

The Way Forward Crosswalk Clarification

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1. Executive Summary

The Executive Steering Committee (ESC), in partnership with the One Washington program, voted on May 16, 2022 to confirm the functionality that should be included with the first implementation of Workday.

The next important step in The Way Forward (TWF) plan is to determine how this scope is rolled out to the enterprise—the deployment strategy. The deployment strategy had two components:

- 1. Deployment of Workday** – Should the first implementation of Workday be implemented to all agencies¹ at the same time, in waves— to different groups of agencies over a longer period, or some other approach?
- 2. Agency Remediation (LSR) strategy** – To what degree should agency legacy system remediation be completed before the first financial implementation of Workday is implemented?

On June 7, 2022 the ESC approved the first part of the deployment strategy recommendation – a single deployment of Workday. After discussion, the ESC asked for additional information on crosswalks and agency system remediation before making a final decision on the second part of strategy deployment.

This document is written with the ESC, OCIO and agencies in mind, providing the definition and purpose of the crosswalks, plus provides examples of integration use cases for the Enterprise Integration Crosswalk.

Key information to know about One Washington crosswalks:

- This document represents the best-known information at the time. One Washington is an iterative program and as we learn more, we will continue to provide information to the ESC and agencies.
- ***Crosswalks are a collaborative effort*** within the One Washington program between OFM ITSD, Statewide Accounting, One Washington program staff and contracted expert partners.
- ***Crosswalks are a standard tool used for system implementation.*** Washington state government has successfully used crosswalks in the past for system mappings required to perform extract, transform and load (ETL's) processes. Deloitte as the system integrator (SI), states that crosswalks are common and has vast experience supporting them during system implementations. The One Washington program has been planning for the use of crosswalks since the readiness phase of the project.
- Once the scope of One Washington was split between core and expanded financials, the use of a crosswalk became necessary to support expanded financial systems. ***There is no deployment strategy option that does not include the use of a crosswalk.***
- **Crosswalks have been planned for the One Washington since the readiness phase of the project.**
- ***Not all agency systems will use a crosswalk.*** A critical assumption is that not all agency systems would require the use of the enterprise integration crosswalk. Some agency systems will be critical to the One Washington phase 1a go-live of Workday and will be required to remediate. Other agency systems are not critical and can be provided with information regarding the enterprise integration crosswalk. All agencies will be educated about known risks and tentative timeline for how long the crosswalk will be maintained before deciding to select this integration option.
- To support agencies that are unable to remediate their legacy systems, the One Washington program will **focus on providing an enterprise solution** that can handle several different integration use cases to standardize for the most common scenarios. The One Washington program in partnership with OFM ITSD and Statewide Accounting has identified agency integrations needs and developed the plans required to design, build, and test in coordination with agencies.

¹ In this discussion “all agencies” means all agencies except WSDOT. This plan is to implement all agencies that us (which doesn't include WSDOT – which does TRAINS not AFRS) in one implementation.

2. Deloitte's Experience with Crosswalk in other implementations

It is common practice in ERP and specifically Workday implementations to leverage crosswalks to manage data translation between the ERP/Workday and legacy systems. Specifically, crosswalks are used to translate data from the legacy chart of accounts to the Foundation Data Model (FDM) in Workday.

Primary situations where this occurs includes implementations that have:

- Phased implementations of ERP/Workday (i.e., Finance first, then HCM, then Planning)
- Legacy systems that will remain in place permanently (i.e., data warehouse used for longitudinal reporting)
- Integrating systems that cannot be remediated simultaneously with ERP/Workday

Crosswalks are used to support both the one-time conversion of data from systems that will be retired with Workday and to facilitate integrations with specific legacy systems that cannot be remediated due to one of the above circumstances.

When used to support conversion, clients are recommended to leverage the crosswalk when creating data extracts that include FDM elements prior to submitting the extracts for validation. This can be done programmatically or manually depending on volume or complexity. By translating values at the source system and prior to validation by the conversion team, the business owner responsible for the data can perform an initial review and ultimately reduce the volume of errors at load.

In most, if not all implementations, it is necessary for clients to develop an integration crosswalk to support integrations for non-remediated systems for a period after go-live. Crosswalks can be designed for a specific system or can utilize a common design to cover multiple systems depending upon the business needs, technical requirements, governance and duration that the crosswalk is needed. Crosswalks can be developed using any number of implementation tools/architectures such as Excel, middleware, and database platforms.

However, the scope of systems that leverage an integration crosswalk should be carefully assessed as the crosswalks often need to be precisely architected to confirm that all values can be cross walked, the crosswalk can be maintained appropriately, and/or support bi-directional translation. Additional overhead is required to maintain the crosswalk from both technical and business resources. For an integration crosswalk to be successful, thorough consideration must be provided to the people, process and technology used to support it.

Deloitte recommends developing a robust governance model to support the crosswalk as early in the implementation as possible. Through this governance, there should be clear roles and responsibilities as well as clear guidance around usage and limitations of the crosswalk. Additionally, the process and roles should be vetted and confirmed prior to go-live by establishing the governance model no later than User Experience Review.

An integration crosswalk should rarely if ever be considered a permanent solution. In coordination with business owners, the implementation team should continuously evaluate and set guidance around the expected retirement roadmap for the crosswalk. In a phased implementation, a general baseline objective would be to retire the crosswalk within two years of the respective ERP/Workday go-live of a given system.

When implementing a crosswalk, risk is introduced as chart of accounts values sometimes do not map to FDM values and/or vice versa in a one-to-one relationship. In these scenarios, clients must determine workaround or alternatives to a crosswalk. Due to the robust nature of the FDM, often, the mapping of Workday FDM to chart of accounts can encounter limitations. These risks or limitations should be mitigated with strategy around people and process, rather than technology. Example strategies include training end users to build fluency on the new FDM model related reports as well as reducing the many-to-one relationship through data cleanup.

3. The definition and purpose of the crosswalks

The One Washington strategy deployment plan will use crosswalks to achieve business transformation, reduce risk and meet go live for state agencies within a reasonable amount of time. There are several crosswalks, each with a distinct purpose. Throughout this section, we will define the major crosswalks and their purpose.

What is a crosswalk? A crosswalk essentially is a value-to-value mapping so information from one system can be transferred into another system. Not all IT systems speak the same business language and thus the data cannot be transferred easily from one system to another. To solve this problem, a crosswalk is created to map data elements from one system to another so that data can be transferred from one system to the other.

For example: To understand how crosswalks value-to-value works, here is an example. AFRS Program Index Code “12345” equals Workday Cost Center “CC12345.” The crosswalks map value-to-value either from Workday values to legacy AFRS values or legacy AFRS values to Workday values.

One Washington Crosswalks: For the purposes of One Washington, crosswalks refer to data and information that is mapped *from* the agencies *to* the future statewide financial system of record, Workday. The two main crosswalks are:

1. [Conversion Lookup and Crosswalk Tables - Financial](#)
2. [Enterprise Integration Crosswalk](#)

The “Reverse” crosswalk: This term is not a technical or formal term but is used by the program to refer to crosswalks that are used for outbound integrations. For the purposes of One Washington, this is a map of data and information from the One Washington Workday ERP system to AFRS data and information used in the agency system(s). So, a simple way to understand this is:

Forward crosswalks: Maps legacy AFRS values to Workday values for inbound integrations from external legacy system to Workday.

Reverse crosswalks: Maps Workday values to legacy AFRS values for outbound integrations from Workday to legacy systems.

Reporting: Crosswalks that map Workday values to legacy AFRS values (also called “reverse crosswalks”) may be essential for agencies to meet their independent agency reporting requirements.

<p><i>Conversion Lookup and Crosswalk Tables - Financial</i></p>	<p>This crosswalk is currently used by the One Washington program, OFM and agencies. It may also be referred to as the Conversion Lookup and Functional Crosswalk.</p> <p>The purposes of this Excel workbook are to provide the value-to-value mappings from AFRS to the Workday Foundation Data Model (FDM) worktag dimensions. This is the One Washington project team’s source of truth for FDM dimensions and will be updated with revisions as they are added to the Workday tenant.</p> <p>This crosswalk is also critical for agencies to produce data extracts for data conversions. When used in conjunction with the data extract specifications, this crosswalk provides both FDM values and other configurable fields values, such as valid values for asset classes, asset types, customer groups, customer categories, etc. OFM is actively using this for data conversions.</p>
<p><i>Description</i></p>	<p>This crosswalk is based on the Conversion Mapping and Functional Crosswalk deliverable from the System Integrator statement of work, in which the State is primarily responsible with Deloitte supporting. Map value-to-value from legacy AFRS to the Workday Foundation Data Model worktag (FDM) dimensions.</p> <p>A copy of this crosswalk (Excel workbook) is shared with agencies monthly on the AST Leads SharePoint site.</p> <ul style="list-style-type: none"> • Agencies may request updates through a defined request process, which are subject to approval through governance. • Agencies may also use this crosswalk to complete the value-to-value mapping needed for their legacy system remediations. <p>The Conversion Lookup and Crosswalk Tables – Financial <i>is only used during implementation and not maintained after go-live.</i></p>
<p><i>Roles</i></p>	<p>One Washington finance team – Owner</p> <p>Business Owners – FDM governance and approvals</p> <p>Deloitte SI – Advisor</p>
<p><i>Responsibilities</i></p>	<p>The One Washington Finance Team is responsible for updating and maintaining the Conversion Lookup and Crosswalk Tables – Financial Excel workbook.</p> <p>Monthly updates are shared with all agencies, who should be reviewing for accuracy or request required updates through the One Washington’s FDM change requests process.</p> <p>These monthly updates are also shared with the OFM ITSD’s Enterprise Data Management team, who uses this information to update the crosswalk database tables that is used for data conversions and integrations. OFM ITSD meets with the One Washington Finance Team after monthly updates to review potential issues.</p> <p>Per RCW 43.88.160, OFM is responsible for the financial operations and systems for the State of Washington. This includes the devising and supervising a modern and complete accounting system for each agency to the end that all revenues, expenditures, receipts, disbursements, resources, and obligations of the state.</p>

Known Risks and Issues

1. **One-to-One Mapping:** This Conversion Lookup and Functional Crosswalk does not contain a one-to-one mapping for every legacy AFRS chart of account element because either a legacy value does not exist, or legacy values were not properly used in the legacy system.
2. **Grant and Project:** The One Washington Program may need to contact agencies for additional mapping to the Grants and Project worktags to be refined, which may limit the ability to build accurate value-to-value mappings. The legacy AFRS project will likely require significant cleanup prior to go-live because agencies have used legacy AFRS projects to account for revenue and expenditures that would not fit the Workday definition of a project. Additionally, there is not an equivalent legacy AFRS table for grants.
3. **Adding Worktags:** There may be additional worktags added based on functional design decisions that would require mapping to legacy AFRS fields.

Enterprise Integration Crosswalk

This is the temporary crosswalk commonly referred to as “the crosswalk” regarding the deployment strategy conversation. The enterprise integration crosswalk maps legacy AFRS values to Workday values and vice versa (aka forward/reverse crosswalks).

The enterprise integration crosswalk was first articulated in the [Integration Strategy](#), prior to the Request for Proposal (RFP) for the Enterprise Resource Plan (ERP) and System Integrator (SI). This decision drove the [phase 0: integration readiness](#) work with agencies, the “Informatica First²” approach in the Deloitte SI statement of work (SOW), and the integration approach for the One Washington integration team. In short, the One Washington program, in partnership with OFM IT, began planning and building the enterprise integration crosswalk well before TWF project began.

Description

This is a temporary solution for agencies that are unable to remediate their legacy system for interacting with the new Workday financial information prior to deployment, including FDM worktags and alignment with business process workflows. The enterprise integration crosswalk maps legacy AFRS values to Workday values.

Policies and guardrails for the crosswalks

Policies and guardrails for the enterprise integration crosswalk will be developed to support the deployment of Workday across the enterprise in accordance with the approved deployment schedule. This will provide answers to these types of questions:

- Who can use the crosswalk?
- How long can agencies use the crosswalk or for what systems?
- When must they stop using the crosswalk?

How policies and guardrails are developed: This will be a collaborative effort with the legacy system remediation guidance and work efforts. As more is learned about agencies that are dependent upon the crosswalk, this will inform the guardrails used during implementation and future policies that are adopted upon go-live.

Who is responsible: Per [RCW 43.88.160](#), OFM is responsible for the financial operations and systems for the State of Washington.

Roles

OFM ITSD Enterprise Data Management team – Crosswalk owner and administrator
Statewide Accounting and One Washington finance team – Business owner of rules and

² informatica™ will be the platform of first choice when considering an integration for implementation. informatica™ Integrations will be based on the State’s investment in and use of informatica™ as an integration layer, many integrations can be facilitated by direct use of the informatica™ tools. In these cases, informatica™ leverages Workday APIs to pass data between third-party and other State systems and Workday.

requirements

One Washington technical team – Process manager

Deloitte SI – Advisor

Responsibilities

OFM ITSD Enterprise Data Management team, Statewide Accounting, One Washington program and Deloitte SI. This joint effort, led by OFM IT, reflects how services are provided today and will need to be sustained after go-live. There are different components with different areas of responsibility, such as:

- The agency cleaning up use of legacy AFRS values and delivering the file to the designated SFTP folder.
- The integration team for picking up the file, transforming values based on business rules, and loading data into Workday.
- OFM ITSD DBA and Data Management staff will maintain the data solution and crosswalk database.
- SWA/finance team is responsible for defining business rules and requirements.

The OFM ITSD Enterprise Data Management team has data architects, Data Base Administrators (DBAs), and other resources with the knowledge and skills to support the enterprise integration crosswalk solution. However, for them to be successful, it requires collaboration with Statewide Accounting (SWA) and the One Washington program (*including the finance team, technical team, Legacy System Remediation [LSR] team, and Deloitte SI*).

The two main components needed for the enterprise integration crosswalk:

1. A database with all the prescribed value-to-value mappings defined by the Finance Team.

- The AFRSToWorkday Crosswalk database is created on an OFM database server for internal use only.
- A WorkdayToAFRS database is planned to support the reverse crosswalk of Workday to AFRS values.
- These databases and infrastructure are maintained by the OFM ITSD Enterprise Data Management team.

2. The logic for an integration to use that database to correctly transform legacy AFRS values to Workday values (or vice versa).

- There are both State and Deloitte-owned integrations based on the statement of work and the integration control inventory.
- The integration team (OFM ITSD integration developers and Deloitte integration developers) will build integrations, including the workflows to pick up an agency file, apply the business provided logic to transform values using the crosswalk database, and then load data into Workday, plus capture any error handling needed when a transaction fails to load and return errors to the agencies.
- The integration control inventory and integration design documents are for internal use only. The integration field mappings will be shared with agencies and the LSR team for coordinating use of these standard enterprise integration solutions.

Approach to development

Based on the information available and expert advice, the guide to developing the enterprise integration crosswalk:

1. Begin by creating a crosswalk for data conversions to use as a baseline [complete].
 - This will assist with validating initial assumptions and begin development of automated processes to convert legacy data into Workday values.
 - This also demonstrates the level of value-to-value mapping that is possible to automate and identify potential gaps.
2. Expand the crosswalk concept to allow usage with integrations [in-progress].
 - This allows for the validation of additional assumptions and business requirements, such as expand crosswalk to become bi-directional (forward and backward cross-walking) and capturing new requirements.
 - It also supports implementation decision for crosswalk, such as using a spreadsheet or database.

Additional recommendations from independent QA advisors include:

- Identify the timeline of developing the crosswalks.
- Consider performing a Proof of Concept.
- Perform early testing.
- Identify specific touchpoints of when and where both Deloitte and Workday will engage with the program throughout the development of the crosswalks to provide formal reviews and input.

Once the integration and the crosswalk database are complete, the integration team will select a pilot agency (non-remediated) to conduct an early proof of concept testing before expanding to all other non-remediating agencies. This would be considered the unit testing of an integration, prior to conducting the full end-to-end testing that will occur once integration unit testing has been completed.

As part of The Way Forward planning efforts, the One Washington program will standup a dedicated crosswalk subproject for a multi-discipline team to address agency use guiderails and policies, creation of a detailed schedule for crosswalk development and comprehensive testing (to include touchpoints and quality assurance metrics) and ensure coordination between different teams.

Assumptions

Some assumptions regarding the use of the enterprise integration crosswalk.

- **Crosswalk is required:** There is no deployment strategy option that does not include the use of a crosswalk. Crosswalks are common during system implementations, which is why the One Washington program has included it in its strategy and plans. An enterprise approach to the integration crosswalk minimize work on agencies that are unable to remediate their legacy systems and ensures consistency across all agencies that rely on it.
- **Minimize change:** A goal for the integration crosswalk has been to minimize changes needed to un-remediated agency systems, but this should not be construed as no changes will be needed.
- **Retire legacy systems:** It is also highly recommended to not maintain the legacy system just to support value-to-value mapping (COA to FDM). Therefore, AFRS can be retired because OFM would not need to keep the AFRS system in production simply to maintain the AFRS COA tables to use with the enterprise integration crosswalk. Workday becomes the system of record and the approved FDM to be used.

Known Risks and Issues

There are several known concerns associated with the enterprise integration crosswalk.

1. **Dependency on the enterprise integration crosswalk:** The main concern with the integration crosswalk is the potential for a large percentage of non-remediated agency systems that would be dependent on this solution until they are able to remediate their systems. This may impact the state's ability to produce accurate financial reports and/or increased complexity with reconciling financial transactions between agencies, the treasury management system (TMS) and Workday. Therefore, it is recommended that the use of the integration crosswalk is minimized to the extent possible, which should:
 - Emphasize the benefits of remediated agency legacy systems that comply with future-state business transformation goals.
 - Reduce risks and costs for long-term reliance on the temporary integration crosswalk solution.
2. **Complexity:** Another concern with the integration crosswalk is the complexity to handle a combination of one-to-many or many-to-one relationships. For example:
 - A single AFRS Program Index (PI) may crosswalk to many Workday FDM worktags, such as Program, Cost Center, Grant, and Project. The integration would need to search all Workday Program, Cost Center, Grant, and Project worktags to find all matches for the PI code.
 - This process to reverse crosswalk the multiple FDM worktags back into a single PI code is much more difficult to produce consistent and repeatable results.
 - In addition, there are FDM worktags which have multiple AFRS codes consolidated, such as Objects C, E, and J have been consolidated to a single ledger code. Reversing this consolidation in a consistent repeatable manner would be extremely difficult, if even possible.
3. **Master Index code:** Another consideration is use cases that require Master Index (MI) codes to be broken down into multiple transactions based on the combinations of AFRS codes, such as Appropriation Index, Program Index, and Project. This is also referred to as the "MI explosion" process. There are no MI codes in Workday so it is not anticipated that these can be reversed cross-walked for agencies.
4. **Agency clean-up:** Some agencies have misused legacy AFRS index codes which may require clean up.

4. The Integration Layer

What is the integration layer

The use of an integration layer, middleware, was described in the [One Washington - Data Integration Strategy](#).

- An integration platform that resides outside of the Workday ERP software solution itself affords a level of control and flexibility that can facilitate standard mechanisms of interaction between legacy application interfaces and the Workday ERP environment.
- This layer enables the emulation of legacy conduits for applications that will remain on premises at various agencies and facilitates a transition path to a future state where the system of record can be interfaced more directly by users for like functionality and through application programming interfaces.
- Strategically, the end goal will target a publish/subscribe model to provide a standard set of data that can be available to agencies that need access to all or part of the dataset.
- There is a desire to leverage the integration platform to assist in facilitating enforcement of authorized interfaces and transactions with the target ERP environment. The integration layer should be designed to support the acknowledgement and approval of interactions between external applications and the Workday ERP software solution.

This led to the *Informatica first*³ approach that was reinforced through the statement of work with the System Integrator. The integration layer is made up of various components from Informatica to give OFM State and Deloitte developers access to the tools needed to support agencies with their different use cases.

More information about OFM usage of the Informatica platform

It is crucial to note that this **Informatica integration layer supports more than just One Washington**. Informatica has been used throughout OFM for more than 8-years and supports many integrations between many different systems and external agencies. OFM pursued Informatica to become its main enterprise data hub component for OFM and the enterprise it supports.

OFM uses its Informatica environment to support:

- Data sent to or received by agencies from AFRS, based on the completion of the [phase 0: integration readiness](#) work effort.
- Master data management that supports OFM Forecasting division and the P20 longitudinal data warehouse.
- Custom HRMS data integrations (not supported by standard GAP files).
- Integration workflows for a total of 25 agencies outside of AFRS support, including DES, HCA, DFW, DCYF, ATG, and WaTech.
- The Informatica platform supports a high percentage of the 56 enterprise applications that OFM is responsible for.

³ “informatica™ First”. For any integrations created, informatica™ will be considered first. Only when it is determined to be an inefficient and ineffective method to perform the integration will other tools / processes be considered.

Within the integration layer, there are several different Informatica components that allow the integration team to handle different integrations, such as:

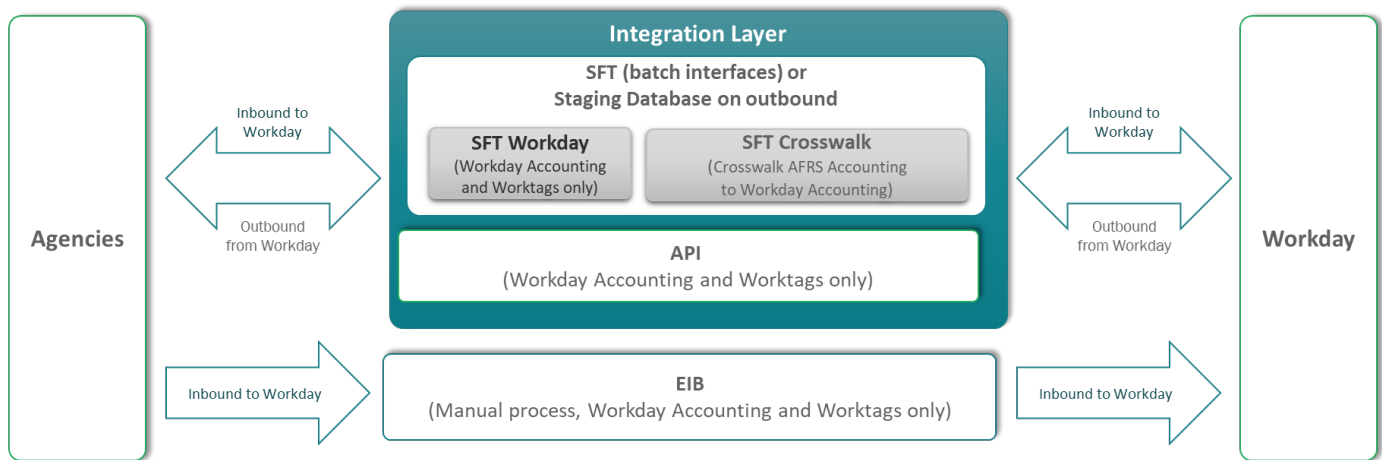
- PowerCenter: allows for ETL components and transformation.
- Data Integration Hub (DIH): provides data publications and subscriptions.
- There are a number of connectors (VSAM/SAP) that allow connectivity to disparate technology platforms.
- Informatica Intelligent Cloud Services (IICS):
 - Cloud Data Integration (CDI) allows for ETL components and transformation and process triggering.
 - Cloud Application Integration (CAI) allows for the orchestration of multiple processes and enables exposure of those processes to be invoked as services by OFM and/or external agencies.
- OFM has also procured other Informatica tools (not specific to integration) that provide ability for data governance of enterprise data, data privacy, and complete data lineage.
- Agencies transfer files using SFTP⁴. Using a non-technical example, this is like taking a package and dropping it off at shipping location like UPS or Fed-Ex.
- The file gets picked up from the SFTP folder and processed by the integration layer. If the file originated from a non-remediated system, the data will be cross-walked. All data from all systems (remediated or not) are then sent to Workday via API⁵. Again, using the package example, this is where the package is sent to the sorting facility.
 - It is important to note that Workday is a Software-as-a-Service (SaaS) solution, which restricts the ways that data can be loaded or exported out of the system through Workday web services or API. This means that even when an agency submits a file via SFTP (crosswalk or no crosswalk), the integration team must still use a Workday web service (WWS) operation to load those transactions on behalf of the agency. Please see [Software as a Service \(SaaS\)](#) one-pager for more information.
- The Integration layer determines if the file is from a remediated system or not based on the location the file is picked up from. And like a package, the data gets delivered (in this case to Workday) and the same is true on the return just like making a purchase from Amazon.
- The same process happens in the reverse order for outbound integrations. The integration layer picks up the data (package) from Workday via API (like the package sorting facility). The integration layer then determines if this is for a remediated or non-remediated system (if so, the reverse crosswalk is applied) and the file is delivered to the SFTP for the agency to pick up.

Remediated agencies can either:

- Submits delimited file in the Workday format to the designated SFTP folder, which the One Washington integration team will pick up and load into Workday.
- Submit an API request in the Workday format using the API wrapper developed by the One Washington integration team.

Un-remediated agencies can only continue to submit their [AFRS Batch Interface](#) (950-character fixed width file) through SFTP, which the One Washington integration team will crosswalk the values before loading them into Workday.

*How the
integration layer
works*



Integration layer and the crosswalk

- The crosswalk is necessary for integration and will support un-remediated systems until they are remediated or retired.
- The enterprise integration crosswalk database is independent of the integration layer but is used by the integration layer to complete transformations either to or from un-remediated systems.
- The integration layer is permanent, while a crosswalk is temporary.
- The intention is for the crosswalk to go away once all agency systems are remediated to the Workday format.

⁴ Secure File Transfer Protocol (SFTP) is a secure version of File Transfer Protocol (FTP), which facilitates data access of files and data transfer over a Secure Shell (SSH) data stream. Please see the WaTech [Secure File Transfer](#) service definition for more additional information.

⁵ An Application Programming Interface (API) is a software intermediary that allows two systems to communicate with each other. APIs help simplify development because it allows you to share data with your customers and partners, while abstracts details (hide internal details of how a system works) about underlying software to provide additional level of control and security. For a more technical definition, please see the OCIO's [Enterprise Technology Dictionary](#).

5. Examples of Enterprise Integration Crosswalk Use Cases

The **Enterprise Integration Crosswalk** will rely on integration use cases. These use cases are designed with detailed logic to migrate, sync and receive information from agencies to Workday.

***Standard
Inbound
Transaction
Interface (ITI)***

The standard daily ITI (also known as INT001-Daily Trans-Inbound-1B or integration option 1b-crosswalk) is the primary use case for many agencies, allowing their un-remediated agency legacy system to continue to send their daily [AFRS Batch Interface](#) as they do today.

Description

This crosswalk use case relies on the ability to consistently take an AFRS 950-character format file from an agency, use the legacy transaction code (Trans Code) to derive the type of Workday transaction:

1. Submit supplier invoice
2. Submit supplier invoice adjustment
3. Submit miscellaneous payment request
4. Import accounting journals
5. Submit Ad-Hoc Bank Transactions (new based on recent functional design decision)

Responsibility

The Deloitte System Integrator is primarily responsible for developing this integration with support from the One Washington finance team, Statewide Accounting and OFM ITSD.

How it works

Using the business-provided logic and the crosswalk database, transform the legacy AFRS accounting values into Workday accounting values so they can be sent to Workday and flow into the appropriate business process.

The high-level flow for this integration:

- Agencies send their daily transactions in the AFRS 950 fixed-width file format to their designated SFTP folder.
- The One Washington integration team will pick up this file using Informatica (integration layer) and crosswalk legacy AFRS accounting values into Workday accounting values.
- The files will be uploaded to Workday via API.

Known risks and issues

1. The logic for mapping AFRS accounting values to Workday accounting values has not been validated or tested. This means that no AFRS 950 transactions have been successfully cross walked into Workday transactions and loaded into a Workday tenant.
2. The functional team has been working through design issues, which have led to reintroducing the Region worktag, continued work to define the Project/Grant worktag design specifications, and other functional designs. This is important because these decisions may impact the standard integrations and have not been fully assessed by the integration team, such as inclusion of submit ad hoc bank transactions for cash receipts.
3. Additionally, while much of the focus has been mapping legacy AFRS accounting values to Workday accounting values, there are other AFRS fields that are important for this integration, such as Month of Service, Budget Unit, Work Class, etc. that are dependent on the functional

design decisions.

4. Another known limitation is that agencies will be unable to send warrant cancellations through this integration crosswalk, requiring agencies to use either the user interface (UI) or EIB⁶ template in the Workday accounting format to cancel a warrant in Workday.

***Standard
Outbound
Transaction
Interface (OTI)***

The standard daily OTI (also known as INT002-Daily Trans-Outbound-1B or integration option 1b-crosswalk) is the primary use case for the daily outbound [AFRS Batch Interface](#) for agencies with un-remediated legacy system.

Description

Not all agencies that send an ITI receive an OTI. The integration team recently sent a request to agencies for getting a better understanding of how the legacy AFRS fields are used in their legacy system. This is an example of where the integration team believes that the One Washington legacy system remediation team can support integrations.

Responsibility

The Deloitte System Integrator is primarily responsible for developing this integration with support from the One Washington finance team, Statewide Accounting and OFM ITSD.

How it works

High-level flow for this integration:

- Separate custom reports are created in Workday and are exposed as web services.
- The Informatica (integration layer) invokes these services to retrieve data from these reports, and crosswalks from Workday accounting values into the AFRS accounting values (as much as can be cross-walked).
- Place the files onto the designated agency SFTP folder for consumption by agency legacy system.

***Known risks and
issues***

The integration team will be able to make progress on this integration once the inbound integrations and final definitions of the WorkdayToAFRS Crosswalk database are provided. Therefore, risks and issues will be documented and communicated when known.

***Monitor
Database Load***

INT050A-OFM-Budget Monitor Load-Outbound is the integration that will get all Workday Journal accounting transactions and Plan/Budget Amendment lines for the specified biennium. It will require converting Workday accounting values to legacy AFRS accounting values (COA codes) using the crosswalk then insert the data into the Monitor staging table.

Description

The Monitor data is used by the OFM Accounting Division, the OFM Budget Division, and the Legislative Evaluation and Accountability Program (LEAP). LEAP also publishes the data through fiscal.wa.gov, a publicly accessible site. Business ownership is shared between the OFM Accounting and

⁶ Enterprise Interface Builder (EIB) is a standard Workday template developed by the One Washington team that will enable agencies to prepare a bulk data upload for simple inbound integrations. EIBs will replace the current 'Financial Toolbox' and the 'TALS import' template [[One Washington Glossary of Terms](#)]. It is important to know that EIBs are Excel templates created by the One Washington functional team and manually submitted (launched) by authorized end-users.

	Budget Divisions.
<i>Responsibility</i>	The state is primarily responsible for developing this integration. The state integration developers supporting the One Washington project are from OFM ITSD Enterprise Data Management team. They will receive support from the One Washington Finance team and the Deloitte SI.
<i>How it works</i>	High-level flow for this integration: <ul style="list-style-type: none"> • A custom report exposed as a service will be created in Workday with all Workday Accounting Journal transactions and Plan/Budget Amendment lines for the specified biennium. • The Informatica (integration layer) pulls the data from this report by invoking the service and crosswalks the data from Workday accounting values into the legacy AFRS accounting values. • The data is then inserted into a Monitor database staging table.
<i>Known risks and issues</i>	The team has assessed the Monitor database load crosswalk from Workday to legacy AFRS accounting values should not be an issue because it's summary level data.

<i>ACFR Database Load</i>	INT050B-OFM-General Ledger-Outbound (ACFR) integration design has largely been on-hold pending functional requirements.
<i>Description</i>	Data from a custom report will be inserted into the ACFR database to support OFM budget applications.
<i>Responsibility</i>	Deloitte System Integrator is primarily responsible for developing this integration, with support from the One Washington finance team and OFM ITSD.
<i>How it works</i>	High-level flow for this integration: <ul style="list-style-type: none"> • A custom report will be created in Workday with all the required information and exposed as a service. • The Informatica (integration layer) invokes the service that will pull the data from this report and crosswalk the data from Workday accounting values into the legacy AFRS accounting values. • The data is then inserted into the ACFR database.
<i>Known risks and issues</i>	There was a recent functional design decision paper related to this integration, but the complete field mapping and business requirements will still need to be completed.

<i>Monthly Forecasting Summary</i>	INT053-OFM-Forecasting_Monthly Summary-Outbound integration is for the bimonthly integration that will send a file of revenue and expenditure data to the OFM forecasting unit.
<i>Description</i>	This data extract is used by OFM, HCA, DSHS and DCYF: <ul style="list-style-type: none"> • OFM use the data to produce and track the Medicaid assistance expenditure forecast. • HCA uses the data for their MSFR budget tracking and CMS federal reporting.

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- DSHS and DCYF also have similar functions.

Responsibility Deloitte System Integrator is primarily responsible for developing this integration, with support from the One Washington finance team, Statewide Accounting and OFM ITSD.

How it works High-level flow for this integration:

- A custom report will be created in Workday with all the required information and exposed as a service.
- The Informatica (integration layer) invokes the service that will pull the data from this report and crosswalk the data from Workday accounting values into the legacy AFRS accounting values.
- The data is then put into a delimited file and uploaded to the designated OFM Forecasting SFTP folder.

Known risks and issues The team has assessed this monthly forecasting summary from Workday to legacy AFRS accounting values will be more difficult because of the detailed level of transactional data required.

Budget TALS database load The Allotment System (TALS) is being retired during the phase 1a implementation. Many internal OFM budget systems rely on data from the TALS database so instead of developing additional point-to-point integrations, it was determined that the creation of a ‘shadow database’ was the best approach to continue providing these other budget systems with the required data. INTO56-OFM-Financial Budgets-Outbound (TALS Shell) will send the data to the TALS shadow database for consumption by other OFM internal budget systems.

Description The Allotment System (TALS) is being replaced during the One Washington financial first implementation (AFRS replacement) and an integration will send data to a TALS shadow database for non-remediated OFM internal budget systems to get the required data.

Responsibility Deloitte System Integrator is primarily responsible for developing this integration, with support from the One Washington finance team, Statewide Accounting and OFM ITSD.

How it works High-level flow for this integration:

- A custom report will be created in Workday with all the required information that will be exposed as a service.
- The Informatica (integration layer) invokes the service that will pull the data from this report and crosswalks the data from Workday accounting values into the legacy AFRS accounting values.
- This data is then inserted into the TALS shadow database.

Known risks and issues Without the TALS shadow database, OFM internal budget applications may not get the data required for allotments. There are no known issues at this time, but the design has not been finalized.

Payroll DM & WWA The INTO61-OFM-Send Payroll DM & WWA-Inbound integration takes the standard OTI (INT002) and appends the data with the work activity code (WAC) so it can be populated in the payroll datamart and Washington Workforce Analytics (WWA) data warehouse for agency use.

<i>Description</i>	This integration appends the data with Ecology-provided work activity codes (WACs) and stages it for loading into the data warehouse for agency use.
<i>Responsibility</i>	Deloitte System Integrator is primarily responsible for developing this integration, with support from the One Washington finance team, Statewide Accounting and OFM ITSD.
<i>How it works</i>	High-level flow for this integration: <ul style="list-style-type: none">• The Informatica (integration layer) will use the daily standard OTI reverse crosswalk that transforms data from Workday accounting values into legacy AFRS accounting values.• Pending functional design decisions, the transactions are then appended with work activity codes (WAC).• The transactions with WAC codes are staged for loading into the warehouse.
<i>Known risks and issues</i>	<ol style="list-style-type: none">1. The integration design and field mappings cannot proceed without the standard OTI (INT002).2. It is unclear whether work activity codes will be included in certain Workday transactions, which is dependent on functional design decisions.

6. Key Assumptions

Key assumptions include:

1. The enterprise integration crosswalk is essential for successful implementation. Based on existing decision to split between core and expanded financials into separate phases, the use of the enterprise integration crosswalk became much more necessary. **There is no deployment strategy option that does not include the use of a crosswalk.**
2. Crosswalks are a collaborative effort within the One Washington program between OFM IT, One Washington program staff and contracted expert partners. The state is responsible for the crosswalks.
3. Not all agency systems will use an enterprise integration crosswalk. Some systems will be critical to go-live of the ERP and will need to be remediated. Agencies with systems that are not critical to the phase 1a implementation go-live will be provided information regarding the enterprise integration crosswalk, including known risks and how long the crosswalk will be maintained before deciding to select this integration option. These non-critical agency systems may either remediate for the phase 1a go-live or use the enterprise integration crosswalk until that system can be remediate or retired during a subsequent phase of the implementation.
4. Crosswalks have been successfully used in other Washington state government IT projects.
5. Workday will become the system of record for Washington State's financials. The One Washington program will work with individual agencies to ensure any cross-walked data supports their federal funding and reporting requirements. For example, the One Washington cost allocation team has facilitated several meetings with HCA regarding this topic so they can continue to meet their CMS-64 reporting requirements.
6. The One Washington has facilitated and is continuing to support agencies' understanding of the enterprise integration crosswalk, including the risks associated with not remediating their legacy systems.
7. The updated One Washington integrated master plan (IMS) and a regular meeting cadence will ensure there is collaboration between the Legacy System Remediation, Integration, and Functional teams.
8. The Legacy System Remediation team will build off the One Washington's previous efforts of agency readiness, legacy system and integration inventories, which will refine and validate the list of agency legacy systems that must be remediated to support the deployment of Workday.
9. Not all agencies are impacted by the enterprise integration crosswalk. Many end-users will use the Workday system directly or be able to remediate their systems to comply with the new Workday accounting formats.
10. There are some use cases in which an integration crosswalk would be the preferred and recommended solution, such as:
 - WSDOT's financial system of record TRAINS, which is not scheduled to be replaced until the phase 1b implementation.
 - There are several agencies with internal grants management system that would also be replaced during phase 1b.
 - The remediation HRMS would require significant cost/benefit analysis due to the significant investment it would require. In addition to time and funding, the remediation would impact all agencies and HRMS is planned to be replaced during the phase 2 implementation.
11. Agencies that are unable to remediate their legacy systems and reliant on the enterprise integration crosswalk will have a chance to further understand the impacts to their agency during testing.

12. During the working sessions for LSR (framework for passes 1-3), the integration team will support and is overall responsible for leading discussions on the available integration options. When discussing integrations, the integration team is dependent on support and collaboration from both the LSR and functional teams.
13. OFM Statewide Accounting is responsible for defining the requirements for the enterprise integration crosswalk, with support from the One Washington functional team. Both should be working with agencies as needed.
14. Crosswalks are a standard tool used for system implementations and Washington state government has successfully used crosswalks in past system implementations so state employees should have experience and knowledge to successfully use crosswalk during One Washington implementation.

Appendix A: Glossary of Terms

Definitions used in this document

Understanding the terms used in this document will help the reader.

These terms are found in the [One Washington Glossary](#):

- **Crosswalk:** The actual usage of the mappings in support of technical requirements. The mappings provide the information to build a 'crosswalk' that can be used to systematically convert COA data to FDM data and FDM data back to COA data, where possible.
- **Reverse crosswalks** can be problematic if multiple COA data elements are being used to derive a single FDM data element, or multiple values for a single COA element are mapping to a single FDM data element value. The ability to recreate that reverse mapping is not possible if multiple Legacy COA element values are mapped to a single FMD value.
- **Functional Crosswalk:** This term refers to crosswalks that are outbound. For the purposes of One Washington, this is a map of data and information from the One Washington Workday system to the agency system(s). The functional team's value-to-value mappings from legacy systems to Workday. Note: Though it's not really all legacy systems, majority focus on AFRS for the relevant chart of account details, which is unlike the conversion mappings include every field that is being converted.
- **Integration Mapping/Crosswalks:** Each integration requires an integration design and field mapping documentation. The integration team is offering agencies a crosswalk integration option to aid with remediation work of some legacy systems during the implementation timeframe or excessive temporary remediations to bridge gaps between phase 1a and phase 1b functionality. The integration team is providing the crosswalk for legacy AFRS COA to/from Workday FDM. These field mappings will be used by OFM to create updated Data Sharing Agreements (DSA).
- **Enterprise Interface Builder (EIB):** is a standard Workday template developed by the One Washington team that will enable agencies to prepare a bulk data upload for simple inbound integrations. The EIB replaces the current 'Financial Toolbox' and the TALS import template.
- **Software-as-a-Service (SaaS):** is a business model in which a third-party provider hosts applications and makes them available to customers via the Internet. An ERP is a type of SaaS.

These terms are defined for this paper:

- **Integration Use Case:** A specific situation in which an integration service to connect IT systems could potentially be used.
 - An **Application Programming Interface (API)** is a software intermediary that allows two systems to communicate with each other. APIs help simplify development because it allows you to share data with your customers and partners, while abstracts details (hide internal details of
-

how a system works) about underlying software to provide additional level of control and security. For a more technical definition, please see the [Washington State Enterprise Technology Dictionary](#).

- **Secure File Transfer Protocol (SFTP)** is a secure version of File Transfer Protocol (FTP), which facilitates data access of files and data transfer over a Secure Shell (SSH) data stream. Please see the WaTech [Secure File Transfer](#) service definition for more additional information.

Terminology issues and challenges

Using the same terminology across the program and the enterprise is key when helping agencies understand the risks between choosing the enterprise integration crosswalk or remediation. These potential terminology issues and challenges are identified:

1. Agencies are familiar with ITI/OTI terms for the daily standard integrations. However, continuing to use legacy terminology may lead to challenges when making the translation into Workday terminology, which may become a bigger issue for the agencies that are remediating during design and then for non-remediating agencies during end-to-end testing/training.
2. Referring to the Crosswalk as a “utility” is technically inaccurate because a utility regarding information technology refers to software programs that are design to help analyze, configure, optimize, or maintain a computer system... usually related to managing a system or resources. There may be a tool used to automate updates to maintain the crosswalk would be a more appropriate use of the term. However, referring to the crosswalk database as a utility will lead to confusion and misunderstandings.
3. “Forward” and “Reverse” crosswalks are not technical or formal terms but is used by the One Washington program to refer to integration crosswalks based on the direction of the dataflows. So, a simple way to understand this is:
 - Forward crosswalks: Maps legacy AFRS values to Workday values for inbound integrations from external legacy system to Workday.
 - Reverse crosswalks: Maps Workday values to legacy AFRS values for outbound integrations from Workday to legacy systems.

Appendix B: RACI

	Business Owner	SWA	FDM Governance	OneWa state finance team	Deloitte functional team	OFM ITSD EDM (data architecture, DBA, & integrations)	Deloitte Integrations	Deloitte Data Conversion	OneWa LSR	Agencies	OneWa OCM team	Test team	OFM ITSD Security
Define One Washington Data Integration Strategy						R/A	I		I	I			
Define One Washington Data Management Strategy						R/A	I	I	I	I			
Draft Conversion Lookup and Functional Crosswalk				R	A	R	I	R					
Develop Integration Approach (Deloitte deliverable per SOW)						R/C	A						
Develop Data Conversion Strategy and Plan (Deloitte deliverable per SOW)						R/C		A					
Populate Conversion Lookup and Functional Crosswalk	A	R		R	R	I	I	I					
Develop Conversion Mapping and Functional Crosswalks from State systems (State deliverable per SOW)				C		A		R/C		C			
Define process for updating and requests for changes to the Conversion Lookup and Functional Crosswalk	I	I	A	R	C	C/I		I	I	I	C/I		
Share Conversion Lookup and Functional Crosswalk with stakeholders	I			C/I	I	I	I	I	I	I	R/A		
Review Conversion Lookup and Functional Crosswalk	I	R		R/A	R	R		R	R	R			
Submit FDM updates and change requests	I	R/I	R/A	R/I	R/I	R/I		I	I	R	I		
Revise Conversion Lookup and Functional Crosswalk				R	C	C/I	I	C/I	I	I	I		
Identify needs and use cases for Enterprise Integration Crosswalk, document in Integration Control Inventory (ICI).	I	R		R	R	R	R/A			C/I			
Define business requirements and rules on use of Enterprise Integration Crosswalk	A	R	I	R	I	C	C						
Prioritize integration in the Integration Control Inventory	A	R		R	I	C	C			I			
Design AFRSToWorkday crosswalk database						R/A	C						
Populate AFRSToWorkday crosswalk database tables						R/A	C						
Design WorkdayToAFRS crosswalk database						R/A	C						
Populate WorkdayToAFRS crosswalk database tables						R/A	C						
Design integration (Deloitte responsible)				C	C	C	R/A						C
Design integration (State responsible)				C	C	R/A	C		I				C
Approve integration design		R		R	C	R/A	C		I				
Build integration (Deloitte responsible)						C	R/A		I				I
Build integration (State responsible)						R/A	C		I				I
Unit test integration (Deloitte responsible)						C	R/A		I				
Unit test integration (State responsible)						R/A	C		I				
Determine Agency Legacy System Remediation disposition (Retire, Maintain, Modernize)	A					I	I		R	R			
Define criteria and guidance for prioritizing agency legacy system remediations	A	R		R					C	I	I		
Develop and maintain the Agency Legacy System Inventory, including system disposition	I	I		I		I	I	I	R/A	C			
Update agency's One Washington Readiness Spreadsheet	I	I		I		I	I	I	C	R/A			
Analyze, Design, Build, Unit Test agency legacy system remediations	I	I		I		C	C		C	R/A		I	

	Business Owner	SWA	FDM Governance	OneWa state finance team	Deloitte functional team	OFM ITSD EDM (data architecture, DBA, & integrations)	Deloitte Integrations	Deloitte Data Conversion	OneWa LSR	Agencies	OneWa OCM team	Test team	OFM ITSD Security
Conduct End-to-End (E2E) and User Experience Review (UER) testing	I	R		R	C	I	I	I	I	R		R/A	
Resolve integration crosswalk defects discovered during testing						R/A	R						
Create/update Data Sharing Agreements (DSA) between OFM and Agency	A			I		R			I	R			I
Develop process to automate updates to crosswalk database tables	R	R		R		R/A							
Define FDM governance process for post deployment (go-live) to include maintaining the crosswalk value-to-value mappings	R	R	A	R	C	I			I	I	I		

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Appendix C: Risk Matrix

Agency Code	Agency Name	Agency Application	Int ID	Option Selected	Comments	OneWa assessed risk			Agency self-assessed risk		
						L	M	H	L	M	H
055	Administrative Office of the Courts (AOC)	Judicial Contract Tracking System (JCTS)	INT001	ITI 1B							
307	Department of Children, Youth, and Families (DCYF)	FamLink	INT001	ITI 1B							
307	Department of Children, Youth, and Families (DCYF)	Merit	INT001	ITI 1B							
307	Department of Children, Youth, and Families (DCYF)	Merit	INT002	OTI 1B							
307	Department of Children, Youth, and Families (DCYF)	SSPS	INT001	ITI 1B							
307	Department of Children, Youth, and Families (DCYF)	DCYF Garnishments	INT002	OTI 1B							
307	Department of Children, Youth, and Families (DCYF)	DCYF Tax System	INT002	OTI 1B							
103	Department of Commerce (COM)	Contract Management System (CMS)	INT002	OTI 1B							
103	Department of Commerce (COM)	Oracle IPM Essbase	INT002	OTI 1B							
461	Department of Ecology (ECY)	GRS	INT001	ITI 1B							
461	Department of Ecology (ECY)	GRS	INT002	OTI 1B							
303	Department of Health (DOH)	ADDS Data	INT002	OTI 1B							
235	Department of Labor and Industries (L&I)	E Procure +	INT001	ITI 1B							
490	Department of Natural Resources (DNR)	CAS	INT001	ITI 1B							
490	Department of Natural Resources (DNR)	CAS	INT002	OTI 1B							
490	Department of Natural Resources (DNR)	NaturE-FI	INT001	ITI 1B	Current replacement project, LAMS.						
490	Department of Natural Resources (DNR)	Financial Datamart	INT001	ITI 1B							
490	Department of Natural Resources (DNR)	Financial Datamart	INT002	OTI 1B							
140	Department of Revenue (DOR)	Cash Receipts Reporting System	INT001	ITI 1B							
140	Department of Revenue (DOR)	FIS	INT002	OTI 1B							
300	Department of Social and Health Services (DSHS)	AFRS Data	INT001	ITI 1B							
300	Department of Social and Health Services (DSHS)	AFRS Data	INT002	OTI 1B							
405	Department of Transportation (DOT)	TRAINS	INT001	ITI 1B							
405	Department of Transportation (DOT)	TRAINS	INT002	OTI 1B							
095	Office of State Auditor (SAO)	???	INT002	OTI 1B							
100	Office of the Attorney General (ATG)	AFRS Data Transfers	INT001	ITI 1B							
100	Office of the Attorney General (ATG)	AFRS Data Transfers	INT002	OTI 1B							
090	Office of the State Treasurer (OST)	TM\$	INT001	ITI 1B	They will modernize, but all other agencies must have remediated before they can go live with it, so 1B for now.			X			
090	Office of the State Treasurer (OST)	TM\$	INT002	OTI 1B	They will modernize, but all other agencies must have remediated before they can go live with it, so 1B for now.			X			
471	State Conservation Commission (SCC)	Accounts Payable Database	INT001	ITI 1B	They may retire once 1B functionality is available, if not they will remediate.						
126	State Investment Board (SIB)	Concur	INT001	ITI 1B							
116	State Lottery Commission (LOT)	AFRS Upload	INT001	ITI 1B							
116	State Lottery Commission (LOT)	AFRS Import	INT002	OTI 1B							
360	University of Washington (UW)	Financial Accounting System	INT001	ITI 1B							
215	Utilities and Transportation Commission (UTC)	Revenue Tracking	INT001	ITI 1B							
215	Utilities and Transportation Commission (UTC)	Cost Allocation	INT002	OTI 1B							
215	Utilities and Transportation Commission (UTC)	Cost Data	INT002	OTI 1B							
380	Western Washington University (WWU)	Ellucian Banner Finance	INT001	ITI 1B							