

# Delivering People Analytics from Workday.



# Why Is It So Hard to Deliver People Analytics from Workday?

**At One Model**, we help companies accelerate their people analytics journeys. A key element in this journey is getting the data out of their HR (and non-HR) systems and into an “analytics-ready data asset” from which they can deliver reporting, analytics, and predictive modeling.

A lot of our customers use Workday as their core human capital management (HCM) solution. Workday helps companies of all sizes to deliver a better experience for employees, managers, and job applicants. Workday drives transactional and process efficiencies, such as manager self-service and basic operational-level reporting to enable managers and HR business partners. Basically, Workday is a great HCM solution.

**Many companies selected Workday** based on the information it promised to deliver. However, while Workday’s system architecture improves the transactional experiences, it’s not built to support the decision-making needs of leadership. Workday doesn’t deliver people analytics at scale.

For reporting, analytics and data science, Workday falls short of delivering beyond the basics. Even with Prism, Workday’s business intelligence add-on, HR and People Analytics (PA) teams are challenged by the limitations of Workday’s embedded data and reporting tools. There is a ceiling and it is low.

**People Analytics teams** may know how to build Workday reports, integrate some data using Prism, and get data out of Workday using reporting and API functionality. The problem comes when they set about constructing this information into an “analytics-ready data asset” that supports a wide variety of reporting, querying, storyboarding, and advanced analytics use cases. Many of these use cases require integrating data from Workday with other HR and non-HR data. These teams often need to work with IT teams to set up a standalone database for Workday data and then transform that data into something workable. It’s a costly and time-consuming journey.

**Transforming HR data** is challenging because it must be carefully scrutinized for accuracy. A team that cannot accurately explain and account for the ins-and-outs of headcount from one period to the next — especially when organization structures are always changing — will not be able to drive adoption and acceptance of their highest value analytics efforts.

## **Analytics-Ready Data Asset:**

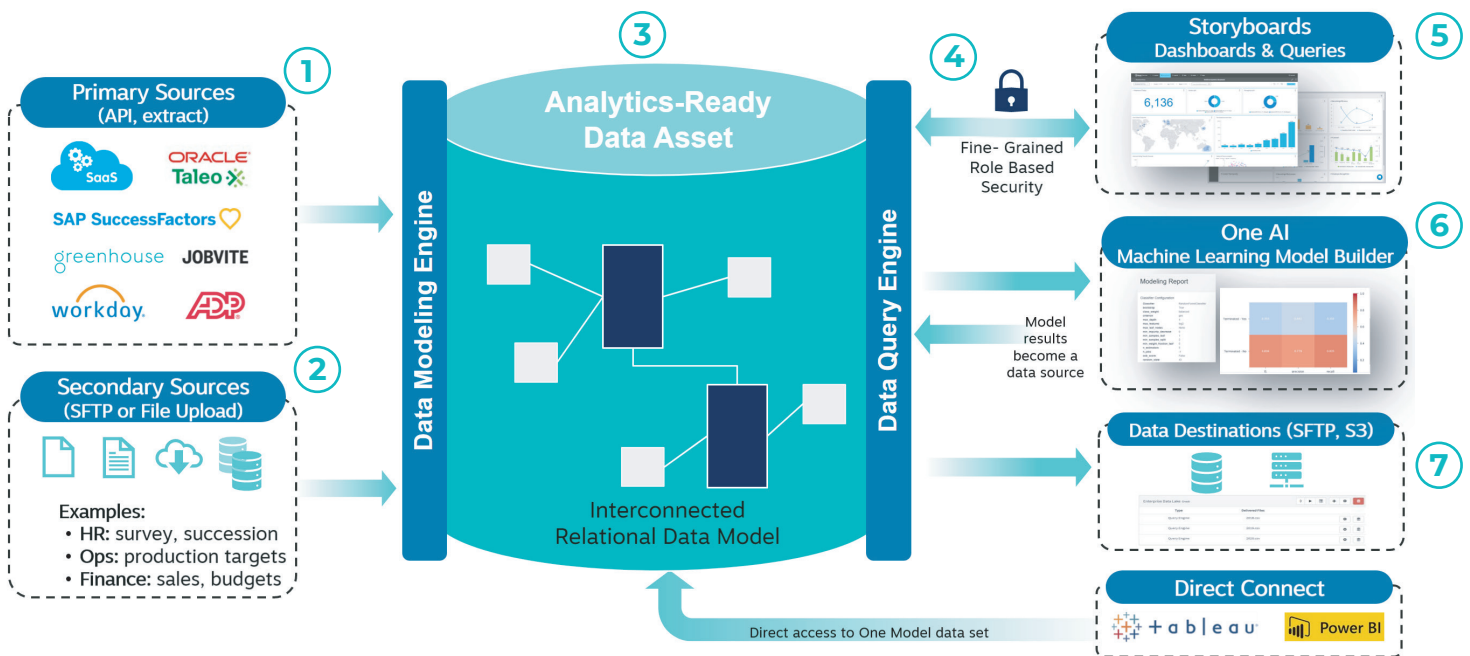
A collection of data that is stored and structured for optimal analytics value, enabling the integration of multiple sources and supporting the evolving deliverables of reporting, storyboards, analytics, and predictive modeling.

**An analytics-ready data asset** is the required foundation for delivering people analytics. In this paper, we explain how One Model accelerates the people analytics journeys of our customers by building such a data asset from their Workday systems.

# Technology Overview: How One Model Delivers People Analytics Capabilities

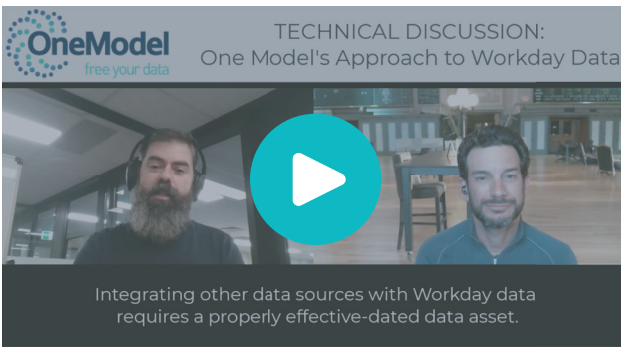
To provide some context, here's an overview of how data flows from HR and non-HR systems into One Model's unified data model creating an "analytics-ready data asset" that supports deliverables such as storyboards, predictive modeling, data feeds to other systems (eg, data lakes), and access by tools such as Tableau and Power BI.

- 1 Extract data from primary data sources using APIs and extracts – in this case, Workday
- 2 Integrate data from secondary sources – surveys, budgets, recruiting, learning, etc.
- 3 Model that data to create an "analytics-ready data asset" that supports people analytics
- 4 Establish data security model
- 5 Enable storyboards, dashboards, and querying capabilities
- 6 Enable One AI, One Model's machine learning predictive model builder
- 7 Set up Data Destinations and Direct Connect (for Tableau, Power BI, etc.) where needed



This is how One Model solves the challenge with Workday (and other systems). It's a proven process which is laid out in more detail later in this paper.

Alternatives exist, but they don't adequately address the complexity of dealing with the nuances of Workday data. Even Workday's own solutions cannot enable the creation of a data asset that can fully support the wide range of needs of a people analytics or workforce planning team.



Click the image to view a short video on this step, or view the video at [www.onemodel.co/wd-whitepaper-video1](http://www.onemodel.co/wd-whitepaper-video1)

## Considering the Workday Alternatives

Workday has been adding some analytics and data features and functions to their solution over time. These are useful for some use cases, but not at the scale that meets the demands of most people analytics teams.

### Prism

Many companies have purchased Workday's data tool, Prism, expecting to use it for delivering better reporting, storyboarding, and analytics. While Prism enables the integration of some data, it lacks the reusability and scalability required by even an average-caliber people analytics team. Prism also doesn't resolve the limitations in the Workday reporting capabilities: filtering, slicing and dicing through data, and enabling a power user community.

Prism is insufficient for a PA team that is expected to deliver content and analytics across the organization that enables decision-making by managers and HR leaders.

### Reporting-as-a-Service (RaaS)

Another option within Workday is the reporting -as-a-service (RaaS) functionality that enables the extraction of "data snapshots." These snapshots are used by companies and PA vendors for extracting data because the process is less complex than using the APIs.

**Leaders at companies using Prism have shared these comments with us:**



"Prism is business intelligence 1.0 ... we just can't use it."

"No RaaS report has ever been accurate for us ... it has even caused Workday to completely shut down."

"We thought Prism was a reporting solution. It's not."

"Our IT team purchased it, but we've only found one narrow use case for it so far. we are not really using it."

Some organizations use RaaS to execute a regimen of extracts upon which they execute various “post-production” steps to create a usable “RaaS-based data asset.”

For example, a daily snapshot of the worker data is run, a weekly snapshot report is run to replace the daily snapshot reports for the week, and then a semi-annual snapshot replaces the previous six months’ snapshots. These snapshots are “stitched” together in a database upon which a team will sit a visualization solution and possibly some data science applications.

This approach enables the team to capture most of the retroactive changes but will still struggle to correctly account for some types of changes. Additionally, the monthly and semi-annual snapshots will be so large that they are likely to fail due to time-outs.

### **Issues with RaaS-based approach:**

**Inaccuracy:** Missing changes that occur between snapshots makes it impossible to track data/attribute change, pro-rate, and create analysis any deeper than the snapshot’s time context. For example, retroactive transactions, which are not accounted for in the data, leave “imbalances” in the in/out flows of the workforce and prevent a balanced view of starting and ending headcount.

**Inflexibility:** An object or time context has already been applied to the data, which you can’t change without replacing the entire data set with a new context. The inflexibility is notable when a previously excluded data element needs to be added to the data asset, requiring a long series of historical reports to be rerun with the new data element included.

**External data is difficult to connect:** Lack of effective-dated data makes it virtually impossible to accurately join data from other systems in a way that enables proper analysis in a common time context.

**Timing Out:** Generally, the snapshots needed to build a data asset are beyond the design of the RaaS solution. Time-outs are common for larger organizations.

**So many reports!:** A report will be needed for each snapshot period, so a three-year data asset with a month-end snapshot means building and maintaining 36 reports.

By itself, RaaS is only an extraction mechanism for the creation of an analytics-ready data asset and cannot perform the data transformations required. While RaaS can support many of the data extraction needs, constructing an analytics-ready data asset from such reports would require a massive regimen of daily or weekly report runs on top of the data transformation and modeling work needed. Companies often underestimate the required expertise, costs, and risks, only discovering them after a project has started and many thousands of hours have been spent “gluing” together the RaaS-based data.

# One Model's Proven Process for Workday

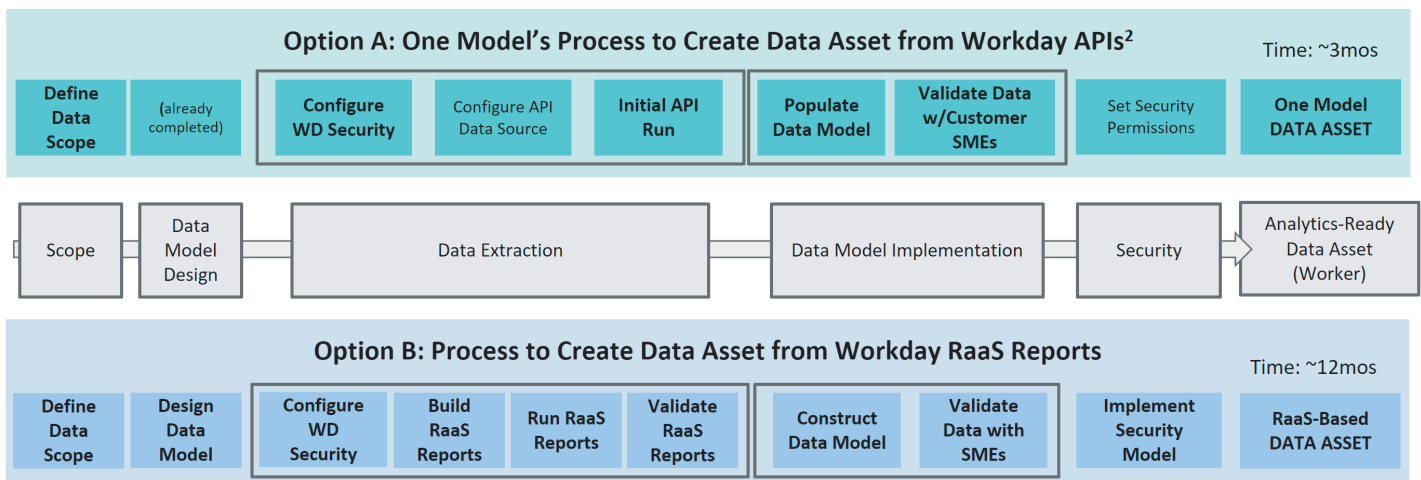
**Our mission at One Model is to accelerate your people analytics journey.**

Being able to build an “analytics-ready data asset” from Workday data is a core element of this mission and a unique capability of One Model.

For companies trying to decide whether to buy or build a solution to deliver people analytics from their Workday data, One Model is almost always the ideal option. One Model has a proven process for constructing such a data asset while also delivering the reporting, querying, storyboarding, visualization, and predictive modeling capabilities that people analytics teams demand.

In just weeks, the One Model solution can deliver more than what an internal IT team might spend several months building at considerably more risk and cost. The One Model team has thousands of hours in development, implementation and refinement of this solution specifically for Workday. A comparable “build” solution would involve teams of data engineers, architects, and analysts who would be learning as they go. One Model is built for this specific purpose.

## Options for Building an Analytics-Ready Data Asset<sup>1</sup>



NOTES: 1. A dataset that is capable of supporting basic through advanced analytics, being effective-dated and capable of integrating other data sources. This only represents the “Worker” elements before any recruiting, survey, learning, or other data is integrated. 2. Supplemented with RaaS reports to capture custom attributes set up by customer not available via the APIs.

## Using the Workday API

One Model uses Workday's APIs to directly interrogate the data, an approach that has proven through much experimentation, to be the most efficient path to creating an analytics-ready data asset from Workday data.

Few organizations use this API-based approach because the resulting data is more complex to manage and transform than the RaaS-based snapshot. This is where One Model's capabilities, based on years of investment, are able to deliver speed, accuracy, and efficiency for Workday customers. Typically, One Model pulls more than 1,000 objects from Workday and blends in select RaaS reports when needed, mostly for custom objects.

One Model's approach is to flatten out the data when abstracted, normalizing the data without losing granularity and attributes, and establishing effective-dating to all transactions, as well as the correct time regarding hierarchies. This data asset is set up for maximum current analytics value and purpose-built for integration of other data, which further increases the analytics value.

## The One Model Workday API Connector

One Model has developed its own Workday connector that accesses the Workday APIs. The connector retrieves and reformats the Workday data to fit a logical model that maps it into metrics, dimensions, and effective-dated data structures so it's capable of supporting analytics, visuals, and insights.

After extracting all object data, One Model systematically evaluates the data flow for each data object, identifies where additional data requests are needed to extract historical data at a different time context (sometimes using supplemental RaaS reports), and then merges these records, collapses them and applies effective-dating to each one.

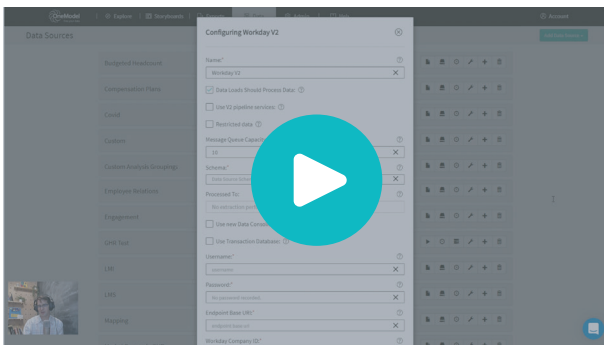
Once these steps are completed, each object has an effective-dated historical extract sourced from the Workday API. This extract is considered the raw input source into the One Model system. This raw data is highly normalized and enormous in its scope, as most customers have 300+ tables extracted.

## Direct Extraction

Direct extraction utilizes Workday API “Get” operations, configures multiple schedules, makes concurrent requests, uses batching and maintenance window retry logic to enable extraction of large data volumes, and uses transaction log-based logic to retrieve historic attribute changes.

## RaaS or Custom Reports

RaaS uses customer-driven Workday custom reports to extract via web service, extracts multiple reports on the same schedule, configures multiple schedules, and uses XML parsing to enable unpacking of complex report structures.



Click the image to view a short video on this step, or view the video at [www.onemodel.co/wd-whitepaper-video2](http://www.onemodel.co/wd-whitepaper-video2)

# One Model Workday Extraction Process

## Task 1: Earliest Effective Transactions

One Model starts by extracting the transaction data that has changed since the last extraction, which for a full-load extraction is from 0001-01-01, and then parses and loads each new transaction into an application database so it can be used to generate the data slices.

## Task 2: Generate Database Slices

Using the transactional data, One Model queries the earliest effective date for an object that has changed since the last data extraction. Currently, One Model is using this process to extract history for Workers and Organizations.

## Task 3: Generate Worker Slices

Using the earliest effective date identified in the Generate Database Slices task, One Model identifies the first date to extract data from for that worker and pulls out all the effective dates that occur on or after the earliest effective date to define the slices of time needed to be extracted.



## Task 4: Worker Data

One Model uses the effective date slices that are identified for each worker to extract an effective dated record from the Get\_Workers endpoint for each Worker and Effective Date combination.

## Task 5: Organization Data

One Model uses the effective date slices identified for each organization to extract an effective dated record from the Get\_Organizations endpoint for each Organization and Effective Date combination.

## Task 6: Data Consolidation Tasks

Most of the Data tasks above are run in batches so One Model can improve scalability and stability. One Model then adds Data Consolidation tasks to combine the data from these earlier tasks and produce tables to be loaded into the data warehouse.

## Task 7: Data Load Process

For a full load, One Model loads the data into a new table. Once One Model has confirmed that the data has loaded, the existing table is dropped and the table the data has been loaded into is renamed.

For an incremental load, One Model loads the new data into a temporary table. From there, it uses the incremental key columns — which for the root worker table would be the Worker's WID and the Effective Date — and drops the data from the existing Worker table where the Worker's WID matches and the Effective Date is after the earliest effective date from the temporary table for that Worker's WID. This process is the same for all of the tables, depending on what the specific keys are for those tables.

## Conclusion:

# One Model Delivers People Analytics from Workday

With One Model, you can deliver people analytics from your Workday data and provide your organization with reports and storyboards efficiently at scale, and unlock the value of actionable insights and predictive modeling.

One Model's approach to creating an analytics-ready data asset from your Workday system enables you to integrate future HR and non-HR datasets into a single analytical model, freeing your data from the challenging structures within Workday. From there, you can proceed to deliver the valuable storyboards, analytics, and predictive models that will drive better talent decision-making in your organization.

Within One Model, the embedded metrics and storyboards are configurable to your team's needs, and the advanced role-based security and auditing facilitate a trusted data-driven culture. The One AI automated machine learning predictive model builder empowers your company to develop workforce predictions that are statistically valid and explainable, supercharging your analysts and freeing up your data science resources to experiment and innovate while model runs are automatically refreshing.

If you have Workday and are evaluating "buy or build" options to support your current and future analytics needs, One Model's flexible and transparent solution is the only one that delivers the full analytics potential of your Workday data.

**Learn how to accelerate your people analytics journey with One Model.**

