State of Vermont
Joint Fiscal Office

Independent Review
of
State Information Technology Projects
and Operations
(H.492 Sec. 36)

Project: Unemployment Insurance Modernization Project (Vermont Department of Labor)

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Executive Summary

Project Overview: The purpose of the Vermont Department of Labor's (VDOL) Unemployment Insurance Modernization (UIM) project is to replace Vermont's legacy Unemployment Insurance system with a new, multi-state solution that will leverage proven systems while allowing Vermont to implement state-specific components. If the project achieves its expected outcomes, Vermont will benefit by avoiding a full system development effort (designing, testing, implementing, and maintaining an entire system), while still allowing the state to configure and customize the system to comply with local regulations and requirements. The multi-state solution is to be based on Idaho's CORE iUS system, and the initial participants were Idaho, Iowa, and Vermont. Actual development efforts will consist of two distinct elements: 1) modify the CORE iUS system as needed to support state-specific modules and interfaces, and 2) develop Vermont-specific modules and interfaces to meet state needs (e.g. Claimant Portal, Employer Portal, etc.). While VDOL will be participating in and monitoring the first effort, the majority of the effort will be the development of the Vermont-specific modules. Assuming that the project proceeds as currently scheduled, system development will take place between December 2016 and March 2018, final testing will occur in March and April 2018, implementation will occur in April and May of 2018, and the system will go live in June of 2018.

Project Status: As of mid-January this project was in the execution phase, and in the process of developing the state-specific modules that will be used to enhance the base CORE iUS system. Based on the most recent schedule and status reports, the project is on track to meet its go-live target of June 2018. There are no major outstanding risks on the technical side, and since the project is federally funded there are no significant financial risks. At this point there are only two concerns: 1) whether changes in VDOL leadership and organizational structure will have an impact on project outcomes, and 2) whether changes will be made to Vermont statutes to support the transfer of legacy system functionality to another department.

Project Analysis: The VDOL's Unemployment Insurance Modernization project is in very good shape at this point in the project lifecycle. While all IT projects entail some degree of risk, this project has a number of strengths:

1) Project leadership and responsibility is clear, and adequately documented;
2) It is not technologically complex, since it is based on a proven technical solution that is currently in use in other states;
3) It is not organizationally complex, since the initial release involves a single unit (VDOL), and all project leadership is within that unit;
4) It is not resource challenged, since VDOL has sufficient personnel (in-house or contracted) to complete all phases of the project;
5) The UIM project is completely federally funded, so no State funds are required;
6) While there are target dates in the schedule, none are fixed based on external criteria. This allows flexibility if the project experiences any difficulties or delays prior to deployment.

Project Recommendations: Given the strong state of the project at this time, there are no recommendations other than to continue project execution and monitoring as documented in the project plans.

The following page provides evaluations of the overall project status and the seven key areas that were investigated during the project review.

Overall Status:

Poor | Weak | Neutral | **Strong** | Excellent

This project is in good shape at this point in the development timeline. There are no areas of weakness in the key subject areas, and the project is on schedule. If the current strengths in project leadership and management are maintained, and a change management process is adequately developed and implanted, there is every expectation that the project will succeed.

1. **Project Justification:** *(Why are we doing this? Is the project necessary and beneficial?)*

Poor | Weak | Neutral | **Strong** | Excellent

The existing system is mainframe-based, was developed in the 80's and 90's, and does not adequately support the required functionality for a modern Unemployment Insurance system. Implementing the proposed solution result in a more technologically advanced system that provides better service and is more maintainable.

2. **Clarity of Purpose:** *(Is there a clear definition of success? Is the scope statement complete?)*

Poor | Weak | Neutral | **Strong** | Excellent

The project goals are clear, concise, understandable, and well documented. This clarity, coupled with strong project leadership and management, should ensure that the completed project meets expectations and has a good chance of success.

3. **Organizational Support:** *(Is the organization ready to undertake this project? Has the potential need for business process change been acknowledged, and is there a Change Management Plan?)*

Poor | Weak | **Neutral** | Strong | Excellent

VDOL has actively supported the new solution, however there have been recent changes in organizational leadership, and there will be changes to the organizational structure. However, the implications of these changes are not clear at this time, and should be monitored as project execution continues. The need for an active Change Management Plan has been acknowledged.

4. **Project Leadership:** *(Has a qualified person been designated to lead the project, and has that person been empowered to do so?)*

Poor | Weak | Neutral | **Strong** | Excellent

Project leadership has been assigned to one individual, and roles, responsibilities, and relationships for this and other governance entities have been documented and executed.

5. **Project Management:** *(Is the project management staff appropriate, and will project management conform to State of Vermont standards?)*

Poor | Weak | Neutral | **Strong** | Excellent

Project Management is being performed by contracted personnel who are well qualified for the role. Project Management artifacts (charters, plans, schedules, etc.) are of very good quality, and the expectation is that this will continue for the life of the project.

6. **Financial Considerations:** *(How much will it cost to complete the project, how much will it cost to maintain and operate the system, and how it will all be paid for?)*

Poor | Weak | Neutral | **Strong** | Excellent

Initial estimates of development and maintenance costs have been developed, and appear to be realistic. Given that this project is 100% federally funded, there is no significant financial risk to the State. However, there is some legacy functionality (healthcare assessment) that needs to be developed for the new system (and paid for by Vermont) or transferred to another department.

7. **Technical Approach:** *(Is the proposed solution achievable, realistic, and appropriate?)*

Poor | Weak | Neutral | **Strong** | Excellent

The technical approach is based on enhancing an existing system developed for, and currently used by, another state. This approach minimizes technical risk, and is much preferred over the alternative of developing a completely new system.

IT Project Review and Analysis
Unemployment Insurance Modernization Project

1 Background

The purpose of the Vermont Department of Labor's (VDOL) Unemployment Insurance Modernization (UIM) project is to replace Vermont's legacy Unemployment Insurance system with a new, multi-state solution that will leverage proven systems while allowing Vermont to implement state-specific components. If the project achieves its expected outcomes, Vermont will benefit by avoiding a full system development effort (designing, testing, implementing, and maintaining an entire system), while still allowing the state to configure and customize the system to comply with local regulations and requirements. The multi-state solution is to be based on Idaho's CORE iUS system, and the initial participants were Idaho, Iowa, and Vermont. Actual development efforts will consist of two distinct elements: 1) modify the CORE iUS system as needed to support state-specific modules and interfaces, and 2) develop Vermont-specific modules and interfaces to meet state needs (e.g. Claimant Portal, Employer Portal, etc.). While VDOL will be participating in and monitoring the first effort, the majority of the work will be the development of the Vermont-specific modules. Assuming that the project proceeds as currently scheduled, system development will take place between December 2016 and March 2018, final testing will occur in March and April 2018, implementation will occur in April and May of 2018, and the system will go live in June of 2018.

In October of 2016 the Joint Fiscal Office (JFO) requested that an IT Project Review be conducted for the UIM Project. The purpose of this review was to examine the project, researching and analyzing its status and identifying any significant risks. Based on the IT Project Review process that was developed previously the project review focused on seven key subject areas:

- Project Justification
  - *Does the project really need to be done?*
- Clarity of Purpose
  - *Is there a clear definition of success so that all participants will know when the project is properly completed?*
- Organizational Support
  - *Is the affected organizational entity ("the business") fully supportive of the project, and is the business willing and able to adapt where required?*
- Project Leadership
  - *Will there be strong and effective leadership to guide the project?*
- Project Management
  - *Will there be qualified and effective project management to assist project leadership?*
- Financial Considerations
  - *Are costs through the system lifecycle properly estimated, and is there funding?*

- Technical Approach
    - *Are the proposed technical solutions achievable, realistic, and appropriate for this project?*

2 Project Analysis

The UIM project was begun on June of 2014 (the first draft of the original Project Charter), and planning activities continued through the middle of 2016, when the project entered the Execution phase. As of the date of this project review the primary activities were the modification of the CORE iUS system, which is being done by Idaho, and the development of Vermont's State Specific Modules, which is being done by Vermont. While the original project consortium consisted of Vermont, Idaho, and Iowa, it is now just Vermont and Idaho. Iowa elected to discontinue participation due to the difficulty and cost of converting to a new development environment. This may have an impact on project federal funding, however that has not been determined at the time of this report.

At this point in the project lifecycle there are no significant areas of concern. The primary reasons for this is that Vermont is building on a proven solution, and that the project does not involve Vermont funding. As such the overall risk is relatively low, resulting in a greater likelihood of success. With regards to the key subject areas listed previously, none has a rating less than Neutral (one area), and the majority are Strong.

Summary: This project is in good shape at this point in the development timeline. There are no areas of weakness in the key subject areas, and the project is on schedule. If the current strengths in project leadership and management are maintained, and a change management process is adequately developed and implanted, there is every expectation that the project will succeed.

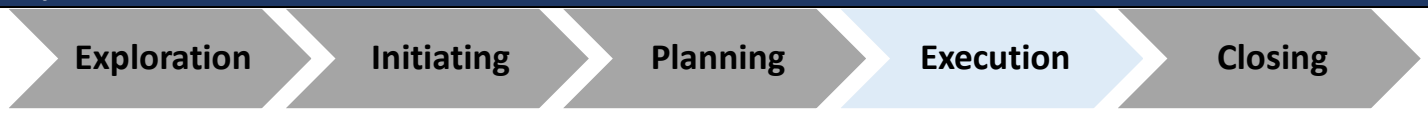
The documentation examined during the review is listed below. Those that are publicly available on the Internet are hyperlinked; the remainder can be accessed by request through VDOL.

a) IT Activity Business Case and Cost Analysis (ABC Form) (04/07/2016)
b) Independent Review of the Unemployment Insurance Modernization Project by Strategic Technology Services (08/09/2016)
c) iUS Architecture Assessment (DII Enterprise Architecture Staff) (12/21/2015)
d) Hosting Comparisons Report UIM Unemployment Insurance Modernization (DII) (05/05/2016)
e) UI Modernization/iUS Project Management Plan Version 6 (01/17/2017) (includes subsidiary documents such as Project Charter, Schedule, Work Breakdown Structure, Governance Plan, Risk Management Plan, Risk Register, etc.)
f) UIM Project Status Reports (10/24/2016 – 01/23/2017)
g) State of Vermont Million Dollar Technology Project Report (12/15/2016)
h) 21 VSA §2001: Employers' Health Care Fund Contribution (04/01/2007)
i) VDOL Employer Health Care Contribution Information (Undated)

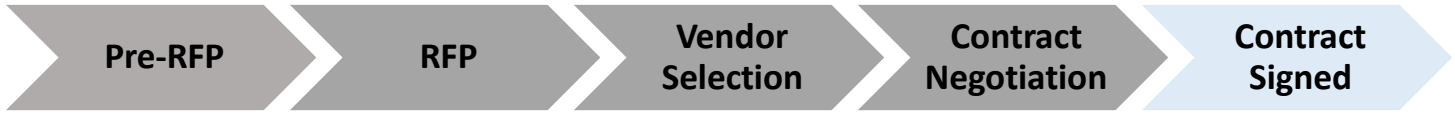
The following excerpt from DII's 2016 Million Dollar Report provides a summary of the UIM project as of December, 2016.

THE PROJECT					
Project Name	DOL Unemployment Insurance Modernization		**2017 Legislative Funding Request**		**$ 0.00**
Agency	Other	**Department**	Labor	**Report Date**	11/30/2016
Project Description	The Vermont Department of Labor's (VDOL) current Unemployment Insurance (UI) processing system runs on legacy hardware and software. The system was written in the 1980s and remains constrained by the technology of that era relative to the demands placed on the system by ever changing federal and state program requirements. In efforts to address this issue VDOL sought federal grant funds (in collaboration with Maryland and West Virginia) for the development of requirements for a modernized UI benefits/tax/appeals system. Requirement development completed in 2013. Using the developed requirements, Vermont has partnered with Idaho and Iowa on the development of a UI Modernization system. The Vermont/Idaho/Iowa consortium approach is to develop a flexible multi-tenant UI system that utilizes modern systems, tool sets, development methodologies and development languages. The final development will consist of a comprehensive UI benefits/tax/appeals system.				
Key Project Deliverables	• One Integrated System that includes all processes (benefits, tax, and appeals), data validation, case management, and electronic documents. • Improved data mining/reporting capabilities to automate management/financial/federal reports, and improve demographics and profiling of data to be a stronger partner for Workforce Development. • Modularized system enabling simplified maintenance of business rules and the ability to make state and federally required changes easier. • Greater system functionality by automating workflow and case assignment, tracking of case history, and minimizing tax process steps and current number of triggered error reports. • Increased program integrity by lowering number of improper payments/overpayments, lessoning inappropriate access and opportunity for human error from manual intervention, increase employer response rate with easier access, while lowing phone calls and questions to staff. • Improved fraud analytics with real-time cross match verifications (hiring and earnings), and timelier wage information. • A system that's easier to use, with reduced training time and user questions, less support required for questions, enhancement request or repeat calls, and overall increased level of self-service. • Improved compliance with Federal Performance Standards.				
Project Start Date	1/14/2016		**Scheduled Completion Date**		12/31/2018
Independent Review Report Available on EPMO Website?					Yes

Project Status



Procurement Status



Procured Solution/Software Name: State of Idaho's iUS System
Implementation Vendor Name: N/A. Collaborative between VT, ID, and IA. VT is also contracting with Mathtech Inc., for staffing resources associated with the Implementation (PM, BA, Developers).

KEY PROJECT CHANGES FROM LAST YEAR'S REPORT

Key project resources have been staffed with the hiring a new UI Director (Project Business Lead) and IT Manager (Project IT Lead), and approval to procure 4 IT System Developers through the current Mathtech Inc., staffing contract. With the needed resources, the Project Team has furthered their efforts finalizing a Memorandum of Understanding (MOU) between the three partnering states, completed an Independent Review of the project with DII, and finalized a contract with Idaho to further the development and integration of the current iUS solution to meet Vermont's needs.

BUSINESS VALUE TO BE ACHIEVED

☒ **Financial**: Over the lifecycle of the new solution, the total costs will be less than the current solution.

- Reduced infrastructure costs (legacy mainframe vs. windows servers).
- Decreased maintenance and support costs from a modernized application and environment that is easier to maintain, fix, and find qualified staff to support.
- Reduced use of paper and/or other supplies.
- Reduction in operation cost by the automation of several manual processes (i.e. case assignment and tracking, workflow, and automated reporting).
- Addition $1M in Treasury Offset Program (TOP) available as a result of the new system (see Compliance section below).

☒ **Customer Service Improvement**: The new solution will provide a new or improved customer service or services.
More responsive to State/Federal changes, automate processes, reduce wait time, and provide self-service (update accounts, report changes, and obtain reports).

☒ **Risk Reduction**: The new solution will reduce risk to the State (e.g., replace outdated technology that is unstable and/or difficult to support, improve security of State data, etc.)
The current system is no longer supported by manufacturer IBM and it is hard to find vendors that can work on the IBM Mainframe hardware and software platform. As system and/or integration issues arise, and State and Federal changes to the Unemployment Insurance application become required, is it more difficult to resolve the defects and implement the changes. The inability to provide this support puts Vermonters at risk.

☒ **Compliance**: The new solution meets a previously unmet State or Federal compliance requirement.
The new system has improved security measures, which will allow VT to participate in the federal TOP program. This will allow VT to increase overpayment recovery efforts and lead to better overall integrity of the program.

PROJECT APPROACH (How the Project Work is/will be Organized)
Idaho built the CORE iUS (Benefits) system in 2012-2013 and put it into production in 2014. Idaho developed iUS using the same Microsoft tools (.Net) that VDOL uses for its current web facing functions (i.e. claimant portal). The consortium's approach is to build a multi-tenant CORE iUS product. This approach would allow other states to use the CORE iUS system and like ID, IA, and VT, integrate specific state modules and interfaces to the CORE iUS system. VDOL has contracted with Mathtech, Inc. for Project Management, Business Analyst, and now System Developer resources. The VDOL UIM PM, Business Lead and Technical Leads will head up the VDOL project Team and work directly in collaboration with their peers from the other two states in the consortium. A governance group for the consortium has also been established with representatives from each state (VDOL's Business Lead for VT). Where possible, the consortium will conduct business remotely via web conference and utilize Microsoft's Team Foundation Server (TFS) along with SharePoint to track and manage the work. Over the next 18-24 months, the VT/ID/IA consortium will enhance the CORE iUS system to incorporate additional UI Benefit features, integrate Idaho's AIMS Tax system into CORE iUS, and develop state specific interfaces to the CORE iUS product (i.e. Vermont's Domestic Violence and Healthcare contributions interfaces). In addition, each state will have several individual responsibilities such as developing any state specific Modules they need to integrate with iUS, system hosting, and ongoing support of their instance of the iUS system.

MAJOR PROJECT MILESTONES

Milestone	Target Date	Current Status
IT-ABC Approval	4/14/2014 (VT/MD/WV scope)	Completed 4/1/2016 (VT/ID/IA scope)
Mathtech Contract for initial project resources required (PM and BA) • Amendment 1 to increase max amount • Amendment 2 to procure 4 Developers	1/16/2015	• Base Contract Completed 1/16/2015 • Amendment 1 Completed 7/31/2015 • Amendment 2 Completed Oct 2016
Project Charter (Based on VT/ID/IA consortium)	7/1/2015	Completed 1/14/2016
Independent Review	7/18/2016	Completed 8/10/2016
Idaho Contract	7/30/2016	Completed 10/12/2016
Gap Analysis/Requirements Review/Scoping Sessions	7/2016 - 12/2016	In Progress
Organizational Change Management and Communications	7/2016 - 7/2017	In Progress
Iterative Design/Development/Unit Testing	12/2016 – 8/2017	Future
Integration Testing	9/2017 – 7/2017	Future
Training	10/2017 – 11/2017	Future
User Acceptance Testing	11/2017	Future
Implementation	12/2017 – 6/2018	Future
Post Deployment Activities (defect resolutions) & Closing Phase	6/2018 – Up to 12/31/2018	Future

LIFECYCLE INFORMATION

Solution Lifecycle in Yrs.	20	Estimated Lifecycle Costs	$ 15,475,343.00

PROJECT IMPLEMENTATION COSTS	
Expense	**Total Cost**
Software/Licenses (Win Server, SQL Server, HyperV)	4,797.00
Services (detailed below)	8,786,486.00
• IT Development Idaho DOL Contract – ($3,500,000)	
• Project Management - Mathtech ($1,492,843)	
• Business Analysis - Mathtech ($1,119,633)	
• Developers - Mathtech ($2,496,010)	
• Travel to Idaho Consortium – Mathtech ($128,000)	
• Security/vulnerability testing ($50,000)	
Hardware	3,415.00
State Labor	1,104,479.00
DII PM Oversight, EA Services (estimated 3% of implementation), and IR ($11,895.00)	254,566.00
Estimated Total Project Implementation Costs	**$10,153,743.00**
Total Implementation Spend as of FY16 End	**$ 1,209,676**

ANNUAL OPERATING COSTS			
Estimated Annual Operating Costs of New Solution			**$ 266,080.00**
Expense	**New Solution Cost**	**Current Solution**	**Difference**
State Labor	$262,080.00	$262,080.00	0
Hardware	$4,000.00	$18,149.00	$ -14,149.00
Other (supplies through Staples, OfficeMax, etc.)		$17,183.00	$ -17,183.00
Other (electricity, insurance, mail, etc.)		$326,923.00	$ -326,923.00
Total	**$266,080.00**	**$624,335.00**	
	Total Savings or Increase		**$ 358,255.00**

Current solution annual costs were taken from recently completed Independent Review and reflective of annual costs beginning in FY19.

ESTIMATED 5 YEAR COSTS (FY17-21)				
Fiscal Year	**Project Costs**	**Funding Source for Project Costs**	**Operating Costs**	**Funding Source for Operating Costs**
FY17	**$ 3,517,710.00**	**State %: 0** **Non-State %: 100**	**$ 0.00**	**State %: 0** **Non-State %: 100**
FY18	**$ 3,717,337.00**	**State %: 0** **Non-State %: 100**	**$ 0.00**	**State %: 0** **Non-State %: 100**
FY19	**$ 1,709,020.00**	**State %: 0** **Non-State %: 100**	**$ 266,080.00**	**State %: 0** **Non-State %: 100**
FY20	**$ 0.00**	**State %: 0** **Non-State %: 100**	**$ 266,080.00**	**State %: 0** **Non-State %: 100**
FY21	**$ 0.00**	**State %: 0** **Non-State %: 100**	**$ 266,080.00**	**State %: 0** **Non-State %: 100**

2.1 Project Justification

The reasons provided in the various documents available (primarily the UIM ABC Form) represent sufficient justification for initiating the project. As with other legacy systems the core justification is that the existing system is old, difficult to maintain, and unable to meet expectations. Specifically justifications include:

- The existing system is difficult and costly to maintain, and cannot be modified to respond to changing requirements without significant effort;
- The new system will be more responsive to State/Federal changes, will automate processes, reduce wait time, and provide self-service functionality;
- The new solution will reduce risk to the State (e.g., replace outdated technology that is unstable and/or difficult to support, improve security of State data, etc.)
- The current system is no longer supported by manufacturer IBM and it is hard to find vendors that can work on the IBM Mainframe hardware and software platform. As system and/or integration issues arise, and State and Federal changes to the Unemployment Insurance application become required, is it more difficult to resolve the defects and implement the changes. The inability to provide this support puts Vermonters at risk;
- The new system has improved security measures, which will allow VT to participate in the federal TOP program. This will allow VT to increase overpayment recovery efforts and lead to better overall integrity of the program.

Summary: The existing system is mainframe-based, was developed in the 80's and 90's, and does not adequately support the required functionality for a modern Unemployment Insurance system. Implementing the proposed solution result in a more technologically advanced system that provides better service and is more maintainable.

Keys to success: None; project justification is acceptable at the time of the project review.

2.2 Clarity of Purpose

Clarity of purpose, defined as having a clear, detailed description of success, is one of the strengths of the UIM project. The overall goals are clear, specific, understandable, and well documented. The Project Charter and UIM ABC Form both provide clear and concise descriptions of the expected outcomes of the UIM project.

Summary: The project goals are clear, concise, understandable, and well documented. This clarity, coupled with strong project leadership and management, should ensure that the completed project meets expectations and has a good chance of success.

Keys to success: None; clarity of purpose is acceptable at the time of the project review.

2.3 Organizational Support

Based on the documentation reviewed and the interviews conducted, organizational support appears strong. The primary organization affected is the Vermont Department of Labor (VDOL), with minor impacts to other organization units such as the Department of Taxes. One area of concern at the time of the project review is the proposed reorganization of VDOL into a combined entity with the Agency of Commerce and Community Development. While there is nothing at this point to indicate a potential adverse effect on the UIM project, any reorganization activity has the potential to disrupt active projects. This possible reorganization should be monitored closely, and potential problems should be documented in the Risk Management Plan and responded to appropriately by project leadership and management.

Summary: VDOL has actively supported the new solution, however there have been recent changes in organizational leadership, and there will be changes to the organizational structure. However, the implications of these changes are not clear at this time, and should be monitored as project execution continues.

Keys to success: Continue to monitor potential organizational changes, and respond accordingly.

2.4 Project Leadership

Consortium leadership and Vermont leadership is adequate for this project, and documented in the appropriate project management artifacts. Governance has been specified at all levels, along with the decision making philosophy and the implementation procedures. At the Vermont level the project is led by the Project Director (Cameron Wood, VDOL), who has been sufficiently empowered by the VDOL to lead and execute the project.

Summary: Project leadership has been assigned to one individual, and roles, responsibilities, and relationships for this and other governance entities have been documented and executed.

Keys to success: Ensure that any organizational changes, including department reorganization, do not weaken the current project leadership. In addition, monitor consortium leadership and governance to ensure that decision making is consistent with the documented philosophy and procedures.

2.5 Project Management

Project Management (PM) for the UIM project has been contracted to Mathtech Inc., and this is expected to continue for the life of the project. A review of the PM artifacts was completed, and the overall quality is very good. All required artifacts have been produced (Charter, Project Management Plan, Project Schedule, Risk Register, etc.), and demonstrate sound project management.

Summary: Project Management is being performed by contracted personnel who are well qualified for the role. Project Management artifacts (charters, plans, schedules, etc.) are of very good quality, and the expectation is that this will continue for the life of the project.

Keys to success: All participants in Project Management (both project level and oversight) must continually review their activities and outputs with the Project Leader, and ensure that they are actively contributing to project success.

2.6 Financial Considerations

The UIM project is somewhat unique in that it does not involve any Vermont funding: all project costs other than normal VDOL labor are to be borne by the U.S. Department of Labor. Of the overall project cost of approximately $10M, State labor costs represent approximately $262K, which is identical to the costs of the current system. As a result, financial risks for this project are extremely low compared to other Vermont IT projects. The only unknown at this point is whether the new system will be required to handle the existing Healthcare Assessment. While the Tax Department has proposed submitting legislative changes that will transfer responsibility for this functionality to them, this has not yet been accomplished. Failure to do so will result in additional changes to the State Specific Modules which will have to be paid for by Vermont.

Summary: Initial estimates of development and maintenance costs have been developed, and appear to be realistic. Given that this project is 100% federally funded, there is no significant financial risk to the State. However, there is some legacy functionality (healthcare assessment) that needs to be developed for the new system (and paid for by Vermont) or transferred to another department.

Keys to success: Continue to monitor project costs, and ensure that State labor costs match the original estimates. In addition, follow up on Tax Department actions to transfer responsibility for the Healthcare Assessment to that department.

2.7 Technical Approach

The UIM project is following a low-risk technical approach, in that it is building on and extending a proven solution. While the approach is not a true Commercial Off the Shelf (COTS) approach, it is the nearest thing to it. The approach is similar to that recently used by VDH's Women, Infant, and Children (WIC) modernization project, in that a Federal agency is supporting the transfer and customization of another state's solution rather than a complete new solution development. This approach minimizes risk since it relies on a proven solution, and any customizations are small relative to the whole. At this point in the project work has begun on the development of Vermont's State Specific Modules, and as of January 2017 this development is on schedule.

At the time of this project review there are several technical areas that should be monitored as the project progresses:

- There is a proposal to reorganize all Vermont IT into a single agency (Agency of Digital Services). At this time it is unknown whether this will actually occur, and if so, whether it will have any effect on this project;
- The VDOL has chosen to assume initial responsibility for solution hosting, rather than utilize the existing Vermont Private Cloud infrastructure. This may not be the appropriate approach for the long term, especially if all State IT is consolidated;
- A Security Review has not been yet been performed on the proposed solution (CORE iUS / State Specific Modules). While it is still early in the development process, planning for this review should begin now so that the review is completed well in advance of deployment. Although VDOL has acknowledged that a security review is appropriate, this review is not contained in the current project schedule.

Summary: The technical approach is based on enhancing an existing system developed for, and currently used by, another state. This approach minimizes technical risk, and is much preferred over the alternative of developing a completely new system.

Keys to success: Actively monitor the project execution to ensure that technical decisions are made appropriately and risks are minimized, and schedule the required Security Reviews as soon as feasible.

3 Risk Summary

Three common types of failure for an IT project are:

- The system was never completed (i.e. nothing was built);
- The system was completed, but did not meet the requirements (i.e. it was built, but doesn't work as desired);
- The system was completed and meets the requirements, but is unsupportable (i.e. it works, but is too difficult or expensive to maintain and operate).

Given the current state of the VDOL UIM project the risks of all three types of failure are considered low. While any IT project contains an element of risk, the technical approach being used (building on another state's proven solution) is appropriate for this project. As the project nears completion and deployment, the VDOL must ensure that department personnel are appropriately exposed to and trained on the new system, and that these activities are managed through a quality Change Management program. Even with the best technical solution user acceptance is a critical factor, and should not be overlooked.

4 Recommendations

At the time of this project review the Unemployment Insurance Modernization project is in good shape, and there are no significant recommendations for changes. However, as stated during the Project Analysis section there are several areas where continued monitoring and planning are important. This includes monitoring and responding to potential organizational changes (both in VDOL and State IT), and ensuring that required activities are scheduled and performed as the project moves toward deployment (Change Management, Security Reviews). From the Joint Fiscal Office's perspective, the project should be loosely monitored to ensure that the project is proceeding as planned.

5 IE Project Questions

The following table represents items that were investigated during the Project Review process, along with additional include notes. Any colors used represent the analyst's opinion about the state of various items; green = good, yellow = caution, red = danger.

Section	Question	Answer	Notes
Project Justification			Overall: Good
	Has sufficient justification been provided for initiating the project?	Yes	
	Is there a Federal or State mandate for this system?	Yes	
	Will there be a significant improvement to current operations?	Potentially yes	
	Is this driven by current system obsolescence	Yes	
	Was a DII ABC Form completed and approved?	Yes	
Clarity of Purpose			Overall: Good
	Does a document exist that clearly defines the success criteria for this project?	Yes	
	Are target schedule milestones clearly identified, and are they realistic?	Yes	Top level milestones (system completion) are identified and documented in the Project Charter and Project Schedule
	Are major system capabilities clearly defined, and are they realistic?	Yes	
	Is the success definition specific enough that it can identify points in the project where failure is a possibility, enabling early termination?	Yes	
Organizational Support			Overall: Neutral
	Is the business entity that will be the beneficiary fully supportive of the project?	Yes. However, there are potential changes to the organization structure that could have an effect on this support.	
	Will successful completion of the project require major changes to	No	

	current business processes?		
	If project completion requires business changes, will the business be able to make those changes?	Potentially yes	
	Is a need for a comprehensive change management program indicated, and if so, has the business recognized and planned for such a program?	Yes	
Project Leadership			Overall: Good
	Has a single person, that is part of the affected business entity, been designated to lead this project?	Yes	
	Is the project leadership experienced in directing this type and size of project?	Yes (through local and contracted resources)	
	Has the project leader been given sufficient authority to effectively execute the project?	Yes	
	Have relationships and authority between the project leader and key stakeholders been clearly defined and agreed to?	Yes	
Project Management			Overall: Good
	Has a qualified project manager been assigned to this project?	Yes	
	Does the project manager have the appropriate support from the affected business entity?	Yes	
	Will the project manager be following an accepted PM process (PMBOK, DII EPMO, AHS PMO, etc.)?	Yes	
	Are all project management artifacts appropriate for the current project phase acceptable, accurate, and up to date	Yes	
	Is the projected schedule realistic for the development tasks,	Yes	

	resources available, and funding?		
	Does the schedule include adequate time for testing, rework, and retest prior to system acceptance and implementation?	Yes	
Financial Considerations			Overall: Good
	Has a realistic estimate of the system's development costs been prepared?	Yes	
	Has a realistic estimate of the system's ongoing costs been developed?	Yes	
	Have the sources of the development and ongoing system costs been identified?	Yes (federal funds)	
	If a contract is used, are adequate protections in place to handle partial or complete failures during the development, implementation, or support phases?	Unknown; State development efforts are limited, and the contract for CORE iUS modification was not reviewed	
Technical Approach			Overall: Good
	Is the technical approach appropriate for this project?	Yes	
	Is this system type unique to Vermont, or do other states have similar needs?	This solution builds on another state's	
	If other states require similar systems, do those systems already exist in those states?	Yes	
	If other states possess or are acquiring similar systems, can Vermont leverage other states' systems or procurements?	Yes	
	Do commercial off the shelf (COTS) systems that meet the system needs exist?	No	
	If the system is to be developed, will it be developed internally, externally, or a combination?	Combination	Modification of CORE iUS to be handled externally, development of Vermont State Specific Modules is to be handled internally

	For developed systems, do the developers have significant experience in this type of system?	Yes	
	Will this system involve multiple, sequential releases with increasing functional capabilities?	Yes	
	Do the requirements for the initial release represent the minimum acceptable functionality?	Yes	
	Are the requirements clearly understood by, and validated by, the target users of the system?	Yes	
	Are the requirements and specifications sufficient for development/purchase, or will additional clarification be needed?	Yes	
	Whether developed or purchased, has a viable release plan/schedule been developed?	Yes	
	Have plans been developed to migrate data and functionality from the existing system to the new system, and are they realistic?	Yes	
Risk Management			Overall: Neutral
	Are there significant risks that were defined during either the project planning or the project review, and are they satisfactorily addressed?	Risks have been identified, and responses documented in the Risk Management Plan. The Independent Review did not document any High Risk items	
	Has an Independent Review been conducted?	Yes	
	Does the project permit early termination if progress is not satisfactory?	Unknown	
	Are there acceptable alternatives available if the project does not proceed according to plan?	Not at this time	
	Are plans in place for changes in key personnel	Yes	

	(business leader, project manager, executive sponsor, subject matter experts, technical experts, contractor personnel, etc.)?		

Appendix A
Project Management Phases and Processes

The activities of Project Management are generally broken into distinct phases, each of which contains a number of processes. The phases are described below, and an abbreviated list of process is shown in the table.

Initiating Phase: During this phase the project is proposed, initially defined, and approved. The Initiating Phase is considered complete when a Project Charter has been accepted that defines what is going to be accomplished, why it is necessary, when it is going to be completed, and who is responsible and accountable for the project's success.

Planning Phase: In the Planning phase the groundwork is laid for the Executing phase. This includes developing project plans and defining the specifics of scope, requirements, schedule, and cost. The procurement process is started (RFPs), and risk management is planned. Communications between stakeholders (status reports, etc.) are established.

Executing Phase: During this phase the actual work required to meet project goals is performed in accordance with the project plans. This includes the execution of contracts, the performance of project work, and the management of communications between project participants and stakeholders.

Closing Phase: In the closing phase the project is determined to be complete, and for most projects the transition is made from a project mode to an operations mode. Procurements are closed, project teams are released to other tasks, and lessons learned are documented.

Throughout the project, but especially during the Executing Phase, the **Monitoring & Controlling Phase** monitors project status, performs Integrated Change Control, and controls Scope, Schedule, Work, Costs, Quality, Communications, Risks, Procurements, and Stakeholder Engagement.

	Project Phase			
Process Group / Knowledge Area	Initiating	Planning	Executing	Closing
Integration Management	Develop Project Charter	Develop Project Management Plan	Direct & Manage Project Work	Close Project
Scope Management		Collect Requirements		
		Define Scope		
Time Management		Define Activities		
		Develop Schedule		
Cost Management		Estimate Costs		
		Determine Budget		
Quality Management		Plan Quality Management	Perform Quality	
Human Resource Management	Define Initial Project Team	Plan Personnel Management	Acquire, Develop, and Manage Project Team	
Communications Management		Plan Communications Management	Manage Communications	
Risk Management		Identify Risks and Plan Responses		
Procurement Management		Plan Procurement Management	Conduct Procurements	Close Procurements
Stakeholder Management	Identify Stakeholders	Plan Stakeholder Management	Manage Stakeholder Engagement	

Appendix B
Questions and Definitions

"What is the difference between Project Leadership and Project Management?"

The answer depends on the nature of the organization that is undertaking the project. Every project requires a Project Manager (PM), however, a separate Project Leader (PL) may also be required. In those organizations where high priority is given to a project, and the Project Manager is given full authority over both the planning and the project personnel, the Project Manager can also assume a leadership role. In those organizations where major decisions are made by someone other than the Project Manager, or a separate person controls or influences personnel or financial resources, there is a need for a separate Project Leader. The organizational structure generally determines the role of the Project Manager, and ranges from Projectized (Strong PM, possibly no PL), through Matrix (PM/PL share authority), to Functional (Strong PL, Weak PM). Since Vermont government activities are generally organized around ongoing operations, the State organization is usually described as Functional, or at best Weak Matrix. For more information, see https://www.projectsmart.co.uk/forums/viewtopic.php?t=730.

The weaker the authority of the Project Manager, the greater the need for a strong and empowered Project Leader. Without a person in that role the project can lose focus, difficult decisions aren't made in a timely manner, and the risk of failure grows. An analogy that can be used to compare the two roles is that of a ship that is travelling from place to place: the Captain (Project Leader) is responsible for determining the destination, issuing the orders to get underway, making decisions enroute, and for the safe arrival at the destination. The Navigator (Project Manager) is responsible for figuring how to get to the destination (Project Planning) and keeping track of the ships' current position (Project Status).

For small State IT projects, the leadership and management responsibilities generally reside in a single individual, usually the IT Manager or a designated member of the IT team. For larger projects that require DII oversight (i.e. over $500K) a qualified and designated Project Manager is required, and will almost certainly require that a separate individual assumes the responsibilities of Project Leader, especially if the Project Manager is a contracted position.

"What is Incremental development?"

Incremental development means that an IT project is developed and delivered in stages, rather than as a single complete system. This allows for risks and costs to be broken up and managed more easily, allows for earlier demonstrations of success, and allows for earlier termination in case the project isn't going well.

"What does 'Agile' mean?"

At its simplest, 'Agile' means that an incremental IT project is characterized by early and frequent delivery, continuous improvement, and a flexible and rapid response to changing requirements. It may also describe a specific way of managing development activities, such as Scrum.

VDOL Comments on the UIM Project Review

The VDOL / UIM Project Director, Cameron Wood, reviewed the report on 1/26/2017. While no formal comments were provided, a telephone conversation was held and he stated that he was in general agreement with the report contents.