

Modernization Program Quality Management Plan

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TABLE OF CONTENTS

Program Overview	3
Document Purpose	3
Document Audience	3
Risks, Assumptions, and Constraints	3
Roles and Responsibilities.....	4
Quality Management Overview	5
Deliverable Acceptance Criteria.....	9
Deliverable Approval Process	9
Quality Management Coordination	9
Lessons Learned.....	10
Metrics	10
Document Maintenance	12
Approving Authorities.....	13
Appendix A – Quality Standards	14
Appendix B – Quality Checklists.....	24
Appendix C – OSCIO Quarterly Reporting: Project Status Update Report Template	25
Appendix D – OSCIO Quarterly Reporting: Project Assessment Report Template.....	26
Appendix E – OSCIO Quarterly Reporting: Project Variance Report Template	27

TABLE OF FIGURES

Figure 1 – Roles and Responsibilities.....	4
Figure 2 – Significant Processes Subject to Quality Assurance.....	6
Figure 3 – Major Deliverables Subject to Quality Control Review.....	7

Program Overview

The Employment Department's Modernization Program is a multi-year initiative focused on transforming the agency's business processes and core technology systems. Computer systems supporting receipt of unemployment insurance taxes, payment of unemployment insurance benefits, and delivery of employment services will be replaced. Further, business processes will be transformed to take advantage of opportunities and benefits available through new system capabilities.

Document Purpose

This plan defines the relevant quality planning, quality assurance, quality control, and independent verification and validation activities, and defines the process for quality reviews and acceptance processes of internal deliverables and work products. In the context of modernization, "internal" refers to deliverables and work products generated by agency employees. Vendors should consider this process before submitting a deliverable as part of their work contract. The acceptance process for vendor deliverables and work products is described in the program's contract management plan.

Document Audience

This document is intended for these primary audiences:

- **Program sponsors and steering committee members** – to understand the processes that will be followed to ensure quality work products and deliverables are produced by the modernization team and associated vendors. Program sponsors and steering committee members also have a responsibility to ensure processes are appropriate and are enforced.
- **Internal and external oversight entities** – to monitor whether appropriate processes are in place and continue to be followed.
- **Program and project team members and vendor staff** – to understand the processes that will be followed.
- **Agency employees** – to reference for general awareness.

Risks, Assumptions, and Constraints

RISKS

Risks related to quality management and other project management process groups are described and managed through the program's risk and issue process. See the program's risk management plan for further details on the risk and issue process.

ASSUMPTIONS

- An independent quality management services (iQMS) vendor will effectively contribute to modernization quality management.
- iQMS vendor reviews and reports project quality independently from the modernization team.

- Solution vendor staff will actively participate in quality assurance, including quality reviews of their work products and processes before submission.

CONSTRAINTS

- State of Oregon (Policy No. 107-004-030) requires projects exceeding \$5 million in budget (or meet other criteria set by OSCIO if between \$1 million and \$5 million) to use professional iQMS.
- The iQMS vendor must be selected from the state’s quality management price and services agreement. The State’s contract for iQMS also has defined deliverables that must be met.

Roles and Responsibilities

Significant roles and responsibilities involved in these processes are described below.

Figure 1 – Roles and Responsibilities

Role	Responsibilities
Modernization Sponsor (Modernization Director)	Accountable for the quality delivered for all modernization projects. Administers the iQMS contract vendor.
Modernization Program Manager	Develops the quality management strategy, and works with Modernization Quality Analyst to develop sufficient quality management processes. Meets with iQMS vendor to provide information as assessments are conducted.
Modernization Quality Analyst	Responsible for quality oversight of all modernization projects. Develops and maintains the quality management plan. Facilitates iQMS vendor’s ability to review program and project plans and activities and acts as the point of contact for question raised by the iQMS vendor. Meets with iQMS vendor to provide information as assessments are conducted. Reviews documents and work products to ensure the documents meet agency and project standards for quality and content. Ensures quality processes are incorporated with modernization processes. Monitors and facilitates management of quality related risks.
iQMS vendor	Conducts independent quality assurance and quality control reviews of project management processes and project deliverables. Conducts product verification and validation activities. Conducts risk assessments and provides recommendations on mitigation strategies.

Role	Responsibilities
Solution vendors	Responsible for quality oversight of their system and vendor team, ensuring modernization quality standards are considered before submission of deliverables.
Office of the State Chief Information Officer (OSCIO)	Provides statewide quality oversight of major agency projects. Reviews iQMS vendor deliverables and reports.

Quality Management Overview

The four main components of quality management are:

- Quality planning
- Quality assurance
- Quality control
- Independent verification and validation

QUALITY PLANNING

Quality planning includes identification and monitoring of quality standards relevant to a project, as well as determining how to satisfy them within the constraints of the project schedule, available resources, and internal policies and procedures.

The initial product of quality planning is this quality management plan. The modernization team will work with the iQMS vendor to produce additional artifacts, including all requisite quality standards, checklists, report templates, and processes. Such artifacts will be used in quality reviews of all major documents and processes for the project. This includes reviews of the program and project management plans, schedules, resources, processes, and products. Quality checklists will be developed by the iQMS vendor and will be incorporated in later iterations of this plan in Appendix B.

The iQMS vendor will provide any specific quality standards as a deliverable, and will indicate how these standards relate to the quality standards established by OSCIO's quality management program. OSCIO's quality standards can be referenced in Appendix A.

QUALITY ASSURANCE (QA)

Quality assurance includes the periodic review of key project processes, documentation, and interviews with key business and technical staff. Quality assurance also includes evaluating, identifying, and recommending adjustments to the activities or tasks that must be performed to provide confidence that the modernization project will satisfy the relevant quality standards. Quality assurance activities focus on processes used to manage and deliver the program deliverables and objectives. Quality assurance standards require an evaluation of overall project performance on a regular basis.

iQMS are required by the State of Oregon for all IT projects exceeding certain thresholds. The Modernization Program will contract services of an iQMS vendor to review project processes and work products, prepare monthly and quarterly reports, and provide updates to OSCIO and the Legislative Fiscal Office (LFO). See Appendices C-E for examples of the OSCIO quality reporting templates.

Significant processes subject to quality assurance are listed in the table below. This is not an exhaustive list. Additional quality assurance activities will take place.

Figure 2 – Significant Processes Subject to Quality Assurance

Process	Quality Standard	QA Activity	Frequency	Performer
Develop or update project charter	Meet or partially meet all related quality standards	Quality assurance reviews and reports	As needed	Modernization Quality Analyst iQMS vendor
Develop or update program and project management plans	Meet or partially meet all related quality standards	Quality assurance reviews and reports	As outlined within the document management plan	Modernization Quality Analyst iQMS vendor
Execute and control project per plan	Green health or short-period yellow health	Project reports Quality assurance reviews and reports	Monthly	Modernization Program Manager iQMS vendor
Develop or update project schedule	Meet or partially meet all related quality standards	Quality assurance reviews and reports Reviews of project schedule	Monthly Weekly/monthly	iQMS vendor Modernization project team
Execute and control project per project schedule	Green health	Project reports Quality assurance reviews and reports	Monthly	Modernization Program Manager iQMS vendor
Code reviews	Meet or partially meet all related quality standards	Quality assurance reviews and reports	Prior to promotion to a staging environment	Solution vendor iQMS vendor
Conduct lessons learned sessions	TBD	Quality assurance review and report Project report	Once post project or phased rollout Once post project or phased rollout	iQMS vendor Modernization Program Manager
Close project	TBD	TBD Project closeout report	Once post project	iQMS vendor Modernization Program Manager

QUALITY CONTROL (QC)

Quality control tasks involve monitoring project results to determine if they comply with stated project requirements and foundational strategies. Project results include both work product results (notably deliverables) and project management results (notably schedule, scope, and cost performance).

Quality control activities are performed continually to verify that internal project management and vendor deliverables are of high quality, meet State of Oregon quality standards, and meet contractual thresholds for deliverable acceptance. This includes review of completed deliverables to determine whether they conform to project critical success factors, and meet business, functional, or technical requirements. Quality control helps uncover causes of unsatisfactory results, and identifies lessons learned to avoid similar issues in subsequent phases or projects. Quality control includes identifying quality improvements, and recommending and tracking changes that realize those improvements.

Quality control for the projects will include the following techniques:

- **Initial assessment** – Review of key project documentation and interviews with key project, business, and technical staff.
- **Peer review and work product review** – Modernization team members will assign peer reviewers for significant work products.
- **Software testing** – Modernization project teams, including the solution vendor, will perform testing activities as detailed in the project’s testing plans.
- **Independent verification and validation (IV&V)** – Modernization project teams, including the solution vendor, will conduct software testing and other quality control activities. These activities are discussed in further detail later within this plan.

The iQMS vendor will assist with identification of quality risks and issues relating to project management processes and deliverable work products. The iQMS vendor will perform these functions. Internal reviews will further ensure project and product quality.

The major deliverables subject to quality control are listed in the table below. This is not an exhaustive list. Additional quality control activities will take place.

Figure 3 – Major Deliverables Subject to Quality Control Review

Process	Quality Standard	QA Activity	Frequency	Performer
iQMS deliverables	Deliverable expectation document	iQMS vendor internal review	Per quality schedule	iQMS vendor
	Contractual expectations	Modernization team review	Upon receipt of deliverable expectation document and upon receipt of submitted deliverable (per contract and/or project schedule)	Designated deliverable reviewer per contract
	High professional standards for distribution to external stakeholders including the legislature			

Process	Quality Standard	QA Activity	Frequency	Performer
Solution vendor deliverables	Deliverable expectation document Contractual expectations Quality checklist (when applicable)	Solution vendor internal review Modernization team review iQMS vendor review	Two levels of review per implementation schedule Upon receipt of deliverable expectation document and upon receipt of submitted deliverable (per contract and/or project schedule) Per quality schedule (upon receipt of submitted deliverable)	Solution vendor Designated deliverable reviewer per contract iQMS vendor
Agency internal deliverables and work products	High professional standards for distribution to external stakeholders including the legislature	Modernization team review iQMS vendor review	Per project schedule	Appropriate peer; assigning manager or delegate iQMS vendor

INDEPENDENT VERIFICATION AND VALIDATION (IV&V)

The iQMS vendor will perform independent verification and validation tasks that ensure technical artifacts, the system, and its components, as delivered by the solution vendor, are accurate, functional, stable, and secured as defined by approved requirements of the modernization project.

The iQMS vendor will develop an IV&V test plan. This test plan will include the plans, methodologies, and bug tracking that the iQMS vendor will employ. The IV&V test plan will emphasize testing of high risk and new code areas. High risk areas will include, but are not limited to sub-system integration and interfaces to other data systems. At a minimum, the IV&V test plan will include the following elements:

- Identification of potential high risk or new code areas
- Test definition and test matrix
- Detailed test script development procedure
- Detailed configuration and build control procedure
- Testing procedure
- Testing environment
- Test scripts
- Testing metric and reporting

Deliverable Acceptance Criteria

During the planning stage of each project, the modernization team and key stakeholders will agree on major deliverable acceptance criteria. The process for establishing acceptance criteria for deliverables produced by a vendor is described in the program's contract management plan, as well as the specific vendor contracts. These processes will be used to evaluate final deliverable results before deliverables are formally approved. In the event vendor products do not meet quality requirements, the appropriate contractual clauses may be exercised.

Deliverable Approval Process

Deliverables will follow a process through various stages to reach acceptance. Each stage will start with an assignment and end with an approval. Necessary stages should be clarified at time of assignment. Deliverables and work products will be stored in the modernization project's file share, and documented for future reference purposes. The process below outlines the key steps.

- **Assignment** – A manager or designee assigns a deliverable. The assignment may reference a checklist, developed by either the agency or the iQMS vendor, describing the deliverable contents and granularity needed.
- **Delivery process** – Deliverables can be delivered in stages; for example, chapters of a report or system components, or may be of the type where they can only be delivered when fully completed. The process for submitting the deliverable for review and acceptance will be defined at time of assignment. This process may be further clarified with a deliverable expectations document.
- **Review stages** – The assignment should indicate any stage(s) where the deliverable will require a review of "in progress" work. When the review is completed, the reviewer sends an email indicating they have reviewed.
- **Deliverable acceptance** – Once the deliverable is reviewed and determined to be acceptable, there will be a communication, email or more formal notification method, from a manager or designee indicating approval of the deliverable, which is stored in the project's file share.

The processes for document review, versioning, and use of the document registry are described within the program's document management plan. The processes for contract deliverable review and acceptance are described within the program's contract management plan.

Quality Management Coordination

QUALITY PLAN INTEGRATION

Quality plans include this quality management plan, as well as plans from the iQMS vendor, and solution vendors. To avoid duplication of effort, the Modernization Quality Analyst will work with each of the vendors to address specific scope and span of control of their quality plans.

QUALITY ASSURANCE COORDINATOR

The Modernization Quality Analyst is the point of contact for the iQMS vendor, and performs the following tasks:

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- Meets regularly with iQMS vendor and solution vendor to review progress and updates associated with the project.
- Participates in iQMS vendor debriefing sessions.
- Reviews iQMS vendor monthly and quarterly reports, provides feedback, and edits or coordinates the collection of feedback from other project team members to include in the response.
- Drafts a response to concerns, risks, or issues raised by iQMS vendor in their monthly and quarterly reports, and collects feedback from project team members to include in the response.
- Develops action plans as a response to concerns, risks, or issues, and ensures action plans are assigned and carried out.
- Compiles and provides quarterly reports to OSCIO.
- Reviews iQMS vendor deliverables, and processes invoices once deliverables are approved.

Additionally, the Modernization Quality Analyst may perform additional internal quality coordination tasks:

- Reviews documents and work products to ensure the documents meet agency and project standards for quality and content. Work products may include meeting minutes, status updates, plans, and future project contracts.
- Works with agency subject matter experts involved in review and testing of deliverables.

Lessons Learned

The modernization project team will conduct a lessons learned exercise at the completion of each project implementation phase. The resulting lessons learned document is developed for an internal audience. Modernization managers, project leads, and members of the program management team will participate in developing the lessons learned document for each project implementation phase. With lengthy phases, there may be focused lessons learned gathered for specific areas, which will be combined into a summary lessons learned document. Program and project management plans are then updated to reflect adjustments to address challenges and improvements identified.

The Modernization Program Manager will schedule process reviews (assessments) at regular intervals. Improvements or clarifications identified as a result of these assessments will be incorporated into program and project management plans.

A lessons learned deliverable may also be required of the iQMS vendor at the end of each project implementation phase. This lessons learned document is at a higher level and designed for an external audience (i.e. OSCIO, LFO).

Metrics

In support of quality assurance and quality control activities, metrics will be prepared as needed to ensure project success.

BUDGET METRICS

The budget management process is described within the program's budget management plan. Budget reports are included within the modernization monthly status reporting process.

The Modernization Budget Analyst prepares a quarterly budget variance report required by OSCIO.

CHANGE CONTROL METRICS

The change control process is described within the program's change control process plan. The Modernization Change Analyst will produce monthly change control metrics showing change requests reviewed by the program's change control board. These metrics are reported monthly within the modernization monthly status reporting process.

CHANGE MANAGEMENT METRICS

The change management process is described within the program's change management plan, along with specific project-level change plans. Readiness assessments will be conducted at different intervals throughout the project. The results of these assessments are not intended to be shared broadly, rather are used to help prepare tactics and methods to ensure employees are prepared for changes resulting from modernization projects.

COMMUNICATIONS METRICS

Communication metrics are described within the program's communications and outreach plan.

DECISION METRICS

The program's decision process, including documentation of decisions, is described within the program's governance plan.

DEFECT METRICS

Metrics regarding system defects will be outlined within the project's testing plan.

DELIVERABLE METRICS

A deliverables registry is maintained for each vendor contract, which is updated regularly by the Modernization Contract Analyst. Vendor deliverable metrics are described in the program's contract management plan.

OBJECTIVE METRICS

Program goals, objectives, and supporting metrics are described within the program's charter. The objectives and metrics pertaining to the individual modernization projects are described within the project's charter and detailed in the project's metric scorecard. These metrics will be gathered and reported at the completion of each project implementation phase.

RISK AND ISSUE METRICS

The risk and issue management process is described within the program's risk management plan. Risk and issue metrics are included within the modernization monthly status reporting process.

The Modernization Risk Analyst also prepares a quarterly project report for submission to OSCIO. The last section of the report lists top project risks and mitigations.

SCHEDULE METRICS

The schedule management process is described within the program’s schedule management plan. Schedule reports are included within the modernization monthly status reporting process.

The Modernization Scheduler also prepares a quarterly schedule variance report required by OSCIO.

SCOPE METRICS

The scope management process is described within the program’s scope management plan. Scope is tracked at the project level, and the specific scope components that will be measured will be identified as the project is initiated. During the project’s planning phase, these scope components will be baselined and measured throughout the project. Scope metrics are reported quarterly.

TRAINING METRICS

Metrics regarding training, including training material design and development, registration, and evaluation processes, will be outlined within the project’s training plan.

Document Maintenance

This document is maintained by the modernization team and will be reviewed and updated annually or when major revisions are necessary. Periodic process reviews assess the effectiveness of program plans and processes. Any identified changes or improvements are incorporated in program processes and reflected within revisions to these program plans. All program plans are stored within the program’s file share here: <\\WPOEDFILL04\014\Shared\00 Program Management\Program Plans\>.

Version	Date	Author	Change Description
V1.0	12/2018	Jennifer Hannan, Modernization Program Manager	Initial version of the document.

Approving Authorities

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Kelley Duron (Dec 18, 2018)

Kelley Duron, Modernization Quality Analyst

Date

Appendix A – Quality Standards

The following was taken from OSCIO's recommended iQMS SOW:

https://www.oregon.gov/das/OSCIO/Documents/2b--QA_SOW_appendices_a_thru_e_v2.0.doc

The following table identifies quality standards that will be for quality management and risk assessment purposes. Additional standards may be added, while standards identified as unnecessary can be deleted. However, there are specific quality standards, identified herein with an asterisk (*) and/or specified in the QA Contract Statement of Work, that must be reported on.

- a. The quality standards in the following table are organized with the following headers:
- b. QS# - A sequentially assigned number for quality standards
- c. Quality Category – Header that names the category in which the following Quality standards belong
- d. Quality Standard – Named areas of potential quality standards. "*" indicates recommended minimums
- e. Low Risk Cues – Characteristics of this quality standard when it can be considered low risk to the project
- f. Medium Risk Cues – Characteristics of this quality standard when it should be considered high risk to the project
- g. High Risk Cues – Characteristics of this quality standards when it should be considered high risk to the project
- h. Rating – Level of quality risk you think is true of this project
 - a. Low – This project exhibits the low risk cue, or appears to have no risks in this area
 - b. Medium – This project exhibits the medium risk cue, or something similar in threat
 - c. High – This project exhibits the high risk cue, or something similar in threat
 - d. N / A – This factor is not applicable to this project
 - e. Need Info – The Contractor needs information from someone else (perhaps an expert) to make a judgment
 - f. TBD – The project is not far enough along to make a rating; the Contractor needs to review the quality standard at a later time
- i. Risk Rank – The numerical rating for risk as it ranks with other identified. For example the quality standard may have high risk cues, but for the project may be of low risk

Quality Standard		Low Risk Cues	Medium Risk Cues	High Risk Cues
Process Standards				
Business Mission and Goals				
1	Project Fit to Customer Organization	directly supports customer organization mission and/or goals	indirectly impacts one or more goals of customer	does not support or relate to customer organization mission or goals
2	Project Fit to Provider Organization	directly supports provider organization mission and/or goals	indirectly impacts one or more goals of provider	does not support or relate to provider organization mission or goals
3	Customer Perception	customer expects this organization to provide this product	organization is working on project in area not expected by customer	project is mismatch with prior products or services of this organization
4	Work Flow	little or no change to work flow	will change some aspect or have small effect on work flow	significantly changes the work flow or method of organization
5	Goals Conflict	goals of projects within the organization are supportive of or complimentary to each other	goals of projects do not conflict, but provide little direct support	goals of projects are in conflict, either directly or indirectly
Decision Drivers				
6	*Political Influences	no particular politically-driven choices being made	project has several politically motivated decisions, such as using a vendor selected for political reasons, rather than qualifications	project has a variety of political influences or most decisions are made behind closed doors
7	Convenient Date	date for delivery has been set by reasonable project commitment process	date is being partially driven by need to meet marketing demo, trade show, or other mandate not related to technical estimate	date is being totally driven by need to meet marketing demo, trade show, or other mandate; little consideration of project team estimates

	Quality Standard	Low Risk Cues	Medium Risk Cues	High Risk Cues
8	Attractive Technology	technology selected has been in use for some time	project is being done in a sub-optimal way, to leverage the purchase or development of new technology	project is being done as a way to show a new technology or as an excuse to bring a new technology into the organization
9	Short Term Solution	project meets short term need without serious compromise to long term outlook	project is focused on short-term solution to a problem, with little understanding of what is needed in the long term	project team has been explicitly directed to ignore the long term outlook and focus on completing the short term deliverable
Project Management				
10	*Definition of the project	project is well-defined, with a scope that is manageable by this organization	project is well-defined, but unlikely to be handled by this organization	project is not well-defined or carries conflicting objectives in the scope
11	*Project Objectives	verifiable project objectives, reasonable requirements	some project objectives, measures may be questionable	no established project objectives or objectives are not measurable
12	*Leadership	project has active sponsor	project has sponsor responsible for project, but unable to spend enough time to direct effectively	project has no sponsor, or project manager concept is not in use
13	*PM Approach	product and process planning and controls in place	planning and controls need enhancement	weak or nonexistent planning and controls
14	PM Communication	clearly communicates goals and status between the team and rest of organization	communicates some of the information some of the time	rarely communicates clearly to the team or to others who need to be informed of team status
15	PM Experience	PM very experienced with similar projects	PM has moderate experience or has experience with different types of projects	PM has no experience with this type of project or is new to project management
16	PM Attitude	strongly committed to success	willing to do what it takes	cares very little about project

	Quality Standard	Low Risk Cues	Medium Risk Cues	High Risk Cues
17	*PM Authority	has line management or official authority that enables project leadership effectiveness	is able to influence those elsewhere in the organization, based on personal relationships	has little authority from location in the organization structure and little personal power to influence decision-making and resources
18	Support of the PM	complete support by team and of management	support by most of team, with some reservations	no visible support; manager in name only
Project Parameters				
19	Project Size	small, non-complex, or easily decomposed	medium, moderate complexity, decomposable	large, highly complex, or not decomposable
20	Hardware Constraints	little or no hardware-imposed constraints or single platform	some hardware-imposed constraints; several platforms	significant hardware-imposed constraints; multiple platforms
21	Reusable Components	components available and compatible with approach	components available, but need some revision	components identified, need serious modification for use
22	Supplied Components	components available and directly usable	components work under most circumstances	components known to fail in certain cases, likely to be late, or incompatible with parts of approach
23	*Budget & Resource Size	sufficient budget and resources allocated	questionable budget and resources allocated	doubtful budget and resources are sufficient
24	Budget Constraints	funds allocated without constraints	some questions about availability of funds	allocation in doubt or subject to change without notice
25	*Cost Controls	well established, in place	system in place, weak in areas	system lacking or nonexistent
26	*Delivery Commitment	stable commitment dates	some uncertain commitments	unstable, fluctuating commitments
27	*Development Schedule	team agrees that schedule is acceptable and can be met	team finds one phase of the plan to have a schedule that is too aggressive	team agrees that two or more phases of schedule are unlikely to be met
Project Team				

	Quality Standard	Low Risk Cues	Medium Risk Cues	High Risk Cues
28	*Team Member Availability	in place, little turnover expected; few interrupts for fire fighting	available, some turnover expected; some fire fighting	high turnover, not available; team spends most of time fighting fires
29	Mix of Team Skills	good mix of disciplines	some disciplines inadequately represented	some disciplines not represented at all
30	Application Experience	extensive experience in team with projects like this	some experience with similar projects	little or no experience with similar projects
31	Experience with Project Hardware and Software	high experience	average experience	low experience
32	Experience with Process	extensive experience with this process	some experience with this process or extensive experience with another	little or no experience with a defined process
33	Training of Team	training plan in place, training ongoing	training for some areas not available or training planned for future	no training plan or training not readily available
34	Team Spirit and Attitude	strongly committed to success of project; cooperative	willing to do what it takes to get the job done	little or no commitment to the project; not a cohesive team
35	*Team Productivity	all milestones met, deliverables on time, productivity high	milestones met, some delays in deliverables, productivity acceptable	productivity low, milestones not met, delays in deliverables
36	Expertise with Application Area (Domain)	good background with application domain within development team	some experience with domain in team or able to call on experts as needed	no expertise in domain in team, no availability of experts
Organization Management				
37	*Organization Stability	little or no change in management or structure expected	some management change or reorganization expected	management or organization structure is continually or rapidly changing
38	Organization Roles and Responsibilities	individuals throughout the organization understand their own roles and responsibilities and those of others	individuals understand their own roles and responsibilities, but are unsure who is responsible for work outside their immediate group	many in the organization are unsure or unaware of who is responsible for many of the activities of the organization

	Quality Standard	Low Risk Cues	Medium Risk Cues	High Risk Cues
39	Policies and Standards	development policies and standards are defined and carefully followed	development policies and standards are in place, but are weak or not carefully followed	no policies or standards, or they are ill-defined and unused
40	Management Support	strongly committed to success of project	some commitment, not total	little or no support
41	*Executive Involvement	visible and strong support	occasional support, provides help on issues when asked	no visible support; no help on unresolved issues
42	Resource Conflict	projects within the organization share resources without any conflict	projects within the organization schedule resources carefully to avoid conflict	projects within the organization often need the same resources at the same time (or compete for the same budget)
43	Customer Conflict	multiple customers of the project have common needs	multiple customers of the project have different needs, but do not conflict	multiple customers of the project are trying to drive it in very different directions
	Customer/User			
44	*User Involvement	users highly involved with project team, provide significant input	users play minor roles, moderate impact on system	minimal or no user involvement; little user input
45	User Experience	users highly experienced in similar projects; have specific ideas of how needs can be met	users have experience with similar projects and have needs in mind	users have no previous experience with similar projects; unsure of how needs can be met
46	*User Acceptance	users accept concepts and details of system; process is in place for user approvals	users accept most of concepts and details of system; process in place for user approvals	users do not accept any concepts or design details of system
47	User Training Needs	user training needs considered; training in progress or plan in place	user training needs considered; no training yet or training plan is in development	requirements not identified or not addressed
48	User Justification	user justification complete, accurate, sound	user justification provided, complete with some questions about applicability	no satisfactory justification for system

Quality Standard		Low Risk Cues	Medium Risk Cues	High Risk Cues
Product Standards				
Product Content				
49	Requirements Stability	little or no change expected to approved set (baseline)	some change expected against approved set	rapidly changing or no agreed-upon baseline
50	*Requirements Complete and Clear	all completely specified and clearly written	some requirements incomplete or unclear	some requirements only in the head of the customer
51	*Testability	product requirements easy to test, plans underway	parts of product hard to test, or minimal planning being done	most of product hard to test, or no test plans being made
52	Design Difficulty	well defined interfaces; design well understood	unclear how to design, or aspects of design yet to be decided	interfaces not well defined or controlled; subject to change
53	*Implementation Difficulty	algorithms and design are reasonable for this team to implement	algorithms and/or design have elements somewhat difficult for this team to implement	algorithms and/or design have components this team will find very difficult to implement
54	System Dependencies	clearly defined dependencies of the software effort and other parts of system (hardware, process changes, documentation, ...)	some elements of the system are well understood and planned; others are not yet comprehended	no clear plan or schedule for how the whole system will come together
Development Process				
55	Alternatives Analysis	analysis of alternatives complete, all considered, assumptions verifiable	analysis of alternatives complete, some assumptions questionable or alternatives not fully considered	analysis not completed, not all alternatives considered, or assumptions faulty
56	Commitment Process	changes to commitments in scope, content, schedule are reviewed and approved by all involved	changes to commitments are communicated to all involved	changes to commitments are made without review or involvement of the team

	Quality Standard	Low Risk Cues	Medium Risk Cues	High Risk Cues
57	Quality Assurance Approach	QA system established, followed, effective	procedures established, but not well followed or effective	no QA process or established procedures
58	*Development Documentation	correct and available	some deficiencies, but available	nonexistent
59	Use of Defined Engineering Process	development process in place, established, effective, followed by team	process established, but not followed or is ineffective	no formal process used
60	Early Identification of Defects	peer reviews are incorporated throughout	peer reviews are used sporadically	team expects to find all defects with testing
61	Defect Tracking	defect tracking defined, consistent, effective	defect tracking process defined, but inconsistently used	no process in place to track defects
62	Change Control for Work Products	formal change control process in place, followed, effective	change control process in place, not followed or is ineffective	no change control process used
63	Lessons Learned	Lessons learned and improvements made at milestones or phases	Lessons learned conducted, improvements not incorporated	No lessons learned conducted, improvements not incorporated
Development Environment				
64	Physical Facilities	little or no modification needed	some modifications needed; some existent	major modifications needed, or facilities nonexistent
65	Hardware Platform	stable, no changes expected, capacity is sufficient	some changes under evolution, but controlled	platform under development along with software
66	Tools Availability	in place, documented, validated	available, validated, some development needed (or minimal documentation)	unvalidated, proprietary or major development needed; no documentation
67	Vendor Support	complete support at reasonable price and in needed time frame	adequate support at contracted price, reasonable response time	little or no support, high cost, and/or poor response time

Quality Standard		Low Risk Cues	Medium Risk Cues	High Risk Cues
68	Contract Fit	contract with customer has good terms, communication with team is good	contract has some open issues which could interrupt team work efforts	contract has burdensome document requirements or causes extra work to comply
69	Disaster Recovery	all areas following security guidelines; data backed up; disaster recovery system in place; procedures followed	some security measures in place; backups done; disaster recovery considered, but procedures lacking or not followed	no security measures in place; backup lacking; disaster recovery not considered
Technology				
70	Technology Match to Project	technology planned for project is good match to customers and problem	some of the planned technology is not well-suited to the problem or customer	selected technology is a poor match to the problem or customer
71	Technology Experience of Project Team	good level of experience with technology	some experience with the technology	no experience with the technology
72	Availability of Technology Expertise	technology support and experts readily available	experts available elsewhere in organization	will need to acquire help from outside the organization
73	Maturity of Technology	technology has been in use in the organization for quite some time	technology is well understood in the organization	technology is leading edge, if not "bleeding edge" in nature
Deployment				
74	Hardware Resources for Deliverables	mature, growth capacity in system, flexible	available, some growth capacity	no growth capacity, inflexible
75	Response or other Performance Factors	readily fits boundaries needed; analysis has been done	operates occasionally at boundaries	operates continuously at boundary levels
76	*Customer Service Impact	requires little change to customer service	requires minor changes to customer service	requires major changes to customer service approach or offerings

Quality Standard		Low Risk Cues	Medium Risk Cues	High Risk Cues
77	Data Migration Required	little or no data to migrate	much data to migrate, but good descriptions available of structure and use	much data to migrate; several types of databases or no good descriptions of what is where
78	Pilot Approach	pilot site (or team) available and interested in participating	pilot needs to be done with several sites (who are willing) or with one who needs much help	only available pilot sites are uncooperative or in crisis mode already
79	External Hardware or Software Interfaces	little or no integration or interfaces needed	some integration or interfaces needed	extensive interfaces required
Maintenance				
80	*Design Complexity	structurally maintainable (low complexity measured or projected)	certain aspects difficult to maintain (medium complexity)	extremely difficult to maintain (high complexity)
81	*Support Personnel	in place, experienced, sufficient in number	missing some areas of expertise	significant discipline or expertise missing
82	Vendor Support	complete support at reasonable price and in needed time frame	adequate support at contracted price, reasonable response time	little or no support, high cost, and/or poor response time

Appendix B – Quality Checklists

Quality checklists will be developed by the iQMS vendor and will be incorporated in later versions of this plan.

Appendix C – OSCIO Quarterly Reporting: Project Status Update Report Template

MAJOR IT PROJECT UPDATE

Project Name:		
Project Name Abbreviation:	Agency Name:	
*Project Description: (Please use fewer than 255 characters.)		
Project Sponsor:	Start Date:	QA Contractor:
Project Manager:	Original End Date:	Last QA Report Date:
Program Manager:	Current End Date:	Development Contractor:
	Date Revised/End Date:	

PROJECT FINANCIAL \$

Fund Sources	Approved Amount	FEDERAL SHARE Approved Amount	STATE SHARE Approved Amount
Project Development Costs	\$	\$	\$
Software/Hardware Costs	\$	\$	\$
*Agency Staff Costs (including S&S)	\$	\$	\$
*Other Costs	\$	\$	\$
Total Budget:	\$	\$	\$
Current Budget Funds Expended:	\$	\$	\$
Expenditures Previous Releases:	\$	\$	\$
Project Spending Totals:	\$	\$	\$

Note: Total Budget is defined as the sum of development costs (including contract services), software/hardware costs, agency staff costs (including S&S), and other costs.

Project Information

Background

Purpose of the Project

Benefits

Major Accomplishments

Brief Narrative on major milestones, scheduled vs. actual completion date, status.

Significant Delays or Project Changes (since last reporting period)

Brief Narrative on significant delays or project changes to budget, schedule, scope, etc. since the last reporting period.

Project Risks and Mitigation

*Note: The top risks identified here should align with the most recent independent QA report. Please limit description of each risk and associated mitigation to one sentence.

Risk #1	
Mitigation #1	
Risk #2	
Mitigation #2	
Risk #3	
Mitigation #3	

Appendix D – OSCIO Quarterly Reporting: Project Assessment Report Template

Project Assessment Report				
Version 2.0				
	Project Name:			
	Agency Name:			
	Person completing this form and affiliation:			
	Date of completing this form:			
	Technology Description			
	Platforms:			
	% custom:			
	Funding Description			
		Rating	Rating	Explanation
		(rear view)	(fwd view)	Rating Scale^
1	Overall Project Health			Red, yellow, green*
1a	Total Cost (Budget)			Red, yellow, green*
1b	Schedule			Red, yellow, green*
1c	Scope			Red, yellow, green*
1d	Resource			Red, yellow, green*
	Deliverables (Work Products)			
1e	Quality			Red, yellow, green*
2	Overall Delivery Risk			high, medium, low*
2a	Technology	N/A		high, medium, low*
2b	Financial & Business Case	N/A		high, medium, low*
2c	Business Transition	N/A		high, medium, low*
2d	Funding	N/A		high, medium, low*
3	O&M Risk			
3a	Long-Term Supportability	N/A		high, medium, low*
3b	Long-Term Maintainability	N/A		high, medium, low*

Appendix E – OSCIO Quarterly Reporting: Project Variance Report Template

Project Variance Report (Version 1.0)											
Budget Variance											
Current Budget Variance						Projected Budget Variance at Completion					
Project	Report as of Date	Actual Expenditures	Planned Expenditures	Variance Amount	Variance Percentage	Date Baseline Occurred	Baseline Budget	Estimate At Complete	Variance Amount	Variance Percentage	Comments
Project A				\$ -	#DIV/0!				\$ -	#DIV/0!	
Project B				\$ -	#DIV/0!				\$ -	#DIV/0!	
Project C				\$ -	#DIV/0!				\$ -	#DIV/0!	
Project D				\$ -	#DIV/0!				\$ -	#DIV/0!	
Budget Variance Key											
				At or under Original or Re-baselined Cost Estimate							
				Within 0-15% of Original or Re-baselined Cost Estimate							
				More than 15% of Original or Re-baselined Cost Estimate							
Schedule Variance											
Current Schedule Variance						Projected Schedule Variance at Completion					
Project	Project Start Date	Actual Date	Earned Date	Variance Amount (Days)	Variance Percentage	Date Baseline Occurred	Baseline End Date	Projected End Date	Variance Amount (Days)	Variance Percentage	Comments
Project A				0	#DIV/0!				0	#DIV/0!	
Project B				0	#DIV/0!				0	#DIV/0!	
Project C				0	#DIV/0!				0	#DIV/0!	
Project D				0	#DIV/0!				0	#DIV/0!	
Schedule Variance Key											
				At or under Original or rebaselined schedule							
				0-15% of Original or rebaselined schedule							
				More than 15% of Actual or Baseline Date							

Modernization Quality Management Plan V1.0

Final Audit Report

2018-12-18

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