



One Washington Agency Internal Systems Analysis

January 2021

Table of Contents

Overview.....	3
Agency Systems.....	5
Complexities	6
Business functions and processes	7
System Replacement.....	10
Systems Replacement Unclear.....	10
Data Conversion.....	11
Line of Business.....	11
Agency Mission Critical	11
Agency Interfaces	12
AFRS Interfaces.....	14
HRMS Interfaces	14
Volume of Data.....	14
Integration Strategy.....	14
Agency Detail	15

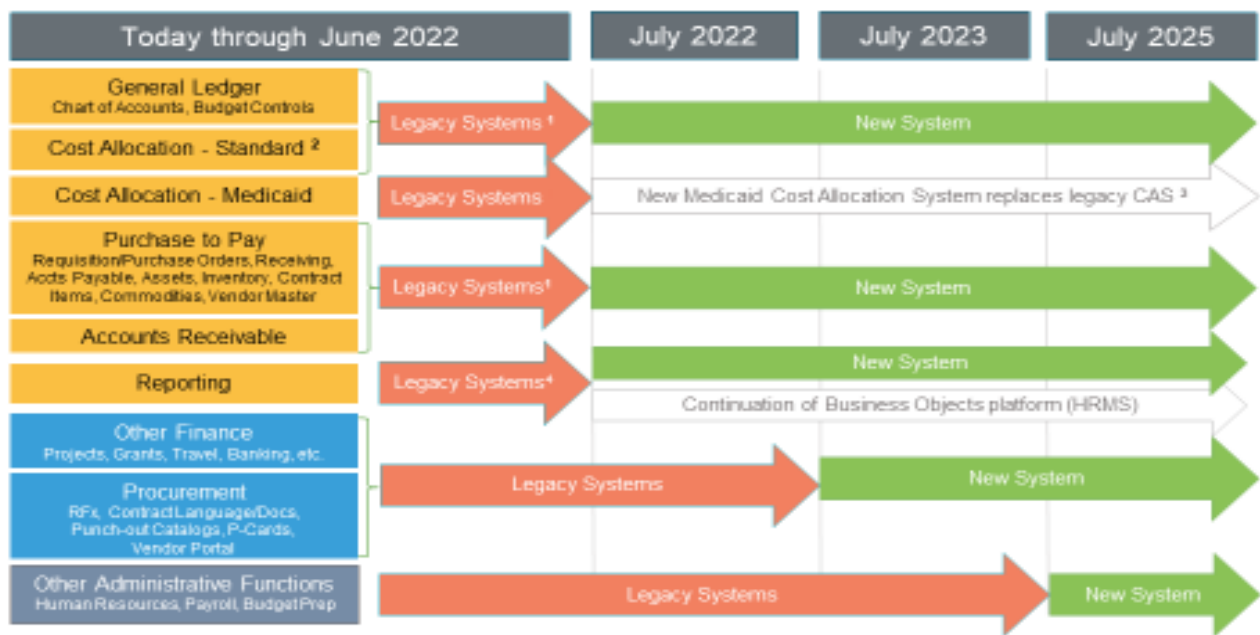
Version Log

Update Date	Update By	Update Comments
April 2020	Lori Jones	First release
August 2020	Lori Jones	Updated numbers to reflect modifications by the agencies as we worked through their systems/interfaces. All agencies not finalized as of this date.
January 2020	Lori Jones	Updated numbers from agency updates

Overview

One Washington is conducting a modernization effort that will replace the state’s legacy core enterprise systems with a new ERP solution. The scope of the ERP will include financial, purchasing & procurement, human resources & payroll and budget preparation functions that will be implemented in phases from 2022 through 2025.

Functional Areas Roll-out/Implementation



6

In the fall of 2019, the One Washington program asked agencies, across all three branches of government, to identify any internal systems that would be impacted by the modernization effort. The impact would come from changes to data that is sent to or received from the core systems or the total replacement of their current internal shadow system.

In December 2019, agencies responded with completed spreadsheets identifying the systems and interfaces that would need consideration as the program moves toward implementation. Agencies with non-standard interfaces or data that would need to move from their internal systems into the ERP, were then asked to identify their detailed data needs by April 1, 2020. This report contains the analysis of the compilation of that data.

This document assesses and quantifies the impact an ERP implementation will have on agencies internal systems. It provides input into workload, budget and timing for moving forward with an ERP solution.

Disclaimer:

- This data is self-reported by the agencies and a point in time snapshot.
- Data in the summary portion of this *updated* report is reflected as of *January 6, 2020*.
- Detailed agency reports will be dated differently depending on final data pulled for that agency.
- It is expected that this data will change over the course of this modernization effort. A database tool has been provided to assist agencies in keeping their information current throughout the entire ERP software implementation rollout to ensure the greatest utilization of this large data-gathering effort.

Assumptions:

- Data is self-reported by the agencies business owners and technical contacts.
- This data will change over the course of implementation and will be updated regularly.
- Agencies were provided the following functions and processes to assist in their evaluations based on known scope and implementation estimates.

Functions and Processes

<p style="text-align: center;">Financial</p> <ul style="list-style-type: none"> • Chart of Accounts • Budget Control & Maintenance / Allotments • Accounts Payable • Interagency Billing • Vendor / Customer Management • Inventory • Travel • Fixed Assets • Projects • Grants • Accounts Receivable • Cost Allocation <p style="text-align: center;">Purchasing & Procurement</p> <ul style="list-style-type: none"> • Commodity Management • Vendor Portal • Requisition to Payment • Contract Items • Contract Language / Documents • P-cards • Punch out Catalog • Competitive Procurement (RFx) • Sourcing 	<p style="text-align: center;">Human Resources (Options)</p> <ul style="list-style-type: none"> • Benefit Enrollment • Employee Self Service • Position Control • Staff Scheduling • Performance Management • Learning Management • Personnel Actions • Classification <p style="text-align: center;">Payroll (Options)</p> <ul style="list-style-type: none"> • Employee Set up / Maintenance • Benefits • Garnishments • Labor Distribution • Time Keeping • Leave Management • Deductions & Contributions • Payroll processing 	<p style="text-align: center;">Budget Preparation</p> <ul style="list-style-type: none"> • Operational Budget Preparation • Capital Budget Preparation • Position Budgeting • Forecasting • Supplemental Budget Management <p style="text-align: center;">Technology</p> <ul style="list-style-type: none"> • System Operations & Maintenance • User Account Management / System Security • Workflow and Transaction Processing • Business Rule Orchestration • Business and Data Analytics • System Integration / Interfaces
---	---	--

Agency Systems

Out of the 126 agencies contacted, there are **46** agencies that identified system impacts by changes to the legacy core systems.

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. Department of Agriculture 2. Administrative Office of the Courts
(on behalf of agencies of the Court) 3. Attorney General, Office of the 4. Department of Commerce 5. Department of Children, Youth and Families 6. Department of Enterprise Services 7. Department of Financial Institutions 8. Department of Fish and Wildlife 9. Department of Natural Resources 10. Department of Corrections 11. Department of Health 12. Department of Licensing 13. Department of Revenue 14. Department of Retirement Systems 15. Department of Services for the Blind 16. Department of Social and Health Services 17. Department of Ecology 18. Employment Security Division 19. Eastern Washington University 20. Health Care Authority 21. Liquor and Cannabis Board 22. Legislative Evaluation and Accountability Program Committee 23. Legislative Technology Services (on behalf of agencies of the Legislature) | <ol style="list-style-type: none"> 24. Department of Labor and Industries 25. Lottery Commission, State 26. Office of Financial Management 27. Office of the State Treasurer 28. Office of the Superintendent of Public Instruction 29. State Auditor's Office 30. State Board for Community and Technical Colleges 31. State Conservation Commission 32. State Investment Board 33. State Parks and Recreation Commission 34. Recreation and Conservation Office 35. Secretary of State 36. The Evergreen State College 37. Transportation Improvement Board 38. Utilities and Transportation Commission 39. University of Washington 40. Washington Technology Solutions 41. Student Achievement Council 42. Department of Transportation 43. Washington State Patrol 44. Traffic Safety Commission 45. Washington State University 46. Western Washington University |
|--|--|

Within these 46 agencies, there were **603** systems identified as being impacted. The table below shows the number of systems by agency. This number aids in understanding and quantifying the upfront readiness work that needs to take place before the ERP software solution is fully implemented. This workload will affect both the agencies and the OneWa program.

Agency	# of Systems
020 - Legislative Evaluation and Accountability Program Committee (LEAP)	26
038 - Joint Legislative Systems Committee (JLS)	8
055 - Administrative Office of the Courts (AOC)	1
085 - Office of the Secretary of State (SOS)	4
090 - Office of the State Treasurer (TRE)	1
095 - Office of the State Auditor (SAO)	2

Agency	# of Systems
100 - Office of the Attorney General (ATG)	23
102 - Department of Financial Institutions (DFI)	1
103 - Department of Commerce (COM)	3
105 - Office of Financial Management (OFM)	40
107 - State Health Care Authority (HCA)	2
116 - State Lottery Commission (LOT)	3
124 - Department of Retirement Systems (DRS)	2
126 - State Investment Board (SIB)	2
140 - Department of Revenue (DOR)	20
163 – Washington Technology Solutions (WaTech)	13
179 - Department of Enterprise Services (DES)	48
195 - Liquor and Cannabis Board (LCB)	1
215 - Utilities and Transportation Commission (UTC)	11
225 - Washington State Patrol (WSP)	6
228 - Washington Traffic Safety Commission (STS)	1
235 - Department of Labor and Industries (L&I)	47
240 - Department of Licensing (DOL)	37
300 - Department of Social and Health Services (DSHS)	54
303 - Department of Health (DOH)	19
307 - Department of Children, Youth, and Families (DCYF)	7
310 - Department of Corrections (DOC)	12
315 - Department of Services for the Blind (DSB)	1
340 - Student Achievement Council (SAC)	3
350 - Superintendent of Public Instruction (OSPI)	1
360 - University of Washington (UW)	2
365 - Washington State University (WSU)	3
370 - Eastern Washington University (EWU)	1
376 - The Evergreen State College (TESC)	8
380 - Western Washington University (WWU)	2
405 - Department of Transportation (WSDOT)	83
407 - Transportation Improvement Board (TIB)	2
461 - Department of Ecology (ECY)	18
471 - State Conservation Commission (SCC)	3
477 - Department of Fish and Wildlife (DFW)	33
490 - Department of Natural Resources (DNR)	42
495 - Department of Agriculture (AGR)	1
540 - Employment Security Department (ESD)	6
699 - Community and Technical College System (SBCTC)	6

Table 1.1

Complexities

Based on conversations with agencies and other subject matter experts, the number of systems doesn't fully quantify the workload, so it is important to consider the complexity of the system and its environment. Some agency systems, like ProviderOne, are very

large and complex systems that span multiple agencies. Many of these systems are mission critical for agencies and essential to the citizens of Washington State, therefore, ensuring the successful integration with these systems during the ERP implementation is crucial.

The OneWa program has started a list of complexities that will require additional coordination and collaboration on with the agencies. The OneWa program will continue adding to the list of complexity as more information is gathered from agencies.

- MQ (service bus maintained by DSHS)
- Provider One (HCA)
- FAST agencies (DOL, ESD, DOR)
- Agency mainframe applications
- Microsoft Dynamics, PeopleSoft, SAP and other ERP implementations
- Web Intelligence reporting tool usage for data extracts
- Current accounting/AFRS codes hard coded in agency internal systems

The AFRS indexes are another complexity that must be addressed. Some agencies have creatively used the different indexes (AI, PI, and OI) for their individual agency needs, which led to the use of indexes for collecting or categorizing data in ways the system was not intended. These agencies have also used these indexes within their internal line of business systems and may now have a strong reliance on them.

As we move to replace AFRS, understanding how indexes are being used across the agencies is critical to ensuring the agencies will still be able to categorize their data to support their unique business needs. Index usage is unique to each agency and will not be cross walked to the new ERP system.

Business Functions and Processes

Breaking down the total number of systems by the five core business functions provides an idea of the workload and readiness activities needed during each phase of implementation. Because agency internal systems may span multiple business functions, the total of the breakdown does not match the total number of impacted systems.

The results show that the first phase of the ERP implementation will have the largest impact on agency internal systems, with **323** possible systems being affected.

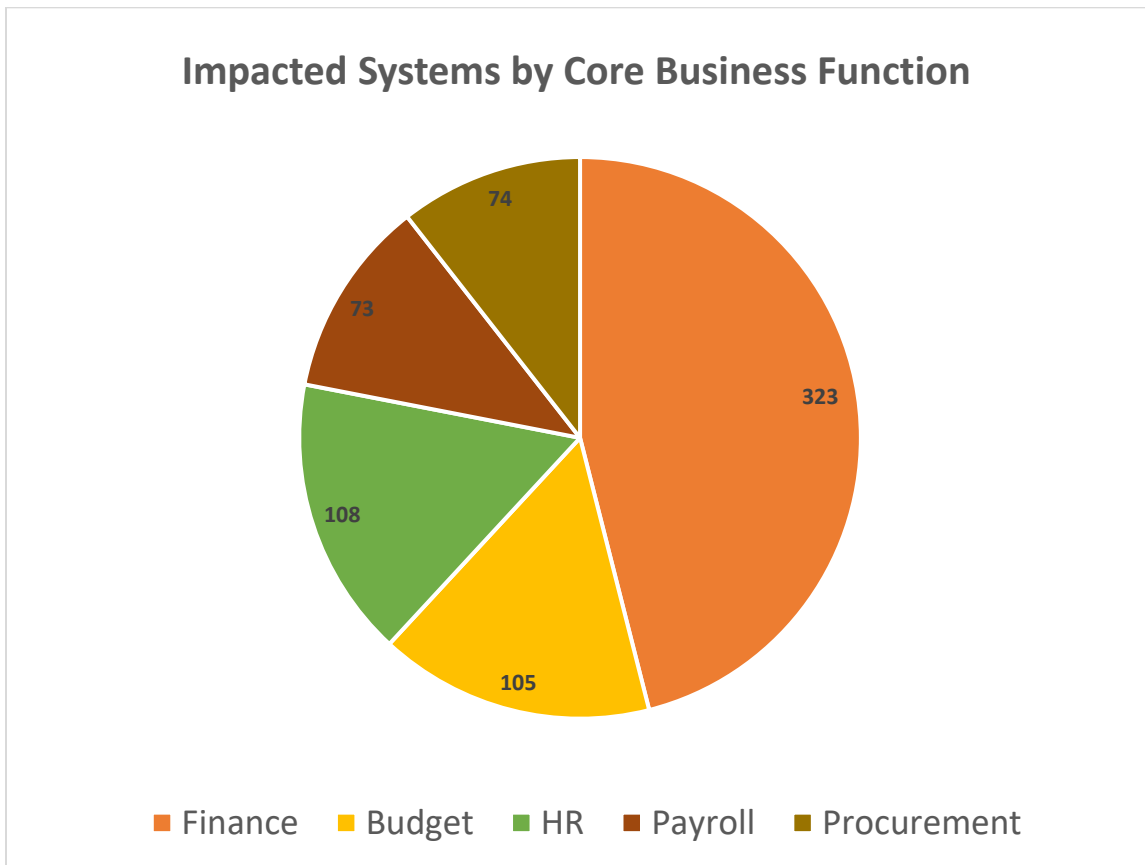


Figure 1

Given the fact that many of the agency internal systems support more than one business function, this will have an impact on if and when a system can be fully replaced by the ERP. The timing of implementation phases could mean that agencies will have to continue utilizing the internal system until all the business functions that the internal agency system support have been implemented by OneWa. This can affect overall cost to the agencies and delay the financial benefit to the state by phasing out agency shadow systems.

Table 1.3 below further breaks down the business functions into business processes or the high-level categories that describe major business workflows that this system supports. Like the business functions, systems can support multiple business processes. This view lets us pinpoint the number of systems that will be impacted at each phase, especially since finance will span two phases. It is, however, important to note that schedule of business process implementation may be adjusted based on the system integrator.

Systems by business process	Count	Implementation Phase
Accounts Payable	102	Phase 1a
Accounts Receivable	140	Phase 1a
Asset Management	48	Phase 1a
Budget Development	63	Phase 3
Cash & Banking Management	40	Phase 1a
Consumable Inventory Management	17	Phase 1b
Contract Management	61	Phase 1b
General Ledger & Period End Closing	85	Phase 1a
Grant Management	42	Phase 1b
HR/Labor/Time & Attendance	123	Phase 2
Payroll	65	Phase 2
Project Accounting	32	Phase 1b
Purchase Order Processing	29	Phase 1b
Receipt of Goods and Services	24	Phase 1b
Revenues and Expenses	119	Phase 1a
Sourcing and RFx	8	Phase 1b
Terms & Conditions Tracking	17	Phase 1b
Travel & Expense Management	18	Phase 1b
Vendor Management	37	Phase 1a

Table 1.3

To reiterate, because agency systems can support more than one business process, there is not a one-to-one on the number of systems. We can deduce that the majority of systems that agencies have identified as being impacted by an ERP will, in fact, be impacted in the first phases of implementation. Ensuring we are prepared for that prior to implementation will be critical to our success.

Implementation Phase	% impacted systems
Phase 1a (Nov 2020 – June 2022)	54%
Phase 1b (January 2022 – June 2023)	23%
Phase 2 (July 2023 – July 2025)	18%
Phase 3 (July 2023 – July 2025)	6%

Table 1.4

System Replacement

The following table shows the total number of systems that are planned to be replaced by the ERP by core business function. Because the systems may support multiple business functions, the total systems breakdown by business function will be more than the total number of systems identified to be replaced.

Number of systems to be replaced	147
Budget	31
Finance	91
HR	31
Payroll	27
Procurement	40

Table 1.5

Systems Replacement Unclear

Not all systems are cut and dried when it comes to replacement. Many agencies are still waiting to see if the selected ERP software solution will cover all the functionality that they need internally. The table below shows the total number of systems that remain unclear on if they will be replaced by the ERP. This is broken down by core business function.

Number of systems replacement is still unclear	124
Budget	16
Finance	45
HR	28
Payroll	9
Procurement	12

Table 1.6

Data Conversion

Agencies identified **141** internal systems that will need their data converted and moved into the new ERP software solution when their internal system sunsets. This number is expected to grow as systems continue to be identified for replacement.

This is an area that will require working closely with each agency to understand their internal needs and requirements. Data conversion is very complex and time consuming, therefore OneWa needs to ensure that there is enough time and resources at both the program and the agency level.

Number of systems that need to convert system data into the ERP	141
Finance	89
Budget	21
HR	20
Payroll	22
Procurement	33

Table 1.7

More information regarding data conversion is available in the [One WA Data Conversion Plan](#), which was published in March 2020.

Line of Business

Of the 603 systems, agencies have identified 208 internal systems that support their unique line of businesses. These systems will not be replaced by the ERP software solution, but there will still be impacts that must be addressed. These unique business systems send or receive data from state core systems and will need to continue these processes in the new environment with little to no changes.

As noted earlier, some of these line of business systems are very complex. Some rely solely on third-party vendors who would be required to schedule changes far in advance. Some of these systems will have multi-agency impact or support critical public services. All will need to continue functioning during and after implementation.

The OneWa program will continue to work on minimizing the impacts to agency line of business systems and ensure business continuity during the ERP implementation. In working closely with each agency, detailed action plans will be created using the data that has been collected.

Agency Mission Critical

The agencies have identified **346** internal systems that will be impacted as mission critical systems that are critical to their business continuity. That is more than half of the total impacted systems and almost double the line of business systems identified. Although OneWa will need to review the criteria used by each agency to identify the mission critical designation for the inventories, this number highlights the importance of minimizing the impacts to line of business systems.

Agency Interfaces

Of the 603 impacted systems, there are **1,507** interfaces that will need to be reviewed. Some of these interfaces use the state standard format, which was created by OFM for the agencies to send or receive data from AFRS, HRMS and other core systems. The majority of the interfaces identified, unfortunately, were nonstandard. These nonstandard interfaces will be the bulk of the workload for both the agencies and the program. Additionally, many agencies have used the self-service Web Intelligence reporting tool to extract data from state core systems and load into their internal systems.

Number of interfaces	1,507
Number of Standard Interfaces	366
Number of Non-Standard Interfaces	1,141

Table 2.1

The following table breaks down the interfaces by the number coming into the legacy core systems and the number of interfaces that are going out to the agencies from those core systems. Please note the discrepancies in the total number of interfaces reflect instances where agencies did not declare an interface direction.

Interface Direction	1,507
Inbound Interfaces from agencies	566
Outbound Interfaces to agencies	764
Direction not identified by agency	177

Table 2.2

The table below shows the breakdown of interfaces by business function. Line of business has also been included. Totals by function will not match the total number of interfaces since a single interface could cover multiple business functions. As with the systems, the bulk of the interface work is with finance and will need to be resolved in the first phase of the implementation.

Interfaces by Core Business Function

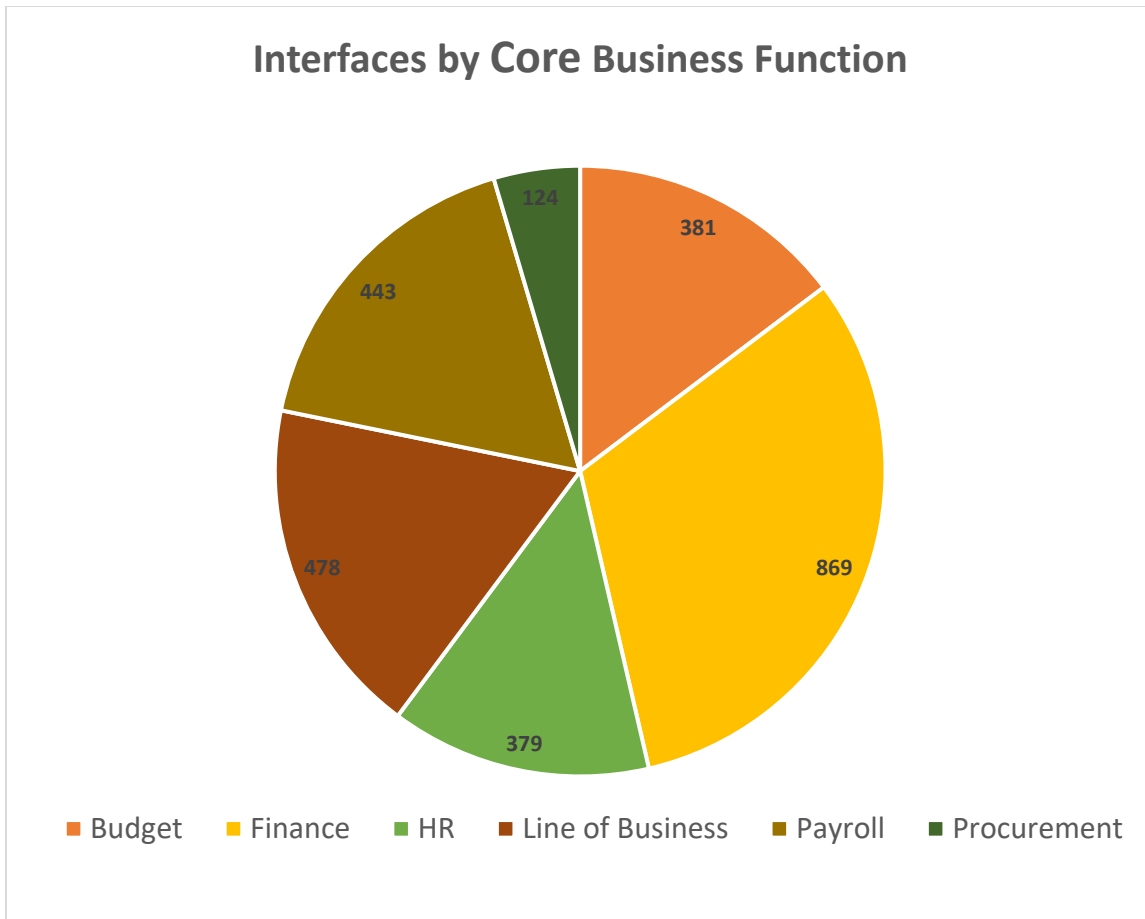


Figure 2

Interfaces by business function	Percent
Finance	58%
Budget	25%
HR	25%
Line of Business	32%
Payroll	29%
Procurement	8%

Table 2.3

Of the 1,507 interfaces identified and the financial business function making up 58%, only 272 interfaces show up as AFRS interfaces. This could either mean there are several agencies separately pulling financial reference data or the data was misidentified by the agencies as it was entered into the inventory spreadsheets.

Business functions were identified at the system level with the system interfaces then inferring the same. Because the majority of the state's core financials are through AFRS, the large difference in the numbers needs further review. OneWa will be working closely with internal OFM IT and each agency to help clarify what interfaces will be critical during each phase of implementation.

AFRS Interfaces

Number of AFRS interfaces	272
Number of Standard AFRS Interfaces	270
Number of Non-Standard Interfaces	2

Table 2.4

There is also concern around the HRMS interfaces. The majority of data moving in and out of the state's core HR system is controlled through standard GAP files, but the large number of nonstandard interfaces collected in the agency inventories was surprising. Again, these will need to be reviewed closely with each agency.

HRMS Interfaces

Number of HRMS interfaces	195
Number of Standard HRMS Interfaces	165
Number of Non-Standard	30

Table 2.5

Volume of Data

Although OneWa collected the amount of data moving within each interface inventory, we were not successful enough with the collection effort to have numbers confident enough to be published at this time. Further data collection and analysis on volume will be reviewed at the core systems themselves.

Integration Strategy

The number of systems and interfaces identified as being impacted by the move to a modernized ERP solution make it clear that an intermediate strategy will be needed for mitigating risks to mission critical agency line of business systems. OneWa is working closely with OFM IT to expand their integration capacity.

The goal of both business and integration is to provide standardized interfaces whenever and wherever feasible. Agencies will use their own platforms and tools to send and retrieve data to the ERP via a data access layer provided and managed by OFM. The data access layer will include a variety of integration options, such as direct database connectivity, API access, or traditional file loads. The type of integration method used will depend on the requirements and needs of each interface. Data in the old format will be mapped into the new format and then loaded into the ERP.

This intermediate strategy will allow the OneWa program to continue to move forward with an implementation without expecting every agency to change their impacted systems and interfaces within the short period before each phase's go-live.

OneWa will work with OFM IT and each agency to point their interfaces to this new data access layer by the end of this calendar year where plausible. We understand this may not be possible for all agencies or all systems.

More information regarding Integration Strategy is available in the [One WA Integration Strategy](#) document published in March 2020.

Agency Detail

A separate report has been created for each of the 44 agencies and will be used for data validation and creation of their agency-centric action plan. These reports are considered confidential and are only released to specific entities. If you would like to see your agency's detailed report, please see your agency's OneWa point of contact. A list of point of contacts by agency is listed here:

https://ofm.wa.gov/sites/default/files/public/onewa/AGENCY_points_of_contacts_list.pdf