

# SOUTH YORKSHIRE DIGITAL BY DEFAULT PROJECT PHASE 1

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*Bridging the “Digital Divide”*

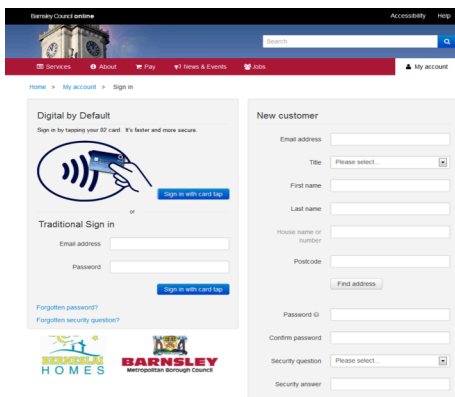
**White Paper**

**IDENTITY STEERING GROUP**

By Gary Simpson

## The Project

The South Yorkshire project was a small-scale test in the context of how we might address the “digital divide”. It helped all parties work together to address key challenges to realising IDAP goals of citizen inclusion for convenient and secure access to digital public services.



## Key Findings

- The scheme had immediate trust because there was a relationship between the Credit Union and the individuals
- It is possible for a financial regulatory agreement to be made for federated identity assurance
- There was a high level of smartphone penetration amongst this demographic
- Participants digital confidence increased as they used the token (payment card) across other services
- Trust and education was a critical factor for this demographic in relation to increased usage

# Executive Summary

This paper reports on the first phase of a project conducted in 2012 and 2013 with customers of the South Yorkshire Credit Union. The project looked at the benefits and challenges for this demographic presented by reuse of a payment authentication solution for access to digital public services through mobile and other channels.

There are an estimated 400 Credit Unions in Great Britain, serving 1 million of the population. Credit Unions are savings and loan co-operatives, where the members pool their savings to lend to one another and help to run the Credit Union. This is done in a ‘not-for-profit’ way, so the cash is only used to run the services and reward the members, making them popular with local communities and the under or un-banked.

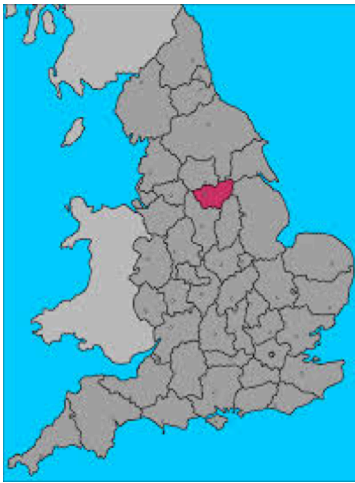
In order to gain access to funds from a Credit Union it is a requirement for an individual’s identity to be proofed to meet both regulatory requirements, such as anti-money laundering (AML), and to prevent fraud against the Credit Union. Identity proofing takes place on each occasion before the extension of credit.

Many of the Credit Union’s target market are the under or un-banked, also referred to as the “thin file” demographic, meaning they have little or no digital footprint. This means the method of proving who these individuals are is manually intensive for the Credit Union because established digital methods of identity proofing may not work. The manual paper-based identity proofing for the Credit Union costs somewhere in the region of £14 per person, per identity proofing. Typically these individuals do not regularly use or do not trust electronic methods of banking, this is in some part due to the perceived lack of control of their funds.

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## South Yorkshire, England



## Participants

1. Berneslai Homes (Housing Association)
2. O2 (Digital Wallet Provider)
3. South Yorkshire CU (Credit Union)
4. e@SY Connects (Project Manager)
5. Sheffield Uni (Research Team)
6. SecureKey (Authentication Provider)

Therefore the Credit Unions tend issue cash to the individuals, which makes the end-to-end process almost entirely manual and highly resource intensive. The individuals tend to only use cash, which for the most part precludes them from spending online.

The Government has a strategy of Digital by Default: this means all public services should be designed for digital access as the default position. This project focused on the ‘thin file’ demographic to understand the difficulties they have proving their identity digitally, and to investigate the extent to which difficulty proving identity online might prohibit their access to digital public services.

The project examined how organisations such as O2 and the Credit Union could collaborate with one another and with public service providers to address the usability and trust issues of digital identity. It aligns to the Cabinet Office’s Identity Assurance Programme (IDAP) goals of a standards-based, federated approach to citizen identity assurance, across public and private sector.

The project aimed to test the hypothesis that if Credit Union customers had a familiar authentication mechanism they would be more inclined to access services digitally, and less inclined to use telephone and face-to-face access channels.

## 1. Overview of Project

The Open Identity Exchange (OIX) is enabling public and private sector collaboration by providing the platform to complete discovery and alpha projects. These are small scale, low risk assessments, analysis or tests of interoperable components. Each project addresses specific key challenges to the creation of an environment in which people can assert their identities digitally and without concern over security or lost control of their personal data.

## User Quotes

*"I feel like a proper person"*

Tom, talking about the scheme

*"I can't get served in some shops "*

Simon, talking about the restrictions because they are digitally and financially excluded

*"I found it easier than going into the Credit Union everyday "*

Chris, talking about the digital wallet and the fact it meant he didn't have to go into Wombwell everyday

*"This has changed my life"*

Claire talking about the freedom it gave her and the fact it allowed her to present her Visa card as a proof of identity

*"Usually I can't get served in some shops"*

Tom talking about the freedom it gave him and the fact having a payment card allowed him to transact in more shops than before

This project focused principally on two areas: the barriers to adoption of 'digital' money by customers of the Credit Union and the propensity of these customers to access other digital services once they have a mechanism for authentication which is provided by digital money.

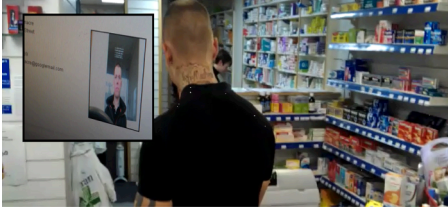
The participants in the project were used to receiving their money as cash by attending the Credit Union every week, in person. Currently, each time a member receives cash from the Credit Union they are required to provide identity documentation to prove they are the person they claim to be.

Selected Credit Union members were given an O2 Money prepaid Visa card. The usual process for application for an O2 Money card involves an identity proofing check conducted according to a process regulated by the financial services sector. Within this project the financial services regulator accepted the identity check that the Credit Union had completed previously as sufficient, thereby accepting a third party or federated identity check. This allowed the pre-paid cards to be issued to the individual members in South Yorkshire at lower cost because only one identity check was completed, then reused.

The members received their weekly payment electronically from the Credit Union directly onto the pre-paid Visa card, with no requirement for them to attend the Credit Union offices weekly and present the usual identity documentation or take funds. This resulted in a cost saving for the Credit Union.

The project ran over a 9 month period and the members usage of the card was tracked with their consent, in order to assess how their behaviour changed in comparison to before, when they used only cash.

## The Process



## User Authentication

- The user presented their pre-paid O2 money card
- The card was read with the card reader
- A photographic image of the card owner was presented on the screen of the relying party (pharmacist) system
- The relying party (pharmacist) made a comparison between the image on screen and the person asking for the prescription
- When authenticated the user was able to take their requested services (prescription)

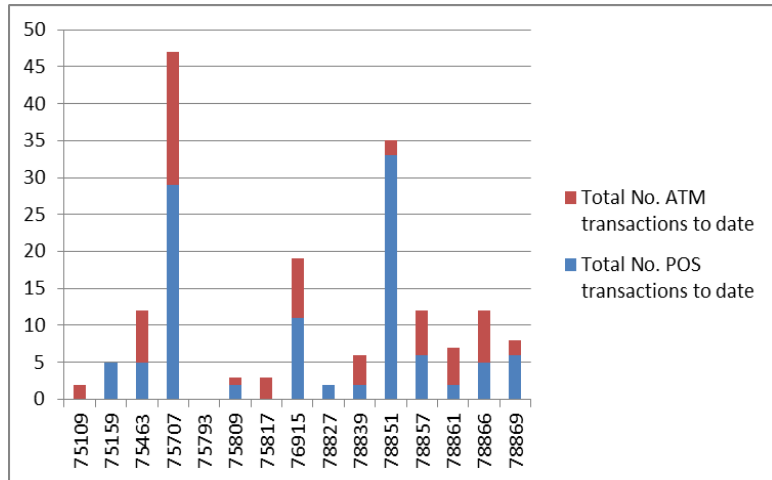


Fig. 1 Graph showing the usage of the O2 Money card per trialist during the first 3 months of the project. The wide divergence of usage led to the mentor / mentee initiative.

In month 3 it was identified that customers required some additional assistance in relation to understanding the scheme so a mentor / mentee engagement program was put in place. A few of the low usage customers were selected for this process, through which trusted members of the community advocated and educated use of the pre-paid card.

An instruction card was developed to provide a concise, portable set of instructions to help participants (Fig. 2).

With users that were being mentored these measures resulted in an increase in usage. Explanation of the new system by peers using familiar terminology proved more effective than ‘expert’ advice from the project organisers. Furthermore, peers proved better able to articulate the benefits of digital transactions in terms that resonated with Credit Union members.

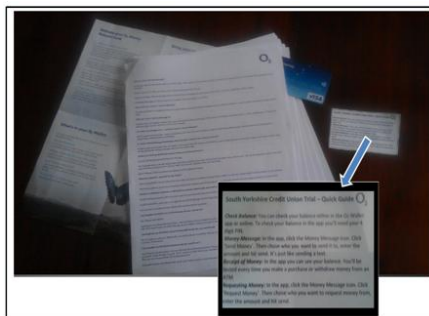


Fig. 2 Above shows the instruction card that was developed by participants for participants to provide a set of instructions to help with the process



### Themes

- Trust relationships and speed of adoption are directly linked
- Simple familiar authentication increases customer propensity to use digital services
- Regulatory requirements inhibit inclusion
- There is a rise in smartphone penetration
- Mobile and email addresses are transient in this demographic
- Training and trust are critical to adoption

### Face-to-face verification

The project investigated whether the O2 Money Card could be used as a simple visual identification mechanism in face-to-face transactions. Credit Union members must bring paper documents such as passports, driving licences, bus passes, electricity and gas bills when they attend a branch to withdraw cash. The project investigated whether the token could provide a more effective solution for face-to-face identity verification at the branch. SecureKey, a Canadian authentication solutions company, was used for this purpose. They have developed a contactless authentication solution for EMV payment cards.

SecureKey developed a simple visual recognition service, which was customisable to be enabled for facial recognition or personal data. When the members were issued an O2 Money card they had their photographs and personal details recorded in a database against an identifier for the token. An internet enabled computer was placed at the branch desk with an EMV token reader attached. When members presented their O2 Money card to the reader, the member's photograph and key personal details were presented to the Credit Union officer. This proved to be as a faster and more effective means of customer identification. Ironically, the success of the digital money solution meant that customers no longer visited Credit Union branches so the system could not be tested in practice. Instead it was deployed in a pharmacy and used to demonstrate how a pharmacist might achieve a higher level of assurance to ensure that prescription drugs are only issued to authorised parties.

The test highlighted the relative technical ease of deploying a facial recognition system at point of sale and shone a light on the benefits and data protection risks throughout the end-to-end process. Interviews with the GP surgery, pharmacist and trial participants indicated a willingness to use such a system. However, the test did not provide any substantive insight on the propensity of customers to use a digital service of this type as this study was relatively small and therefore not statistically representative.

## The Test Transactions



- Pharmacies were used within the trial
- The authentication used could be extended into other retail outlets

## 2. Project Themes

The project was small in scale qualitative project. This section sets out the themes that the project aimed to explore.

### 1. Trust relationships and speed of adoption.

The Credit Union has a strong trust relationship with its members. Many customers have been helped out of unsustainably high levels of debt at punitive interest rates. Many Credit Union customers perceive payment cards as one of the causes of previous financial difficulties. Knowing how much money you have left is more difficult with a traditional card than with cash. At the outset of the project it was considered a likely scenario that participants would soon reject the card and revert to using cash.

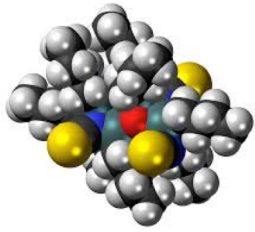
The extent to which the Credit Union's promotion of the card resulted in successful adoption was considered. The O2 Money card addresses many customer difficulties with digital payments by providing immediate SMS balance messages at the point of transaction. There was no substantive evidence that the association with the Credit Union had any affect on user behaviour or an increase in usage. Customers instead cited that the features of the product and the ease of use as the main factor they wanted to, and continued to use the payment card.

### 2. Simple, familiar authentication increases customer propensity to use digital services

A project hypothesis was that Credit Union customers would have a greater propensity to use public services if the same authentication solution could be used for both digital payments and access to digital public services. This hypothesis could not be properly tested within the small budget of the initial project and has been taken forward to the next project phase.

### 3. Regulatory requirements inhibit inclusion

Know Your Customer (KYC) and Anti-Money Laundering (AML) regulations place a burden on financial instrument providers to



## The South Yorkshire Catalyst

The following initiatives started as a result of the South Yorkshire project:

- The Cabinet Office became a member of the OIX to deploy further projects
- Warwickshire County Council started a project on user controlled identity
- A second phase of the South Yorkshire project started to further investigate this demographic and themes

conduct identity verification processes before taking on new customers. Institutions are wary of relying on the compliance checks of other regulated institutions to meet their own obligations. Customers are therefore obliged to go through similar identity verification processes for each institution that they take financial products from. The Credit Union's customers do not, typically, have digital footprints that enable identity verification to take place easily. For this project O2 Money's regulator permitted the reuse of the Credit Union's identity verification checks as part of the O2 Money regulatory compliance process. This both reduced project costs and increased customer willingness to participate.

### 4. Smart phone penetration and email

At the outset it was considered that most customers would have little or no access or experience of the internet. The penetration of smartphone was higher than anticipated, however the use of the internet on smartphones was relatively low. Mobile phones are increasingly a channel of choice for digital transactions and provide many opportunities for convenient and secure authentication. For some of the participants this was the first time they had engaged in any kind of digital activity, and many of the respondents did not have email addresses of their own.

### 5. Mobile numbers and email address are transient

This demographic use multiple mobile phone numbers and email addresses. These may change many times throughout the year. This is worth noting if email and mobile numbers are used as the primary point of contact.

### 6. Training and trust are critical to adoption

Whilst the sample was very small, the importance of clear explanation is clearly a key factor in adoption. Customers were more inclined to use the service once it had been explained by a peer in terms that resonated with their own circumstances.





## 7. Incentives may be required

Incentives were offered at the start of the project in the form of money, which was put onto the O2 Money card. This was to assist in encouraging the start of the behaviour change to use the card rather than cash from the cash point.

## 3. Next Steps

A number of initiatives have been informed and developed by the findings from the South Yorkshire project.

Mobile phones clearly have the capability to be both a channel for digital transactions and a source of data that can be used in an authentication service. The role of Mobile Network Operators (MNOs) in this capacity is now being explored by the OIX and the GSMA.

Warwickshire County Council is exploring how user-controlled identity services can improve the delivery of digital public services. A white paper on the project is available on the OIX website.

The Cabinet Office has become a member of the Open Identity Exchange and a formula has been developed for projects of this nature through OIX. Phase 2 of the South Yorkshire project has now begun and is being conducted under this formula. It will investigate the increased propensity of Credit Union customers to access multiple public services digitally with a single identity and authentication service. Looking Local, a portal for local authority services, is investigating how it might apply identity assurance across its full range of local public services. The project will also investigate the obstacles faced by these customers in registering for an identity service. A white paper on this phase will be published on the OIX website early in 2014.

# Conclusions



## GDS



This collaboration has pioneered the new, agile approach to the delivery of digital public services that is being championed by the Government Digital Service and Cabinet Office. The project was one of the first endeavours in this way of working and much has been learned about how to conduct projects of this nature.

Digital identity is a complex and evolving new subject. There is a need to explore issues collaboratively between the public and private sector to understand the features of identity services that users will require. There is rapid change in both technology and the ways in which people in every-day transactions adopt it. In such an environment any attempt to predict a single 'solution' is futile. Instead, progress will be made through the development and adoption of open standards that allow inter-operability between services.

Projects such as South Yorkshire allow organisations to understand the value of product features for their customers and for other stakeholders. Authentication is a key element of enabling trust in digital transactions. Security that prevents adoption of digital services may be a false economy. The regulatory environment is a critical enabler of innovation. Compliance officers within organisations need to be confident that regulators, in the context of a commonly understood risk model, will understand new services.

This project has shown the potential for commercial organisations to collaborate to develop digital services that serve a demographic frequently described as financially or digitally excluded. It has allowed the public and private sectors to work together for mutual benefit and understand the dynamics of an emerging and potential economically powerful identity services industry.