



# Enterprise Data-to-Revenue

State of California  
Franchise Tax Board

**NASCIO State IT Recognition Awards 2018**

**Category: Emerging & Innovative Technologies**

**Project Initiation and completion dates:  
July 2011 – December 2016**

**Contact Name: Kem Musgrove**  
CIO | Technology Services Division  
**Phone: (916) 845-3452**  
**Email: [kem.musgrove@ftb.ca.gov](mailto:kem.musgrove@ftb.ca.gov)**

## Executive Summary

The Franchise Tax Board (FTB) administers the California Personal Income Tax and the Bank and Corporation tax law. Annually, FTB processes more than 18 million Personal Income Tax (PIT) returns and one million Business Entity (BE) returns, responds to more than three million phone calls, and collects nearly \$90 billion. Taxes collected by FTB represent about 75% of California's general fund revenue and directly affect each Californian by providing funds for infrastructure improvements, public safety, health insurance for children, mental health services, environmental protection, and education.

Since 2011, FTB has worked to modernize its tax systems through the Enterprise Data-to-Revenue (EDR) project. EDR was the largest technology project ever implemented by FTB. EDR included 10 major releases over a 5 year period. The state-of-the-art technologies and reengineered business processes impacted over 4,000 staff with the potential to impact every taxpayer. EDR focused on capturing more data, using this data for enhanced return and fraud analysis, sharing the enhanced data across multiple business areas, and connecting disparate IT systems. Using a phased implementation approach that streamlined processes, increased revenue, and decreased costs, the EDR project has successfully addressed some of the FTB's most pressing business problems including:

- **Business processes:** Workload forecasting and business process improvements were difficult to implement due to manual, inflexible business processes and limited data capture. Now, tax returns and correspondence take less overall time to process, business changes take a shorter time to implement, and more data is captured upfront to support downstream business processes.
- **Data availability:** Data was maintained in separate systems or on paper and impacted FTB staff ability to serve taxpayers and work efficiently. Now, a taxpayer folder consolidates data from multiple systems in a single view and eliminates the need to track and manage paper documents.
- **Data analysis:** Our noncompliance discovery and fraud detection capabilities were hampered by the lack of analytical tools. Now, state-of-the-art enterprise modeling tools have improved discovery of noncompliant taxpayers and the detection, tracking and prevention of fraudulently filed tax returns.
- **Filing self-services:** Taxpayer self-service was severely limited due to outdated technology. Now, the new MyFTB website provides improved self service capabilities for taxpayers and their representatives. Taxpayers who received notices and viewed them on MyFTB were more likely to make payments than taxpayers who did not use MyFTB.

### Project Revenue

*The EDR project generated over \$2.2 billion in new revenue during the first 5 years of its lifespan! Additionally, EDR revenue increases have exceeded targets, realizing \$2.8 billion as of October 2016.*

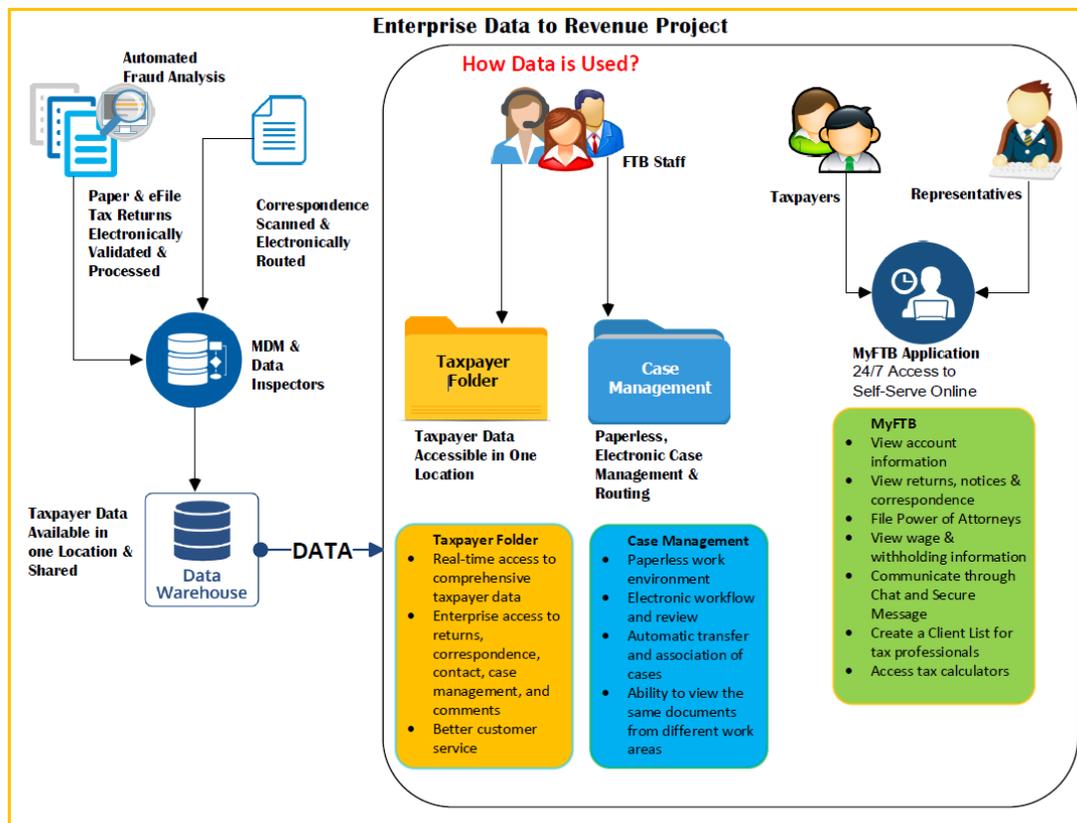
## Concept

EDR is a continuous digitization project that replaces manual paper processes and uses leading data and analytical techniques to enable FTB to administer the tax system more effectively. It provides a common view of information to improve transparency and citizen service.

Starting with the core FTB business process of receiving over 18 million PIT tax returns annually and managing taxpayer accounts, EDR captures more data and makes it available to fraud models and other analytics. Captured data as well as data from other FTB systems are stored in a common repository to present a single view of data to FTB staff as well as taxpayers and their representatives. Data management applications provide a single source of taxpayer data to leverage across all business processes. Case management applications provide automated workflow and in combination with the single view of data in the taxpayer folder provide a more efficient, paperless work environment. In short, the EDR solution represents the following four concepts:

- Concept 1: Reengineered Business Processes Improve Staff Efficiency and Speed-up Taxpayer Refunds
- Concept 2: Enhanced Data Availability Allows Staff to Serve Taxpayers More Efficiently
- Concept 3: Improved Data Modeling and Analytics Increases Revenue
- Concept 4: Enhanced Online Services Enrich the Taxpayer Experience

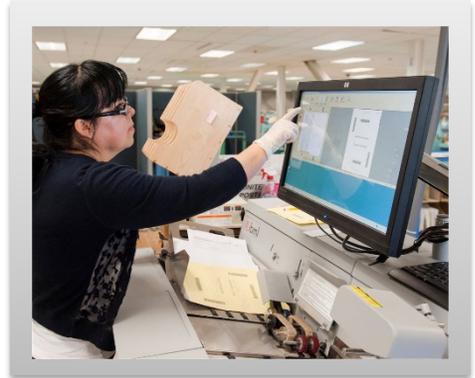
These four concepts are a prime example of how government agencies like FTB are implementing technology to optimize business processes and modernize their IT environments.



## Significance

### Reengineered Business Processes Improve Staff Efficiency and Speed-up Taxpayer Refunds

The EDR Case Management (CM) application makes the processing of correspondence and PIT and BE returns and payments more agile, faster, and efficient. CM electronically routes, assigns, and processes work for returns, payments and correspondence. CM expands the use of Master Data Management (MDM) and probabilistic taxpayer matching to improve return processing timeframes and overall data quality. Additionally, high-speed digital scanners and data capture software eliminates paper, speeds up processing, and allows correspondence and return images and data to be shared more quickly throughout the enterprise.



### Enhanced Data Availability Allows Staff to Serve Taxpayers More Efficiently

The MDM application provides FTB with a single source of taxpayer demographic data. Being able to confidently identify taxpayers protects taxpayer privacy by reducing the risk of inadvertent disclosure of taxpayer information. The Taxpayer Folder (TPF), an enterprise application with both PIT and BE taxpayer information brings together information from EDR and the five legacy FTB systems to create a single view of taxpayer information.



### Improved Data Modeling and Analytics Increases Revenue

By using Information Technology (IT) Best Practices, EDR implemented a new Enterprise Data Warehouse (EDW) with centralized data processing, matching and delivery services, enterprise business intelligence and data mining tools to improve the efficiency and effectiveness of data management and analysis. All required third party and return data is available enterprise-wide for Fraud Detection, Filing Enforcement, Audit and Collections. New, highly intelligent predictive modeling tools take advantage of a broader range of data to analyze taxpayer behavior.



### Enhanced Online Services Enrich the Taxpayer Experience

MyFTB is an externally facing, online application for taxpayers and representatives. In January 2016 FTB launched the enhanced MyFTB which included a redesigned look and feel, easier intuitive navigation with expanded features and a self-service option. In 2016, the application logged over 2 million visits.



<https://www.ftb.ca.gov/online/myacct/index.asp>

## Impacts

### Reengineered Business Processes Improve Staff Efficiency and Speed-up Taxpayer Refunds

Scanning and data capture technology improvements along with CM and MDM applications provide the foundation for reengineered business processes resulting in:

- Expanded return validation automatically corrects more taxpayer return errors. Over 2.4 million returns representing 46 percent of returns that would have been manually worked were automatically corrected.
- Better matching with 3<sup>rd</sup> party data such as W2s.
- Increased fraud detection models are initiated before refunds are generated.
- New digital scanner technology to scan, capture data, create images and perfect data as well as make data available for collections, fraud and audit activities.
- 2D barcode technology for paper-filed returns, allowing returns to be processed more quickly, efficiently, and accurately. Of the 3.3 million paper returns filed in 2016 by individual taxpayers, 1.4 million returns were processed using 2D barcodes.
- New technology to deposit checks electronically instead of sending paper to banks.
- New work is prioritized and has decreased the time for the taxpayer to receive their refund. With prioritized return fallout, FTB issued \$10.2 million in refunds on time for the 2016 filing season.
- Automated review of backlog inventory validates and posts returns to the accounting system without manual intervention when conditions change. This resulted in savings of 23,400 hours of processing time in 2016.



- Paperless workflow process - paper returns and correspondence are no longer manually processed and routed across the organization.
- Electronic workflow and review across business areas using automated routing rules and processes.
- Staff have access to the same information and work can be reassigned electronically without having to move paper from desk to desk.
- Automatic workload escalation is based upon established priorities and urgencies.
- FTB Supervisors have access to real-time inventory reports that facilitate managing daily workloads and reducing work backlogs.

### Enhanced Data Availability Allows Staff to Serve Taxpayers More Efficiently

Together, MDM and the TPF are the trusted sources for reliable taxpayer information used throughout the FTB. Specifically:

- Taxpayer demographic data is managed at the front-end of business processes so that searching and matching algorithms are centralized and can be refined more easily.
- MDM data is used in automated processes that locate “best” taxpayer address information and make it

#### **Paperless Work Environment**

*Serving taxpayers is made easier with online documents*

available throughout the FTB Enterprise. Address information is crucial in providing due process notices to taxpayers for collection enforcement, return auditing, and fraud.

- MDM uses probabilistic versus deterministic matching routines to better accommodate data irregularities such as character transpositions and misspellings, so less data is lost.



Return, payment and correspondence images, as well as outbound notice information is now available in a single, online location. FTB staff no longer have to manually search for paper returns or correspondence to help taxpayers or to complete work effectively. FTB staff can now access the same taxpayer information using a single login.

#### *TPF View Account Information:*

- Returns & payment images
- Notices images
- Correspondence images
- Account balances, payment and return details and history
- Wage and withholding details
- Estimated payments and credits
- Payment history
- Account summary information
- 3<sup>rd</sup> party data, such as IRS and EDD
- Power of Attorneys
- View and add Comments
- Contact and demographic information

### Improved Data Modeling and Analytics Increases Revenue

Enterprise data in combination with new modeling tools and analytics created new solutions for data modeling in the following business areas:

#### **New Fraud Revenue**

*Approximately \$130 million over 4 years*

- **Fraud** – implemented new fraud detection models and analytics during upfront return processing. An identity theft model was introduced for Refund Fraud to assist with detecting fraudulent returns earlier in the process. Configurable models can be adjusted as new fraud is detected or to allow for the quicker release of refunds when it is determined that no fraud exists.
- **Audit** – Access to new data from returns and third-party data sources coupled with advanced data matching tools results in better audit candidate selections.
- **Filing Enforcement** – leveraged new and consolidated data to identify more non-filer candidates for both PIT and BE taxpayers who have an obligation to file.
- **Collections** – New, highly intelligent predictive modeling tools take advantage of a broader range of data to analyze taxpayer behavior and identify optimum treatment strategies for each outstanding debt owed. One of these tools being, the Financial Institute Record Match file that is an automated enforcement tool used to identify additional financial accounts for collection activities.

#### **New Collection Revenue**

*Approximately \$600 million over 5 years*

## Enhanced Online Services Enrich the Taxpayer Experience

MyFTB enables taxpayers to self-serve using the same information FTB Call Center staff use to respond to taxpayer inquiries. New features available to taxpayers and representatives as a result of the EDR redesign and enhancements are:

### ***New Information Available:***

#### **More Payments**

*Taxpayers who use MyFTB are more likely to make payments*

- Tax returns, notices and correspondence
- Wage and withholding details
- Estimated payments and credits
- Payment history
- Account summary information
- Page-level Help

### ***New Communication Options:***

- **Chat** – discuss confidential tax matters with an agent.
- **Send Message** – send electronic messages and upload documents. Messages are automatically routed to business areas based upon the subject selected.

#### **Secure Access**

*24/7 access to self-serve anytime, anywhere*

### ***New Services:***

- **Skip An Installment Payment** – request to skip a payment.
- **Protest a Notice** – protest a notice online.
- **Manage Contact Information** – Manage contact information, such as update contact information and receive notifications by text or email.
- **Power of Attorney** – submit a Power of Attorney online. POA will receive electronic notifications of correspondence and notices sent to their clients.
- **Tax Calculators** – calculate future balances, Personal Income Tax lookup, Personal Income Tax Due.

### ***New Features for Representatives:***

With the enhanced MyFTB, representatives now have access to nearly all the features available to taxpayer, plus, they can now more easily manage their client's account with the additional new features added:

- **Client List** – Single login to access all clients on one page, plus add and remove clients.
- **Client Notices** – receive electronic notifications to view POA client notices.
- **Manage Power of Attorneys** – update POA forms online.