



Department of Labor and Training
RHODE ISLAND

State of Rhode Island

DLT Systems

Modernization

Strategic Plan 2024

IBM

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Introduction

The Rhode Island Department of Labor and Training (DLT) systems are in dire need of modernization due to years of neglect and deferred maintenance. These outdated systems involve heavily manual workloads, carry high security risks, and hinder the agency's ability to provide effective services to Rhode Island citizens and employers. Additionally, the systems are not aligned with the current technology and best practices.

Recognizing these challenges, DLT and the Department of Administration's (DOA) Division of Enterprise Technology Strategy and Services (ETSS) unit have partnered with IBM to develop a comprehensive strategic modernization plan. IBM created a plan that outlines how the DLT will transform its systems, adopt modern technologies, offer additional service capabilities to Rhode Island citizens & employers, and improve operational efficiency.

The IBM team conducted several discovery sessions with DLT users and management and ETSS to evaluate the current state of the DLT's systems. After analyzing DLT's requirements and considering best practices in the industry, IBM proposed various modernization options and recommendations. The report provides a comprehensive assessment of the current state, potential solutions, and the technical & organizational change management resources required for successful implementation of the strategic plan.

The strategic plan provides the DLT and ETSS leadership with a clear roadmap, empowering them to make informed decisions, allocate resources wisely, and track progress. The plan focuses on operational efficiency and effective resource allocation. It will ultimately guide decision-making, optimize resources, and ensure DLT's long-term success.

We thank Rhode Island DLT Director Matthew Weldon and Enterprise Technology Strategy and Services (ETSS) CDO/CDO Brian Tardiff; They have championed this initiative and have made the first steps toward a long-term systems transformation for the DLT. We also thank the DLT and ETSS Teams for their commitment and openness in this assessment. IBM is confident in Rhode Island's ability to execute this modernization based on the executive support and stakeholder collaboration during this first phase.

1.0 Executive Summary

The Rhode Island Department Labor and Training's systems and processes are in dire need of modernization. The systems suffer from years of deferred maintenance and most processes involve manual efforts anchored by paper forms. The current state of the most critical systems leaves the team with no viable options for incremental change. Major investment and wholesale replacement is required, and until this happens, the agency will be running with high security and operational risks.

The Strategic Plan will provide details on IBM's findings and recommendations for systems to change, products that will transform DLT's operations and estimated costs for execution of the plan. While the price for bringing DLT into a modern era with security, integration, automation, and self-service capabilities are certainly high, the risk in continuing to delay technology improvements is higher, with a real risk in the continued ability for DLT serve the citizens of Rhode Island who rely on these critical safety-net and other licensing and safety systems.

Many common patterns have emerged as we've reviewed DLT's systems and processes that inform our recommendations for the future state. We found that many of the issues identified in the Enterprise Applications Strategic Plan from 2020 also apply to DLT . (<https://doit.ri.gov/sites/g/files/xkgbur466/files/Documents/erp/Strategic-Plan---Summary.pdf>)

The key patterns identified are listed below.

- Systems are decades behind technology advancements and lack adaptability, scalability, and modern security features.
 - Routine maintenance, upgrades, and technology staff needed for proper care and feeding of systems has been deferred due to budget constraints.
- Systems are not integrated and require manual effort to move data between them.
- Systems are built through one-time projects, and then left without the required support they need to be successfully optimized and improved.
 - No formal training to onboard workforce to new capabilities.
 - No persistent owner of systems, especially shared platforms, to adapt processes, sponsor enhancements, and work with vendors for maintenance.
 - Limited development and testing support that can continuously adapt the system to meet changing business needs. The limited resources support operations and development.
 - No automated testing capabilities or code repositories

- Extremely limited system design documentation and process documentation.
- The State lacks the technical expertise to implement, drive, or oversee modernization projects as existing resources are centered around legacy technology.
 - The focus has been keeping the current legacy systems operational, with little opportunity to leverage newer technologies or upscaling of staff technical skills.
 - Funding additional technical staff has been a persistent issue.
- The handful of experts the State relies on for existing systems are eligible for retirement or are nearing retirement eligibility, especially for COBOL-based systems. There are no dedicated database administrators; as DBA's left employment, due to budget concerns, they were not replaced so DBA activities are performed by programming staff.
- Business processes are manual, error-prone, and tedious.
- Heavily reliant on spreadsheets for critical business processes.

The IBM team assessed the existing systems and classified systems based on the risk level as follows: Dangerous, High, Moderate, Low. Several systems were identified with a 'Dangerous' risk level. These systems have a high likelihood of failure, pose significant recovery challenges, and could impact a large number of users. Immediate actions are required to address these critical vulnerabilities. Below is the list of existing systems with Dangerous risk level assessment.

1. Employer Tax and Wage Record Database
2. UI Interstate Connection Network / Interstate Wages (ICON)
3. Enterprise Content Management System / Document Management System
4. Financial Accounting Reporting System (FARS)
5. Certified Payroll
6. Workforce Regulation & Safety (WRS)

The modernization of the DLT's systems is critical to ensuring the continued delivery of essential services to the people of Rhode Island. The strategic plan outlines a seven-year roadmap to ensure continued, high-quality service delivery. This transformation requires an estimated \$133M investment (see table below for a breakdown by programs) but will yield a more secure, efficient, and resilient technology infrastructure. The \$133M includes both the one-time costs and recurring costs for the first seven years.

Programs	Estimated Cost
Income Support Modernization of Employer Tax, TDI/TCI, ICON, UI Benefits, Document Management, Call Center Phone systems, IVR and Reservation systems, Data Strategy and Reporting.	Capex: \$59.3M M & O: \$30.6M
Financial Management Implementation of Workday for DLT accounting and integration with the state-level Workday financial system. Automate manual processes.	Capex: \$6.2M M & O: \$2.2M
Salesforce Implementation and Integration Modernization of Workforce Regulation and Safety (WRS), Certified Payroll, and Real Jobs Rhode Island (RJRI). Introduction of Customer Relationship Management (CRM), Customer 360, Case Management, and Partner Portals.	Capex: \$12.3M M & O: \$10.8M
Modernization Delivery Unit and Tactical Projects The additional technical expertise required by DLT to guide the successful implementation of the programs will be achieved by establishing a Modernization Delivery Unit (MDU). The cost (0.5M) of a small number of short-term technical resources required to do the tactical project is also included. These tactical projects will provide relief while all the systems are modernized.	M & O: \$12.9M

2.0 Roadmap for Broad DLT Modernization

These themes were central as IBM selected technology, reviewed processes, and created our roadmap. These principles have guided our strategic decisions and long-term modernization plans. However, tactical efforts are required to address the current stability and supportability of the systems.

- Consolidate application portfolio to limit vendor and technology diversity to facilitate support and maximize utilization of technical resources.
- Select configurable Software as a Service (SaaS) and Commercial Off the Shelf Software (COTS) on the cloud over custom development.
- Select widely adopted technologies with a large resource pool of support staff, implementation, and support partners.
- Target platforms that support incremental adoption and continuous improvement.
- Prioritize capabilities that improve customer and agent experience, especially self-service and automation
- Improve risk posture for DLT systems
- Build process models on common platforms that break down silos to enable sharing of personnel and process best practices.
- Align to ETSS guidance and leverage cross-agency experience where possible.
- Select platforms with robust integration capabilities and built-in connectors to core systems.
- Any solutions must meet ETSS and DLT standards for security, compliance, and availability.

2.1 DLT Systems Strategy

IBM recommends organizing modernization into three major workstreams to optimize DLT's systems and processes around common technology, themes, and business processes.

Income Support

- Select a configurable, off-the-shelf platform from a well-established vendor that supports Employer Tax, Unemployment Insurance (UI), and Temporary Disability Insurance (TDI)/Temporary Caregivers Insurance (TCI).
- Solution will replace individual systems in place today: Employer Tax (employer tax/wage record systems), TDI/TCI, TDI Online, UI, UI Online, and UI Interstate Connection Network (ICON).
- Program will drive implementation of core support capabilities: public facing self-service portals, document management, telephony, Interactive Voice Response (IVR), and data warehouse.

- Implementation will leverage a phased approach, while following a comprehensive procurement strategy and roadmap.

Case Management, Workflow Automation & Customer Relationship Management / Salesforce

- Anchor on Salesforce as the core platform for case management, workflow automation, and customer/partner relationship management. Note: Salesforce is cloud-based Customer Relationship Management (CRM) software.
- Digitize and automate manual processes: labor standards and certified payroll investigations, discrimination complaints, UI appeals, licensing, and permitting.
- Enable a 360-degree view of customers and partners across all DLT interactions for enhanced support and cross-division awareness.
- Replace custom systems for Workforce Regulation and Safety (WRS) and Real Jobs Rhode Island (RJRI) with standardized Salesforce based platform solutions

Financial Management

- Leverage procurement and invoice management capabilities at the state level via DLT integration with the DOA's Enterprise Resource Planning (ERP) Workday Financial implementation.
- Implement a DLT-specific module for the Enterprise ERP Workday Financial system to support funding allocation and federal reporting.
- Replace DLT's Financial Accounting Reporting System (FARS) and spreadsheet-driven invoice management processes.

2.2 DLT Application Disposition Summary

The following section describes the recommendation and level of business risk for each application. Business risk is based on the applications in their current state and is a major driver of the urgency to modernize. Business risk was assessed based on the likelihood of a system failure or incident, availability of technical resources, ability to recover, and the scale of the impact. Outcomes of failures in DLT's systems or processes involve extended business disruption, data loss, public embarrassment for the State and most importantly the impact to the customers DLT services through these benefits, licensing, and safety related programs.

Risk Level Definitions

- **Dangerous:** System or process has a high likelihood of failure or recovery is difficult or impossible and a large population of constituents would be impacted.
- **High:** System or process has a low likelihood of failure, but recovery is difficult or impossible and a large population of constituents would be impacted.
- **Moderate:** System or process has a low likelihood of failure, and recovery possible or the impact of a failure would be limited.
- **Low:** System or process is stable and has acceptable levels of risk.

Income Support

Employer Tax and Wage Record Database

Business Function

The system collects three different taxes, namely Employment Security tax (UI), Job Development Fund (JDF) tax, and Temporary Disability Insurance/Temporary Caregivers insurance taxes. In calendar year 2023, DLT collected \$506.3 million in these taxes to fund these benefit programs.

The Employer Tax systems (Tax, Wage) process quarterly tax and wage reports submitted by the employers. The Employer Wage Record component contains employee wages supplied by the Employer. It is the most sought-after data set for statistical analysis and benefit determination by many internal and external partners. The Employer Tax component is the Employer facing module that is used to keep historical experience ratings, associate employer charge bills, and many other critical functions.

In addition to supporting the collection of the assessments, the wage information collected by the system are used by the UI Benefits system and many other state agencies (RIBridges, Child Support) and reported the US Health and Human Services Office of Child Support Services for benefits determinations. New employers first register with the system and then submit quarterly reports and payments. Tax rates are calculated based on historical wages paid, workers laid off, and some additional factors. The key business processes include employer registration and maintenance, issuing contribution rates, filing quarterly reports and payments processing, accounting, collection activities, field audit, Tax Performance System (TPS), TDI refunds, and federal reporting.

Technical Description

The core backend is a set of mainframe programs with all file-based interfaces. Data is also shared with dozens of partners and business processes via SFTP

interfaces. The data may be anonymized or non-anonymized depending on the partner with whom data is being shared.

The Employer Wage Record component contains VSAM datasets with online CICS batch processes. Due to space constraints, the system only captures the first initial of the first name and first nine (9) characters of the last name, which provides an incomplete record. It is also out of compliance with the US Department of Health and Human Services' Office of Child Support Services requirements. It does not support binary/non-binary gender identification options.

Employer Tax is Cobol based system with an IBM SQL/DS database. This database predates IBM DB2 and is not supported by IBM, and has not been for several years. In order to continue to support the IBM SQL/DS database, the CICS for the mainframe is downgraded since the newer versions are not supported. This component has also been running out of space, which required DLT to purge data sooner than they desire, impacting their ability to use historical data and to effectively perform re-determinations.

Most processes are paper-based and involve manual data entry into standard formats that can be uploaded or directly keyed into the legacy system green screens. DLT's OnBase Document Management System (DMS) is a key component for storing and organizing registration documents.

The .Net-based app receives data and translates data from RI.gov for storage in OnBase and the mainframe. The mainframe hardware was consolidated into an updated mainframe at the ETSS Enterprise Operations Center (EOC) in 2022, but due to the age of the DLT applications, the software is downgraded to be able to support the legacy applications.

Business Risk: Dangerous

This risk level is driven by the underlying mainframe platform for the Employer Tax and Wage Record systems. While the hardware was recently updated, [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Failure would impact the ability for DLT to collect the appropriate assessments to fund the benefits programs (\$506.3MM in CY2023) and impact the ability to make benefit determinations on DLT and other critical state systems.

Disposition – Recommendation: Replace

Select a well-established COTS platform and implementation partner that supports tax processing and benefits programs.

Tactical Actions

The timeline and effort to externalize the database should be evaluated against the first phase of income support modernization. This is unlikely to be feasible, given the complexity, cost, and limited support for the current code base.

Recommend securing additional technical resources to cross train and learn the system as well as increase the current support augmentation engagement.

Embark on data cleanup and normalization efforts to facilitate future migration to a replacement system.

Key Questions

1. What do most states use?

Details are available in section [Options](#).

2. Which system does IBM recommend?

IBM recommends including all major COTS vendors in an RFP for an integrated Tax and Benefits system. IBM does not recommend pursuing a custom solution.

UI Interstate Connection Network /Interstate Wages (ICON)**Business Function**

The Unemployment Insurance Interstate Connection Network (ICON) is the system that allows the UI Benefit program to request and receive data and assessments for use in the filing and processing of Interstate Benefits (IB), Combined Wage Claims (CWC), Ex-military (UCX), and Federal Claims (UCFE). The ICON system also supports exchanging employment and wage data with other states using the State Wage Interchange System (SWIS). The system provides a platform for data exchange between state workforce agencies and federal partners.

Technical Description

This system supports data sharing and benefit assessments between states and includes support for many different data sharing technologies. DLT is currently using the system manually to request data via a terminal interface accessed via the mainframe. Data requests will be processed by ICON, which can later be accessed manually and keyed into DLT's UI system. RI's mainframe-based ICON system is both batch and CICS driven and uses obsolete IBM Systems Network Architecture (SNA) protocol for communications. RI is one of the last

two states that have not modernized. Stability has been tenuous and available support is becoming more problematic. Some states have upgraded to use the available web services, but most states leverage the file interface which is embedded in the COTS UI systems. This is on the same mainframe as the Employer Tax and Financial Accounting Reporting System (FARS).

Business Risk: Dangerous

This risk level is driven by the underlying mainframe hardware as well as the terminal interface via direct connection to the National Association of State Workforce Agencies (NASWA). The architecture is very dated, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Data entry and processing is also mainly manual, creating opportunities for typos to impact benefits processing.

Failure of this system impacts the ability to check other states, Combined Wage Claims, Ex-Military Claims, Federal Wages, etc., and to apportion benefits and charge back benefits to other states. [REDACTED]

[REDACTED]

Disposition – Recommendation: Replace

ICON connectivity and functionality will be a standard feature of the leading COTS platforms. Custom development should not be expected.

Tactical Actions

N/A – Recommend accelerating strategic solution to address. Recommend securing additional technical resources to cross train, document, and learn the system to support it through replacement.

Key Questions

1. How can we modernize our state connection to ICON?

NASWA is in the process of modernizing its APIs for all UI functions. However, they have indicated that they have another four years until completion. Since DLT has no modern application base on which to expand, it is not feasible to adopt NASWA APIs in a piecemeal fashion. Overall, IBM recommends a COTS-based approach to modernizing the ICON interface, as the time and cost associated with custom development are very high.

Option A: Build a stand-alone ICON app against legacy APIs
Custom coding to implement all NASWA provided APIs, build a user interface, and integrate with existing AS400-based UI system. The entire

effort would be throw-away and would have to start from the ground up as no reusable components exist from NASWA.

Estimated Cost: \$2-3M throw away on top of current maintenance. There is no reduction in cost to implement the COTS solution.

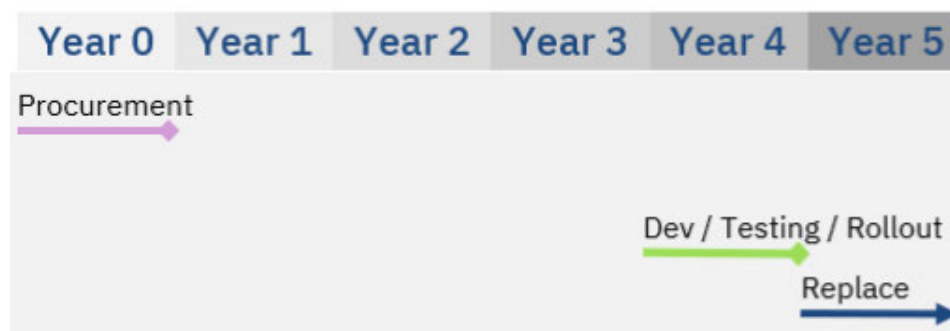
Estimated Timeline



Option B: Continue with terminal access until the COTS solution
No significant changes to the current mode of operation. Vendor solutions to implement UI will include requirements to implement modern ICON APIs.

Estimated Cost: \$.5M for vendor to implement modern APIs, but cost built into COTS UI solution.

Estimated Timeline



Option C: Expedite COTS solution (Recommended)

Pull forward the ICON portion of the UI product rollout and integrate it with the AS400-based UI system. The solution will use legacy out-of-the-box vendor implementation of NASWA interfaces.

Estimated Cost: \$0-1M incremental cost for vendor to isolate ICON function into stand-alone solution. \$.5M for vendor to implement modern APIs within COTS UI solution.

Estimated Timeline



2. How did other states modernize their ICON interface?

In most states, the ICON System is part of the UI Benefits System. The states updated their UI Benefits System, and as a result, their ICON System was modernized. As NASWA does not offer modern APIs for most of the ICON functionality, we believe that most states use file-based interfaces.

Temporary Disability Insurance (TDI) / Temporary Caregiver Insurance System (TCI)

Business Function

Rhode Island's Temporary Disability Insurance (TDI) provides financial support to workers who are unable to work due to a temporary illness or injury that's not job-related. Established in 1942, it was the first program of its kind in the U.S. and is funded entirely by Rhode Island worker contributions.

Rhode Island's Temporary Caregiver Insurance (TCI) was established in 2013. It provides up to 6 weeks of benefits for people who need to take time off work to care for a seriously ill family member or to bond with a new child (through birth, adoption, or foster care).

Both programs are funded exclusively by Rhode Island workers through taxes collected through DLT's Employer Tax System.

Technical Description

The TDI/TCI and Unemployment Insurance systems backend, runs on IBM AS400 Cobol-based systems. The UI Cobol application was upgraded to native mode in the 2001, but TDI/TCI has remained in outdated System 36 mode. The customer facing front end is an online .Net app. The Interactive Voice Response (IVR) system, which helps direct customers to appropriate agents or even

address their needs without talking to an agent, is supported by FiServ, which who provides extended support for this end-of-life product and recommends moving to a new IVR platform. There are numerous integration and workflow opportunities to reduce data entry. Case management would help to track follow up steps and improve productivity and prioritization of day-to-day claim processing. Reporting is limited to data extracts from custom AS400 programs. There is a heavy business reliance on DLT's document management system but the benefits system and DMS are not integrated. The .Net front is vendor managed, dated, and does not provide the necessarily customer interaction capabilities necessary to provide adequate service. The legacy COBOL application is supported primarily by one (1) ETSS full time employee that also supports other DLT systems.

Business Risk: High

This risk level for TDI/TCI is due to the [REDACTED]
[REDACTED]
[REDACTED] The green-screen applications prevent task automation. [REDACTED]
[REDACTED]
[REDACTED] makes tracking data changes challenging and cumbersome, and external data integration is difficult. The system is outdated, lacks integrations, workflow, and integration with the document management system. [REDACTED]
[REDACTED]

Disposition – Recommendation: Replace

Select a well-established COTS platform and implementation partner that supports tax processing and benefits programs.

Tactical Actions

Remove dependency on FiServ licensed IVR software by replacing with alternative solution. This component is end of life and in extended support with support costs that are rapidly increasing. Recommend securing additional technical resources to cross train, document, and learn the system. Embark on data cleanup and normalization efforts to facilitate future migration to a replacement system.

Key Questions

1. Should the TDI system remain on the same platform as the UI system?
IBM's recommendation is to move TDI to a SaaS-based COTS product. We further recommend that TDI and UI leverage the same vendor and product to enable technology and cost synergies.

2. Is there a comparable COTS product that has the same functionality as the AS400?

Some of the COTS product vendors offer solutions for the Paid Family and Medical (PFML) domain, which is similar to TDI/TCI benefits in Rhode Island. COTS vendors like Sagitec, TCS, and Geographic Solutions currently provide solutions for PFML. RI DLT can work with a COTS product vendor to customize the product based on their business rules and regulations. DLT should adapt business processes where possible to the off-the-shelf capabilities of the COTS product to streamline implementation and reduce future support costs.

3. What would be required to adopt a tiered benefit rate if passed by the legislature?

System replacement is required. The limited documentation on the current implementation of benefit calculation on AS400 and the limited availability of technical (programmers) resources for the modification in the existing application significantly limit the RI DLT capability to implement the modified logic on the existing AS400 application. A new COTS product for the TDI/TCI system will allow RI DLT to work with the vendor and implement the Tiered Benefit rate logic.

Unemployment Insurance (UI) System

Business Function

Unemployment Insurance (UI) is a program designed to help workers who have lost their jobs through no fault of their own. This joint federal and state program is funded by employer taxes and provides temporary financial help to those who meet specific eligibility requirements, including having earned enough income recently.

The taxes received are tracked and collected through DLT's Employer Tax System.

The system supports data collection, claims processing, and benefit determination and provides data for many external processes, including required federal reporting. UI Online (UIO) is a public-facing web application in Amazon Web Services (AWS) that allows applicants to file applications for UI benefits. Applicants with approved benefits can complete weekly certifications using UIO or UI's AWS IVR system. Applicants can also utilize UIO to print 1099G's for the previously completed years. Back office and call centers interact with green screens on the AS400 to manage claims. The UI Call Center

uses AWS Connect, an AWS cloud-based telephony system. Claims may be taken by phone or by UIO.

Technical Description

The UI backend runs on the Cobol based IBM AS400. Support is provided by two (2) ETSS employees, augmented by contracted staff. There are no database administrators managing the databases. The AS400 is the UI system of record.

UI Online is an AWS hosted application built from numerous AWS offerings including multiple database (DB) technologies and serverless functions. UIO was developed by AWS Professional Services during the pandemic to replace a .Net front end that could not appropriately scale to meet the capacity needs. DLT published a Request for Proposals (RFP) and engaged another provider to continue UIO development and perform maintenance and operations activities. There are no internal resources with expertise to directly maintain the UIO system, therefore there is a reliance on a contracted managed services provider. The legacy programming staff support the legacy integration components. The technology stack is overly complex, which creates many points of failure and higher maintenance costs.

UIO integrates with the AS400 backend through a complicated file interface that involves many hops and requires constant monitoring and activity to ensure it is running. The electronic data exchange is complicated by the legacy databases, which include multi-member file records. The data exchange is through a change data capture program, to the AWS Data Lake as a pass through to UIO. The nature of this data exchange means that if the data exchange fails, the online data in UIO and backend data in the AS400 system of record can be out of sync until any issue is resolved. This leads to downtime and confusion if customers call for help or need to make corrections to a weekly certification. The AS400-based applications are COBOL based, inflexible and rely on batch processes fed by files from external systems.

There is a heavy business reliance on DLT's document management system but the benefits system and DMS are not integrated. UI is using an out of date and homemade fax server, which lacks appropriate capacity and redundancy.

Business Risk: High

This risk level for UI is due to the [REDACTED]
[REDACTED] The codebase is difficult to maintain and offers little ability to respond rapidly to changing regulations and business processes. The green-screen applications prevent task automation. [REDACTED]
[REDACTED]

[REDACTED] The lack of automated alerting makes tracking data changes challenging and cumbersome, and external data integration is difficult. The system is outdated, lacks integrations, workflow, and integration with the document management system.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Failure of the system would impact any displaced worker seeking benefit payments.

Disposition – Recommendation: Replace

Select a well-established COTS platform and implementation partner that supports tax processing and benefits programs. Ensure a selected platform has a well-defined support process to make certain DLT's system stays current.

Tactical Actions

DLT should prioritize investigative analysis of the original UIO design to facilitate the system architecture which could reduce overall cost as well as improve the time required to make requested changes in the application.

Additionally, the AWS Data Lake was never fully hydrated and used for statistical analysis. The Data Lake has been used primarily as a conduit to transfer data between the legacy systems and UIO. DLT should examine the cost benefit of decoupling UI Online from the Data Lake to potentially reduce AWS hosting costs.

DLT should also prioritize the tagging of AWS utility resources that would allow for a more granular review of AWS utility costs. It is a common practice in a cloud computing environment to only stand-up non-production environments while in use to save on cloud utility costs. This option should be explored but given the onshore/offshore model used by the current UIO application vendor, savings may be minimal. DLT should examine additional opportunities for cloud utility savings through securing reserved instances for expected baseline needs.

Recommend securing additional technical resources to cross train, document, manage and learn the system and databases. Embark on data cleanup and normalization efforts to facilitate future migration to a replacement system.

Key Questions

1. What are the available options, and associated cost benefit, for moving the functionality of the AS400 off a COBOL based program?

There are various commercial off-the-shelf (COTS) products available that can provide UI Benefits functionality. DLT should collaborate with the chosen vendor to identify the business processes that require modification to align with the out-of-box functionalities. Additionally, DLT should work with the vendor to determine the out-of-the-box functionality that needs to be adjusted to match the existing business processes or if the business processes can be adjusted to match the standard functions of the system.

2. What are the most important lessons learned from states who abandoned recently modernized systems?

The most common reasons why states abandon modernization efforts is due to a combination of factors. These include but are not limited to, under staffing projects with agency Subject Matter Experts (SMEs), project management, and technical experts, poorly defined requirements, scope creep, the tendency to look for a perfect solution instead of focusing on the minimum viable product (MVP), lack of a clear project vision, and insufficient executive support. Another factor is the desire to customize a new system to match current business processes instead of engaging in business process reengineering to leverage the system's core capabilities which should meet most statutory and regulatory requirements. State specific items should be configurable.

IBM recommends a third party that can provide strong vendor and business lead oversight to help keep the project on track and avoid the issues mentioned above. The critical roles for this are program management, solution architecture, and technical SMEs that can help translate the business needs into product customizations and can help manage scope and implementation timelines.

3. What are IBMs recommendations for improving synergy between the AS400 and UI Online? (AS400 being the MIS and UIO being the customer interface)

IBM recommends replacing both the backend (AS400) and the UI Online front end (AWS) with a COTS product that has a tightly integrated front end and back end that will also include Employer Tax, ICON, and TDI. This will ensure that both the front end and back-end work together seamlessly and efficiently. Tactical action should be prioritized by DLT for the UI Online support vendor to address issues with data replication and

to reduce recurring monthly AWS costs since it will be several years before the strategic solution can be implemented.

Labor Market Information (LMI)

Business Function

The Labor Market Information (LMI) Division is a valuable resource for a wide range of data on the Rhode Island economy. It is responsible for collecting, analyzing, and sharing information on the state's labor market. The LMI Division collaborates with the US Bureau of Labor Statistics (BLS) and runs four federal/state survey programs to gather data about their employment status from employers and households in Rhode Island. These programs are operated in all states, ensuring that data is comparable across states and over time.

Technical Description

Little technology is in use to support the needs of the LMI group. They are primarily using Excel to work with data extracts from the legacy systems and information provided by the other systems. LMI also uses Access and Text Pad for flat files. All data sharing is via files. Reporting is cumbersome and time consuming.

Business Risk: Moderate

This risk level for LMI is due to the lack of technology in use today. While there is no risk of a system failure, there is also no automation or true system in place. Confidence in the data is a serious problem as it is difficult to reproduce exact results following manual processes.

Disposition – Recommendation: Adopt

Modify business processes to use data platforms and tools to analyze and produce reports. Tools such as Power BI and the eventual data warehouse described in the Data Lake section below will improve efficiency and raise confidence in data quality. Automate data extracts and standardize data models using Extract Transform and Load (ETL) tools. Enable traceability by building programs to replace manual steps. The LMI team will greatly benefit by the implementation of a COTS UI platform that produces many of the standard federal reports out of the box. This will free up time to do more ad hoc and investigative reporting.

Tactical Actions

Create data mappings and glossaries to document data usage to prepare for a future data platform.

Key Questions

1. How can existing reports be analyzed to ensure accurate information is being reported from Unemployment and TDI to LMI for their reports to USDOL?
LMI reports should be codified and tested to ensure they are consistent from period to period. Data accuracy can be validated by comparing to other reports across similar datasets.
2. How are other states populating this information?
Many states are utilizing the UI Tax & Benefits COTS product's built-in capability to generate USDOL reports, while some have implemented customized solutions for generating these reports.
3. Is there a way to automate the file transfers that LMI required throughout the year?
This can be automated using a combination of ETL, reporting and FTP tools. This would be a normal function tied to an enterprise data warehouse.
4. Are there any efficiencies IBM can recommend based on our current process?
LMI requires data from various systems. IBM suggests creating a data warehouse to gather information from different DLT systems. The LMI team can utilize this data for special projects or reporting purposes. Additionally, it would be beneficial for the LMI team to use a business intelligence tool such as Power BI or Tableau for their analysis and reporting needs.

Board of Review

Business Function

The Board of Review is an autonomous, quasi-judicial agency created by Rhode Island General Law. Primary function is to hear and render decisions on appeals arising from DLT, Unemployment Insurance and Temporary Disability / Temporary Caregivers Insurance divisions. The Board of Review is statutorily independent from DLT.

Technical Description

Team uses an Access Database and Word '97 templates as their primary tools. The Board of Review team is limited by the phone system, which affects the quality and the number of participants that are able to participate in hearings. Information is exchanged with DLT's units via printed files and a manual SharePoint-based workflow.

Business Risk: Moderate

This risk level for Board of Review is due to the poor technology supporting the business process today. While there is little risk of catastrophic failure, there are numerous challenges that the team deals with daily. There is risk of [REDACTED] but this is backed up daily. As with other systems, the technology has not been upgraded.

Disposition – Recommendation: Replace

Submitting and tracking appeals cases is a standard feature of the major COTS UI platforms. Updating the phone system to support basic recorded conference calls would address the daily headaches of manually conferencing together multiple parties for appeals hearings.

Tactical Actions

Eliminate reliance on paper printouts by leveraging the document management system for sharing files. Migrate the current Access based system to the Microsoft Power Platform. Embark on data cleanup and normalization efforts to facilitate future migration to an integrated replacement system.

Key Questions

1. How can DLT move this system off Access?
Most COTS products for UI, TDI, and Tax have built-in functionality to handle appeals, which can be customized based on DLT needs. DLT can work with the COTS vendor to migrate all past and present appeals into the new system.
2. How can this system better sync with the UI MIS?
The updated appeals feature will be closely integrated with the UI Benefits, TDI, and Employer tax functionality.

*Shared Platforms***Enterprise Content Management System\ Document Management System (OnBase)****Business Function**

Enterprise content management system used by different business domains such as UI, TDI, and Worker's Compensation. Stores and organizes forms, identities documents, and claims evidence. There are limited defined workflows. Workers Compensation (WC) and TDI have integrated RightFax fax servers. UI has an older custom built fax server that will drop files for a folder for the DMS to process but it lacks capacity and other key features.

Technical Description

Originally a COTS product and due to funding constraints, limited attention has been committed to keeping it current over the past 30 years. The initial implementation focused on implementation speed so documents may not be classified with the required level of detail. It has organically grown and expanded but was not designed for the current service levels. Some divisions are using basic workflow, others using only for document storage and tagging. Integration with RightFax is used in TDI and WC. The UI fax server was built onsite using a fax card installed in an old server. It lacks the needed capacity to support UI.

The system is currently hosted on premises and using version 18, which is several versions behind. There is no automated archiving, leaving millions of documents that impact the performance of the system.

Support is provided primarily by the ETSS tech support team assigned to DLT. The team have not received necessary training and have limited ability to assist with changes or upgrades. The focus is on keeping the system operational.

Business Risk: Dangerous

This risk level for OnBase is attributed to lost opportunities and lost data. OnBase suffers from poor initial design and implementation decisions coupled with lack of funding resulting in long term neglect in required system maintenance and lack of internal resources to support and improve it, which impacts the general implementation success. Documents are not tagged adequately, making them difficult to find and workflow is not fully enabled to help support claim processing. Teams do not have the expertise or support to use the system properly.

Disposition – Recommendation: Replatform

Move to a cloud-based solution and focus on stabilization of the current system. Contract for services to provide required support, maintenance, operations and continued build out of the system functions to improve business value. Take actions to improve business processes and leverage automatic tagging, archiving, and workflow capabilities.

Tactical Actions

Numerous tactical actions were identified by the current document management system vendor through the assessment performed in 2022. Execution of the recommendations was delayed pending the execution of this Strategic Plan and securing available funding. These are prioritized and focus on stabilization of the platform and provided the re-platforming option discussed

above. Even if Rhode Island decided to change underlying platform, immediate action is required to stabilize the system provide for its continued operation.

Secure necessary services or staff to support proper maintenance, operations, and upgrades.

Expand the current RightFax fax server to include a DLT-wide fax server, including the UI division to replace the inadequate UI fax server.

Develop improved integration with existing systems and print processes to automatically import and classify documents from DLT's current systems to avoid printing and then scanning documents.

Key Questions

1. What is the cost benefit analysis of fixing and expanding the current system to meet DLT's need vs. implementing a new solution?

DLT can transition from its current on-premises OnBase solution to a SaaS-based OnBase solution by restructuring its existing licenses, with the addition of relatively small licensing costs. This transition will enable DLT to save time and cost of migrating to a different product.

2. How can DLT maximize the use of an ECMS in the units currently using it and in units that are not currently using it?

IBM recommends implementing an enterprise-wide content management system (ECMS) for all DLT applications that utilize content management. This will enable a centralized location for sharing documents across the systems, eliminating the need for end-users to upload the same document repeatedly. Building a center of expertise through a dedicated admin and at least one knowledgeable expert in each business division will enable sharing of practices, consistency of implementation, and expansion of use. Improve governance over ECMS activities and set standards for implementation, naming conventions, and document classification.

Expand the current RightFax fax server to include a DLT-wide fax server, including the UI division to replace the inadequate UI fax server.

Develop improved integration with existing systems and print processes to automatically import and classify documents from DLT's current systems to avoid printing and then scanning documents.

Integrate fully with the proposed CRM. Include document management system integration planning in all planned or proposed system upgrades.

Digitize all of DLT's historical business documents to provide for true Continuity of Operations (COOP) capabilities as well as to provide critical document preservation and security capabilities. For example, should a fire occur in DLT's WRS division, all professional licensing documents could be lost. Digitizing also provides increased document workflow and security controls and would position DLT to make more documents available both internally and externally.

3. If investing the current system is recommended, how should DLT order the necessary sub-projects?

The Health Check Report, produced by the current DMS vendor, includes prioritization. Immediate action is required to stabilize the system.

Security and stability as well as securing appropriate staffing should be included in the first steps before moving into changes that enable features or drive business efficiency.

Call Center Phone System / IVR / Reservations

Business Function

The current phone and Interactive Voice Response (IVR) systems used in DLT have limitations that prevent workers from providing optimal service to customers. These systems lack important features such as call reservation, data capture, intelligent call routing, and overflow support. By incorporating these capabilities, DLT can reduce customer wait times, improve first-call resolution rates, and ensure calls are directed to the most appropriate agents.

Remote work capability is enabled for some, but not all business functions. Remote work capabilities are also limited in certain units due to reliance on paper-based processes. Examples include Employer Tax and Workforce Regulation & Safety units, where heavy use of paper records restricts remote work options. The telephone systems also need expanding to support remote capabilities.

Technical Description

- Multiple phone systems are in place, each with different capabilities, requiring some UI users to require both the legacy phone system as well as AWS Connect to perform necessary functions

- AWS Connect is used by the UI Call Center and supports high call volumes and can scale rapidly, but was never fully built out, therefore limited features are in use.
- The legacy Avaya system has quite a bit of legacy capability but is not used for the high-volume UI Call Center team. The Avaya system could not scale to meet the needs during the pandemic response.
- Two Interactive Voice Response Systems (IVR) are in place
 - UI uses and AWS Connect IVR, which is integrated into the UIO platform and processes to interact with the AS400 system of record.
 - TDI uses an older legacy IVR system that is approaching end of support with dramatically increasing extended support vendor costs.
 - IVR capabilities are not available for other DLT business units, omitting a potential constituent communication channel.

Business Risk: High

This risk level for the phone and IVR systems are also [REDACTED]

[REDACTED] call interactions and caller identification is broken. Call times and volumes are higher than required as humans must repeat actions that are typically automated. These include call routing, caller identification and answering basic questions that could be performed by a system. [REDACTED]

Disposition – Recommendation: Replace

Select a single platform provider that meets DLT’s needs across telephony, IVR, reservations, fax server integration, and supports seamless integration with Salesforce CRM. The proposed system must meet IRS, SSA, and HIPPA compliance standards.

Tactical Actions

Engage a developer to build APIs to replace existing screen scraping functions to allow for integration with the TDI AS400 for replacement of TDI’s IVR system. Explore potential for expanding the AWS Connect system to support TDI. This enables the replacement of the expensive FiServ license and allows for a common IVR solution across DLT.

Document current telephone needs and development requirements for a future consolidated telephone system.

Key Questions

1. What phone solution does IBM recommend for DLT as a whole? (Should DLT keep the current systems, move all phone to one of the current systems, or implement a new system?)

IBM recommends using a single phone solution for all DLT systems, as it allows for economies of scale, the convenience of moving staff between systems, and the ability to work with only one vendor. IBM recommends Nice InContact for DLT as single phone solution.

Ease of integration with Salesforce CRM is a very important requirement for the phone system. The proposed system must meet IRS, SSA, and HIPPA compliance standards. The system must be able to scale to meet rapid changes in usage that result from unplanned or predictable events such as disasters or sudden economic downturns.

2. What is the cost benefit of having UI and TDI use the same IVR provider?

DLT will have an advantage when negotiating with IVR providers when looking for solutions for multiple systems. Any IVR system should be seamlessly integrated with the telephone system.

Familiarity with the system will help enable flexibility managing the system and in sharing staff when needed. Reports could also be produced across the entire business instead of disjointed. This will also reduce training and onboarding costs for new employees. Future IVR capabilities, if any, should be confined to the same system selected for UI and TDI. Additional DLT units could leverage IVR and call tree capabilities to answer basic inquiries.

3. What COTS products does IBM recommend for call reservation, including an assessment of the Mindful system used by CT?

IBM recommends using NICE InContact for call reservations and phone systems in general. IBM recommends coordinating with other agencies through ETSS for increased economies of scale. IBM recommends integration with the Salesforce CRM.

Data Lake

Business Function

Centralized data management is a capability that largely does not exist for DLT. There are no dedicated database administrators for DLT's systems; ETSS programming staff perform limited DBA functions. There has been some effort put in to building a data lake, but this is incomplete and not currently used to its full capability. The intent of this data management strategy will be to set up some guidelines for how to describe and build out some core capabilities. DLT has established a Data and Performance Team and embarked on improved data governance, classification, and management.

Technical Description

A Data Lake is intended to store raw, unstructured, or unstructured data that could be processed later, while a Data Warehouse is intended to store structured, clearly defined, and processed data.

The Data Lake was envisioned during DLT's pandemic response as an entry into cloud computing. While some data feeds have been established to populate a data lake in AWS, little to no transformation is being done to enable reporting on this data and linking to other data sources. The DLT Data Lake is used primarily as conduit to share data between the legacy AS400 system of record and the AWS-based UI systems. Data reporting is primarily ad hoc, but some use of Power BI exists. Power BI reports are leveraging files staged in SharePoint.

Business Risk: Moderate

This risk level for the Data Lake, in its current state, is moderate as it is not fully leveraged today. There is some risk in attempting to change to this complex architecture and breaking some of the UI Online functionality. The primary issue here is that the lack of a usable and centralized data platform limits the agency's ability to serve DLT administration and public's data needs effectively.

Disposition – Recommendation: Replace

Since DLT's data is structured, implement a data warehouse platform with a relational database. Retire the existing architecture and replace with a cloud-hosted data warehouse and extract transform and load (ETL) platform. Changing the current ETL platform would require investment in both new technology for change data capture processing as well as a redesign of the UIO processing process.

Tactical Actions

Decouple UI Online from Data Lake to reduce complexity and potentially reduce AWS hosting costs. DLT is currently paying a moderate sum each month for many AWS environments. Reducing the number of business functions leveraging AWS will reduce the development and testing activity. This will allow for non-production environments to be shut down for extended periods. This especially applies to the user acceptance testing environment, which should only be used occasionally.

Key Questions

1. What should DLT adopt as a data management strategy moving forward?

It is recommended that DLT replace the Data Lake and its complex technology stack with a cloud-based data warehouse to share and manage data efficiently across various applications. This will more closely align to the existing structure of the DLT data, will reduce support costs and will enable more self-service reporting by business users. DLT should develop a Data Management Plan with a focus on the confidentiality, integrity, and accessibility of the data. Ensuring appropriate protections for the data is essential. The plan should also include, but not be limited to, how data will be processed, collected, analyzed, preserved, and shared.

2. What is the best way to get data out of the legacy systems so it can be more easily used by the Data and Performance Team?

The data management strategy must include a tool for Extracting, Transforming and Loading (ETL) data from source systems and into the data warehouse. There are many tools that integrate with the technologies that DLT uses and will use in the future. Integrate.io and Talend offer low-cost options that can be leveraged to get started. Once the core systems have been modernized, DLT should re-evaluate the ETL platform and select a solution that aligns to the primary system's data integration strategy.

Seek more timely integration with the DLT legacy systems of record. Once data is loaded into the data warehouse, DLT can shift reporting from the legacy systems of record to the data warehouse platform, which would provide more flexibility in reporting capabilities.

3. Is the AWS environment the right solution for DLT or are other options a better fit?

AWS can be used to host the data warehouse; however, the technical implementation should be simplified to reduce ongoing maintenance costs. DLT should evaluate the need for each component of the existing AWS build out and simplify where possible.

DLT also leverages Google Public Cloud (GCP) and Google Workspaces for DLT's Workforce Development's BacktoWorkRI system. DLT should consolidate cloud hosting to a single provider to gain economies of scale where possible as well as reducing the need for specialized staff to manage each platform.

XL Print Paris

Business Function

Paris Software by XL Print is the centralized printing solution that enables form printing from AS400 and mainframe. The templates for layout and content need to be customized by the ETSS programming staff. Also functions as a print server for the Xerox machines.

Technical Description

Paris is a COTS product with configurable templates designed to interpret the Line Printer Daemon (LPD) output of the AS400 or mainframe platforms. DLT is using version 5.x, which is up to date. Paris is necessary software to enable form printing from the legacy systems. Paris supports data stream interpretation and template capabilities to handle printing of claimant letters.

DLT recently migrated to the Paris solution, but most of the legacy system output using it is not configured to use the solution to its full potential. Most output is still using hard-coded X, Y coordinates to identify print locations on the form, making document changes cumbersome and inflexible. As output is redesigned, programming is taking place to remove X, Y coordinate-based printing.

Business Risk: Low

This is required tool based on the legacy technology in use at DLT.

Disposition – Recommendation: Retain and keep up to date until systems are upgraded.

The software is serving the present need and should be retained while the legacy platforms are in place. This function is tied to the AS400 and mainframe

platforms and will be replaced by capabilities built into the target COTS benefits systems.

Tactical Actions

Keep version levels current. Modify all forms and make associated COBOL programming changes to use Paris best practice processes and eliminate hard coded X,Y coordinate based printing to improve the ability to make changes and modify output without COBOL programming.

In coordination with changes to the document management system to accept them, reconfigure daily print jobs to route output to digital document management archives and be classified, indexed, and saved as needed instead of physically printing them for DLT archiving. Copies of documents sent to customers should be printed for the mailing to the customer as well as being produced digitally by Paris for importing in to the DMS.

Key Questions

1. Based on recommendations for the UI, TDI, Employer Tax, and FARS system, is this system still necessary?

The modernized systems for UI, TDI, Employer Tax, and FARS will not require XL Print services. Instead, they will produce print-ready documents. This tool is tied to the use of the legacy mainframe and AS400 platforms. DLT will not be able to eliminate this until after all AS400 and mainframes are retired.

2. What additional functionality does XL Print PARIS offer that IBM recommend DLT implement if the system is still needed?

No changes need to be made to XL Print as a product, as the modernized systems won't require it. DLT should continue to use the capabilities, such as templating until the core benefits platforms are replaced.

3. What order should DLT implement the additional features?

Not applicable.

Financial Systems

Financial Accounting Reporting System (FARS)

Business Function

DLT's Financial Accounting Reporting System (FARS) manages cost allocations within DLT's accounts, and it is tied to federal fiscal reporting requirements. It is

the basis for how funds are moved within DLT accounts on the state's financial system called RIFANS.

Technical Description

FARS is a 30-year-old configurable off-the-shelf (COTS) system residing in the mainframe. It is a 100% batch system with file driven data exchanges that process on a nightly basis. Does not support data inquiry.

Business Risk: Dangerous

FARS is another application at dangerous risk levels due to the underlying mainframe. This application also carries operational risk as all data input is manual and no ability to leverage tools to audit financial transaction data between systems exists. [REDACTED]

Disposition – Recommendation: Replace

Implement a Workday Financials module for DLT accounting in the State's Enterprise Resource Planning (ERP) Workday system. (Note: The State's Workday ERP system is under development with planned rollouts for financial and human resources over the next two (2) years.) Integrate with the State level HR, Invoicing and Procurement systems that are rolling out Workday.

Tactical Actions

Secure resources to develop processes to replace FARS data entry with robotic process automation (RPA) that copies data from Excel worksheets onto FARS screens. Explore the option of using another platform, such as the Microsoft Power Platform or other options used by other states to meet the federal reporting requirements.

Recommend securing additional technical resources to cross train, document, manage and learn the system to provide continued support until replacement.

Key Questions

1. How do other state Labor department's allocate expenditures to federal grants?

It is unclear how state workforce agencies allocate expenditures to federal grants. Simplifying approaches available in the private sector are not allowed by federal regulations.

2. Are there any COTS products that can replicate the functionality of FARS?

IBM recommends using a DLT specific module developed in the State's ERP Workday system as a replacement for FARS. Workday is already being implemented at the state level to replace RIFANS. Implementing Workday at the DLT level will provide the best integration between DLT and state-level Workday systems.

Invoice Management

Business Function

DLT engages with numerous partners for millions of dollars to provide training and educational opportunities. These partners are organizations and businesses that work directly with Rhode Island job seekers. The partners apply for funding from DLT, who will reimburse them based within program requirements. Ensuring appropriate oversight, tracking, and processing of these engagements requires a more robust system.

Currently, this is a manual process for processing and paying partner invoices. DLT uses Agiloft, a contract lifecycle management software, for creating and managing the contracts with partners. Data is pulled from Agiloft, RJRI Data Management System, and EmployRI by the Data and Performance lead and sent to Business Affairs. Funding allocations are determined and stamped onto the invoices which drives the accounting entries in FARS. This process includes manual enrollments into EmployRI and multiple staff updating and re-updating tracking spreadsheets.

Technical Description

The is an entirely Excel based process with no support for automation. Appears to be using Excel only as a simple spreadsheet without more advanced features such as data loading, validation, or modeling. Tasks are tracked by moving files between folders in shared network drives. The process is very time consuming and cumbersome.

Business Risk: High

Invoice management is a high-risk business process because it is entirely manual. [REDACTED]

[REDACTED]

[REDACTED]

Disposition – Recommendation: Replatform

Modify business processes to replace manual and spreadsheet-based tracking with Workday enabled workflows. Integration with Salesforce will enable digital

submission of data from partners. This business process will require an end-to-end design effort to integrate contract management in Agiloft with participant tracking in RJRI and partner payment in Workday.

Tactical Actions

Secure technical resources to help build intelligent spreadsheets that automate data summarization and reconciliation. Refactor data structures in excel to reduce duplicate data entry and enable analysis through formulas and pivot tables.

Key Questions

1. What technology solutions between EmployRI, RJRI Data Management System, Agiloft, FARS, and any new products can replace the manual spreadsheet processes that determine participant-based allocations?
To reduce the manual work involved in participant-based allocations that are currently being done using spreadsheets, it is recommended to modify business processes by replacing manual and spreadsheet-based tracking with Workday-enabled workflows. By integrating with Salesforce, partners will be able to submit data digitally, eliminating the need for manual submissions.
2. What technology solutions can be used to create the necessary feedback loops between Business Affairs, Workforce Development, and the Governor's Workforce Board staff to eliminate the staff-time intensive manual feedback process currently in place?
Automation of tedious and repetitive tasks will free up staff time to dig deeper into special cases that require coordination across groups. This will be enabled by workflow in Workday that involves reviews and approvals. Invoices must be submitted as data to truly enable automation, especially around data validation and auditing against budgets.

Salesforce Candidate Systems

Certified Payroll

Business Function

Enforcement of prevailing wage laws through certified payroll audits and complaint investigation. Workforce Regulation and Safety (WRS) team collects project data from awarding authorities and payroll data from contractors for all public works contracts over \$1,000 to ensure workers are classified and paid appropriately under state laws. There is interest in increasing oversight in this

area and shifting the responsibility for collecting weekly certifications from awarding authorities to DLT.

Technical Description

No systems currently support Certified Payroll. DLT is looking for a system that reduces the burden and errors associated with manually tracking, calculating, and auditing vast amounts of payroll data. Automatable functions include online certification, wage reconciliation, evidence collection and storage, case creation and tracking, case submission, and subpoena generation.

Business Risk: Dangerous

The dangerous risk level for Certified Payroll is driven by DLT's inability to meet the public need and agency mission by running a manual process without any system supporting it. [REDACTED]

Disposition – Recommendation: Replatform

Build Salesforce based case management workflows for tracking investigations. Digitize data collection and attestations.

Tactical Actions

Two other RI state agencies (Department of Transportation (DOT) and Department of Administration, Division of Equity, Diversity, and Inclusion (DEDI)) are using a product from Early Morning Software called PRISM Compliance Management (PRISM) for similar activities.

Implement the PRISM solution with minimal customization to meet near term goal of digitizing this process if the Salesforce solution does not align to timeline goals.

Key Questions

1. What is IBM's assessment of the PRISM system used by RI DOT?

Due to RI's procurement rules, IBM was not able to directly consult with Early Morning Software or other potential vendors. IBM recommends creating a Salesforce solution that enables contractors to submit payroll certification data weekly, has case management functionality, integrates with enterprise content management, and supports easy integration with external systems. While PRISM appears to meet the basic functional needs for certified payroll, the product appears very basic and does not have the integration with the WRS and other DLT systems and provide a holistic customer view. There is also very little documentation available, and support will rely on the small vendor that built the product. While

Salesforce will be more expensive in the short term, the long-term advantages of a common technology and user platform will outweigh the initial cost difference. Salesforce also offers far more robust integration options for connecting to municipal and other procurement systems.

2. How should DLT best estimate the system usage for building an RFP for this kind of system?

DLT should utilize historical data to predict the usage of the system and assume that the use will increase annually. According to past data, an average of 9,000 contractors submitted certified weekly payroll and around 70 projects were active every month. On average, the total number of complaints, both from internal and external sources, was 60 per month.

Workforce Regulation & Safety

Business Function

DLT's Workforce Regulation and Safety unit enforces the safety laws that protect Rhode Island's workforce, including the fair collection of wages, child labor laws, trade licensing, apprenticeship training, hazardous substance exposure, weights and measures and prevailing wage laws.

The misclassification of workers as independent contractors rather than employees is a serious problem in Rhode Island and across the country. WRS is the unit responsible for investigation of misclassified workers.

Professional Regulation oversees the licensure, testing, registration, and discipline of more than 30,000 individuals in 67 trade occupations, as well as the administrative and regulatory functions of seven licensing Boards whose 56 members represent various professions. The trade occupations are listed in [Appendix B](#), and licensing boards are listed in [Appendix C](#).

The Labor Standards Unit enforces workplace laws and ensures that Rhode Island's employees receive the wages they have earned. Labor Standards investigates wage complaints involving minimum wage, payment of wages, overtime, Sunday/holiday premium pay, and vacation pay upon termination, as well as child labor, parental and family medical leave, and industrial homework.

The Prevailing Wage Unit refers to the requirements of the Rhode Island General Law 37-13 and the general prevailing rate of pay for regular, holiday and overtime wages to be paid to each craftsmen, mechanic, teamster, laborer or other type of worker performing work on public works projects when state or

municipal funds are used in excess of \$1,000. Contractors must refer to the applicable Davis Bacon Wage Determination rate schedule found online at the U.S. System for Award Management (SAM) to determine the prevailing wage rates for a public works construction project. The prevailing wage rates to be applied are those that are effective as of the date of the awarding of the contract to the general contractor. Contractors must also adjust employees' hourly wage rates (if applicable) every July 1st in accordance with any updated Davis Bacon Wage Determination rates.

Occupational Safety protects the public and private sector by enforcing health and safety standards and by educating the public regarding these standards. The unit is comprised of four separate areas of expertise—Boilers, Elevators, Right to Know and Weights & Measures.

The Office of Apprenticeship is responsible for registering apprenticeship programs that meet federal and state requirements, protecting the safety and welfare of apprentices, assuring the programs provide high-quality training and on-the-job mentoring, assuring the programs produce skilled and competent workers, issuing nationally recognized and portable credentials to apprentices, and promoting the development of new apprenticeship programs.

Technical Description

WRS uses an IBM Informix Standard Engine (Informix SE) based system for storing and retrieving data. This includes the Informix SE database containing over 100 tables as well as Informix forms for data entry. These forms are accessed by logging into a Unix machine using Putty. All interaction is keyboard driven, similar to green screens. The code is written in 4GL version 7.32.UC3, which was released in 2005.

Additional details about the latest version of Informix are available [here](https://www.ibm.com/docs/en/informix-servers/14.10?topic=tools-informix-4gl) (https://www.ibm.com/docs/en/informix-servers/14.10?topic=tools-informix-4gl).

Business Risk: Dangerous

Workforce Regulation and Safety runs on a technology that [REDACTED]
[REDACTED] The system is outdated, lacks integration, and workflows.

Without data integration, the current business processes rely on copy/paste and dual data entry to move data between the payment system and licensing system of record. Other agencies, such as the Department of Business Regulation, rely

on the data from this system to validate licensing status when allowing permits to be obtained in Cities and Towns.

[REDACTED]

Disposition – Recommendation: Replace

Build Salesforce based licensing and permitting workflows and establish records for professionals that will be linked to customer records. Retire Informix database. Digitize all WRS documents into the Document Management System, provide full integration of all WRS documents in the Salesforce platform. Integrate WRS license data with CRM to link data and customers across all DLT units to maximize business opportunity.

Tactical Actions

Recommend securing additional technical resource to cross train, document, and learn the system to support it through replacement. Explore obtaining Informix support through ETSS's pending Informix Managed Services Provider (MSP) to obtain system knowledge to be able to maintain the system.

Assign a data analyst to document data model, determine clean up needs and prepare for mapping to target system.

Include WRS in the Document Management System repositories so documents can be preserved and more readily accessible. Utilize a prospective approach for all new documents, digitize existing document upon “first touch”, as well as back scanning of legacy documents from most current years backwards.

Key Questions

1. Are there investigation case management systems and licensing systems already used in the state or by other states that would be a good fit for DLT?
Most states have their own customized solutions for investigation, licensing, and case management. One such product that provides these functionalities is Tyler Technologies' SRPS solution, which RI DBR will use as a replacement for its on-premises Tyler CAVU licensing system. IBM suggests a Salesforce-based solution, which would be seamlessly integrated with other systems and reduce the number of vendors and technology stacks that DLT would have to work with.
2. How do we build more dynamic reporting capacity?

Salesforce has built-in reporting capabilities, which would support many general reporting needs, especially dynamic dashboards. By exporting the data to a data warehouse, DLT will be able to create reports that incorporate data from WRS and other DLT systems, providing a 360-degree view of the data.

Real Jobs Rhode Island (RJRI) Data Management System

Business Function

Real Jobs Road Island data management system is the system where Governor's Workforce Board manages participants regardless of their federal eligibility. Participants enroll through various portals to initiate the process of seeking aide for job seeking support.

Technical Description

This is a custom developed solution that integrates with EmployRI for storing data and uploaded files. The system includes a web front end and APIs connected to EmployRI, but the database only contains administrative data. API integration with EmployRI is limited to basic data elements and full registration requires manual data entry.

Business Risk: Moderate

This [REDACTED] has limited functionality and integration.

[REDACTED] however the business capability for the application is very limited so risk is not high. While there are far better solutions available, this is not one of DLT's biggest problems.

Disposition – Recommendation: Replace

Build Salesforce based data collection screens and workflow for RJRI applicants. Retire RJRI DMS.

Tactical Actions

Use Robotic Process Automation (RPA) to automate data entry between RJRI DMS and EmployRI. Improve logging and/or access to logs for EmployRI API failures.

Key Questions

1. What additional functionality needs to be built into this system to support the growing RJRI program?

The addition of a partner portal to the RJRI program will enable updating participant information by partners and enrollment managers through the portal. RJRI should not be expanded in its current form as it is a custom

solution built in .Net. IBM recommends replacing this with a Salesforce based solution to consolidate technology and ease integration.

2. How can this system better support the invoice allocation process (listed below)?

The portal will allow partners to submit invoices online. Invoice data will be shared electronically with the state Workday system to streamline allocation.

Worker's Compensation System

Business Function

All Rhode Island employers are required to maintain workers' compensation insurance, which provides workers with protection in the event of a work-related injury or illness by covering missed wages and medical expenses. At the Department of Labor and Training, the Workers' Compensation Division (WC) monitors the state's workers' compensation system, ensuring that all required employers have insurance coverage, that appropriate documents are filed to protect injured workers and employers, that claims are paid correctly, and that measures are taken to detect and prevent fraud.

DLT's role for Worker's Comp is to oversee the insurance companies, look for fraud, and conduct investigations. DLT uses a system to ensure that appropriate documents are filed to protect injured workers and employers, that claims are paid correctly, that all required employers have insurance coverages, insurance carriers report policy information.

Technical Description

This is one of DLT's most modern systems. It is a .NET app with a SQL Server database and integration with OnBase. It is currently supported by a team of staff augmentation resources. Data sharing between systems is via files. Opportunity to upgrade claims data interface to XML but is currently a flat file.

Business Risk: Moderate

There is little risk related to the operating and maintenance of this application. There is a reliance on external, contracted resources for system management. However, there is an opportunity to consolidate technology stacks and eliminate a custom developed application. The risk associated with this application is related to the inefficient use of capital to maintain an application with functions that are available out of the box from other technology platforms.

Disposition – Recommendation: Replace

Migrate case management functionality to Salesforce to consolidate technology. This is a lower priority than other identified systems but should be considered before any significant investments into enhancements are made.

Tactical Actions

Ensure current Workers Compensation .NET system has appropriate documentation for both .NET components, business rules, workflows, and databases. Include the WC system in DLT Data Governance activities as well as overall technological oversight activities by DLT leadership and ETSS.

Key Questions

1. What does DLT need to do to keep this system modernized so it does not fall behind in maintenance and operation?

The Worker's Comp team has a model of continuous improvement. The Worker's Comp team has also defined a road map. DLT may continue to make incremental improvements to the custom application but should avoid major investment. When a large change and major investment is required, the team should use that opportunity to move to Salesforce. This will move the team from an isolated technology solution and into a common platform.

2. Is the current system the right fit for DLT or are there other systems that would be more beneficial to the agency?

In the long run, it is recommended to migrate the application to Salesforce for better integration and technology consolidation. Although this is not a top priority, it should be taken into consideration before any significant enhancements are made. Much of the functionality that was custom developed in the current system is available out of the box in Salesforce. This would provide better integration with DLT's other business units and provide opportunities for a true 360-degree view of the customer.

3. Are there efficiencies or enhancements that IBM recommends in the current system to improve business processes?

Improve integration with OnBase and digitizing paper-based processes should be the focus. Obtain and engage document management system resources to assist building more capabilities.

Other Systems

EmployRI

Business Function

System manages participants involved in federal grants and it gets reported up in Federal Reports. Beyond the federal grant participation, it is also used for employer management, Wagner Peyser, Trade, Jobs for Veterans Grant, other DOL grants MIS and is the state's job bank/Employer Service system.

Technical Description

Geographic Solutions COTS product with numerous individually licensed modules. Some integration with RJRI through a single API with limited data elements. Exports federally mandated reports. Product supports document management for identity files.

Business Risk: Moderate

There is little risk related to the operating and maintenance of this application. As a COTS product, this application requires minimal internal resources support. Geographic Solutions is widely used for employment support across various states' labor departments.

Disposition – Recommendation: Retain

Improve application registration process through integration and automation of data entry. DLT teams have reported frustration with product support from the vendor. Even with this limitation, there are no other viable options that support the complex federal reporting requirements without incurring significant costs to change systems.

Tactical Actions

Use Robotic Process Automation (RPA) to automate data entry between RJRI DMS and EmployRI.

Key Questions

1. Is DLT maximizing the capacity of this system?

DLT is making good use of the EmployRI system, but there is still room for improvement in terms of integrating Data Management System (DMS) with EmployRI. There are a few potential enhancements that could be made to EmployRI, such as the ability to verify participant IDs, resolving any API issues with the vendor, implementing quick alerting for data transfer issues, standardizing data collection, and enabling easy data transfer from DMS to GSL. To help streamline manual tasks, RPA (Robotic

Process Automation) can be used as a short-term solution. Once shell accounts are created in EmployRI, participant data can be automatically populated using RPA.

2. DLT over the years has built out the activity codes and federal reporting mapping, what is IBM's assessment of this current state?

The activity codes created for federal reporting are working well for the state, and no significant changes are required.

Agiloft Contract Management System

Business Function

Contract Lifecycle management software which allows DLT to create contracts with training & education partners. Also tracks approval workflow and manages invoices associated with funding requests to ensure that partners are paid appropriately under state laws.

Technical Description

Agiloft is a SaaS application that was DLT began using in 2019. The DLT Team currently contracts through Agiloft for an Agiloft partner, Spectrum Mobility, to provide Agiloft implementation and customization assistance. The system is a configurable platform that runs on Agiloft's cloud and resembles Salesforce in look and function. Agiloft supports data exchange with hundreds of products, multiple reporting platforms and APIs for custom integration.

Business Risk: Low

There is little risk related to the operating and maintenance of this application. As a COTS product, this application requires minimal support. Technology support is reliant on contracted resources. While DLT continues to use this product for its intended purpose, contract lifecycle management, it is an example of the target model for applications in DLT's portfolio.

Disposition – Recommendation: Retain

Expand use of Agiloft to support additional workflows related to contract lifecycle management. Do not expand into functions beyond the core capability of the product, such as invoice management. Integrate into the Salesforce CRM for 360-degree view capabilities.

Tactical Actions

None

Key Questions

1. What additional functionality needs to be built into this system to support the growing RJRI program?

The following additional functionality in Agiloft will allow DLT to meet its growing needs.

- a. Introduce a partner portal for submitting PITCH proposals.
- b. Enhance to allow for contracts to be modified and extended.
- c. Integration with a Partner Portal to support partners submitting changes to existing contracts.

2. How can this system better support the invoice allocation process (listed below)?

Agiloft should not be involved in the invoicing process. This product is designed for contract lifecycle management and should only be used for functions in that domain.

Office of Community Engagement

Business Function

The Office of Community Engagement (OCE) leads the Department of Labor and Training's commitment and strategy to be a diverse, equitable, and inclusive organization, both internally and externally in serving the public.

The mission of the OCE is to promote and ensure fair treatment and quality employment for all, while supporting and developing partnerships and equitable distribution of services and resources through meaningful community engagement.

Technical Description

Team currently making use of standard Microsoft 365 tools. Notes are kept offline. Team would like to leverage data from other divisions. Primary functions are around communication and contact management.

Business Risk: Low

This team does not have any systems that introduce business risk, and the team is very small. As the team grows and picks up additional responsibilities, there will be a need to bring in tools to improve efficiency.

Disposition – Recommendation: Adopt

This team will adopt invoice management, case management and CRM capabilities as the common platforms are enabled. This team is a good candidate for pilot implementations given their small size. DLT's Marketing and

Communications team uses Constant Contact for mass emailing campaigns, which may be a good solution for the OCE team. With the Salesforce CRM, contact management should transition to Salesforce.

Tactical Actions

None

Key Questions

1. Are there COTS products that could help organize or facilitate the work of this unit?

The Office of Community Engagement (OCE) needs a solution that can handle CRM, case management, and contract management. IBM recommends a Salesforce-based solution, which would be a good fit for OCE's CRM and case management requirements. As for the contract management aspect, DLT can utilize its existing Agiloft software. Agiloft is a contract management software currently used by DLT.

2. How should DLT best estimate system usage/size to build an RFQ/RFP?
OCE, given their very small size, should leverage the Salesforce platform that is being recommended for other larger divisions of DLT.

3.0 Objective Recommendations

IBM recommends that DLT undertake a series of initiatives to modernize their systems and processes. These initiatives should follow the guidelines outlined in section 2.0 above. Each initiative is described below along with proposed phases, benefits assumptions and options evaluated.

Initiative 1: Employer Tax, TDI/TCI, UI Modernization

Select and configure a new Employer Tax, UI and TDI/TCI solution leveraging the common Integration Platforms to share data across the DLT application portfolio including Data Warehouse, ICON, and Content Services to simplify and automate workflows. Modernization will include retiring the Employer Tax mainframe, Wage Record mainframe, AS400 and consolidating UI and TDI/TCI applications into a single system.

Projects / Phases

1. Replace mainframe implementation for ICON interface
Implement ICON module from selected COTS platform as stand-alone solution until full UI system is in place. Will require some temporary process workarounds depending on what ability the vendor has to adapt to this unique request.
2. Implement Employer Tax Systems processing on new platform
Select an employer tax and benefits platform and partner. Implement new solution for employer tax and wage record processing and transitional solution to feed legacy UI and TDI systems as well as the Data Warehouse and external data sharing partners.
3. Select and implement benefits solution to support TDI/TCI
Extend platform's out-of-the-box functionality to support TDI/TCI benefits based on DLT's requirements. Build out MVP and migrate required functionality from the AS400 and custom TDI Online onto the new solution.
4. Extend benefits solution to support UI
Extend platform's out-of-the-box functionality to support UI benefits based on DLT's requirements. Build out MVP and migrate required functionality from the AS400 and custom UI Online onto the new solution.

Benefits

Stabilization

- Replace systems ranked as “Dangerous” first (Employer Tax, ICON) and then move UI and TDI to a supported platform with available resources to support it.

Customer Experience

- Online self-service capabilities for claim submission, supporting docs and status
- Faster claim decisions and processing due to automation

Operational Performance

- Reduction in the manual effort to load tax/wage, ICON data
- Improved data access to enable better decision making
- Integrated appeals, LMI, case management and correspondence

Business Agility

- Participant data visibility across programs
- Integrated front end applications provide internal and external users seamless interaction with the systems of record and eliminates the complexity of batch data synchronizations between the front and back-end systems
- Simplified vendor management through app consolidation

Improved Security and Compliance Posture

- Improve the security and compliance posture using modern technologies that are more readily supported by best-in-class tools.

Assumptions

- Funding is available.
- Programming changes are limited on the legacy systems.
- Baseline requirements are known.
- Modernization Delivery Unit and dedicated Team has been established with key SMEs including a UI/TDI TPO, System and Integration Architect, Project Managers, Business Product Owner, legacy technical resources, and key stakeholders.
- Ensure enough legacy and technical resources to support ongoing operations as well as migration efforts.
- The vendor has a COTS solution available or a configurable benefits platform that can be adapted to support UI, TDI and TCI benefits programs as well as Employer Tax and ICON capability.
- The selected solution will have out of the box integration with ICON.

- DLT's utilize business process re-engineering to focus using as much baseline system functionality as possible to keep customization to a minimum.
- TDI and UI modernization will not run in parallel, allowing for lessons learned and resources from TDI to apply to UI.
- The start of a UI modernization project is dependent on winning a large federal grant.

Options

The RFP should target all configurable platforms that can support Employer Tax, ICON, UI and TDI/TCI. This is to avoid multiple platforms in the future and to ensure interoperability and coordination among the systems. Due to available funding and resources, there may be a gap in DLT implementing the phases for various components.

The priority should be given to the vendor that can deliver the best value to DLT, including cost assessment, the most out-of-the-box functionality, provides an adaptable implementation strategy to meet the agency and technological requirements, is configurable rather than requiring customization, can rapidly scale, provide appropriate performance and customer satisfaction tools, meet or exceed required security and compliance requirements, and can demonstrate a modern adaptable product. Leading vendors include, but are not limited to:

- Sagitec
- FastUI
- Geographic Solutions
- TCS
- Deloitte
- Infosys
- Accenture

There are a handful of major players in the UI and tax modernization space. Recent industry trends indicate that states are taking advantage of off-the-shelf solutions that can be configured to support their unique laws and business rules. There are no clear winners amongst the COTS vendors as we've observed states moving between the vendors, using multiple vendors, and opting for custom solutions. While states are each coming to different conclusions for solving a relatively similar problem, IBM recommends limiting complexity by selecting a single vendor that aligns most closely to RI DLT's needs and culture.

Custom	FastUI	Geographic Solutions	Sagitec Neosurance	TCS
Colorado North Dakota Florida Illinois Minnesota (Deloitte) New Hampshire New Jersey South Dakota	California Illinois Massachusetts * <i>Michigan (moving to Deloitte)*</i> Montana * Nevada * Oregon * Tennessee Washington (benefits)	Iowa Nebraska Pennsylvania (bens) Washington DC (bens)	Maryland Ohio South Carolina (tax) West Virginia Washington (tax) Washington DC (tax) Texas	Connecticut Georgia (2023) Maine Mississippi Missouri New York Wyoming

Top custom vendors include: HCL, Capgemini, Accenture, Infosys and others

* Indicates benefits and tax solutions from the same vendor

Initiative 2: Content Services – Document Management System

Upgrade on-prem OnBase solution to Hyland's SaaS-based model while also updating to the latest software version. Follow current vendor's recommendations for addressing stability and security concerns. Design and implement an archiving strategy that enables the offloading of historical digital assets from the operational platform.

Note: Unless there is a compelling reason to migrate from the current DMS, IBM recommends remaining on the current system since it could be stabilized for less than full replacement to a new product.

Prioritized Activities

1. Implement stabilization recommendations from product vendor
Follow recommendations to implement highest priority stabilization and security changes.
2. Migrate document management function to a SaaS solution
Execute recommendation to upgrade current version of OnBase.
Onboard additional units to the new solution incorporating archiving,

migration of existing documents and inbound faxes. Implement agency wide fax server full integrated with the solution.

3. Onboard existing teams and processes to new platform

Onboard UI, TDI, and WC to the new platform with minimal initial modifications to processes. Leverage long term professional services or staff augmentation to establish a continuous improvement model that addresses the highest priority business issues.

Ensure appropriate system licensure to allow for full adoption of the DMS across the entire agency.

4. Workflow automation and document tagging

Onboard additional teams and processes to new platform to eliminate all paper-based workflows. Expand automatic document identification, classification, and tagging. Build workflows to intelligently route inbound documents to workgroups. Implement auto-redaction of documents and quality control measures. Explore newer technologies that may be used to review existing documents and assign to appropriate document classes.

5. Develop and implement document archiving strategy

Define archiving rules to meet regulatory and operational requirements. Select solution for long-term storage of digital documents. Build automated processes to archive documents from all applications with digital documents including, OnBase, SharePoint, EmployRI and internal processes

Benefits

Customer Experience

- Enables online self-service capabilities for submission of applications and uploading supporting docs
- Faster claim decisions and processing due to automation and easy access
- With proper document security, classification, and redaction, documents could be made available to the customer, provider, or public, as applicable. DLT would be positioned well for a digital government experience.

Operational Performance

- Reduction in the manual effort to scan paper forms
- Digital document tracking, workflows, and integration for appeals, LMI, case management and correspondence

- Elimination of time spent filing and retrieving documents

Business Agility

- Continuous process improvement enabled through managed service engagement and dedicated staffing of a Content Services TPO

Improved Security and Compliance Posture

- Improve the security and compliance posture using modern technologies that are more readily supported by best-in-class tools.
- With appropriate settings, one ingested, no document could be physically lost.

Assumptions

- Funding is available.
- Modernization Delivery Unit has been established with key SMEs including a Content Services Technical Product Owner (TPO), Project Managers, technical staff, and key stakeholders. Ongoing vendor professional services or staff augmentation required to ensure long term success.
- DLT Business users appropriately classify and index documents.
- A migration to a new platform and vendor would introduce additional change beyond that of upgrading from the on-premises to cloud-based OnBase.
- The existing vendor team has the experience and familiarity required to deliver an enhanced system faster than a new partner.
- Past frustration with the current product and support appears to be related to misaligned expectations, improper initial setup and document classification, lack of investment and technical resources, not a poor product or partnership.

Options

IBM recommends continued use of OnBase with a focus on platform stabilization over a migration to a new solution. Leverage the vendor's cloud solution to relieve the infrastructure maintenance burden and providing managed services and consistent product roadmap and upgrade path. Major document management solutions offer comparable features, so that there is limited benefit to changing platforms.

- Upgrade and extend OnBase
- Select alternative centralized platform and migration content
- Leverage built-in doc management (i.e., EmployRI) and SharePoint

Initiative 3: Call Center Phone System, IVR and Reservations

Select, build, and integrate a cloud-based call center phone system with call routing, interactive features, and connections to backend systems to enable self-service. Continuous improvement and expansion of capabilities as legacy systems are modernized, and new capabilities are unlocked.

Projects / Phases

1. Document phone system and IVR requirements
Analyze and document the agency wide requirements for the telephone and IVR systems. Identify call trees, mappings, and units with specialized compliance requirements.
2. Select and install call center and IVR telephony platform
Set up base features of phone system such as call routing, queuing, and voice mail. First phase should include existing capabilities for the call centers and self-service such as UI weekly certifications and TDI IVR functions. Telephony system will support scheduling of conference calls for Board of Review and reservations (to be implemented in a future phase).
3. Integrate telephony platform with CRM platform
New capabilities will include functions to support the call center experience through integration with the CRM system to identify callers and log the support interactions. Retraining will be required as service reps will work directly in CRM for all telephony functions.
4. Implement reservations model for phone-based support
Develop systems and processes for a reservation model. Requires public facing self-service site to schedule a callback as well as the telephony platform to manage the workforce and calls. Call center training and adjustments to work scheduling will be key components of the new model.
5. Self-service integrations and virtual assistant
Further self-service capabilities will be enabled through integrations as additional DLT systems are modernized. Enable a virtual assistant to deflect calls from service reps.

Benefits

Customer Experience

- Reduced call wait-times through self-service, intelligent call routing and virtual assistance for routine requests
- Additional language options
- Provide scheduling flexibility by enabling reservations

Operational Performance

- Leverage data capture to analyze and adapt to call patterns
- Identify callers to improve call routing and resolutions
- CRM integration enables comprehensive call and program history
- Eliminate the cost and complexity of some users requiring multiple phone systems to complete their required tasks
- Scheduling of calls would provide staffing predictability by eliminating surges that occur early in the week. Additional staff could be assigned, or the customers would select times later in the week resulting in a balanced workload.
- Develop metrics for call types to allow targeted campaigns to address frequent issues

Business Agility

- Consistent platform builds scale for synergies across DLT divisions
- Ability for staff phone number to be available to them regardless of location
- Provides opportunity for further integration among DLT divisions
- Modern platform enables workforce location flexibility

Assumptions

- Funding is available.
- Modernization Delivery Unit has been established with key SMEs including a Call Center and IVR Technical Product Owners, Project Managers, technical resources, and key stakeholders.
- DLT engages appropriate technical resources to configure, manage, and support ongoing operation of the system.
- Training occurs for users, managers, and technical support staff.
- A single modern system can support all DLT's needs including the interactive features and scalability required under peak conditions.
- All existing phone systems will be consolidated into one and the legacy systems will be decommissioned.
- Agency hardware (laptops, networking, etc.) can support soft phones. Voice over IP (VOIP) phones are purchased for those users that still require a desk phone. Headsets and other tools are purchased as needed.
- Remote staff has appropriate Internet service and bandwidth.

- Some integration with legacy systems may be required to enable automation as dependent system modernizations may take a long time.
- Selected IVR platform will include off-the-shelf integration to CRM platform.

Options

Recommend consolidating telephony and IVR solutions to a single platform.

Expand deployment of NICE inContact as selected by RI Dept of Health.

Leverage out-of-the-box Salesforce integration capabilities for complete CRM experience.

- Replace with NICE inContact
- Explore other telephony options with similar capabilities as NICE inContact that may already be included under contracted State agreements.
- Upgrade Avaya
- Expand AWS Connect

Initiative 4: Data Strategy and Reporting

Design and build a data warehouse to store centralized master, operational, and reference data to be used for reporting, analytics, dashboarding and forecasting. The data warehouse would be heavily used by the Data and Performance Team and would replace the manual and spreadsheet driven approach that the LMI Team uses.

Governor McKee has issued Executive Order 24-06 (<https://governor.ri.gov/executive-orders/executive-order-24-06>) establishing a Data Center of Excellence within ETSS. DLT's modernization efforts should be aligned with the overall State data strategy.

Projects / Phases

1. Data Governance, Business Glossary and Metadata

Empower a team to manage and drive data management in the environment. Identify initial set of business requirements, create the business glossary and metadata required as input into the next generation data analytics environment. Secure staffing to complete the current project underway by the Data and Performance and ETSS Teams.

2. Data Warehouse MVP Implementation

Build a foundational data warehouse that is hosted in the cloud and has a standard extract, transform and load (ETL) tool connected. Early phases should focus on data modeling and building out the core structures for customers and partners. Power BI reports should be built directly from data marts, replacing the SharePoint sources of today.

3. Expand data warehouse to support additional requirements

Expand data warehouse data domains by incorporating additional internal and external data sources. Expose additional data sets to support new business requirements and support decision making process with actionable insights. Leverage the data warehouse for data exchanges.

The Labor and Management Information (LMI) team requires data from the majority of systems. The extended data warehouse will serve as an excellent source for all of LMI's data needs. With access to the data warehouse, the LMI team will be able to write and run data extraction queries tailored to their specific needs. This will be particularly beneficial when the LMI team is working on specialized projects. Furthermore, LMI staff will be able to use tools like Power BI to access the data warehouse and extract and summarize data. Provide training to existing teams to enable them to leverage new tools.

Benefits

Customer Experience

- Improve confidence in public reporting through automated consistent reports.
- Ability to bring in advanced analytics that measure trends across programs.

Operational Performance

- Faster turn-around on ad hoc report requests.
- Improved ROI as current platform is not used to full capability.

Business Agility

- Ability to share resources between Data and Analytics and LMI when all working from the same platform and tools.
- Provide single point of integration for all data sharing partners

Assumptions

- Funding is available.
- Modernization Delivery Unit has been established with Project Managers, technical resources, and key SMEs including a Data Architect and key stakeholders.
- There are ample legacy technical resources to support data classification activities.
- Appropriate data governance and data sharing agreements are in place for data to be shared.
- Data warehouse replaces AWS Data Lake implementation.
- Platform will be deployed in the public cloud.

- Data warehouse will leverage relational data and be accessible by standard reporting tools like Power BI.
- Staff will be trained and able to use the data analytics tools.
- Data governance, security, and change management will be key requirements during the design and implementation of the data warehouse.

Options

Recommend replacing data lake model with new data warehouse. Simplify architecture and utilize technology more closely aligned to DLT's native structured data. Put systems in place to enable RI to leverage DLT data (anonymized and non-anonymized, as needed) as a core asset for operational and public use.

- Build new data warehouse
- Integrate with ETSS Data Strategy (under development) to facilitate data sharing among State agencies.
- Extend AWS data lake
- Continue with SharePoint and ad hoc tools

Initiative 5: Financial Management

Build an integrated environment of Workday modules and instances, integrating with the State Workforce ERP, to modernize and automate DLT financial activities. Includes accounting, billing, budgeting, and financial reporting capabilities to replace FARS and the many spreadsheet-based processes. Integrate with HR's Workday to receive timesheet data and leverage the Controller's Office Workday solution for invoice processing and billing.

Projects / Phases

1. Implement a State ERP Workday instance for DLT accounting
Accounting system includes standard general ledger, accounts receivable and accounts payable functions. DLT system acts as a sub-ledger to RIFANs, containing details related to federal grant allocations. All financial transactions for DLT will flow through this system.
2. Integrate DLT with Controller's procurement system
Enable automated workflows for processing partner invoices with expense receipts and approvals of internal purchases. This system will integrate with the accounting system and provide detailed accounts payable data.
3. Integrate DLT accounting functions with Workday instances

Employer tax, benefits, licensing, permitting and worker's comp systems all track financial transactions that must be logged into the accounting systems. Integrating these systems will replace manual entry and cross-checking of data.

4. Select and implement a budgeting system

This system will enable financial forecasting and reporting. Integration with accounting will support target vs actuals analysis.

Benefits

Customer Experience

- Faster turn-around for invoice payments to partners.

Operational Performance

- Systematic traceability from invoice to payment including correspondence with partners.
- Automation and digitization will reduce duplicate entry.
- Ability to code program allocations into accounting system.

Business Agility

- Integration between DLT and State-level systems reduces errors in data entry.

Assumptions

- Funding is available.
- Modernization Delivery Unit has been established with key SMEs including a Financial Management Technical Product Owner, Project Managers, Systems and Integration Architect, Workday developers, and key stakeholders.
- Ample legacy technical and functional legacy staff are available to support the initiative and perform operational tasks.
- State ERP successful production on time and the approval for the DLT's proposed integration with the ERP Workday system.
- All new systems will be SaaS based and will have off-the-shelf integration capabilities including pre-built connectors.
- Connected systems and accounting flows can be implemented incrementally.
- Base accounting system will support standard functions required by DLT and customization will be kept to a minimum.

Options

Recommend Workday for ease of integration and common technology across DLT and supporting state agencies.

- Workday financials integrated with HR and Accounting Workday deployments
- Stand-alone accounting system with custom integrations to HR and RIFANS
- Custom built solution

Initiative 6: CRM, Customer 360, and Case Management

Enable a centralized view of the customer's data, program participation, and support interactions. Salesforce will be the system of interaction between DLT and customers, tracking all activity so DLT will have a holistic 360-degree view of the customer, know the customer's history, and can efficiently serve their needs. Case management links to the customer's data and automates workflows for customer interactions including integrations with systems of record.

Projects / Phases

1. Establish base installation of Salesforce
Define and build foundational employer and customer data models, with search functions and display screens. Ingest data from various systems including WRS, WC, Unemployment, TDI, and Employer Tax to populate system and establish base records and relationships.
2. Case management workflow automation
Establish case management capabilities by building MVP implementation for Workforce Regulation and Safety and the Office of Community Engagement (OCE) discrimination cases. Extend to support tracking labor complaint workflows. Continue expansion into highest volume workflows with the most pain points.
3. Build Customer 360 capabilities
Expand data model and customer screens with integration to source systems to retrieve customer data into a centralized view. Integrations to incrementally add UI, TDI/TCI, WC, RJRI, professional licensing and EmployRI data to Salesforce.
4. Build Employer/Partner 360 capabilities
Expand data model and employer/partner screens with integration to source systems to retrieve employer/partner data into a centralized view.

Add tax and wage, RJRI partners, OCE partners and labor violations data to Salesforce.

Benefits

Customer Experience

- Robust customer data and interaction history improves customer's confidence in DLT services.
- Consolidating the data allows for improved assessment of customer inquiries.
- Single point of contact for DLT customer communications.

Operational Performance

- Improved ability to train and hire call center representatives to work on a modern platform.
- Reduction in call times since history is known and data is easily accessible.
- Full view of customer DLT contact.
- Improved reporting and analysis of call times and customer contact, introduction of dashboards and other tools.

Business Agility

- Broad use of Salesforce across DLT divisions enables economies of scale and resource sharing for implementation and support.
- Low-code platform allows for easy adjustment of business rules for case management workflows and data capture.
- Enables expansion of messaging and communications to additional channels and integrated document sharing with customers.

Assumptions

- Funding is available.
- Modernization Delivery Unit has been established with key SMEs including a CRM Platform Technical Product Owner, Systems, and Integration Architect. Project Managers, Salesforce resources, and key stakeholders.
- Salesforce has out of the box capabilities to support most of DLT's core case management and workflow needs and is the preferred CRM platform of RI ETSS.
- All systems selected by DLT will have out-of-the-box integration capabilities with Salesforce.
- Salesforce capabilities will be built incrementally over time through a continuous improvement model by a persistent delivery and product team.

- Support and governance oversight provided by ETSS' Low Code/No Code Center of Excellence.

Options

Recommend building around a Salesforce ecosystem for ease of integration and common use across all DLT. Salesforce offers the most out-of-the-box capabilities that reduce the amount of custom development and integration required. Wide adoption and large partner landscape ensures continuous product advancement and diverse support availability.

- Use Salesforce to centralize CRM, case management and activity tracking
- Use second tier CRM and case management system like Dynamics
- Use individual systems and point-to-point integrations

Initiative 7: WRS and Certified Payroll Modernization

Select and configure a new Workforce Regulation and Safety system of record with integration to self-service portals for all WRS constituents. Digitize the Certified Payroll data collection and auditing process by establishing an online website for weekly submissions and leveraging case management to track investigation actions. Build integrations to awarding authorities for contract registration. Digitize all existing WRS records and save in the document management system.

Projects / Phases

1. Implement case management for labor standards and certified payroll
Build workflow for tracking payroll investigations and integrate with document management solution. Build website and database for awarding contract upload and vendor entry of weekly payroll certification data. Enable digitization of labor standards investigations. Digitize new and existing records once the document management system is stabilized and ready to accept them.
2. Implement licensing system to support occupation safety
Define data model and workflows to automate the tracking and issuing of permits to replace Informix database. Includes new permits, expiration and failed inspections. Integration with document management system.
3. Implement licensing system to support professional regulation
Define data model and workflows to automate the tracking and issuing of licenses to replace Informix database. Includes new licenses, testing, including implementing computer-based testing, renewals, and complaints. Integrate with document management system.

4. Implement self-service portals for permits and licensing
Build portal for constituents to perform self-service applications, status checks and payments. Build portal for professionals to perform self-service application, renewals, test scheduling and payments.
5. Testing process improvements
Explore options to replace the current paper-based testing system with an electronic testing method or improved integration of the Scantron based paper testing system into the new Salesforce based system.

Benefits

Customer Experience

- Enables online self-service capabilities for submission of licensing and permitting applications, uploading supporting documentation and payments.
- Allows more public transparency into license holders.
- Ability to leverage system to identify projects that require investigation.
- Improved oversight and ability to investigate prevailing wage cases will help protect workers.

Operational Performance

- Focus on investigation rather than data processing of hand-written forms.
- Case management and digital documents will improve throughput.
- Automated reports allow DLT to be proactive in their monitoring and oversight responsibilities.
- Data collected could be used for improved analytics and fraud reporting.
- Digitized documents allow for improved document security, auditing, and access by remote workers.

Business Agility

- Low-code platform allows for easy adjustment of business rules for case management workflows and data capture.

Assumptions

- Funding is available.
- Modernization Delivery Unit has been established with key SMEs including a CRM Platform TPO, Systems and Integration Architect, Project Managers, technical resources, and key stakeholders.

- Sufficient functional and technical staff are available to support the project as well as ongoing operations.
- Salesforce has out of the box capabilities to support most of DLT's core case management and workflow needs and is the preferred CRM platform of RI ETSS.
- If another system is preferred, the solution should fully integrate with Salesforce.
- Existing online license application and test result functions will be replaced with new self-service portals. Paper based testing replaced with computer-based testing.
- All projects are dependent on a base implementation of Salesforce.

Options

Recommend Salesforce-based solution over independent systems with integration. A common platform enables ease of support, consistent experience, and economies of scale. All systems will require configuration to adapt to DLT's processes.

- Salesforce
- Tyler SRPS (licensing)
- PRISM, LCPTTracker, AASHTOWARE (certified payroll)

Initiative 8: Partner Support Process Improvement

Expand automation, self-service and consolidate technologies for partner related systems. Extending Agiloft to support business processes that precede and follow contract management will require moving to an online model so that partners may submit their data digitally. This will enable automation of basic partner management functions and free up time to focus on job seeker outcomes. Building a more robust RJRI in Salesforce will not only remove a custom-built system but will enable seamless integration between Agiloft and EmployRI.

Projects / Phases

1. Pitch and Proposal Workflows

Expand Agiloft forms and workflows to support tracking pitches and proposals in a similar fashion to the current contract lifecycle management.

2. Build partner portal for pitch submission and contract extensions

Build Salesforce based portal that provides partners a location to log in, submit and track pitches, proposals, and contract extension request. Portal will integrate with Agiloft, which will support the business process workflows.

3. Extend partner portal to support invoice submission
Incorporate invoicing capabilities into partner portal to enable automation of digital invoice processing. Initial phase will be to accept invoices from partners. Later phases will integrate the partner portal with the Business Affairs financial systems.
4. Replace RJRI with Salesforce solution
Reimplement RJRI participant enrollment form and partner site with Salesforce solution. Leverage centralized contact record and ID verification solution in Salesforce so that the system recognizes the customer from an unemployment claim or another program.

Benefits

Customer Experience

- Improved relationships with partners as more time can be spent on programs rather than data processing.
- Ability to support more partners and therefore reach more job seekers.
- Improved online user interface and interaction for job seekers.

Operational Performance

- Reduction in manual work as processes are moved from email to an integration platform.
- Improved ability to track outcomes through data integration.

Business Agility

- Broad use of Salesforce across DLT divisions enables economies of scale and resource sharing for implementation and support.
- Low-code platform allows for easy adjustment of business rules for data capture and integration.

Assumptions

- Funding is available.
- Continued engagement of Agiloft and an implementation partner by DLT
- Modernization Delivery Unit has been established with key SMEs including a CRM Platform TPO, System and Integration Architect, Project Managers, technical resources, and key stakeholders.
- Partner portals will be built in Salesforce and will be an extension of the core Employer CRM.
- Integration with Business Affairs financial systems is dependent on implementation of the recommended procurement Workday module.

- Project 4 (Replace RJRI with Salesforce solution) is dependent on another initiative to implement centralized contact records and ID verification solutions in Salesforce.

Options

Recommend Salesforce-based solution over independent systems with integration. Common platform enables ease of support, consistent experience, and economies of scale. Retiring custom solution reduces technology sprawl and required skills to support the application landscape.

- Replace RJRI Data Management System with Salesforce
- Continue enhancing RJRI Data Management System

Initiative 9: Miscellaneous Technology Improvements

IBM's scope was limited to major key DLT systems and processes. However, some additional technology related items were observed and could be addressed. Since they were out of scope, IBM did not perform detailed financial impact analysis for them but identified them so they can be considered in DLT's future plans.

- Desktops/Laptops – Adopt one device per individual
 - Observations:
 - IBM observed that while most employees are using one device (laptop or desktop) there are still employees that have both devices.
 - Most devices are basic and have lower end hardware configurations.
 - No standard refresh cycle for devices. Due to funding constraints, refreshing devices with new equipment appeared ad hoc and only occurred when staff members had significant issues with their devices. This results in user and management frustration since replacements can take time to be procured. It also adds additional pressure to the Technical Support Team.
 - Not all employees have headsets or cameras that connect to their computers.
 - Recommendations:
 - Standardize on a laptop only model to provide the most flexibility for the staff to be able to remote work, be adaptable to facility closures, and improve collaboration, as well as minimizing hardware support requirements.

- Ensure stand by devices are available so the staff are able to swap out malfunctioning devices for a replacement to keep staff working while hardware issues are addressed.
 - Implement a standard three-year device refresh schedule where one-third of the devices are replaced each year with refreshed equipment. Alternatively, adopt a four-year cycle with the recognition that DLT will see more issues in year four. This provides predictability for budgeting, tech support resource planning, and minimizes business disruptions.
 - Purchase moderate level systems instead of minimal baseline models. Spending a little more initially on a device for an improved processor, increased RAM, or a larger hard drive will prolong the useful life of the device.
 - Ensure every employee has a headset so they can participate in Teams or Zoom calls. Having cameras available to each unit to share with staff (if needed) would also facilitate communication using these tools.
- Printers / Multi-Function Devices
 - Observations:
 - The agency appears to have a significant amount of workgroup level printers for individuals throughout the agency. The printing capacity far exceeds the business needs.
 - Like laptops/desktops, printers are aging and replaced when there is a hardware issue. Current individual printers are being replaced with individual printers,
 - Specific and expensive configuration options, such of external paper trays, are employed to separate employee print jobs.
 - Recommendations:
 - Seek to replace individual desktop printers with shared, networked, large capacity multifunction copiers and printers.
 - Printing cost per page and support is generally less expensive with the larger multi-function devices.
 - The concerns about individual user documents being mixed could be addressed with requiring a PIN to be entered to release the print job or implementing “follow me” printing capability that could leverage their employee ID card to release print jobs upon swiping at the device.
- Domain Names
 - Observations:
 - [REDACTED]

- Recommendations:
 - Migrate all agency sponsored websites to a .Gov domain name. A .Gov name provides assurances to the public that they are interacting with a government agency. Additionally, there are inherent protections with .Gov domain names.
- Employee Wi-Fi
 - Observations:
 - Wi-Fi is only available in and around DLT conference rooms and in the remote Woonsocket and West Warwick Offices.
 - Recommendations:
 - Implement Wi-Fi throughout DLT's offices to allow for better collaboration among employees.
 - Wi-Fi would also provide some backup in the event of wiring issues with DLT's aging wiring infrastructure.
- Conference Rooms
 - Observations:
 - Only selected conference rooms have technology providing cameras, displays or projectors, and conference call technology.
 - Recommendations:
 - Explore opportunities to upgrade conference room technology. This will allow for more collaboration among staff as well as opportunities to engage with constituents.

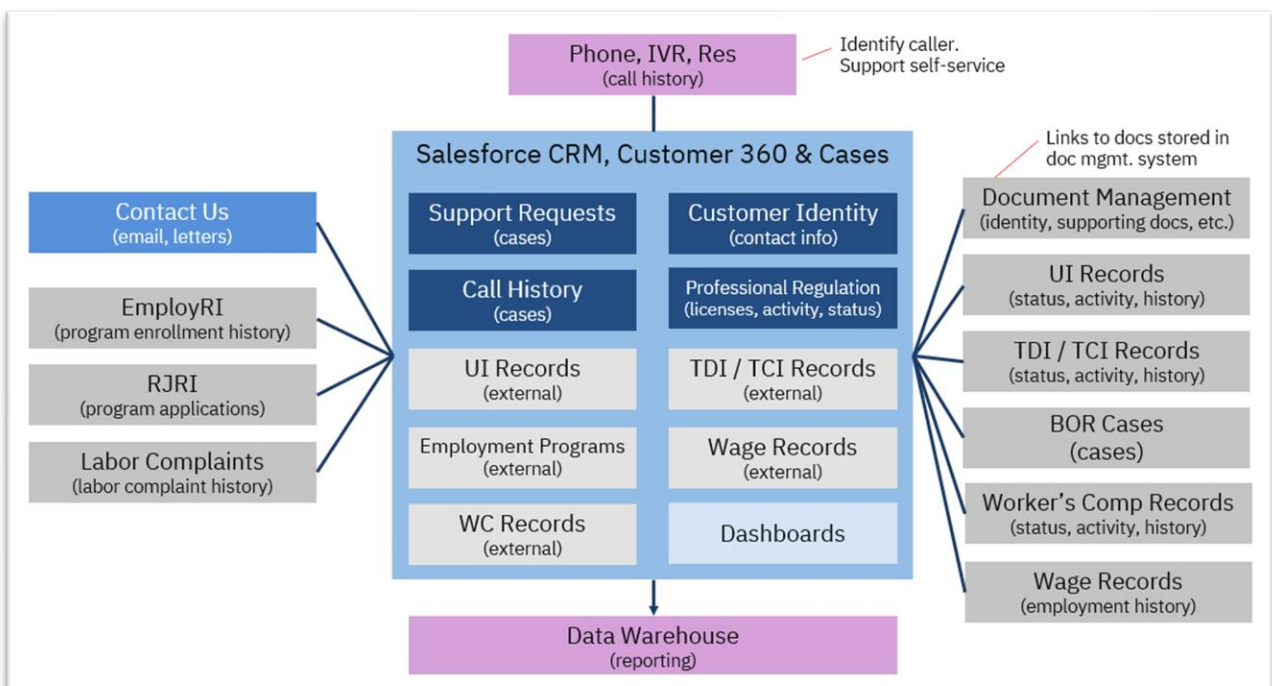
4.0 Target State Architecture

This section highlights a few of the major components and considerations of the existing and future architectures.

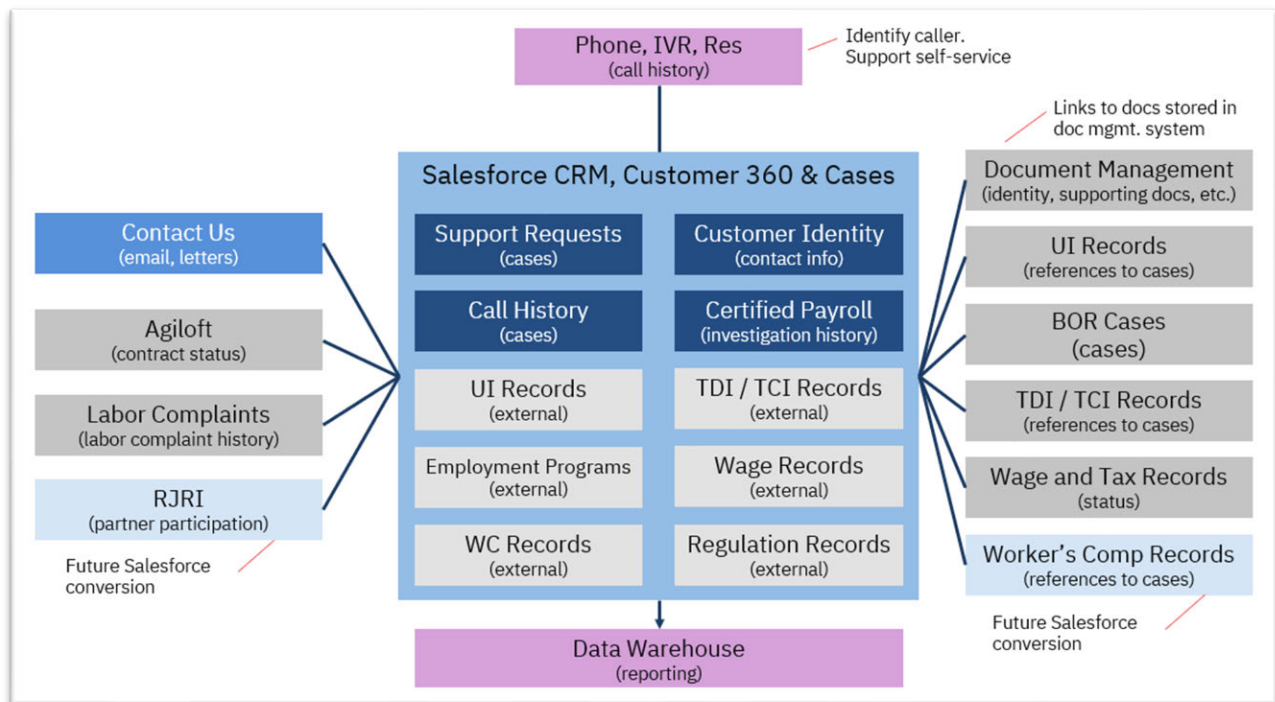
4.1 Salesforce as a central component of DLT's architecture

IBM recommends an architecture with Salesforce at the center. Salesforce will serve as the system of interaction between DLT and customers, tracking all activity so we know the customer's history and can efficiently serve their needs. This includes a centralized view of the customer's data, program participation and support interactions and creates a single location for finding the customer regardless of their relationship with DLT.

The diagram below illustrates how Salesforce would be the system of record for some data and would be aware of the data in the other systems of record. Integrations with the phone, job seeker, and benefits systems enable cross-program activity history that will drive up the customer's experience and down DLT's time to serve most issues.



Salesforce would also serve as a centralized view of the data, program participation and support interactions for employers and partners.



4.2 Mainframe Recommendations

Mainframe Application Retirement Summary

Special attention was paid to the applications running on DLT's mainframes. These applications pose extra risk for DLT due to the longstanding deferred maintenance, the difficulty and expense in maintenance, and the lack of current and available resources. The following outlines the three (3) applications, the options, and IBM's recommendation.

To retire the mainframe and associated costs from DLT's budget, all applications using them must be decommissioned. Tactical efforts to address current pain points will require time, effort, and focus, which will delay the overall schedule to achieve mainframe retirement. IBM recommends minimizing tactical efforts, implementing a development freeze for all but critical changes, and accelerating implementation of the modern solutions.

Overall, the system and application software running on the mainframe are beyond support and pose a dangerous risk to the core operations of DLT.

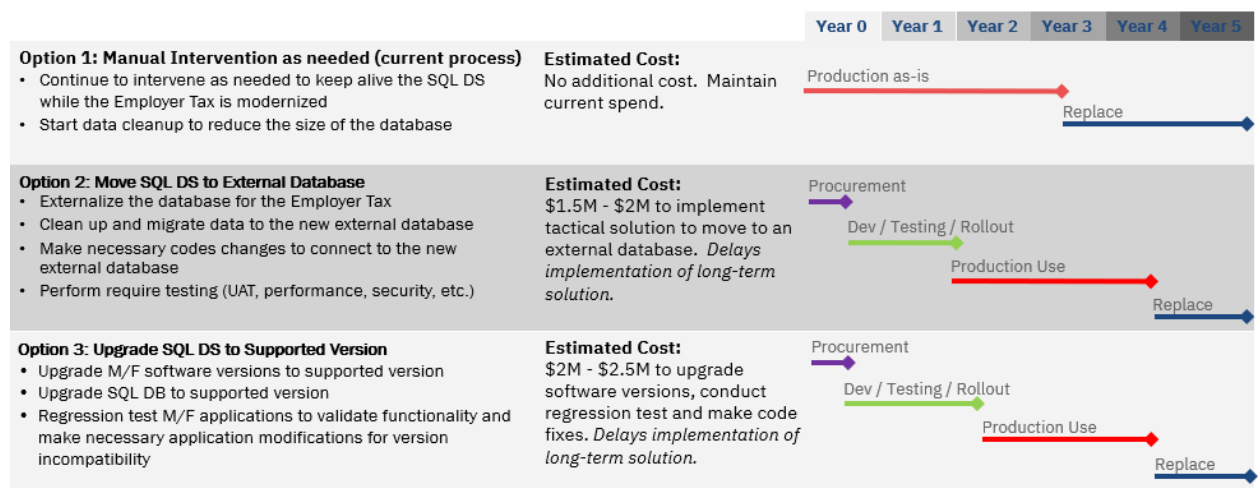


Employer Tax Database Tactical Options

Mainframe currently hosts three (3) key applications: FARS, Employer Tax System (Employer Tax & Wage Record), and ICON. The DLT team has identified the **Employer Tax Database** as a critical application that requires interim remediation due to the expected long duration and dependencies of the Employer Tax modernization project.

Key Issues for Employer Tax Database:

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]



Mainframe Recommendation

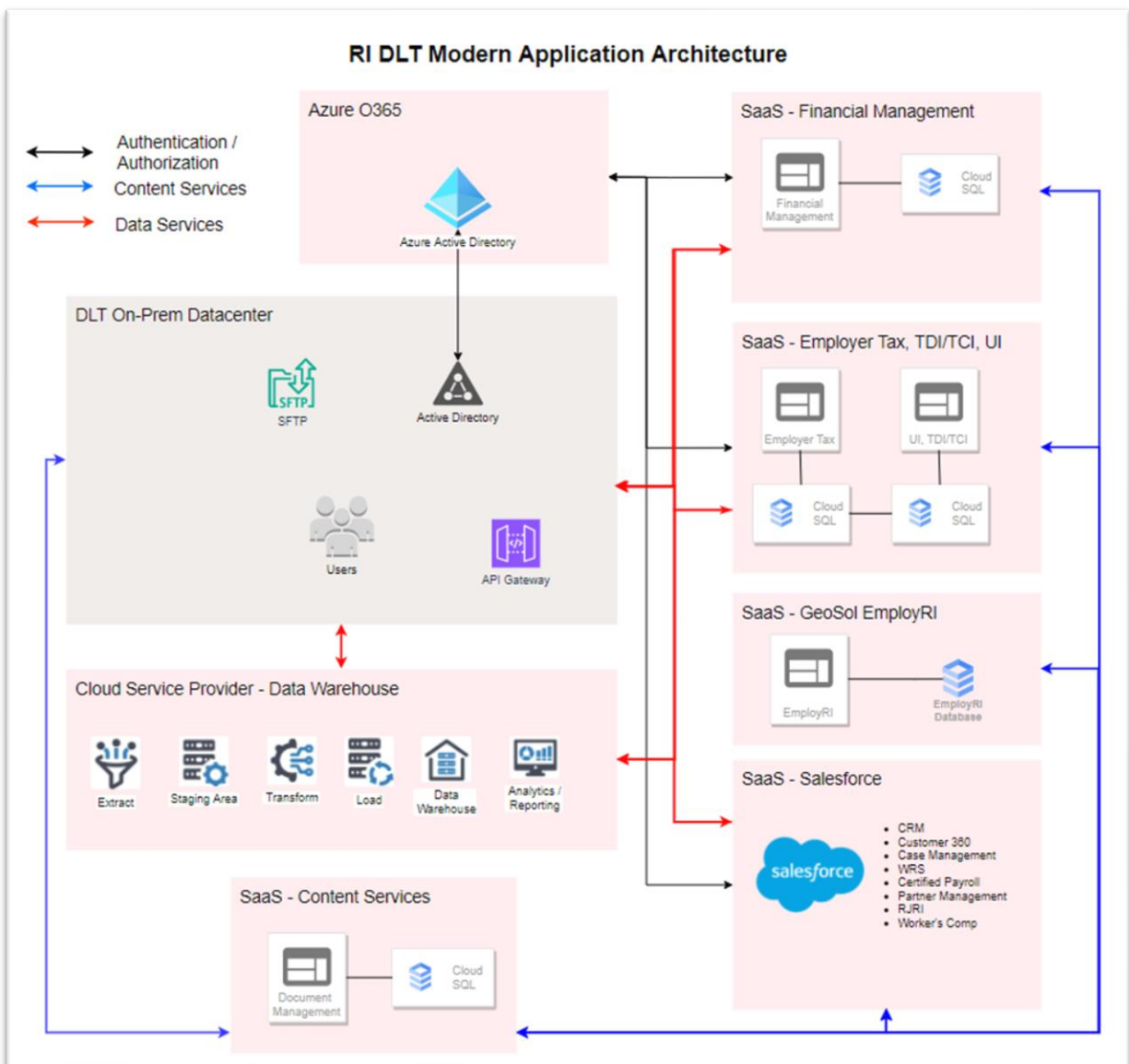
IBM recommends DLT focus on the implementation of a strategic COTS solution to replace the existing Employer Tax & Wage applications running on the mainframe. DLT should obtain additional resources to learn the system to avoid reliance on one (1) retirement eligible ETSS employee and continue to engage the current vendor assisting with IBM SQL/DS to provide life support and should seek to engage them for additional data cleanup, maintenance and operations activities while DLT moves forward with the Employer Tax & Wage modernization. Any significant changes to the mainframe-based databases are inherently risky and will significantly delay the implementation of a modern solution. Engage in as much data cleanup and classification activities as possible in the time the RFP and procurement activities are occurring to be positioned for rapid success.

Due to the long-term neglect in maintenance, the age of the technology, lack of resources, and inflexibility of the current software there are no low-risk solutions available.

Options	Pros	Cons
Option 1: Manual Intervention as needed (current process)	<ul style="list-style-type: none">• Lowest throw-away investment• Shortest path to the long-term solution• Lowest change risk to the production system	<ul style="list-style-type: none">• Maintains status-quo for the longest duration• Requires manual interventions to sustain life support
Option 2: Move SQL DS to External Database	<ul style="list-style-type: none">• Eliminates the dependency on unsupported SQL DS• Accelerates data cleanup and enforces referential data integrity	<ul style="list-style-type: none">• Prolongs mainframe dependency• Delays the path to the modern platform• Introduces major change risk
Option 3: Upgrade SQL DS to Supported Version	<ul style="list-style-type: none">• N/A	<ul style="list-style-type: none">• Infeasible option due to effort required to upgrade and test through 20 years of revisions since last upgrade• Highest change risk option

4.3 Conceptual Cloud Architecture

The following diagram indicates the logical relationships between the major systems in DLT's future state architecture. Individual technology decisions, including which products and vendors are leveraged to achieve this architecture, will be determined in coordination with ETSS and during RFPs over the course of the modernization program.



Key tenants of the target cloud architecture:

- DLT's application modernization will be deployed in a hybrid/multi cloud architecture.
- DLT will leverage cloud first application architecture and adopt SaaS as the most preferred application architecture
- All other applications that cannot be deployed or does not support SaaS architecture, will be deployed onto a [REDACTED]
[REDACTED]
- Applications deployed on the cloud will leverage Microsoft Azure Active Directory (renamed to Entra ID) for authentication and authorization or a subsequent identity and access management system as determined by ETSS.
- Application that are not part of the modernization will continue to be hosted on the on-prem data centers
- Governance, risk, compliance, and security controls will be robust

5.0 Business Process Reengineering (BPR)

In the dynamic landscape of application modernization, achieving substantial performance breakthroughs necessitates a transformative approach. Business Process Reengineering (BPR) fills this vital role. It stands as a comprehensive methodology for fundamentally revising core operational workflows. Through rigorous analysis, BPR identifies redundancies and inefficiencies within existing processes, then radically redefines them to achieve significant improvements in critical areas like speed, cost, quality, and customer satisfaction. This strategic reinvention empowers organizations to unlock their full potential and gain a decisive competitive edge in today's demanding marketplace.

Governor McKee's Executive Order 24-06 (<https://governor.ri.gov/executive-orders/executive-order-24-06>) creates an Artificial Intelligence Center of Excellence and Data Center of Excellence within ETSS. These teams are examples of Rhode Island embracing new technologies to drive business process changes. DLT's modernization efforts should be aligned with ETSS overall and with these teams.

Assess and Analyze Current Processes

IBM team conducted several working sessions with the DLT and ETSS teams to understand the existing business processes and details for each DLT application under consideration. IBM team documented the key As-IS processes models from the applications, identified the pain points, redundancies, roadblocks, tedious and manual efforts, non-efficient practices, lack of systemic support, errors, communication gaps, effort duplications, time lags, and other inefficiencies in the system.

Design of Improved Business Processes

The IBM team collaborated with various departments of DLT to create improved revised (To-Be) business processes by identifying and addressing the inefficiencies in the current (As-Is) processes. The team held brainstorming sessions to gain a clear understanding of all requirements and envision the future strategy. The team analyzed the existing processes with a critical eye, looking for bottlenecks and opportunities to make significant improvements. They focused on automated workflow, end-users, new technology, cross-functional teams, and streamlined procedures while redesigning the processes. The revised business process flows were created to address the major issues faced by DLT today.

Key Business Process Improvements

IBM team identified a number of business process improvements, some of the common and most critical improvements are summarized below. Please see the [Appendix A](#) for the detailed business process improvements for individual applications.

Automated and Intelligent Processes

The proposed processes will replace DLT's inefficient manual processes with automated and intelligent business processes. These proposed processes will maximize staff efficiency, reduce DLT staff costs, improve staff utilization, reduce errors and rework, improve data accuracy, and provide faster response to citizens of Rhode Island, Employers, and DLT partners.

Emphasis on Self Service Portals

There is a significant focus on self-service portals for end-users in the redefined business processes. These portals are designed for the citizens of Rhode Island, claimants, employers, and DLT business partners. Self-service portals will have the potential to revolutionize business processes by empowering end-users, streamlining tasks, and enhancing the customer experience. The self-service portals will allow end-users to make online payments for current or past dues. The end-users will be able to make the online payment using bank or credit card options. This leads to increased efficiency, reduced costs, and a better experience for the end-users, making it a win-win situation for both DLT and its audience. Providing 24x7 access for constituents to access DLT's systems is a priority.

Customer Centric

The refined processes are designed with the customers and constituents as a focal point. The redesigned business processes create a 360 holistic view of the end-user by linking their information from the different applications.

Cross-functional Approach

Redefined business processes break down departmental silos and look at processes holistically, spanning different functions and involving teams from various departments to ensure a seamless flow across the organization.

Leveraging Technology

The revised business processes embrace technology as a key enabler, utilizing automation, data analytics, and digital solutions to streamline tasks, eliminate redundancies, and improve efficiency. The extensive use of Electronic Data Interfaces (EDI), the Data Warehouse, and ETSS' proposed data strategy and AI in the revised processes is an example of leveraging technology.

Implementing automated testing tools with test case libraries will improve testing time. Load and performance testing can be leveraged to confirm the ability to scale to meet customer needs.

Improved Decision-Making

The revised business processes enable DLT to access real-time data and analyze end-user needs and DLT resource allocation. This will allow DLT to make more informed decisions based on better insights into citizen needs and resource allocation. DLT can use the data collected to better allocate the resources, improve business processes, and offer additional services to citizens.

If implemented, using automated tools in the new applications will measure user experience and frustration with the applications, as well as identify root cause of any system issues, allowing the technology solutions to be refined to continually improve user experience and improve performance.

Increased DLT Worker Satisfaction

Redefined business processes will boost the morale of DLT workers by eliminating tedious manual data entry from paper, complex spreadsheet maintenance, and sharing data through shared folders. With streamlined procedures, workers can focus on job functions they care about and serve more vital customer facing functions instead of wasting time searching endlessly for documents and manually entering data. Happier workers lead to higher productivity.

Enhanced Audit Trail and Data Security

The revised systems and business processes will have built-in functionality to maintain a detailed audit trail at the different steps of the processes. The audit trail will be available to authorized business/management users through the application. Integration with a standard SIEM would assist in providing automated alerts and reports.

There is a significant focus on data security in the new applications. The applications will guarantee that only authorized personnel can access sensitive data and that the information remains secure and accurate throughout its life cycle. Applications will maintain a detailed audit trail of who accessed what sensitive data and when to ensure data protection. Stringent and comprehensive privileged access management will ensure appropriate controls at the system level.

Ensuring any new systems have the environments and tools to automatically de-identify large sets of data for testing and development or the implementation of an industry standard de-identification tool will assist in maintaining data security and confidentiality and improve testing over limited amounts of manually entered synthetic data.

Inherently, the new systems will have improved security, auditing, and compliance capabilities over the obsolete legacy systems. Security and compliance technologies constantly evolve therefore, at the time of assessment and continually following implementation, the systems should be assessed to ensure best of breed tools and resources are in place to support the continued safeguarding of the systems.

All proposals should be examined with a focus on the people, data, processes, and technology and ensuring confidentiality, integrity, and availability of the systems.

Systems should integrate with a Security Information and Event Management (SIEM) system with automated reporting and alerting.

6.0 Modernization Roadmap

The roadmaps below reflect the team's current estimates of project durations and sequencing. This may be used for planning purposes, but as initiatives leverages RFIs and RFPs to collect more detailed information, plans should be adjusted. The DLT organization and systems require major modernization in many areas and these roadmaps reflect that many projects must be executed in parallel.

6.1 Income Support and Shared Platforms

Projects	START QTR	END QTR	Year 0				Year 1				Year 2				Year 3				Year 4				Year 5				Year 6			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			Y0 Q1	Y0 Q2	Y0 Q3	Y0 Q4	Y1 Q1	Y1 Q2	Y1 Q3	Y1 Q4	Y2 Q1	Y2 Q2	Y2 Q3	Y2 Q4	Y3 Q1	Y3 Q2	Y3 Q3	Y3 Q4	Y4 Q1	Y4 Q2	Y4 Q3	Y4 Q4	Y5 Q1	Y5 Q2	Y5 Q3	Y5 Q4	Y6 Q1	Y6 Q2	Y6 Q3	Y6 Q4
Initiative 1: Employer Tax, TDI/TCI, UI Modernization			Y0 Q1	Y0 Q4																										
RFP Requirements for Platform	Y0 Q1	Y0 Q4																												
Replace mainframe implementation for ICON interface	Y1 Q1	Y1 Q4																												
Implement employer tax processing on new platform	Y1 Q1	Y3 Q2																												
Select and implement benefits solution to support TDI/TCI	Y2 Q1	Y4 Q2																												
Extend benefits solution to support UI	Y4 Q1	Y6 Q4																												
Initiative 2: Content Services - Document Management			Y0 Q3	Y0 Q4																										
Implement KMBS stabilization recommendations	Y0 Q3	Y0 Q4																												
Migrate document management function to a SaaS solution	Y1 Q1	Y1 Q2																												
Onboard existing teams and processes to new platform	Y1 Q4	Y2 Q1																												
Workflow automation and document tagging	Y2 Q1	Y2 Q4																												
Develop and Implement Document Archiving Strategy	Y3 Q1	Y3 Q2																												
Initiative 3: Call Center Phone System, IVR Reservations			Y1 Q3	Y2 Q2																										
Select and install call center and IVR telephony platform	Y1 Q3	Y2 Q2																												
Integrate telephony platform with CRM platform	Y2 Q4	Y3 Q2																												
Implement reservations model for phone-based support	Y3 Q3	Y4 Q1																												
Self-service integrations and virtual assistant	Y4 Q1	Y4 Q4																												
Initiative 4: Data Strategy and Reporting			Y2 Q1	Y2 Q2																										
Data Governance, Business Glossary and Metadata	Y2 Q1	Y2 Q2																												
Data Warehouse MVP Implementation	Y2 Q3	Y3 Q2																												
Expand Data warehouse to support additional requirements	Y3 Q1	Y4 Q2																												

6.2 Financial Management

Note: There is a dependency on the Enterprise ERP project for any Workday integration.

			Year 0				Year 1				Year 2				Year 3				Year 4				Year 5				Year 6			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Projects	START QTR	END QTR	Y0 Q1	Y0 Q2	Y0 Q3	Y0 Q4	Y1 Q1	Y1 Q2	Y1 Q3	Y1 Q4	Y2 Q1	Y2 Q2	Y2 Q3	Y2 Q4	Y3 Q1	Y3 Q2	Y3 Q3	Y3 Q4	Y4 Q1	Y4 Q2	Y4 Q3	Y4 Q4	Y5 Q1	Y5 Q2	Y5 Q3	Y5 Q4	Y6 Q1	Y6 Q2	Y6 Q3	Y6 Q4
Initiative 5: Financial Management																														
Implement a Workday instance for DLT accounting	Y2 Q1	Y3 Q2																												
Integrate DLT with Controller's procurement system	Y3 Q1	Y3 Q4																												
Integrate DLT accounting functions with Workday instances	Y4 Q1	Y5 Q4																												
Select and implement a budgeting system	Y5 Q1	Y5 Q4																												

6.3 Salesforce Implementation and Integration

			Year 0				Year 1				Year 2				Year 3				Year 4				Year 5				Year 6			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Projects	START QTR	END QTR	Y0 Q1	Y0 Q2	Y0 Q3	Y0 Q4	Y1 Q1	Y1 Q2	Y1 Q3	Y1 Q4	Y2 Q1	Y2 Q2	Y2 Q3	Y2 Q4	Y3 Q1	Y3 Q2	Y3 Q3	Y3 Q4	Y4 Q1	Y4 Q2	Y4 Q3	Y4 Q4	Y5 Q1	Y5 Q2	Y5 Q3	Y5 Q4	Y6 Q1	Y6 Q2	Y6 Q3	Y6 Q4
Initiative 6: CRM, Customer 360 and Case Management																														
Establish base installation of Salesforce (Sales Cloud)	Y0 Q4	Y1 Q3																												
Case management workflow automation	Y1 Q2	Y2 Q1																												
Build Customer 360 capabilities	Y2 Q2	Y3 Q4																												
Build Employer/Partner 360 capabilities	Y3 Q3	Y4 Q4																												
Initiative 7: WRS and Certified Payroll Modernization																														
Implement case mgmt for labor standards and Certified Payroll	Y0 Q4	Y1 Q3																												
Implement licensing system to support occupation safety	Y1 Q3	Y2 Q1																												
Implement licensing system to support professional regulation	Y2 Q1	Y2 Q3																												
Implement self-service portals for permits and licensing	Y2 Q4	Y3 Q2																												
Initiative 8: Partner Support Process Improvement																														
Pitch and Proposal Workflows	Y1 Q3	Y1 Q4																												
Build partner portal for pitch submission and contract extensions	Y2 Q1	Y2 Q4																												
Extend partner portal to support invoice submission	Y2 Q4	Y3 Q2																												
Replace RJRI with Salesforce solution	Y4 Q1	Y4 Q3																												

6.4 Tactical Projects

These tactical projects should be executed to provide some short-term relief from manual processes, reduce recurring costs or to simplify technology. They are not expected to require RFPs as these small projects can be completed by existing resources or obtaining limited engagement staff augmentation resources.

Project 1: Data Cleanup, Classification and Documentation

Continue and accelerate the project to identify, document and classify current DLT data sets and databases. Expand the project to begin data cleanup on the existing data sets.

Project 2: AWS, Data Lake Simplification, Change Data Capture Changes

Eliminate current data synchronization issues between the legacy systems and UIO by replacing the current change data capture program.

Potentially reduce monthly AWS spending by obtaining reserved instances and turning off components that are underutilized and incurring costs. Examine account setup and tagging to separate UI and non-UI expenses. Look for opportunities for savings including consolidation or reduction of dev and testing environments, turning off data feeds for unused data and turning off processing steps that trigger AWS cloud costs.

Moving BacktoWorkRI from the Google Cloud Platform may result in operational cloud cost savings but must be balanced against the cost to re-platform it in AWS.

Project 3: Financial tools and automation

Secure resources with expertise to implement Excel enhancements to reduce duplicate data entry, improve data flow and aid in summarization and

validations. These enhancements should free up capacity that will be needed when developing new processes and shifting to Workday.

Project 4: Automation federal program application data entry.

Use robotic process automation to script the data transfer between RJRI and EmployRI. This manual data entry process is supported by a vendor that could be eliminated with minimal development work. This would also avoid data entry errors that occur in today's process.

Project 5: Refactor Worker's Compensation System in Salesforce

Once the base Salesforce platform has been established, the Worker's Comp system should be refactored to eliminate the one-off custom developed system and the associated maintenance costs.

Projects	START QTR	END QTR	Year 0				Year 1				Year 2				Year 3				Year 4				Year 5				Year 6			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			Y0 Q1	Y0 Q2	Y0 Q3	Y0 Q4	Y1 Q1	Y1 Q2	Y1 Q3	Y1 Q4	Y2 Q1	Y2 Q2	Y2 Q3	Y2 Q4	Y3 Q1	Y3 Q2	Y3 Q3	Y3 Q4	Y4 Q1	Y4 Q2	Y4 Q3	Y4 Q4	Y5 Q1	Y5 Q2	Y5 Q3	Y5 Q4	Y6 Q1	Y6 Q2	Y6 Q3	Y6 Q4
Tactical Projects																														
Tactical: Data Lake Simplification	Y0 Q3	Y0 Q4																												
Tactical: Financial tools and automation	Y0 Q1	Y0 Q4																												
Tactical: Automate federal program application data entry	Y0 Q1	Y0 Q2																												
Tactical: Refactor Workers Comp in Salesforce	Y3 Q3	Y3 Q4																												

7.0 Financial Impact

This section provides an overview of the Financial Analysis for the proposed modernization initiatives. Detailed views, such as application cost data (by app and spend type), detailed spend by initiative, and investment details, can be found in the provided excel workbook.

The financial analysis is performed over a 7-year time horizon (Year0 – Year 6). The proposed modernization initiatives are forecasted to last at least 7 years, and thus will only be finishing in the final year of the analysis.

The analysis assumes a parallel run of current and new systems for at least one year, to account for data/process migration and decommissioning activities. The impact of both assumptions is that annual recurring costs in Y7 will be larger than the steady state (Year 8+) annual recurring costs, making the net cost of all initiatives appear larger than expected in the steady state. The recurring run costs of legacy applications that will not be decommissioned until Year 8+ (e.g., UI, UIO), are part of the recurring run rate in the Transformation Scenario, even as the annual recurring costs of their replacements ramp up. This “double counting” of run rates (existing legacy recurring costs + new system recurring costs during parallel run) creates an inflated total until all initiatives are complete and legacy systems are shut down.

Furthermore, the current recurring costs are the result of years of under-investment in existing legacy systems and support. The current run rates and staffing levels for applications are not sustainable, do not allow systems to be supported effectively, and are a deficit relative to required budgets. The proposed recurring costs of the Transformation scenario represent estimates of the true cost to effectively run and maintain the systems.

As a result, IBM projects a significant increase in total costs over the first 7 years that is caused by large One Time Costs in initiative project costs and inflated recurring costs (parallel run of systems), followed by steady state recurring costs in the Transformation scenario that are higher than existing to better account for the resources required for effective support.

Summary of Financial Impact

Key Notes:

- IBM projects total net costs of \$133M over 7 years - combined One Time and Incremental Recurring Costs
 - \$78M in One Time Costs
 - \$55M in Incremental Recurring Costs
- Analysis of spending in 2023 established a baseline of \$6.6M in annual recurring costs.
 - This represents the “Do Nothing” scenario, where DLT continues to run existing systems and applications as is and with the minimal and risky technology staffing levels.
 - Given the state of DLT’s systems, this number is known to be underbudgeted and impractical to effectively run and support the applications/systems.
- IBM projects future recurring costs of \$14.3M in the Transformation scenario (i.e., initiatives are performed as recommended).
 - These costs will grow over the course of the program as projects are completed.
 - \$5.5M of New Recurring Costs are offset in the Transformation Scenario by savings achieved via existing system rationalization as part of the recommendations.
 - Comparison of steady state recurring costs (Year 8+ in Do Nothing/Transformation scenarios, inclusive of YoY growth)
 - Annual recurring costs (Transformation scenario): \$12.3M
 - Annual recurring costs (Do Nothing scenario): \$7.5M
- The sizeable increase in Annual Recurring Costs can be attributed to the following factors:
 - Support teams for today’s systems are severely understaffed.
 - Regular maintenance is not performed to keep systems up to date, healthy, and secure.
 - Support contracts may not be renewed or deferred if funding is not available.

- DLT lacks a team that can execute the business, technical and organizational changes that are required to transform and then maintain the State's desired level of customer service.

Summary – Modernization Initiatives Financial Analysis - Consolidated

<i>Annual Cost, \$M</i>	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Total
Do Nothing - Recurring Cost								
I-1: Employer, TDI/TCI, UI Mod	\$4.4	\$4.5	\$4.6	\$4.7	\$4.8	\$4.9	\$5.0	\$33.0
I-2: Call Center, IVR, Reservations	\$0.04	\$0.04	\$0.04	\$0.04	\$0.05	\$0.05	\$0.05	\$0.3
I-3: Content Svcs. – Doc. Mgmt.	\$0.2	\$0.2	\$0.2	\$0.2	\$0.2	\$0.2	\$0.2	\$1.5
I-4: Data Strategy & Reporting	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04	\$0.3
I-5: Financial Management	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1	\$0.6
I-6: CRM, Cust. 360, Case Mgmt.	-	-	-	-	-	-	-	-
I-7: WRS & Certified Payroll Mod	\$0.2	\$0.2	\$0.2	\$0.2	\$0.2	\$0.2	\$0.2	\$1.5
I-8: Partner Support Process	\$1.1	\$1.1	\$1.1	\$1.1	\$1.2	\$1.2	\$1.2	\$7.9
Tactical Projects	\$0.6	\$0.6	\$0.6	\$0.6	\$0.6	\$0.6	\$0.6	\$4.3
Total	\$6.6	\$6.8	\$6.9	\$7.1	\$7.2	\$7.3	\$7.5	\$49.4
Transformation - Recurring Cost								
I-1: Employer, TDI/TCI, UI Mod	\$4.6	\$4.7	\$4.8	\$7.6	\$10.3	\$9.9	\$9.7	\$51.6
I-2: Call Center, IVR, Reservations	\$0.04	\$0.2	\$0.7	\$0.7	\$0.7	\$0.7	\$0.7	\$3.8
I-3: Content Svcs. – Doc. Mgmt.	\$0.2	\$0.9	\$0.9	\$0.7	\$0.7	\$0.7	\$0.7	\$4.9
I-4: Data Strategy & Reporting	\$0.04	\$0.04	\$0.2	\$1.3	\$1.3	\$1.3	\$1.3	\$5.4
I-5: Financial Management	\$0.1	\$0.1	\$0.3	\$0.4	\$0.7	\$0.6	\$0.6	\$2.8
I-6: CRM, Cust. 360, Case Mgmt.	-	\$0.1	\$1.1	\$1.2	\$1.5	\$1.7	\$1.7	\$7.3
I-7: WRS & Certified Payroll Mod	\$0.2	\$0.2	\$0.9	\$0.7	\$0.7	\$0.7	\$0.7	\$4.0
I-8: Partner Support Process	\$1.1	\$1.1	\$1.1	\$1.1	\$1.2	\$1.2	\$1.2	\$7.9
Tactical Projects	\$0.6	\$0.6	\$0.6	\$0.6	\$0.6	\$0.6	\$0.7	\$4.3
Modernization Unit	\$4.2	\$2.0	\$2.1	\$2.1	\$0.7	\$0.7	\$0.7	\$12.5
Total	\$11.0	\$9.9	\$12.7	\$16.4	\$18.3	\$18.1	\$18.0	\$104.4
Net Impact – Recurring Costs	(\$4.3)	(\$3.1)	(\$5.8)	(\$9.4)	(\$11.1)	(\$10.8)	(\$10.5)	(\$55.0)
Transformation – One Time Cost								
Vendor Implementation	\$4.2	\$7.7	\$14.1	\$16.1	\$10.3	\$6.3	\$6.3	\$65.0
IV&V	\$0.4	\$0.8	\$1.4	\$1.6	\$1.0	\$0.6	\$0.6	\$6.4
State Staff Costs	\$0.5	\$2.0	\$1.3	\$1.6	\$0.9	\$0.3	\$0.3	\$6.9
Total	\$5.1	\$10.4	\$16.7	\$19.2	\$12.3	\$7.2	\$7.2	\$78.3
Net Impact – Recurring & One Time	(\$9.4)	(\$13.6)	(\$22.5)	(\$28.6)	(\$23.4)	(\$18.0)	(\$17.8)	(\$133.3)

Summary – New Recurring Costs of Proposed Recommendations

<i>Annual Cost, \$M</i>	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Total
Transformation – New Recurring Cost								
License, Maintenance, & Hosting	-	\$0.5	\$1.0	\$3.5	\$5.9	\$6.1	\$6.1	\$23.1
Technical Support	-	\$0.1	\$1.8	\$3.3	\$4.2	\$4.3	\$4.3	\$17.9
Technical Product Owners	\$0.2	\$0.5	\$0.9	\$0.9	\$1.1	\$1.2	\$1.2	\$6.0
Modernization Unit	\$4.1	\$2.0	\$2.1	\$2.1	\$0.7	\$0.7	\$0.7	\$12.5
Total	\$4.3	\$3.2	\$5.8	\$9.9	\$11.9	\$12.2	\$12.3	\$59.6

Summary – Recurring Costs at Steady State (Year 8+)

<i>Annual Cost, \$M</i>	Steady State
Do Nothing - Recurring Cost	\$7.5
Transformation – Recurring Cost	\$14.3
Net Impact – Steady State Recurring	(\$6.8)

Financial Impact – By Initiative

This section contains a breakdown of the annual costs (both Recurring and One Time) of each initiative's associated applications (current applications and planned new systems) and projects. Estimates of IV&V costs and State Staffing to support project implementation are also included. Each initiative tab (one per initiative) includes such details as application level spend and project breakdowns (Requirements vs. Configuration and Deployment vs. Up Front Licensing/Hosting/Warranty costs).

Initiative 1: Employer Tax, TDI/TCI, UI Modernization

<i>Annual Cost, \$M</i>	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Total
Recurring Costs								
Do Nothing	\$4.5	\$4.5	\$4.6	\$4.7	\$4.8	\$4.9	\$5.0	\$33.0
Transformation Scenario	\$4.6	\$4.7	\$4.8	\$7.6	\$10.3	\$9.9	\$9.7	\$51.6
Transformation – One Time Cost								
P0: RFP Requirements for Platform	\$3.0-	-	-	-	-	-	-	\$3.0
P1: New Employer Tax Platform	-	\$3.3	\$4.5	\$2.2	-	-	-	\$10.0
P2: Implement Benefits Solution	-	-	\$4.1	\$5.6	\$2.8	-	-	\$12.5
P3: Extend Benefits Solutions to UI	-	-	-	-	\$4.9	\$6.3	\$6.3	\$17.5
P4: Implement COTS for ICON	-	\$0.5	-	-	-	-	-	\$0.5
IV&V	\$0.3	\$0.4	\$0.9	\$0.8	\$0.8	\$0.6	\$0.6	\$4.4
State Staffing	\$0.1	\$0.2	\$0.4	\$0.4	\$0.4	\$0.3	\$0.3	\$2.1
Total – One Time Cost	\$3.5	\$4.3	\$9.9	\$9.0	\$8.9	\$7.2	\$7.2	\$50.0
Net Impact - Recurring & One Time	(\$3.6)	(\$4.5)	(\$10.0)	(\$12.0)	(\$14.4)	(\$12.2)	(\$11.9)	(\$68.6)

Initiative 2: Content Services – Document Management

<i>Annual Cost, \$M</i>	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Total
Recurring Costs								
Do Nothing	\$0.2	\$0.2	\$0.2	\$0.2	\$0.2	\$0.2	\$0.3	\$1.5
Transformation Scenario	\$0.2	\$0.9	\$0.9	\$0.7	\$0.7	\$0.7	\$0.7	\$4.9
Transformation – One Time Cost								
P1: Migrate to a SaaS version	-	\$0.3	-	-	-	-	-	\$0.3
IV&V	-	\$0.03	-	-	-	-	-	\$0.03
State Staffing	-	\$0.7	-	-	-	-	-	\$0.7
Total – One Time Cost	-	\$1.1	-	-	-	-	-	\$1.1
Net Impact - Recurring & One Time	-	(\$1.8)	(\$0.7)	(\$0.5)	(\$0.5)	(\$0.5)	(\$0.5)	(\$4.4)

Initiative 3: Call Center Phone System, IVR and Reservations

Annual Cost, \$M	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Total
Recurring Costs								
Do Nothing	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04	\$0.3
Transformation Scenario	\$0.04	\$0.2	\$0.7	\$0.7	\$0.7	\$0.7	\$0.7	\$3.8
Transformation – One Time Cost								
P1: Select & Install Call Center/IVR Telephony Platform	-	\$0.9	\$0.6	-	-	-	-	\$1.5
P2: Integrate Telephony Platform with CRM Platform	-	-	\$0.1	\$0.4	-	-	-	\$0.5
P3: Reservations	-	-	-	\$0.4	\$0.1	-	-	\$0.5
P4: Self-Service Integrations and Virtual Assistant	-	-	-	-	\$0.8	-	-	\$0.8
IV&V	-	\$0.1	\$0.1	\$0.1	\$0.1	-	-	\$0.3
State Staffing	-	\$0.2	\$0.2	\$0.2	\$0.2	-	-	\$0.8
Total – One Time Cost		\$1.2	\$0.9	\$1.1	\$1.2	-	-	\$4.4
Net Impact - Recurring & One Time	-	(\$1.4)	(\$1.6)	(\$1.8)	(\$1.9)	(\$0.6)	(\$0.6)	(\$7.9)

Initiative 4: Data Strategy & Reporting

Annual Cost, \$M	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Total
Recurring Costs								
Do Nothing	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04	\$0.3
Transformation Scenario	\$0.04	\$0.04	\$0.2	\$1.3	\$1.3	\$1.3	\$1.3	\$5.4
Transformation – One Time Cost								
P1: Data Governance, Business Glossary and Metadata	-	-	\$0.2	-	-	-	-	\$0.2
P2: Data Warehouse MVP Implementation	-	-	\$0.7	\$0.8	-	-	-	\$1.5
P3: Expand Data warehouse to support additional requirements	-	-	-	\$1.1	\$0.4	-	-	\$1.5
IV&V	-	-	\$0.1	\$0.2	\$0.1	-	-	\$0.3
State Staffing	-	-	\$0.1	\$0.1	\$0.1	-	-	\$0.3
Total – One Time Cost		-	\$1.0	\$2.2	\$0.5	-	-	\$3.8
Net Impact - Recurring & One Time	-	-	(\$1.2)	(\$3.5)	(\$1.7)	(\$1.2)	(\$1.2)	(\$8.9)

Initiative 5: Financial Management

Annual Cost, \$M	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Total
Recurring Costs								
Do Nothing	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1	\$0.6
Transformation Scenario	\$0.1	\$0.1	\$0.3	\$0.4	\$0.7	\$0.6	\$0.6	\$2.8
Transformation – One Time Cost								
P1: Implement a Workday instance for DLT accounting	-	-	\$1.1	\$0.9	-	-	-	\$2.0
P2: Integrate DLT with Controller's procurement system	-	-	-	\$1.0	-	-	-	\$1.0
P3: Integrate DLT accounting functions with Workday instances	-	-	\$1.1	\$0.9	-	-	-	\$2.0
P4: Select and implement a budgeting system	-	-	-	-	\$0.5	-	-	\$0.5
IV&V	-	-	\$0.2	\$0.3	\$0.1	-	-	\$0.6
State Staffing	-	-	\$0.05	\$0.05	\$0.05	-	-	\$0.1
Total – One Time Cost		-	\$2.5	\$3.1	\$0.6	-	-	\$6.2
Net Impact - Recurring & One Time	-	-	(\$2.7)	(\$3.4)	(\$1.1)	(\$0.6)	(\$0.6)	(\$8.4)

Initiative 6: CRM, Customer 360, and Case Management

Annual Cost, \$M	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Total
Recurring Costs								
Do Nothing	-	-	-	-	-	-	-	-
Transformation Scenario	-	\$0.05	\$1.1	\$1.2	\$1.5	\$1.7	\$1.7	\$7.3
Transformation – One Time Cost								
P1: Establish base installation of Salesforce (Sales Cloud)	\$0.7	\$1.3	-	-	-	-	-	\$2.0
P2: Case management workflow automation	-	\$0.4	\$0.1		-	-	-	\$0.5
P3: Build Customer 360 capabilities	-	-	\$0.5	\$1.0	-	-	-	\$1.5
P4: Build Employer/Partner 360 capabilities	-	-	-	\$0.2	\$0.8	-	-	\$1.0
IV&V	\$0.7	\$0.1	\$0.1	\$0.1	\$0.1	--	-	\$0.5
State Staffing	\$0.3-	\$0.6	\$0.2	\$0.4	\$0.3	-	-	\$1.2
Total – One Time Cost	\$1.0	\$2.4	\$1.0	\$1.7	\$1.1	-	-	\$7.3
Net Impact - Recurring & One Time	(\$1.0)	(\$2.5)	(\$2.1)	(\$2.9)	(\$2.7)	(\$1.7)	(\$1.7)	(\$14.6)

Initiative 7: WRS and Certified Payroll Modernization

Note: Assumes Salesforce Platform already built.

Annual Cost, \$M	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Total
Recurring Costs								
Do Nothing	\$0.2	\$0.2	\$0.2	\$0.2	\$0.2	\$0.2	\$0.2	\$1.5
Transformation Scenario	\$0.2	\$0.2	\$0.9	\$0.7	\$0.7	\$0.7	\$0.7	\$4.0
Transformation – One Time Cost								
P1. Implement case mgmt. for labor standards and Certified Payroll	\$0.05	\$0.5	-	-	-	-	-	\$0.5
P2. Implement licensing system to support occupation safety	-	\$0.3	\$0.2		-	-	-	\$0.5
P3. Implement licensing system to support professional regulation	-	-	\$0.5	-	-	-	-	\$0.5
P4. Implement self-service portals for permits and licensing	-	-	\$0.1	\$0.7	-	-	-	\$0.8
IV&V	-	\$0.1	\$0.1	\$0.1	-	--	-	\$0.2
State Staffing	-	\$0.2	\$0.2	\$0.2	-	-	-	\$0.6
Total – One Time Cost	\$0.1	\$1.0	\$1.1	\$0.9	-	-	-	\$3.0
Net Impact - Recurring & One Time	(\$0.1)	(\$1.0)	(\$1.7)	(\$1.4)	(\$0.5)	(\$0.5)	(\$0.5)	(\$5.6)

Initiative 8: Partner Support Process Improvement

Annual Cost, \$M	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Total
Recurring Costs								
Do Nothing	\$1.1	\$1.1	\$1.1	\$1.1	\$1.2	\$1.2	\$1.2	\$8.0
Transformation Scenario	\$1.1	\$1.1	\$1.1	\$1.1	\$1.2	\$1.2	\$1.2	\$8.0
Transformation – One Time Cost								
P1. Pitch and Proposal Workflows	\$0.2	-	-	-	-	-	-	\$0.2
P2. Build partner portal for pitch submission and contract extensions	-	\$0.3	\$0.2		-	-	-	\$0.5
P3. Extend partner portal to support invoice submission	-	-	\$0.2	\$0.1	-	-	-	\$0.3
P4. Replace RJRI with Salesforce Solution	-	-	-	\$0.5	-	-	-	\$0.5
IV&V	\$0.0	\$0.0	\$0.0	\$0.0	-	--	-	\$0.1
State Staffing	-	\$0.2	\$0.2	\$0.2	-	-	-	\$0.4
Total – One Time Cost	\$0.3	\$0.4	\$0.5	\$0.8	-	-	-	\$2.0
Net Impact - Recurring & One Time	(\$0.3)	(\$0.4)	(\$0.5)	(\$0.8)	-	\$0.03	\$0.03	(\$1.9)

Initiative 9: Tactical Projects

Annual Cost, \$M	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Total
Recurring Costs								
Do Nothing	\$0.6	\$0.6	\$0.6	\$0.6	\$0.6	\$0.6	\$0.7	\$4.3
Transformation Scenario	\$0.6	\$0.6	\$0.6	\$0.6	\$0.6	\$0.6	\$0.7	\$4.3
Transformation – One Time Cost								
P1. Data Lake Simplification	\$0.1	-	-	-	-	-	-	\$0.1
P2. Financial tools and automation	\$0.05	-	-		-	-	-	\$0.1
P3. Automate federal program application data entry	\$0.1	-	-	-	-	-	-	\$0.1
P4. Refactor Workers Comp in Salesforce	-	-	-	\$0.3	-	-	-	\$0.3
IV&V	-	-	-	\$0.0	-	--	-	\$0.0
State Staffing	-	-	-	\$0.0	-	-	-	\$0.0
Total – One Time Cost	\$0.2	-	-	\$0.3	-	-	-	\$0.5
Net Impact - Recurring & One Time	(\$0.2)	-	-	(\$0.3)	-	-	-	(\$0.5)

Do Nothing Scenario – Approach & Assumptions

This section contains details on the approach and assumptions used to develop the estimates of annual Recurring Costs found in the Do-Nothing scenario, which make a base of comparison for the costs associated with the recommended initiatives modeled in the Transformation scenario. Further details on the assumptions and source data can be found in the supporting workbook.

Approach

- Current IT Costs for existing applications under analysis modeled through collaboration with DLT stakeholders. Other costs (e.g., operational cost of the business) were not included
 - Cost data was categorized into spend categories and classified as addressable/non-addressable
 - Categorization of cost was based on input from DLT team
 - Categorized cost data was allocated to an application (fully or partially) based on input from DLT team
 - Cost data that could not be categorized was classified as “Unsure” and not included in the analysis
- Cost data was provided by the ETSS team

- Available cost data is limited in coverage and may not present a complete view of the true application Total Cost of Ownership (TCO). This may have the effect of making the current run rate appear artificially low
- Estimates of annual application costs were projected over 7 years to create a “Do -Nothing” total to serve as a basis of comparison to the Transformation Scenario
- Estimates of the “Do-Nothing” scenario do not estimate the potential costs associated with system outages/catastrophic failure (e.g., lost work caused by inability to perform business process, inability to collect UI/TDI/JDF taxes, lost work caused by reversion to manual processes while systems are down, cost of reputational impact to the agency) and the impact to the public who rely on the Income Support and other DLT programs.
 - The risk of these outages/failures are significant given the current posture of existing systems, and the potential operational and financial impacts of these outages are a driver of proposed modernization efforts.
 - There is no simple technical fix to potential system failures. In the case of system failure, the state would be forced to rely on manual processes until a replacement system could be implemented.
- Estimates of the “Do-Nothing” scenario do not estimate the potential costs associated with the loss of talent required to support the aging legacy systems. The talent pool to support existing legacy systems is extremely small, aging (most are retirement eligible or near eligibility and key staff augmentation resources came out of private sector retirement to work on DLT systems) and possesses unique system knowledge. Loss of these resources could result in loss of the state’s ability to support and run existing systems.

Assumptions

- Addressable spend categories:
 - Application Labor
 - Software, Hardware
 - Infrastructure Maintenance
 - Public Cloud Charges
 - Other IT Services

- Non-Addressable spend categories:
 - Non-Application related labor/charges
 - General labor charged to applications
 - Costs labeled “Unsure”, “To Be Determined”, “Misc” “N/A”
 - WDS, RI.Gov, and ECMS application costs
- Assumed management, non-app labor costs not affected by system modernization/replacement
- Assumed multi-year contracts were split evenly by year to annualize costs (e.g., cost of a 3-yr contract was divided by 3 to estimate the annual cost)
- Assumed a 2% growth rate in costs YoY to account for inflation

Initiative Investment Costs – Approach & Assumptions

This section explains the approach and assumptions used to size the estimated One Time Costs of the proposed initiatives. Both the vendor costs (implementation and IV&V) and the state staffing costs to support each initiative are included.

Approach – Initiative Sizing

- The cost and duration estimate of the proposed initiatives/projects are intended for planning purposes only. They are intended to support prioritization, relative sizing, and strategic budgeting.
 - As assumptions around project scope change/are refined (e.g., through RFP process), estimates may need to be updated
- Investment costs for project estimates based on IBM industry experience and publicly available data/pricing on proposed solutions
 - Investment estimate for Employer Tax, TDI/TCI, UI, Modernization initiative used publicly available information on the State of Oregon’s FastUI implementation (2021)
- Project investments are comprised of 3 phases
 - Requirements & Design: Effort to gather/document requirements, design/scope solution. Internal support for this effort performed and funded by proposed modernization staffing (BAs, TPOs, Architects)
 - Configuration, Integration, & Deployment: Labor effort associated with implemented the proposed solution. Includes testing (excl. UAT).

- Initial License, Hosting, & Warranty: Up-front purchase of Software/Product, as well as hosting costs during project phase. Warranty covers fixes/enhancements to the product functionality during the project/go-live
- Investment split across the 3 phases based on details about the proposed initiatives.
- For example, Salesforce base installation project and call center/IVR system installation have relatively high requirements & design efforts. R&D was 20% of total investment, compared to 10% for many other projects
- The effort for DLT resources to support projects – (e.g., acceptance testing, training, BPR) is not included in these investment cost estimates
- Future ETSS costs are assumed to be similar to today's levels.
- Business/IT support requirements were t-shirt sized at an initiative level for UAT, training, project management (if required above vendor provided), and business process re-engineering

Assumptions – Initiative Sizing

- Project investment costs are modeled assuming the use of a vendor to perform the project
 - Assumed that vendor will provide project management function as well as delivery
- Assumed limited custom development because of SaaS first principle – implementation labor focused on configuration/integration of selected products
- All project investment costs allocated annually based on percentage of quarters to overall phase.
 - For example, 4 quarters of Requirements & Design work, 2 in 2024, 2 in 2025. 50% of R&D costs modeled in 2024, 50% in 2025
- Portion of the Requirements & Design effort assumed to start in RFP phase, 2-3 quarters prior to project kick-off. Assumed to run for 1-2 quarters past project kickoff
 - Requirement & Design duration of the Employer Tax, TDI/TCI, UI, Modernization initiative was estimated at an initiative, not project level (i.e., one R&D phase for all projects)

- Assumed that License, Hosting, & Warranty costs split in the same proportion as Configuration, Integration, & Deployment costs
- Assumed no YoY increase in costs for vendor initiative costs as fixed-price, multi-year contracts are expected over time and materials-based projects
- Sized IV&V as 10% of initiative vendor implementation cost

Approach – State Staffing Sizing

- The effort and cost of internal DLT resources to support the initiatives was estimated
- Four types of internal effort were used to size the estimated costs
 - Training (On New System)
 - Acceptance Testing
 - BPR
 - Project Management
- Three DLT roles were used in this sizing effort
 - Staff
 - Managers
 - SMEs
- Proposed initiative/project durations were used to estimate the annual hours each role would dedicate to internal support
- Estimates of the number of DLT employees in each role were provided by DLT leadership
- Loaded Hourly rates for each role was provided by DLT

Transformation Scenario – Approach & Assumptions

This section contains details on the approach to modeling the annual Recurring Costs of the Transformation scenario. These modeled costs, combined with the estimated initiative costs, represent the estimated financial impact of the proposed recommendations.

Approach – Transformation Scenario

- Developed a “Transformation Scenario IT Run Cost” projected over 7 years to compare to the 7 year “Current IT Run Cost”

- For each new system, an estimate of the annual Maintenance, Hosting, & Licensing cost was developed based on IBM industry experience, and publicly available data/pricing on proposed solutions
 - Estimate for Employer Tax, TDI/TCI, UI, Modernization initiative used publicly available information on the State of Oregon's FastUI contract
- Support teams were also sized for new systems – a combination of TPO/product owners and support resources
- In the Transformation scenario, changes to application run costs were modeled based on the impact of proposed initiatives/projects
 - For example, the existing application maintenance and software costs associated with the Employer Tax system would go away after the project for the new Employer Tax system is complete (and a period of parallel run). Hardware costs and support would remain until all mainframe applications were retired.
- Majority of captured costs in Current State were App Labor, Software, Infrastructure Maintenance, and Public Cloud Charges – able to be reduced/eliminated as applications go away
- Costs were replaced by the new Maintenance, Hosting, & Licensing estimates, as well as associated support teams

Assumptions – Transformation Scenario

- Assumed that Maintenance, Hosting, and Licensing would be a single annual charge – not separate agreements
- Assumed no new hardware or infrastructure maintenance costs for new systems based on SaaS first principle for product selection
- Assumed \$140/hr. rate for Tech Specialist (general support) and \$180/hr. rate for Salesforce Support (more expensive resources) based on federal negotiated rates from General Services Administration (GSA) data.
- Annual total at steady state assumes that all transformation work has been completed – all legacy systems proposed for rationalization have been retired, all legacy costs are gone, and all target state systems + associated costs are live
- Assumed a 2% growth rate in costs YoY to account for inflation

- Assumed that the state's existing Salesforce license could be extended, and incremental recurring license costs associated with the installation for the CRM and WRS initiatives will grow with adoption by the various business units. Additional costs are likely as other Salesforce products come into play and pricing should be updated during the RFP process. The specific Salesforce products required for DLT are unknown at this time and will vary greatly based on the income support platform that is chosen.

8.0 Staffing

DLT, through ETSS, urgently needs supplemental technical staff to run their existing systems as well as to engage and drive the modernization effort. Past projects have been executed as one-time efforts which introduced new systems but did not adequately provide for the ongoing care for the maintenance of those systems through required permanent staffing or application staff augmentation resources.

Due to funding constraints, technical staff has been reduced over the years. For example, there is no DBA to manage the databases. Similarly, teams did not receive the training they needed to adopt and adapt the systems and business processes beyond the initial implementations or the funding to engage external resources to keep the systems current. Systems were not replaced with modern technology on a planned schedule, resulting the current deferred maintenance and technical debt. IBM recommends establishing a joint DLT-ETSS Modernization Delivery Unit to fill this need.

This unit will be a permanent group that brings together expertise across DLT and ETSS. We have defined roles for and onboarding or hiring Technical Product Owners and Project Managers that will become the drivers for system and process modernization. These will be full time roles throughout modernization, change adoption and during continuous improvement to ongoing operations. These roles will require full time dedicated staff to drive the intense levels of change that are required throughout DLT's systems and processes.

We recommend organizing this unit under the Executive Office, since the roles will be working across divisions, and through ETSS for the technical resources.

Scope

Highest priority is a core team of experts that will work across projects from RFP through implementation and onboarding.

- Systems and Integration Architect
- Program Manager
- Salesforce TPO
- OCM Lead
- Legacy Resources

Individual projects will require specific expertise working within DLT and ETSS. These roles drive the products from RFPs and eventually own system and process enhancements.

- Call Center and IVR TPO
- Content Services TPO

- Financial Management TPO
- Data Architect

Benefits

- Sponsor projects to implement changes across DLT, maintain alignment with the Strategic Plan and ETSS, and provide requirements to vendors for implementations on behalf of the divisions.
- Allows dedication to understanding the business processes and tools that are in use by DLT teams.
- Enables focus on system upgrades that prevent the crisis created through excessive deferred maintenance.
- Knowledge retention across projects and temporary vendors.
- Sharing of practices and capabilities across divisions for better adoption.
- Creates alignment with ETSS policies, governance, and technologies.
- Enables consistent focus on a roadmap and continuous improvement.
- Enables direct configuration and administration of modern low-code platforms.

Assumptions

- Funding will be available.
- Roles will have expertise in target platforms and build a deep understanding of DLT business processes.
- DLT and ETSS will select technology platforms with technical resources available for hire in the market.
- Once the programs and projects begin (drafting of RFP), these roles must be filled immediately and continuously.
- Roles must be filled with long term resources either through hiring or staff augmentation.
- Product vendors will provide expertise but cannot be left to prioritize and guide themselves.

Risks

- The cost of failed projects, operating with inefficient processes and poorly maintained systems is far more than maintaining these roles on a persistent basis.
- DLT and ETSS do not have the expertise or available resources to staff these roles internally. These roles require specific experience with modern technology and dedicated time to focus on continuous improvement of the respective products.
- Assigning these roles to existing team members with day-to-day operational responsibilities will risk successful project completion.

- State governments have a history of neglecting systems after initial deployment and reacting to immediate needs over strategic initiatives.
- Failing to engage in BPR and creating a highly customized system and allowing scope creep can derail any project. The focus needs to remain on BPR and an initial Minimally Viable Product.

Roles

Systems and Integration Architect

Description: This is the overall technical lead and the technical owner of the strategic plan. This role will work with the implementation teams' technical leads and ensure applications are integrated correctly and align to ETSS standards. This role must be continuously filled to maintain a wholistic view for DLT across projects and product implementations. This person will be a key member of the RFP selection team.

Experience: Senior architect with experience integrating cloud platforms and designing systems. Experience working with vendors to implement complex systems. Demonstrates ability to learn full breadth of business.

Program Manager

Description: This is the client-side project manager that will oversee all projects and vendor engagements. This person will drive consistency in cadence, progress reporting and escalation. This role must be continuously filled to maintain a wholistic view for DLT and ETSS across projects and product implementations.

Experience: Senior project manager with ability to juggle many parallel projects. Limited involvement in each project, but able to drive best practices and hold delivery teams accountable.

Salesforce Technical Product Owner

Description: This role is responsible for guiding the Salesforce implementation. They will drive best practices, org administration and release management. They will be responsible for driving consistent use of Salesforce across DLT divisions and use cases and alignment with the ETSS Low Code Center of Excellence.

Experience: Technical experience with Salesforce platform to guide strategy and oversee implementation. Must have experience with multiple implementations

and numerous Salesforce products (Sales Cloud, Service Cloud, Experience Cloud, Customer 360, etc.).

Organizational Change Management Lead

Description: This role will facilitate change and communications on behalf of the modernization program. This role will work closely with DLT leadership to ensure strong stakeholder management is in place. This role will drive consistency in internal and external communications and will lead cross-project change activities to ensure modernization goals are met. This role will assist with adoption and role our activities.

Experience: Senior change manager with strong communication skills. This role requires familiarity with the organization to support communication, new system and process adoption, and overall buy-in to the strategic goals of the agency.

Technical Product Owners and Subject Matter Experts

- Call Center and IVR TPO
- Content Services TPO
- Financial Management TPO
- Data Architect
- Legacy System Resources

These roles are needed to support the introduction, adoption, and use of technologies within DLT. Technical products and platforms require constant care and feeding, or they become outdated, improperly used, and quickly lose their value as business enablers.

The above roles all have similar functions around their respective technical platforms. These include:

- Representing the business during the initial product implementations
- Driving continuous improvement of business processes and product use
- Establish and drive common usage across divisions
- Support business users with day-to-day challenges
- Assist existing legacy resources for project related work or to backfill operational tasks while the legacy staff engage on the project

Experience: Any of these roles may be sourced from contractors if employee positions are difficult to obtain. It is important that they are staffed

continuously once the corresponding projects begin to implement each technology. Experience with technology and the ability to work collaboratively with the business and technology team is required.

9.0 Organizational Change Management

The objective of Organizational Change Management (OCM) at RI-DLT is to move the workforce to the future modernized state proposed in this strategic plan. Change management focuses on the people side of change. It aims to provide a framework for the question, "How does RI-DLT transition from legacy manual-based systems, to modern, automated, and efficient systems - while still being able to serve the citizens day-to-day needs as the strategy is executed?" This transformation will be a major undertaking for the agency and ETSS, and it is achievable with help and support.

There are three strategic recommendations from an Organizational Change Management perspective our Strategic Planning Team would like to emphasize:

- Establish a Modernization Delivery Unit as a guiding coalition to execute the strategic plan.
- Apply a Change Framework as a foundation for each initiative and project.
- Continuous Communications to Stakeholders.

A case for change

For the Rhode Island Department of Labor and Training, the Modernization Strategic Plan 2024 is an opportunity to address thematic problems of:

- long deferred system replacement, which makes it challenging to retain retiring talent and attract new talent with skills on legacy systems,
- longstanding financial challenges that impact the ability to appropriately staff the technology team as well as fund necessary system upgrades, making the focus of support to be reactive to incidents rather than pro-active continuous improvement,
- manual and tedious workloads, which impede the staff's ability to serve citizens efficiently,
- stress from single points of failure and improvements and lack of automation in monitoring the confidentiality, integrity, and availability of data.

The path to solving these challenges will accelerate the DLT into the future and serve as model for other State of Rhode Island agencies in their transformations.

Why Change Management?

Implementing change management effectively will increase RI-DLT's returns on the investment. Change management will help protect against the observed pattern of one-time technology projects without support for training and process change. An

organization can select the best of breed product or solution, but having the perfect tool is not a guarantee it will be adopted by the workforce and appropriately supported.

All too often scenarios occur where a technology is implemented, and individuals fail to fully utilize it at production go-live because they:

- learned the change was occurring too late,
- are confident in the “Do-Nothing” and do not see the need for change,
- are unclear how to transition from the current process and use the new solution,
- lack the skills to make the technical leap from legacy to modern technology,
- have misaligned incentives and outdated job assessment metrics.

Conversely, with change management we seek individuals to:

- be informed and engaged in how the change is impacting them,
- see the benefits on a personal and organizational level,
- understand the steps to transition to a new solution,
- receive training to upskill in advance of the change,
- assist in communicating required resources,
- understand changes in performance goals and job expectations.

Organizational Change Management capabilities will protect RI-DLT's investments by ensuring:

- adoption is accelerated,
- utilization rates are high,
- training makes people confident and proficient.

Establish a Modernization Delivery Unit

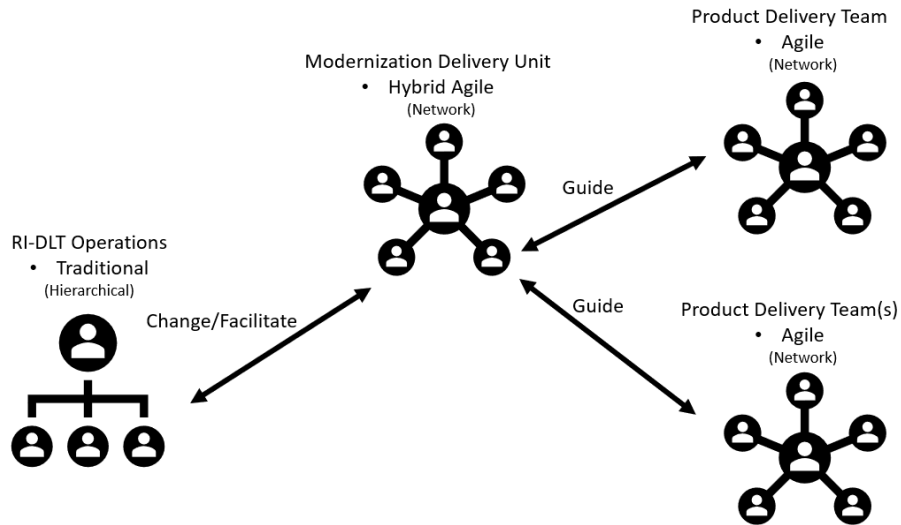
IBM recommends that DLT and ETSS establish a Modernization Delivery Unit as a guiding coalition to execute the strategic plan. This new entity will serve as a catalyst for change and act as a centralized communication hub for RI-DLT managers, staff, business units, and product vendors across initiatives. This will be a committed group with a core set of skills and roles. The MDU team members will be able to cut across business units at the RI-DLT to lead the initiatives, projects, and institute change. The staffing and composition of the MDU is mentioned in a prior section of this report, whereas this section describes the OCM implications of that recommendation.

The existing DLT organization is not adequately adapted to manage the transformation on top of normal daily workloads. There is a lack of capacity, due to manual processes, and a lack of organizational capability to manage large and complex technical projects. The existing workforce, like the systems and processes they use, suffer from a lack of investment in training and modernization. For people to modernize, they need time to explore new methodologies and to apply them to their daily work. Similar to system maintenance, if left unattended, people's skills will drift further and further from those necessary to operate in modern environments.

John. P Kotter, a leading expert on Change Management, says what organizations need today is to bring back a 'dual-operating system' to preserve the core of the traditional, reliable, and efficient operations of day-to-day activities AND have a network-like team to accelerate and guide change.

"What is needed is that dual system that all big organizations once had, if only briefly, early in their histories. When the dual system becomes just a part of 'how we do things here'-that is, as it sinks into the culture-you get sustainable agility. You create an environment where it is actually possible to implement Agile Principles the way they were intended- leading to a more adaptable organization that gets things done faster." (Kotter, 2021)

The Modernization Delivery Unit will utilize a hybrid-agile methodology. Traditional portfolio and project management is suited for stable, reliable, and defined processes rather than 'big-bang' delivery methods. Transforming to modern platforms requires leaner portfolio management to confront smaller and rapid delivery models and the volatile, uncertain, complex, and ambiguous (VUCA) environment agencies have found they must operate in. To be effective with this strategy from a cultural perspective the MDU must balance both methodologies and collaborate with vendors, who use several different methods for their solutions (Disciplined Agile, SAgE, Scrum, Hybrid, Kanban). The illustration below shows how the MDU will be a hybrid-agile network like structure to offer technical advisory services between the various product vendors and RI-DLT full-time employee staff.



The Modernization Delivery Unit will serve several key functions:

- Ensure the selection of products aligns to the Strategic Plan,
- Shift the responsibility for leading change to a dedicated team rather than a part-time addition to RI-DLT's full-time employees,
- Coordinate testing, implementation, and release management,
- Provide IT Advisory services at strategic and tactical levels,
- Become the nexus between Product Delivery Teams and RI-DLT staff,
- Collect, maintain, and prioritize feedback and requirements for future action,
- Empower a culture of continuous improvement and delivery,
- Handle emergent challenges,
- Lead organizational change management.

IBM recommends that the Modernization Delivery Unit be staffed as the top priority and maintained as a permanent fixture. Keeping up with legislative updates, changes in citizen expectations, and evolving technology will require constant modernization. Continuous small changes are the recommended future model.

Apply a Change Framework as a foundation for each initiative and project.

IBM recommends that DLT adopt a change framework to ensure organizational change management (OCM) principles are incorporated into every modernization effort. The Change Framework leverages the Prosci ADKAR methodology to include overall change management and communication strategies to that should be applied from kick-off through launch. Below we will explain how the Prosci ADKAR methodology may be leveraged to increase initiative success.

The OCM Lead will collaborate with product vendors and RI-DLT and ETSS staff on two levels using the Change Framework.

- *Organizational Change Management* is managing changes within business units or at the group level at RI-DLT.
- *Individual Change Management* is providing tactics and tools to enable managers and employees to transition to new systems and processes, while overcoming personal barriers to adoption.

5 Strategic OCM Recommendations for RI-DLT

1) Kick-off initiatives and projects with strong sponsorship and governance

Identify an executive sponsor to ensure long-term accountability and ownership. Establish a governance model to facilitate strategic alignment and interactions for decision-making purposes. Ensure the ETSS IT Governance process is followed.

2) Leverage organizational lessons learned & industry standards

To facilitate transition, apply learnings such as more business and IT staff engagement during requirements sessions. Pair these with the introduction of project, change, and configuration management best practices into the organization through thoughtfully curated messaging and activities orchestrated through the IT strategic roadmap.

3) Plan, perform, measure (repeat)

Develop communication and adoption plans (and associated targets). Provide continuous cadence of communication to stakeholder groups. Build metrics that measure value and use reporting to enable data-driven results.

4) Mobilize a Modernization Unit

Create a cross-functional group of business, data, and technology “champions” to help craft requirements, iteratively coordinate technical and tactical initiatives, facilitate bottom-up change, and enable continuous feedback loops.

5) Manage people, process, technology risks

Maintain a people-oriented focus to offset technology risks. Invest in people through staffing and succession planning, learning and development, recognition programs, and alignment of performance objectives with project success. Enable delivery through mobilization processes and tracking tools. Celebrate joint DLT and ETSS successes. Learn from missteps.

ADKAR and Assessing Change

ADKAR is an acronym composed of five elements Awareness, Desire, Knowledge, Ability, and Reinforcement that is meant to be followed in order when introducing a new change. It is based on the principle that organizational change is driven by individual change. It addresses the most common reasons why organizational changes fail through strategy, communication, and motivation.

"ADKAR is a results-oriented model that provides a framework for how change management tactics and techniques (including communications, sponsorships, readiness assessments, coaching, training, and resistance management) come together to produce change." (Hiatt J. , 2006)

As projects from the strategy roadmap backlog is authorized and funded from IT Governance Council, RI-DLT, and ETSS the OCM lead within the Modernization Delivery Unit may conduct an assessment using ADKAR. The table below, drawn from the work of Jeffrey M. Hiatt and Timothy J. Creasey in *Change Management: The People Side of Change*, defines each of the five elements of the ADKAR Model, the success factors influencing the element, and how a score may be assessed. The RI OCM Lead may use this model strategically to assess the feasibility of initiatives and projects to business units and tactically for managers and vendors to increase speed of adoption by individuals.

ADKAR Element Definition	Success Factors	Initiative/Project /Individual Score 0-5
Awareness of the need for change	<ul style="list-style-type: none"> • a person's view of the current state • how a person perceives a problem • credibility of the sender of awareness messages • circulation of misinformation or rumors • contestability of the reasons for change 	Awareness Profile: (0-5)
Desire to support and participate in the change	<ul style="list-style-type: none"> • the nature of the change and how it will impact each person • the organizational or environmental context for the change • each individual's personal situation • a person's motivation 	Desire Profile: (0-5)
Knowledge of how to change	<ul style="list-style-type: none"> • the current knowledge base of an individual • the capability of a person to gain additional knowledge • resources available for education and training • access to or existence of the required knowledge 	Knowledge Profile: (0-5)
Ability to implement required skills and behaviors	<ul style="list-style-type: none"> • psychological blocks • physical abilities • intellectual capability • the time available to develop the needed skills • the availability of resources to support the development of new abilities 	Ability Profile: (0-5)
Reinforcement to sustain the change	<ul style="list-style-type: none"> • the degree reinforcement is meaningful to the person impacted by the change • the association of the reinforcement with demonstrated progress or success • the absence of negative consequences • an accountability system that creates an ongoing mechanism to reinforce the change 	Reinforcement Profile: (0-5)

Adapted from (Hiatt J. M., 2012)

Conducting an OCM Assessment and developing the ADKAR Profile will be essential for identifying barriers on which to focus efforts to overcome resistance. These barriers

will be represented by the lowest scores among these five dimensions. There are certain tactics the Modernization Delivery Unit can leverage to increase weak scores on any dimension. Periodically taking inventory during the Software Delivery Lifecycle (SDLC) will provide the OCM Lead insight into how well the change is proceeding and identify opportunities for tactical action.

Continuous Communications to Stakeholders

The success of the modernization program will depend on all parties working in lockstep towards common goals. This requires the prioritization of constant and consistent communication. The OCM Lead will be responsible for ensuring this communication happens throughout each stage of every project. The Communication Plan developed with DLT and ETSS leadership lays out the cadence, channels, and content for messaging throughout all phases of the modernization program. Each of these correspond to the elements of the ADKAR model.

Effective communication will require messaging that targets each audience's interests and concerns. To achieve buy-in, they will want to know why the changes are happening at a general level, but specifically how the changes affect them. Resistance to change should be expected. A key approach to combat this is through early communication that gives stakeholders time to process what is coming, provide feedback, and support the change. DLT's projects are expected to take many years from RFP to launch, but stakeholders should be given regular updates with increasing details from the beginning.

The OCM Lead will work with many partners to disseminate their messages. While it is critical that top State, DLT and ETSS leaders sponsor each project and demonstrate their support, it is also important that messages come from many different voices. The OCM Lead will identify change agents throughout the DLT and ETSS organizations to reinforce messages and ensure they resonate with all the different stakeholder groups. This approach serves two primary purposes; demonstrating buy-in from multiple levels of the organization and uses many voices to reach many ears.

Informed, engaged and supportive employees will enable a smooth transition to DLT's modern future.

10.0 Modernization Lessons Learned

Large modernization projects are challenging for any organization, but the unique environments in most state government agencies often lead to failed projects. Here we've compiled some observations of patterns that have shown across these projects and recommendations for how to minimize some of the risks.

1. Projects focus on systems and process but leave the people behind.

Organizational change must be an integral part of the planning, development and rollout of any system and process change. This is even more critical in divisions that are leaping ahead decades in technology and are introducing processes that may not resemble their predecessors. Without the buy-in from the teams using new software, workers will find ways to continue legacy manual processes within the new systems that were built to retire those processes. (Kern, 2021)

Recommendation: Build buy-in from the beginning with clear communication and inclusion of representatives from throughout the organization. Ensure teams own the new systems and processes and are empowered to make them work.

2. Projects introduce new systems but do not train teams on how to use them.

DLT has seen firsthand the results of this issue as OnBase was put in place years ago, but the goals that drove the project were never realized. This left the entire organization frustrated with a product and a support team that was meant to ease their day-to-day burdens.

Recommendation: Account for training and ongoing support in the delivery plan and budget from the beginning. Training must cover day-to-day users, administrative staff, and technical teams. Support budgets must account for professional services from product vendors and time for DLT and ETSS employees to collaborate with the vendors. No modernization is a one-time project, so continuous improvement, ongoing training and annual software upgrades must be included.

3. State governments lack modernization experts.

The day-to-day business of serving the public by administering benefits and helping job seekers does not prepare the agency to execute modernization projects. Many projects leave agency leaders to figure out complex roles such as program management, contract administration, process improvement and architecture for which they have no experience and training. (Katawazi, n.d.)

Recommendation: Bring in experts with experience and the ability to focus on the business of modernization. Hire these roles, if possible, but even if required to

leverage contractors, acquire them as permanent positions outside of the temporary projects that they'll oversee. Coordinate with ETSS to ensure statewide initiatives and Governor's 2030 plan are accounted for.

In addition, leverage an independent verification and validation model and be prepared to respond to gaps and delays in delivery. The state of Hawaii had this model in place, but reports indicate that they did not take timely action against the vendor and did not keep up with quality reviews. This not only led to the project's failure but wasted millions of additional dollars in the process.

4. Projects fail to engage business subject matter experts.

Technology firms that are good at modernization do not know the intricacies of the State's business processes. Projects often leave technology firms to work in isolation where they must make assumptions about business processes. (Andrew Gomes, 2024)

DLT saw this pattern during the pandemic with the UI Online modernization that left key features out of the new system.

Recommendation: Allocate significant time from business experts to share their knowledge of processes, regulations, and the local culture. Expect SMEs to dedicate 20-30% of their time to requirements, process re-engineering, testing, and training.

5. Projects lack sponsorship and commitment.

Major modernization projects, especially in State government, will span political administrations and the tenor of the original sponsor. This can leave the project without focus and the vision to drive it to completion. Crises, like the pandemic and environmental disasters, and the need for urgent responses are also a constant in State government. Projects that rely on individuals and don't create lasting artifacts and establish permanent structures are doomed to be swept aside once the next emergency arrives. (Barlow, 2019)

Recommendation: Draft a vision (strategic plan). Project Charter, and communicate it broadly and regularly. Establish permanent roles (Modernization Delivery Unit) that can focus on modernization and do not have daily responsibilities that will overrule the progress of modernization in an emergency. In addition, project sponsorship must come from the top of the organization. This means consistent involvement, follow up on progress and ensuring that division and line managers are continuously engaged and working to progress the effort. Continue engagement with ETSS for overall IT alignment and governance.

11.0 Performance Indicators

As the state seeks to evaluate options such as projects, vendor solutions, and future enhancements, it is important to have a common approach for scoring business value. The scoring criteria should align to DLT's mission and goals and enable a common formula across diverse sets of options.

The categories and criteria below were developed with DLT leadership to provide an objective and clear way to evaluate options and measure progress towards modernization and process improvement. These categories have been used in the Strategic Plan to describe the expected benefits of each initiative and should be used going forward to communicate the effectiveness of the modernization changes.

Scores indicate the level of correlation between DLT's goals and a proposed project's outcomes. Projects with higher scores should be pursued over those with lower scores or large investments should only be made where a project scores high and very high across all criteria.

- Very High (VH): Generational investments must score at this level across all categories.
- High (H): Large investments must score at this level or higher across all categories.
- Medium (M): Moderately priced tactical projects must score in this range.
- Low (L): Only small tactical projects should be pursued if scores are in this range.

Customer Experience

Criteria	Scoring Scale
Convenience – Expanded access/self-service, greater information access, and increased communication (e.g. status and procedural info)	VH: Key improvements for VERLY LARGE portion of DLT customers/requests (30%+)
	H: Key improvements for LARGE portions of DLT customers/requests (20%-30%)
	M: Improvements for MEDIUM portion of DLT customers/requests (10%-20%)
	L: Improvements for SMALL portion of DLT customers/requests (<10%)

Operational Performance

Criteria	Scoring Scale
<i>Manual Effort Reduction – Monthly manual effort hours reduction within the department/function.</i>	VH: 640+ effort hours (>4 FTE) reduced per month for manual workarounds
	H: 320-640 effort hours (2-4 FTE) reduced per month for manual workarounds
	M: 160-320 effort hours (1-2 FTE) reduced per month for manual workarounds
	L: <160 effort hours (<1 FTE) reduced per month for manual workarounds

Business Agility

Criteria	Scoring Scale
<i>Legislative Policy Changes Agility – Potential reduction in Effort/Cost to implement legislation and/or other policy changes</i>	VH: \$250k+ reduction in annual IT spend for legislation/policy changes
	H: \$100-\$250k reduction in annual IT spend for legislation/policy changes
	M: \$50-\$100k reduction in annual IT spend for legislation/policy changes
	L: <\$50k reduction in annual IT spend for legislation/policy changes

Appendix A – Detailed Reengineered Business Processes

The appendix lists the key revised business processes by the application.

Tax & Wage To-Be Process

The Tax and Wage To-Be processes are divided into the following main processes.

- New Employer Registration Online
- File Wage Report Online
- Pay Online
- Payroll Company Submit Files Online
- Amend Wage Report for any Quarter Online
- Calculate and Assign Contribution Rate
- Benefit Charge
- Field Audit
- Collections
- Tax Performance System (TPS)
- TDI Tax Refund
- Bankruptcy

The below sections will discuss the key To-Be processes at a high level.

New Employer Registration Online

Employers of Rhode Island citizens can now register online through a self-service portal, with existing employers able to update certain information. Key features include data validation enforcement, improved data quality, and online communication preferences to reduce paper mail costs. The system automatically assigns contribution rates, generates a new employer packet, and assigns a unique account number.

File Wage Report Online

The proposed To-Be system will allow employers, payroll companies, and CPAs to file wage reports online using a self-service portal. Key features include filing wage reports for any quarter, prepopulating employee information, and calculating total taxable wages. Payroll companies/CPAs can file reports on behalf of employers, and workers can submit paper reports via the portal.

Pay Online

The proposed To-Be system will introduce a new Pay Online feature that enables employers, payroll companies, and CPAs to make online payments for current or past due amounts. The system will reduce the need for paper checks and provide users with secure payment options using their credit cards or other electronic payment methods. The Pay Online feature will also allow users to make partial payments, print payment

vouchers with unique barcodes for easy processing of paper checks, and provide a faster and more efficient payment method for payroll companies/CPAs.

Payroll Company Submit Files Online

The proposed To-Be system will allow payroll companies to securely upload wage and tax data files using a self-service online portal. The system will run validations on the uploaded files and notify payroll companies of any discrepancies. Once files pass validation, the system will process the data to create wage records and post receivables for employers. This will save time and provide a reliable and secure way for payroll companies to submit data.

Amend Wage Report for any Quarter Online

The proposed To-Be system is designed to allow employers, payroll companies, and CPAs to amend their wage reports online. The portal will enable users to amend wage reports for any quarter, keep records of modifications, and allow them to select reasons for amendments. The system will run business rules to determine if a worker review is required for amendments, such as reducing wages below a certain percentage. The system will automatically adjust existing receivables and payments based on approved amendments, reducing manual work.

Calculate and Assign Contribution Rate

The "Calculate and Assign Contribution Rate" will be a batch process initiated by the system. It will be triggered in various scenarios such as when a new employer registers or when benefit charges are adjusted. The system will maintain all transactional data and recalculate the experience rate accurately at any time.

Benefit Charge

The Benefit Charge will be a batch process initiated by the system when a monthly benefit charge file is received from UI benefits or when previously posted benefit charges are adjusted. The new Benefit Charge process includes several key features to improve efficiency and accuracy, such as saving time for workers by submitting a data file to adjust or reverse previously posted benefit charges, always adjusting or reversing past benefit charges to ensure correct transactional data, automatically determining if a past adjustment or reversal requires rate recalculation and adjusting receivables and applied payments to the past quarter(s) impacted by revised contribution rates, saving a significant amount of worker time.

Field Audit

The proposed new system for Field Audit will enable workers to use it at all stages of the audit process. It will select employers for the audit based on defined business rules, allow supervisors to add or remove employers to/from the list, assign auditors based on defined business rules, track all audit activities using a case, allow auditors to

modify and share the audit report electronically with employers, and allow supervisors to review and approve audit reports using a workflow that notifies them when the audit is ready for review.

Collections

The proposed new Collections system will enable workers to use a self-service online portal at every step of the collections process, including identifying delinquent employers based on defined business rules, assigning revenue officers based on defined business rules, keeping track of all collections activities using a case, allowing workers to enter contacts made by revenue officers with employers, generating reports, allowing workers to initiate a partial payment agreement and file a tax lien, and enabling employers to request and download various clearance documents from the self-service portal.

Tax Performance System (TPS)

The proposed new Tax Performance System (TPS) will provide a self-service online portal for workers to complete all TPS steps. This system eliminates the need for IT staff assistance, saves time, and reduces paper usage. Workers can generate a universe online, enter a random seed to create a sample, review sample cases, and answer questionnaires. The system will record all responses and generate a summarized view of the sample assessment, which workers can approve.

TDI Tax Refund

The proposed system will allow employees to request TDI refunds online using the TDI Online portal. The system offers features such as the ability for employees to log in and review TDI tax by employer and calendar year and initiate investigations for any missing or incorrect information. Employees can also request a refund for any of the last three completed calendar years and the year in which they worked for more than one employer. The system will automatically adjust any TDI or UI overpayment made to the employee against the TDI tax refund and notify the accounting system to initiate a funds transfer. It will display the refund details and provide employees with an option to initiate an investigation for missing or incorrectly reported wages. Finally, the system will notify the tax worker to review and approve the TDI tax refund, after which it will issue the refund to the employee.

Bankruptcy

The current bankruptcy process is manual, and a new system is proposed to reduce the workload. The new system will have a self-service online portal that workers can use at every step of bankruptcy, significantly reducing manual work. Key features of the new system include automatic addition or removal of employers to the LexisNexis watch list, automatic processing of identified matches, automatic updates of existing bankruptcy information, generation of bankruptcy notice, and automatic set up of

bankruptcy indicator. The system also provides an option for workers to file a bankruptcy proof of claim and identify pre-petition missing reports and money delinquencies. The system notifies the legal worker to print and submit the Proof of Claim to the bankruptcy court once the tax worker reviews and approves it.

TDI/TCI To-Be Process

The TDI To-Be process is divided into the following two main processes.

- To-Be TDI Application (Application Submission).
- To-Be TDI Claim Processing.

The below sections will discuss the key To-Be processes at a high level.

To-Be TDI/TCI Application (Application Submission)

TDI/TCI accepts new applications through paper, phone, and online. TDI workers will use TDI Online to file paper applications on behalf of the applicant and save partial applications. The filed applications will be stored in Operational Customer Data and processed by TDI Backend, which runs business rules to determine monetary eligibility. The approved claims are marked Monetary Approved, and Forms and Statements are sent to claimants. The IVR will be connected to Operational Customer Data, allowing applicants/claimants to get status updates and make specific updates. The data from the Wage system and UI Benefit system is used to determine monetary eligibility and identify claimants eligible for both TDI and UI benefits.

The applications successfully processed will create claims, and the TDI Backend will address issues with applications that could not be processed. The Denial Notice and Statement will be sent to claimants whose claim failed the monetary eligibility criteria, including how they can appeal the decision. The applicant/claimant will be able to save a partial application and resume it later. Claimants will be able to set communication preferences for receiving Forms and Statements, which can be mailed or downloaded from TDI Online. The TDI Backend will follow defined business rules to determine monetary eligibility, and the IVR connected to Operational Customer Data will allow applicants/claimants to make certain updates and get status updates.

To-Be TDI Claim Processing

The TDI Online system will allow medical providers, employers, insurance companies, and claimants to submit required forms and parental evidence for bonding with a newborn or adopted child. TDI Online will save the forms with relevant keywords/tags into the OnBase system, reducing the manual work for TDI workers. The new workflow system provides the current stage of a claim, the owner, and the next steps. The worker will review the claim, approve or deny it, or request additional information. The claim status is automatically updated, and claimants will be able to check the status on TDI

Online or IVR. The system will match the data from the Family Court, Worker's Compensation Court, and GSS with the claimants in the system. The TCI system will allow for tax withholding. The TDI Backend will generate TCI 1099 data files for the IRS and state Department of Revenue and data files for claimants with overpayments. The system will calculate weekly payments accounting for any deductions ordered by the Family Court for child support or past overpayments. Payment details will be electronically shared with the DLT accounting system FARS, banks, or debit card vendors.

The TDI Online system will significantly reduce manual work for TDI workers and cut down the time required to process forms. The new workflow system will provide a systematic and manual step-by-step process for reviewing claims, updating claim statuses, and notifying claimants of the next steps. The system will match incoming data from the Family Court, Worker's Compensation Court, and DLT's Worker Compensation System with claimants in the system and generate 1099 data files for the IRS and state Department of Revenue. The system will also calculate weekly payments, which will be electronically shared with the DLT accounting system FARS, banks, or debit card vendors.

UI Benefits To-Be Process

The UI Benefits To-Be processes are divided into the following main processes.

- File a Claim
- Claimant File an Appeal
- Identify Over Payment – Form Sent
- Identify Over Payment -Process Form
- Claimant Pays back Overpayment Online
- Identity Theft

The below sections will discuss the key To-Be processes at a high level.

File a Claim

The self-service online portal will allow individuals to file an initial or refiled claim for benefits either through the portal itself or with the help of a worker over the phone. The system will use predefined business rules and data to determine whether the claim is an initial application or a refiled claim. The system will validate the data using external data sources and update the claim accordingly. If the claim data fails validation, the system will notify the worker. Once the claim is validated successfully, the employer will be informed, a monetary determination will be run, and the claimant will be informed of the status of their claim.

If there is an issue with the claim, the worker will schedule an adjudication to resolve it, make a decision, and update the claim with an appealable decision. The system will also communicate with the ICON system to identify any out-of-state wages earned by the claimant, process them according to predefined processes, and run a monetary determination. Once the application is processed, the system will issue a determination letter to the claimant to notify them of the status of their claim.

Claimant File an Appeal

The proposed self-service portal will allow both claimants and workers to file appeals online against appealable decisions. Claimants will be able to provide additional details and attach supporting documents electronically. The system will create an appeals case based on the appeal submitted, whether by the claimant or worker. The worker will review the appeal and add comments or documents to the case. The Board of Review will then process the case and render a decision. Once a decision is made, the Board of Review workers will update the case and workflow it back to the UI Benefit worker. Based on the decision, the UI Benefit worker will update the claim and remove any holds or stops if applicable.

Overall, the new system will streamline the appeals process, making it easier for claimants and workers to file appeals online. The self-service portal will allow for electronic submission of supporting documents and additional details. The Board of Review will process the case and workflow back to the UI Benefit worker, who will be able to update the claim based on the decision rendered.

Identify Over Payment – Form Sent

The proposed system is designed to identify overpayments from various sources and simplify the process of confirmation by sending the Crossmatch Form to the employer. The system has several key features: Firstly, it automatically identifies overpayments using the wage data from the Tax and Wage systems and also by using the New Hire Data. Secondly, it provides a screen for call center workers to enter employment information to identify any overpayments. Thirdly, it sends a prepopulated Crossmatch Form to the employer for the potential overlapping weeks, requesting weekly wages for those overlapping weeks.

Additionally, the system creates an overpayment case with all the details to keep track of progress and all related information in one place. Lastly, it notifies the worker if no response is received from the employer within a configurable number of days (X). These features will streamline the process of identifying overpayments and make it easier for both employers and workers to confirm overpayments, ensuring a fair and efficient process.

Identify Over Payment – Process Form

The proposed To-Be system has a process to identify overpayments and send the Crossmatch Form to the employer. The worker will enter the information from the returned Crossmatch Form into the system using the online self-service portal. The system will update the overpayment case once the worker has entered the information returned by the employer. The system will then determine the number of overlapping actual weeks based on the information returned by the employer. If there are no overlapping actual weeks, the system will notify the worker to close the case. If there are actual overlapping weeks, the system will notify the worker to schedule an overpayment adjudication. The worker will then enter the adjudication decision into the system using the online self-service portal. The system will create overpayments receivable(s) for the week(s) where the adjudication decision confirms there were overpayments.

In summary, the proposed To-Be system aims to simplify the process of identifying overpayments. It provides a user-friendly online self-service portal for the worker to enter information from the returned Crossmatch Form and update the overpayment case. The system then determines the number of overlapping actual weeks and notifies the worker to either close the case or schedule an overpayment adjudication. The worker enters the decision of adjudication into the system using the online self-service portal, and the system creates overpayment receivable(s) for the confirmed overpayment weeks.

Claimant Pays back Overpayment Online

The To-Be system simplifies the process of returning overpayments to DLT while automating the entire process. Claimants will be able to refund any overpayments using a self-service online portal. The system will allow claimants to pay either the full or partial amount of the overpayment using a credit card or bank account. Additionally, they will be able to print a payment voucher with a unique bar code and submit payment using a check and voucher. Once the payment is received, the system will apply it against the overpayment receivable and notify the worker if the claimant has paid the entire overpayment. Workers will then review the claimant's account and determine the next steps, such as removing the hold on the account.

Identity Theft

The proposed new system will enable tracking of payments made on accounts affected by identity theft without causing any further harm to the victim. Once identity theft is confirmed, the system will identify the payments made on the victim's account that the identity theft has impacted and then present these payments to the worker for review. The worker will then have the option to add, modify, or remove any affected payments identified by the system. A fraud case will be created to store all the details of the identity theft, including the payments made under identity theft. The system will

reverse all payments made under identity theft from the victim's account, transfer them to a special fraud account, and then store the details of the reversed payments in the fraud case for future reference.

ICON To-Be Process

The ICON To-Be processes are divided into the following main processes.

- RI DLT Requesting Wages from other State(s) (IB4 Request)
- Other State(s) Provided Wages (IB4 Response)
- Claim Withdrawn / Cancelled
- Generate Quarterly IB6

The below sections will discuss the key To-Be processes at a high level.

RI DLT Requesting Wages from other State(s) (IB4 Request)

The new system will streamline requesting wages from other states for unemployment claims. It will first automatically use the SID ICON call to check for wages in other states. If none are found, it will then run IBIQ for the five neighboring states, as IBIQ sometimes has more recent wage information. Based on the information from SID and IBIQ, the system will automatically request wages from any identified states and notify the worker if no out-of-state wages are found despite the worker claiming an out-of-state employer. This automation will save time and effort for both claimants and unemployment staff.

Other State(s) Provided Wages (IB4 Response)

The new Requesting Wages from other State(s) feature in the To-Be system automates wage processing from other states through ICON. It makes wage requests and automatically processes returned wages via IB4 responses, except when business rules or worker reviews require intervention. These rules handle scenarios like IB4 comments, missing wages, or duplicates. If issues are identified, the worker reviews the wages and decides to accept or return them, with the system generating the appropriate IB5 response. For accepted wages, the system associates them with the claim, performs monetary calculations, and generates an IB5 for the other state. This streamlined process saves time and effort for both workers and other states.

Claim Withdrawn / Cancelled

The new To-Be system automates the process of returning ICON wages when a claim is withdrawn or canceled. It does this by identifying claims using ICON wages during the withdrawal/cancellation process and automatically generating an IB5 request to the other state for wage return. This automation reduces discrepancies found during quarterly IB6 generation.

Generate Quarterly IB6

The proposed To-Be system streamlines IB6 generation and eliminates manual work. Unlike the current system where workers initiate and review batch jobs, the new system automates it all. It triggers quarterly batch jobs, calculates IB6s per state, identifies discrepancies through defined business rules, and automatically sends out clean IB6s without worker intervention. However, if discrepancies arise, the system alerts the worker for resolution before sending data to ICON. This automation not only saves time but also improves data accuracy by reducing manual handling.

LMI To-Be Process

The LMI To-Be processes are divided into the following main processes.

- Quarterly Census of Employment and Wages (QCEW)
- Local Area Unemployment Statistics (LAUS)
- NAICS Code Assignment
- SUN System
- Special Projects and LMI Reports

The below sections will discuss the key To-Be processes at a high level.

Quarterly Census of Employment and Wages (QCEW)

LMI is looking to streamline its quarterly tax data submissions to the Bureau of Labor and Statistics (BLS) through a new system. This system will utilize a dedicated QCEW DataMart to automatically generate the required data file. Workers will have control, initiating the generation process and reviewing the data with tools like Excel and Power BI before uploading it to the BLS-QCEW program for final processing. This shift promises to improve efficiency and data quality for LMI's quarterly BLS reporting.

Local Area Unemployment Statistics (LAUS)

The current process involves the LMI team manually preparing a file from claim and ICON data, feeding it into PROMIS, and uploading the output to BLS-LAUS. The proposed "to-be" process streamlines this by creating a LAUS DataMart in the data warehouse. Workers will generate the data file directly from DataMart, review and verify it using tools like Excel or Power BI, and then load it into PROMIS. The subsequent steps of processing the data in PROMIS and uploading it to BLS-LAUS will remain the same.

NAICS Code Assignment

Rhode Island's DLT team is revamping how NAICS codes are assigned to new employers. Instead of assigning codes, employers will now choose them during registration. This triggers an automatic notification to an LMI worker who reviews the

information (including the chosen NAICS code) and can edit it if needed. Finally, the LMI worker approves the finalized NAICS code for the new employer.

Sun System

Currently, the LMI team manually creates Tax and Benefits reports for the SUN system by gathering data from various sources (PDFs, TDI, UI Benefits, Appeals, etc.) and manually entering it field by field into the system. The proposed system simplifies this process by relying on a DataMart to automatically generate report data in the USDOL-defined format. Workers can then review this data in tools like Excel or Power BI before uploading it to SUN via FTP, eliminating manual data entry and saving time.

Special Projects and LMI Reports

The proposed system will create data marts for regularly published data on the LMI site. This will enable workers to query and export data, which can then be taken to tools such as Adobe Design for publishing. The specialized projects are unique in that they are based on specific needs. LMI workers will have access to a data warehouse that contains data from all sources. They can write their own queries to extract data from the warehouse based on the requirements of the special project. Additionally, LMI workers will have access to tools such as Power BI that will allow them to extract and summarize data from the data warehouse.

OCE To-Be Process

The Office of Community Engagement To-Be processes are divided into the following processes based on the business functions.

- Contact Management
- Case Management
- Contract Management
- Project Tracking

The below sections will discuss the key To-Be processes at a high level.

Contract Management

The Office of Community Engagement needs to keep contacts for outreach. A CRM system, which will store and manage all customer data, is proposed for this purpose. The CRM will bring all customer information together in one place, allowing stakeholders to see it. The OCE can use the CRM to capture all interactions with partners, automate communication, and create dashboards to organize partners based on demographics. This will help target specific parts of the audience with different campaigns.

Case Management

OCE will use a case management system to handle discrimination complaints. This system will also be used for other business domains, such as the Board of Review and Workforce Regulation & Safety.

Contract Management

Agiloft will be used for contract management. Detailed recommendations are covered in the To-Be process design for Agiloft.

Project Tracking

A project tracking system is recommended for efficient management. It helps to track all tasks, recommendations, and future project ideas based on OCE feedback.

Agiloft To-Be Process

The Agiloft To-Be process is divided into the following processes based on the business functions.

- Proposal Solicitation
- Pitches
- Creating Contract
- Contract Approval
- Contract Modification or Extension
- Invoicing Process

The below sections will discuss the key To-Be processes at a high level.

Proposal Solicitation

Proposals and evaluations happen outside the Agiloft system. Approved requests are then entered as award agreements by the Agiloft contract team. Adobe Sign handles agreement signing, with both a fully executed version stored in Agiloft and a copy sent to partners.

Pitches

In the To-Be system, a partner portal is introduced to partners. They will be able to submit pitches through the partner portal. All the negotiation of pitches will take place in the Agiloft. Once the Agiloft contract management team finalizes the proposal, it is sent to the director for review. The director updates his decision in the Agiloft, and if it is approved, pitches are converted to contracts automatically.

Creating Contract

Contracts are created automatically by the system and then edited by the Agiloft team if required. They are reviewed by both the Business Affairs team and Agiloft management team in parallel. Approval is needed from both teams. Once approved,

the contracts are sent out for partner signature via Adobe sign envelopes. Fully executed contracts are saved in Agiloft and published in the partner portal. Agiloft sends notifications to partners and team members.

Contract Modification or Extension

For contract modification or extension, partners can submit their request through the partner portal. Agiloft contract management team can view the performance of partners on the current contract or past contracts in the partner portal and will be able to evaluate their performance. If a partner is found eligible, contract modification or extension workflow will be initiated in Agiloft by the Agiloft contract management team, which undergoes the approval process workflow.

Invoicing Process

Agiloft contract management team is not currently involved in invoicing. In the future, Agiloft will provision contracts to the Invoice management system, and partners can submit invoices through the portal. The Business Affairs team will review and approve invoices. The contract management team can view Automated updates. Invoices and receipts will be stored OnBase after payment processing.

BOR To-Be Process

The Board of Review To-Be process is divided into the following processes based on the business functions.

- UI/TDI Claim Process
- Appeal with DLT

The below sections will discuss the key To-Be processes at a high level.

UI/TDI Claim Process

When a claimant files an appeal with the Department of Labor and Training (DLT), the system will create a case in the case management system. DLT can also attach relevant digital images from OnBase to this case. A case management system provides organizations with a central location to track and store case information, including contact details, case notes, appointment scheduling, client communications, and history.

Appeal with DLT

A case is assigned to a referee who reviews and updates it in the system. The hearing is scheduled using team meetings and tracked in the Outlook calendar. Participants receive notices with the meeting ID and call-in number. Sessions can be recorded, and transcripts generated. The decision is recorded in the case management system, and a decision mail is sent to all parties. The appeal status and decision document are updated in the UI online.

Certified Payroll To-Be Process

The Certified Payroll To-Be process is divided into the following processes based on the business functions.

- Online Submission of Payroll
- Case and Document Management

The below sections will discuss the key To-Be processes at a high level.

Online Submission of Payroll

As part of the new certified payroll process, two additional components have been added to the workflow. Firstly, a web portal has been created to allow vendors to submit their payroll information directly. Both the DLT and awarding authority will have access to the portal submissions. The awarding authority can verify and approve the submission while the certified payroll processing department can access the submissions for auditing purposes.

The second component is a website and database that contractors can use to enter their weekly payroll certification data. The system has predefined wage rates, so if a contractor assigns a wage that is not in line with the Federal government's defined labor wage, it will automatically raise a red flag.

Case and Document Management

The system streamlines certified payroll complaint handling. Employees file their complaints online, triggering case creation and an automatic document request from awarding authorities. All documents become centrally organized. By analyzing the evidence, the system flags potential wage violations, triggering further investigation. The investigations will be done following the WRS (Workforce Regulation and Safety) prevailing wage investigations process. Confirmed violations move through the standard workflow, while dismissed cases notify everyone involved. This efficient process promotes compliance and protects worker rights.

EmployRI To-Be Process

The EmployRI To-Be process is divided into the following processes based on the business functions.

- RJRI Application Submission
- Contract Expense Payment

The below sections will discuss the key To-Be processes at a high level.

RJRI Application Submission

Participants enroll in the RJRI system. Accounts will be created in EmployRI using data in RJRI and participant data will be populated in EmployRI by Robotic Process Automation (RPA). This is a short-term solution as DMS will be replaced with Salesforce in the future.

Contract Expense Payment

The To-Be contract expense payment will follow the recommendation made for the general invoicing process used by Business Affairs team.

FARS To-Be Process

The FARS Business Affairs To-Be process is divided into the following processes based on the business functions.

- Timesheets and Payroll
- Partner Expenses and Invoicing
- Automatic Reconciliation

The below sections will discuss the key To-Be processes at a high level.

Timesheets and Payroll

DLT employees currently submit timesheets in Excel, which are later logged into FARS by manually entering details into the mainframe system. The To-Be process aims to eliminate this manual transaction logging into the mainframe system. The administrator can set up allocation rules and project codes in the system, and employees can submit their timesheets in the state's financial system based on the allocation rules and project codes. The system will share data with the payroll and other systems automatically.

Partner Expenses and Invoicing

The business affairs team will be able to create a project with grant mapping and program allocation rules for partner expenses and invoicing. Once set up, partners can submit invoices through the portal, and expenses are allocated to the project. The system tracks the remaining budget. Journal entries are recorded automatically. The process for operational expenses is the same.

Automatic Reconciliation

Automatic reconciliation between state and DLT financial accounting systems will eliminate manual intervention and generate federal reports using DLT datasets.

RJRI (DMS) To-Be Process

The RJRI DMS To-Be process is divided into the following processes based on the business functions.

- Participant Enrollment
- Data Sharing with Agiloft
- Online Enrollment Data Update
- RJRI Sharing Data with EmployRI

The below sections will discuss the key To-Be processes at a high level.

Participant Enrollment

Participants are enrolled through the participant portal. The new system will standardize data collection and validation and verify participant identification, boosting data accuracy. The system will integrate with other DLT departments. The new API will quickly alert EmployRI of any data failures and prevent data loss.

Data Sharing with Agiloft

Agiloft's contract management team will have access performance targets (enrolled, placed, and completed) via a partner portal. A contract dashboard will be built in the portal to show contract details from DMS to both partners and the Agiloft team. This will enable the team to monitor participation and eliminate the need to search DMS manually.

Online Enrollment Data Update

The new system will allow all users, including participants, enrollment managers, and the RJRI team to update information directly from the front-end portal. This will remove the need for the RJRI team to log in to the back-end database and write SQL queries to make small changes to the enrollment portal.

RJRI Sharing Data with EmployRI

The RJRI team generates new employment report every week and sends it to EmployRI. This report contains new participant information from the Enrollment Portal, which EmployRI uses for federal enrollment allocation. The new system will share data automatically with EmployRI.

Workforce Regulation & Safety To-Be Process

The Workforce Regulation and Safety To-Be process is divided into the following processes based on the business functions.

- Prevailing Wage & Labor Standards Investigation
- Permits & Certificates
- Trade Licensing

The below sections will discuss the key To-Be processes at a high level.

Prevailing Wage & Labor Standards Investigation

Employees will be able to submit a complaint online, system will create a case automatically. The supervisor assigns the case to an investigator based on workload, expertise, history, and other factors identified by the system. Employers will be able to submit additional documentation using the secure online portal. Once a decision is made, the assistant director communicates it to the employer and employee. If the employer agrees, they can pay fees and fines online, and back-wages are paid. Otherwise, the case goes to the adjudicative section. The decision of the adjudicative section is updated in the case management system, and final communication is sent to the parties involved.

Permits & Certificates

The Permits and Certificates team within WRS issues permits for new equipment or renews permits for existing equipment. Property owners create an account in the occupational safety portal to submit new and renewal permit requests with online payments. Inspectors submit inspection reports through secure document upload. If equipment passes inspection, owners pay outstanding fees through the portal and print certificates. When equipment fails inspection, a case is created, and the applicant is notified. If a violation is not fixed within 45 days, the applicant is notified of the shutdown. If an equipment certificate expires without inspection, a violation case is automatically created.

Trade Licensing

Trade Licensing deals with issuing and renewing different trade licenses, which enables workers to pursue and practice different trades like electricians, plumbers, and others. Trade professionals can create an account in the Trade licensing portal and submit new license applications as well as renewal applications. Upon submitting the new license application, a case is automatically created in the case management system. If the application is approved, an applicant can make payment online by logging in to the portal.

The to-be system enables applicants to schedule test dates based on calendar availability. The score and status of the test will also be published in the portal. If the applicant passes the test, the charge is generated for the license and sent to Invoicing. Once the applicant makes the payment, the License is Issued, and the record details in the licensing system are updated & reflected in the status in the portal.

The To-Be system will allow the submission of renewal requests and complaints through the online portal. The portal will automatically create a case in the management system. Status updates are available throughout the process, and online payments can be made. A complaint against a person or company follows standard investigation procedures.

Workers Compensation (WC) To-Be Process

The Worker's Compensation (WC) To-Be process is divided into the following processes based on the business functions.

- Document Management
- Accessing Court Documents

The below sections will discuss the key To-Be processes at a high level.

Document Management

During the As-Is session, one of the major pain points that was discussed was the inability to import documents into OnBase automatically. It is recommended to have an API integration between the Worker's Compensation system and the OnBase module in the To-Be state. This integration will eliminate the need to print out the documents and then scan them back into OnBase. Instead, the documents will be loaded into OnBase with associated keywords and linked to the case within the Worker's Compensation system.

Accessing Court Documents

Fetching all the court-related documents should not be a manual task. With the Judiciary's cooperation, Workers' compensation system can be integrated with the court system and thereby can make the task automated. The To-Be system will use data interfaces to integrate the worker's compensation system with the court system.

Appendix B – Trade Occupations

Workforce Regulation and Safety oversees the licensure, testing, registration, and discipline of more than 30,000 individuals in following trade occupations.

Trade Group	Trade Occupation
RESTRICTED ENDORSEMENTS	Hydraulic Delivery Truck
	Lattice Crane
	Hydraulic Cranes
	Overhead Electric Crane
	Crane Sign
	Aerial Lift
	Segmental Lift Hoist or Segmental Erecting Arm
	Excavating Equipment
APPRENTICES	Apprentice (Oil Burner)
	Apprentice (Fire Alarm)
	Apprentice (Sign Installer)
	Apprentice (Lightning Protection)
MECHANICALS	Master Mechanical Contractor MMA
	Contractor Master CM
	Contractor Master Pipefitter CMP
	Contractor Master Refrigeration CMR
	Contractor Master Sheet Metal CMS
	Refrigeration Master 1 RMI
	Refrigeration MASTER 2 RM2
	Pipefitter Master 1 PMI
	Pipefitter Master 2 PM2
	Sheet Metal Master I SMM 1
	Sheet Metal Master Il SMM 2
	PJF/ Natural Gas Service Master Il LTD
	PJF/ Gas Serviceman (Propane Gas) Master Il LTD
	Refrigeration Journeyman I RJI
	Refrigeration Journeyman Il RJ2
	Pipefitter Journeyman I PJI
	Pipefitter Journeyman Il PJ2
	Sheet Metal Journeyman I SW 1
	Sheet Metal Journeyman Il SMJ 2
	Fire Suppression LTD LIMITED
	Decorative Heating Appliances LTD LIMITED
	Welding LTD LIMITED
	Gas Serviceman (Natural Gas) PJF LIMITED

	Gas Serviceman (Propane Gas) Journeyperson II PJF LIMITED
	O/B Serviceman Journeyperson II PJF LIMITED
	Gas Station LTD LIMITED
	Synthetic Exhaust Ducting LTD LIMITED
	Contractor Master Sprinkler CMFP
	Fire Protection Master FPM
	Fire Protection Journeyperson FPJ
PLUMBERS and IRRIGATORS	Contractor Master
	Master Plumber
	Journeyperson Plumber
	Apprentice Plumber
	Master Irrigator
	Journeyperson Irrigator
	Apprentice Irrigator
	Master water-filtration/treatment-system installer
	Journeyperson water-filtration/treatment-system installer
UNRESTRICTED ENDORSEMENTS	Full License
	Lattice Crane
	Hydraulic Cranes
	Aerial Lift
	Overhead Electric Crane
	Conveyor Belt
	Concrete Pump/Screeding Equipment
	Const. Forklift / Telehandler
	Excavating Equipment
	Drilling Rig
RESTRICTED ENDORSEMENTS	Hydraulic Delivery Truck
	Lattice Crane
	Hydraulic Cranes
	Overhead Electric Crane
	Crane Sign
	Aerial Lift
	Segmental Lift Hoist or Segmental Erecting Arm
	Excavating Equipment

Appendix C – Trade Licensing Boards

Workforce Regulation and Safety oversees the administrative and regulatory functions of following licensing Boards whose 56 members represent the various professions.

Licensed Trades/Boards
Alarm Business and Agents
Electricians
Telecommunications
Hoisting Engineers
Hoisting Restricted
Mechanicals
Plumbers and Irrigators

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