## Executive Summary

*Provide a high-level overview of the problem and solution, highlighting the main objectives and benefits and costs (what is our ask).*

This whitepaper outlines the lack of a cohesive, data strategy for Human Resources (HR) within Chewy, provides a view on what that Data Strategy should be and how to get to that desired future state. The purpose of this whitepaper is to get state the desired Data Strategy as a North Star which we can drive to in 1-year, 3-year and 5-year and beyond.

## Introduction

*Describe the problem or challenge that your whitepaper addresses. Explain its significance and why it requires attention.*

We define Data Strategy as the long term plan that defines the rules and operating structures (people, processes, tools and technology) to manage our HR data assets, i.e., how we define, collect, transform, store, secure, retain/dispose, share and use HR data.

Lack of data strategy and the pace of business has caused us to reach an inflection / tipping point. To date, most of the products and decisions that we have made around data in the HR domain have been with speed to market as the driving factor. When Thinking Big has clashed with Accelerate Time, we’ve had to make the intentional decision(s) to drive forward to enable the business, often at the cost of foundational data strategy. This has reached an inflection or tipping point, where we are no longer able to move forward with new innovation at the same pace because of the tangled web of concessions we have made from a Data Strategy perspective.

## Background and Context

*Provide relevant background information, industry trends, or existing solutions related to the problem.*

History

Industry Standards

## Problem Statement

*Clearly articulate the problem and its impact. Use data and examples to support your claims.*

We don’t have a data strategy, so each individual project and new request is done in a silo, without room for pause or strategy on long term impact.

Examples:

Remote Locations – embedding in the location code

Cost Centers – embedding Exempt / Non-Exempt in the code

Manager Levels – Adding an 11th level of Manager

Freezer Locations – Reusing Location as a freezer (need more details)

Integrations of non-Workday systems – Cornerstone being an example – Data Hub? Data Mart? Workday? No standard solution around what the enterprise strategy should be.

Define

Collect

Transform

Store

Secure

Retain/Dispose

Share and Use

## Proposed Solution

*Describe your solution or approach in detail. Explain how it addresses the problem and the unique value it offers.*

We believe the following pieces need to be created and defined going forward

* Define
* Collect
* Transform
* Store
* Secure
* Retain/Dispose
* Share and Use

We believe we will need the following org design to accomplish that strategy and vision

\*\* Org Design

\*\* RACI

## Methodology or Technical Details

*If applicable, provide technical information, algorithms, or methodologies that underpin your solution.*

Not sure If we need this section….or do we role it into Implementation Plan / Roadmap?

## Implementation Plan

*Outline the steps required to implement your solution, including potential challenges and risks.*

Create roadmap to get this delivered

## Use Cases or Examples

*Include real-world examples or scenarios that demonstrate the effectiveness and practicality of your solution.*

Find some case studies of other companies that have accomplished this… hopefully won’t be terrible ☺

## Alternative Analysis

*Analyze and compare your solution to existing alternatives, highlighting its advantages and limitations.*

Integrations

Data Mart / Data Mesh

Workday as Data Hub

Strategy

Each application creates their own in a silo

Enterprise Strategy / Governance

## Conclusion

*Summarize the key points, reiterate the benefits of your solution, and discuss potential future developments or research areas.*

### APPENDICES

### Appendix 1

**Reference Links**

[1] <https://en.wikipedia.org/wiki/Data_architecture>

[2] <https://www.bmc.com/blogs/data-architecture/#:~:text=Data%20architecture%20is%20a%20framework,foundation%20of%20any%20data%20strategy>.

[3] <https://doc.workday.com/>

[4] <https://developers.greenhouse.io/harvest.html>

[5] <https://github.com/grnhse/greenhouse-api-docs>

[6] <https://chewyinc.atlassian.net/wiki/spaces/EDW/pages/6834612/AD+to+Snowflake+Role+Mapping>

[7] <https://www.adessagroup.com/hr-gdpr-cloning-scrambling-and-anonymization-of-employee-data-in-sap-hr/>

[8] <https://www.collibra.com/us/en/blog/the-6-dimensions-of-data-quality>

### Appendix 2

**Current HR Integration Architecture Diagram** *(from Workday perspective)*

**Source Systems**

Current Workday Integration Architecture is shown in Appendix 2. HRIT owns all the Integrations involving Workday. There is additional documentation directly from Workday in the Resource Center [[3]](https://doc.workday.com/). Additionally There are also integrations between Greenhouse and some vendors., there is some documentation from Greenhouse [[4]](https://developers.greenhouse.io/harvest.html)[[5]](https://github.com/grnhse/greenhouse-api-docs). Greenhouse integrations are owned by the TA Ops team. Kronos is owned by the HR Ops Team

Documentation is scarce on all sides and is not consistently captured. Requests for information also go through each team and causes unnecessary context switching. The security and governance models are defined independently by each team, so while an end user might not have access to a particular piece of data in one system, they can go to another system, and they might be able to get access to that attribute via different access paths.

There is no standard access and governance framework to track what access each person or role has access to. Additionally, while there are data classifications and general data privacy information published by security and compliance, there is no central repository of how the data within each source system is classified, nor is there much guidance on how to properly handle different classifications of data within the HR realm.

**Opportunity**: Set up an enterprise view of the HR Data Ecosystem, inclusive of Workday, Greenhouse and Kronos in standardized documentation and feeding an information catalog.

Create guidance and structure around the classification of data attributes and how to properly handle that data (e.g., what is appropriate to be able to download via Tableau vs what needs to only be allowed in aggregate).

**Reporting**

As of March 2022, in Workday, there are 1583 custom reports that have been created and an additional 2365 workday-delivered reports that we can access. There are an additional xxx generated out of Kronos, and xxx generated out of Greenhouse. Each system has its own team that manages admin and security models for those canned and custom reports. It is unknown how many of these reports are then further enriched, analyzed and then sent on to other people who might receive them, whether in Tableau, Excel or another tool of choice.

In Tableau, there are at 6 different subfolders within the HR parent folder with inconsistent levels of permissions, and another set of reports within the FC parent folder as well. It is not well governed on who has access to each report, and whether those permissions are necessary and appropriate. Details about the known Tableau Reports is attached in Appendix 3.

The way that Tableau is set up across Chewy, the permissions are applied at a folder level, and the assumption is that reports within a folder should have the same security model. However, in the HR space, different teams have created different folders with different strategies, so the permissions are managed currently by department or group, rather than logically by what a role should have access to. This leads to a poor user experience, where a user needs to request access to each department folder individually, and often may get access to data they don’t need nor care about.

A lot of reports in tableau are curated to only display access to aggregated data, but the raw underlying data is at a person level and has lots of detailed information that is not necessary to the report. Because of the permission by folder level and many people being in the Explorer category, those granular level details of data are available via download in the Tableau report, and we lose sight of what a user does with that data downstream.

The only automated Tableau Dashboards are the ones built or inherited by the HRIT team and use the HR Data Mart as a data source (Project Viking, Eagle Eye, HRBP, etc.). Other Tableau Dashboards that are not automated and not using the HR Data Mart are using manual data refreshes (i.e., Flat File Ingestion) are published to the development server (reports.chewy.com).

**Opportunity**: Find and document the “Menu of Reports” and have standard reports for each purpose to ensure standardized reporting capabilities all around. Redesign and govern access to HR Tableau reports in such a way that the Tableau is secure and governed, while having a pleasant user experience. Automate core reports from data out of HR Data Mart and continue to grow the Data Mart to be more inclusive of all the asks.

We also need to design and publish a strategy on when to use aggregate data for sensitive data, and when granular level details are ok. This blend of aggregate and sensitive will be particularly relevant in the HR data domain.

Additionally, we should be able to design the Tableau folder structure for HR in a way that is driven by access and role, rather than by individual folders. We should also develop a comprehensive strategy for when to use aggregate and when to use granular data in Tableau, especially for our sensitive data.

**Snowflake**

**Technical Capabilities**

HR data is inherently sensitive in nature as it deals with PII and employee data. Consequently, HR has decided to create an instance of Snowflake that is separate from the rest of the Corporate Chewy Snowflake instance. The HRIT team administers and develops code on this Snowflake instance apart from the rest of Chewy. Because we have a separate instance, that is solely administered and developed upon by the same team, there are many steps that are not taken.

|  |  |  |
| --- | --- | --- |
| **Capability** | **HR Snowflake** | **Chewy Snowflake** |
| Continuous Integration / Continuous Deployment (CI / CD) |  | X |
| Code Review and Architecture Approval |  | X |
| Dev / QA Environments |  | X |
| Sandbox |  | X |
| Automated Admin through SNOW |  | X |
| Data Catalog Integration (Mr. Peabody) |  | X |

The Chewy Snowflake environment has defined processes for continuous integration and deployment, which requires code review and approval from the central engineering team to ensure good performance and scalability. It also has development, QA and sandbox environments which the HR Snowflake account has not stood up yet. In turn, the development of all code is done in the production environment in the HR Snowflake account and has immediate impact on anyone using that data.

Administering of the cluster is also done manually within the HR Snowflake account, and permissions are run line by line, not recorded anywhere and hard coded when requested. The Chewy Snowflake cluster has had a role design that has been created and permissions are granted through a standard SNOW process[[6]](https://chewyinc.atlassian.net/wiki/spaces/EDW/pages/6834612/AD+to+Snowflake+Role+Mapping).

Finally, the Chewy Snowflake account is tied into the Mr. Peabody Data Catalog, so the data is documented, and usage can be tracked via the tool. HR has deliberately chosen not to integrate with Mr. Peabody as HR metadata itself can be sensitive, but in doing so there is a lack of solid documentation and no standard repository to collect that metadata.

**Opportunities:** There is a lot of opportunity to learn from what the Enterprise Chewy Snowflake team has built and use their expertise on the system architecture, process and strategies. There’s no need to re-invent the wheel, the HR Snowflake Cluster is lacking in scalability.

Specifically, we should enable CI/CD and a Development Process (e.g., Code Repositories, Code Reviews, Automated Deploys, Development and QA Environments) and create an access strategy that is not ad-hoc, and follows the various layers of access and security that have been designed at the source.

There is also an opportunity to either have our own Mr. Peabody instance or create our own centralized Information Catalog.

**Data Model**

The Data Model in Snowflake was created on a project-to-project basis. Views are created with business logic hardcoded in the view, instead of creating generic views that can be re-used across various analytics requests. In addition, the data model is created in a way such that access to data is granted in an all or nothing fashion. Details can be found in Appendix 3.

Views are complex and have a lot of logic embedded in the views, and logic is reused across multiple views. When changes are needed, those updates are needed across all the views to keep them consistent. However, since there is no deployment pipeline, nor is there a dev environment, the changes are done to the production data model. This seemingly happens quite often in particular around mappings and hierarchy information.

This type of reference and master data is an area of opportunity to gain some efficiency. We should standardize reference data across our source systems (e.g., Workday, Greenhouse, Kronos) and our partner source systems as well (e.g. Hyperion).

An example of a proposed Curated and Business Product Layer is shown in Appendix 4.

**Opportunity:** If we focus on designing and building a Curated and a Business Product Layer that is scalable, it will be able to serve all reporting and analytic needs without constant manual intervention.

To do this, we need to better understand ourbusiness processes and capabilities, and design by domains, rather than by project.

**Historical Data**

In reporting and analytics, historical or point in time data is necessary to do trending analysis. In the current HR Data Mart, data is pulled in each day to show what is stored in the system for current state, however, the data of what data looked like in history is overwritten and lost. Not having the history can lead to confusion when comparing metrics across time periods and the data looks like it has changed.

**Opportunity:** Snapshots of key data and metrics would be advisable.

**Architecture**

There are lots of pieces to the Data Architecture of the HR Domain. Each individual piece of integration and team may have their own documentation, but there is not standard documentation nor a consolidated view of the Architecture from a holistic point of view. To obtain a holistic picture of the HR landscape, we need to know what business domains and capabilities we have and what data is created in each of those domains. Not just for the major data sources (e.g., Workday, Greenhouse, Kronos), but also for other data that is typically manually assessed (e.g., Glint, Recruitics, Learning Data, Assessments, OpenBark, etc.).

From the opposite end, we can generate the architecture by profiling the data products that consume the data (e.g., Tableau reports – Project Viking, Eagle Eye, HRBP, etc.) and see what the core data attributes are that are being used. This work has been started. See Appendix 5 for examples of these top down and bottom-up approaches to discovering the current Data Architecture.

**Opportunity:** Create both a business capability model and build documentation of the Tableau reports up to discover what the Data Architecture should be if driven by Data Domains.

To truly understand how data in the HR domain is accessed and governed, we need to know what data products exist. From that list, we can design proper access, governance, standards and definitions. A data product in this context can be

* Source Systems (Workday, Greenhouse, Kronos)
* Operational Reports
* Historical or Analytic Reports
* APIs
* Data Science Model
* Metric or KPI

In terms of security and access governance, as has been stated, there is not a consistent process nor guidance on how to handle the sensitive data. We should focus on creating that process with documentation and training on how to safely handle our data products. In the current state, all products should go through the PII request process to be cleared, but am unsure how often that is happening.

**Opportunity:** If we compile a central repository of Data Products, this will be a useful tool across the entire HR Data Landscape. In compiling this list, we gain documentation and insight into what exists, but also are then able to coherently design access and governance strategies. Additionally, all data products should go through the legal and compliance review process that we define and document. At a minimum it should go through an inform for any product that does not use sensitive data.

Another thing that is missing from our current architecture is a common agreement and alignment on business roles. Once we can come up with standard business roles, we can apply those roles and appropriate access to data at the role level (role-based permissions). This will allow more comprehensive audits and we can find where we need to fill the gaps and create more access controls and governance in the different source systems. As of current state, these business roles do not exist, and permissions are given on an ad-hoc basis and are cloned from person to person (e.g., “Can you grant me the same levels of access that my coworker has”). This can be dangerous as people inherently should move between roles over time, and their access should also change with the role, rather than gaining access to sensitive data and then being grandfathered into that access group when it’s inappropriate to continue to have access to the data. The level of governance now is REACTIVE to changes, and are done only on periodic audits, rather than being alerted of a change in job status.

**Opportunity:** We should identify the various personas in and across Chewy and map them to appropriate access to HR data attributes and products. From that map, we can develop a governance and alerting framework for when people move between roles and no longer need access, and grant access based on roles, instead of manually assigning in an ad-hoc fashion.

One way to ensure appropriate access to the data, we need to handle data appropriately as we develop for both our source systems and also our reporting systems. In our current state, all development is done against real employee data, and tableau reports are all built off row level granular data. To ensure proper access to data, and in the spirit of only accessing the data necessary to do one’s job, we should have test data profiles set up across the various systems, and also a way to anonymize data in our test environments to do true testing while not opening ourselves to risk of real production and person level data.[[7]](https://www.adessagroup.com/hr-gdpr-cloning-scrambling-and-anonymization-of-employee-data-in-sap-hr/)

**Opportunity:** Using either a data anonymization tool, scrambling the data, or simply to create test subjects across our source systems will allow us to do much more targeted testing while not risking production, employee level PII. This test-driven development would allow us to more effectively and efficiently configure both source systems, and our downstream HR Data Mart and analytics.

Lastly, business rules are not defined in a standard way across the HR ecosystem, and are defined on an ad-hoc basis. Of the business rules that we do have and have defined, there is very little Data Quality checking that is done outside of manual processes and human intervention. This is a cause for context switching and is error prone, leading to inefficiency in the communication cycle. By discovering existing business rules, defining new ones and capturing all business rules in a central place, we can put a Data Quality framework in place that will help Create Trust in the HR data in the key dimensions of Data Quality[[8]](https://www.collibra.com/us/en/blog/the-6-dimensions-of-data-quality)

* Completeness – Is all the data being correctly captured, and stored in our Source Systems and in the Data Mart?
* Accuracy – Is the data accurately representing the HR processes that we have put in place?
* Consistency – Is the data consistent across Workday, Greenhouse, Kronos, Snowflake, Finance, etc.?
* Validity – Is the data valid for the different use cases (e.g., picklists, dropdowns, departments, etc.)?
* Uniqueness – Are there duplicates in the data either in each system and across systems?
* Integrity – How does the HR data move across different systems and can it be traced?
* Timeliness – Is data getting where it needs to go in a timely manner which meets SLAs?

**Opportunity:** Create a Data Quality framework that tracks and remediates all data quality issues across the HR data ecosystem.

Diagram

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**Source:** <https://chewyinc.atlassian.net/wiki/spaces/HRIT/pages/1437336102/Current+HR+Systems+Architecture+-+January+2022>

### Appendix 3

**HR Data Mart Details**

Appendix 4

**Proposed Curated and Business Product Layers in HR Data Mart**

### Appendix 5

**HR Data Architecture Discovery**

### Table Description automatically generated with medium confidence

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### Appendix 6

**HR Data Architecture Roadmap Details**

***Note:*** *Proposed deliverables with Contingent Labor highlighted in Light Green below.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **ID** | **Initiative** | **Category** | **STO** | **Activities** | **Key Deliverables** |
| 0 | Snowflake Technical Architectural Updates | Right Time | Kara Prigodich | Enable CI / CD (Continuous Integration / Continuous Deployment) process for Development of HR Data Mart  Establish Development, QAT (Quality Assurance Testing) and Production Environments  Adopt Automated Deployment Process from standard Chewy best practices  Design and Automate Access and Governance Strategy of HR Data Mart with Access Roles based on business role-based permissions | Establish Technical Advisory Board to ensure HR Data Mart follows Chewy Best Practices and Standard Architecture Patterns  Full Development Pipeline and Cycle for HR Data Mart in Snowflake  Loveable Access Request Process |
| 1 | Standard Data Definitions and Metrics | Right Data | Matthias Chan | Consolidate Data Dictionaries and Information from Key Stakeholders and reports to start standardizing key definitions and metrics  Document standards in a repository (e.g., Mr. Peabody, or Information Catalog) | A repository of standard metrics and definitions  Guidance on where to go (HR Data Mart or Tableau) for each key metric or data attribute |
| 2 | Curated and Business Product Layer in Snowflake | Right Data Right Time | Matthias Chan | Design the Conceptual and Logical Data Model for Curated and Business Product Layers  Identify business logic to translate from Raw to Curated and from Curated to Product Layers  Implement Curated and Product Layers using SQL | A Data Mart that allows HR analysts and business intelligence developers to   * Request Access through a Governed Process * Self-Serve HR Data they have permission to access * Create Data Products, Automated Dashboards, Data Science and Machine Learning Models and Discover Insights |
| 3 | Historical (Point-in-Time) Reporting and Historically Reported Metrics | Right Time | Matthias Chan | Creating Strategy and Implementing snapshots (point-in-time) of data and key metrics that are reported out in WBRs and MBRs | Historical Snapshots of Key Reported Metrics  Ability for analysts and data scientists to be able to generate a look back to data as it was at a given point in time |
| 4 | HR Data Product Inventory | Right People | Matthias Chan | Create a repository of all HR Data Products  Categorize and document best sources and usage patterns for all HR Data Products | Menu of HR Data Products with guidance on   * Where to find * How to use * Who to contact for support * What the product does * When the product is refreshed |
| 5 | Business Capability Model | Right Data | Matthias Chan | Discover, Document and Create a Business Capability Model to drive our data domains  Create data domains which will in turn influence the Conceptual and Logical data models of the HR Data Mart | Business Capability Model with Domains, Stakeholders, Key Metrics, Standard Metrics and Access strategy documented and accessible |
| 6 | Tableau Design and Governance | Right Data Right People | Matthias Chan | Inventory HR Data within Tableau  Inventory User Access within Tableau  Redesign Tableau Folder Structure and Governance for Appropriate Security and User Experience  Create Governance Framework to support ongoing Tableau Development and User Access | Easy to use Tableau Structure for HR Visualizations  Fully documented for any user across HR to onboard and request proper permissions and consume the data |
| 7 | Data Quality Framework | Right Data | Matthias Chan | Identify business rules for key metrics and calculations  Create automated dashboards, alerts, and remediation processes for data quality issues  Create documentation and trending analysis for Data Quality Scorecard and tracking for Data Quality Program effectiveness | Data Quality Framework and Strategy for HR  Automated Dashboards and processes for alerting data owners of data quality issues proactively instead of reactively |
| 8 | Data Classification Strategy | Right People | Nicole Wetmore | Create and implement a Data Classification Strategy with Proper Usage Guidelines  Tag Data Attributes and Domains to the right levels of Data Classification | A data classification strategy with usage guidelines for all HR data attributes and domains |
| 9 | HR Security, Compliance and Governance Framework | Right People | Nicole Wetmore | Identify security controls within each HR Data Product  Create Security, Compliance and Governance process across all products, teams, and domains | Standard Access and Governance Framework for all HR products, teams, and domains  Documentation of who has access to what data that is consistent across systems and follows a role, rather than a person  Proactive monitoring and alerting when people move across roles, and provisioned access needs to be changed |
| 10 | Persona and Role Based Permissions | Right People | Nicole Wetmore | Identify personas and roles within HR  Decide appropriate data access permissions for each persona and role  Design framework for ongoing review and support of the personas and role-based permissions  Identify what capabilities there are for each HR Data Product based on Personas and Roles (e.g., Workday, Greenhouse, Kronos, Hyperion, Snowflake, Tableau) | Cohesive framework, strategy, guidance, and templates for designing Persona and Role-Based Permissions |
| 11 | Testing and Anonymized Data Strategy | Right People | Matthias Chan | Identify what environments we have for testing for each HR Data Product  Determine what is possible in terms of cloning, anonymizing, and scrambling the data  Create a Testing and Anonymization Data Strategy for all HR Systems | Strategy, and implementation templates for test data in each system and guidance on when anonymization, cloning and scrambling of data is advisable |
| 12 | Sensitive Data Access Strategy | Right Data Right People | Matthias Chan  (HRBI Tools) | Create a strategy for when to use aggregate data only, when to use granular data, and when it is appropriate to do a hybrid  Create templates showing how to implement these strategies across HR data | Documented strategy and guidance for when granular data is acceptable, and when aggregated data is a necessity  Templates and examples for how to implement   * Aggregate Only * Granular Only * Aggregate with Granular Drill Down |
| 13 | Data Guidelines for Vendor Selection | Right Data | Matthias Chan | Work with the team creating the standard process for vendor selection in HR to include a scorecard and perspective on data capture (attributes and format), transfer, and scheduling | A standard practice and questions to ask our vendor partners to identify and document common data questions we should be asking with each vendor, as well as a repository to store all vendor documentation |
| 14 | Information Catalog (Metadata) | Right Data Right People  Right Time | Matthias Chan | Consolidate Data Dictionaries, Source to Target Mappings, Physical Data Models, Tableau Documentation, Security and Access Documentation, Process Documentation  Build Metadata Pipelines and GUI for Information Consumption | Information Catalog that shows   * Downstream Impact of Data and Process Changes * Upstream sources of a metric * Holistic data access across HR * Data sources, and standard metric sources |

Small = < 2 Weeks

Medium = 2-4 Weeks

Large = 4-8 Weeks

X-Large = 8-16 Weeks

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Priority** | **Initiative** | **Category** | **T-Shirt Size** | **OP1s** | **Current State** | **Proposed** |
| 0 | Snowflake Technical Architectural Updates | Technology | Large |  | (HRIT) | (HRIT) |
| 1 | Standard Data Definitions and Metrics | Analytics | X-Large | 5, 6, 7, 11, 20, 29, 40, 49, 53, 61, 70, 84 | W16 | W16 |
| 2 | Curated and Business Product Layer in Snowflake | Analytics | X-Large | 5, 6, 7, 20, 40, 49, 84 | W32 | W16 |
| 3 | Historical (Point-in-Time) Reporting and Historically Reported Metrics | Analytics | Small | 6, 20 | W34 | W2 |
| 4 | HR Data Product Inventory | Foundational | Medium | 13, 112 | W38 | W6 |
| 5 | Business Capability Model | Foundational | Medium |  | W42 | W10 |
| 6 | Tableau Design and Governance | Analytics / Governance | Medium | 5, 7, 8. 13, 552 | W46 | W14 |
| 7 | Data Quality Framework | Foundational | Large | 61 | W54 | W22 |
| 8 | Data Classification Strategy | Governance | Small | 5, 7, 8, 13, 552 | W56 | W24 |
| 9 | HR Security, Compliance and Governance Framework | Governance | Small | 5, 7, 8, 13, 90 | W58 | W26 |
| 10 | Persona and Role Based Permissions | Governance | Medium | 5, 8, 13, 90 | W62 | W30 |
| 11 | Testing and Anonymized Data Strategy | Foundational | X-Large | 5, 7, 8, 13, 552 | W78 | W46 |
| 12 | Sensitive Data Access Strategy | Governance | Medium | 5, 7, 8, 13, 90, 552 | W82 | W50 |
| 13 | Data Guidelines for Vendor Selection | Governance | Medium | 11, 28, 45, 48, 84, 112 | W86 | W54 |
| 14 | Information Catalog (Metadata) | Foundational | X-Large | 61 | W102 | W70 |

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**Details**

EPA Data Enablement Only – 102 weeks (about 2 years)

EPA Data Enablement + Contingent Labor – 70 Weeks

**Note:** Technical Architecture Updates for Data Mart are solely at the discretion of HRIT, but that work has not been prioritized nor resourced for.

### Appendix 7

**HR Data Competency Program Impact**

