



Case study: Data Hub ensures business as usual for travel scheme

Replacing one million National Entitlement Cards in six months – and making sure they went to the right people – was always going to be a massive task. Fortunately, the Improvement Service's Data Hub was there to help.

The Challenge

On 31 December 2016, 1.3 million National Entitlement Cards (NEC) used for concessionary travel in Scotland were due to expire as the smartcard technology embedded in them became obsolete. Each affected card needed to be replaced before that, otherwise they would simply stop working. The result would be inconvenience and cost for customers, and a rise in demand for the organisations dealing with those customers affected.

Transport Scotland (which runs the scheme) and local authorities (which maintain the cardholder data) faced the challenge of maintaining business-as-usual for the popular, free bus travel scheme by making sure one million people received their replacement card in time. Transport Scotland faced some other important considerations: Minister and scheme reputation, plus staying on top of potential fraud. Making sure that new cards were sent to the right people at the right addresses was uppermost in everyone's minds.

NEC data is segmented into council areas and councils are expected to maintain their own cardholder data and keep it up-to-date. Although a cardholder's name and address is verified before a card is issued, many cardholders subsequently change address without telling their local council. With many NECs in circulation for years, councils couldn't be certain that the addresses they held on file were still correct. Automatically issuing new cards to these addresses risked cards being delivered to the wrong address or being returned. That comes with a cost: undelivered cards need to be reprinted and re-issued, and cards that fall into the wrong hands can be used fraudulently.

This meant that all cardholder records would need to be cleansed and validated before the new cards could be issued. Transport Scotland and local authorities needed a way of matching the cardholder data against all the other records that they held to determine the correct addresses for their customers.

The Solution

For Transport Scotland and its partners, the answer was Data Hub - a



About the concessionary travel scheme

What is the concessionary travel scheme?

It's a Scotland-wide free bus travel scheme for older and disabled people. It provides free travel at any time of day on local bus services and scheduled long-distance bus journeys. It was introduced on 1 April 2006.

Who's eligible?

People aged 60 or over, plus those with eligible disability entitlement.

What do you need to access the scheme?

Those eligible are issued with a National Entitlement Card (NEC).

Plus.. under the Scheme, travel discounts are also available to 16-18 year olds, or full time volunteers aged under 26 using a Young Scot NEC.

Who runs the NEC programme?

Dundee City Council is the lead council for the development of the National Entitlement Card Programme and hosts the NEC Programme Office.

data matching/cleansing service provided free of charge to Scottish councils by the Improvement Service (IS).

Part of myaccount services, Data Hub can analyse multiple data sources and produce data analysis reports for partner organisations. The aim of the service is to assist organisations in identifying the most accurate and up-to-date addresses and person records for their customers.

West Lothian Council agreed to pilot the Data Hub. It faced having to validate 56,000 addresses – comparing and cross-referencing several of its own data sets against the card management system data.

The initial data sets selected were the edited electoral roll, council tax and Customer Relationship Management (CRM) records. Data sharing processes were agreed and approved by the council.

As the pilot progressed, the process was refined. For example, additional datasets were added to improve the match rates; for example, data from SEEMiS, the schools management system, was fed in to increase the information about young people. The IS also tweaked the matching criteria to take into account local nuances which occur across varied data sets.

The pilot began in July 2015 and by October that year had delivered some impressive results including a data matching rate of over 90% of cardholders aged over 60. That allowed West Lothian Council to supply output files to the NEC Programme Office (NECPO) containing cardholder addresses that could be used with confidence to issue replacement cards. Once the council acknowledged receipt of the output file, all data was deleted from the Data Hub by the Improvement Service.

Only a small number of unmatched records were left for manual checking by the council, saving it a considerable amount of time and effort. "I don't know how we would have done it without the Data Hub and the analysis and validation it provided," said Joe Murray, Project and Systems Manager at West Lothian Council. "It's exceeded my expectations."

Number Crunching...



c£195m
Cost of the scheme to Scottish Government in 2016/17

Average benefit of concessionary travel scheme for users every year



£250



1,300,000

The number of cards that needed replacing by 31 December 2016



31
Number of councils which used the Data Hub



£20m

Estimated annual savings to the taxpayer through cutting red tape and fraud related to the scheme

Importantly, the pilot also paved the way for a roll-out of the service across Scotland to support the card replacement programme. This avoided the need for each council to develop its own matching and cleansing solution.

Impact and Results

Thirty-one of Scotland's 32 councils used Data Hub to support the card migration programme with the following results:

- 1.8 million card records were mined against 8.2 million records held by councils
- Up to 14 different data sets were used by the Data Hub during the matching process
- The matching process was repeated several times to improve match rates
- The highest match rate was 94%; the lowest was 54%.
- The average match rate was 76%

The high match rates had two benefits:

- They increased the number of replacement cards able to be issued in bulk by automated means.
- The minimised the number of records that had to be checked manually, saving councils time and effort.

In all, it took less than 3.5 months to input all the data, process it and supply the results to councils and NECPO – far less than the six months anticipated to replace the cards. “The Data Hub helped smooth a challenging task in relation to the seamless, continued operation of the concessionary travel scheme. Without the Data Hub, we would have faced a near impossible challenge,” said Gordon Hanning, Head of Smart and Integrated Ticketing at Transport Scotland.

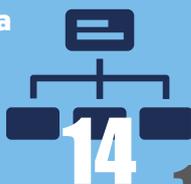
“We faced a complex undertaking,” confirmed Brenda Robb, National Entitlement Card Programme Manager, Dundee City Council, “but data hub allowed us to more effectively project manage the entire

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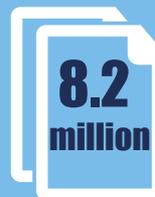
Gordon Hanning,
Head of Smart and
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Transport Scotland

Number Crunching...

Number of data sets used by Data Hub for matching and cleansing



Number of data set records against which card records were mined



Average rate of matched records across all participating councils



1.8 million

Card records mined against data sets held by councils

94%

Highest amount of matched records reached by one council

98.8%

of cardholders with disabilities hold a new card



97.6%

of over 60s cardholders now hold a new card



53%

Lowest amount of matched records reached by one council

replacement card project with the safe knowledge that every effort had been made by the local authorities to get the customer's card to the right address first time."

The exercise also had a pleasant side-effect for participating councils: it led to a significant improvement in the quality of their local data by removing duplicate records and creating a 'single view' of their customers.

Lessons Learned from the Project

All partners took away a number of lessons from the project. For example, the improved access to real-time information helped Transport Scotland better understand analytics related to customer behaviour; it also helped it improve internal business processes. The project also reinforced the potential of the Data Hub to support aspects of Transport Scotland's strategic planning.

For many local authorities, the project revealed the Data Hub's potential to form an integral component of their master data management strategy, with many planning to use it in this way.

For NECPO, the project helped reinforce the value gained from using local authority data sets that have been pre-matched and cleansed prior to bulk issuance of cards.

Next Steps

Accurate and good quality data is fundamental for efficient planning and delivery of public services. Although the Data Hub was developed initially to assist councils with the card replacement programme, the IS is focused on expanding its use and applicability.

The Data Hub is now a core part of the myaccount service and is available free of charge to councils and partner organisations.

Now designed to support regular, rather than one-off, data matching exercises, partners can use the service to keep their internal customer data up-to-date. As well as highlighting matched and unmatched records, the Data Hub formats all records to CAG (Corporate Address Gazetteer) standards and provides UPRNs (unique property reference numbers) and UCRNs (unique citizen reference numbers) for each record. These numbers can then be used to support the creation of a "single view" of the customer within the council.

The service has also been configured as a 'self-service' tool, adding even more flexibility for those who use it.

"It's pleasing to see the benefits that the Data Hub has been able to offer to the card replacement programme. Usefully, in the process, it's helped improve significantly the proposition and the appeal of the myaccount service," concluded Cameron Walker, Head of Operations (myaccount), Improvement Service.

Key benefits of the Data Hub

- Free service
- Can improve the quality and accuracy of your data
- Can provide UPRNs and UCRNs for each record
- Helps cut down on waste and saves money
- Reduces manual investigation by councils

Find out more...

For more information about the Data Hub, contact Fiona Gray at the Improvement Service:
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