Smart Core

Case Studies - Migration

Government organisation transforms legacy data to conform with modern emissions legislation

As part of the New Zealand Governments role in administering the Emissions and Trading Scheme. They record, track, manage and report on carbon units, emissions and removals across New Zealand.

As part of making it easier to do this they embarked on a project to create a more efficient online system to support this part of their business. One of the main challenges was the change of focus to users and accounts as well as the introduction of online workflow processes over static forms.

Migration of the data from the old system had two focuses:

- Ensure accounts/users/emissions were available for trading when the new system went live
    - Emissions were accurately recorded against the correct accounts
    - Emission trading were consistent with the ITL records of NZ trading
- Ensure historical records of transactions/emission returns were available for review/reporting from within the new system as well as the new Data Warehouse.

A full restructure of organisations, accounts, roles and users was performed then the existing records transformed by merging, splitting and aggregating whilst maintaining a consistent relationship to historical records.

Challenges Transformations:

Transactions and Notifications:

There were 25 different transaction types with further 16 Notification Types in the source system which were required to be transformed through to the newly defined workflow types. This involved:

- One to one direct mapping between source type and workflow type
- Rolling up multiple source types into a single workflow
- Splitting source types to multiple workflows using additional criteria
- Rerouting into different areas such as moving transactions to different workflow models

Using **CAD4Data** techniques and utilising the **Smart** tool simple mapping tables were created which identified how each transaction and notification type related to the new workflow types. This was easily consumable by the business with the actual agreed document being used for the mappings in the migration.

During development an issue was identified that the new system restricted certain account types against workflow types e.g. Crown account could not be involved in a Domestic transfer transaction as they had been in the source system. Hence a further split of the mapping was required

- Splitting a transaction types into multiple workflow types based on range of criteria e.g. account number

As we were using **Smart** it was simply a matter of creating a new line/s in the mapping file to correctly split the transaction types into the newly identified target workflow type.

The result was the creation of 34 different mappings for Transaction type to Workflow type, 16 for Notifications and 15 for Batches

Status to Workflow (Transactions/Notifications and Emission Returns):

The History of Emission Returns and Transactions were held over a series of status changes captured against the Emission Return/Transactions each with its own dates of movement into the new status as well as who performed it. This data was considered essential to be viewable in the new system.

For each new workflow type every possible status step movement needed to be individually crafted into a workflow. There were approximately 70 different scenarios for Transactions, 23 for Notifications, and a further 16 for Emissions Returns. Each scenario needed to be individually investigated with a workflow process created based off workflow documents in consultation.

Due to the accelerated development time due to using **Smart** the migration was ahead of the application development. When the client saw how the agreed workflow creations were displayed in the application there was a realisation of a misunderstanding of exactly how each workflow step was displayed. This resulted in significant re-work in adjusting several workflow patterns and in some cases all user or dates for every Task and Task Outcome in each of the workflows scenarios. Many scenarios had upwards of 22 Tasks and Task Outcomes associated with them. This was a significant rework identified long after the analysis phase had been completed.

With **Smart** this was able to be completed within days instead of months, using filters to find the areas to correct was the work of minutes and *all* data areas to be updated were able to be identified and updated with a full update/code regeneration/deployment done within days for review and acceptance/identification of further work as further understanding around the application was obtained by the Client. This was essential in the meeting of the go-live deadline as many of these large changes were only identified in the last month of development.

General Challenges

As Migration was working concurrently with development there were many changes to the target data model including alterations model structure as well as table structure, attributes and data type.

Smart enabled easy adjustments to the migration through easy mapping to new values and generating code.