmacy data integration across all five hospitals and modifications to the existing application environment and architecture so support new hardware and software.

Implementing this solution has the additional financial benefit of reduced initial costs and the advantage of having the vendor provide regular upgrades to the hardware and software as part of the leasing costs

Approach (Check all that apply):

- Increase staff – new or existing capabilities
- Modify the existing business process or create a new business process
- Reduce the services or level of services provided
- Utilize new or increased contracted services
- Enhance the existing IT system
- Create a new IT system
- Perform a business-based procurement to have vendors propose a solution
- Other, specify:

2.10.4 Benefit Analysis

Benefits/Advantages

Represents the lowest initial cost with the highest return on investment



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Levels the Department's pharmacy system equipment costs evenly over time
 Significant improvements in hospital pharmacy processes for the management and administration of drugs to patients
 Enterprise-wide business processes promote efficiencies in hospital pharmacy operations
 It is more cost effective to maintain industry standard, pharmacy operations with a lease option
 Improves the patient care and safety
 Meets all objectives as stated in the S1BA
 Select + to add benefits/advantages.

Disadvantages

No asset equity because the equipment is leased.
 Select + to add disadvantages.

Anticipated Time to Achieve Objectives After Project Go-Live

Objective Number	Objective Timeframe				
	Within 1 Year	2 Years	3 Years	4 Years	Over 4 Years
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Select + to add objectives.

Anticipated Time to Achieve Financial Benefits After Project Go-Live

Financial Benefit	Within 1 Year	2 Years	3 Years	4 Years	Over 4 Years
Increased Revenues	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cost Savings	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cost Avoidance	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cost Recovery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

2.10.5 Assumptions and Constraints

This alternative assumes the approval of this project and associated budget.
 Select + to add assumptions/constraints

2.10.6 Implementation Approach

Identify the type of existing IT system enhancement or new system proposed (check all that apply):

- Enhance the current system
- Develop a new custom solution
- Purchase a Commercial off-the-Shelf (COTS) system
- Purchase or obtain a system from another government agency (Transfer)
- Subscribe to a Software as a Service (SaaS) system
- Other, specify: Lease the hardware with data integration and utilize the Enterprise Service Bus to communicate with back end systems.

Identify cloud services to be leveraged (check all that apply):

- Software as a Service (SaaS) provided by OTech
- Software as a Service (SaaS) provided by commercial vendor
- Platform as a Service (PaaS) provided by OTech
- Platform as a Service (PaaS) provided by commercial vendor
- Infrastructure as a Service (IaaS) provided by OTech



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- Infrastructure as a Service (IaaS) provided by commercial vendor
- No cloud services will be leveraged by this alternative. Provide a description of why cloud services are not being leveraged:

Identify who will modify the existing system or create the new system (check all that apply):

- Agency/state entity IT staff
- A vendor will be contracted
- Inter-agency agreement will be established with another governmental agency. Specify Agency name(s):
- Other, specify: This option includes data integration of all five hospital pharmacies and the use of an Enterprise Service Bus.

Identify the implementation strategy:

- All requirements will be addressed in this proposed project in a single implementation.
- Requirements will be addressed in incremental implementations in this proposed project.
- Some requirements will be addressed in this proposed project. The remaining requirements will be addressed later.
Specify the year when the remaining requirements will be addressed:

Identify if the technology for the proposed project will be mission critical and public facing:

- The technology implemented for this proposed project will be considered mission critical and public facing.

2.10.7 Architecture Information

This alternative solution includes all the architecture objects identified in Section 2.5.3 because those elements remain required but do not change in this solution. The following is a new architecture element that will be introduced with this solution



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Business Function/Process(es)		Pharmacy Operations	
Select + to add a business process with the same application, system, or component; COTS, MOTS or custom solution; runtime environment; system interfaces, data center location; and, security.			
Application, System or Component		Inventory Control	
Select + to add an application, system, or component.			
COTS, MOTS or Custom		COTS	
Name/Primary Technology:		Inventory Management System	
Runtime Environment	Cloud Computing Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If "Yes," specify: Internal Cloud Computing using OTech
	Server/Device Function	Enterprise Server (ES) App, DB and Report	
	Hardware	MS Windows Server	
	Operating System	MS Windows Server 2008-2012Rw	
	System Software	MS Windows 2008-2012 SQL	
System Interfaces		Automated Dispensing System, ADT, PHO, CRS	
Data Center Location		OTech	
Other, specify			
Security	Access (check all that apply)	<input type="checkbox"/> Public <input checked="" type="checkbox"/> Internal State Staff <input checked="" type="checkbox"/> External State Staff <input type="checkbox"/> Other, specify:	
	Type of Information (check all that apply)	<input checked="" type="checkbox"/> Personal <input checked="" type="checkbox"/> Health <input type="checkbox"/> Tax <input checked="" type="checkbox"/> Financial <input checked="" type="checkbox"/> Legal <input type="checkbox"/> Confidential <input type="checkbox"/> Other, specify:	
	Protective Measures (check all that apply)	<input checked="" type="checkbox"/> Technical Security <input checked="" type="checkbox"/> Identity Authorization and Authentication <input checked="" type="checkbox"/> Physical Security <input checked="" type="checkbox"/> Backup and Recovery <input type="checkbox"/> Other, specify:	
Data Management	Data Owner	Name: Uyen Nguyen	
		Title: Clinical Operations Advisory Council Pharmacist	
		Business Program: Clinical Operations	
Data Management	Data Custodian	Name: Uyen Nguyen	
		Title: Clinical Operations Advisory Council Pharmacist	
		Business Program: Clinical Operations	



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Select + to add business functions/processes.

2.10.1 Solution Type

Alternative 2

2.10.2 Name

Purchase Commercial Off-the-Shelf (COTS) hardware and software

2.10.3 Description

This alternative solution proposes the purchase of hardware and software from a commercial off-the-shelf (COTS) vendor, integration of pharmacy data from all five hospitals and the modifications to the existing application environment/architecture necessary to integrate with the new pharmacy system. This solution will bring Department of State Hospitals' pharmacy operations into compliance with the State Leadership Accountability Act (SLAA), Office of State Audits and Evaluations (OSAE) and the Drug Supply Chain Security Act.

The scope of this alternative solution meets the stated business objectives with the following functionality: Inventory (medication) control, medication repackaging and dispensing, secure management of controlled medications, accurate patient billing information, pharmacy data integration across all five hospitals and modifications to the existing application environment and architecture so support new hardware and software.

Approach (Check all that apply):

- Increase staff – new or existing capabilities
- Modify the existing business process or create a new business process
- Reduce the services or level of services provided
- Utilize new or increased contracted services
- Enhance the existing IT system
- Create a new IT system
- Perform a business-based procurement to have vendors propose a solution
- Other, specify: _____

2.10.4 Benefit Analysis

Benefits/Advantages

- Improves patient safety, continuity of care and outcomes
 - Meets all business objectives as stated in the S1BA
 - Significant improvement for pharmacy operations by automating manual processes
 - Enterprise-wide business processes promote efficiencies in hospital pharmacy operations
 - Provides a single HL-7 connector for use by EHR (rather than five individual connectors, one per hospital)
- Select + to add benefits/advantages

Disadvantages

- Hardware and software maintenance (including software upgrades) are the responsibility of DSH
 - Large up-front cost for purchase of hardware and software
 - Requires additional (new) DSH personnel to alleviate strain on current resourcing.
- Select + to add disadvantages

Anticipated Time to Achieve Objectives After Project Go-Live

Objective Number	Objective Timeframe				
	Within 1 Year	2 Years	3 Years	4 Years	Over 4 Years
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Select + to add objectives

Financial Benefit	Anticipated Time to Achieve Financial Benefits After Project Go-Live				
	Within 1 Year	2 Years	3 Years	4 Years	Over 4 Years
Increased Revenues	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cost Savings	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cost Avoidance	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cost Recovery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

2.10.5 Assumptions and Constraints

This alternative assumes the approval of this project and associated budget.

Select + to add assumptions/constraints

2.10.6 Implementation Approach

Identify the type of existing IT system enhancement or new system proposed (check all that apply):

- Enhance the current system
- Develop a new custom solution
- Purchase a Commercial off-the-Shelf (COTS) system
- Purchase or obtain a system from another government agency (Transfer)
- Subscribe to a Software as a Service (SaaS) system
- Other, specify:

Identify cloud services to be leveraged (check all that apply):

- Software as a Service (SaaS) provided by OTech
- Software as a Service (SaaS) provided by commercial vendor
- Platform as a Service (PaaS) provided by OTech
- Platform as a Service (PaaS) provided by commercial vendor
- Infrastructure as a Service (IaaS) provided by OTech
- Infrastructure as a Service (IaaS) provided by commercial vendor
- No cloud services will be leveraged by this alternative. Provide a description of why cloud services are not being leveraged:

Identify who will modify the existing system or create the new system (check all that apply):

- Agency/state entity IT staff
- A vendor will be contracted
- Inter-agency agreement will be established with another governmental agency. Specify Agency name(s):
- Other, specify:

Identify the implementation strategy:

- All requirements will be addressed in this proposed project in a single implementation.
- Requirements will be addressed in incremental implementations in this proposed project.
- Some requirements will be addressed in this proposed project. The remaining requirements will be addressed later.
Specify the year when the remaining requirements will be addressed:

Identify if the technology for the proposed project will be mission critical and public facing:

- The technology implemented for this proposed project will be considered mission critical and public facing.

2.10.7 Architecture Information



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This alternative includes all the architecture elements identified in section 2.5.3. This solution will be integrated with the existing Pharmacy Operations, Clinical and Billing components and includes the following new element.			
Business Function/Process(es)		Pharmacy Operations	
Application, System or Component		Inventory Management	
COTS, MOTS or Custom		Commerical off-the-shelf (COTS)	
Name/Primary Technology:		Inventory Control	
Runtime Environment	Cloud Computing Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If "Yes," specify: Software as a Service (SaaS)
	Server/Device Function	Enterprise Server (ES) App, DB and Report	
	Hardware	MS Windows Server	
	Operating System	MS Windows Server 2008-2012R2	
	System Software	MS SQL 2012R2	
System Interfaces		Automated Dispensing System, ADT, PHO, CRS	
Data Center Location		State data center operated by department of Technology	
Security	Other, specify		
	Access (check all that apply)	<input type="checkbox"/> Public <input checked="" type="checkbox"/> Internal State Staff <input type="checkbox"/> External State Staff <input type="checkbox"/> Other, specify:	
	Type of Information (check all that apply)	<input checked="" type="checkbox"/> Personal <input checked="" type="checkbox"/> Health <input type="checkbox"/> Tax <input checked="" type="checkbox"/> Financial <input checked="" type="checkbox"/> Legal <input checked="" type="checkbox"/> Confidential <input type="checkbox"/> Other, specify:	
	Protective Measures (check all that apply)	<input checked="" type="checkbox"/> Technical Security <input checked="" type="checkbox"/> Identity Authorization and Authentication <input checked="" type="checkbox"/> Physical Security <input checked="" type="checkbox"/> Backup and Recovery <input type="checkbox"/> Other, specify:	
Data Management	Data Owner	Name: Kanwal Singh	
		Title: Applications Chief	
		Business Program: Technology Services	
	Data Custodian	Name: Kanwal Singh	
		Title: Applications Chief	
		Business Program: Technology Services	



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Select + to add business functions/processes.

2.11 Recommended Solution

2.11.1 Rationale for Selection

DSH recommends approval of the lease option request of \$6.3 million in FY 2020-21, \$3.3 million in FY 2021-22, \$1 million ongoing in General Fund authority to support the pharmacy modernization initiative for all five state hospitals consisting of inventory, repackaging and dispensing as well as pharmacy data integration and rearchitecting the existing application environment to accommodate the new pharmacy system.

The lease option is a significantly lower upfront cost than the purchase of the pharmacy equipment. Leasing also has the advantage of maintaining currency of the equipment over time. This assures that end of equipment lifespan or regulatory changes related to equipment do not result in a scramble to find another large capital expenditure to maintain equipment at current standard of practice. The ongoing lease will prevent a situation such as that of DSH-Patton where MedSelect automated dispensing cabinets were purchased many years ago when there were fewer medications on the market and current equipment cannot hold all the medications currently in use. Patient safety features such as single item access did not exist when DSH-Patton's equipment was purchased, so their equipment no longer meets standard of practice for patient safety by protecting patients from a wrong medication selection. The older equipment's software is unable to recognize the same medication from different manufacturers as now required for billing and therefore when a medication manufacturer is changed the prior product must be discarded, creating unnecessary waste.

Attachment: Attach file to email submission.

2.11.2 Technical/Initial CA-PMM Complexity Assessment

Complexity		Complexity Zone	
Technical Complexity Score:	2.3	<input type="checkbox"/> Zone I	Low Criticality/Risk
		<input checked="" type="checkbox"/> Zone II/III	Medium Criticality/Risk
		<input type="checkbox"/> Zone IV	High Criticality/Risk

2.11.3 Procurement and Staffing Strategy

Activity

Solicitation Development

Responsible (check all that apply)	When Needed (check all that apply)	Cost Estimate Verification (check all that apply)
<input checked="" type="checkbox"/> Agency/state entity staff <input type="checkbox"/> STP staff <input type="checkbox"/> CDT Project Approvals and Oversight staff <input type="checkbox"/> CA-PMO staff <input type="checkbox"/> DGS staff <input type="checkbox"/> Contractor <input type="checkbox"/> Other, specify:	<input checked="" type="checkbox"/> Stage 3 Solution Development <input checked="" type="checkbox"/> Stage 4 Project Readiness and Approval <input type="checkbox"/> After project is approved (after Stage 4 Project Readiness and Approval)	<input checked="" type="checkbox"/> Market research conducted (MR) <input checked="" type="checkbox"/> Cost estimate provided (CE) <input type="checkbox"/> CDT CE <input type="checkbox"/> DGS CE <input type="checkbox"/> Request for Information (RFI) conducted <input checked="" type="checkbox"/> Comparable vendor services have been used on previous contracts (CV) <input type="checkbox"/> Leveraged Procurement Agreement (LPA)

Complete Only if Contractor Responsible for Activity

Procurement Vehicle	Select...	Contract Type	Select...
If "Other," specify:		If "Other," specify:	

Requirements Elicitation



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Responsible (check all that apply)	When Needed (check all that apply)	Cost Estimate Verification (check all that apply)
<input checked="" type="checkbox"/> Agency/state entity staff <input type="checkbox"/> STP staff <input type="checkbox"/> CDT Project Approvals and Oversight staff <input type="checkbox"/> CA-PMO staff <input type="checkbox"/> DGS staff <input type="checkbox"/> Contractor <input type="checkbox"/> Other, specify:	<input checked="" type="checkbox"/> Stage 3 Solution Development <input type="checkbox"/> Stage 4 Project Readiness and Approval <input type="checkbox"/> After project is approved (after Stage 4 Project Readiness and Approval)	<input checked="" type="checkbox"/> Market research conducted (MR) <input checked="" type="checkbox"/> Cost estimate provided (CE) <input type="checkbox"/> CDT CE <input type="checkbox"/> DGS CE <input type="checkbox"/> Request for Information (RFI) conducted <input checked="" type="checkbox"/> Comparable vendor services have been used on previous contracts (CV) <input type="checkbox"/> Leveraged Procurement Agreement (LPA)

Complete Only if Contractor Responsible for Activity

Procurement Vehicle	Contract Type
If "Other," specify: Click here to enter text.	If "Other," specify: Click here to enter text.

Cost Estimating

Responsible (check all that apply)	When Needed (check all that apply)	Cost Estimate Verification (check all that apply)
<input checked="" type="checkbox"/> Agency/state entity staff <input type="checkbox"/> STP staff <input type="checkbox"/> CDT Project Approvals and Oversight staff <input type="checkbox"/> CA-PMO staff <input type="checkbox"/> DGS staff <input type="checkbox"/> Contractor <input type="checkbox"/> Other, specify:	<input checked="" type="checkbox"/> Stage 3 Solution Development <input type="checkbox"/> Stage 4 Project Readiness and Approval <input type="checkbox"/> After project is approved (after Stage 4 Project Readiness and Approval)	<input checked="" type="checkbox"/> Market research conducted (MR) <input checked="" type="checkbox"/> Cost estimate provided (CE) <input type="checkbox"/> CDT CE <input type="checkbox"/> DGS CE <input type="checkbox"/> Request for Information (RFI) conducted <input checked="" type="checkbox"/> Comparable vendor services have been used on previous contracts (CV) <input type="checkbox"/> Leveraged Procurement Agreement (LPA)

Complete Only if Contractor Responsible for Activity

Procurement Vehicle	Contract Type
If "Other," specify: Click here to enter text.	If "Other," specify: Click here to enter text.

Business Analysis

Responsible (check all that apply)	When Needed (check all that apply)	Cost Estimate Verification (check all that apply)
<input checked="" type="checkbox"/> Agency/state entity staff <input type="checkbox"/> STP staff <input type="checkbox"/> CDT Project Approvals and Oversight staff <input type="checkbox"/> CA-PMO staff <input type="checkbox"/> DGS staff <input type="checkbox"/> Contractor <input type="checkbox"/> Other, specify:	<input checked="" type="checkbox"/> Stage 3 Solution Development <input type="checkbox"/> Stage 4 Project Readiness and Approval <input type="checkbox"/> After project is approved (after Stage 4 Project Readiness and Approval)	<input checked="" type="checkbox"/> Market research conducted (MR) <input checked="" type="checkbox"/> Cost estimate provided (CE) <input type="checkbox"/> CDT CE <input type="checkbox"/> DGS CE <input type="checkbox"/> Request for Information (RFI) conducted <input checked="" type="checkbox"/> Comparable vendor services have been used on previous contracts (CV) <input type="checkbox"/> Leveraged Procurement Agreement (LPA)

Complete Only if Contractor Responsible for Activity



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Procurement Vehicle		Contract Type	
If "Other," specify:	Click here to enter text.	If "Other," specify:	Click here to enter text.

Technical Analysis

Responsible (check all that apply)	When Needed (check all that apply)	Cost Estimate Verification (check all that apply)
<input checked="" type="checkbox"/> Agency/state entity staff <input type="checkbox"/> STP staff <input type="checkbox"/> CDT Project Approvals and Oversight staff <input type="checkbox"/> CA-PMO staff <input type="checkbox"/> DGS staff <input type="checkbox"/> Contractor <input type="checkbox"/> Other, specify:	<input checked="" type="checkbox"/> Stage 3 Solution Development <input type="checkbox"/> Stage 4 Project Readiness and Approval <input type="checkbox"/> After project is approved (after Stage 4 Project Readiness and Approval)	<input checked="" type="checkbox"/> Market research conducted (MR) <input checked="" type="checkbox"/> Cost estimate provided (CE) <input type="checkbox"/> CDT CE <input type="checkbox"/> DGS CE <input type="checkbox"/> Request for Information (RFI) conducted <input checked="" type="checkbox"/> Comparable vendor services have been used on previous contracts (CV) <input type="checkbox"/> Leveraged Procurement Agreement (LPA)

Complete Only if Contractor Responsible for Activity

Procurement Vehicle		Contract Type	
If "Other," specify:	Click here to enter text.	If "Other," specify:	Click here to enter text.

Project Management

Responsible (check all that apply)	When Needed (check all that apply)	Cost Estimate Verification (check all that apply)
<input checked="" type="checkbox"/> Agency/state entity staff <input type="checkbox"/> STP staff <input type="checkbox"/> CDT Project Approvals and Oversight staff <input type="checkbox"/> CA-PMO staff <input type="checkbox"/> DGS staff <input checked="" type="checkbox"/> Contractor <input type="checkbox"/> Other, specify:	<input checked="" type="checkbox"/> Stage 3 Solution Development <input checked="" type="checkbox"/> Stage 4 Project Readiness and Approval <input checked="" type="checkbox"/> After project is approved (after Stage 4 Project Readiness and Approval)	<input type="checkbox"/> Market research conducted (MR) <input type="checkbox"/> Cost estimate provided (CE) <input type="checkbox"/> CDT CE <input type="checkbox"/> DGS CE <input type="checkbox"/> Request for Information (RFI) conducted <input type="checkbox"/> Comparable vendor services have been used on previous contracts (CV) <input type="checkbox"/> Leveraged Procurement Agreement (LPA)

Complete Only if Contractor Responsible for Activity

Procurement Vehicle		Contract Type	
If "Other," specify:	Click here to enter text.	If "Other," specify:	Click here to enter text.

Conduct Procurement

Responsible (check all that apply)	When Needed (check all that apply)	Cost Estimate Verification (check all that apply)



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<input checked="" type="checkbox"/> Agency/state entity staff <input type="checkbox"/> STP staff <input type="checkbox"/> CDT Project Approvals and Oversight staff <input type="checkbox"/> CA-PMO staff <input type="checkbox"/> DGS staff <input type="checkbox"/> Contractor <input type="checkbox"/> Other, specify:	<input checked="" type="checkbox"/> Stage 3 Solution Development <input type="checkbox"/> Stage 4 Project Readiness and Approval <input type="checkbox"/> After project is approved (after Stage 4 Project Readiness and Approval)	<input checked="" type="checkbox"/> Market research conducted (MR) <input checked="" type="checkbox"/> Cost estimate provided (CE) <input type="checkbox"/> CDT CE <input type="checkbox"/> DGS CE <input type="checkbox"/> Request for Information (RFI) conducted <input checked="" type="checkbox"/> Comparable vendor services have been used on previous contracts (CV) <input type="checkbox"/> Leveraged Procurement Agreement (LPA)
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Complete Only if Contractor Responsible for Activity

Procurement Vehicle		Contract Type	
If "Other," specify:	Click here to enter text.	If "Other," specify:	Click here to enter text.

Independent Verification and Validation (IV&V)

Responsible (check all that apply)	When Needed (check all that apply)	Cost Estimate Verification (check all that apply)
<input type="checkbox"/> Agency/state entity staff <input type="checkbox"/> STP staff <input type="checkbox"/> CDT Project Approvals and Oversight staff <input type="checkbox"/> CA-PMO staff <input type="checkbox"/> DGS staff <input type="checkbox"/> Contractor <input checked="" type="checkbox"/> Other, specify: TBD	<input checked="" type="checkbox"/> Stage 3 Solution Development <input checked="" type="checkbox"/> Stage 4 Project Readiness and Approval <input type="checkbox"/> After project is approved (after Stage 4 Project Readiness and Approval)	<input type="checkbox"/> Market research conducted (MR) <input type="checkbox"/> Cost estimate provided (CE) <input checked="" type="checkbox"/> CDT CE <input type="checkbox"/> DGS CE <input type="checkbox"/> Request for Information (RFI) conducted <input type="checkbox"/> Comparable vendor services have been used on previous contracts (CV) <input type="checkbox"/> Leveraged Procurement Agreement (LPA)

Complete Only if Contractor Responsible for Activity

Procurement Vehicle		Contract Type	
If "Other," specify:	Click here to enter text.	If "Other," specify:	Click here to enter text.

Project Oversight

Responsible (check all that apply)	When Needed (check all that apply)	Cost Estimate Verification (check all that apply)
<input type="checkbox"/> Agency/state entity staff <input type="checkbox"/> STP staff <input checked="" type="checkbox"/> CDT Project Approvals and Oversight staff <input type="checkbox"/> CA-PMO staff <input type="checkbox"/> DGS staff <input type="checkbox"/> Contractor <input type="checkbox"/> Other, specify:	<input checked="" type="checkbox"/> Stage 3 Solution Development <input checked="" type="checkbox"/> Stage 4 Project Readiness and Approval <input type="checkbox"/> After project is approved (after Stage 4 Project Readiness and Approval)	<input type="checkbox"/> Market research conducted (MR) <input type="checkbox"/> Cost estimate provided (CE) <input checked="" type="checkbox"/> CDT CE <input type="checkbox"/> DGS CE <input type="checkbox"/> Request for Information (RFI) conducted <input type="checkbox"/> Comparable vendor services have been used on previous contracts (CV) <input type="checkbox"/> Leveraged Procurement Agreement (LPA)

Complete Only if Contractor Responsible for Activity

Procurement Vehicle		Contract Type	
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If "Other," specify:		Click here to enter text.		If "Other," specify:		Click here to enter text.	
Organizational Change Management							
Responsible (check all that apply)		When Needed (check all that apply)		Cost Estimate Verification (check all that apply)			
<input checked="" type="checkbox"/> Agency/state entity staff <input type="checkbox"/> STP staff <input type="checkbox"/> CDT Project Approvals and Oversight staff <input type="checkbox"/> CA-PMO staff <input type="checkbox"/> DGS staff <input checked="" type="checkbox"/> Contractor <input type="checkbox"/> Other, specify:		<input checked="" type="checkbox"/> Stage 3 Solution Development <input checked="" type="checkbox"/> Stage 4 Project Readiness and Approval <input checked="" type="checkbox"/> After project is approved (after Stage 4 Project Readiness and Approval)		<input type="checkbox"/> Market research conducted (MR) <input type="checkbox"/> Cost estimate provided (CE) <input type="checkbox"/> CDT CE <input type="checkbox"/> DGS CE <input type="checkbox"/> Request for Information (RFI) conducted <input type="checkbox"/> Comparable vendor services have been used on previous contracts (CV) <input type="checkbox"/> Leveraged Procurement Agreement (LPA)			
Complete Only if Contractor Responsible for Activity							
Procurement Vehicle				Contract Type			
If "Other," specify:		Click here to enter text.		If "Other," specify:		Click here to enter text.	
Testing							
Responsible (check all that apply)		When Needed (check all that apply)		Cost Estimate Verification (check all that apply)			
<input checked="" type="checkbox"/> Agency/state entity staff <input type="checkbox"/> STP staff <input type="checkbox"/> CDT Project Approvals and Oversight staff <input type="checkbox"/> CA-PMO staff <input type="checkbox"/> DGS staff <input checked="" type="checkbox"/> Contractor <input type="checkbox"/> Other, specify:		<input type="checkbox"/> Stage 3 Solution Development <input checked="" type="checkbox"/> Stage 4 Project Readiness and Approval <input type="checkbox"/> After project is approved (after Stage 4 Project Readiness and Approval)		<input type="checkbox"/> Market research conducted (MR) <input type="checkbox"/> Cost estimate provided (CE) <input type="checkbox"/> CDT CE <input type="checkbox"/> DGS CE <input type="checkbox"/> Request for Information (RFI) conducted <input type="checkbox"/> Comparable vendor services have been used on previous contracts (CV) <input type="checkbox"/> Leveraged Procurement Agreement (LPA)			
Complete Only if Contractor Responsible for Activity							
Procurement Vehicle				Contract Type			
If "Other," specify:		Click here to enter text.		If "Other," specify:		Click here to enter text.	
Data Cleansing							
Responsible (check all that apply)		When Needed (check all that apply)		Cost Estimate Verification (check all that apply)			



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<input checked="" type="checkbox"/> Agency/state entity staff <input type="checkbox"/> STP staff <input type="checkbox"/> CDT Project Approvals and Oversight staff <input type="checkbox"/> CA-PMO staff <input type="checkbox"/> DGS staff <input type="checkbox"/> Contractor <input type="checkbox"/> Other, specify:	<input type="checkbox"/> Stage 3 Solution Development <input checked="" type="checkbox"/> Stage 4 Project Readiness and Approval <input checked="" type="checkbox"/> After project is approved (after Stage 4 Project Readiness and Approval)	<input type="checkbox"/> Market research conducted (MR) <input type="checkbox"/> Cost estimate provided (CE) <input type="checkbox"/> CDT CE <input type="checkbox"/> DGS CE <input type="checkbox"/> Request for Information (RFI) conducted <input type="checkbox"/> Comparable vendor services have been used on previous contracts (CV) <input type="checkbox"/> Leveraged Procurement Agreement (LPA)
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Complete Only if Contractor Responsible for Activity

Procurement Vehicle		Contract Type	
If "Other," specify:	Click here to enter text.	If "Other," specify:	Click here to enter text.

Data Validation

Responsible (check all that apply)	When Needed (check all that apply)	Cost Estimate Verification (check all that apply)
<input checked="" type="checkbox"/> Agency/state entity staff <input type="checkbox"/> STP staff <input type="checkbox"/> CDT Project Approvals and Oversight staff <input type="checkbox"/> CA-PMO staff <input type="checkbox"/> DGS staff <input type="checkbox"/> Contractor <input type="checkbox"/> Other, specify:	<input checked="" type="checkbox"/> Stage 3 Solution Development <input checked="" type="checkbox"/> Stage 4 Project Readiness and Approval <input type="checkbox"/> After project is approved (after Stage 4 Project Readiness and Approval)	<input type="checkbox"/> Market research conducted (MR) <input type="checkbox"/> Cost estimate provided (CE) <input type="checkbox"/> CDT CE <input type="checkbox"/> DGS CE <input type="checkbox"/> Request for Information (RFI) conducted <input type="checkbox"/> Comparable vendor services have been used on previous contracts (CV) <input type="checkbox"/> Leveraged Procurement Agreement (LPA)

Complete Only if Contractor Responsible for Activity

Procurement Vehicle		Contract Type	
If "Other," specify:	Click here to enter text.	If "Other," specify:	Click here to enter text.

Data Conversion

Responsible (check all that apply)	When Needed (check all that apply)	Cost Estimate Verification (check all that apply)
<input checked="" type="checkbox"/> Agency/state entity staff <input type="checkbox"/> STP staff <input type="checkbox"/> CDT Project Approvals and Oversight staff <input type="checkbox"/> CA-PMO staff <input type="checkbox"/> DGS staff <input type="checkbox"/> Contractor <input type="checkbox"/> Other, specify:	<input checked="" type="checkbox"/> Stage 3 Solution Development <input checked="" type="checkbox"/> Stage 4 Project Readiness and Approval <input type="checkbox"/> After project is approved (after Stage 4 Project Readiness and Approval)	<input type="checkbox"/> Market research conducted (MR) <input type="checkbox"/> Cost estimate provided (CE) <input type="checkbox"/> CDT CE <input type="checkbox"/> DGS CE <input type="checkbox"/> Request for Information (RFI) conducted <input type="checkbox"/> Comparable vendor services have been used on previous contracts (CV) <input type="checkbox"/> Leveraged Procurement Agreement (LPA)

Complete Only if Contractor Responsible for Activity

Procurement Vehicle		Contract Type	
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If "Other," specify:		Click here to enter text.		If "Other," specify:		Click here to enter text.	
Data Migration							
Responsible (check all that apply)		When Needed (check all that apply)		Cost Estimate Verification (check all that apply)			
<input checked="" type="checkbox"/> Agency/state entity staff <input type="checkbox"/> STP staff <input type="checkbox"/> CDT Project Approvals and Oversight staff <input type="checkbox"/> CA-PMO staff <input type="checkbox"/> DGS staff <input type="checkbox"/> Contractor <input type="checkbox"/> Other, specify:		<input checked="" type="checkbox"/> Stage 3 Solution Development <input checked="" type="checkbox"/> Stage 4 Project Readiness and Approval <input checked="" type="checkbox"/> After project is approved (after Stage 4 Project Readiness and Approval)		<input type="checkbox"/> Market research conducted (MR) <input type="checkbox"/> Cost estimate provided (CE) <input type="checkbox"/> CDT CE <input type="checkbox"/> DGS CE <input type="checkbox"/> Request for Information (RFI) conducted <input type="checkbox"/> Comparable vendor services have been used on previous contracts (CV) <input type="checkbox"/> Leveraged Procurement Agreement (LPA)			
Complete Only if Contractor Responsible for Activity							
Procurement Vehicle				Contract Type			
If "Other," specify:		Click here to enter text.		If "Other," specify:		Click here to enter text.	
Training							
Responsible (check all that apply)		When Needed (check all that apply)		Cost Estimate Verification (check all that apply)			
<input checked="" type="checkbox"/> Agency/state entity staff <input type="checkbox"/> STP staff <input type="checkbox"/> CDT Project Approvals and Oversight staff <input type="checkbox"/> CA-PMO staff <input type="checkbox"/> DGS staff <input type="checkbox"/> Contractor <input type="checkbox"/> Other, specify:		<input type="checkbox"/> Stage 3 Solution Development <input checked="" type="checkbox"/> Stage 4 Project Readiness and Approval <input checked="" type="checkbox"/> After project is approved (after Stage 4 Project Readiness and Approval)		<input type="checkbox"/> Market research conducted (MR) <input type="checkbox"/> Cost estimate provided (CE) <input type="checkbox"/> CDT CE <input type="checkbox"/> DGS CE <input type="checkbox"/> Request for Information (RFI) conducted <input type="checkbox"/> Comparable vendor services have been used on previous contracts (CV) <input type="checkbox"/> Leveraged Procurement Agreement (LPA)			
Complete Only if Contractor Responsible for Activity							
Procurement Vehicle				Contract Type			
If "Other," specify:		Click here to enter text.		If "Other," specify:		Click here to enter text.	
Contract Management							
Responsible (check all that apply)		When Needed (check all that apply)		Cost Estimate Verification (check all that apply)			



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<input checked="" type="checkbox"/> Agency/state entity staff <input type="checkbox"/> STP staff <input type="checkbox"/> CDT Project Approvals and Oversight staff <input type="checkbox"/> CA-PMO staff <input type="checkbox"/> DGS staff <input type="checkbox"/> Contractor <input type="checkbox"/> Other, specify:	<input type="checkbox"/> Stage 3 Solution Development <input checked="" type="checkbox"/> Stage 4 Project Readiness and Approval <input checked="" type="checkbox"/> After project is approved (after Stage 4 Project Readiness and Approval)	<input type="checkbox"/> Market research conducted (MR) <input type="checkbox"/> Cost estimate provided (CE) <input type="checkbox"/> CDT CE <input type="checkbox"/> DGS CE <input type="checkbox"/> Request for Information (RFI) conducted <input type="checkbox"/> Comparable vendor services have been used on previous contracts (CV) <input type="checkbox"/> Leveraged Procurement Agreement (LPA)
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Complete Only if Contractor Responsible for Activity

Procurement Vehicle		Contract Type	
If "Other," specify:	Click here to enter text.	If "Other," specify:	Click here to enter text.

Enterprise Architecture

Responsible (check all that apply)	When Needed (check all that apply)	Cost Estimate Verification (check all that apply)
<input checked="" type="checkbox"/> Agency/state entity staff <input type="checkbox"/> STP staff <input type="checkbox"/> CDT Project Approvals and Oversight staff <input type="checkbox"/> CA-PMO staff <input type="checkbox"/> DGS staff <input type="checkbox"/> Contractor <input type="checkbox"/> Other, specify:	<input checked="" type="checkbox"/> Stage 3 Solution Development <input checked="" type="checkbox"/> Stage 4 Project Readiness and Approval <input type="checkbox"/> After project is approved (after Stage 4 Project Readiness and Approval)	<input type="checkbox"/> Market research conducted (MR) <input type="checkbox"/> Cost estimate provided (CE) <input type="checkbox"/> CDT CE <input type="checkbox"/> DGS CE <input type="checkbox"/> Request for Information (RFI) conducted <input type="checkbox"/> Comparable vendor services have been used on previous contracts (CV) <input type="checkbox"/> Leveraged Procurement Agreement (LPA)

Complete Only if Contractor Responsible for Activity

Procurement Vehicle		Contract Type	
If "Other," specify:	Click here to enter text.	If "Other," specify:	Click here to enter text.

Quality Assurance

Responsible (check all that apply)	When Needed (check all that apply)	Cost Estimate Verification (check all that apply)
<input checked="" type="checkbox"/> Agency/state entity staff <input type="checkbox"/> STP staff <input type="checkbox"/> CDT Project Approvals and Oversight staff <input type="checkbox"/> CA-PMO staff <input type="checkbox"/> DGS staff <input type="checkbox"/> Contractor <input type="checkbox"/> Other, specify:	<input checked="" type="checkbox"/> Stage 3 Solution Development <input checked="" type="checkbox"/> Stage 4 Project Readiness and Approval <input type="checkbox"/> After project is approved (after Stage 4 Project Readiness and Approval)	<input type="checkbox"/> Market research conducted (MR) <input type="checkbox"/> Cost estimate provided (CE) <input type="checkbox"/> CDT CE <input type="checkbox"/> DGS CE <input type="checkbox"/> Request for Information (RFI) conducted <input type="checkbox"/> Comparable vendor services have been used on previous contracts (CV) <input type="checkbox"/> Leveraged Procurement Agreement (LPA)

Complete Only if Contractor Responsible for Activity

Procurement Vehicle		Contract Type	
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If "Other," specify:	Click here to enter text.	If "Other," specify:	Click here to enter text.
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	Yes	No
Will any of the activities identified above result in a competitive or non-competitive solicitation that will be over the Agency/state entity's DGS delegated purchasing authority?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

2.11.4 Enterprise Architecture Alignment

The recommendation solution allows DSH to reach its goal of building an enterprise architecture for its hospital operations by providing a single solution for all of its core pharmacy areas of inventory, repackaging, dispensing medications to patients, improved controlled drug security and patient specific medication billing and data integration.

Information Technology Capability Table		
Information Technology Capability	Existing Enterprise Capability to be Leveraged	New Enterprise Capability Needed
Public or Internal Portal/Website	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Public or Internal Mobile Application	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Enterprise Service Bus	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Identity and Access Management	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Master Data Management	<input checked="" type="checkbox"/>	<input type="checkbox"/>



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2.11.5 Project Phases	
Phase 1	Project Planning
Description	
All PAL phases	PAL Stage approvals
Phase 2	Assess facilities for potential building modifications
Description	
Phase Deliverable	
Determine building modifications required to accommodate new equipment.	Schedule of work to be completed to prepare for new equipment.
Phase 3	Design Backend Architecture
Description	
Phase Deliverable	
Design of enterprise level architecture and integration of new equipment and systems	Design Document Architecture diagrams
Phase 4	Implementation of back end automatic drug dispensing systems
Description	
Phase Deliverable	
Implementation of enterprise environment for inventory management and new equipment.	Product installation Acceptance test results
Phase 5	Procurement of ADDS
Description	
Phase Deliverable	
Procurement of licenses and equipment	Equipment and licenses obtained for each site
Phase 6	Hospital 1 Implementation
Description	
Phase Deliverable	
Inventory Management, Repackaging equipment and ADDS equipment installed	Successful deployment
Phase 7	Hospital 2 Implementation
Description	
Phase Deliverable	
Inventory Management, Repackaging equipment and ADDS equipment installed	Successful deployment
Phase 8	Hospital 3 Implementation
Description	
Phase Deliverable	
Inventory Management, Repackaging equipment and ADDS equipment installed	Successful deployment
Phase 9	Hospital 4 Implementation
Description	
Phase Deliverable	
Inventory Management, Repackaging equipment and ADDS equipment installed	Successful deployment
Phase 9	Hospital 5 Implementation
Description	
Phase Deliverable	
Inventory Management, Repackaging equipment and ADDS equipment installed	Successful deployment
Phase 9	Project Close
Description	
Phase Deliverable	
Complete all project closing activities	Live systems at all sites, all project close artifacts completed
2.11.6 High Level Proposed Project Schedule	
Proposed Project Planning Start Date:	5/1/2018
Proposed Project Planning End Date:	6/30/2020



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Proposed Project Start Date:	7/15/2020	Proposed Project End Date:	3/31/2022
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Activity Name	Start Date	End Date
Stage 3 Solution Development	5/17/2019	12/31/2019
Stage 4 Project Readiness and Approval	12/31/2019	4/30/2020
Implementation – Back end enterprise system	3/2/2020	8/3/2020
Hospital 1 Implementation	7/6/2020	12/1/2020
Hospital 2 Implementation	12/1/2020	3/31/2021
Hospital 3 Implementation	3/1/2021	8/2/2021
Hospital 4 Implementation	7/1/2021	10/30/2021
Hospital 5 Implementation	10/1/2021	1/31/2022
Project close	2/1/2022	3/31/2022
Select + to add activities		

2.11.7 Cost Summary

Total Proposed Planning Cost:	\$2.4 million
Total Proposed Project Cost:	\$ 10.9 million
Total Proposed Future Operations IT Staff & OE&E Costs (Continuing):	
Total Proposed Annual Future Operations IT Costs (M&O):	\$823,000

2.12 Staffing Plan

2.12.1 Administrative



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Due to the criticality and magnitude of this project, to effectively prepare the contract and successfully mitigate risk DSH's staffing plan includes requesting the following resources to complete Stages 3 and 4 of the Project Approval Lifecycle, including solution development/procurement and project readiness.

A project manager and business analyst will track and manage all DSH Pharmacy project readiness and governance efforts. The contract manager will coordinate with control agencies, lead and prepare the procurement approach and procurement documents. This is key to ensure proper planning, monitoring, risk mitigation, issue resolution and communication.

A contract manager is integral to coordinating among control agencies, DSH legal expert and project planning team members to ensure the solicitation development, selection and award is properly planned and executed. The resulting contract will dictate the course of the project and set the stage for success.

A billing Pharmacy advocate will augment our clinical resources to provide input and implement organizational readiness activities to ensure billing is integrated effectively with the clinical goals of the project. This is key to ensuring we achieve project outcomes associated with revenue generation.

A legal expert will ensure all HIPAA, privacy and contractual considerations are addressed throughout the planning stages. This will mitigate significant risks.

Contracted Pharmacy implementation consultants will focus on organizational readiness. The Pharmacy consultants will be clinicians that have IT experience implementing Pharmacy systems in large hospital organizations and they will provide guidance and help ensure organizational readiness and implement lessons learned in market research and contract preparation. The Pharmacy task forces will work alongside the consultants and serve as subject matter experts, providing in depth knowledge and understanding of business processes related to EHR. This resource is critical to achieving user adoption, effective organizational change management and contributing key information to project planning.

2.12.2 Business Program

Following a Pharmacy Governance Plan, the Pharmacy Advocates will work with clinical subject matter experts to provide assistance with business process reengineering, gap analysis, policy revision recommendations and business program support.

2.12.3 Information Technology (IT)

The project manager will track and manage all recommended solution efforts and will be responsible for developing a project management plan and monitoring all daily activities associated with this proposal. The project manager will also be responsible for tracking milestones and success criteria and preparing status reports, escalating issues, etc.

2.12.4 Testing

DSH has existing experienced resources who are capable of providing testing and have performed all stages of testing in previous projects, including Functional, Integration, Security, Regression, Stress/Load, Performance and User Acceptance Testing (UAT).

2.12.5 Data Conversion/Migration

Data conversion and migration planning will be completed by experienced, current TSD staff as part of the Stage 3 and Stage 4 Project Approval Lifecycle documentation.

2.12.6 Training and Organizational Change Management



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There will be a moderate degree of business disruption that will be mitigated by effective training, planning, basic computer skills education, completion of a gap analysis, business process reengineering and other Organizational Change Management (OCM) efforts tailored to each local hospital's organizational needs.

Training will be provided by DSH staff in cooperation with the vendor (as applicable). The state has robust Training Departments at each of its standalone hospitals with enough qualified staff to coordinate training. Cost estimates include any requests relevant to training and organizational change management.


OCM planning will be completed by Pharmacy Advocates. Implementation of OCM efforts will be completed by Pharmacy Advocates, local hospital-specific Change Ambassadors (to be identified) and other key stakeholders, with oversight by the Clinical Operations Division.

2.12.7 Resource Capacity/Skills/Knowledge for Stage 3 Solution Development

DSH anticipates an increase in staff and resources for Stage 3 Solution Development and other Pharmacy planning efforts. Staff mentioned in the FAW will participate in the remainder of the planning phases and through the project duration as indicated. Planning and implementation efforts will leverage the support and guidance of an Executive Project Sponsor and the Executive Steering Committee for decision making relative to critical change requests and risks/issues which cannot be resolved at the lower levels of the project team structure. Along with controlling agencies, project members identified and illustrated in the project structure will support the Stage 3 effort. Staff serving in the IT Specialist rank have the capacity, skill and knowledge of DSH's procurement program and resources to support the procurement effort and are familiar with DSH's governance framework as it pertains to procurement.

2.12.8 Project Management

2.12.8.1 Project Management Risk Assessment

Project Management Risk Score:	2.5
 07 Pharmacy_Moderniz	

2.12.8.2 Project Management Planning

Are the following project management plans or project artifacts complete, approved by the designated Agency/state entity authority, and available for Department of Technology review?

Project Charter	Yes	...
Scope Management Plan	Yes	...
Risk Management Plan	Yes	...
Issue and Action Item Management Plan	Yes	...
Communication Management Plan	Yes	...
Schedule Management Plan	Yes	...
Human Resource Management Plan	Not Applicable	...
Staff Management Plan	Yes	...
Stakeholder Management Plan	Yes	...
Governance Plan	Yes	...

2.12.9 Organization Charts



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2.12.9 Pharmacy
Modernization Orga

2.13 Data Conversion/Migration

Identify the status of each of the following data conversion/migration activities:

Data Conversion/Migration Planning	Not Started	Data Quality Assessment	Not Started
Data Conversion/Migration Requirements	Not Started	Data Quality Business Rules	Not Started
Current Environment Analysis	In Progress	Data Dictionaries	In Progress
Data Profiling	Not Started	Data Cleansing and Correction	Not Started

Attachment: Attach files to email submission.

2.14 Financial Analysis Worksheets

Attachment: Attach file to email submission.

Preliminary Assessment – Department of Technology Use Only

Original “New Submission” Date	11/1/2018
Form Received Date	9/13/2019
Form Accepted Date	9/13/2019
Form Status	Completed
Form Status Date	1/10/2020

Main Form – Department of Technology Use Only

Original “New Submission” Date	9/13/2019
Form Received Date	9/13/2019
Form Accepted Date	9/13/2019
Form Status	Completed
Form Status Date	9/13/2019
Form Disposition	Approved
Form Disposition Date	1/10/2020