

Performance Work Statement (PWS)
ENTERPRISE TRAINING EVALUATION AND
ANALYTICS MANAGEMENT SYSTEM
(ETEAMS)

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Version 1.0

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Performance Work Statement (PWS)

ENTERPRISE TRAINING EVALUATION AND ANALYTICS MANAGEMENT SYSTEM (ETEAMS)

Vision Statement

The Contractor shall provide a commercial-off-the-shelf (COTS) tool as a Software-as-a-Service (SaaS) for survey and closed loop action management that supports workforce analytics, including evaluation, training, and succession projects.

1 General Information

1.1 Scope of Work

The Contractor shall provide a commercial-off-the-shelf (COTS) tool as a Software-as-a-Service (SaaS) for survey and closed loop action management that supports workforce analytics, including evaluation, training, and succession projects. The major tasks involved with the PWS include the following:

- Customer Experience Management System (CEMS) solution.
- Provide any integration services required to support HUD interfaces, including, but not limited to Enterprise Talent Management System and HUD Dashboards.
- Provide configuration and professional/technical services in the areas of customer experience strategy, analysis, identifying customer experience drivers, and operationalizing insights in the complex HUD ecosystem.
- Provide Operations and Maintenance (O&M) for training and workforce succession planning projects.

1.2 Background

The mission of the Department of Housing and Urban Development (HUD), Office of the Chief Human Capital Officer (OCHCO), Talent Development & Workforce Planning (TDWP), Learning Solutions Division (LSD) is to provide workforce Surveying and Data Analytic tools and services to the Department. In meeting these goals, LSD strives to provide high quality, effective, and efficient integrated Information Technology (IT) services to those responsible for providing survey support to conduct Skills Gap Studies, Workforce Succession Planning (WSP), and Title 5 Section 410 Survey and Evaluation of Training. TWDP depends on Information Management/Information Technology (IM/IT) systems to meet mission goals. LSD and WSP provide a service to OCHCO and Program Areas to support them in meeting their goals in improving customer experience.

For HUD, OCHCO has been designated as the Lead Agency Partner for the President's Management Agenda (PMA) Cross-Agency Priority (CAP) Goal of Improving Customer Experience with Federal Services. To enable this important goal, the Department designates the Talent Development (TDWP) as HUD's authoritative organization in customer experience (CX). TDWP brings industry best practices and CX capabilities to the Department, including foundational components of CX data, tools, and technology. TDWP is responsible for setting HUD-wide strategy and minimum standards on how to apply CX capabilities across HUD. This includes collection, analysis, and management of CX data and insights, CX training and tools, and integrated multichannel technology.

HUD is radically transforming its relationship with its employees and Program Areas. The goal of the effort is to build trusted, lifelong relationships with employees and ensure HUD is a great place to work by making service experiences predictable, consistent, and easy. The desired Software-as-a-Service (SaaS) solution provides actionable intelligence on what is influencing employee trust in the services provided by HUD OCHCO. TDWP/LSD is seeking a true SaaS FEDRAMP solution that contains IT and Non-IT requirements to include further configuration of Customer Experience Management System (CEMS) capabilities to bolster the HUD mission.

Today, HUD, OCHCO, and TDWP face unprecedented demands for services and benefits across the width, depth, and breadth of the entire OCHCO program services. The offered trainings have multiplied dramatically over the years due to implementing a complete virtual training program due to COVID-19 Pandemic. Furthermore, the demands of WSP for succession planning, products, and studies due to HUD’s high retirement eligibles has caused the need for centralized tools and easy to deploy studies. Overall, this has increased the complexity in supporting and planning for retention/ organizational growth, change management, knowledge management, and decision-making using data analytics and dashboards. This challenging environment requires HUD to re-examine its operating norms and current systems, and institute new programs to meet these challenges specifically around the retention of retirement eligible employees and new employees with under 5 years of service here at HUD.

Whether a HUD Employee or Program Area is accessing one of our programs or services, every contact between these customers and HUD OCHCO should be predictable, consistent, and easy. In today’s environment, insights on these customer experiences are gained through the collection of data using surveys and forms administered by a decentralized and uncoordinated approach. This has caused HUD to move to a centralized, unified approach. There is nothing more powerful than knowing what employees are talking about and how they feel about those topics.

1.3 Constraints

The services identified in this PWS will adhere to the rules, regulations, laws, standards, and conventions identified by HUD as well as within the Federal Government. Constraints include the following:

Document Number	Title & URL
44 USC §3541 et seq.	Federal Information Security Management Act (FISMA, supersedes the Computer Security Act of 1987) http://www.gpo.gov/fdsys/pkg/USCODE-2008-title44/pdf/USCODE-2008-title44-chap35-subchapIII.pdf
44 USC §3601 et seq.	E-Government Act of 2002 http://www.gpo.gov/fdsys/pkg/USCODE-2010-title44/pdf/USCODE-2010-title44-chap36.pdf https://www.whitehouse.gov/omb/financial_fmfi1982
FISMA	Federal Information Security Management Act (FISMA)

GAO/AI M D-00-33	Information Security Risk Assessment Practices of Leading Organizations http://www.gao.gov/assets/200/199976.pdf
HSPD-12	Policy for a Common Identification Standard for Federal Employees and Contractor's, Homeland Security Presidential Directive-12 http://www.dhs.gov/homeland-security-presidential-directive-12
HUD Handbook 1325.01, REV-01	Privacy Act Handbook http://portal.hud.gov/hudportal/HUD?src=/program_offices/administration/hudclips/handbooks/admh/1325.1 http://portal.hud.gov/hudportal/HUD?src=/program_offices/administration/hudclips/handbooks/hsggh/2226.1
HUD Handbook 2400.25 Rev 4.2	Information Technology Security Policy (2400.25) http://portal.hud.gov/hudportal/documents/huddoc?id=240025CIOH.pdf
HUD Handbook 3255.1	Enterprise Architecture Policy http://portal.hud.gov/hudportal/documents/huddoc?id=32551CIOH.pdf
HUD Handbook 3410.1	HUD Policy For IT Project Planning and Management (PPM) http://portal.hud.gov/hudportal/documents/huddoc?id=34101CIOH.pdf
HUD Project Planning and Management (PPM)	HUD Project Planning and Management (PPM) Site: Project Type Guides, Tools and Artifact Templates http://portal.hud.gov/hudportal/HUD?src=/program_offices/cio/ppm/PPMV20HOME

Document Number	Title & URL
HUD Project Planning and Management (PPM)	HUD Enterprise Architecture Program http://portal.hud.gov/hudportal/HUD?src=/program_offices/cio/ea/newea
IEEE 1012-2012	IEEE Standard for System and Software Verification and Validation http://standards.ieee.org/findstds/standard/1012-2012.html
IEEE 1016-2009	IEEE Standard for Information Technology--Systems Design--Software Design Descriptions http://standards.ieee.org/findstds/standard/1016-2009.html
IEEE 12207-2008	Systems and software engineering -- Software life cycle processes http://standards.ieee.org/findstds/standard/12207-2008.html
IEEE 15288-2015	ISO/IEC/IEEE International Standard - Systems and software engineering -- System life cycle processes http://standards.ieee.org/findstds/standard/15288-2015.html
IEEE 16326-2009	ISO/IEC/IEEE International Standard Systems and Software Engineering--Life Cycle Processes--Project Management http://standards.ieee.org/findstds/standard/16326-2009.html
IEEE 23026-2015	ISO/IEC/IEEE International Standard - Systems and software engineering - Engineering and management of websites for systems, software, and services information http://standards.ieee.org/findstds/standard/23026-2015.html
IEEE 29148-2011	Systems and software engineering -- Life cycle processes --Requirements engineering http://standards.ieee.org/findstds/standard/29148-2011.html
IEEE 42010-2007	ISO/IEC Standard for Systems and Software Engineering - Recommended Practice for Architectural Description of Software-Intensive Systems http://standards.ieee.org/findstds/standard/42010-2007.html
IEEE 730-2014	IEEE Standard for Software Quality Assurance Processes http://standards.ieee.org/findstds/standard/730-2014.html
IEEE 828-2012	IEEE Standard for Configuration Management in Systems and Software Engineering

	http://standards.ieee.org/findstds/standard/828-2012.html
IEEE 830-1998	IEEE Recommended Practice for Software Requirements Specifications http://standards.ieee.org/findstds/standard/830-1998.html
NIST Draft Special Publication 800-82, Series	Guide to Industrial Control Systems (ICS) Security http://csrc.nist.gov/publications/PubsSPs.html

Document Number	Title & URL
NIST Publication	FIPS 140-2S Security Requirements for Cryptographic Modules http://csrc.nist.gov/groups/STM/cmvp/standards.html#02
NIST Special Publication 800-100, Series	Information Security Handbook: A Guide for Managers http://csrc.nist.gov/publications/PubsSPs.html
NIST Special Publication 800-12, Series	An Introduction to Computer Security: The NIST Handbook http://csrc.nist.gov/publications/PubsSPs.html

NIST Special Publication 800-14, Series	Generally Accepted Principles and Practices for Securing Information Technology Systems http://csrc.nist.gov/publications/PubsSPs.html
NIST Special Publication 800-18, Series	Guide for Developing Security Plans for Federal Information Systems http://csrc.nist.gov/publications/PubsSPs.html
NIST Special Publication 800-30, Series	Guide for Conducting Risk Assessments http://csrc.nist.gov/publications/PubsSPs.html
NIST Special Publication 800-34, Series	Contingency Planning Guide for Information Technology Systems http://csrc.nist.gov/publications/PubsSPs.html
NIST Special Publication 800-35, Series	Guide to Information Technology Security Services http://csrc.nist.gov/publications/PubsSPs.html
NIST Special Publication 800-37, Series	Guide for the Security Certification and Accreditation of Federal Information Systems http://csrc.nist.gov/publications/PubsSPs.html

NIST Special Publication 800-47, Series	Security Guide for Interconnecting Information Technology Systems http://csrc.nist.gov/publications/PubsSPs.html
NIST Special Publication 800-53, Series	Security and Privacy Controls for Federal Information Systems and Organizations http://csrc.nist.gov/publications/PubsSPs.html
NIST Special Publication 800-53A, Series	Guide for Assessing the Security Controls in Federal Information Systems and Organizations http://csrc.nist.gov/publications/PubsSPs.html
NIST Special Publication 800-55, Series	Performance Measurement Guide for Information Security http://csrc.nist.gov/publications/PubsSPs.html
NIST Special Publication 800-60, Series	Guide for Mapping Types of Information and Information Systems to Security Categories (Appendices) http://csrc.nist.gov/publications/PubsSPs.html

Document Number	Title & URL
NIST Special Publication 800-64, Series	Security Considerations in the Information System Development Life Cycle http://csrc.nist.gov/publications/PubsSPs.html
NIST Special Publication 800-84, Series	Guide to Test, Training and Exercise Programs for IT Plans and Capabilities http://csrc.nist.gov/publications/PubsSPs.html
OMB Circular A-130	Security of Federal Automated Information Resources (Appendix III) https://www.whitehouse.gov/omb/information-for-agencies/circulars/
OMB Circular A-130	Management of Federal Information Resources https://www.whitehouse.gov/omb/information-for-agencies/circulars/
OMB Circular A-130	Security of Federal Automated Information Resources (Appendix III) (see also 34 FR 6428) https://www.whitehouse.gov/omb/information-for-agencies/circulars/

OMB Circular A-133	Security of Federal Automated Information Resources (Appendix III) (see also 34 FR 6428) https://www.whitehouse.gov/omb/information-for-agencies/circulars/
OMB Memorandum 06-15	Safeguarding Personally identifiable Information https://www.whitehouse.gov/omb/information-for-agencies/circulars/
OMB Memorandum 06-16	Protection of Sensitive Agency Information https://www.whitehouse.gov/omb/information-for-agencies/circulars/
OMB Memorandum 06-19	Reporting Incidents Involving PII https://www.whitehouse.gov/omb/information-for-agencies/circulars/
OMB Memorandum 99-20	Security of Federal Automated Information Resources https://www.whitehouse.gov/omb/information-for-agencies/circulars/
PDD-63	Critical Infrastructure Protection,” Presidential Decision Directive-63 http://fas.org/irp/offdocs/pdd/pdd-63.htm
Pub. L. 104-106, 40 uSC §1401 et seq.	Information Technology Management Reform Act of 1996 (Clinger-Cohen Act) http://www.gpo.gov/fdsys/pkg/USCODE-1998-title40/pdf/USCODE-1998-title40-chap25.pdf
Pub. L. 113-101, 31 uSC §3716(c)(6)	Digital and Transparency Act of 2014 http://www.gpo.gov/fdsys/pkg/PLAW-113publ101/pdf/PLAW-113publ101.pdf
Pub. L. 105-220, 29 uSC 701 et seq.	Section 508 of the Rehabilitation Act of 1998 http://www.gpo.gov/fdsys/pkg/PLAW-105publ220/pdf/PLAW-105publ220.pdf

1.3.1 Project Planning and Management

All HUD IT projects, including all information systems acquired, developed, enhanced, or maintained shall follow the policy, procedures, standards, and guidelines set forth within the IT Management Framework using the Project Planning and Management (PPM) Life Cycle located at HUDs PPM Life Cycle Website:

http://portal.hud.gov/hudportal/HUD?src=/program_offices/cio/ppm/PPMV20HOME

PPM was designed based on the best practices from the Capability Maturity Model Integration (CMMI) for systems development and PMBok for project management. While at the foundation, PPM is designed as a Waterfall methodology, HUD encourages tailoring the PPM to use the many modern solution development methodologies available to enable the planning, development, and delivery of useable functionality within 6-9-month increments.

Contractors are encouraged to propose a preferred methodology whether their solution(s) are for custom development, includes prototypes or pilots, Commercial Off the Shelf (COTS)/ Government Off the Shelf (GOTS) configuration, or Software as a Services. Working with the HUD Project Manager(s), the Contractor will tailor PPM to take advantage of contractor proposed expertise in using other methodologies in a manner that will provide HUD the best value and address all of the work necessary for successful project completion, on time, within budget, and delivering intended functionality.

The decisions of PPM tailoring are captured in the Project Tailoring Agreement (PTA), which documents the specific agreement for creating, combining, referring, or omitting specific artifacts applicable to the project, as well as adjust project control gate reviews to be consistent with the tailoring. All tailoring of PPM must be approved by HUDs Deputy Chief Information Officer (DCIO) for Business & IT Modernization. As a default, any project without an approved project tailoring agreement is required to follow all PPM phases and artifacts as presented.

1.4 Non-Personal Services

The Government will neither supervise Contractor employees nor control the method by which the Contractor performs the required tasks. Under no circumstances shall the Government assign tasks to, or prepare work schedules for, individual Contractor employees. It shall be the responsibility of the Contractor to manage its employees and to guard against any actions that are of the nature of personal services or give the perception of personal services.

If the Contractor believes that any actions constitute, or are perceived to constitute personal services, it shall be the Contractor's responsibility to notify the Contracting Officer (CO) immediately. These services shall not be used to perform work of a policy, decision making, or management nature, i.e., inherently Government functions. All decisions relative to programs supported by the Contactor shall be the sole responsibility of the Government.

1.5 Period of Performance

The period of performance is for a base year and four one-year option periods.

1.6 Place of Performance

The place of performance is at the contractor's facility.

1.7 Hours of Operation

The Contractor is responsible for providing services between the hours of 8:00am to 5:30pm EST Monday thru Friday except for Federal holidays or when the Government facility is closed due to local or national emergencies, administrative closing, or similar Government directed facility closings. The Government reserves the right to change hours of operation or restrict contractor access. Government agencies will not be available during scheduled holidays, inclement weather, weekends, and after duty hours.

The Contractor shall maintain an adequate workforce for the uninterrupted performance of all tasks defined within the contract when the Government facility is not closed for the above reasons. When hiring personnel, the Contractor shall keep in mind that the stability and continuity of the workforce is essential.

1.8 Special Qualifications

1.9 Post Award/Kickoff Conference

The Contractor shall attend any post award conference convened by the contracting activity or contract administration office in accordance with FAR Subpart 42.5 and HUD Acquisition Regulation (HUDAR) clause 2452.237-79 - Post Award Conference.

1.10 Status Meetings

The Contracting Officer, Contracting Officers Representative (COR), and other Government personnel, as appropriate, may meet periodically with the Contractor to also review Contractor performance, requirement status, etc. At these meetings, the Contracting Officer will apprise the Contractor of how the Government views the Contractor's performance or progress of the requirement. The Contractor will apprise the Government of problems, if any, being experienced. Appropriate action shall be taken to resolve outstanding issues. These meetings shall be at no additional cost to the Government. Post Award Conference and subsequent meetings may be held via teleconference at the Contracting Officer's discretion.

1.11 Contractor Travel

Prior to travel, the Contractor shall coordinate with and receive Government authorization from the COR for all travel. Reimbursement of travel costs will be in accordance with the Federal Travel Regulation and in accordance with FAR 31.205-46.

1.12 Transition In

The Contractor shall, upon the Contracting Officer's written notice, furnish Transition-In services as required. As a successor, the Contractor shall have sufficient personnel on board during the 90 calendar day Transition-In period to ensure a smooth transition with the incumbent Contractor. The Contractor shall provide an orderly transition of work acceptance and accomplishment such that any impact to the program is minimized. During the Transition-In period, the Contractor shall become familiar with the requirements in order to commence full performance of services by the end of the contract Transition-In period. Transition-In is not required if the successor Contractor is the incumbent Contractor.

1.13 Transition Out

To minimize any decrease in productivity and to prevent possible negative impacts on additional services, the Contractor shall have sufficient personnel on board during the 90 calendar days Transition-Out period. The incumbent Contractor shall ensure a smooth transition with the successor Contractor during the Transition-Out period, prior to completion of contractual performance. The incumbent Contractor shall aid the successor in the development of plans, procedures, and methods for the assumption of all on going work. The Contractor shall provide an orderly transition of work acceptance and accomplishment, such that full control by the successor Contractor is achieved by the end of the new contract Transition-In period.

2 Definitions and Acronyms

2.1 Definitions

Business Day - Every official day of the week which are days between and including Monday to Friday. This does not include federal holidays and weekends.

Calendar Day - Any day of the week.

Contractor - A supplier or vendor awarded a contract to provide specific supplies or service to the Government. The term used in this contract refers to the prime.

Contracting Officer (CO) - A person with authority to enter into, administer, and/or terminate contracts and make related determinations and findings on behalf of the Government. Note: the only individual who can legally bind the Government.

Contracting Officer's Representative (COR) - An employee of the U.S. Government appointed by the Contracting Officer to perform contract administration activities in regard to technical issues. This individual has authority to provide technical direction to the Contractor as long as direction is within the scope of the contract, does not constitute a change, and has no funding implications. This individual does NOT have authority to change the terms and conditions of the contract.

Defective Service - A service output that does not meet the standard of performance associated with the Performance Work Statement.

Deliverable - Anything that can be physically delivered but may include non-manufactured things such as meeting minutes or reports.

Government Furnished Property (GFP) - Property in the possession of, or directly acquired by, the Government and subsequently furnished to the Contractor for performance of a contract. Government-furnished property includes, but is not limited to, spares and property furnished for repair, maintenance, overhaul, or modification. Government-furnished property also includes contractor-acquired property if the contractor-acquired property is a deliverable under a cost contract when accepted by the Government for continued use under the contract.

Near Real Time - Depicts an event or situation as it existed at the current time minus the processing time, as nearly the time of the live event.

Performance Requirements Summary (PRS) - A listing of the performance requirements under the contract that are to be evaluated by the Government on a regular basis, performance indicators for these requirements, performance standards for these requirement and surveillance methods to be used to determine if performance standards are met.

Performance Standard - The Contractor's performance level required by the Government.

Performance Work Statement (PWS) - A statement of work for performance-based acquisitions that describe the required results in clear, specific, and objective terms with measurable outcomes.

Quality Assurance (QA) - Policies and procedures adopted by the Government to ensure that supplies and services acquired under Government contracts conform to the contracts quality requirements.

Quality Assurance Surveillance Plan (QASP) - A plan describing how the agency will survey, observe, test, sample, evaluate, and document the Contractor's performance in meeting critical performance standards identified in the contract.

Quality Control (QC) - All necessary measures taken by the Contractor to assure that the quality of an end product of service shall meet contract requirements.

Subcontractor - Any person, other than the prime Contractor, who offers to furnish or furnishes any supplies, material, equipment, or services of any kind under a prime contract or a subcontract entered into in connection with such prime contract, and any person who offers to furnish or furnishes general supplies to the prime contractor or a higher tier subcontractor. The Government does not have privity of contract with a subcontractor.

Work Week - Monday through Friday, unless specified otherwise.

2.2 Acronyms

AQL - Acceptable Quality Level

CFO or OCFO - Office of the Chief Financial Officer of HUD

CFR - Code of Federal Regulations

CIO or OCIO - Office of the Chief Information Officer of HUD

CO - Contracting Officer

COR - Contracting Officer's Representative

COTS - Commercial Off-the-Shelf

CPO - Office of the Chief Procurement Officer of HUD

EST - Eastern Standard Time (U.S.)

ETC - Estimate to Completion

GAO - Government Accountability Office

HUD - U.S. Department of Housing and Urban Development

HUDAR - HUD Acquisition Regulation

IG or OIG - Inspector General (Office of)

IT - Information Technology

IV&V - Independent Validation and Verification

OCPO - Office of the Chief Procurement Officer

OIG - Office of Inspector General

OMB - Office of Management and Budget

PL Public Law

PM - Project Manager

POC - Point of Contact

PPM - Project Planning and Management

QA - Quality Assurance

QASP - Quality Assurance Surveillance Plan

QCP - Quality Control Plan

SCOR - Subordinate Contracting Officers Representative

SF - Standard Form

TBD - To be determined

U.S.C - United States Code

3 Government-Furnished Property and Services

The Contractor shall ensure accurate control and accountability of all Government-Furnished Property in accordance with the terms and conditions of this contract. The Government will furnish, at no cost to the Contractor, the GFP shown below.

3.1 Government Services

N/A

3.2 Facilities

N/A

3.3 Equipment

N/A

3.4 Materials and Information

See HUDAR 2452.227-70, Government Information

The Government shall provide the following materials and information (insert materials and information): N/A

3.5 Quality Assurance (QA)

The Government shall evaluate the Contractor's performance under this contract in accordance with the Quality Assurance Surveillance Plan. This plan is primarily focused on what the Government must do to ensure that the Contractor has performed in accordance with the performance standards. It defines how the performance standards will be applied, the frequency of surveillance, and the minimum acceptable quality level.

4 Contractor-Furnished Items and Services

The Contractor shall furnish, all facilities, equipment, and supplies required to perform the work under this contract that are not listed under Government-Furnished Property and Services.

4.1 Facilities

The Contractor shall furnish all facilities.

4.2 Equipment

The Contractor shall furnish all equipment.

4.3 Materials

The Contractor shall furnish all materials.

4.4 Contractor Responsibilities

The Contractor shall only conduct business with designated Government personnel listed as points of contact (POCs). Names of authorized personnel shall be provided to the Contractor by the Government, in writing, and updated as necessary throughout the contract period of performance. U.S. Government records, copies of original results and reports, verified original data, corrected data, and corrected supporting final reports which are maintained by the Contractor remain the property of the U.S. Government. These files/results must be surrendered to the COR.

4.5 Contractor Personnel

See HUDAR clause 2452.237-70 - Key Personnel in the Key Personnel section of the contract.

4.6 Identification of Contractor Employees

All Contractor/subcontractor personnel shall wear company picture identification badges as to distinguish themselves from Government employees. When conversing with Government personnel during business meetings, over the telephone, or via electronic mail, Contractor/subcontractor personnel shall identify themselves as such to avoid situations arising where sensitive topics might be better discussed solely between Government employees. Contractors/subcontractors shall identify themselves on any attendance sheet or any coordination documents they may review. Electronic mail signature blocks shall identify their company affiliation. Where practicable, Contractor/subcontractors occupying collocated space with their Government program customer shall identify their workspace area with their name and company affiliation, or at a minimum, "Contractor" after name.

5 Specific Tasks

Requirements: Fully integrated with existing ETMS. Scalable – ability to expand or contract “licenses or tokens, and users”. The ability to add additional licenses or tokens based on new missions or enterprise solutions is required. The ability to subtract (release) licenses or token based on reduction in workforce or funding. Must identify minimum for purchasing. Represents the minimum purchase/availability, regardless of actual usage. Should identify probable maximum licenses or tokens needed during the period of performance. Requires monthly report of available licenses and tokens left available. Represents reasonable maximum expectations with understanding this could be exceeded and requires mandatory notification of when we are at the 80% of expenditure of licenses and tokens updated. Requires the flexible – ability to change and ability to integrate with additional systems on demand. Requires the ability to adapt to changing mandatory (regulatory) requirements on demand. Requires the ability to adapt to changing discretionary (recommended; visionary; etc.) requirements on demand.

5.1 PROGRAM MANAGEMENT PLAN

The Contractor shall submit a draft Program Management Plan (PMP) to the COR via email prior to the kickoff meeting Upon receipt of CORs comments, the Contractor shall incorporate the comments and submit the final draft no later than three business days after receipt of comments. Subsequent updates from the COR shall be submitted no later than three business days after each COR submission. The PMP shall address all requirements contained in this PWS and define a detailed plan and schedule for the program throughout the periods of performance. The PMP shall show the processes by which the Contractor shall assist HUD in meeting its goals.

The PMP shall at a minimum include the following:

- Daily tasks and activities that shall be performed.
- Monthly tasks and activities that shall be performed.
- Staffing
- Ad hoc meeting plan
- Describe the planned deliverables schedule/process after task assignment.

Performance Standards

a) Standard: Draft Project Management Plan (PMP) outlining the Contractors approach should be delivered at the Kickoff Meeting

AQL: Zero Deviation

b) Standard: Final Project Management Plan shall be due 7 business days after receipt comments from the COR

AQL: Zero Deviation

5.2 OPERATIONAL CAPABILITIES STANDUP

The Contractor shall provide a COTS Software-as-a-Service (SaaS) FEDRAMP solution, that at a minimum, shall integrate with the Enterprise Talent Management System and its modules to provide and include survey creation, distribution and collection capabilities, and will provide closed-loop feedback functionality to capture and act on customer compliments and complaints. The applications, supplies, and services furnished under this contract shall comply with One-HUD Enterprise Architecture (EA), available in section 1.3 of the PWS and shall comply with all HUD rules, standards, and guidelines in the Technical Reference Model/Standards Profile. Any COTS product provided as part of the solution shall be compliant.

The Contractor solution shall support the following user matrix:

Operational Standup Capacity

Survey Creators / Modifiers	Dashboard Consumers	Respondents	Expected Responses per Survey	Frequency of Surveys	Time Burden per Survey	Closed Loop Management Users
≤ 100	1,400	≤500,00	~ 40%	unique survey minimum ~ 1/week	3-5 minutes	100

5.3 FUNCTIONAL CAPABILITIES

The following represents a summary of high-level functionality to be inherent (off-the-shelf functionality) in the system that is integrated with HUDs Enterprise Talent Management System and its modules. This PWS groups capabilities in terms of modules Survey Management, Closed Loop Management, Analysis, Dashboarding, and Administration.

The CEM system shall deliver a solution that provides the following capabilities within and without being integrated into HUDs Enterprise Talent Management System:

HIGH-LEVEL BUSINESS REQUIREMENTS
General
1. Allows feedback collection based on the number of Experience Data Records purchased. The License should provide flexibility and scalability to provide the government with cost certainty.
2. Ability to accommodate unlimited HUD employee users.
3. Ability to accommodate up to thousands of users at the same time with the capacity to access, analyze, and act on data in real-time platform
4. Ability to create paper surveys with personalized link for each respondent and upload digitized paper survey responses into the system to be analyzed with electronically collected survey.
5. Ability to integrate social media channels to understand what perception is about a specific topic.

6.	6. Authorized roles will have unrestricted access to create, modify, delete, and publish surveys.
	7. Be fully functional using the following devices: computer, tablet, smart phones, and kiosks; each using any of the following operating systems: Windows, iOS, Android, and Windows Phone.
	8. Capability to support collection, analytics, and dashboard creation of Employee experience (EX) data, separate from external customer data
	Survey Design Capabilities
	1. Ability to apply a default HUD survey template to all new surveys
	2. Ability to create multiple choice, checkboxes, star ratings, dropdown, matrix scale, comment box, single textbox, slider, ranking, matrix of dropdown menu, multiple textboxes, date/time, contact information, single choice radio buttons, etc.
	3. Ability to upload files with the following, but not limited to, extensions: JPG, GIF, PNG Files: PDF, DOC, DOCX, PNG, JPG, JPEG, GIF, all audio formats, and all video formats.

4.	Ability for respondents to provide comments, alternate answers, or supplemental responses to questions.
5.	Ability to create and save custom themes and logos; as well, as adding disclaimers and legal language.
6.	Ability to customize display frequency based on number of page views, number of clicks, time spent on page, page view history, and cursor location.
7.	Ability to create a custom question sequence based on responses, to include skipping questions.
8.	Ability to assign a unique name to each survey.
9.	Ability to change survey name quickly without changing the survey content or creating a new survey.
10.	Ability to exit the survey at any time and resume at the exit point.
11.	Ability to preview the survey before it is published and released to respondents.
12.	Ability to test the survey before it is published and released to respondents.
13.	Ability to translate surveys to other languages, such as Spanish, and translate feedback received in such languages back to English.
14.	Ability to provide surveys and invitations in multiple languages.
15.	Ability for the survey creator to create validation rules such as numbers, phone numbers, emails, and logic validation based on the survey navigation logic.
16.	Ability to display pop up, pop over, and persistent intercepts on websites and applications.
17.	Ability to embed survey questions into the website rather than the content management used by the Contractor.
18.	Ability to incorporate long-format or other surveys that were not conducted by the system.
Collection Capabilities	
1.	Ability to create a unique hyperlink for each survey that may be emailed to each respondent. Allows custom survey URL to reflect HUD domain.
2.	Ability to send custom survey invitations via Short Message Service (SMS).
3.	Ability to track contact frequency by individual respondents.
4.	Ability to track how many respondents screen out at different points of the survey.
5.	Ability to prevent respondents from completing the survey multiple times.
6.	Ability to track opened invitations, bounced invitations, and responses by distribution method.
7.	Ability to schedule survey deliveries in advance.
8.	Provides the ability for HUD users, to design, configure, and distribute custom surveys
9.	Capability to deploy a web-based and mobile friendly omnichannel, integrated system that serves multiple simultaneous survey projects across all 10 mission areas.
10.	Collect structured and unstructured, solicited, and unsolicited feedback from customers through multiple channels including, but not limited to; surveys, web forms, email, contact centers, in-person visits, and social media.
11.	Ability to collect survey data from each interaction channel and extract customer-journey-related insights.
12.	Ability to ingest operational data linked to customer experiences from multiple channels and combine with the associated survey data.

13. Aggregate feedback real-time across the customer journey within the solution. Examples, Time on hold, time filling out a form, time spent on a webpage, number of attempts to submit paperwork, etc.

Data Integration

1. Integrates survey data already accumulated by HUD (legacy data)
2. Integrates with existing Customer Relationship Management (CRM) systems used by HUD, such as Salesforce, ServiceNow, and Microsoft Dynamics.
3. Provide the ability to integrate with HUD systems example, FHA's P323J HUDCentral, HUD.gov
4. A system that is scalable and flexible to configure, adapt, and modify the collection instruments and approaches to address evolving business needs and generate actionable insights.
5. Data cleanse and convert legacy survey data
6. Ensure ability to configure, adapt, and modify HUD's survey instruments and approaches to address evolving business needs and generate actionable insights based on experiences of HUD customers across services.
7. Generate these types of actionable insights based on the event – reports, dashboards, text or email alerts, event created by the VoC system, event created by another system
8. Generate actionable insights – Inner Loop – Customer response results in an action assigned to be completed
9. Generate actionable insights – Outer Loop – Volume of customer's response results in an action assigned to be completed
10. Generate actionable insights – Auto Loop – Customer(s) response results in an action assigned to the VoC system to be completed
11. Provide the ability to personalize the response to the customer based on the data collected from the interaction with the customer that triggered the event to respond to the customer
12. Provide sampling capabilities, where, based on a predefined number of customer responses no additional responses are collected and the event is executed.
13. Provide analysis capabilities – Prescriptive
14. Provide analysis capabilities – Predictive
15. Provide the ability to create business rules to define events where the VoC system detects the event and sends a survey

Analysis Capabilities

1. Capable of running real-time data, analyze up to 1 million topics.
2. Capable of translating speech to text. Ability to transcribe phone calls to understand "what" customers are saying. It can be used to understand call reason, topics, customer effort, sentiment, and actionable suggestions. Allows the government to fully understand customer sentiment with call metrics like silence time and vocal emotion.
3. Allows large number of concurrent users to access, analyze on volumes of data within a real-time system.
4. Ability to discern sentiment, tone, emotion by phrase; as well as, positive versus negative responses in text or voice.
5. Ability to conduct high level of text analysis such as aggregating qualitative survey responses in a meaningful way and adding categories to combine similar responses.
6. Ability to use common scoring scales in all surveys.
7. Ability for authorized users to download all data necessary to perform collateral duties.
8. Ability to translate feedback from other languages into English.

- 9. Ability to produce reports that roll up to different levels.
- 10. VoC system analyzes the number of events submitted vs acted upon and reports the results
- 11. Collect ideas from employees and customers collectively to create innovative ideas. Also allows for capture of ideas on products/services and customer insights.

Data Accessibility and Security
1. Provide access for specified HUD users across services, with capability to limit/control access based on role and permissions
2. The system will allow for program offices to have access to the various customer ecosystems
3. Centralized location of customer feedback data that can be used to power multiple channels, contacts centers, CX dashboards, CX PMO offices, etc
4. Provide a holistic view of customer feedback across a mission, areas, agency, and program.
5. Provide workflow capabilities when surveys, etc are created, the record is routed for approval before approved to be used
Listening Capabilities Across Service Channels
1. Provide support in assessing need, survey creation and implementation across multiple channels and journeys.
2. Work with Program Offices using a Human Centered approach to design and identify High impact services where improvements are needed.
3. Work with programs to identify Key Performance Indicators (KPI)
4. Provide analysis support to interpret data to improve overall services
5. Provide analysis support to design structured surveys base on best practices
6. Provide analysis support to train the trainer, i.e., HUD project team features and functions that can be transitioned from the VoC provider to the HUD project team
7. Ensure system workflow aligns with CX@HUD overall strategic approach (ref. HUD VoC Strategy and Measurement Architecture).

Performance Standards

a) Standard: The contractors CEM system shall provide all the capabilities listed in section 5.3 of the PWS.

AQL: Zero Deviation

5.4 SURVEY MANAGEMENT

The ETEAMS solution shall provide HUD an integrated service within and without the Enterprise Talent Management System and its modules, which provides an understanding of Customer experiences through the ability to create, copy, modify, and delete surveys and/or questions using industry model standards for surveys like Kirkpatrick. The functionality includes the distribution of the surveys and/or questions to an identifiable audience via methods identified below including collection from other applications. The anonymous and identified responses received will be stored on a real-time survey collection system (the CEM) accessible by HUD end users based on role permissions. At a minimum these roles shall control the ability of users to control read and modify access to each module and workflow.

The CEM system shall deliver a integrated within and without the HUD's Enterprise Talent Management System solution that provides the following capabilities:

- a. A direct integrated interface within HUD's Enterprise Talent Management System and respective modules, which provides training surveys for courses for individuals, groups internal or external held training or from electronic catalog training conducted with the Learning Management System. From which executive level analysis can be conducted and displayed in dashboards or export into reports.
- b. Using AI tools to ask the AI questions about the data, ask AI for intelligent summaries, ask the AI smart response or themes on all data that is collected, aggregated, for stored survey data and additional data analytics. Types of data shall include: electronic modalities, open text/free-form feedback, closed-ended questions, polling questions, Social Media Listening, Short Message Service (SMS), Interactive Voice Response (IVR), and web intercepts.
- c. Ability to set survey's to send under automatically under certain conditions without manual initiation, for training course evaluations within a specified time period within respect to the training end date/time.
- d. Ability to receive survey status reporting for any open surveys with the ability to push the data from those surveys to a dashboard and also to email, which is role based sending items such as response rates, completion rates, averages, means and other data analytics.
- e. Ability to restrict all personal data or personally identifiable information (PII) which can be cataloged and masked so that is only viewable through specified access rights. This tool must ensured that personal data or PII data can be viewed only by those staff or markets who have a need to know throughout the tool and its dashboards. Must allow HUD to retain PII data in a secure cloud service.
- f. Map text comments from the survey respondents with structured feedback to identify common trends and sentiment.

- g. Send a survey automatically based on a call that is received and logged by the Contact Center.
- h. Display a post survey submission message to the Customer, generate and send a customizable email notification upon survey submission and subsequently can route to another web landing page.
- i. Support anonymous and non-anonymous feedback and responses.
- j. Develop a survey response interface to be used by HUD end users.
- k. Generate and distribute surveys and/or questions at any time from any touchpoint through various channels with pre-scheduled timelines and timeframes.
- l. Identify, configure, manage, and distribute surveys to subsets of customers based on certain characteristics determined by HUD end users.
- m. Support web intercepts that integrate surveys with HUD affiliated websites.
- n. Provide survey features that address the ease of use based on best practices that include select from prepopulated fields, question branching, enter free form text, save without submittal, support chat, and print.
- o. Create, modify, copy, version and delete surveys and/or questions.
- p. Email surveys directly, including individualized links, to respondents and track reminders and responses.
- q. Create customizable email templates that can be assigned to workflow events.
- r. Provide surveys and invitations in multiple languages.
- s. Prevent respondents from completing the survey multiple times.
- t. Show custom end-of-survey messages or redirect respondents to any specified URL.
- u. Certain types of surveys will need the functionality for the survey data to be linked directly to a specific person, or the capability further tie their individual responses to a specific set of records and unique identifiers that can be cross walked with National Finance Center systems data or other Human Capital System data.

Performance Standards

a) Standard: The contractors CEM survey management solution shall provide all the capabilities listed in section 5.5 of the PWS.

AQL: Zero Deviation

5.5 CLOSED LOOP MANAGEMENT

The CEM system shall provide a closed loop management capability for HUD end users to ensure collaborative coordination of customer feedback aimed at real-time service recovery. This includes the ability to generate, manage and track customer cases to resolution, and includes tracking interactions with Customers.

The CEM system shall deliver a solution that provides the following capabilities:

- a. Automatically capture and store interactions with Customers that occurred using email, text messaging, or phone calls in a central location, that can be incorporated into dashboards for analysis and generating of reports.
- b. Generate cases based upon several inputs so that case collection is consistent across HUD. Case generation methods include direct submission from Customers and HUD end users.
- c. Provide ability to fully customize the Closed Loop Management tool interface to track, record and store all necessary data elements.
- d. Allow HUD end users to locally customize their notifications.
- e. Allow HUD end users who are not assigned to work a case to subscribe to alerts and/or email notifications for the case based on configurable attributes and receive automated notifications.
- f. Allow authorized HUD end users to act on a workflow, including crisis alerts, transfer cases between workflows, reassign, and escalate to multiple other HUD end users, automatically and manually on a case-by-case basis.
- g. Allow automated actions on a workflow, including alerts, transfer cases between workflows, reassign, and escalate to multiple other HUD end users on a case-by-case basis.
- h. View stored historical interactions with a specific Customer within the Closed Loop Management system.
- i. Manage work queue and reassign cases in bulk automatically and manually.
- j. Set workflow actions based on timed thresholds.
- k. Define and customize workflow and track and display the status of each case.
- l. Assign a new case to an individual HUD end user or a team based on defined business rules.
- m. Send a customized email confirmation to the Customer and a customized email to the HUD end user assigned upon case entry. (Customized means details from the survey respondent are included in the email.)
- n. Ability to upload documents by HUD end users (PDF, GIF, JPEG, Microsoft Suite products).
- o. Create, modify, copy, version and delete cases.

- p. Support for alerts and aspects like email notifications.
- q. Support inclusion of workflow and rule engine.
- r. Have a report builder function, that allows you to be able to create, edit, and customize role-specific, in-depth reports – in real time, on your own, and all from within the platform. A self-service feature enables flexibility, deeper analysis and allows you to immediately share highly relevant reports with others. Provide the capability to see all your channels and reports mixed together, allow for everything to be sliced and diced, and allow everyone to create or get a custom view of a dashboard that reflects their perspective and reporting needs and evaluate the use and effectiveness of the CEM.

Performance Standards

a) Standard: The contractors CEM closed loop management solution shall provide all the capabilities listed in section 5.6 of the PWS.

AQL: Zero Deviation

5.6 ANALYSIS

The CEM system shall provide the ability to glean sentiment, identify common trends based on qualitative and quantitative inputs, and generate automatic triggers accordingly.

The CEM system shall deliver a solution that provides the following capabilities:

- a. An integrated solution with HUD's Enterprise Talent Management System and still be used externally of the HUD Enterprise Talent Management System.
- b. Support statistical analysis and text analytics on the open text and closed-ended feedback and generate automatic and manual reports and alerts based on triggers.
- c. Allow case agent to tag a case with keywords.
- d. Search all case fields and/or attachments using a search function. This capability shall include the ability to logically combine search terms.
- e. Search a Frequently Asked Questions (FAQ) data library and standard response templates (populated by HUD end users).
- f. Identify systematic trends based on comments, survey responses, and other data sources based on data accessible to the CEM system.
- g. Support for data mining, predictive and prescriptive analytics.
- h. Ability analyze unstructured feedback from channels such as surveys and social media.
- i. Provide built in dashboard/reports for individual trainings, group training, or groups of trainings survey results within the general CEM.

- j. Ownership of all HUD's created raw data. Must be able to provide full access for download, copy, transfer and storage to enable HUD to maintain its ownership to all of HUD's raw data. To include data from just-in-time analytics and dashboards.

Performance Standards

a) Standard: The contractors CEM analysis solution shall perform all the capabilities listed in section 5.7 of the PWS.

AQL: Zero Deviation

5.7 DASHBOARDING AND REPORTING

The CEM system shall provide dynamic reporting and dashboarding capabilities providing rich graphical interfaces from using unique item identifiers such as Organizational Codes, common id from systems of records, to include PII data that are drag and drop capable and are made available through the web and mobile devices. The dashboarding capability shall host the dashboard as an accessible webpage within CEM accessible through a web-link.

The CEM system shall deliver a solution that provides the following capabilities:

- a. Support near-real-time custom configuration of reports and dashboards using drag and drop functionality with an intuitive Graphical User Interface (GUI).
- b. Support ad hoc and interest tracking and reporting.
- c. Support provisioning of access to reports and dashboards.
- d. Provide an interface to design reports and dashboards to ensure data is readable and attainable to the non-technical user.
- e. Support data-driven filters for reports.
- f. Support the ability to export and print reports in multiple format options to include but limited too: word, webpage, csv, excel,.pdf and others.
- g. Consolidate data collection from multiple signals and unify Customer experience metrics in a single channel using a single platform.
- h. Support alerts on queries, filters and other actions which may affect performance of the CEM system.
- i. Provide multiple report types to include charts, graphs, tables and various other data visualizations that can be published reports pushed to dashboards via email or other methods to include SharePoint sites or secure cloud folders.
- j. Allow HUD end users to customize reports to data that is relevant to their core duties using filters or parameters using PII data.
- k. Automatically send canned reports to HUD end users.

- I. Support role-based reports and dashboards.

Performance Standards

a) Standard: The contractors CEM dashboard and reporting solution shall perform all the capabilities listed in section 5.8 of the PWS.

AQL: Zero Deviation

5.8 CUSTOMER JOURNEY

The CEM system shall deliver a solution that provides the following capabilities:

- a. Ability to collect survey data from each interaction channel and extract customer-journey-related insights.
- b. Ability to ingest operational data linked to customer experiences from multiple channels and combine with the associated survey data.

Performance Standards

a) Standard: The contractors CEM Customer Journey solution shall perform all the capabilities listed in section 5.9 of the PWS.

AQL: Zero Deviation

5.9 ADMINISTRATION

The CEM system shall have the capability to administer specific components of the enterprise system to support the functional needs of the system by specific HUD end users. Administering includes customization of the Closed Loop Management workflow and related interfaces; ensure the enterprise solution is administered in a fashion where it can be integrated with the specific operating systems; ensure the enterprise solution can be integrated with various output devices; and customize access to system interfaces and reports based on specific role permissions. Overall, these components should be customizable at various hierarchies defined by the government.

The CEM system shall deliver a solution that provides the following capabilities:

- a. Provide HUD end users with appropriate permissions to create ad hoc reports.
- b. Maintain a local list of HUD end users and respective roles and grant access within the tool.
- c. Be integrated with HUD's Enterprise Talent Management System.

Performance Standards

a) Standard: The contractors CEM administration solution shall perform all the capabilities listed in section 5.10 of the PWS.

AQL: Zero Deviation

5.10 PHASE I TRANSITION-IN

The Contractor shall transition the desired CEM Solution, including user interface, stored historical data, and external interfaces, to Contractor's CEM Solution with no service interruption at the start of the Phase II. The Contractor shall provide configuration support to ensure the ETEAMS system is fully functioning with no service interruption.

The Contractor shall schedule and manage a weekly transition status meeting with Government to include:

1. Current status of transition and integration efforts, including technical and security activities
2. Transition Schedule
3. Checklist of requirements from 5.4 that have been incorporated into new solution
4. Risks and Issues
5. Responsible Accountable Consulted Informed (RACI) matrix

The Contractor shall deliver an integrated solution within and without the Enterprise Talent Management System with the following functional capabilities, as described in Section 5.4, Create and configure scheduled jobs to push reports and data sets as required.

- a. Stand up hosted environments (IAW Paragraphs 5.10.1) and ensure the CEM system is accessible via web browsers.
- b. Create/configure existing surveys, including the distribution cadence and invite/org file process.
- c. Create/configure existing dashboards and reports that accurately display migrated data as well as current data.
- d. Create/configure export functionalities and formats.
- e. Create and configure scheduled jobs to push reports and data sets as required
- f. Create/configure social media analytics on Facebook, YouTube and Twitter HUD accounts.
- g. Create/configure Text Analytics and existing keywords.
- h. Create/configure closed loop management.
- i. Create/configure digital feedback.
- j. Create/configure fields for interface with Customer Relationship Management (CRM) system.

- k. Create existing security user roles and permission levels.
- l. Migration of existing data from existing CEM to new CEM (IAW Paragraph 5.10.4)
- m. Trusted Internet Connection (TIC)
- n. Authority to Operate (ATO)
- o. Two-Factor Authentication (2FA)
- p. Interface with the Identity and Access Management (IAM) system for Personal Identification Verification (PIV) Authentication and Single Sign On (SSO) functionality
- q. Interface with CRM system, establish bi-directional, real-time transfer of data between the two systems
- r. Interface with HUD websites, such as HUD.gov
- s. Interface with Veterans Crisis Line (VCL) and National Call Center for Homeless Veterans (NCCHV) for crisis alerts

Performance Standards

a) Standard: The Contractor shall deliver an integrated solution inside and outside of the Enterprise Talent Management System in accordance with the Project Management Plan.

AQL: Zero Deviation

b) Standard: The contractor shall schedule and manage a weekly transition status meeting with Government and provide updated documentation on activities.

AQL: Zero Deviation

5.10.1 HOSTED ENVIRONMENTS

Hosting services consist of provisioning the environments to allow HUD end users to utilize the CEM system. The Contractor shall setup and configure the Non-Production Environments and Production Environments IAW HUD Directive 6551.

1. Non-Production Environments
 - i. At minimum the contractor shall provide four (4) Sandbox Environments to be used for:
 1. Development Environments to be used for configuration
 2. SQA Environments to be used for software testing
 3. The Sandbox Environment to be utilized for User Acceptance Tests (UAT)
 4. The Pre-Prod Environment mirrors the Production Environment to ensure operability prior to promoting into Production
 5. The government reserves the right to add an additional environments at a later date.

The contractor shall deliver the Non-Production Environment within 30 calendar days of the contract award.

2. Production Environment

The contractor shall deliver the fully Integrated Production Environment within 90 calendar days of the contract award.

Performance Standards

a) Standard: The contractor shall deliver the Non-Production Environment within 30 calendar days of the contract award.

AQL: Zero Deviation

b) Standard: The contractor shall deliver the fully Integrated Production Environment within 90 calendar days of the contract award.

AQL: Zero Deviation

Deliverables

A003 Hosted Non-Production Environments

A004 Hosted Production Environment

5.10.2 TRAINING

The Contractor shall provide instructor led (Virtual or In-person as appropriate to audience and need) training of HUD staff in the utilization of the new CEM system. The Contractor shall:

- a. Provide a HUD End User Training Package which consists of an overview presentation, and User Guide of its services within the provided integrated solution within and without the Enterprise Talent Management System.
- b. Provide four (4) distinct training types for the four audiences, consisting of hands-on training with HUD system administrators, super users, end users and train-the-trainer trainings prior to Phase II. Provide minutes of training sessions to include a list of attendees, and time attended. Specific timing of those training sessions shall be coordinated post award.
- c. Provide a Super User Training Package which consists of a system overview presentation, and Super User Guide.
- d. Perform hands-on training with Super Users (not to exceed a total of 20 users per training session) prior to Phase II. Provide minutes of training session to include a list of attendees and time attended.
- e. Provide User Guides consisting of written instructions and associated images, and clear, simplified diagrams. Jargon is kept to a minimum or explained thoroughly. The document reflects the contents of the most recent release (whether a configuration update or release) and is updated to include any changes.

- f. Provide Quick Reference Guides for end users that provide basic functionality and navigation.
- g. Provide a Help Desk Training Package consisting of an overview presentation, Help Desk Reference Guide, and Troubleshooting Decision Trees.
- h. Training materials may include videos, presentations, documents, and guides.

The contractor shall conduct instructor-led training for each distinct audience once per quarter.

Performance Standards

a) Standard: The contractor shall coordinate a minimum of one training per quarter in accordance with the project management plan.

AQL: Zero Deviation

b) Standard: The contractor shall provide training materials to include HUD End User Training Package, Super User Training Package, User Guides, Quick Reference Guides, and Help Desk Training Package in advance to the scheduled training at least three business day.

AQL: Zero Deviation

Deliverables

A005 HUD End User Training Package and minutes

A006 Super User Training Package and minutes

A007 User Guides

A008 Quick Reference Guides

A009 Help Desk Training Package

5.10.3 AUTHORITY TO OPERATE

The Contractor shall coordinate with applicable HUD stakeholders for an Authority to Operate (ATO) to interface the hosted environments to the HUD Network. The Contractor shall provide all Assessment and Authorization (A&A) support and documentation required to achieve and maintain full A&A certification using the process specified in the Project Management Office (PMO) Website and in HUD's Authorization Requirements Standard Operating Procedure (SOP). Obtaining an ATO based on FedRAMP controls versus FISMA controls is acceptable.

The Contractor shall be responsible for generating the A&A ATO Package that includes the following security documentation from HUD Authorization Requirements SOP:

- a. System Security Plan (SSP),
- b. Risk Assessment (RA),
- c. Incident Response Plan (IRP),
- d. Information Security Contingency Plan (ISCP),
- e. Disaster Recovery Plan (DRP),
- f. Configuration Management Plan (CMP),
- g. Interconnection Security Agreement/Memorandum of Understanding (ISA/MOU),

- h. Additional system description/and diagrams required by HUD to gain access to HUD network and receive an Authority to Operate (ATO).

The contractor shall provide the A&A ATO Package in accordance with the project management plan.

The Contractor shall:

- a. Be fully responsible and accountable for ensuring compliance with all HIPAA, Privacy Act, Federal Information Security Management Act (FISMA), National Institute of Standards and Technology (NIST), Federal Information Processing Standards (FIPS), and HUD security and privacy directives and handbooks. This includes conducting compliant risk assessments, routine vulnerability scanning, system patching and change management procedures, and the completion of an acceptable contingency plan for each system. The contractor's security control procedures must be equivalent, to those procedures used to secure HUD systems.
- b. Ensure adequate security controls for collecting, processing, transmitting, and storage and remote of Personally Identifiable Information (PII) and Personal Health Information (PHI), as determined by the HUD Privacy Service, must be in place, tested, and approved by HUD prior to hosting, operation, maintenance, or use of the information system, or systems by or on behalf of HUD.
- c. Ensure these security controls are to be assessed and stated within the Privacy Impact Assessment (PIA) and if these controls are determined not to be in place, or inadequate, a Plan of Action and Milestones (POA&M) shall be submitted and approved prior to the collection of PII and PHI.

Performance Standards

a) Standard: The contractor shall provide the A&A ATO Package in accordance with the project management plan.

AQL: Zero Deviation

b) Standard: The contractor shall provide the Plan of Action and Milestones in accordance with the project management plan.

AQL: Zero Deviation

c) Standard: The contractor shall adhere to and maintain all HUD security requirements.

AQL: Zero Deviation

Deliverables

A010 Plan of Action and Milestones

A011 A&A ATO Package

5.10.4 DATA MIGRATION

The Contractor shall migrate all records, tables, and files from the current CEM system into the new CEM system. The Contractor shall perform the migration and confirm successful migration of all data to the new solution within 90 calendar days from contract award.

The Contractor shall provide a Data Dictionary and a Data Crosswalk mapping data from existing CEM records, files, and tables to the new solution. The Data Dictionary and Crosswalk shall be provided within 10 business days of migration.

The Contractor shall validate that all current records have been successfully migrated into the new system. This validation shall be provided in the Data Crosswalk and cross checked against the data dictionary.

The contractor shall provide a Data Quality Assessment and Summary Report for all historical data migrated to the new system. The contractor shall document any errors or issues that occurred during migration. The assessment and summary report shall include any remediation that occurred. The contractor shall provide Data Quality Assessment and Summary Report within the date specified in the Project Management Plan.

The contractor shall provide Data Management Plan that complies with HUD and OCHCO data governance requirements. The contractor shall provide the Data Management Plan within 5 business days from the approved Final Project Management Plan.

The Contractor shall provide a Data Validation Report detailing the type of data that was migrated, validating and referenced in the data dictionary that 100% of data have been accurately migrated. Data validation will verify data elements on each record and table to ensure no changes have occurred.

Performance Standards

a) Standard: The Contractor shall migrate all records, tables, and files from the current CEM system into the new CEM system within 90 calendar days from contract award.

AQL: Zero Deviation

b) Standard: The Data Dictionary and Crosswalk shall be provided within 10 business days of migration.

AQL: Zero Deviation

c) Standard: The Contractor shall provide a Data Validation Report detailing the type of data that was migrated, validating and referenced in the data dictionary that 100% of data have been accurately migrated by the date specified within the project management plan.

AQL: Zero Deviation

d) Standard: The contractor shall provide Data Quality Assessment and Summary Report within the date specified in the Project Management Plan.

AQL: Zero Deviation

e) Standard: The contractor shall provide the Data Management Plan within 5 business days of the approved Final Project Management Plan.

AQL: Zero Deviation

Deliverables

A012 Data Dictionary

A013 Data Crosswalk

A014 Data Validation Report

A015 Data quality assessment and summary report for all historical data migrated to the new system

A016 Data management plan (consistent with HUD and OCHCO data governance requirements)

5.11 PHASE II

5.11.1 SYSTEM SOLUTION SUPPORT

The contractor shall deliver the CEM solution, including the commercial software and hosted environments required for the system. The contractor shall maintain the operations of the hosted environments and software for Phase I, Phase II, and throughout the remainder of the performance period.

System solution support activities are associated with the on-going support related to the performance of routine, preventive, predictive, scheduled, and unscheduled actions aimed at preventing system/production failure (i.e., break/fix) and correcting software defects with the goal of increasing efficiency and reliability on a continuous basis.

5.11.2 RELEASE PLANNING

The Contractor shall develop a release collection 30 days prior to a Release. Each release shall be no shorter than 2 weeks but no longer than 3 months. Any release that is user facing will be fully tested by end users before release. The Contractor shall maintain the program/project backlog, continuously, in every release and throughout the life of the period of performance within the HUD Approved Process. All activity scheduled in each release and backlogs will be captured and have status showing all work items, changes, impediments, and retrospectives. All data and artifacts in the tool shall be fully linked to requirements data and test data.

Release planning shall consist of the following:

- a. Teams will review, elaborate, and prioritize the backlog. This backlog grooming will occur continuously throughout the release to ensure the customer's highest priorities are being met.
- b. Backlog grooming and Release Planning sessions, facilitated by the Contractor, that outline the intent of the build, and are not a formal commitment. The Contractor shall update the resulting Release Collection within HUD Approved Tool.
- c. Identification of the Epics and user stories to be completed within the release, the agreement of acceptance criteria of the release, and readiness to begin release.
- d. Identification of field sites, test environments, acceptance criteria, and ATO requirements.
- e. Coordinate and Validate MOU's and SLA's for partner dependencies that specifically highlight the commitment of partners to associated release

Performance Standards

a) Standard: The Contractor shall maintain the program/project backlog, continuously, in every release and throughout the life of the period of performance within the HUD Approved Process.

AQL: Zero Deviation

b) Standard: The Contractor shall develop a release collection 30 days prior to a Release.

AQL: Zero Deviation

5.11.3 TESTING

The Contractor shall adopt best practices for integration testing into each release. The Contractor shall populate its Test Strategy section of the test plan in HUDs implementation of Quality Manager tool within 15 days after the Kickoff Meeting. The Contractor shall conduct tests (e.g. unit, functional, accessibility, system, reliability, usability, interoperability, regression, security, performance) throughout the configuration lifecycle (e.g. user story, sprint, build, release) using industry best practices of continuous integration methods and automated regression testing utilities using One-HUD Technical Reference Model (TRM) approved tools. The Contractor shall conduct testing related to non-functional requirements, (e.g. load, performance, installation, back-out, and rollback).

The Contractor shall provide Test Plan data in the Quality Manager tool following the templates and data requirements appropriate for each test purpose appropriate to each phase of development. The Contractor shall provide test results in the Quality Manager tool which is the final piece of data that completes the Requirements Traceability Matrix (RTM). COR/HUD PM acceptance will occur through the Quality Manager approval process.

The Contractor shall support the security, accessibility, performance, technical standards, architectural compliance, user acceptance and initial operational capability tests, audits, and reviews. Security scanning is done by multiple methods and is done multiple times throughout the course of a project with methods such as infiltration testing (WASA), code analysis tools (Fortify), etc. Accessibility reviews are performed through a variety of tool based and manual reviews, able to scan web applications and other technologies used for user interfaces.

Performance testing is done through load testing and technical analysis of capacity planning data submitted by the project team. Architectural compliance assessments are done through submission of design materials to confirm compliance with allowed enterprise architecture.

The Contractor shall ensure all test and compliance review planning and execution details and their testing and compliance results are entered and maintained in Quality Manager tool and under version control in the HUD Approved Tool. Specifically test management data and artifacts include such items as scripts, configurations, utilities, tools, plans and results. The Contractor shall ensure that results of all assessments of the project performed by the Contractor or by HUD offices are consolidated into the HUD Approved Tool for planning and status reporting.

When a defect is identified during testing, the Contractor shall log it in the Tool, selecting the appropriate severity level. The Contractor shall support the Project Manager for prioritizing the defect in the sprint backlog. Based on a prioritization the defect could be entered into the current sprint or entered into the backlog.

The Contractor shall ensure the HUD Approved Tool data is up-to-date daily so that HUD stakeholders can access accurate and timely status.

Performance Standards

a) Standard: The Contractor shall populate its Test Strategy section of the test plan in HUDs implementation of Quality Manager tool within 15 days after the Kickoff Meeting.

AQL: Zero Deviation

b) Standard: The contractor shall provide Test Plan with the approval of the Final Project Management Plan.

AQL: Zero Deviation

c) Standard: The contractor shall provide Test Execution Data input in accordance with time specified in the Project Management Plan.

AQL: Zero Deviation

d) Standard: The Contractor shall provide test results in the Quality Manager tool which is the final piece of data that completes the Requirements Traceability Matrix (RTM).

AQL: Zero Deviation

Deliverables

A017 Test Strategy Data Input

A018 Test Plan and Test Execution Data Input

A019 Requirements Traceability Matrix (RTM)

5.11.4 508 COMPLIANCE TESTING

The Contractor shall:

- a. Develop a 508 Test plan as part of the Test Plan.
- b. Document and report 508 test findings and test incidences as part of the Quality Manager.
- c. Prepare the Section 508 customization Conformance Validation Statement (CVS) (in accordance with the HUD Section 508 Program Office CVS form) and the HUD Section 508 Self-Certification Form and verify that CEM complies with all requirements identified in the Section 508 Conformance Validation Statement (CVS). If the application is found not to be HUD 508 compliant, the Contractor shall provide the CVS form and a 508-compliance waiver package. All tools used in the environments of the CEM and related Programs and all applications produced by CEM and related program projects shall be Section 508 compliant as determined by the tests performed by the HUD Section 508 Office.
- d. Complete Section 508 Self Certification package for each release to include: Self-Certification document, Voluntary Product Accessibility Template (VPAT), Test Methodology Description document, Conformance Validation Statement (CVS), and Plan of Action and Milestone (POAM) and comply with all Process Asset Library (PAL) and Section 508 requirements for documentation and testing in accordance with the HUD Test Process Workgroup (TPWG) and Section 508 testing requirements.
- e. Support and provide assistance to the HUD staff and other Contractors completing 508 compliance testing.

Performance Standards

a) Standard: The contractor shall ensure that the CEM, release, updates and patches are 508 compliant.

AQL: Zero Deviation

b) Standard: The contractor shall provide a Section 508 customization Conformance Validation Statement for each release.

AQL: Zero Deviation

c) Standard: The contractor shall provide Section 508 Self Certification package for each release.

AQL: Zero Deviation

5.11.5 RELEASE SUPPORT

The HUDs Release Process is conducted during the release of new functionality or configuration in compliance with the HUDs Release Process. The Contractor shall support the HUDs Release Process during the contract's period of performance.

Performance Standards

a) Standard: The Contractor shall support the HUDs Release Process during the contracts period of performance.

AQL: Zero Deviation

5.12 OPERATIONS AND MAINTENANCE SUPPORT

System solution support activities are associated with the on-going support related to the performance of routine, preventive, predictive, scheduled, and unscheduled actions aimed at preventing system/production failure (i.e., break/fix) and correcting software defects with the goal of increasing efficiency and reliability on a continuous basis. This support shall be provided for the CEM solution and all associated components and environments.

In support of these activities, the Contractor shall configure, maintain, test, and deploy CEM maintenance releases applying the same life cycle tasks. The Contractor shall provide technical documentation and execute these life cycle processes throughout the period of performance to support the delivery of CEM functionality.

Releases shall occur after hours and/or during the weekend. The contractor shall conduct maintenance during non-business hours. It is expected that all deployment release packages are completely developed and SME advisory and troubleshooting support is provided. For releases, Contractor support staff should be identified and available should a problem arise.

Performance Standards

a) Standard: The Contractor shall provide technical documentation and execute these life cycle processes throughout the period of performance to support the delivery of CEM functionality.

AQL: Zero Deviation

b) Standard: The contractor shall perform releases after hours and/or during the weekend

AQL: Zero Deviation

c) Standard: The contractor shall conduct maintenance during non-business hours.

AQL: Zero Deviation

5.13 CONFIGURATION MANAGEMENT

The Contractor shall:

- a. Identify the standard and unique aspects of configuration management to be performed for each project by establishing a Product Configuration Management Plan which meets PMO Website CM plan requirements. The Contractor shall reflect all CM required activities and standards in each project-level CM plan while determining the unique aspects of the project which require individualized procedures.
- b. Provide a timeline and plan for integration with HUD's Learning Management System module using API
- c. Deliver a Recommended List of Configuration Items to be placed under configuration and change control. The Contractor shall identify types of configuration items pertaining to each product to be placed under configuration management. Based on PMO requirements, and the unique needs or nature of each project, the Contractor shall determine the components within each project that must be under configuration control.
- d. Use the HUD approved tool and repository for all software source code and electronic artifact configuration and version management. The Contractor shall use the tool to manage change, activity, issue, action, risk, and other project data as prescribed by HUD standards and processes. If assigned a project using tools that are being deprecated, the Contractor shall assist the HUD Tools Team in migrating projects using other Change and/or Configuration Management tools.
- e. Ensure that all project software and non-software artifacts are versioned correctly according to HUD standards and follow a build/release promotion versioning approach which identifies all major, minor, and update changes to the components.
- f. Create Project and Product Artifacts baselined and versioned in the CM repository to allow the tool to show active and past histories of the check-ins and check-outs of all software components, data, and software project engineering documents. Maintain all baselines of software, software builds, and electronic artifacts in the repository, labeling updates and versions according to CM procedures.
- g. Develop, verify and submit with all project build deliveries, a Version Description Document that addresses the manifest of the contents of all software builds created for project releases outside the development environment.
- h. Establish and maintain status reporting on change and configuration management activity and ensure data records and artifacts are filed and updated daily.

Performance Standards

a) Standard: The contractor shall provide a Product Configuration Management Plan with the approval of the Final Project Management Plan

AQL: Zero Deviation

b) Standard: The contractor shall submit a Version Description Document with all project build deliveries.

AQL: Zero Deviation

Deliverables

A020 Product Configuration Management Plan

A021 Version Description Document

5.14 CHANGE AND CONFIGURATION MANAGEMENT SUPPORT

Change and Configuration Management addresses the governance, process, roles and responsibilities for the intake, disposition, and documentation of configuration and/or changes under the direction of HUD in support of applications that have been deployed to production.

The Contractor shall:

- a. Update the existing Change and Configuration Management Plan IAW PWS Paragraph 5.14.
- b. For each defect identified, the Contractor shall triage the defect, identify a resolution for the defect, and provide a plan for resolution, including timeline and impacts and updates to the HUD Approved Tool.
- c. Perform technical analysis to include: identifying dependencies on other tasks; assessing the impact of changes on the existing system; and classifying changes as indicated below:
 - i. Corrective Sustainment which is the diagnosis and correction of program errors after release.
 - ii. Adaptive Sustainment which is the modification of software to interface with a changing environment or congressional mandates.
 - iii. Preventive Sustainment which is the modification of software to improve future maintainability or reliability as a result of a requirement to perform a hardware re-platform or operating system/system software upgrade.
 - iv. Perfective Sustainment which is the modification of the software to improve future functionality based on CEM best practice recommended by the CEM Subject Matter Experts (SMEs), sustainment staff and business. This shall include software patches, optimization and incorporation of upgraded and effective software or plugins to improve performance and usability.
- d. Update the HUD Approved Tool IAW PWS Paragraph 5.1.6 based on the outcome of change and configuration management processes. This shall include:
 - i. Revision of the functional and technical requirements and user stories in the HUD Approved Tool which shall be mapped to the existing requirements affected.
 - ii. Creation of a ranked Product Backlog Report sorted by the priority assigned by HUD.
- e. Update the ATO documentation in accordance with PWS Paragraph 5.10.3 ensuring continuous compliance with HUD regulations.

Performance Standards

a) Standard: The contractor shall provide a Ranked Product Backlog Report in accordance with the Product Configuration Management Plan.

AQL: Zero Deviation

Deliverables

A022 Ranked Product Backlog Report

5.15 HELP DESK SUPPORT

The Contractor shall deliver the full array of services, staff, and expertise to operate the Help Desk. The Contractor shall provide Tier 2 and Tier 3 support:

- a. Help Desk Coordination for interface with the Tier 1 and partner system help desks, enforcing required information on tickets, managing intake, enforcing escalation procedures, and the creation and delivery of Tier 1 training for upcoming releases and other special cases.
- b. The contractor shall provide Tier 2 and Tier 3 Help Desk Communications, to manage tickets throughout the period of performance, update ticket status, document the content and metadata of all communications around a ticket ensuring that tickets are managed in status updates and responses in the timeframes, and correctly entering ticket data to include required ticket fields.

The Contractor help desk support shall consist of the following:

- a. Telephonic toll-free help desk support staffed from 8:00 AM to 9:00 PM Eastern time Monday through Friday, excluding Federal holidays.
- b. Help Desk Ticketing system.
- c. Help Desk response times:
 - i. Average time for First Contact per ticket less than 12 hours.
 - ii. Average queue time per ticket less than 24 hours.
 - iii. Average time to close tickets less than 48 hours.

Performance Standards

a) Standard: The contractor shall provide Tier 2 and Tier 3 help desk Support throughout the period of performance.

AQL: Zero Deviation

- a) b) Standard: The contractor help desk support shall consist of the following:
 - Telephonic toll-free help desk support staffed from 8:00 AM to 9:00 PM Eastern time Monday through Friday, excluding Federal holidays.
 - Help Desk Ticketing system.
 - Help Desk response times:
 - Average time for First Contact per ticket less than 12 hours.
 - Average queue time per ticket less than 24 hours.
 - Average time to close tickets less than 48 hours.

AQL: Zero Deviation

5.16 MAINTENANCE UPGRADES

For the CEM solution, the Contractor shall provide all commercially available maintenance upgrades. However, HUD reserves the right on whether or not to accept a maintenance upgrade for the proposed CEM system. The Contractor shall notify HUD of all upcoming maintenance upgrades within 30 (thirty) calendar days of proposed implementation.

Additionally, the Contractor shall document the functionality and compatibility changes from the current production system.

Performance Standards

a) Standard: The Contractor shall notify HUD of all upcoming maintenance upgrades within 30 (thirty) calendar days of proposed implementation.

AQL: Zero Deviation

5.17 HOSTING SUPPORT

The Contractor shall provide continued hosting support for all non-production and production hosted environments.

The Contractor shall:

- a. Support the activities related to acquiring the Authority to Operate (ATO) for production environments within the HUD network.
 - a. Ensure all documentation is current in the HUD's Governance, Risk and Compliance (GRC) tool.
- b. Assist in the development of Enterprise Architecture (EA) checklists to support Operational Readiness Testing.
- c. Update all technical artifacts to reflect current maintenance procedures related to servers and product support.

Performance Standards

a) Standard: The Contractor shall provide continued hosting support for all non-production and production hosted environments in accordance with section 5.17 of the PWS

AQL: Zero Deviation

5.18 HOSTED ENVIRONMENT HELP DESK SUPPORT

The Contractor shall provide Tier 3 Help Desk support meeting the requirements listed below for all the CEM Environments. Tier 3 support is defined as expert level troubleshooting and analysis methods. The Tier 3 Help Desk shall include:

- a. Providing help to authorized users.
- b. Authenticating a User through questions/challenges in the user profile before giving access; providing information; or making changes to the system.
- c. Maintaining a ticket tracking system.
- d. Managing and tracking all environment/system outages.
- e. Managing Help Desk request fulfillment, access management, and planned and preventive maintenance.

- f. Providing input and technical support to HUD help/service desks on all layers until resolution.
- g. Providing problem management tracking for three severity (SEV) levels of problem requests and timely resolutions for infrastructure problems in accordance with the SLA:
 - i. A SEV 1 Incident shall be defined as system down or capacity diminished by greater than 10%. The definition of system down or capacity diminished by greater than 10% shall be defined by HUD
 - ii. A SEV 2 Incident shall be defined as system down or capacity diminished by less than 10% or change order not requiring additional resources. The definition of system down or capacity diminished by less than 10% shall be defined by HUD
 - iii. A SEV 3 Incident shall be defined as routine maintenance or schedulable activity
- h. Notifying the HUD Project Manager (PM) of scheduled maintenance windows per the SLA.
- i. Coordinating with HUD for network outage, reconfiguration, and network troubleshooting issues.
- j. The Contractor shall provide a detailed Helpdesk Support Plan that includes metrics of tracking issues for severity levels 1-3, and standard operating procedures for the support provided in 5.7.5.1 (a-g)

Performance Standards

- a) Standard: The contractor shall provide Helpdesk Support Plan with the approval of the Final Project Management Plan
AQL: Zero Deviation

Deliverables

A023 Help Desk Support Plan

5.19 BACKUP AND RESTORE

The Contractor shall:

- a. Work with the HUD team to make any networking changes required to bring the CEM applications up and make them operable and accessible to the users.
- b. Ensure HUD has access to and can recall the archived data to any of the HUD data centers upon request.
- c. Develop and implement a Backup and Restore Plan for the computing environment using industry best practices. At a minimum, the Plan shall include the requirement to save data for the backup and recovery of information stored on the cloud storage infrastructure to meeting related SLAs and the retention of records as required by HUD Handbook 6300.1 (“Records Management Procedures”) and Department of Housing and Urban Development (HUD) Directive 6300, (“Records and Information Management”)

- d. Ensure HUD has access to the HUD backed up data.

Performance Standards

- a) Standard: The contractor shall provide the Initial and Updated Backup and Restore Plan with the approval of the Final Project Management Plan
AQL: Zero Deviation

Deliverables

A024 Initial and Updated Backup and Restore Plan

5.20 HOSTED ENVIRONMENTS ISSUE-RELATED TECHNICAL SUPPORT

5.13.5 HOSTED ENVIRONMENTS ISSUE-RELATED TECHNICAL SUPPORT

The Contractor shall provide technical support during the operating hours defined in Section 5.15 to assist HUD with issues pertaining to the Hosted Environments. Response times begin when monitoring alerts are discovered and validated or when the Contractor receives a support request from HUD. The Contractor shall respond to validated monitoring alerts and support requests according to the following Severity Levels:

- a. Severity Level A – Critical impact. Only applies to Production systems. Production stops due to product or major feature failure or data corruption. Issue may be:
 - i. a complete or substantial loss of service when using a Production System, or
 - ii. real or perceived data loss or data corruption making an essential part of the Production System unusable, or
 - iii. the inability to use a mission critical application within a Production System.

The Contractor shall respond to all Severity Level A problems within fifteen (15) minutes of event identification. Severity Level A incidents must be elevated to the HUD PM and COR. Support requests for Severity Level A problems must be received by phone, from COR-designated personnel.

- b. Severity Level B – Major impact. A business impacting function or service is not available. Only applies to Production systems. Major feature/product failure; inconvenient workaround or no workaround exists. Issue may be:
 - i. the functionality of the software is adversely affected, but can be circumvented, or
 - ii. certain functions within the software are disabled, but the Software remains operable, or
 - iii. a complete or substantial loss of service when using a Non-Production System.

The Contractor shall respond to all Severity Level B problems within thirty (30) minutes of event identification. Severity Level B incidents must be elevated to the HUD PM and COR. Support requests for Severity Level B problems must be received by phone, from COR-designated personnel.

- c. Severity Level C – Minor impact. HUD’s environment is not seriously affected. Minor feature/product failure, convenient workaround exists. Issue may be:
 - i. partial non-critical functionality loss and the Issue has no significant effect on the usability of the software, or
 - ii. time-sensitive issue important to long-term productivity that is not causing an immediate work stoppage.

The Contractor shall respond to all Severity Level C problems within twenty-four (24) hours.

- d. Severity Level D – No impact. Response times may vary for Severity Level D support depending on the project work associated with the request.

Resolution time for Severity Level A, B, C and D depends on the issues. The Recovery Point Objective (RPO) and Recover Time Objective (RTO) defined in section 5.7.5.5 Service Level Agreement (SLA) will apply. For the RPO, the Contractor shall ensure that no more than fifteen minutes of data is lost. For the RTO, the Contractor shall have the Disaster Recovery site databases and applications operational within 8 hours.

The Contractor shall provide detail on all monitoring alerts and support requests as part of the Incident Report outlined in Section 5.20 within period of time after incident occurrence as defined in section 5.22 Service Level Agreement (SLA). The report format will be provided by HUD.

Performance Standards

a) Standard: The Contractor shall respond to all Severity Level A problems within fifteen (15) minutes of event identification. Severity Level A incidents must be elevated to the HUD PM and COR. Support requests for Severity Level A problems must be received by phone, from COR-designated personnel.

AQL: Zero Deviation

b) Standard: The Contractor shall respond to all Severity Level B problems within thirty (30) minutes of event identification. Severity Level B incidents must be elevated to the HUD PM and COR. Support requests for Severity Level B problems must be received by phone, from COR-designated personnel.

AQL: Zero Deviation

c) Standard: The Contractor shall respond to all Severity Level C problems within twenty-four (24) hours.

AQL: Zero Deviation

5.21 SECURITY AND MONITORING

The Contractor shall provide continuous monitoring of all critical hosting resources including the computing environments, detailed in Paragraph 5.10.1. The Contractor shall generate a Continuous Monitoring and Operations Support Concept of Operations Plan (CONOPS) to outline its processes, procedures and tools used for monitoring and operations support. The contractor shall provide CONOPS with the approval of the Final Project Management Plan. The contractor shall monitor all such resources through automated tools to ensure availability and to guarantee that all systems are operating within the expected parameters as defined by the SLA (detailed in Section 5.22. In the event of a service disruption, the Contractor shall notify the COR within fifteen (15) minutes of detecting the event. Tools employed in the monitoring of resources should have no less than five (5) minute resolution to ensure there is minimal time between event occurrence and detection. Such notifications shall be disseminated according to the severity and impact.

If an event (System Outage) occurs that impacts the availability of the environment, the Contractor shall provide an Event Update Report every hour until the issue is resolved. After the event, the Contractor shall provide an After-Action Report (AAR) with a detailed summary of the identified problem, chronology of events, impact analysis, remediation actions, total elapsed time, and lessons learned within three (3) business days after the conclusion of the event. The downtime and the impact to the SLA shall be included in the report. Within three (3) business days of resolution, the Contractor shall provide an initial Root Cause Analysis (RCA) outage report IAW Section 5.22. A final version shall be supplied within (5) business days of receiving Governments feedback.

The Contractor shall be responsible for the execution and reporting of routine environmental health checks and monitoring of the environment to ensure performance requirements and SLAs are met. SLAs to be captured are referenced in Section 5.7.5.5 of this document. Status of conformance to SLAs shall be reported and delivered as part of the Weekly Onboarding Report.

Within fifteen (15) business days of award, the Contractor shall update the Security CONOPS to outline its procedures, schedule, and method/type of data/log capture for monitoring by the contractors Intrusion Detection Systems (IDS). The Security CONOPS and supporting tools shall be updated monthly to capture new security alerts, configuration changes to support security concerns, and applicable reports to allow for trending related to security events.

The Contractor personnel shall be trained and experienced in evidence collection and maintenance procedures that may be required to support forensic analysis in the case of an emergency incident.

The Contractor shall capture, FIPS 140-2 encrypt and maintain a Read Only log event information of system and network logs. Access to this data shall be strictly limited and tracked in accordance with a HUD-approved access control list. The Contractor shall send output logs of log analysis tools to the HUD PM for category 1-3 security events, which shall be subject to inspection. IDS systems shall be configured in accordance with (IAW) NIST Special Publication 800-94; Section 3.2.2 that provides details relating to log configuration. The mechanism for log transference shall be FIPS 140-2 encrypted e-mail, when possible; for instances where

encrypted e-mail is not possible, password-protected FIPS 140-2 encrypted .zip files shall be utilized. The Contractor shall retain log output for a minimum period of one (1) year in accordance with HUD policy.

The Contractor shall be responsible for providing Intrusion Detection Services and Active Monitoring on a 24x7 basis at the active contractor hosting facility. The Contractor shall detect, identify, react to and report security events on all supported HUD environments on behalf of HUD. The Contractor shall be responsible for reporting incidents within five (5) minutes of event detection to the HUD National Help Desk Line 1-888-297-8689. Security events include, but not limited to, network intrusions, scans, denial of service attacks, worms and unauthorized access to Contractor-managed devices.

The Contractor shall manage incident response and mitigation. The Contractor shall use US CERT or similar to monitor current security threats to protect the integrity of the federal cloud environment and private cloud environment and any data contained in the systems. The Contractor shall actively investigate any attempted or successful intrusion and take steps to halt the attack and isolate the affected systems. Efforts shall be taken to preserve evidence so forensic analysis can be attempted. The Contractor shall conduct a post-incident briefing with the HUD PM to assess the response to the incident and provide a written Incident Report within three (3) business days of the event occurrence outlining how the attack occurred and if it succeeded, what data was accessed, what resolution steps have been exercised, and how future attacks could be mitigated. The Contractor shall make appropriate adjustments to Contractor IDS policies, procedures, and thresholds as identified during the post-incident briefing.

Performance Standards

a) Standard: The contractor shall provide an Event Update Report every hour until the issue is resolved.

AQL: Zero Deviation

b) Standard: The contractor shall provide an After-Action Report (AAR) with a detailed summary of the identified problem, chronology of events, impact analysis, remediation actions, total elapsed time, and lessons learned within three (3) business days after the conclusion of the event.

AQL: Zero Deviation

c) Standard: The contractor shall provide CONOPS with the approval of the Final Project Management Plan.

AQL: Zero Deviation

d) Standard: The contractor shall update the Security CONOPS to outline its procedures, schedule, and method/type of data/log capture for monitoring within fifteen (15) business days of award.

AQL: Zero Deviation

e) Standard: The contractor shall maintain Security logs in accordance with HUD IT policy.

AQL: Zero Deviation

f) Standard: The contractor shall provide a written Incident Report within three (3) business days of the event occurrence outlining how the attack occurred and if it succeeded, what data was accessed, what resolution steps have been exercised, and how future attacks could be mitigated.

Deliverables

A025 Event Update Report

A026 After Action Report
A027 Concept of Operations Plan
A028 Security CONOPS
A029 Security Logs (encrypted)
A030 Incident Report

5.22 SERVICE LEVEL AGREEMENT (SLA) REQUIREMENTS

The Contractor shall:

- a. Ensure services conform to the following SLA parameters effective upon activation of the Hosted Environments and Services:
 - i. Provide the computing environments 24 hours a day/7 days a week/365 days per year and a recovery time of four (4) business hours. The Contractor shall begin operational checks of the systems to ensure full functionality beginning an hour prior to normal business hours (which are 7:00 AM EST to 6:00 PM EST) and notify the HUD of any failures.
 - ii. Calculate the Service's Unavailability for the CEM environments "Service Unavailability" for each calendar month and include the results in the ETEAMS Contractor Progress Status and Management Report (CPSMR). "Service Unavailability" consists of the number of hours that the systems were not available during the operational hours defined above.
 - iii. Conduct Root Cause analyses and provide findings to the HUD PM within three (3) business days of detection if Service Availability levels have fallen below the levels specified in this section. Provide the HUD PM with a Service Interruption Resolution Schedule to resolve the issues within two (2) business days of completion of the Root Cause Analyses.

The CEM Program specifies the following performance metrics related to technical support services sought in this PWS.

The Contractor shall monitor performance against the established performance objectives that qualitatively summarize the deliverables and/or criteria established in this PWS. The Contractor shall outline and describe in the approved CPMP its process and methodology for quantifying and presenting its performance assessment comparison to performance objectives. The Contractor shall report any deviations in the CPSMR.

Table 1: Service Level Agreement (SLA) Requirements

SLA ID	SLA Metric Name	Required Service	Desired Outcomes	Performance Measure Definition / Standard	Minimum Acceptable Performance Level (MAPL)	Evaluation Frequency	Surveillance Method
1	Uptime Metric	Uptime	Ensure availability of cloud hosted environments	<p>The Contractor shall provide consistent availability (e.g. uptime) of cloud hosted environments.</p> <p>The unscheduled downtime of any Contractor supplied and managed service or component will count against availability.</p> <p>Service Availability is defined as all services and applications in the HUD private cloud environments are available, whether it is during abnormal system operation or software upgrade regardless of hardware, software or user fault.</p>	Uptime Requirement is 99.5%	Monthly	100% Inspection Performance Metrics

2	Maintenance Window	Scheduled Maintenance Window	The Contractor's notification of scheduled maintenance to the government	The contractor shall notify the COR 48 hours prior to performance of any scheduled maintenance. Calculation of Service Unavailability shall not include any time the Service is unavailable due to scheduled maintenance.	Contractor shall notify the government at least 48 hours prior to scheduled maintenance. Maintenance window shall not exceed the 4-hour period between Midnight and 4 am EST and is not to exceed once per week. If the maintenance conflicts with other program requirements the work will be scheduled at the next agreed upon date.	Report for each event	Periodic Inspection Maintenance Window Notification
4	RPO	Availability, Backup, Recovery and Monitoring	Provide a secure backup, recovery and network solution to facilitate the RPO at CEM SITES.	Recovery Point Objective (RPO)	For the RPO, the Contractor shall ensure that no more than fifteen minutes of data is lost.	Monthly	Monthly Backup and Recovery logs\Backup Performance Metrics

6	Secure Connection Availability	Infrastructure Network Availability and Monitoring	The Contractor shall provide and monitor availability of the network connections through the HUD Trusted Internet Connection	1) Secure Site to Site network connection through TIC is defined as the encrypted link between HUD's boundary controller and the Contractor's boundary controller. The Contractor is required to maintain the encrypted link on the Contractor-managed end of the connection.	Ensure the Contractor-managed end of the connection is available 99.5% of the time and that the Contractor implemented security perimeter is available 100% of the time.	Monthly	100% Inspection Performance Metrics
7	Support Response Time	Support Response	The response time of the Contractor to government requests	Response/Acknowledgment time begins when monitoring alerts are discovered and validated or when the Contractor receives a support request from HUD. Severity Level A - Critical Impact notification received from HUD by phone Severity Level B - Major Impact notification received from HUD by phone Severity Level C - Minor Impact notification varies - either by phone, e-mail or ticket submission Severity Level D - No Impact notification varies depending on the project work associated with the request	Support Response Times: Severity Level A - Critical Impact: within 15 minutes Severity Level B - Major Impact: within 30 minutes Severity Level C - Minor Impact: within 24 hours Severity Level D - No Impact: varies depending on the project work associated with the request	Monthly	Periodic Inspection Help Desk Ticket resolution times for Restoration

8	Incident Reporting	Incident Reporting for Disaster Recovery and Continuous Monitoring	Contractor incident reporting to HUD that provides HUD with visibility into the monitoring and operational status of resources	In the event of a service disruption, the Contract shall provide Event Update Reports, After Action Reports and Root Cause Analysis Reports in the Contractor's report formats.	After Action Report (AAR) within 10 work days of report in Contractor format Event Update Reports within 3 work days of event in Contractor format Root Cause Analysis (RCA) Reports within 20 work days, unless approved otherwise by HUD, in Contractor format	Monthly	Periodic Inspection Service Disruptions in the Monthly Help Desk Usage reports compared submission times of AA and RCA reports.
9	Intrusion Detection System (IDS)/Intrusion Protection System (IPS) Metric	Security Breaches	Incident response and mitigations to protect the integrity of the CEM environment and any data contained in the systems.	Detect, identify, react to and report security breaches on all supported HUD environments.	24x7x365 Initial Report within 5 minutes of a breach Incident Report within 3 business days	As event occurs/Monthly	100% reporting on any Security Breach

10	Tier 3 Support	Help Desk	The Contractor will have the ability to provide expert level troubleshooting and analysis to assist users with the research and solution development for new or unknown issues.	The Contractor shall provide Tier 3 support using the Contractor's existing help desk capability	Dedicated Tier 3 support as required by events/issues	As events occur	<p>Periodic Inspection Help Desk Ticket resolution times for Problems.</p> <p>Periodic Inspection Customer Satisfaction survey data</p> <p>Monthly Performance Reports</p>
12	Help Desk Ticketing, Incident and Outage Reporting	Help Desk Reporting	The Contractor will provide ticketing related data to the Government	<p>The Contractor shall provide monthly ticketing data reports in the Contractor format.</p> <p>Incident and outage reporting will be provided via the Dashboard</p>	Provide ticketing related data	<p>Ticketing reports – monthly</p> <p>Incident and outage reporting – as event occurs</p>	<p>Periodic Inspection Help Desk Ticket resolution times for Problems.</p> <p>Periodic inspection Ticketing, incident and outage reporting for problems.</p> <p>Monthly Performance Reports</p>

13	Availability of Network Monitoring	Continuous Monitoring	The availability of continuous monitoring data to be integrated with end-to-end performance monitoring data that will provide a complete view of the health of application business services.	Data must be continuously available in real-time to Government IT Security monitoring tools; e.g. Security Information and Event Monitoring (SIEM) and Tenable Security Center.	99.5% Availability of SNMP (Simple Network Management Protocol) polling occurring at a minimum of 5-minute intervals. Application monitoring metrics should be displayed in 15-second intervals with numerous samples in a 15-sec period.	Monthly	100% Inspection HUD Monitoring Tools
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Performance Standards

- a) Standard: The contractor shall notify the COR 48 hours prior to performance of any scheduled maintenance.
AQL: Zero Deviation
- b) Standard: The contractor shall conduct Root Cause analyses and provide findings to the HUD PM within three (3) business days of detection if Service Availability levels have fallen below the levels specified in this section.
AQL: Zero Deviation
- c) Standard: The contractor shall provide the HUD PM with a Service Interruption Resolution Schedule to resolve the issues within two (2) business days of completion of the Root Cause Analyses.

Deliverables

- A031 Notification of Scheduled Maintenance
- A032 Root Cause Analysis Report
- A033 Service Interruption Resolution Schedule

5.23 PROVIDE DATA CALLS AND REPORTING REQUESTS

The Contractor shall:

- a. Provide Data Call Reports in response to data calls from the COR for any system or process that is involved in the delivery of Contractor services within the given timeframe provided at receipt of the request. These requests may differ in form and substance to support Government Accountability Office (GAO) audits, Inspector General (IG) audits, and Legislative and/or HUD Executive Brief requests. The request for these data calls are solicited on an ad-hoc basis, which may surge to a maximum of three (3) per week and which may overlap in occurrence. Historically, there have been 10 data calls per quarter. HUD will provide any specified templates for these data calls/reports.
- b. Provide support to produce the required reports at an expected level of fifteen (15)-twenty (20) calendar days per quarter during each performance period.
- c. Provide support at an expected level of five (5) to ten (10) calendar days of support per quarter.
- d. Provide any requested customer-specific information that is integral to the delivery of services, including the configuration of Contractor core infrastructure and other Contractor managed resources.

One example of responding to data calls and reporting requests is cooperation with the HUD Office of the Inspector General (OIG) in the areas of facilities access, audits, security incident notification, and hosting location.

Specifically, for any required OIG cooperation, the Contractor (and any Subcontractors) shall:

- a. Provide the Contracting Officer, designated representative of the Contracting Officer, and representatives of the agency's Office of Inspector General, full and free access to the Contractor's (and Subcontractors') facilities, installations, operations documentation, databases, and personnel used for contract hosting services. This access shall be provided to the extent required to carry out audits, inspections, investigations, or other reviews to ensure compliance with contractual requirements for IT and information security, and to safeguard against threats and hazards to the integrity, availability, and confidentiality of agency information in the possession or under the control of the Contractor (or Subcontractor)
- b. Fully cooperate with all audits, inspections, investigations, or other reviews conducted by or on behalf of the Contracting Officer or the agency Office of Inspector General as described in subparagraph (a). Full cooperation includes, but is not limited to, prompt disclosure (per agency policy) to authorized requests of data, information, and records requested in connection with any audit, inspection, investigation, or review, making employees of the Contractor available for interview by auditors, inspectors, and investigators upon request, and providing prompt access (per agency policy) to Contractor facilities, systems, data and personnel to the extent the auditors, inspectors, and investigators reasonably believe necessary to complete the audit, inspection, investigation, or other review. The Contractor's (and any Subcontractors') cooperation with audits, inspections, investigations, and reviews conducted will be provided at no additional cost to the Government.
- c. Preserve such data, records, logs and other evidence which are reasonably necessary to conduct a thorough investigation of any computer security incident. A computer security incident (as defined in NIST SP 800-61, Computer Security Incident Handling Guide), including but not limited to those constituting an actual

- or potential threat or hazard to the integrity, availability, or confidentiality of agency information in the possession or under the control of the Contractor (or Subcontractor), or to the function of information systems operated by the Contractor (or Subcontractor) in the performance of this contract.
- d. Promptly notify the designated agency representative in the event of any computer security incident as described in paragraph (c) above. This notification requirement is in addition to any other notification requirements which may be required by law or this Order. Established Federal agency timeframes for reporting security incidents to the United States Computer Emergency Readiness Team (US-CERT), although not exhaustive, serve as a useful guideline for determining whether reports under this paragraph are made promptly. (See NIST SP 800-61, Computer Security Incident Handling Guide, Appendix J)
 - e. Provide to the requestor (Contracting Officer, a representative of the Contracting Officer, or the agency Office of Inspector General) Government data, information, or records under the control of or in the possession of the Contractor pursuant to this contract, which the Agency, including the Office of Inspector General, may request in furtherance of other audits, inspections, investigations, reviews or litigation in which the Agency or the Office of Inspector General is involved. Requests for production under this paragraph shall specify a deadline not less than 10 days for compliance which will determine whether response to the request has been made in a timely manner. Unless expressly provided otherwise elsewhere in this contract, the production of data, information, or records under this paragraph will be at no additional cost to the Government.
 - f. Include the substance of this paragraph, including this paragraph (f) in any subcontract which would require or otherwise result in Subcontractor employees having access to agency information in the possession or under the control of the Contractor (or Subcontractor), or access to information systems operated by the Contractor (or Subcontractor) in the performance of this contract.
 - g. Ensure that all hosting services pertaining to this contract are performed within the United States of America, including the storage of agency data, information, and records under the control of or in the possession of the Contractor pursuant to this contract.

Performance Standards

a) Standard: The contractor shall provide data call reports on an ad hoc basis. The government anticipates and shall be able to provide at minimum of 10 data calls per quarter.

AQL: Zero Deviation

b) Standard: The due date for all data call reports shall be approved by the government.

AQL: Zero Deviation

Deliverables

A034 Data Call Reports

5.24 TRANSITION SUPPORT AND TRANSITION OF ASSETS

The Contractor shall provide a Transition-Out Management Plan for 90 calendar days of outgoing transition support for transitioning work from the current contract to a follow-on contract or Government entity. This transition may be to a Government entity or to

another Contractor or to the incumbent Contractor under a new contract. In accordance with the Government-approved Transition Out Management Plan, the Contractor shall assist the Government in implementing a complete transition from this contract to a new support provider. This shall include formal coordination with Government staff and successor staff and management. It shall also include delivery of copies of all artifacts delivered under this contract, as well as existing policies and procedures, and delivery of baseline metrics and statistics. This Transition Out Management Plan shall include, but is not limited to:

- a. Coordination with Government representatives.
- b. Review, evaluation and transition of current support services.
- c. Transition of historic data to new Contractor system.
- d. Transition of Rational accounts.
- e. Transfer of all necessary business and/or technical documentation
- f. Orientation phase and program to introduce Government and Contractor personnel, programs, and users to the Contractor's team, tools, methodologies, and business processes.
- g. Disposition of Contractor purchased Government owned assets,
- h. Transfer of Government Furnished Equipment (GFE) and Government Furnished Information, and GFE inventory management assistance.
- i. Turn-in of all Government keys, ID/access cards, and security codes.

Performance Standards

a) Standard: The contractor shall provide a Transition Out Management Plan within 6 months of contract award.

AQL: Zero Deviation

b) Standard: The contractor shall provide a separate Draft Transition Out Schedule that describes the timing and the occurrence of all the activities in the Transition Out Management plan. The contractor shall submit the Draft Transition Out Schedule 120 calendar days prior to the expiration of the final option period. The government shall review the Draft Transition Out Schedule and provide comments. The contractor shall provide the Baseline Transition Out Schedule after receiving government approval from the COR within 7 business days.

AQL: Zero Deviation

Deliverables

- A035 Transition Out Management Plan
- A036 Transition Out Schedule
- A037 Certificate of Transition Completion

6 Deliverables

The Contractor shall complete all work and submit all deliverables as specified herein. The Government reserves the right to make changes to delivery dates.

Number	Name	Frequency	Quantity
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A001	Draft PMP	Once	1
A002	Final PMP	Once	1
A003	Hosted Non-Production Environments	Once	1
A004	Hosted Production Environment	Once	1
A005	HUD End User Training Package and minutes	Once	1
A006	Super User Training Package and minutes	Once	1
A007	User Guides	Once	1
A008	Quick Reference Guides	Once	1
A009	Help Desk Training Package	Once	1
A010	Plan of Action and Milestones	Once	1
A011	A&A ATO Package	Once	1
A012	Data Dictionary	Once	1
A013	Data Crosswalk	Once	1
A014	Data Validation Report	Once	1
A015	Data quality assessment and summary report for all historical data migrated to the new system	Once	1
A016	Data management plan (consistent with HUD and OCHCO data governance requirements)	Once	1
A017	Test Strategy Data Input	Once	1
A018	Test Plan and Test Execution Data Input	Once	1
A019	Requirements Traceability Matrix (RTM)	Once	1
A020	Product Configuration Management Plan	Once	1
A021	Version Description Document	Once	1
A022	Ranked Product Backlog Report	Once	1
A023	Help Desk Support Plan	Once	1
A024	Initial and Updated Backup and Restore Plan	Once	1

A025	Event Update Report	Once	1
A026	After Action Report	As Needed	TBD
A027	Concept of Operations Plan	Once	1
A028	Security CONOPS	Once	1
A029	Security Logs (encrypted)	As Needed	TBD
A030	Incident Report	As Needed	TBD
A031	Notification of Scheduled Maintenance	As Needed	TBD
A032	Root Cause Analysis Report	As Needed	TBD
A033	Service Interruption Resolution Schedule	As Needed	TBD
A034	Data Call Reports	As Needed	TBD
A035	Transition Out Management Plan	Once	1
A036	Transition Out Schedule	Once	1
A037	Certificate of Transition Completion	Once	1

6.1 Quality Control Plan

The Contractor shall establish and maintain a complete quality control program that shall ensure services are performed in accordance with this contract. The Contractor shall develop and implement procedures to identify, prevent, and ensure non-reoccurrence of defective services. The Contractor's quality control program is the means by which they assure themselves that their work complies with the requirements of the contract. The Contractor shall provide the associated Quality Control Plan to the Government as directed.

The Contractor shall develop, maintain, enforce, and document a Quality Control Plan (QCP). The QCP shall ensure the Government receives the level of quality that is consistent with the requirements specified in this contract. The QCP shall be sufficiently detailed to provide the Contractor's methodology for identifying and recruiting qualified personnel. The QCP shall also provide the Contractor's methodology for resolving problems identified by the Government during reviews conducted in accordance with its Quality Assurance Surveillance Plan (QASP).

The QCP shall also provide the Contractor's methodology for establishing an internal feedback system for support personnel and for resolving problems identified by that feedback system. The QCP shall demonstrate and validate that the services or deliverables to be provided under the contract are completed with a level of quality that meets the minimum performance threshold established in the Government's QASP. The QCP shall address Quality Management Approach, Quality Assurance, Quality Control, and Quality Standards.

The Contractor's QCP shall be delivered to the COR within 30 days after contract award (or with the Contractor's proposal if it is an evaluation factor). The QCP shall be submitted to the COR within (insert number of days) business days when changes are made thereafter.

6.2 Acceptance Criteria

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Each contract deliverable shall meet the following inspection and acceptance criteria in addition to any "Inspection and Acceptance contract terms and conditions:

- Deliverables shall incorporate all HUD comments;
- All deliverables shall be provided to the designated COR first in draft format for review and comment unless specified otherwise by the COR;
- Subsequent final reports shall incorporate the comments, changes, edits, and concerns expressed to the Contractor by the COR. All deliverables shall be grammatically correct, reflect comprehensive research, incorporate complete analysis, and address HUD concerns;
- Acceptance of all deliverables shall be provided in writing by the COR within 5 business days. Upon written notification by the COR, the Contractor shall make any required revisions and resubmit the documentation within 5 business days, and/or submit a final draft within two (2) business days. The COR will inform the Contractor of the final draft.
- The Contractor shall provide any further refinement needed for documents required by the COR;
- All deliverables must be in compliance with Section 508 requirements as established by the Section 508 Access Board and other HUD guidelines; and
- In the event the Government deems a deliverable as unacceptable and the deliverable is rejected, the Contractor shall rework the deliverable at no cost increase to the contract. In the event the Government deems the services are unacceptable and rejects the service, the Contractor shall take action necessary to correct deficiencies and bring the service into compliance with the acceptability standards of the contract.

7 Related Documents

The Contractor shall abide by all applicable regulations, publications, manuals, policies, and procedures in the performance of this contract.

8 Performance Requirements Summary

The summary chart below lists the contract's primary requirements, the associated performance standards, the expected target performance, and the methods of surveillance. While some contract requirements may not be listed in the chart below, requirements not appearing on the PRS chart do not negate the Contractor's obligation to perform all requirements as specified in the contract. Additionally, HUD reserves all rights and remedies under the provisions and clauses of the contract when performance of any contract requirement, whether or not listed below, is unacceptable.

HUD will develop a Quality Assurance Surveillance Plan to be used to provide contract oversight. In conjunction with the Contractor's Quality Control Plan and various other methods of assessing performance, the COR and PM may perform on-site reviews and/or other types of verification to determine that the specified target performance requirements have been met.

Regular review of Contractor performance is critical to the overall success of the contract. On a monthly basis, the COR will evaluate the quality of the product or services.

Performance Requirement Summary (PRS)

Statements	Standards/AQLs	Incentive/Remedy
5.1 PROGRAM MANAGEMENT PLAN	a) Draft Project Management Plan (PMP) outlining the Contractors approach should be delivered at the Kickoff Meeting AQL: Zero Deviation b) Final Project Management Plan shall be due 7 business days after receipt comments from the COR AQL: Zero Deviation	

Statements	Standards/AQLs	Incentive/Remedy
5.2 OPERATIONAL CAPABILITIES STANDUP		

Statements	Standards/AQLs	Incentive/Remedy
5.3 FUNCTIONAL CAPABILITIES	a) The contractors CEM system shall provide all the capabilities listed in section 5.3 of the PWS. AQL: Zero Deviation	

Statements	Standards/AQLs	Incentive/Remedy
5.4 SURVEY MANAGEMENT	a) The contractors CEM survey management solution shall provide all the capabilities listed in section 5.5 of the PWS. AQL: Zero Deviation	

Statements	Standards/AQLs	Incentive/Remedy
5.5 CLOSED LOOP MANAGEMENT	a) The contractors CEM closed loop management solution shall provide all the capabilities listed in section 5.6 of the PWS. AQL: Zero Deviation	

Statements	Standards/AQLs	Incentive/Remedy
5.6 ANALYSIS	a) The contractors CEM analysis solution shall perform all the	

	capabilities listed in section 5.7 of the PWS. AQL: Zero Deviation	
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Statements	Standards/AQLs	Incentive/Remedy
5.7 DASHBOARDING AND REPORTING	a) The contractors CEM dashboard and reporting solution shall perform all the capabilities listed in section 5.8 of the PWS. AQL: Zero Deviation	

Statements	Standards/AQLs	Incentive/Remedy
5.8 CUSTOMER JOURNEY	a) The contractors CEM Customer Journey solution shall perform all the capabilities listed in section 5.9 of the PWS. AQL: Zero Deviation	

Statements	Standards/AQLs	Incentive/Remedy
5.9 ADMINISTRATION	a) The contractors CEM administration solution shall perform all the capabilities listed in section 5.10 of the PWS. AQL: Zero Deviation	

Statements	Standards/AQLs	Incentive/Remedy
5.10 PHASE I TRANSITION-IN	a) The Contractor shall deliver an integrated solution inside and outside of the Enterprise Talent Management System in accordance with the Project Management Plan. AQL: Zero Deviation b) The contractor shall schedule and manage a weekly transition status meeting with Government and provide updated documentation on activities. AQL: Zero Deviation	
5.10.1 HOSTED ENVIRONMENTS	a) The contractor shall deliver the Non-Production Environment within 30 calendar days of the contract	

	<p>award. AQL: Zero Deviation b) The contractor shall deliver the fully Integrated Production Environment within 90 calendar days of the contract award. AQL: Zero Deviation</p>	
5.10.2 TRAINING	<p>a) The contractor shall coordinate a minimum of one training per quarter in accordance with the project management plan. AQL: Zero Deviation b) The contractor shall provide training materials to include HUD End User Training Package, Super User Training Package, User Guides, Quick Reference Guides, and Help Desk Training Package in advance to the scheduled training at least three business day. AQL: Zero Deviation</p>	
5.10.3 AUTHORITY TO OPERATE	<p>a) The contractor shall provide the A&A ATO Package in accordance with the project management plan. AQL: Zero Deviation b) The contractor shall provide the Plan of Action and Milestones in accordance with the project management plan. AQL: Zero Deviation c) The contractor shall adhere to and maintain all HUD security requirements. AQL: Zero Deviation</p>	
5.10.4 DATA MIGRATION	<p>a) The Contractor shall migrate all records, tables, and files from the current CEM system into the new CEM system within 90 calendar days from contract award. AQL: Zero Deviation b) The Data Dictionary and Crosswalk shall be provided within 10 business days of migration. AQL: Zero Deviation c) The Contractor shall provide a Data Validation Report detailing the type of data that was migrated,</p>	

	<p>validating and referenced in the data dictionary that 100% of data have been accurately migrated by the date specified within the project management plan. AQL: Zero Deviation</p> <p>d) The contractor shall provide Data Quality Assessment and Summary Report within the date specified in the Project Management Plan. AQL: Zero Deviation</p> <p>e) The contractor shall provide the Data Management Plan within 5 business days from the approved Final Project Management Plan. AQL: Zero Deviation</p>	
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Statements	Standards/AQLs	Incentive/Remedy
5.11 PHASE II		
5.11.1 SYSTEM SOLUTION SUPPORT		
5.11.2 RELEASE PLANNING	<p>a) The Contractor shall maintain the program/project backlog, continuously, in every release and throughout the life of the period of performance within the HUD Approved Process. AQL: Zero Deviation</p> <p>b) The Contractor shall develop a release collection 30 days prior to a Release. AQL: Zero Deviation</p>	
5.11.3 TESTING	<p>a) The Contractor shall populate its Test Strategy section of the test plan in HUDs implementation of Quality Manager tool within 15 days after the Kickoff Meeting. AQL: Zero Deviation</p> <p>b) The contractor shall provide Test Plan with the approval of the Final Project Management Plan. AQL: Zero Deviation</p> <p>c) The contractor shall provide Test Execution Data input in accordance with time specified in the Project Management Plan.</p>	

	AQL: Zero Deviation d) The Contractor shall provide test results in the Quality Manager tool which is the final piece of data that completes the Requirements Traceability Matrix (RTM). AQL: Zero Deviation	
5.11.4 508 COMPLIANCE TESTING	a) The contractor shall ensure that the CEM, release, updates and patches are 508 compliant. AQL: Zero Deviation b) The contractor shall provide a Section 508 customization Conformance Validation Statement for each release. AQL: Zero Deviation c) The contractor shall provide Section 508 Self Certification package for each release. AQL: Zero Deviation	
5.11.5 RELEASE SUPPORT	a) The Contractor shall support the HUDs Release Process during the contracts period of performance. AQL: Zero Deviation	

Statements	Standards/AQLs	Incentive/Remedy
5.12 OPERATIONS AND MAINTENANCE SUPPORT	a) The Contractor shall provide technical documentation and execute these life cycle processes throughout the period of performance to support the delivery of CEM functionality. AQL: Zero Deviation b) The contractor shall perform releases after hours and/or during the weekend AQL: Zero Deviation c) The contractor shall conduct maintenance during non-business hours. AQL: Zero Deviation	

Statements	Standards/AQLs	Incentive/Remedy
5.13 CONFIGURATION	a) The contractor shall provide a	

MANAGEMENT	Product Configuration Management Plan with the approval of the Final Project Management Plan AQL: Zero Deviation b) The contractor shall submit a Version Description Document with all project build deliveries. AQL: Zero Deviation	
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Statements	Standards/AQLs	Incentive/Remedy
5.14 CHANGE AND CONFIGURATION MANAGEMENT SUPPORT	a) The contractor shall provide a Ranked Product Backlog Report in accordance with the Product Configuration Management Plan. AQL: Zero Deviation	

Statements	Standards/AQLs	Incentive/Remedy
5.15 HELP DESK SUPPORT	a) The contractor shall provide Tier 2 and Tier 3 help desk Support throughout the period of performance. AQL: Zero Deviation b) The contractor help desk support shall consist of the following: Telephonic toll-free help desk support staffed from 8:00 AM to 9:00 PM Eastern time Monday through Friday, excluding Federal holidays. Help Desk Ticketing system. Help Desk response times: Average time for First Contact per ticket less than 12 hours. Average queue time per ticket less than 24 hours. Average time to close tickets less than 48 hours. AQL: Zero Deviation	

Statements	Standards/AQLs	Incentive/Remedy
5.16 MAINTENANCE UPGRADES	a) The Contractor shall notify HUD of all upcoming maintenance upgrades within 30 (thirty) calendar days of proposed implementation. AQL: Zero Deviation	

Statements	Standards/AQLs	Incentive/Remedy
5.17 HOSTING SUPPORT	a) The Contractor shall provide continued hosting support for all non-production and production hosted environments in accordance with section 5.17 of the PWS AQL: Zero Deviation	

Statements	Standards/AQLs	Incentive/Remedy
5.18 HOSTED ENVIRONMENT HELP DESK SUPPORT	a) The contractor shall provide Helpdesk Support Plan with the approval of the Final Project Management Plan AQL: Zero Deviation	

Statements	Standards/AQLs	Incentive/Remedy
5.19 BACKUP AND RESTORE	a) The contractor shall provide the Initial and Updated Backup and Restore Plan with the approval of the Final Project Management Plan AQL: Zero Deviation	

Statements	Standards/AQLs	Incentive/Remedy
5.20 HOSTED ENVIRONMENTS ISSUE-RELATED TECHNICAL SUPPORT	a) The Contractor shall respond to all Severity Level A problems within fifteen (15) minutes of event identification. Severity Level A incidents must be elevated to the HUD PM and COR. Support requests for Severity Level A problems must be received by phone, from COR-designated personnel. AQL: Zero Deviation b) The Contractor shall respond to all Severity Level B problems within thirty (30) minutes of event identification. Severity Level B incidents must be elevated to the HUD PM and COR. Support requests for Severity Level B problems must be received by	

	<p>phone, from COR-designated personnel. AQL: Zero Deviation</p> <p>c) The Contractor shall respond to all Severity Level C problems within twenty-four (24) hours. AQL: Zero Deviation</p>	
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Statements	Standards/AQLs	Incentive/Remedy
<p>5.21 SECURITY AND MONITORING</p>	<p>a) The contractor shall provide an Event Update Report every hour until the issue is resolved. AQL: Zero Deviation</p> <p>b) The contractor shall provide an After-Action Report (AAR) with a detailed summary of the identified problem, chronology of events, impact analysis, remediation actions, total elapsed time, and lessons learned within three (3) business days after the conclusion of the event. AQL: Zero Deviation</p> <p>c) The contractor shall provide CONOPS with the approval of the Final Project Management Plan. AQL: Zero Deviation</p> <p>d) The contractor shall update the Security CONOPS to outline its procedures, schedule, and method/type of data/log capture for monitoring within fifteen (15) business days of award. AQL: Zero Deviation</p> <p>e) The contractor shall maintain Security logs in accordance with HUD IT policy. AQL: Zero Deviation</p> <p>f) The contractor shall provide a written Incident Report within three (3) business days of the event occurrence outlining how the attack occurred and if it succeeded, what data was accessed, what resolution steps have been exercised, and how future attacks could be mitigated.</p>	

Statements	Standards/AQLs	Incentive/Remedy
5.22 SERVICE LEVEL AGREEMENT (SLA) REQUIREMENTS	<p>a) The contractor shall notify the COR 48 hours prior to performance of any scheduled maintenance. AQL: Zero Deviation</p> <p>b) The contractor shall conduct Root Cause analyses and provide findings to the HUD PM within three (3) business days of detection if Service Availability levels have fallen below the levels specified in this section. AQL: Zero Deviation</p> <p>c) The contractor shall provide the HUD PM with a Service Interruption Resolution Schedule to resolve the issues within two (2) business days of completion of the Root Cause Analyses.</p>	

Statements	Standards/AQLs	Incentive/Remedy
5.23 PROVIDE DATA CALLS AND REPORTING REQUESTS	<p>a) The contractor shall provide data call reports on an ad hoc basis. The government anticipates and shall be able to provide at minimum of 10 data calls per quarter. AQL: Zero Deviation</p> <p>b) The due date for all data call reports shall be approved by the government. AQL: Zero Deviation</p>	

Statements	Standards/AQLs	Incentive/Remedy
5.24 TRANSITION SUPPORT AND TRANSITION OF ASSETS	<p>a) The contractor shall provide a Transition Out Management Plan within 6 months of contract award. AQL: Zero Deviation</p> <p>b) The contractor shall provide a separate Draft Transition Out Schedule that describes the timing and the occurrence of all the activities in the Transition Out Management plan. The contractor shall submit the Draft Transition Out</p>	

	<p>Schedule 120 calendar days prior to the expiration of the final option period. The government shall review the Draft Transition Out Schedule and provide comments. The contractor shall provide the Baseline Transition Out Schedule after receiving government approval from the COR within 7 business days.</p> <p>AQL: Zero Deviation</p>	
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