

U.S. Department of Veterans Affairs
Veteran's Health Administration (VHA)
VistA Application Analytics (VA2)

CONTRACTOR PROJECT MANAGEMENT PLAN

Base Period, 12 Months

Contract: 36C10B24N10280030



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TABLE OF CONTENTS

1	PROJECT INFORMATION.....	5
1.1	Document Information	5
1.2	Document Change History	5
1.3	Project Information.....	5
1.4	Location of Performance	5
1.5	Background Overview	6
2	PROJECT MANAGEMENT APPROACH	7
2.1	Scope Management	7
2.1.1	Project Scope	7
2.1.2	Scope Change Management	7
2.2	Schedule and Time Management	8
2.3	Cost Management.....	8
2.4	Communications Management	8
2.4.1	Project Status Management	9
2.4.2	Risk/Issue Management.....	10
2.4.3	Document Management.....	10
2.4.4	Document Location.....	11
2.4.5	Naming Conventions.....	11
2.4.6	Project Assignments.....	11
2.4.7	Stakeholder Engagement.....	11
2.5	Procurement Management	11
2.6	Quality Management	11
2.7	Human Resource Management	11
2.7.1	Stakeholder Contact List for Resource Support.....	12
2.7.2	Roles, Responsibilities and Assignments	12
3	TECHNICAL APPROACH.....	14
3.1	Technical Activities.....	14
3.1.1	Approach to Capture of VistA Client Traffic (PWS 5.2.1)	14



3.1.2	Analysis of Vista Client Traffic (PWS 5.2.2).....	14
3.1.3	Analysis of Use of Key Vista Clients (PWS 5.2.3)	17
3.1.4	Vista Client Use Improvement Report (PWS 5.2.4)	17
3.1.5	Additional Vista Client Traffic Capture and Analysis (PWS 5.3 - Optional Task 1).....	18
3.2	Technical Tools Summary	18
3.3	Technical Life Cycle (WBS) and Deliverables	19
3.3.1	Project Management	19
3.3.2	Reporting Requirements.....	20
3.3.3	Technical Kick off Meeting	20
3.3.4	Capture of Vista Client Traffic	21
3.3.5	Analysis of Vista Client Traffic	22
3.3.6	22
3.3.7	Analysis of Use of Key Vista Clients	23
3.3.8	Vista Client Use Improvement Report.....	26
4	APPENDICES	27
4.1	Project Schedule	27
4.2	Risk Management Tracker	28
4.3	Contractor Staff Roster – Deliverable	29
4.4	Performance Metrics	30

1 PROJECT INFORMATION

1.1 Document Information

Title:	VistA Application Analytics
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1.2 Document Change History

Date	Revision #	Change Author	Change Summary
10/09/2024	1.0	Crystal Plain	Initial baseline
TBD			Monthly Updates to Roster, Risks, Schedule

1.3 Project Information

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1.4 Location of Performance

Efforts under this TO shall be performed at Contractor facilities – 100% remote-based. Work shall be primarily conducted during core and non-core business hours. Core hours are defined as 8:00am to 4:00pm local time. Non-core hours are defined as 2nd shift (4:00pm to 12:00am) and 3rd shift (12:00am to 8:00am) as well as weekends. Contractor locations are listed in the [Contract Staff Roster](#).

1.5 Background Overview

To aid maintenance and manageability of VistA, VA has migrated all VistA systems to the VA Enterprise Cloud (VAEC), a federally certified U.S. GovCloud managed by Amazon Web Services (AWS). By leveraging the built-in traffic logging capabilities of the VAEC-based VistA systems, VHA has the first-ever opportunity to analyze the actual clinical care workflows employed in VA medical centers. Such analysis would drive improved standards of practice by health care providers. These improvements would be prompted by the actual practice of care and not speculation about how care is being provided.

VA care is currently provided through VistA's point of care clients ('VistA Applications') which communicate with the VistA servers. Taken as a whole, these communications between VistA clients and VistA servers capture the patterns of clinical care activity performed today in VA. The VistA Application Analytics task order calls for health care data experts to analyze the traffic between VistA clients and three representative VistA servers. The analysis will be provided in a series of precise reports, detailing different aspect of VA care.

Analysis will include the types and volumes of structured and unstructured information read and written by clearly identified classes of health care professional as well as the range of time spent on different tasks. On completion, VHA will possess a set of concrete, actionable recommendations, and demonstrations for improving the care provided to Veterans as well as a guide for how to perform such analysis in the future.

2 PROJECT MANAGEMENT APPROACH

The purpose of this document is to provide the approach, timeline, tools, and resources that will be used to execute a successful project. This plan provides the foundation to achieve project goals and communicates how the project will be managed. By adhering to this plan, VetsEZ will implement and utilize the proper management controls for the project, thereby promoting the achievement of the project's and OIT's goals and objectives.

2.1 Scope Management

This section includes the plan for managing the contract scope through the definition of Project Scope and execution of Change and Acceptance Management plans.

2.1.1 Project Scope

- The goal is for the solution to be hosted in the existing VAEC Amazon Web Services (AWS) environment.
- VA will furnish VAEC capacity as Government Furnished Equipment (GFE), thus the Contractor shall not be responsible for providing or acquiring software, cloud capacity, or server hosting infrastructure.
- The Contractor shall analyze the traffic exchanged between VistA clients and a representative sample of VAEC-based VistA systems. These exchanges use VA's proprietary Remote Procedure Call (RPC) protocol.
- The Contractor shall use the built-in facilities of VAEC to capture this traffic non-invasively (without any need to change or reconfigure the VistA system itself or its clients).
- From this captured data, the Contractor shall provide detailed analysis of representative traffic, identifying point-of-care applications, user behaviors, patterns of clinical use, and areas of concern.
- The Contractor shall reduce the production of this analysis to a repeatable process.
- The Contractor shall deliver its detailed analysis in a series of clearly identified reports.

2.1.2 Scope Change Management

As the project matures, changes in priority and focus may occur. If that occurs, the VA Contracting Officer Representative (COR) and VA Program Manager (PgM) will define the priority of work items. The Project Manager (PM) will work with the VA COR and PgM to execute the Change Management Process that will be followed. During the Project Status meetings or other ad-hoc meetings, items such as staffing, schedule, work item status, risk, and priority will be reviewed. If during these meetings a change in focus is identified, we will work to document the change and get formal approval to proceed with the change.

2.2 Schedule and Time Management

Information related to the status of the project schedule will be provided during the project status meetings and will be available at any time upon request. We will perform a detailed analysis to elevate physician experience at the point of care. We will work to define a schedule following an Agile, time boxed model. This will allow us to quickly see the status of work items and change priority quickly while identifying the impact to the planned items.

2.3 Cost Management

This performance-based Task Order 36C10B24N10280030 entitled, “VistA Application Analytics” is issued on a Firm-Fixed-Price (FFP) basis, in accordance with the terms and conditions of Contract VA118-16-D-1028 and modifications thereto. The TAC Number associated with this task is VA-24-00054128.

2.4 Communications Management

Virtual team meetings are the primary method to facilitate communications, both with external stakeholders and with various internal working teams. Project Status meetings are conducted on a recurring basis to discuss the progress of tasks, planned next steps, action items, risks and issues, and staffing updates. Ad-hoc and/or daily stand-up meetings are conducted with the VA COR and PgM. In addition, updates to the Monthly Status Report and Project Management Plan are generated in accordance with the terms of the contract.

Project communications management assists the Project Team (i.e., Team) effectively communicate with stakeholders to build awareness, elicit buy-in, monitor progress, and facilitate informed decision-making. Communications management includes the processes necessary to facilitate timely and appropriate generation, collection, dissemination, storage, and ultimate disposition of project information.

Project communications will address several aspects detailed in the following subsections. The Team will develop a communications schedule based on the outline provided below. This will guide the multiple communication types within the VA stakeholders.

The Team’s communication strategy utilizes an agile methodology approach. Most communication exchanges are associated with the planned program reviews and progress reports. These may include, but are not limited to, Monthly Status Reports, COR or PgM meetings as needed, and other ad-hoc communications as warranted.

TABLE 1 STAKEHOLDER COMMUNICATION SCHEDULE

Stakeholder Group	Communications
VA Community Image Exchange Services project team	Regular and ad-hoc as formally outlined in the Project PWS, and informally as we discover to be practicable. All methods of communication (electronic, voice, in person) should be employed to suit the stakeholders’ preference.

Stakeholder Group	Communications
VA Management	Communications are most appropriate done through the project team. VetsEZ stands ready to support contract team communications with supporting information and documentation.
Customer Users	Should receive general notification that the project is occurring, and who to contact to get more information or help. Possible opt-in system to receive notification of imminent activities relating to their VISN or Site. Communications may be through the VA project team or directly from VetsEZ as deemed most appropriate.
VA IT Help Desk	Should be well-aware of the project, receive notification of imminent project activities that might result in help calls as well. The help desk needs to be able to contact the contractor team for assistance in issues they suspect may be related to the project.
VA Developers	Should receive general notification that the project is occurring, and who to contact to get more information or help. Possible opt-in system to receive notification of imminent activities relating to their VISN or site, as well as tips to insure their minimal impacts on their work.
VistA and VAEC	VetsEZ plans to coordinate the traffic capture from three VistAs. This will involve liaising with other parties working in the VAEC including those actively managing cloud-based VistAs and VAEC facilities required for VAA's analytics.
3rd Party App and IT service Providers	Should receive general notification that the project is occurring, and who to contact to get more information or help.

Below is the proposed list of standing meetings to support the contract:

- Re-occurring meetings with the VA stakeholders, VA PM, and COR, occur weekly on Tuesdays.
- Quarterly Technical Analysis “all-hands” Open Forum discussions and demonstrations with VA business Owner

2.4.1 Project Status Management

Project updates will be provided regularly to the COR and PgM in written (i.e., Monthly Progress Reports) and oral (Project Status Meetings) format. The Monthly Progress Reports will include:

1. Product TO Name.
2. Overview and description of the TO.
3. Overall high-level assessment of TO progress.
4. All Work In-Progress (WIP) vs work in-progress limit and completed during the reporting period.
5. Identification of any TO related issues uncovered during the reporting period and especially highlight those areas with a high probability of impacting schedule or performance goals and their impact on schedule or performance goals.

6. Explanations for any unresolved issues, including workable solutions and any actions required of the Government and/or Contractor to resolve or mitigate any identified issue, including a plan and timeframe for resolution.
7. Status on previously identified issues, actions taken to mitigate the situation and/or progress made in rectifying the situation.
8. Work planned for the subsequent reporting periods when applicable Current TO schedule overlaid on original TO schedule showing any delays or advancement in schedule.
9. Workforce staffing data showing all Contractor personnel performing on the effort during the current reporting period. After the initial labor baseline is provided, each report shall identify any changes in staff identifying each person who was added to the TO or removed from the TO.
10. Training Certificates, after initial and updated certificates are provided, each report shall identify any changes for all contractor personnel including the dates of expiration and the due date for the next time due.
11. Original schedule of deliverables and the corresponding deliverables made during the current reporting period.

These Reports will be delivered to the VA COR and PgM unless otherwise specified on the fifth day of the month, beginning after technical project kickoff with the customer, throughout the Period of Performance (PoP). Project Status Meetings and/or ad-hoc stand-up meetings will be conducted to discuss all work products, risks, and issues for supporting the contract. Additionally, any problems encountered, and actual and/or potential schedule deviations shall be communicated in these meetings, in the Monthly Status Report, and in the Project Management Plan.

2.4.2 Risk/Issue Management

A risk is defined as anything that **could** impact the execution of the project. An issue is defined as anything that **is** impacting the project's execution. As risks/issues are identified they will be documented and tracked by the PM in an Issue/Risk Log. We recommend a single, joint log due to the close relationship of Risks and Issues. The status of active risks/issues will be discussed during our Project Status meetings and defined and updated in the Monthly Status Report and Project Management Plan. Generally, risks/issues will remain open until the PM and VA COR and/or PgM agree that it has been resolved and no additional action is required. If required, a separate Risk/Issue log will be provided. However, this will be driven by the need.

2.4.3 Document Management

The Document Management Plan defines where and how project documents and formal deliverables will be stored. Specifically, where documents are stored is determined by their location and how documents are stored is determined by a naming convention used for all files associated with the project.

2.4.4 Document Location

The project procedural documents will be stored in the assigned Teams site (in PDF format) on the VA network unless otherwise directed. The site is set up and is [VA2 Deliverables](#). All Analysis Outcome Document Deliverables will be stored in VA's Enterprise GIT. Currently, the team is awaiting a submitted SNOW ticket (RITM12645988) to be implemented that will establish our GitHub repository.

2.4.5 Naming Conventions

The following naming conventions will apply to documents in the project folders:

<name of artifact>_<yymmdd>.<file format>

2.4.6 Project Assignments

To enable a continuity of effort, team members will be required to share information regarding their designated assignments via the VA internal task tracking application (e.g., Atlassian Jira) with other members of the Team. This will permit the continuation and completion of a project task by a backup in an emergency affecting the primary designee.

2.4.7 Stakeholder Engagement

To successfully execute the primary objectives of this Task Order, collaborating with Subject Matter Experts (SMEs), and Product Owners within and across OIT is critical. Meetings will be primarily conducted virtually via Microsoft Teams unless travel to migration sites is needed and directed by the VA.

2.5 Procurement Management

We do not anticipate procurement of items for this task order.

2.6 Quality Management

The Quality Management plan identifies what quality requirements to adhere to and defines how project documents and formal deliverables will be assessed and audited for quality.

We will work with the COR, VHA Business Owner, and other appropriate VA stakeholders to define acceptance criteria for each deliverable. We will implement a two-stage review process in which completed deliverables will be peer-reviewed by the Team as appropriate, then reviewed for final delivery by the Project Manager. Implementing a two-stage review process will mitigate technical issues and/or non-compliance with the agreed upon acceptance criteria.

2.7 Human Resource Management

This section includes a stakeholder contact list and a roles, responsibilities, and assignments table.

2.7.1 Stakeholder Contact List for Resource Support

Position	Name
Contract Officer (CO)	Dana Newcomb
Contract Specialist (CS)	Sara Kuna
Contract Officer Representative (COR)	Chris Clark
VP, Service Delivery	Jeff Udell
Director, Digital Services	Tim Ferony
FSO	Tracy Lundien
Invoicing	Earleen Smith
Project Manager	Crystal Plain
Project Coordinator	Ashley Canady
Solution Architect	Conor Dowling
Lead Analyst	Gregory Suenaga
Technical Analyst	Brad Goo
Business Process Expert Analyst	Sean Ishii
Data Manager	Michael Furoyama
Data Manager	Jimi Ishihara
Business Process SME	Phuong Nham
Business Analyst	Heather Tipon

2.7.2 Roles, Responsibilities and Assignments

The following table includes the roles, responsibilities, and assignments for all project resources. Staffing for this project is expected to occur over the first six months of this project by adding resources as they are needed.

Role	Name	Responsibilities / Assignments / from Project Schedule
Director	Tim Ferony	Kickoff Meeting Agenda (PWS 5.1.3A)
Project Manager (PM)	Crystal Plain	Contractor Project Management Plan (PWS 5.1.1A) Monthly Status Report (PWS 5.1.2A)
Project Coordinator	Ashley Canady	Contractor Project Management Plan (PWS 5.1.1A) Monthly Status Report (PWS 5.1.2A)
Technical Leads	Conor Dowling / Gregory Suenaga	Vista Traffic Logging Standard Operating Procedure (PWS 5.2.1A) Traffic Analysis Reports for three production Vistas (PWS 5.2.2A) Three (3) Vista Client Use Analysis Reports (PWS 5.2.3A) Client Analysis Validation and Verification Report (PWS 5.2.3B) Client Use Improvement Reports (PWS 5.2.4A)



Role	Name	Responsibilities / Assignments / from Project Schedule

3 TECHNICAL APPROACH

The section below defines the tools and methodology to execute the deliverables for this Task Order: Vista Client Traffic Capture and Analysis.

3.1 Technical Activities

3.1.1 Approach to Capture of Vista Client Traffic (PWS 5.2.1)

The Team plans to coordinate the use of built-in VAEC facilities to non-invasively log the Vista client traffic (RPC traffic) of VAEC-hosted Vistas for a representative period. As a non-invasive method, it will not require any change, reconfiguration, interfaces, development, patches, or plugins in the Vista system itself or any client communicating with that Vista.

The Team plans to coordinate the logging of all client traffic of three VAEC-based production VA Vistas ("Analyzed Vistas").

At least one of the Vistas will support a large integrated medical facility.

Accordingly, the Team will:

- In collaboration with the Government, identify three Vistas and obtain permission from their managers to capture their RPC traffic.
- Coordinate the configuration of the RPC Traffic capture to log all RPC traffic for these three Vistas.
- Monitor and ensure traffic logging of each of the three identified Vistas for at least one month and the storage of all captured data in VAEC for analysis.
- Develop and provide a Vista Traffic Logging Standard Operating Procedure to document the processes and procedures used to log required traffic from any Vista, including permissions required from Vista owners and VAEC maintainers.
- Quality Assurance and Validation using a pre-existing VAEC-based Test Vista before initiating full-scale production capture.

3.1.2 Analysis of Vista Client Traffic (PWS 5.2.2)

Using the client traffic captured (deliverable 5.2.1A), the Team will provide Traffic Analysis Reports comprising the complete client traffic for each of the three analyzed Vistas. In addition, the Team will provide a cross-Vista Analysis Report distinguishing cross-Vista from Vista-specific traffic patterns.

RPC Traffic Analysis – Grouped by RPC Name, RPC Type, and Traffic Attributes

RPC Name	RPC Type	Data Attributes Within the RPC
RPC: TCPConnect	Connection Setup	Contains the IP Address of the client.
RPC: XUS SIGN ON SETUP	Authentication	Provides user-identifying content for CAPRI (low security) login and BSE (token-based) login.
RPC: XUS AV CODE	Authentication	Holds the user's unique identifier within Vista based on Access-Verify login credentials.

RPC Name	RPC Type	Data Attributes Within the RPC
RPC: XUS ESSO VALIDATE	Authentication	Captures the client type, user's unique identifier in VistA, user's name, and other related identifiers based on PIV card login.
RPC: XWB CREATE CONTEXT	Authentication	Identifies specific client types through context, determining the RPCs a client will utilize
RPC: XUS GET USER INFO	User Description	Retrieves user demographics, including the user's unique identifier in VistA, along with the user's name, title, and service information.
RPC: ORWU USERINFO	User Description	Contains the user's unique identifier in VistA, the user's name, physician status, and preferences related to CPRS and other systems.
RPC: MAGGUSER2	User Description	Includes the user's unique identifier in VistA and the user's name, specifically for Imaging Clients.

VistA Traffic Metric by Analysis Type and Data Representation

Traffic Metric	Analysis Type	Data Representation
User volume (PWS 5.2.2.a)	Filtered Data Analysis	Unique user identifiers and types from the User Description RPCs traffic will be used to analyze user volume for each VistA.
Client types and volume of use (PWS 5.2.2.b)	Filtered Data Analysis	Client types, calling IPs of connections, and user identifiers for machine users will be identified through the Authentication RPC traffic log.
Connection volumes, frequency, and duration (PWS 5.2.2.c)	Simple Data Analysis	Every connection, including timestamps for when connections open and close, is logged in the Traffic Log.
Types of user authentication/ security and relative use (PWS 5.2.2.d)	Filtered Data Analysis	Traffic Capture Log for Authentication RPCs record the type of user authentication and the associated NIST levels of assurance (LOAs).
Machine from end Users (PWS 5.2.2.e)	Filtered Data Analysis	Traffic capture logs machine user logins, and logs connections from specific IP pools.
RPC usage frequency and execution times (PWS 5.2.2.f)	Simple Data Analysis	RPC names and invocation start and end times are recorded for each connection in the traffic log.
RPC groupings - representing transactions (PWS 5.2.2.g)	RPC Sequence Analysis	Repeated RPC sequences are identified through LCS analysis to isolate frequently appearing sequences in the traffic log.
RPCs specific to a VistA from cross-VistA RPCs (PWS 5.2.2.h)	Simple Data Analysis	Instance-specific data representation. Organized by VistA, with RPCs identified by name.

Client Traffic Metrics by Analysis Type and Data Representation

Traffic Metric	Analysis Type	Data Representation
User volume and types (PWS 5.2.3.a)	Filtered Data Analysis	User volume for each key client will be analyzed by leveraging unique user identifiers and types extracted from the RPC traffic repository of User Description RPCs using scripts previously developed for Table 3: User Volume .
Connection volumes, frequency, and duration (PWS 5.2.3.b)	Simple Data Analysis	Each Client's connections, including the opening and closing timestamps, are thoroughly analyzed through RPC traffic repository, employing scripts created for Table 3: Connection volumes , frequency, and duration.
Types of user authentication/ security and relative use (PWS 5.2.3.c)	Filtered Data Analysis	Traffic Capture logs for Authentication RPCs (RPC: XUS SIGNON SETUP, RPC: XUS ESSO VALIDATE) record the client type, user auth type, and associated NIST Level of Assurance. It will be extracted by reusing scripts created for Table 3: Types of user authentication/security and use .

Traffic Metric	Analysis Type	Data Representation
Patient volumes (PWS 5.2.3.d)	Filtered Data Analysis	Data from Patient Selection RPCs ("ORWPT SELECT," "GMV PTSELECT," and "DGWPT SELECT") will be used to count distinct patient id or DFNs within the connections of each client type.
Enumeration of all RPCs used by a client and their relative use (PWS 5.2.3.e)	Filtered Data Analysis	Count and enumerate all RPCs used by each client, counting their frequency of use by reusing scripts from Table 3: RPC Usage Frequency .
Distinction of clinical from non-clinical RPCs (PWS 5.2.3.f)	Simple Data Analysis	RPC traffic repository will be queried to determine the RPC type, check for the presence of DFNs, and distinguish between clinical and non-clinical RPCs.
Distinction of RPCs that change (write) from those that read the clinical record (PWS 5.2.3.g)	Filtered Data Analysis	RPC traffic repository will be queried to determine the RPC type, signatures, and associated parameters. Identifying change RPCs and categorizing them by type requires detailed analysis following a basic heuristic to correct any inaccuracies. This will produce a detailed list and count of change (write) RPCs, categorized by subtype, along with a separate list of non-change (read) RPCs.
Distinction of slow running, high overhead, and variable overhead RPCs (PWS 5.2.3.h)	Filtered Data Analysis	The basic traffic representation, including connection volumes, frequency, and duration, reflects the performance of each RPC invocation. This data will isolate RPCs with high and variable overhead, enabling targeted analysis and optimization.

VistA Client Workflow Analysis using Task-Set Descriptions

Requirement	Analysis Approach
Clinical care task sets, represented as groups of RPCs used in tandem (PWS 5.2.3.i)	RPC sequences in Three-Part Task-Set Descriptions relevant to clinical care will be leveraged to understand how RPCs are used in tandem.
Match task sets with the use of one or more specific client screens (PWS 5.2.3.j)	Three-Part Task-Set Descriptions in the Task-Set Alignment Report align task sets with client screens.
Task sets employed by different user types (PWS 5.2.3.k)	Cross-referencing the User Volume and Types metric from the traffic log analysis in Table 4 , with RPC sequences in the Three-Part Task-Set Descriptions, we will categorize task sets by user type, identifying specific workflows and behaviors for each role.
Isolate performance issues with patterns of use that slow care (PWS 5.2.3.l)	By aligning the distinction of slow-running, high overhead, and variable overhead RPCs metric from the traffic log analysis in Table 4 with the RPC sequences in the Three-Part Task-Set Descriptions, we will pinpoint performance issues within the RPC sequence of each Task-Set.

All four reports (i.e. 3 Traffic Analysis Reports and 1 Cross VistA Analysis Report) will be composed in GitHub compatible markdown with embedded graphics where appropriate and all four reports will be stored as markdown in the VA Enterprise GitHub as required in the PWS.

The Traffic Analysis Report for each VistA shall characterize:

- User volume
- Client types and volume of use
- Connection volumes, frequency, and duration

- Types of user authentication/security and relative use
- Machine from end Users
- RPC usage frequency and execution times
- RPC groupings – representing transactions
- RPCs specific to a VistA from cross-VistA RP

3.1.3 Analysis of Use of Key VistA Clients (PWS 5.2.3)

Based on the traffic and client types isolated during the VistA traffic analysis, the Team will produce a detailed Client Traffic Analysis of the operation of three of the most used VistA point-of-care applications ("Clients"). CPRS shall be one of the three, with two others yet to be identified.

All three reports will be composed in GitHub compatible markdown with embedded graphics where appropriate. The team will store the three reports in a git in the VA Enterprise GitHub. All client analyses will be validated and verifiable in a demonstrable way, matching RPC flows to specific client screens and typical tasks. The Team will document the verification and validation of the analysis.

The per Client Traffic Analysis shall include:

- User volumes and types. User types shall capture clinical care specialties and roles.
- Connection volume and duration, tying frequency of client use to user types
- Types of user authentication/security and relative use
- Patient volumes
- Enumeration of all RPCs used by a client and their relative use
- Distinction of clinical from non-clinical RPCs
- Distinction of RPCs that change (write) from those that read the clinical record
- Distinction of slow running, high overhead and variable overhead RPCs
- Clinical care task sets, represented as groups of RPCs used in tandem
- Match task sets with the use of one or more specific client screens
- Task sets employed by different user types
- Isolate performance issues with patterns of use that slow care
- Verification and validation that the analysis accurately captures care provision

3.1.4 VistA Client Use Improvement Report (PWS 5.2.4)

The Team will provide recommendations to upgrade the use of the top three RPC-using Point-of-Care VistA Clients to deliver better clinical care, based on the Client Use Analysis Reports. These recommendations shall be documented in Client Use Improvement Reports for each Client in Microsoft Word and a supporting PowerPoint presentation.

- **Optimal Workflow Identification:** Identify and recommend the most efficient workflow for tasks that can be executed through multiple methods. Standardizing these activities will streamline operations and reduce variability in clinical practices, ensuring that all users adopt the most effective approach.
- **Reconfigurations for Consistent Performance:** In cases where the same workflow exhibits inconsistent performance across different configurations or user settings, we will propose reconfigurations to harmonize and optimize the workflow's performance, ensuring all users experience optimal efficiency.
- **Replacement of Inefficient Workflows:** For workflows that consistently underperform or create bottlenecks in clinical operations, we will recommend their replacement with more efficient alternatives. This will involve analyzing the root causes of poor performance and suggesting new workflows that better meet the demands of clinical care.
- **Microsoft Word and a supporting PowerPoint presentation.** across different user types and specialties to identify workflow efficiency and performance variations. By examining how different users interact with the same Task-Sets, we can uncover best practices and identify areas where workflow standardization may be beneficial.
- **Performance Benchmarking:** Task-Sets will be benchmarked against predefined performance metrics to identify those that consistently underperform. This will involve analyzing response times, error rates, and user feedback to determine the root causes of inefficiencies and guide targeted improvements.
- **Frequency of Use Assessment:** We will assess the frequency of use for each Task-Set to determine which workflows are essential and which may be candidates for streamlining or elimination. Low-use Task-Sets may indicate outdated or redundant features contributing to 'UI/UX clutter.'
- **Correlation with Clinical Outcomes:** Where possible, we will correlate specific Task-Sets with clinical outcomes, enabling us to prioritize improvements with the greatest potential to enhance patient care.

3.1.5 Additional VistA Client Traffic Capture and Analysis (PWS 5.3 - Optional Task 1)

If exercised, the Team will take the approach to non-invasive traffic analysis used in the base period and extend its application to other types of VistA traffic and scenarios.

- Post Cerner migration, the VistA of a migrated site ("Migrated VistA") that is still in production, running a subset of its previous functionality.
- VistA Community Care Client Traffic Analysis

3.2 Technical Tools Summary

Below is a list of the key technical tools to be used in the execution of the contract.

Name of Tool	Description	VA Based System
Microsoft Outlook	Email communication modality	Yes
Microsoft Office	Document and diagramming tool suite	Yes

Microsoft Teams (SharePoint)	Team documentation repository and meeting communication modality	Yes
Vista Clients (3)	Source of Data	Yes
Cerner (If needed in OP2)	VHA site or VISN migration to Cerner EHR (as required)	Yes
VA Enterprise Cloud (VAEC)	Hosting environment to host a Test and Prod "VA2" Virtual Private Cloud (VPC) instance and services needed within. Also, VAEC tools and facilities include Traffic Mirroring, S3, DynamoDB and Redshift.	Yes
Markdown Tools	Reports will be delivered in Github-compatible Markdown	Yes

3.3 Technical Life Cycle (WBS) and Deliverables

This section includes the technical life cycle (work breakdown structure) for the technical approach to this project. It includes a description and acceptance criteria for all tasks, activities, and deliverables necessary to implement the solution.

3.3.1 Project Management

Contractor Project Management Plan	
Description	The Project Management Plan shall include the approach, timeline, and tools to be used in the execution of the TO. It will also include planned execution of planned, routine, and ad hoc data collection reporting requests. This task is due thirty (30) calendar days from contract start (9/9/2024) and updated monthly.
Acceptance Criteria:	The delivery of the Project Management Plan will be determined ACCEPTABLE when the following criteria are met: Report is delivered on time and accepted as accurate by VHA Business Owner and COR either via email or with no comments after 5 business days.
Producer(s)	Tim Ferony, Crystal Plain
Reviewer(s):	Jeff Udell
Approvers(s):	Rafael Richards, M.D., Christopher Clark

3.3.2 Reporting Requirements

Monthly Progress Report	
Description	The Monthly Progress Report covers all work completed during the reporting period and work planned for the subsequent reporting period and identify any problems that arose and gives a description of how the problems were resolved. Specific data elements to be included are included in the PWS and Section 2.4.1 of this document. This task is Due the 5th day of each month throughout the PoP.
Acceptance Criteria:	The delivery of each Monthly Progress Report will be determined ACCEPTABLE when the following criteria are met: Report is delivered on time and accepted as accurate by VHA Business Owner and COR either via email or with no comments after 5 business days.
Producer(s)	Tim Ferony, Crystal Plain
Reviewer(s):	Jeff Udell
Approvers(s):	Rafael Richards, M.D., Christopher Clark

3.3.3 Technical Kick off Meeting

Technical Kick off Meeting Agenda	
Description	The Kickoff Meeting Agenda shall outline the discussion topics for the kickoff meeting, including intended approach, work plan, project schedule for each effort. This task is due five (5) calendar days prior to the scheduled meeting.
Acceptance Criteria:	The delivery of the Kickoff Meeting Agenda will be determined ACCEPTABLE when the following criteria are met: Draft agenda is delivered and accepted
Producer(s)	Tim Ferony, Crystal Plain
Reviewer(s):	Jeff Udell
Approvers(s):	Rafael Richards, M.D., Christopher Clark

Technical Kick off Meeting	
Description	The Technical Kickoff Meeting an updated Microsoft PowerPoint presentation that includes discussion topics and action items elicited from the kickoff, and detailed notes from the meeting. This task is due within 10 calendar days award.

Acceptance Criteria:	The delivery of the Technical Kickoff Meeting will be determined ACCEPTABLE when the following criteria are met: Post-meeting minutes are delivered and accepted as accurate by VHA Business Owner and COR either via email or with no comments after 5 business days
Producer(s)	Conor Dowling
Reviewer(s):	Tim Ferony, Crystal Plain
Approvers(s):	Rafael Richards, M.D., Christopher Clark

3.3.4 Capture of Vista Client Traffic

Vista Traffic Logging Standard Operating Procedure	
Description	Coordinate the logging of all client traffic of three VAEC-based production VA Vistas ("Analyzed Vistas"). At least one of the Vistas should support a large integrated medical facility.
Acceptance Criteria	The delivery of the Vista Client Use Traffic Report CPRS will be determined ACCEPTABLE when the following criteria are met: <ul style="list-style-type: none"> In collaboration with the Government, identify three Vistas and obtain permission from their managers to capture their RPC traffic. Coordinate the configuration of the RPC Traffic capture to log all RPC traffic for these three Vistas. Monitor and ensure traffic logging of each of the three identified Vistas for at least one month and the storage of all captured data in VAEC for analysis. Develop and provide a Vista Traffic Logging Standard Operating Procedure to document the processes and procedures used to log required traffic from any Vista, including permissions required from Vista owners and VAEC maintainers.
Producer(s):	Conor Dowling and Implementation Team
Reviewer(s):	Rafael Richards, M.D.
Approvers(s):	Rafael Richards, M.D., Christopher Clark

3.3.5 Analysis of Vista Client Traffic

Traffic Analysis Report Production Vista #1	
Description	Using the client traffic captured (deliverable 5.2.1A), we will provide Traffic Analysis Reports comprising the complete client traffic for each of the three analyzed VistAs. All reports will be composed in GitHub compatible markdown with embedded graphics where appropriate.
Acceptance Criteria	<p>The delivery of the Traffic Analysis Report Production Vista #1 will be determined ACCEPTABLE when the following criteria are met:</p> <ul style="list-style-type: none"> • User volume • Client types and volume of use • Connection volumes, frequency, and duration • Types of user authentication/security and relative use • Machine from end Users • RPC usage frequency and execution times • RPC groupings – representing transactions • RPCs specific to a Vista from cross-Vista RPCs • Reports stored in GitHub
Producer(s):	Capture Team
Reviewer(s):	Rafael Richards, M.D.
Approvers(s):	Rafael Richards, M.D., Christopher Clark

Cross Vista Traffic Analysis Report	
Description	We will provide a Cross Vista Analysis Report distinguishing cross-Vista from Vista-specific traffic patterns.
Acceptance Criteria	<p>The delivery of the Cross Vista Traffic Analysis Report will be determined ACCEPTABLE when the following criteria are met:</p> <p>Distinguished difference between cross Vista from Vista specific traffic patterns</p>
Producer(s):	Analytics Team
Reviewer(s):	Rafael Richards, M.D.
Approvers(s):	Rafael Richards, M.D., Christopher Clark

3.3.6

3.3.7 Analysis of Use of Key VistA Clients

Vista Client Use Analysis Report System #1	
Description	Based on the traffic and client types isolated during the VistA traffic analysis, a detailed Client Traffic Analysis of the operation of three of the most used VistA point-of-care applications ("Clients"). CPRS shall be one of the three; the remaining two shall be chosen after project start based on client usage. All three reports shall be composed in GitHub compatible markdown with embedded graphics where appropriate. All client analyses will be validated and verifiable in a demonstrable way, matching RPC flows to specific client screens and typical tasks.
Acceptance Criteria	<p>The delivery of the Vista Client Use Traffic Report System #3 will be determined ACCEPTABLE when the following criteria are met:</p> <ul style="list-style-type: none"> • User volumes and types. User types shall capture clinical care specialties and roles • Connection volume and duration, tying frequency of client use to user types • Types of user authentication/security and relative use • Patient volumes • Enumeration of all RPCs used by a client and their relative use • Distinction of clinical from non-clinical RPCs • Distinction of RPCs that change (write) from those that read the clinical record • Distinction of slow running, high overhead and variable overhead RPCs • Clinical care task sets, represented as groups of RPCs used in tandem • Match task sets with the use of one or more specific client screens • Task sets employed by different user types • Isolate performance issues with patterns of use that slow care • Verification and validation that the analysis accurately captures care provision
Producer(s):	Analytics Team
Reviewer(s):	Rafael Richards, M.D.
Approvers(s):	Rafael Richards, M.D., Christopher Clark

Vista Client Use Analysis Report System #2	
Description	Based on the traffic and client types isolated during the VistA traffic analysis, a detailed Client Traffic Analysis of the operation of three of the most used

	Vista point-of-care applications ("Clients"). CPRS shall be one of the three; the remaining two shall be chosen after project start based on client usage. All three reports shall be composed in GitHub compatible markdown with embedded graphics where appropriate. All client analyses will be validated and verifiable in a demonstrable way, matching RPC flows to specific client screens and typical tasks.
Acceptance Criteria	<p>The delivery of the Vista Client Use Traffic Report System #3 will be determined ACCEPTABLE when the following criteria are met:</p> <ul style="list-style-type: none"> • User volumes and types. User types shall capture clinical care specialties and roles. • Connection volume and duration, tying frequency of client use to user types • Types of user authentication/security and relative use • Patient volumes • Enumeration of all RPCs used by a client and their relative use • Distinction of clinical from non-clinical RPCs • Distinction of RPCs that change (write) from those that read the clinical record • Distinction of slow running, high overhead and variable overhead RPCs • Clinical care task sets, represented as groups of RPCs used in tandem • Match task sets with the use of one or more specific client screens • Task sets employed by different user types • Isolate performance issues with patterns of use that slow care • Verification and validation that the analysis accurately captures care provision
Producer(s):	Analytics Team
Reviewer(s):	Rafael Richards, M.D.
Approvers(s):	Rafael Richards, M.D., Christopher Clark

Vista Client Use Analysis Report System #3	
Description	Based on the traffic and client types isolated during the Vista traffic analysis, a detailed Client Traffic Analysis of the operation of three of the most used Vista point-of-care applications ("Clients"). CPRS shall be one of the three; the remaining two shall be chosen after project start based on client usage. All three reports shall be composed in GitHub compatible markdown with embedded graphics where appropriate. All client analyses will be validated and verifiable in a demonstrable way, matching RPC flows to specific client screens and typical tasks.

Acceptance Criteria	<p>The delivery of the Vista Client Use Traffic Report System #3 will be determined ACCEPTABLE when the following criteria are met:</p> <ul style="list-style-type: none"> • User volumes and types. User types shall capture clinical care specialties and roles. • Connection volume and duration, tying frequency of client use to user types • Types of user authentication/security and relative use • Patient volumes • Enumeration of all RPCs used by a client and their relative use • Distinction of clinical from non-clinical RPCs • Distinction of RPCs that change (write) from those that read the clinical record • Distinction of slow running, high overhead and variable overhead RPCs • Clinical care task sets, represented as groups of RPCs used in tandem • Match task sets with the use of one or more specific client screens • Task sets employed by different user types • Isolate performance issues with patterns of use that slow care • Verification and validation that the analysis accurately captures care provision
Producer(s):	Analytics Team
Reviewer(s):	Rafael Richards, M.D.
Approvers(s):	Rafael Richards, M.D., Christopher Clark

Client Analysis Validation and Verification Report	
Description	All client analyses must be validated and verifiable in a demonstrable way, matching RPC flows to specific client screens and typical tasks.
Acceptance Criteria	<p>The delivery of the Client Analysis Validation and Verification Report will be determined ACCEPTABLE when the following criteria are met:</p> <ul style="list-style-type: none"> • Matched RPC flows to specific screens and typical tasks
Producer(s):	Quality Analytics Team
Reviewer(s):	Rafael Richards, M.D.
Approvers(s):	Rafael Richards, M.D., Christopher Clark

3.3.8 VistA Client Use Improvement Report

Client Use Improvement Reports	
Description	Based solely on the Client Use Analysis Reports, we will provide recommendations to upgrade the use of the top three RPC-using Point-of-Care VistA Clients to deliver better clinical care.
Acceptance Criteria	The delivery of the Client Use Improvement Reports will be determined ACCEPTABLE when the following criteria are met: <ul style="list-style-type: none"> Recommendations documented for each client in Microsoft Supporting PowerPoint presentation
Producer(s):	Improvement Analytics Team
Reviewer(s):	Rafael Richards, M.D.
Approvers(s):	Rafael Richards, M.D., Christopher Clark

4 APPENDICES

4.1 Project Schedule

The project schedule is divided into three main phases, each with specific goals and deliverables. **Phase 1 (September 2024 - January 2025)** focuses on setting up the capture of VistA client traffic and establishing simple metrics in a test environment. This phase also includes completing the static task-sets for three VistA clients and configuring data capture procedures in the VA Enterprise GitHub. **Phase 2 (February 2025 - May 2025)** involves applying traffic capture and metrics to three production VistAs, validating the accuracy of the capture, and developing dynamic task-sets from the traffic data. **Phase 3 (June 2025 - August 2025)** will focus on refining and verifying the task-set completeness, followed by detailed recommendations for improving the use of VistA clients. Throughout the project, progress will be tracked through regular progress reports, and permission will be sought to capture traffic at three VA production sites.

The broad phases are listed below. A detailed schedule will be part of the next revision of this plan.

Broad Schedule

3 Phases

Phase 1 (Sept-January)

- Establish and hone **Capture/Simple Metrics in Test**
- **Task-Set Static** complete for three clients - in VA Enterprise GIT
- **Task-Set Dynamic Start** with Test Data
- Choose Client 2 and 3
- Permission to capture for 3 VA production sites

Phase 2 (February-May)

- Apply **Capture and Metrics** for 3 **Production VistAs**
- Further QA of capture/metrics in Test including documentation
- **Task-Set Dynamic** from 3 Production VistAs
- Documents Capture (5.2.1), Simple Metrics (5.2.2), Task-Sets (5.2.3)

Phase 3 (June-August)

- Hone and verify Task-Set completeness
- VA Presentations
- **Detailed Recommendations** for improving use of 3 clients

4.2 Risk Management Tracker

Risk ID	Risk	Probability	Constraint	Description	Project Impact	Response Strategy (Preemptive & Contingent)	Response Type
0	Brief description.	What is the Probability the Risk will be realized? (H) High (M) Medium (L) Low	What is the Constraint if the Risk is realized? (H) High (M) Medium (L) Low	Long description of the risk.	What is the impact to the project if the risk occurs?	Preemptive Strategy – What is the preemptive response strategy? Contingent Strategy - What is the contingent response strategy if the preemptive response is unattainable?	Avoid – eliminate the threat by eliminating the cause Mitigate – Identify ways to reduce the probability or the impact of the risk Accept – Nothing will be done Transfer – This risk is outside of contractor control.
1	Access to VPC and VA Enterprise GIT	Low	High	If access to VPC and/or VA Enterprise GIT is delayed past end of October, then the project could be delayed.	Time to perform Analysis and complete project expected outcomes could be impacted.	Submitted requests early and working directly with stakeholders to obtain access. Also working with a team that previously set up VPC to see if it can store prod data for analysis.	Mitigate

4.3 Contractor Staff Roster – Deliverable

Contractor Name	Role	Business Email	Phone	VA Email	Location
Tim Feron	Program Director	timothy.ferony@vetsez.com	512-522-7254	timothy.ferony@va.gov	TX
Crystal Plain	Project Manager	crystal.plain@vetsez.com	321-431-5189	crystal.plain@va.gov	FL
Gregory Suenaga	Functional Area Expert /RPC SME	gsuenaga@hawaiiirg.com	808-386-3322	gregory.suenaga@va.gov	HI
Conor Dowling	Functional Area Expert Sr. /RPC SME	conor-dowling@caregraf.com	310-980-7954	conor.dowling@va.gov	CA
Brad Goo	Functional Area Expert	bgoo@hawaiiirg.com	808-372-7246	brad.goo@va.gov	HI
Phoung Nham	Business Process Expert	pnham@hawaiiirg.com	703-628-2336	phuong.nham@va.gov	VA
Sean Ishii	Business Process Expert	sishii@hawaiiirg.com	808-282-5075	sean.ishii@va.gov	HI
Heather Tipon	Business Analyst Sr.	htipon@hawaiiirg.com	808-234-4885	heather.tipon@va.gov	HI
Michael Furoyama	Data Manager	mfuroyama@hawaiiirg.com	808-375-3235	michael.furoyama@va.gov	HI
Jimi Ishihara	Data Manager	jishihara@hawaiiirg.com	808-429-1900	jimi.ishihara@va.gov	HI

4.4 Performance Metrics

Performance Objective	Performance Standard	Acceptable Levels of Performance
A. Technical / Quality of Product of Service	1. Shows understanding of requirements 2. Efficient and effective in meeting requirements 3. Meets technical needs and mission requirements 4. Provides quality services/products	Satisfactory or higher
B. Project Milestones and Schedule	1. Quick response capability 2. Products completed, reviewed, delivered in accordance with the established schedule 3. Notifies customer in advance of potential problems	Satisfactory or higher
C. Cost & Staffing	1. Currency of expertise and staffing levels appropriate 2. Personnel possess necessary knowledge, skills, and abilities to perform tasks	Satisfactory or higher
D. Management	1. Integration and coordination of all activities to execute effort	Satisfactory or higher