# Annex H - Checklist of IV&V Scope of Work(based on PMO-TMO Models)

To establish the overall ICT project organization for The Agency, i.e. having both Project Management Office (PMO) and Test Management Office (TMO) co-exist in synchronization, three types PMO-TMO relationship models can be adopted to realize an IV&V Engagement.

Model Type	Description	Selection Criteria
Standard Model (S)	<ul> <li>The management offices share in monitoring and controls responsibilities:         <ul> <li>PMO for project management monitoring and controls.</li> <li>TMO for testing management monitoring and controls and advice on quality.</li> </ul> </li> <li>IV&amp;V Provider provides value-added services augmenting The Agency's PMO capabilities where needed, in a non-disruptive style.</li> <li>PMO engage the TMO to share advice on quality and include them in project discussions.</li> </ul>	When The Agency's PMO capabilities are strong.     The least cost model type.
Collaborative Model (C)	<ul> <li>Both sides (PMO and IV&amp;V) modelled their own business requirements while maintaining respect for what the other party needs to accomplish.</li> <li>The PMO offers input into the TMO's IV&amp;V Plans and the TMO's provides input into the PMO plans, hence each is supporting the other's objectives.</li> <li>In this relationship, the TMO will fill in the gaps in PMO capabilities.</li> </ul>	<ul> <li>Regardless of strength and competence of The Agency's PMO, it still requires significant inputs and presence from the TMO.</li> <li>When The Agency's PMO capabilities need support.</li> </ul>
Integrated Model (I)	<ul> <li>TMO and PMO is an integrated entity called PTMO, where:         <ul> <li>a) The merged entity drives the project based entirely on quality-driven TMO objectives.</li> <li>b) The TMO Manager is recognised as senior member of the PTMO.</li> </ul> </li> <li>TMO heavily driving PTMO activities, infusing quality into the process lifecycle.</li> <li>IV&amp;V Provider must be hired before tendering for the development project.</li> </ul>	When the PMO requires significant support from TMO, with no compromise on quality of the deliverables.      Most suitable for critical life threatening systems.      It is costly and project will need to consider the cost factor that will be attached.

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✓ - Must be included in the scope of work O - Optional
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#### 1. IV&V Project Management

TASK ITEM	TASK DESCRIPTION		PMO-TMO Model		
		S	С	I	
IV&V Management Plan	As the first deliverable the IV&V provider shall develop an IV&V Management Plan. This plan shall describe the activities, personnel, schedule, standards, and methodology for conducting the IV&V reviews.	<b>√</b>	<b>✓</b>	<b>✓</b>	
Conduct Initial Review	Prepare and deliver an Initial IV&V report on the required activities. Report on status of each activity.	<b>✓</b>	>	<b>~</b>	
Conduct Periodic Review(s)	Prepare and deliver a Follow-up IV&V report on the required activities. Report on status of each activity and progress since the previous report.		<	<b>✓</b>	
Management Briefing	Prepare and deliver a formal presentation(s) on the status of the IV&V project. Presented as required, with at least 3 or 5 business days' notice.		<b>\</b>	<b>✓</b>	

# 2. Planning Oversight (prior to release of tender – engagement with IV&V before engagement with developer)

TASK ITEM	TASK DESCRIPTION	S	O	I
Procurement	Verify the procurement strategy supports Agency project objectives.		0	✓
	Review and make recommendations on the solicitation documents relative to their ability to adequately inform potential vendors about project objectives, requirements, risks, etc.		0	<b>√</b>
	Verify the evaluation criteria are consistent with project objectives and evaluation processes are consistently applied; verify all evaluation criteria is metrics based and clearly articulated within the solicitation documents.		0	<b>✓</b>
	Verify that the obligations of the vendor, sub-contractors and external staff (terms, conditions, Statement of work, requirements, technical standards, performance standards, development milestones, acceptance criteria, delivery dates, etc.) are clearly defined. This includes verifying that performance metrics have been included that will allow tracking of project performance and progress against criteria set by the Agency.		0	<b>\</b>
	Verify the final contract for the vendor team Agency's that the vendor will participate in the IV&V process, being cooperative for coordination and communication of information.		0	<b>✓</b>

TASK ITEM	TASK DESCRIPTION	Ø	O	ı
Feasibility Study	Perform ongoing assessment and review of Agency methodologies used for the feasibility study, verifying it was objective, reasonable, measurable, repeatable, consistent, accurate and verifiable.		0	<b>✓</b>
	Review and evaluate the Cost Benefit Analysis to assess its reasonableness.		0	✓

#### 3. Project Management

TASK ITEM	TASK DESCRIPTION	S	С	I
Project Sponsorship	Assess and recommend improvement, as needed, to assure continuous executive stakeholder buy-in, participation, support and commitment, and that open pathways of communication exist among all stakeholders.		\ \ \	~
Management Assessment	Verify and assess project management and organization, verify that lines of reporting and responsibility provide adequate technical and managerial oversight of the project.		0	✓
	Verify that executive sponsorship has bought-in to all changes which impact project objectives, cost, or schedule.	✓	<b>✓</b>	<b>√</b>
	Assess coordination, communication and management to verify agencies and departments are not working independently of one another and following the communication plan.		<b>✓</b>	✓
Project Management	Verify that a Project Management Plan is created and being followed. Evaluate the project management plans and procedures to verify that they are developed, communicated, implemented, monitored and complete.		0	<b>√</b>
	Evaluate project reporting plan and actual project reports to verify project status is accurately traced using project metrics.	<b>√</b>	<b>√</b>	<b>√</b>
	Verify milestones and completion dates are planned, monitored, and met.	✓	<b>√</b>	✓
	Verify the existence and institutionalization of an appropriate project issue tracking mechanism that documents issues as they arise, enables communication of issues to proper stakeholders, documents a mitigation strategy as appropriate, and tracks the issue to closure. This should include but is not limited to technical and development efforts.	<b>√</b>	<b>✓</b>	<b>√</b>
	Evaluate the system's planned life-cycle development methodology or methodologies (waterfall, evolutionary spiral, rapid prototyping, incremental, etc.) to see if they are appropriate for the system being developed.			<b>√</b>
Business Process Reengineering	Evaluate the project's ability and plans to redesign business systems to achieve improvements in critical measures of performance, such as cost, quality, service, and speed.			0
	Verify that the reengineering plan has the strategy, management backing, resources, skills and incentives			0

TASK ITEM	TASK DESCRIPTION	S	С	I
	necessary for effective change.			
	Verify that resistance to change is anticipated and prepared for by using principles of change management at each step (such as excellent communication, participation, incentives) and having the appropriate leadership (executive pressure, vision, and actions) throughout the reengineering process.			0
Risk Management	Verify that a <b>Project Risk Management Plan</b> is created and being followed. Evaluate the projects risk management plans and procedures to verify that risks are identified and quantified and that mitigation plans are developed, communicated, implemented, monitored, and complete.		<b>√</b>	<b>*</b>
Change Management	Verify that a Change Management Plan is created and being followed. Evaluate the change management plans and procedures to verify they are developed, communicated, implemented, monitored, and complete; and that resistance to change is anticipated and prepared for.		<b>~</b>	<b>(</b>
Communication Management	Verify that a Communication Plan is created and being followed. Evaluate the communication plans and strategies to verify they support communications and work product sharing between all project stakeholders; and assess if communication plans and strategies are effective, implemented, monitored and complete.	<b>(</b> )	<b>√</b>	<b>~</b>
Configuration Management	Review and evaluate the configuration management (CM) plans and procedures associated with the development process.	<b>√</b>	<b>√</b>	<b>✓</b>
	Verify that all critical development documents, including but not limited to requirements, design, code and JCL are maintained under an appropriate level of control.	<b>√</b>	<b>√</b>	<b>✓</b>
	Verify that the processes and tools are in place to identify code versions and to rebuild system configurations from source code.	<b>√</b>	✓	<b>√</b>
	Verify that appropriate source and object libraries are maintained for training, test, and production and that formal sign-off procedures are in place for approving deliverables.	0	0	<b>√</b>
	Verify that appropriate processes and tools are in place to manage system changes, including formal logging of change requests and the review, prioritization and timely scheduling of maintenance actions.	<b>√</b>	<b>√</b>	<b>✓</b>
	Verify that mechanisms are in place to prevent unauthorized changes being made to the system and to prevent authorized changes from being made to the wrong version.	<b>✓</b>	<b>√</b>	<b>√</b>
	Review the use of CM information (such as the number and type of corrective maintenance actions over time) in project management.	<b>√</b>	✓	<b>√</b>
Project Estimating and Scheduling	Evaluate and make recommendations on the estimating and scheduling process of the project to ensure that the project budget and resources are adequate for the work-breakdown structure and schedule.	<b>√</b>	<b>√</b>	<b>✓</b>

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TASK ITEM	TASK DESCRIPTION	S	С	I
	Review schedules to verify that adequate time and resources are assigned for planning, development, review, testing and rework.	✓	<b>√</b>	<b>√</b>
	Examine historical data to determine if the project/department has been able to accurately estimate the time, labor and cost of software development efforts.	✓	<b>√</b>	<b>√</b>
Project Personnel	Examine the job assignments, skills, training and experience of the personnel involved in program development to verify that they are adequate for the development task.			<b>√</b>
	Evaluate the Agency's hiring plan for the project to verify that adequate human resources will be available for development and maintenance.			<b>✓</b>
	Evaluate the Agency's personnel policies to verify that staff turnover will be minimized.			<b>Y</b>
Project Organization	Verify that lines of reporting and responsibility provide adequate technical and managerial oversight of the project.		0	<b>√</b>
	Verify that the project's organizational structure supports training, process definition, independent Quality Assurance, Configuration Management, product evaluation, and any other functions critical for the project's success.	0	0	<b>√</b>
Subcontractors and External Staff	Evaluate the use of sub-contractors or other external sources of project staff (such as IS staff from another Agency organization) in project development.		0	✓
	Verify that the obligations of sub-contractors and external staff (terms, conditions, Statement of work, requirements, standards, development milestones, acceptance criteria, delivery dates, etc.) are clearly defined.			<b>√</b>
	Verify that the subcontractors' software development methodology and product standards are compatible with the system's standards and environment.		0	✓
	Verify that the subcontractor has and maintains the required skills, personnel, plans, resources, procedures and standards to meet their commitment. This will include examining the feasibility of any offsite support of the project		0	<b>√</b>
	Verify that any proprietary tools used by subcontractors do not restrict the future maintainability, portability, and reusability of the system.		0	✓
Agency Oversight	Verify that Agency oversight is provided in the form of periodic status reviews and technical interchanges.		0	✓
	Verify that the Agency has defined the technical and managerial inputs the subcontractor needs (reviews, approvals, requirements and interface clarifications, etc.) and has the resources to supply them on schedule.		0	<b>√</b>
	Verify that Agency staff has the ultimate responsibility for monitoring project cost and schedule.		0	<b>√</b>

#### 4. Quality Management

TASK ITEM	TASK DESCRIPTION	S	С	I
Quality Assurance	Evaluate and make recommendations on the project's Quality Assurance plans, procedures and organization.	<b>√</b>	✓	✓
	Verify that QA has an appropriate level of independence from project management.	<b>√</b>	<b>√</b>	✓
	Verify that the QA organization monitors the fidelity of all defined processes in all phases of the project.	✓	<b>√</b>	✓
	Verify that the quality of all products produced by the project is monitored by formal reviews and sign-offs.	✓	<b>√</b>	✓
	Verify that project self-evaluations are performed and that measures are continually taken to improve the process.	✓	<b>√</b>	<b>✓</b>
	Monitor the performance of the QA contractor by reviewing its processes and reports and performing spot checks of system documentation; assess findings and performance of the processes and reports.	0	0	~
	Verify that QA has an appropriate level of independence; evaluate and make recommendations on the project's Quality Assurance plans, procedures and organization.	<b>Y</b>	1	✓
	Evaluate if appropriate mechanisms are in place for project self-evaluation and process improvement.	<b>✓</b>	✓	✓
	Review and make recommendations on all defined processes and product standards associated with the system development.	<b>√</b>	<b>√</b>	✓
Standards	Verify that all major development processes are defined and that the defined and approved processes and standards are followed in development.	<b>√</b>	<b>√</b>	✓
	Verify that the processes and standards are compatible with each other and with the system development methodology.	✓	<b>√</b>	✓
	Verify that all process definitions and standards are complete, clear, up-to-date, consistent in format, and easily available to project personnel.	<b>√</b>	<b>√</b>	✓

# 5. Training

TASK ITEM	TASK DESCRIPTION	S	С	I
User Training and Documentation	Review and make recommendations on the training provided to system users. Verify sufficient knowledge transfer for maintenance and operation of the new system.			<b>*</b>
	Verify that training for users is instructor-led and hands- on and is directly related to the business process and required job skills.			<b>√</b>
© MAMPU. Date	Verify that user-friendly training materials and help desk services are easily available to all users.			<b>√</b>
	Verify that all necessary policy and process and documentation is easily available to users.			<b>√</b>
	Verify that all training is given on-time and is evaluated and monitored for effectiveness, with additional training provided as needed.			<b>√</b>

TASK ITEM	TASK DESCRIPTION	S	С	ı
-	Review and make recommendations on the training provided to system developers.			✓
Documentation	Verify that developer training is technically adequate, appropriate for the development phase, and available at appropriate times.			✓
	Verify that all necessary policy, process and standards documentation is easily available to developers.			✓
	Verify that all training is given on-time and is evaluated and monitored for effectiveness, with additional training provided as needed.			<b>√</b>

#### 6. Requirements Management

TASK ITEM	TASK DESCRIPTION	S	С	I
Requirements Management	Evaluate and make recommendations on the project's process and procedures for managing requirements.	~	<b>X</b>	<b>√</b>
	Verify that system requirements are well-defined, understood and documented.	<b>V</b>	<b>V</b>	✓
	Evaluate the allocation of system requirements to hardware and software requirements.	<b>√</b>	<b>✓</b>	✓
	Verify that software requirements can be traced through design, code and test phases to verify that the system performs as intended and contains no unnecessary software elements.	<b>√</b>	<b>~</b>	<b>√</b>
	Verify that requirements are under formal configuration control.	✓	<b>√</b>	✓
Security Requirements	Evaluate and make recommendations on project policies and procedures for ensuring that the system is secure and that the privacy of client data is maintained.	✓	<b>✓</b>	✓
	Evaluate the projects restrictions on system and data access.	✓	<b>√</b>	✓
	Evaluate the projects security and risk analysis.	✓	✓	✓
	Verify that processes and equipment are in place to back up client and project data and files and archive them safely at appropriate intervals.	✓	<b>✓</b>	✓
Requirements Analysis	Verify that an analysis of client, Agency needs and objectives has been performed to verify that requirements of the system are well understood, well defined, and satisfy Agency regulations.	<b>√</b>	<b>~</b>	✓
	Verify that all stakeholders have been consulted to the desired functionality of the system, and that users have been involved in prototyping of the user interface.	✓	<b>√</b>	✓
	Verify that all stakeholders have bought-in to all changes which impact project objectives, cost, or schedule.	✓	<b>✓</b>	<b>√</b>
	Verify that performance requirements (e.g. timing, response time and throughput) satisfy user needs.	<b>√</b>	<b>✓</b>	✓
	Verify that user's maintenance requirements for the system are completely specified.	✓	<b>√</b>	✓
Interfage/PU Da	Verify that all system interfaces are exactly described, by	✓	✓	✓

TASK ITEM	TASK DESCRIPTION	S	С	ı
Requirements	medium and by function, including input/output control codes. data format, polarity, range, units, and frequency.			
	Verify those approved interface documents are available and that appropriate relationships (such as interface working groups) are in place with all agencies and organizations supporting the interfaces.	<b>√</b>	<b>√</b>	<b>✓</b>
Requirements Allocation and	Verify that all system requirements have been allocated to either a software or hardware subsystem.	✓	<b>√</b>	✓
Specification	Verify that requirements specifications have been developed for all hardware and software subsystems in a sufficient level of detail to ensure successful implementation.	,	<b>√</b>	<b>✓</b>
Reverse Engineering	Verify that a well-defined plan and process for reengineering the system is in place and is followed (if a legacy system or a transfer system is or will be used in development). The process, depending on the goals of the reuse/transfer, may include reverse engineering, code translation, re-documentation, restructuring, normalization, and re-targeting.	×		

#### 7. Operating Environment (pre-tender)

TASK ITEM	TASK DESCRIPTION	S	С	I
System Hardware	Evaluate new and existing system hardware configurations to determine if their performance is adequate to meet existing and proposed system requirements.		0	✓
	Determine if hardware is compatible with the Agency's existing processing environment, if it is maintainable, and if it is easily upgradeable. This evaluation will include, but is not limited to CPUs and other processors, memory, network connections and bandwidth, communication controllers, telecommunications systems (LAN/WAN), terminals, printers and storage devices.		0	✓
	Evaluate current and projected vendor support of the hardware, as well as the Agency's hardware configuration management plans and procedures.		0	✓
System Software	Evaluate new and existing system software to determine if its capabilities are adequate to meet existing and proposed system requirements.		0	✓
	Determine if the software is compatible with the Agency's existing hardware and software environment, if it is maintainable, and if it is easily upgradeable. This evaluation will include, but is not limited to, operating systems, middleware, and network software including communications and file-sharing protocols.		0	<b>√</b>
	Current and projected vendor support of the software will also be evaluated, as well as the Agency's software acquisition plans and procedures.		0	✓
Database Software	Evaluate new and existing database products to determine if their capabilities are adequate to meet existing and proposed system requirements.		0	✓
© MAMPU.	Determine if the database's data format is easily convertible to other formats, if it supports the addition of new data items,		0	✓

TASK ITEM	TASK DESCRIPTION	S	С	I -
	if it is scalable, if it is easily refreshable and if it is compatible with the Agency's existing hardware and software, including any on-line transaction processing (OLTP) environment.			
	Evaluate any current and projected vendor support of the software, as well as the Agency's software acquisition plans and procedures.		0	✓
System Capacity	Evaluate the existing processing capacity of the system and verify that it is adequate for current Agency needs for both batch and on-line processing.		0	✓
	Evaluate the historic availability and reliability of the system including the frequency and criticality of system failure.		0	✓
	Evaluate the results of any volume testing or stress testing.		0	<b>✓</b> <
	Evaluate any existing measurement and capacity planning program and will evaluate the system's capacity to support future growth.		0	
	Make recommendations on changes in processing hardware, storage, network systems, operating systems, COTS software, and software design to meet future growth and improve system performance.		0	<b>✓</b>

# 8. Development Environment (Pre-tender)

TASK ITEM	TASK DESCRIPTION	S	С	I
Development Hardware	Evaluate new and existing development hardware configurations to determine if their performance is adequate to meet the needs of system development.			✓
	Determine if hardware is maintainable, easily upgradeable, and compatible with the Agency's existing development and processing environment. This evaluation will include, but is not limited to CPUs and other processors, memory, network connections and bandwidth, communication controllers, telecommunications systems (LAN/WAN), terminals, printers and storage devices.			<b>√</b>
	Current and projected vendor support of the hardware will also be evaluated, as well as the Agency's hardware configuration management plans and procedures.			✓
Development Software	Evaluate new and existing development software to determine if its capabilities are adequate to meet system development requirements.			✓
	Determine if the software is maintainable, easily upgradeable, and compatible with the Agency's existing hardware and software environment.			✓
	Evaluate the environment as a whole to see if it shows a degree of integration compatible with good development. This evaluation will include, but is not limited to, operating systems, network software, CASE tools, project management software, configuration management software, compilers, cross-compilers, linkers, loaders, debuggers, editors, and reporting software.			<b>√</b>
© MAMPIL F	Language and compiler selection will be evaluated with regard to portability and reusability (ANSI standard language, non-standard extensions, etc.)			<b>✓</b>

TASK ITEM	TASK DESCRIPTION	S	С	I	_
	Current and projected vendor support of the software will also be evaluated, as well as the Agencys software acquisition plans and procedures.			<b>√</b>	

#### 9. Design and Development

TASK ITEM	TASK DESCRIPTION	S	С	I
Design	Evaluate and make recommendations on existing high level design products to verify the design is workable, efficient, and satisfies all system and system interface requirements.	<b>√</b>	<b>√</b>	<b>✓</b>
	Evaluate the design products for adherence to the project design methodology and standards.	0	<b>√</b>	<b>✓</b>
	Evaluate the design and analysis process used to develop the design and make recommendations for improvements. Evaluate design standards, methodology and CASE tools used will be evaluated and make recommendations.	0		
	Verify that design requirements can be traced back to system requirements.	<b>Y</b>	<b>*</b>	<b>√</b>
	Verify that all design products are under configuration control and formally approved before detailed design begins.	<b>\</b>	✓	<b>√</b>
Detailed Design	Evaluate and make recommendations on existing detailed design products to verify that the design is workable, efficient, and satisfies all high level design requirements.	<b>√</b>	<b>√</b>	✓
	The design products will also be evaluated for adherence to the project design methodology and standards.		<b>√</b>	✓
	The design and analysis process used to develop the design will be evaluated and recommendations for improvements made.		<b>√</b>	✓
	Design standards, methodology and CASE tools used will be evaluated and recommendations made.		✓	<b>√</b>
	Verify that design requirements can be traced back to system requirements and high level design.	✓	✓	✓
	Verify that all design products are under configuration control and formally approved before coding begins.	✓	✓	✓
Job Control	Evaluate for appropriate scheduling, timing and internal and external dependencies.		✓	<b>√</b>
Code	Evaluate and make recommendations on the standards and process currently in place for code development.		✓	✓
	Evaluate the existing code base for portability and maintainability, taking software metrics including but not limited to modularity, complexity and source and object size.		<b>√</b>	<b>√</b>
	Code documentation will be evaluated for quality, completeness (including maintenance history) and accessibility.		✓	✓
	Evaluate the coding standards and guidelines and the projects compliance with these standards and guidelines. This evaluation will include, but is not limited to, structure, documentation, modularity, naming conventions and format.		<b>~</b>	✓
	Verify that developed code is kept under appropriate configuration control and is easily accessible by developers.		<b>√</b>	<b>√</b>
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TASK ITEM	TASK DESCRIPTION	S	С	I	
	Evaluate the project's use of software metrics in management and quality assurance.	<b>√</b>	<b>√</b>	<b>✓</b>	

### 10. System and Acceptance Testing

TASK ITEM	TASK DESCRIPTION	S	С	I
	Evaluate the plans, requirements, environment, tools, and procedures used for unit testing system modules.		✓	✓
Unit Test	Evaluate the level of test automation, interactive testing and interactive debugging available in the test environment.		✓	✓
	Verify that an appropriate level of test coverage is achieved by the test process, that test results are verified, that the correct code configuration has been tested, and that the tests are appropriately documented.	✓	<b>√</b>	<b>*</b>
Integration Test	Evaluate the plans, requirements, environment, tools, and procedures used for integration testing of system modules.	<b>√</b>	<b>\</b>	>
	Evaluate the level of automation and the availability of the system test environment.	<b>~</b>	~	<b>√</b>
	Verify that an appropriate level of test coverage is achieved by the test process, that test results are verified, that the correct code configuration has been tested, and that the tests are appropriately documented, including formal logging of errors found in testing.	<b>✓</b>	<b>√</b>	<b>~</b>
	Verify that the test organization has an appropriate level of independence from the development organization.	✓	✓	<b>√</b>
Pilot Test	Evaluate the plans, requirements, environment, tools, and procedures for pilot testing the system.	✓	✓	<b>√</b>
	Verify that a sufficient number and type of case scenarios are used to ensure comprehensive but manageable testing and that tests are run in a realistic, real-time environment.	<b>√</b>	<b>√</b>	<b>√</b>
	Verify that test scripts are complete, with step-by-step procedures, required pre-existing events or triggers, and expected results.	<b>√</b>	<b>√</b>	<b>√</b>
	Verify that test results are verified, that the correct code configuration has been used, and that the tests runs are appropriately documented, including formal logging of errors found in testing.	<b>√</b>	<b>√</b>	<b>~</b>
	Verify that the test organization has an appropriate level of independence from the development organization.	<b>√</b>	<b>√</b>	<b>√</b>
Interface Testing	Evaluate interface testing plans and procedures for compliance with industry standards.	<b>√</b>	<b>√</b>	<b>√</b>
Acceptance and Turnover	Acceptance procedures and acceptance criteria for each product must be defined, reviewed, and approved prior to test and the results of the test must be documented. Acceptance procedures must also address the process by which any software product that does not pass acceptance testing will be corrected.	<b>√</b>	<b>√</b>	<b>√</b>
	Verify that appropriate acceptance testing based on the defined acceptance criteria is performed satisfactorily before acceptance of software products.	<b>√</b>	<b>√</b>	<b>√</b>
0.1411211	Verify that the acceptance test organization has an  Dated December 2020	✓	<b>√</b>	<b>√</b>

TASK ITEM	TASK DESCRIPTION	S	С	I
	appropriate level of independence from the subcontractor.			
	Verify that training in using the contractor-supplied software is be on-going throughout the development process, especially If the software is to be turned over to Agency staff for operation.	✓	<b>√</b>	<b>✓</b>
	Review and evaluate implementation plan.	✓	✓	✓

#### 11. Data Management

TASK ITEM	TASK DESCRIPTION	S	С	I
Data Conversion	Evaluate the Agency's existing and proposed plans, procedures and software for data conversion.	<b>√</b>	✓	<b>✓</b>
Conversion	Verify that procedures are in place and are being followed to review the completed data for completeness and accuracy and to perform data clean-up as required.	<b>*</b>	<b>~</b>	\ \
	Determine conversion error rates and if the error rates are manageable.	< -	<b>*</b>	<b>✓</b>
	Make recommendations on making the conversion process more efficient and on maintaining the integrity of data during the conversion.	<b>\</b>	<b>√</b>	<b>✓</b>
Database Design	Evaluate new and existing database designs to determine if they meet existing and proposed system requirements.	<b>√</b>	<b>√</b>	<b>√</b>
	Recommend improvements to existing designs to improve data integrity and system performance.	<b>√</b>	<b>√</b>	<b>✓</b>
	Evaluate the design for maintainability, scalability, refreshability, concurrence, normalization (where appropriate) and any other factors affecting performance and data integrity.	<b>√</b>	<b>√</b>	<b>~</b>
	Evaluate the project's process for administering the database, including backup, recovery, performance analysis and control of data item creation.	<b>√</b>	<b>√</b>	<b>✓</b>

# 12. Operations Oversight

TASK ITEM	TASK DESCRIPTION	S	С	I
	Evaluate Agency wide system's change request and defect tracking processes.	<b>√</b>	<b>√</b>	✓
Operational Satisfaction	Evaluate implementation of the process activities and request volumes to determine if processes are effective and are being followed.	0	<b>√</b>	✓
Customer & User Operational Satisfaction	Evaluate user satisfaction with system to determine areas for improvement			<b>√</b>
Operational Goals	Evaluate impact of system on program goals and performance standards.	✓	<b>√</b>	✓
Operational Documentation	Evaluate operational plans and processes.	<b>√</b>	<b>√</b>	✓

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TASK ITEM	TASK DESCRIPTION	S	С	I	ŀ
Processes and	Evaluate implementation of the process activities including backup, disaster recovery and day-to-day operations to verify the processes are being followed.	<b>√</b>	<b>√</b>	<b>✓</b>	