Department of Administrative and Financial Services

Maine Revenue Services

Computerized Tax System Modernization Project

Business Case

November 2018

Contents

1.0 Executive Summary

Maine Revenue Services (MRS) administers 48 different State of Maine tax types and collects approximately 98% of all General Fund revenues and about 70% of Highway Fund revenues. For the fiscal year ending June 30, 2018, MRS collected revenues of nearly $4 billion. The agency's critical mission is currently performed using a tax system based on technology that is over 30 years old. This document presents the reasoning to support a significant investment in a modern, integrated "commercial-off-the-shelf" (COTS) tax administration software system.

The Problem

MRS's outdated systems pose significant operational risks to a critical State function. The agency's tax applications consist of multiple systems that are interconnected through a series of data hand-offs and interfaces which introduce multiple points of potential failure and vulnerability. The Office of Information Technology (OIT) and MRS expend an increasing amount of resources performing system maintenance and support. It is difficult to find people with the knowledge and skills to maintain our aging legacy systems.

The primary tax processing and administration system does not have advanced security features to protect the data against the threat posed by aggressive computer hacking techniques. Apart from the risk of system failure or significant data breach, operating with an outdated system compromises MRS's ability to meet customer service expectations, implement best practices, and continue to improve taxpayer compliance metrics.

A Proposed Solution

A new integrated COTS tax administration software system will provide the reliable technology MRS needs to address the problems described above. In the last 10 years, the market for COTS tax software has grown. A number of states have successfully implemented COTS packages that handle tax processing and integrate a range of other tax administration functions, such as e-filing, compliance case management, audit selection and discovery, revenue accounting and user-driven reporting. COTS solutions have proven to pay for themselves in terms of increased operational efficiency, reduced internal IT costs and increased revenue. These benefits will be sustained by MRS's plan for on-going maintenance after system implementation, in which the vendor will update the software with regular patches, upgrades, and security enhancements.

Costs and Benefits

MRS estimates the total project implementation cost to be between $39 and $53 million based on the vendor responses to our recently published Request for Information (RFI). These estimates are supported by the actual costs of tax system modernization projects in comparable states.

With this investment, the State of Maine will be able to:

- ✓ Enhance taxpayer customer service and satisfaction.
- ✓ Better secure tax systems, taxpayer data and personal information.
- ✓ Increase operational efficiency and reduce processing time.
- ✓ Reduce the time and effort required to make system changes and quickly adapt to tomorrow's business challenges, including implementation of tax legislation.
- ✓ Reduce the cost of internal IT operations and maintenance.
- ✓ Avoid software obsolescence by leveraging regular upgrades.
- ✓ Avoid risks associated with an aging state workforce and widening skills gap.
- ✓ Increase revenue through improved compliance methods.

Our intent is to identify an experienced and capable vendor to partner with who has proven methodologies and software designed specifically for tax administration.

2.0 Project Description

The Department of Administrative and Financial Services, Maine Revenue Services is seeking to replace its array of legacy systems with a modern, integrated COTS solution that supports all taxes the agency administers. The project is planned to be a multi-phased, four-year effort.

The primary goals of the project are to:

1. Provide taxpayers with a convenient and user-friendly portal to file and pay their state tax obligations, maintain their accounts, enroll in online payment plans for delinquent taxes owed and access account status and filing history;
2. Enhance system and data security, fraud detection and internal controls in order to meet all federal and state compliance requirements;
3. Limit costly customization by adapting business processes to take advantage of built-in COTS functionality;
4. Gain flexibility to quickly incorporate new ideas and best practices to streamline processes, provide greater transparency and increase revenue;
5. Increase system integration and provide additional functionality to reduce manual intervention, increase employee productivity and speed up processing;
6. Increase revenue using improved compliance methods; and
7. Ensure that MRS's information technology (IT) remains current and reliable through the next decade and beyond.

MRS is committed to engaging in a rigorous procurement process to identify an experienced and capable vendor with proven methodologies and COTS software designed specifically for tax administration. Implementing project management best practices and leveraging organizational change management will help to achieve the project's objectives and reduce the risk of a failed implementation.

The request for proposal (RFP) process will seek the most secure, sustainable and competitively-priced solution for hosting the underlying technology infrastructure. Cloud-hosted, vendor-hosted, and OIT-hosted are viable options. A final decision on system infrastructure hosting and support will depend on details surrounding sustainability, security, cost and service levels gathered as part of the RFP process.

MRS will form a Project Steering Committee, engage in formal governance, and follow best practice implementation methodologies.

Project Assumptions

MRS is working under the following initial assumptions:

- The Tax and Revenue Image Processing System used for front-end data entry and document management, and the Computer Assisted Mass Appraisal application used for property tax assessments will not be part of the COTS solution. The COTS solution is expected to interface with these applications.
- Staff augmentation may be necessary to backfill staffing needs through tax season.
- A vendor project team and MRS team will be co-located at the MRS facility.

3.0 Business Need

MRS currently processes about 2.1 million tax returns and approximately $4 billion in tax revenues each year. Our ability to provide efficient customer service and make significant system improvements is increasingly challenged by weaknesses in our aging systems and the difficulty of maintaining multiple applications that have been separately developed over the last 25 years. Any failure in existing systems could lead to a **significant business disruption** with a potential loss of revenue for the State.

Current systems to be combined into one integrated tax system

- **Maine Revenue Integrated Tax System (MERITS)** – The system of record for 48 different tax types and reimbursement programs with features that include the generation of refunds, bills, notices, liens and reports, as well as collection and audit case management.
- **Property Tax Management and Commercial Forestry Excise System** – A property tax case management and billing system that issues liens, reports and credits.
- **I-File** – A collection of internet applications that allow taxpayers to file individual income, sales, use, service provider and withholding taxes and choose from 34 various tax obligations for online electronic payments.
- **Modernized e-File (MEF)** – Electronic filing and payment options for businesses and individuals using commercial tax preparation software, offered in partnership with the IRS.
- **Maine Employers Electronic Tax Reporting System (MEETRS)** – A bulk upload system for withholding tax used by large employers and payroll processors.
- **Data Warehouse** – A tool utilized in fraud prevention and non-filing detection programs.
- **Collection System** – A tool used to identify underpayments, support collection case prioritization and supplement audit selection.

Core Issue

The core issue is that MERITS is based on 30-year-old mainframe technology originally developed in the late 1980s.

In 2006, MRS migrated MERITS to a more modern hardware and software platform, addressing several significant technology issues and avoiding increasing costs associated with the State's old mainframe technology. However, the underlying application architecture is still based on obsolete COBOL logic and mainframe limitations.

The decision in 2006 to defer a significant additional investment was sound at the time. Now, almost 30 years since the original implementation, MRS has reached a point of diminishing returns in terms of maintaining, enhancing and securing the system. MERITS cannot be modified to accommodate certain business functions, including the ability to suspend interest calculations, track Power of Attorney documentation, implement necessary access controls, provide system audit trails or enforce segregation of duties. Additionally, some changes require costly programming and can take a significant amount of time. Manual workarounds put the agency at greater risk for human error, data loss and data integrity issues.

Maintaining multiple applications, along with the interfaces that connect them and the supporting infrastructure, requires significant technical and testing resources and hinders operations.

Security Risk

The current systems were not built to withstand today's continuously evolving security threats, both internal and external. A new system that has been developed with a focus on security will reduce the risk of a major data breach that could expose taxpayers' personal information and cause irreparable harm to the public trust and the State's reputation.

OIT is now largely on its own in its efforts to try and stay ahead of increasingly sophisticated security threats. This will not be the case with a modern COTS solution with a vendor leveraging multiple resources.

Outdated Electronic Applications

MRS electronic filing and payment programs have grown over the years to the point where almost 81% of revenues and 62% of returns are submitted electronically. However, the agency has not been able to keep up with customer expectations for an easy and convenient online service experience.

Taxpayers are using MRS online options, but the options are awkward and at times frustrating to use:

- Taxpayers must log into different MRS Internet applications to file and pay their various tax obligations.
- The ability to view account status and filing history is very limited.

- The design is outdated.
- Even simple questions about account status require the taxpayer to call MRS.
- Tax returns for most tax types and other required forms and schedules cannot be submitted online.

This experience does not mirror what customers have come to expect from using online and mobile banking and financial applications.

Additional Issues

- MRS's technology falls behind as other tax administrators are continuously improving and implementing best practices.
- Urgency is building to transition to a more sustainable platform. Staff who built and understand the current systems are retiring. People entering the IT field are not being trained in these legacy skill sets.

MRS has continued to find new and improved ways of employing technology to benefit the State and its taxpayers. However, as the outdated MERITS system becomes more cumbersome and problematic to maintain, MRS is losing its ability to make further gains and adequately meet its organizational mission.

4.0 Opportunity

The project is a "once in a generation" transformational investment that positions MRS to meet increasing demands for customer service, security and operational efficiency.

This section highlights the opportunities available if MRS implements a COTS integrated tax system by comparing MRS's current posture to a potential future provided by the new modern technology.

1. **Modernize Failing Computer Systems:** Reliable, well-performing technology is integral to the effectiveness of a large state agency tasked with processing substantial amounts of data quickly, accurately and confidentially.

   Current: MRS's core system is linked together by a series of data exchanges through interfaces that introduce various potential points of failure. Complexity raises the potential of unintended consequences when making changes to any one system and increases the number of resources needed for testing.

   Future: MRS will be able to reduce application portfolio maintenance burden; more easily deploy technology to quickly adapt to changing business needs; better leverage data to detect potential tax fraud and underreporting; define workflow and business rules to move work automatically between processing and compliance stages; improve revenue accounting; and maintain a high degree of confidence in data integrity.

2. **Protect Taxpayer Data:** Internal and external security threats are constantly changing and becoming more sophisticated.

   Current: Unlike software companies that spend millions of dollars fortifying their systems against "bad actors," MRS and OIT are on their own to protect sensitive taxpayer data housed in 1980s-era computer systems that were not designed to withstand today's threats.

   Future: MRS will benefit from leveraging best practices and pooled resources that a COTS solution provides by moving to commercial software on a modern, more resilient computer architecture.

3. **Enhance Customer Service:** As customers become accustomed to banking and shopping online, expectations for e-service usability and features have increased. Taxpayers want to look up their account details online, not call MRS to get the answers to simple questions.

   Current: Taxpayers must log into different MRS internet applications to file and pay their various tax obligations. Many key schedules and taxes are not available, account status information is limited and the design is not intuitive or user friendly.

   When a taxpayer calls MRS, it can be difficult for staff to understand the taxpayer's entire tax status because data is organized by tax type, not customer. MRS is similarly organized, with most staff being tax-specific specialists. Even simple customer questions must be forwarded to the tax-specific unit.

   Future: Taxpayers will be able to access a modern online portal where they can pay and file tax returns for all tax types, view account status and history, review correspondence, and access self-service options like pre-defined payment plans. This capability will result in fewer phone calls, filing errors and processing delays.

   When taxpayers do call MRS, it will be easier for staff to respond and provide customer-centric service. The modern tax system will organize data by customer account, with "drill-downs" to tax account information (e.g., sales and business tax filings). Information will be structured similarly across all tax types, making it easier to cross-train staff to work across tax types, especially when responding to routine questions.

4. **Increase Operational Efficiency:** Work that could be automated is now processed manually. A new integrated system will allow staff to access data within one system and eliminate the burden of managing multiple tax systems.

   Current: The maintenance, support and use of multiple systems that provide online filing and payment applications, compliance and audits tools, and core administrative tools such as MERITS are burdensome and not intuitive.

   Certain tax returns, payments, applications and other related submissions are still filed on paper and processed manually. Staff work from paper reports to determine when work is ready to move to the next step.

   Future: A new integrated system will eliminate the burden of supporting and using multiple systems, allowing MRS to focus its resources on a single system. Implementing

a fully integrated and automated system will allow the bulk of returns, payments, and applications to be completed and submitted online, reducing expensive paper handling and processing delays. Workflow rules will automatically move work to the next step for review or supervisor approval and configurable rules will flag returns for further analysis. The system will be more intuitive to use and a streamlined workflow will improve productivity. Taxpayers' online accounts will be automatically updated with the status of filings, exemption requests and payments.

5. **Improve Internal Controls and Compliance with Security Standards:** MRS is required to meet federal and state security standards in systems that receive, store or transmit federal tax information or state tax information. As standards become stricter, MRS struggles to comply. IRS regulations and a greater focus on opportunities for internal fraud require more stringent segregation of duties and controls on access to taxpayers' personal information.

   Current: The internal controls within MERITS were implemented to satisfy 30-year-old application control standards. While the controls have been improved over time, control gaps still exist. For example, there is limited ability to track who is viewing and making changes to tax data or to create a hierarchy between work roles for clear segregation of duties, leaving MRS vulnerable to internal fraud.

   Future: Software designed for tax administration will meet IRS requirements for protecting personal information; MRS will be compliant with security protocols for handling data in transmission and in storage; user roles will be closely defined to limit access to system functions not associated with job function; and there will be audit trails of all inquiries, changes and actions taken in the system. This will result in stronger internal controls and segregation of duties to help prevent internal fraud.

6. **Increase Revenues Through Improved Compliance Methods:**

   Current: During the last 10 years, MRS has improved methodologies for audit selection and collections. While these improvements have resulted in increased revenue collections, a modern COTS solution would further advance MRS's tax compliance effectiveness, as shown by other states that have experienced increases after implementing a state-of-the-art integrated tax administration system.

   Future: Improved compliance methods will result in improved quality of audit selections and increased collections through advanced algorithms, analytics, automation and taxpayer self-service. Using advanced data analytic tools will result in improved non-filer detection and collections efforts.

5.0 Solution

MRS plans to partner with a proven vendor to implement a mature COTS software solution for tax administration.

A COTS application is a type of software product that has a baseline of functionality already developed "out of the box," as opposed to a "custom build" solution that is developed from the ground up based on a customer's particular requirements. COTS software products for

tax administration available in today's market are fully integrated, with online filing and payment applications and compliance discovery and collections tools built into the system. A single system will integrate all the features currently provided by MRS's array of legacy systems.

A principle benefit of COTS software is that implementation costs, risk and time are typically lower. The software is tailored to each customer by configuring rule parameters, rather than writing completely new computer code. Because the core code is basically unchanged from customer to customer, it is cost efficient for vendors to provide regular maintenance patches and upgrades, significantly extending the system life cycle. Further, revenue agencies have formed COTS user communities and work together with the vendor to introduce system enhancements and optimize business practices to get the most from their COTS investments.

To benefit from the full value of a COTS investment, it is important that, as much as possible, MRS conforms its business processes to the core functionality and limits customization. Factoring in customizations when applying routine upgrades can be more difficult and often requires more extensive rework and testing. Adapting business practices to the out-of-the-box functionality is made somewhat easier with a tax administration COTS system, because the core code generally benefits from being based on best practices and customer experience across a range of common scenarios.

6.0 Cost-Benefit Analysis

Anticipated Benefits

MRS stands to realize a range of benefits from implementing a more modern, integrated system including:

- **Front-End Efficiencies** – Returns and payments for all tax types can be submitted electronically resulting in less need for handling paper (open mail, sort, scan and store) and manual intervention to correct errors and create work lists.
- **Enhanced Customer Service** – An integrated taxpayer portal allows taxpayers to look up account information, set up payment plans, and review electronic communications, prior filings and correspondence. Improved usability of the system makes it easier for staff to look up taxpayer records, see prior taxpayer interactions and answer questions quickly, improving customer service. The new system would also enable a greater level of electronic communications.
- **Increased Workflow Automation** – A greater ability to implement or modify rules allows for more returns to be processed without manual intervention and for automating tasks.
- **Reduced IT/QA Costs** – The integration of systems reduces the need for vendor and staff augmentation for system enhancements, maintenance and operations.
- **Reduced Postage Costs** – A more robust online capability allows taxpayers to opt out of paper and enable email and other electronic communications.

- **Improved Collections** – Flexible treatment strategies and other collection mechanisms will result in more efficient and effective collections.
- **Enhanced Compliance** – Advanced data analytic tools result in improved non-filer detection.
- **Enhanced Audit Selection and Quality** – Improved audit selections result from enhanced algorithms and analytics in combination with the ability to be more flexible in testing and learning from small pilots of innovative selection criteria and filters. Algorithms can be flexibly set to improve the likelihood that returns selected for audit will yield results and those results will be collectible.
- **Reduced Fraud** – Enhanced detection during processing and validation against multi-state fraud analytics reduce potential for fraudulent refund requests. Stronger internal controls and separation of duties help prevent internal fraud.
- **Improved Taxpayer and Revenue Accounting** – Integration of all elements of the tax administration process helps ensure completeness and reconcilability of accounting data for both the taxpayer and revenue accounting functions. The consolidation of data also aids in the revenue forecasting process.

Projected benefits over a seven-year period from start of implementation are conservatively estimated to be $85 million. Project benefit estimates are based on direct cost savings and the experience of other states who have implemented similar systems. Details on the methodology used to estimate benefits are included in Appendix A.

Estimated Costs

The costs for a project of this nature fall into four categories:

- **Software License Cost** – The cost to access the core code that will be configured to support Maine tax laws and business processes. We do not expect any need for additional software or third-party products to support the programming, configuration, migration or documentation of the new tax system or for extended functionality related to reporting tools, correspondence generation, tax form maintenance and workflow.
- **Configuration and Implementation Services** – The cost of services provided by the vendor to support the configuration, testing, training and documentation associated with the implementation of the system and management of the project.
- **Maintenance During Implementation** – The cost of vendor system maintenance and operational support after the first phase of the project goes into production.
- **Hosting During Implementation** – The assumption for budgeting purposes is that the system infrastructure (servers, routers, etc.) will be hosted in a "cloud" environment. This essentially means that rather than owning and maintaining individual pieces of computer equipment, equipment is shared and optimized among clients in a secure, off-site facility. The cost is based on the amount of computing power used and a schedule of service levels. The IRS has recently approved the

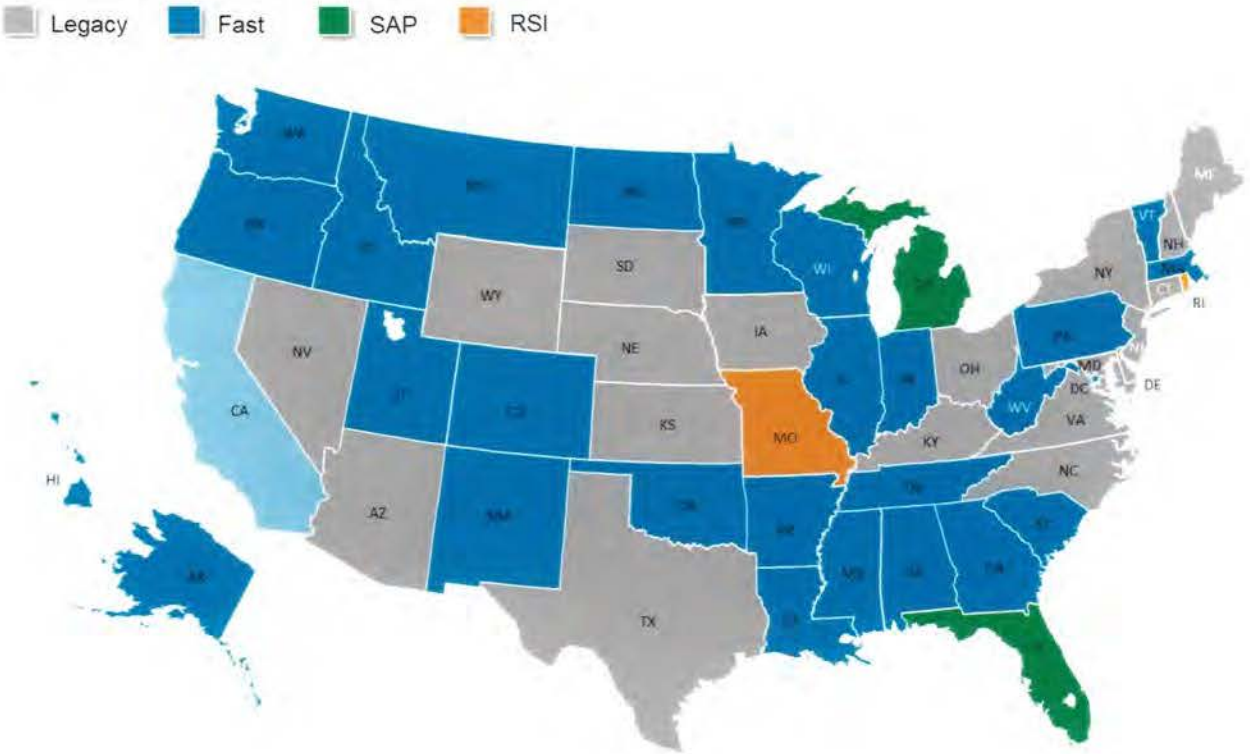
security measures of certain cloud providers as sufficient to protect taxpayer personal information.

Estimated project implementation costs based on responses to a recently issued RFI are between $39 and $53 million. The budget for the project will be refined as project costs are firmed up during the procurement process. Details on the methodology used to estimate project costs are included in Appendix A.

7.0 Tax System Marketplace

There are two dominant types of tax administration system providers in the US: vendors who are extending and modifying software solutions designed for Enterprise Resource Planning (ERP) and those who specifically build tax administration systems to address the needs of revenue agencies. Representatives of both approaches responded to MRS's RFI, which specifically requested information on software designed exclusively for tax administration.

The following map illustrates the market penetration of various tax system providers, including SAP (an ERP solution); Fast Enterprises (FAST), and Revenue Solutions Incorporated (RSI), which are vendors of tax-specific solutions; and states that continue to operate on legacy systems.



Notes:

- *This map identifies vendors for states where modern integrated tax systems have been implemented, are in the process of being implemented or system replacement contracts are in place. The map identifies implementations that include the core tax administration system. It does not identify those states that implemented stand-alone components of a vendor's product without the core tax administration system.*
- *In California, the Department of Tax and Fee Administration (sales tax) is implementing FAST's GenTax; the Franchise Tax Board (personal and corporate) uses a legacy system.*
- *Map date: 2018*

Market Research

To help ensure the success of the project, MRS has engaged in an effort to learn about various tax system capabilities, view product demonstrations, and meet with other states to see COTS systems in action and gain from their experience.

On December 18, 2017, MRS issued an RFI to solicit information regarding the replacement of its array of legacy tax processing, administrative, internet return filing and payment, discovery, and fraud prevention systems with a vendor-hosted modern, integrated system that supports all taxes administered by MRS. The RFI specified that the system should be a mature COTS solution designed for the administration, collection, and revenue accounting of state taxes. It should also encompass tax return and payment processing, taxpayer self-service, administrative, compliance, and discovery features. MRS was interested in hearing from vendors who could provide hosting, support and maintenance services for the entire system, including both the application and the infrastructure.

MRS received nine responses to the RFI. Seven responses did not provide information that adequately matched the requested criteria, and no further information was sought from those vendors.

FAST and RSI submitted information about their COTS integrated tax systems that closely matched the criteria outlined in the RFI. Both vendors provided demonstrations of their systems to MRS managers and OIT representatives.

A team of MRS operational managers visited the following state revenue agencies that recently implemented a FAST or RSI system. The purpose of the meetings was to learn how the COTS systems operate, learn about the development and installation project, and identify efficiencies and benefits offered by these modernized systems.

State Agency	System	Date of Site Visit
Vermont	FAST (GenTax)	August 13, 2018
Massachusetts	FAST (GenTax)	September 17, 2018
Rhode Island	RSI (Revenue Premier)	October 19, 2018

The information obtained supports that the new system improved efficiencies, resulting in enhanced customer service and cost benefits.

8.0 Project Risk and Risk Mitigation Strategies

The biggest concerns for MRS are either delaying the project or not proceeding with the project altogether.

By continuing to rely on outdated system architecture, MRS runs significant risk of **a system failure**, with a commensurate **disruption in its business and loss of revenue** to the State, or **a major data breach that exposes taxpayer's personal information**.

Further, the **window of opportunity is closing** to successfully migrate current systems' data to a new solution as staff who built and understand the current systems retire.

In terms of risk to a successful project, MRS's experience has shown that the **most important success factor is working with an experienced vendor** to implement a proven solution.

Beyond the risk proposed by an unproven solution, MRS has identified a variety of other potential risks to the project's success. Examples include:

- Lack of leadership support
- Lack of clearly-defined objectives
- Delays due to MRS's inability to make design decisions timely
- Limitations on resource availability
- Difficulty in mapping and migrating data from legacy systems
- Unwillingness to adapt business processes to COTS functionality (leading to excessive customization)

Risk Mitigation

Each of the risk areas requires ongoing monitoring and a risk-mitigation plan. To effectively manage project risk, MRS will take several key steps:

- ✓ Leadership will be champions of the modernization project, including assigning the project as high priority, clearly and repeatedly communicating the project's goals and benefits and removing obstacles as necessary.
- ✓ A key individual from MRS's senior management will be appointed to provide overall direction for the project on a full-time basis.
- ✓ A project Steering Committee comprised of the vendor's staff, MRS's senior managers, OIT leadership and a representative from OIT's Project Management Office will help make key decisions and resolve project issues.

- ✓ A qualified project manager with experience leading implementation efforts of this size and scope will employ widely-accepted tools and processes for monitoring and controlling the project's scope, schedule, cost and quality.
- ✓ A formal procurement process will yield the selection of an experienced vendor with the skills and approach necessary to implement a proven COTS system, offering the required functionality, security and maintenance to best meet the objectives of the project.
- ✓ A dedicated joint MRS-vendor project team will focus on ensuring that project activities are carried out effectively and that project deliverables meet the needs of MRS.
- ✓ The project will utilize implementation methodologies that have been proven on similar projects in the areas of functional design, testing, data migration, cut-over management, user training, and technical knowledge transfer. MRS will partner with the vendor to configure the COTS product's built-in functionality to optimize MRS processes and limit customization.

9.0 Conclusion

The Computerized Tax System Modernization Project has a high level of importance for the State in ensuring effective tax administration and continued taxpayer confidence.

MRS looks forward to taking this next step in its continued evolution as an agency committed to bringing innovative technology to bear in providing Maine taxpayers with outstanding service and maximizing efficiency to ensure excellent results with the least possible expenditure of public resources.

MRS is committed to engaging in a procurement process to identify an experienced and capable vendor to partner with, implementing project management best practices and leveraging organizational change management to achieve the project's objectives.

APPENDIX A

Maine Revenue Services
Computerized Tax System Modernization Project

Return on Investment

Schedule #		Implementation Year 1-4	Maintenance & Support Year 5-7	Total
1	**Cost to Implement**	$ (46,400,000)	$ -	**$ (46,400,000)**
2	**Cost to Maintain**	-	(19,500,000)	**(19,500,000)**
3	**Certificate of Participation Receipt**	46,400,000	-	**46,400,000**
3	**Certificate of Participation Interest Payment**	(2,577,954)[1]	(6,777,478)	**(9,355,432)**
3	**Certificate of Participation Principal Payment**	(9,103,886)[1]	(37,296,114)	**(46,400,000)**
4	**Annual Benefit**	-	84,984,282	**84,984,282**
	Return on Investment	**(11,681,840)**	**$ 21,410,690**	**$ 9,728,850**

[1]No appropriation is needed in fiscal years ending in 2020 and 2021, but requires an appropriation in FYE 2022 and 2023

Maine Revenue Services

Schedule 1

Computerized Tax System Modernization Project

Cost to Implement

Costs	Highest Vendor Estimates
Software license cost	$ 5,400,000
Implementation services	40,000,000
Hosting during implementation	5,000,000
Maintenance during implementation	2,500,000
Total estimated implementation costs	52,900,000
Vendor IT staff reduction[1]	(6,500,000)
Total implementation costs	**$ 46,400,000**

[1]Vendor estimate includes 100% vendor staff maintaining the system. We believe that a hybrid approach, where OIT provides approximately 12 of their staff to supplement and reduce reliance on vendor staffing, would reduce risk if the vendor fails, is sold or does not perform their duties according to contract requirements.

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Schedule 2

Computerized Tax System Modernization Project

Cost to Maintain

Costs	Highest Vendor Estimate[1]
Annual Hosting	$ 1,300,000
Annual maintenance and support	5,700,000
Total estimated costs	7,000,000
Vendor IT staff reduction[1]	(500,000)
Annual cost to maintain system	**$ 6,500,000**
Cost to maintain through year 7	**$ 19,500,000**

[1]Vendor estimate includes 100% vendor staff maintaining the system. We believe that a hybrid approach, where OIT provides approximately 12 of their staff to supplement and reduce reliance on vendor staffing, would reduce risk if the vendor fails, is sold or does not perform their duties to contract requirements.

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Schedule 3

Computerized Tax System Modernization Project

Certificate of Participation

COP Financing[1]	**$ 46,400,000**

[1] MRS will need three, 18-month COPs to finance the Project. In the first 18 months, $14 million would be borrowed, $14 million for the next 18-month period and $18.4 million for the remaining period of the Project. Estimate assumes an interest rate charge of 5% per annum. First payment is due 2 years after payout term of 18 months is complete.

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Benefits

Attachment 1, Page #	Benefit	Description	Annual Savings
1.	Staff reduction	Increase in operational efficiency will support the reduction of staff through attrition.	$ 2,268,850
2.	OIT cost reduction	Vendor supported system will reduce need for staff, servers, databases and licenses.	3,348,244
2.	Postage expense reduction	Electronic communications will allow taxpayers to opt out of paper notices resulting in a reduction in postage expense.	175,000
3.	Increased revenue	Increase in revenue due to improved collections, non-filer compliance, audit selection, and refund fraud detection.	22,536,000
		Annual total	**$ 28,328,094**
		Total through year 7	**$ 84,984,282**

Computerized Tax System Modernization Project

Benefit Assumptions

1. Staff Reduction				
Division/Unit	Position	Number of Employees	Avg. Annual Salary[1]	Total Annual Salary Savings
Revenue Processing Unit	Office Associate II	5	$ 60,500	$ 302,500
Assumption: A modernized integrated system will allow all tax types to be filed online resulting in a 50% decrease in paper returns by year 7 of post implementation. This supports a reduction of 5 of the 12 positions held by processing staff. Currently, 800,000 paper returns are filed annually and only 5 tax types can be filed online. The 43 tax types that do not have online filing options will with a new system. Vermont Department of Revenue notes that many of its miscellaneous taxes that were paper filing only on its legacy system are now close to 100% e-filed since implementing a new system. Louisiana Department of Revenue saw a decrease of 25% of revenue processing staff.				
Accounting Unit	Senior Staff Accountant	1	75,300	75,300
	Staff Accountant	1	63,500	63,500
Assumption: Improved revenue accounting functionality will allow automated journal entry postings and reconciliation processes. A modernized system will directly interface with the State of Maine general ledger system. Vermont Department of Revenue decreased positions in this area due to the reduced need for manual journal entries.				
Property Tax Division	Principal Property Appraiser	1	78,000	78,000
	Office Associate II	1	60,500	60,500
Assumption: Automation of Property Tax Management system will eliminate manual billing processes.				
Sales Tax Division	Tax Examiner	5	58,000	290,000
Income Tax Division	Tax Examiner	5	58,000	290,000
Assumption: Online taxpayer portal will allow taxpayers to maintain accounts and contact information, access account status and filing history, and set up payment plans resulting in fewer inbound calls. Improved online filing features will allow for more returns to be processed without manual intervention. Enhanced workflow rules will streamline work items and supervisor review. Idaho State Tax Commission reports that the average number of original individual income tax returns processed per employee per day has increased by 50%. Montana Department of Revenue states that the time spent on taxpayer assistance calls has been significantly reduced since the implementation of a modernized system.				
Quality Assurance Unit	Contracted Personnel	5	108,000	540,000
	Office Specialist I	1	72,250	72,250
	Business Systems Administrator	3	89,000	267,000
	Business Systems Q/A Analyst	3	76,600	229,800
Assumption: Reduction in system enhancements and customization will reduce need to test code.				
	Total Staff Reduction	**31**		**$ 2,268,850**

[1]Average annual salary based on FYE 2018 actuals including benefits

Computerized Tax System Modernization Project

Benefit Assumptions

2. OIT Savings			Avg. Annual Salary[1]	Total Annual Savings
Personnel				
OIT contracted personnel		2	187,000	$ 374,000
OIT personnel	Senior Programmer Analyst	6	113,337	680,022
Total OIT Personnel		**8**		**$ 1,054,022**
Assumption: Vendor supported software will reduce reliance on OIT personnel.				
Systems[2]				
Cognos				133,143
TestTrack[3]				8,463
MeF				125,416
Data Warehouse and Collection Technology Project				1,955,648
Property Tax Management				71,552
Total OIT Systems				**$ 2,294,222**
Assumption: The systems listed above will be replaced by a fully integrated system.				
Total OIT Savings				**$ 3,348,244**

3. Postage Expense Savings	Total Annual Savings
Postage expense savings	**$ 175,000**
Assumption: Improved electronic communications will reduce the need for postage. Taxpayers will be able to retrieve many notices from the taxpayer portal	

[1]Annual savings based on FYE 2018 actual salary, benefits and OIT upcharge

[2]Includes all systems to be replaced by integrated system

[3]Assumes replacement by vendor defect tracking system

Computerized Tax System Modernization Project

Benefit Assumptions

4. Increased revenue			
The revenue gains are based on information received from other state departments of revenue (DOR) that in recent years installed a modern tax administration system. We also used data from a vendor who gathered information on their last nine state DOR installations of complete new systems. This ROI incorporates the vendor's state revenue increases for the initial three years of system production and averaged the yearly data and reduced the results by approximately 50%.			
	Current Annual Collections	**Est. % Annual Increase**	**Annual Revenue Increase**
Improved collections	$90,000,000 [1]	15%	$ 13,500,000
Assumption: MRS has made considerable improvements to its collection technology in recent years but believes the risk analysis and case management features of a modernized system will streamline and automate routine debt collection allowing its collectors to focus on complex and high risk collection cases. The result will be an increase in collections.			
Improved non-filer detection	25,000,000	12%	3,000,000
Assumption: Enhanced discovery tools and programs will allow MRS to identify and score non-compliant taxpayers, resulting in a small increase from its current collections.			
Improved audits	40,000,000	12%	4,800,000
Assumption: Improved algorithms for selecting productive audit cases, along with the ability to incorporate a range of data sources, will lead to an increase in audit revenue.			
Improved fraud detection	360,000,000 [2]	0.25%	900,000
Assumption: Improved fraud detection using multi-state fraud analytics. Massachusetts DOR had a $7.5 million increase in fraud detection in the first year after implementation.			
Decrease in contingency fees paid to outside collection agency	5,600,000 [3]	6%	336,000
Assumption: Taxpayers' ability to set up payment plans using the online taxpayer portal will require fewer collection cases to be sent to outside collection agency.			
Total Increased Revenue			**$ 22,536,000**

[1]Annual collections based on FYE 2018 actual unless otherwise noted

[2]Annual individual income tax refunds

[3]Annual contingency fee paid to collection agency