

# How Data Conversion plays a vital role in HR/Payroll Transformation Project Success

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## Abstract

**This article focusses on providing information on the key concepts and efficient method of performing data conversion from an existing system to new ERP systems in HR Transformation. This article references a real HR Transformation project wherein the data conversion was performed between the in-house PeopleSoft System to Workday HCM and Payroll System and the key decisions/steps involved in this successful implementation.**

**Keywords:** ERP, Workday, Workday HCM, Workday Payroll, In-House, PeopleSoft, SQR Program, Application Engine, People Tools, iLoad, Enterprise Interface Builder(EIB), Workday Studio

## 1. Introduction –HR/Payroll Transformation & Data Conversion

All Organizations with some exceptions are using some software application whether it is in-house built or outsourced to maintain their Employee's Personal, Employment, Compensation Information. Also, these organizations also have payroll solutions to process, maintain and pay the employees. These organizations are spending more money towards the infrastructure and maintenance of these systems and the emergence of SaaS ERP products shifted the view point of organization leaders to switch to these products available in markets. This move is not only saving cost in terms of infrastructure and maintenance of software but also providing valuable latest technology, compliance, and analytics. When organizations decide to make the transformation, especially the HR and Payroll systems, the main challenge these organizations need to deal with is the data conversion from the existing system to new system. The main success of the transformation project depends on the success rate of data conversion. The higher the accuracy of data conversion provides the best experience in the new system. Incorrect data conversion will not only lead to incorrect data in the new system but also results in incorrect payroll calculation but also provide negative experience to employees. So, Data Conversion plays a vital role for any transformation projects, especially in HR/Payroll transformation projects.

## 2. Data Conversion

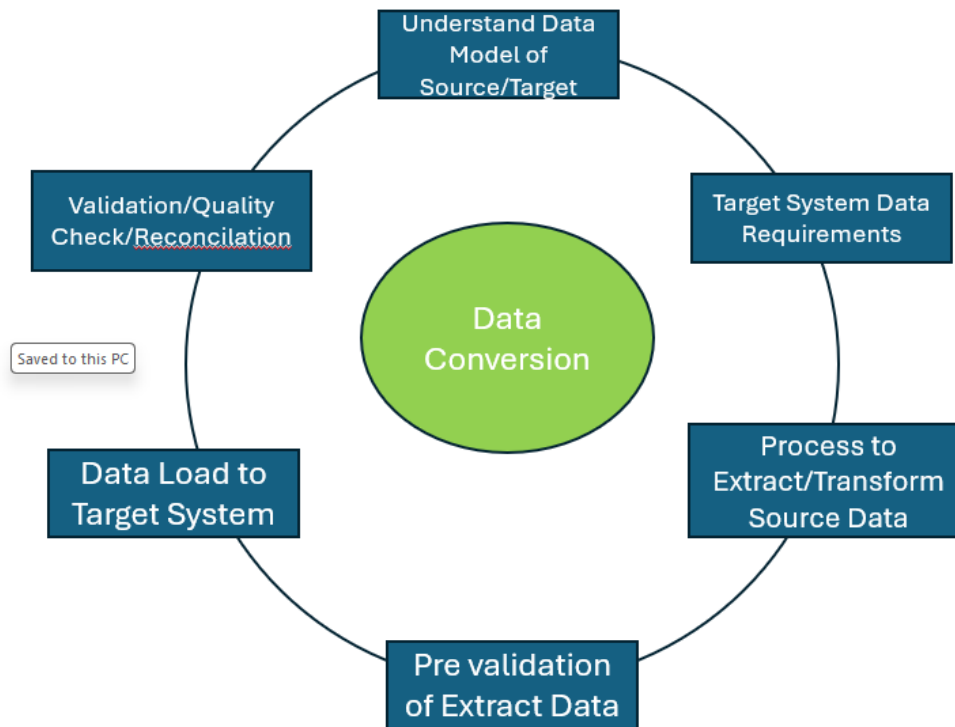
Data conversion is a process which transforms the data from one format to another format wherein it is compatible with the target system's data objects or storage. Based on the scope of the project, the data conversion needs to be designed effectively to have accurate and timely data movement. As these data conversions may be iterative, it is best to have a process or integration to process this transformation so that it can be used any number of times and for different environments for the same target source.

## 3. Common steps of Data Conversion

The basic steps of data conversion are below.

- Understand the source system Data model & target system data model.
- Understand the data requirements of the target system.

- Process of extracting and transforming the data from source as per target system requirements
- Verification and validation of the transformed data
- Load/Process the transformed data into target system.
- Validation and Quality Check
- Data Reconciliation process to validate the data between the source and target.



**Figure 1: Data Conversion Process Steps**

#### **4. Understanding PeopleSoft HCM and Workday HCM**

##### **PeopleSoft HCM**

PeopleSoft Human Capital Management is a comprehensive human resource management system used to manage Employee Information, Compensation information, Benefits Information, payroll etc. It is an ERP suite that organization can use to maintain the entire workforce lifecycle.

##### **WORKDAY ERP**

Workday is a powerful cloud-based ERP platform (SaaS solution) that helps organizations to have a centralized platform for managing all the company's business functions. Workday has various products like Human Capital Management, Financial Management, Workday Payroll, Workforce Management, Analytics and Reporting etc., Workday ERP provides better scalability, lower costs, better data security and frequent updates on regulatory rules.

##### **Workday Human Capital Management (Workday HCM)**

Workday HCM is a flexible suite of HR Solutions designed to work together and provide various business process definitions and analytics. It is built of a flexible framework which will enable organization to organize people using multidimensional criteria. Workday HCM groups logically by function or reporting hierarchy and align with financial structures such as division, cost center etc.

#### **5. Key Decisions – Successful Data Conversion**

The success of any data conversion depends on the key decisions made before the data conversion process is initiated. Based on the business function which is chosen for data conversion, all the

stakeholders of the current system and the target system need to have brainstorming session and finalize the data points which are necessary and need to be converted. Also, another main decision is the amount of data to be converted. Large volume of data conversion leads to more processing time, errors, and takes more time to validate. Some of the key decisions to be made while doing data conversion between PeopleSoft and Workday are provided below:

- How many companies need to be set up?
- How many years of employee data needs to be converted?
- Whether Terminated Employees data needs to be converted?
- If an employee is performing multiple jobs whether terminated jobs to be converted?
- Whether historical compensation needed?
- Whether historical payslip information is needed?
- Whether Payroll can Go Live at the start of the quarter to avoid mid quarter balance conversion?
- Whether Historical Payroll Calculation is needed in Workday?

#### 6. Key Data Objects Required by Workday for HCM/Payroll

Every system requires some basic and key information to perform the functions of the system effectively. Similarly Workday HCM/Payroll requires some basic and key data objects to be configured and have data loaded to process their HR and Payroll Functions. Some of the basic and key data objects required by Workday HCM/Payroll are provided below.

- Company Setup
- Supervisory Organization
- Employee Personal Information
- Employee Worker Information
- Employee Compensation Information
- Earnings and Deduction Configuration
- Employee Benefits Information (Optional)
- Employee Tax Information (Optional)
- Employee Payment Information (Optional)

#### 7. Tools used to extract/transform Data from PeopleSoft

Peoplesoft has diverse options to build custom applications and reports. Application Engine and SQL program are the best tools we can use to extract and transform the data.

**Application Engine program** is a set of SQL statements, PeopleCode and control actions which are used to loop and conditional logic. This application engine can be used to perform row-by-row processing, but the most efficient feature for the Application Engine program is for set-based processing.

**SQR Program** is a powerful reporting system that provides direct access to data sources of PeopleSoft. This program is used to create straight complex reports. This is a specialized programming language for accessing, extracting, and transforming the data as required. Using SQR Program, we can build complex programs that can perform multiple calls, conditional looping, arrays etc., and output the data in the user required format.

#### 8. Tools used to Load Data Into Workday HCM/Payroll

Workday used objects model and clients will not have direct access to their data model to load any data. We should use the appropriate web services for each of the data models to load the data. Workday has multiple solutions to load into the Workday system using Enterprise Interface Builder, Studio Integration and iLoad.

Workday mostly uses **iLoad** to load the data into Workday during data conversion as it can manage large volume of data. iLoad is available only for Implementers role wherein they can configure the tool and load the data. iLoad uses the xml pattern of file load.

**Workday Enterprise Interface Builder (EIB)** tool is an easy-to-use graphical guided interface to extract the data from Workday or load the data into Workday. Inbound EIB's are the ones we can use to load the data into Workday. This Inbound EIB will provide you with a spreadsheet template for each of the business objects which in turn will invoke the webservice to load the data. The excel template needs to be filled with data to load. This model can be used to load the data but may take more process time for bulk data load.

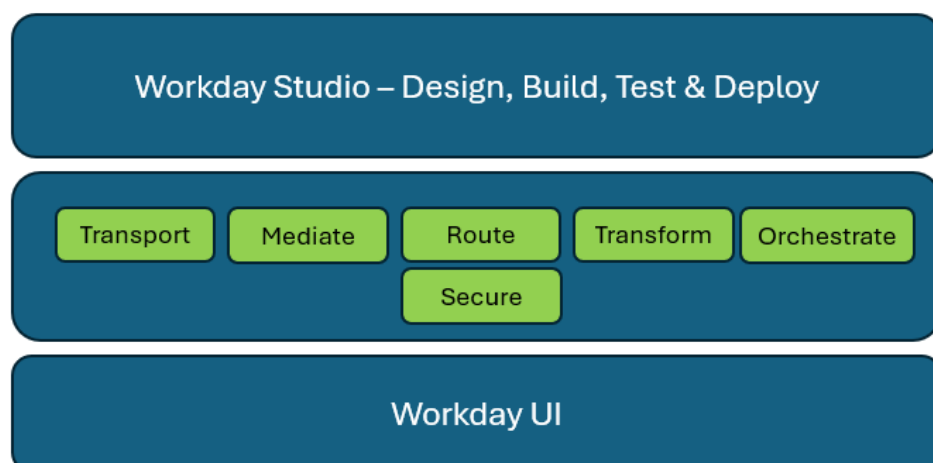


**Figure 2: EIB Data Flow**

Payroll Off cycle Payment - v27.0							
Area	All			Payroll Off cycle Payment Data (All)			
Restrictions	Required	Optional	Optional	Required	Required	Required	Required
Format	Text	Payment_ID	Text	Text	Employee_ID	YYYY-MM-DD	YYYY-MM-DD
Fields	Spreadsheet Key*	Payroll Off-cycle Pa	Batch ID	Payment ID*	Employee*	Payment Date*	Period Date*

**Figure 3: Sample EIB Spreadsheet**

**Workday Studio** is a powerful development tool enabling customers and partners to build sophisticated integrations to and from Workday. These integrations are deployed and run on your behalf on integration servers in Workday's data center.



**Figure 4: Workday Studio Process Flow**

## 9. Sample Key Data Model

Some of the key data model objects which are required for data conversion between PeopleSoft and Workday are provided below.

PeopleSoft Object	Workday Object
Company	Organization
Manager Information	Supervisory Org
Personal Information	Employee Personal Information
Job	All Effective Positions
Compensation	Compensation
Direct Deposit	Payment Elections
Federal Tax Data	Tax Elections
State Tax Data	Tax Elections
Local Tax Data	Tax Elections
Garnishment	Withholding Order

## 10. Architecture Followed for Data Conversion

**Data Mapping:** Created separate data mapping table in PeopleSoft for each data conversion object to hold the PeopleSoft Setup values and the equivalent Setup values of Workday. We can get the Workday setup code values from the Workday Implementers.

Example: PeopleSoft store US State California as CA whereas Workday store it as a State Numeric Code.

**Separate Data Conversion Program:** Build separate Data Conversion program in PeopleSoft for each data conversion object using any of the tools based on the developer's choice and transform the data and generate the output based on the Workday Data object requirement.

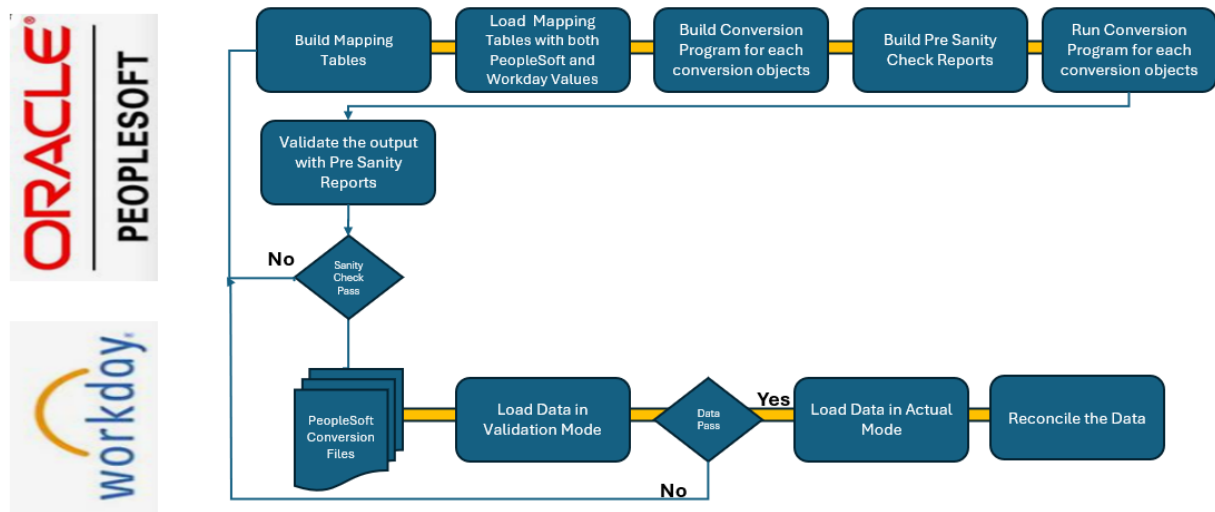
**Pre Data Sanity Check:** Validate the data generated by the conversion program by comparing the data output with the PeopleSoft Report

**Data Load Process in Validation Mode:** Process the data conversion output file in Workday using any of the load tools in validation mode. Validation mode in Workday is a process which will load the data into Workday without saving but generate errors if applicable.

**Data Load Process in Actual Mode:** Based on the outcome of the validation mode data load, process the data conversion output file in Workday using any of the load tools in actual mode.

**Validate Errors:** Validate the errors from the Workday data load and fix the errors if applicable.

**Reconciliation:** Extract the data from Workday after the data load using the Workday reports and reconcile the data between the PeopleSoft Output and Workday Output



**Figure 5: Architecture of Data Conversion Performed**

## 11. Parallel Payroll

When the HR Transformation projects include payroll transformation then parallel payroll is the best way to validate the data conversion as well as the payroll configuration in the new system.

Parallel payroll is nothing but processing the payroll in the new system with the converted data and the new configuration and comparing the results with the old system and analyzing the discrepancies. Before the parallel payroll, the following decisions need to be made and finalized.

- How many payroll periods are expected to perform the parallel payroll?
- What are all the payroll periods?
- Discuss and finalize the threshold of variance to be considered as normal as different systems pay calculation in different methods and rounding methods may cause variances.
- Methods to be followed to perform the Comparism between the current system and new system payroll values.
- Go Live decision on Parallel Payroll

To perform Parallel payroll the cutover data for each payroll period from the current system which is identified for parallel payroll needs to be saved and loaded into the new system to achieve the best and accurate results. Even a small missing input data will cause a big variance in the payroll results.

## Conclusion

HR Transformation Projects of moving from one system to another new system is exciting but without the proper or accurate data conversion the project success is challenging and questionable. Improper data or incorrect data will not only make the new system to behave differently but also sometimes make employees not satisfied. In some instances, incorrect compensation information, taxes information and incorrect bank account information conversion will lead to legal issues. So proper planning and architect of data conversion is very vital. Automation of data extraction and transformation by the method of programming tools is better than manual extraction as the iteration of extraction of data during project will be multiple times and this automation method not only saves time but also fix manual errors. Validating the data using the pre sanity data check using reports and the option of loading the data in validation mode instead of actual mode to identify the errors will serve better data conversion success rate. Reconciliation of data after loading the reports from the system using data Comparism tool will also improve the data conversion success rate. In

addition, the concept of parallel payroll is the best way for payroll customers not only to validate the data conversion but also the payroll configuration of the new system as it provides the payroll results from the new system.

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