OPEN BANKING FOR GOOD:

MAKING A DIFFERENCE?

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ABOUT THE AUTHORS

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EXECUTIVE SUMMARY

What is Open Banking for Good?

Open Banking for Good (OB4G) was launched by Nationwide Building Society in 2018 and ran throughout 2019 into early 2020. As one of the first initiatives in the Cabinet Office-led Inclusive Economy Partnership, its aim was to help create and scale Open Banking-enabled apps and online services that would benefit the one in four UK adults who are '*financially squeezed*'. It used a Grounded Innovation approach (Holmquist, 2012) that brings together user experts (Charity Partners), solution experts (fintech Challengers) and process experts (Nationwide's OB4G team) to solve real and grounded challenges, where 'real' means evidenced challenges that exist, and 'grounded' means involving both experts that understand the challenge and users that regularly face it.

Figure: OB4G Challengers that completed the programme and their Charity Partners

Three Challenges	Five Fintech Challengers	Four Charity Partners
Income Smoothing	Trezeo	Citizens Advice
Income & Expenditure	Ducit.ai OpenWrks	Money Advice Trust
Money Management & Help	Toucan Tully	The Money Charity The Money & Mental Health Policy Institute

Why evaluate Open Banking for Good?

Nationwide commissioned the University of Bristol's Personal Finance Research Centre to evaluate the process and impact of the OB4G programme to help build a new evidence base around the potential of technology and innovation to 'move the dial' on big social issues. This knowledge sharing has become even more important in the wake of COVID-19, which brings opportunities to use a Grounded Innovation approach to 'build back better' and improve the UK's financial wellbeing. The process evaluation was published in December 2019 (Collard & Evans, 2019). This report sets out the findings from our evaluation of the impact of OB4G.

What are the key findings from the impact evaluation?

In this report, the ***Challengers' Stories*** assess the impact of OB4G from the perspective of the five Challengers that completed the programme. The OB4G programme largely met their expectations of creating time and space for innovation through collaborative learning. As a result, all five Challengers successfully developed and tested propositions that tackled real problems which were grounded in the experience of people who are '*financially squeezed'*. Other positive impacts for Challengers from OB4G were:

Deploying at scale: Following the OB4G programme, three Challengers (Ducit.ai, OpenWrks and Tully) deployed their OB4G propositions at scale through partnerships with financial services firms and energy companies.

New insights about people who are '*financially squeezed*': The consumer surveys carried out by some of the Challengers as they developed and tested their propositions shed new light on topics such as digital connection and the financial needs of gig workers.

Successful applications to other innovation programmes: Following on from OB4G, four Challengers successfully applied to other innovation programmes including the Inclusive Economy Partnership's BOOST programme (Trezeo), Accenture's Fintech Innovation Lab (Ducit.ai), London Barclays Accelerator (Touco) and Nesta's Open Up 2020 Challenge (Touco and Tully).

The second element of our impact evaluation involved *Evaluating User Impacts*. We worked with Challengers to design an evaluation framework for end beneficiaries that others can scrutinise, adapt and improve on; supported Challengers to conduct small-scale user research to test the evaluation framework and inform their product development; and explored some of the practical issues that might arise in an evaluation context. This starts to fulfil the criteria for a proportionate evaluation design identified by Harrison et al (2016) and helps demonstrate the potential for OB4G products and services – if scaled – to deliver time savings and money benefits for individuals and organisations; and improved wellbeing for significant numbers of people.

What was the impact of COVID-19 on the OB4G Challengers?
The COVID-19 pandemic took hold in the UK in March 2020, just as the OB4G programme was wrapping up. The economic and social impact of the pandemic has fallen especially heavily on OB4G's target audience – people who are already '*financially squeezed*'. While the pandemic brought home the potential value of the propositions that were developed in the OB4G programme, COVID-19 impacted the OB4G Challengers in a range of different ways:

- **Income smoothing challenge**: Trezeo brought forward the development of its sickness insurance for independent workers and gave existing members complementary cover from early March to the end of June 2020. The pandemic also meant it had to delay its next funding round and put on hold its partnership with an online employment platform.

- **Income and expenditure challenge**: Both Ducit.ai and OpenWrks saw increased demand for their Income & Expenditure propositions as the pandemic led to large-scale drops in earnings and people turned to creditors for forbearance and support. OpenWrks also created a payment relief solution that enabled lenders to offer an automated online channel for customers to apply for mortgage and consumer credit payment deferrals.

- **Money management & help challenge**: The first national lockdown in March 2020 - when 2.5 million people were advised to stay at home or 'shield' – highlighted the value of Touco's ideas for using tech to provide a safe way for individuals to give money to a helper to spend on their behalf. The pandemic also created significant challenges for Touco's planned user testing of the new version of its app. The major changes to people's spending patterns also had implications for how people interacted with Tully's *Money Coaching app,* and in particular the spending challenges they might set.

1.
INTRODUCTION

This chapter sets the scene by describing the Open Banking for Good programme and our approach to evaluating it.

1.1 WHAT IS OPEN BANKING FOR GOOD?

Open Banking for Good (OB4G) was launched by Nationwide Building Society in 2018 and ran throughout 2019. Its aim was to help create and scale Open Banking-enabled apps and online services that would benefit the one in four UK adults who are *'financially squeezed'*.

What is 'Open Banking'?

Open Banking means that bank and building society customers can securely share their transaction data – in basic terms, the information on a bank statement – with regulated third-party organisations.

These third-party organisations provide apps to help people manage their money, to borrow, to save and invest, or to get advice about their finances. Find out more about Open Banking apps here: www.openbanking.org.uk/app-store/

Who are the 'financially squeezed'?

The 'financially squeezed' are working-age consumers with significant financial commitments but relatively little provision for coping with income shocks.

They account for a quarter of the UK adult population – equivalent to 12.7 million consumers.

41% have debts higher than the equivalent of one month's income (compared to 30% of the UK overall), while they typically have savings of £580 (UK average is £1,000).

(Source: CACI, 2016)

OB4G was conceived by Joe Garner, Chief Executive of Nationwide Building Society, and Nationwide led the OB4G programme with support from Accenture (which runs the London Fintech Innovation Lab[1]), doteveryone and Nesta. In his words:

> *"We believe Open Banking presents a huge opportunity to help everybody with their money – not just the affluent or technically literate... If entrepreneurs, innovators, charities and financial services work together, we could make a huge positive impact - and that's what this is all about."* Joe Garner, Chief Executive, Nationwide Building Society[2]

OB4G was one of the first initiatives in the Inclusive Economy Partnership which in 2018 brought together businesses, civil society and government departments "*to solve some of society's toughest challenges, to help all communities and everyone within them feel they belong to and can participate in the UK economy*" (HM Government, no date).

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[1] https://www.fintechinnovationlab.com/london/
[2] https://www.nationwide.co.uk/about/media-centre-and-specialist-areas/media-centre/press-releases/archive/2018/10/15-open-banking-for-good-challenge

OB4G TIMELINE

JANUARY 2018

Open Banking comes into effect in the UK.

SPRING /SUMMER 2018

OB4G challenges co-created with Charity Partners and other stakeholders.

15 OCTOBER 2018

OB4G officially launches and invites applications for ideas to tackle its three Challenges.

23 NOVEMBER 2018

Closing date for OB4G applications - there are 50 applications from 39 organisations.

DECEMBER 2018

Seven fintechs are selected to be OB4G Challengers.

JANUARY - MAY 2019

Seven OB4G Challengers take part in 3-month Explore & Develop phase.

JUNE-DECEMBER 2019

Five OB4G Challengers continue to 6-month Accelerate & Incubate phase.

1.2   HOW DID OB4G RUN?

The OB4G programme used a Grounded Innovation approach that brought together user experts, solution experts and process experts to solve real and grounded challenges. OB4G took a Grounded Innovation approach by:

- Tackling real and grounded challenges
- Creating time and space for innovation
- Fostering collaborative learning through a process of co-creation involving fintechs, charity partners and the OB4G team (Collard et al, 2021 forthcoming).

The following sections summarise how this approach was used to frame the three OB4G Challenges before looking at the application process and OB4G in practice.

1.2.1   Framing the challenges

Nationwide's OB4G team leveraged its wide network of charities and stakeholders to understand the key problems faced by people who are *'financially squeezed'*. These relationships included the programme's four Charity Partners (Citizens Advice, the Money Advice Trust, The Money Charity and the Money and Mental Health Policy Institute) as well as charities locally where Nationwide staff worked as volunteers; Nationwide's corporate charity partners; and professional links with money and debt charities that had been built over several years as part of Nationwide's money advice liaison function. Other stakeholders included statutory organisations, research bodies and academics.

Once these key problems were collated it was clear that there was a long list of significant challenges that the financially squeezed faced daily. However, once the lens of Open Banking was applied to this list, three issues emerged that were felt to be the most suitable for innovation:

Income Smoothing to help the growing number of people with unpredictable or irregular income manage their regular outgoings.

Income & Expenditure to simplify and improve the accuracy of the I&E profile that someone must complete when they seek debt help; and that could be used to help them work towards their goals, based on a better understanding of their finances.

Money Management & Help to help people practice and maintain better money habits through richer, personalised services so they become more financially confident and capable.

1.2.2 The application process

In a competitive process, Nationwide invited applications for ideas that used Open Banking to help people who are '*financially squeezed*' with one of these three challenges. In total, there were 50 applications from 39 organisations. There were no restrictions on the types of organisations that could apply, but most were fintechs. The judging panel comprised Nationwide's OB4G team, its four Charity Partners, and representatives from the Inclusive Economy Partnership. Seven applicants (all fintechs) were successful and became the OB4G Challenger cohort.

1.2.3 OB4G in practice

The seven OB4G Challengers were assigned a Charity Partner and received funding and support from Nationwide to collaboratively co-design, test and potentially scale their ideas and prototypes. They were allocated to one of three OB4G pathways (Figure 1.1):

- **Explore & Develop pathway**: to have the space to explore and deepen the challenge with the user experts, and to test very early ideas or develop and test existing well-formed concepts. Originally conceived as two separate pathways, they were combined following the selection process. Six Challengers were initially allocated to this pathway; two of them (Flow Financial and Squad) did not progress beyond this stage in the programme.
- **Accelerate pathway**: to develop and test proven viable concepts. One larger and more commercially established Challenger - OpenWrks - was assigned to the Accelerate path at the start of the OB4G programme. The four Challengers who completed Explore & Develop also went on to join the Accelerate pathway.
- **Invest pathway**: to scale and deploy products. None of the successful Challengers was felt by Nationwide's OG4G team to have a product that was sufficiently built or tested to be allocated to this pathway at the start of the OB4G programme.

Figure 1.1 OB4G application paths
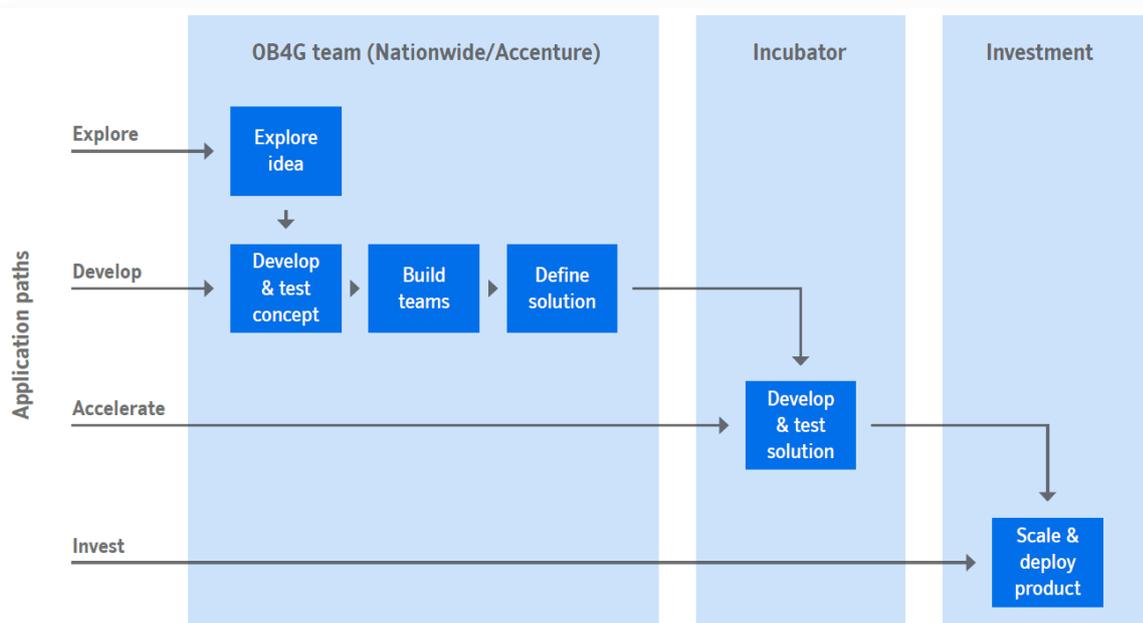
Five Challengers went on to complete the full OB4G programme (Figure 1.2); the other two withdrew after the Explore & Develop phase.

Figure 1.2 The five Challengers that completed OB4G and their propositions

Challenges	Fintech Challengers	Propositions
Income Smoothing	**Trezeo**	Turns variable self-employed income into a regular pay cheque
Income & Expenditure	**Ducit.ai**	Uses AI to improve the categorisation of Open Banking data
	OpenWrks	Creates accurate I&E statements online in minutes
Money Management & Help	**Touco**	Sends alerts to a trusted ally when the user has money issues
	Tully	Offers users personalised, data-led Money Coaching

1.3   CAPTURING THE IMPACTS OF OB4G

OB4G is an opportunity to help build a new evidence base around the potential of technology and innovation to 'move the dial' on big social issues, where currently there is a lot of interest and activity but little in the way of independent evaluation or published information. This knowledge sharing has become even more important in the wake of COVID-19, which brings opportunities to use a grounded innovation approach to 'build back better' and improve the UK's financial wellbeing.

Early in the programme's inception, Nationwide commissioned the University of Bristol's Personal Finance Research Centre (PFRC) to conduct an independent evaluation of OB4G. The evaluation had two phases: a process evaluation (the findings of which were published in 2019) and an impact evaluation which is the focus of this report.

1.3.1   Phase 1: Process evaluation

The process evaluation used qualitative research methods to capture learning about the design and implementation of OB4G. We carried out the process evaluation between January and July 2019 and published the report in December 2019 (Collard and Evans, 2019). It highlighted how funding can be designed to create time and space for innovation; the importance of properly resourcing the input of user experts (in the case of OB4G the four Charity Partners); and the crucial role of Nationwide's OB4G team as facilitators, translators and navigators where the other expert partners (i.e. fintech Challengers and Charity Partners) had very different organisational remits and ways of working.

The interview data showed that OB4G delivered positive impacts for participants. For Challengers, the benefits included a much deeper understanding of the challenges and target audience; funding to work on new socially useful ideas and prototypes; and brand association with a major building society. For Charity Partners, the positives included getting a close-up view of fintech design and development that meant they could have better-quality conversations with the sector; and being more informed about the potential uses and pitfalls of Open Banking for their organisations and service users.

1.3.2   Phase 2: Impact evaluation

Our impact evaluation has two elements. Firstly, in Chapter 2 - **Challengers' Stories** - we assess the impact of OB4G from the perspective of the five Challengers that completed the programme, focusing on their progress across the OB4G pathway to which they were allocated. We see that the OB4G programme largely met their expectations of creating time and space for innovation through collaborative learning. As a result, all five Challengers successfully developed and tested propositions that tackled real problems which were grounded in the experience of people who are '*financially squeezed'.*

As noted above, none of the Challengers was at the stage of scaling or deploying their propositions commercially at the time of the OB4G programme (although some subsequently did so, as we discuss below). This meant that we had limited scope to assess the impact of their products and services on end beneficiaries. We did, however, work with Challengers to design an evaluation framework for end beneficiaries and supported them to

conduct small-scale user research to test how they could measure the financial and social impacts of their products and services. We discuss this second element of the impact evaluation in Chapter 3 – ***Evaluating User Impacts*** – along with some of the practical issues related to measuring the impact of innovative products and services for end beneficiaries. The data we draw on for Chapters 2 and 3 comprises:

- Qualitative interviews and discussions with the OB4G Challengers
- Qualitative interviews and discussions with the Nationwide OB4G team
- User research conducted by the Challengers, some of which was designed in collaboration with the University of Bristol evaluation team.

2.

CHALLENGERS' STORIES

This chapter assesses the impact of OB4G from the perspective of the five Challengers that completed the programme.

The Challengers' stories demonstrate that the OB4G programme largely met their expectations of creating time and space for innovation through collaborative learning. As a result, all five Challengers successfully developed and tested propositions that tackled real problems which were grounded in the experience of people who are *'financially squeezed'*. This is in marked contrast with the more commonly considered approach of using innovation as a way of encouraging blue-sky thinking to 'invent the future'.

Other positive impacts for Challengers from OB4G were:

Deploying at scale: Following the OB4G programme, three Challengers (Ducit.ai, OpenWrks and Tully) deployed their OB4G propositions at scale through partnerships with financial services firms and energy companies.

New insights about people who are *'financially squeezed'*: The consumer surveys carried out by some of the Challengers as they developed and tested their propositions shed new light on topics such as digital connection and the financial needs of gig workers.

Successful applications to other innovation programmes: Following on from OB4G, four Challengers successfully applied to other innovation programmes including the Inclusive Economy Partnership's BOOST programme (Trezeo), Accenture's Fintech Innovation Lab (Ducit.ai), London Barclays Accelerator (Touco) and Nesta's Open Up 2020 Challenge (Touco and Tully).

2.1 THE IMPACT OF COVID-19

The COVID-19 pandemic took hold in the UK in March 2020, just as the OB4G programme was wrapping up. The economic and social impact of the pandemic has fallen especially heavily on OB4G's target audience – people who are already 'financially squeezed' (see for example Benzeval et al, 2020; Crawford and Karjalainen, 2020; Kempson et al, 2020).

What has been the impact of COVID-19 on UK fintech? Research published in July 2020, based on a sample of 100 fintech start-ups in the UK, found that (compared with 2019) most were still struggling to achieve profitability and many needed financing to fill funding gaps (KPMG/Google Cloud, 2020). Smaller fintech companies with 25 or fewer employees were most at risk from the impact of COVID-19; and over three-quarters of small fintech start-ups had turned to government schemes for funding support (Innovate Finance, 2020).

At the same time, total venture capital investment in the UK fintech sector declined from USD 1.74 billion in Q1 2019 to USD 1.1 billion in Q1 2020, with a slowdown in deal activity between April and June 2020. Where investment did occur, it tended to be in business-to-business fintechs such as RegTech, core banking software, data analytics and digital identity (EY, 2020) which saw an increase in demand since the pandemic; as did specialists in

artificial intelligence and automation (Aston, 2020). In contrast, a common negative impact was the loss of a key customer group, for example where fintechs sold to businesses that had to close in the pandemic, such as retail stores or travel companies (Aston, 2020).

While the pandemic brought home the potential value of the propositions that were developed in the OB4G programme, COVID-19 impacted the OB4G Challengers in a range of different ways. For example:

- **Income smoothing**: Trezeo brought forward the development of its sickness insurance for independent workers and gave existing members complementary cover from early March to the end of June 2020. However, the pandemic also meant it had to delay its next funding round and put on hold its planned partnership with an online employment platform.
- **Income and expenditure**: Both Ducit.ai and OpenWrks saw increased demand for their Income & Expenditure propositions as the pandemic lead to large-scale drops in earnings and people turned to creditors for forbearance and support. OpenWrks also created a payment relief solution that enabled financial services firms to offer an automated online channel for customers to apply for mortgage and consumer credit payment deferrals.
- **Money management & help**: The first national lockdown in March 2020 – when 2.5 million people were advised to stay at home or 'shield' – highlighted the value of Touco's ideas for using tech to provide a safe way for individuals to give money to a helper to spend on their behalf. The pandemic also created significant challenges for Touco's planned user testing of the new version of its app. The major changes to people's spending patterns also had implications for how people interacted with Tully's *Money Coaching app,* in particular the spending challenges they might set.

These impacts are explored in more detail in the Challengers' Stories.
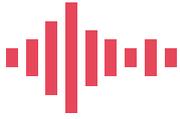
2.2 TREZEO'S STORY
CHALLENGE: INCOME SMOOTHING

FOUNDED IN 2016, TREZEO'S SIX-PERSON TEAM HAS BACKGROUNDS IN FINANCIAL SERVICES, TECHNOLOGY, MARKETING AND RISK. TREZEO HAS BEEN REGISTERED AS A PAYMENT INSTITUTION SINCE JUNE 2018, BECAME AUTHORISED AS A LENDER IN JULY 2018 AND REGISTERED AS AN ACCOUNT INFORMATION SERVICE PROVIDER (AISP) AGENT IN DECEMBER 2018.

As with some of the other Challengers, OB4G was one part of a *'complex tapestry'* of funding and support to help Trezeo develop its product and its business. It was one of ten fintech firms in the Techstars 2019 Barclays London Accelerator, which is a 13-week programme to help fintechs accelerate their business strategy and get feedback from mentors and business sponsor teams about their products and ideas (Varma and Adelsbach, 2019). Trezeo started the OB4G programme about the same time as the Barclays Accelerator, which took place from January to May 2019. It also participated in the RSA's Economic Security Impact Accelerator in summer/autumn 2019 which supported a cohort of innovators looking to improve the overall economic security of UK workers (Taylor and Dalal, 2019).

What is Trezeo?

Trezeo applied to OB4G to test and deploy its app-based income smoothing account. It uses open banking data to calculate each customer's sustainable average income from their different income sources and assess the affordability of any credit offered.

By smoothing their uncertain and volatile incomes, Trezeo aims to help the UK's independent workers manage their money and plan ahead financially.

THE PRODUCT

Trezeo's core product is an app-based financial safety net that provides gig economy and other self-employed workers with consistent payments based on their sustainable average income. It also gives them access to money in emergencies, automated savings for future expenses (like tax or holidays), interest-free top-ups and income advances when they are short of money and protects their income if they can't work due to accident or sickness. Trezeo uses Open Banking data to identify customers' sources of income, calculate their sustainable average income and assess the affordability of any credit offered. Customers' money is stored in their Trezeo account which is an e-money account issued by PayrNet Limited and insurance is underwritten by Chubb Europe.

Trezeo works on a membership model where the standard membership costs £3 per week for a business account, income smoothing tools, personal accident insurance and access to a confidential helpline.[3]

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[3] https://www.trezeo.com/pricing/

THE POTENTIAL

Trezeo aims to help the UK's growing population of self-employed and gig economy workers smooth their often uncertain and volatile earnings so they are better able to manage their finances, plan ahead and access other financial products and services such as consumer credit, insurance, and savings.

> *"I mean at a core level we see a huge gap in financial services for self-employed and gig workers… they are effectively underserved and unserviceable in some cases by the banks and it's an already large portion of the workforce and growing."*
> (Interview with Trezeo, May 2019)

The past 20 years have seen strong growth in self-employment in the UK, which now has more than five million self-employed people who represent around 15% of employment, up from 12% in 2000 (ONS, 2020). In addition, nearly one in 10 workers do platform work at least once a week (i.e. jobs found via a website or app like Uber, Deliveroo or Handy) (TUC, 2019). While individuals may value the flexibility offered by these types of work, research shows that irregular income patterns and related economic security issues represent the biggest challenges these workers face (Lockey, 2018). It is these challenges that Trezeo wants to address.

THE IMPACT OF OB4G

Coming into OB4G, Trezeo already had a prototype app. The purpose of OB4G was to (1) get user validation of the problem and Trezeo's proposed solution; (2) to test and refine its messaging and positioning; and (3) to deploy the app. It largely achieved these three goals although like other Challengers its deployment during OB4G was small-scale. Its initial target audience was workers in the cab, courier and food delivery sectors.

Goal 1: User validation of the problem and Trezeo's proposed solution
Early in the programme, design workshops with its Charity Partner and the OB4G team enabled Trezeo to review and refine its prototype. The Trezeo team also reviewed published research from its Charity Partner and others to get additional insight into the issues faced by gig workers. This resulted in a better understanding of the dynamics of income volatility; insights about the money worries and anxieties experienced by gig workers and design features that might alleviate them such as encouraging small savings.

Trezeo had hoped to access user testers through its Charity Partner, however for practical reasons this was not possible (see Collard and Evans, 2019). Instead it worked with an external agency to conduct user testing to assess the target audience's understanding of the product; the usability of the app interface; and the user experience of inputting data. This testing generated recommendations for improving the 'front end' of the app.

Figure 2.1 Images of Trezeo app from the Play Store
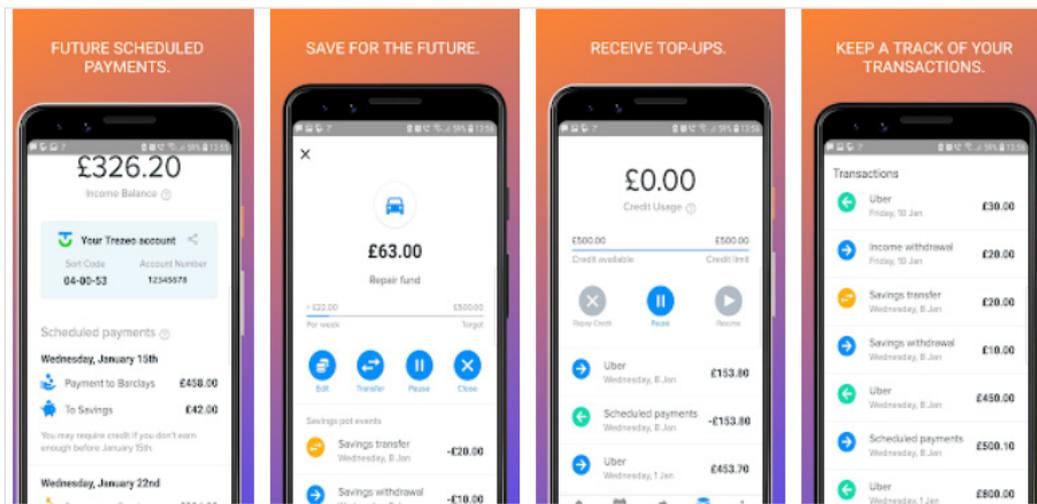
Goal 2: Messaging and positioning

OB4G enabled Trezeo to work on the messaging and positioning of its income smoothing app. As a novel product that would be completely unfamiliar to the target audience, this was an important step in the design process. To do this, it tested different product messages and positioning on Facebook in a process known as A/B testing (Facebook, 2020). Of the different messages it tested, the frontrunner proved to be "*Get paid even when you take holiday. Get paid even when work is slow. Get paid even when you're sick*".

The other way Trezeo tested its messaging and sought user validation was via 'pop-up' money clinics at local garages which were popular meeting places for its target audience of delivery drivers. Here, the Trezeo team got to know the drivers, heard about their lives and talked about the idea behind the income smoothing app.

> *"… we're doing kind of pop-up money clinics… we worked out well where are they comfortable, where do they go - garages… I think it's either 10 or 12 garages now we're doing kind of regular pop-ups."* (Interview with Trezeo, May 2019)

Goal 3: Deploying the app

During the first phase of OB4G, Trezeo focused on deploying its income smoothing app directly to its target audience of delivery drivers through social media channels and its pop-up money clinics. Analysis of Trezeo's user data from January 2020[4] shows that:

- In keeping with the profile of gig delivery drivers, these early Trezeo adopters were generally young men aged under 35, who mostly lived and worked in London.
- Two-thirds were from Brazil and were first-language Portuguese (which Trezeo took into account in its messaging and customer service).

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[4] Based on 35 active users at that time.

- Their income fluctuated a great deal from month to month so that they typically earned 1.4 times as much in their highest earning month than in an average month (which was equivalent to about £550).

Being a small start-up, the user numbers were modest, but this also meant the team could closely monitor user behaviour and activity and iron out any issues with the app. Working with the University of Bristol evaluation team, Trezeo carried out a survey of its users in the first three to six months they had been using the app. The survey indicates that Trezeo was valued by users as a novel tool to help them manage their money:

- 17 out of 21 respondents agreed that Trezeo offered a service they couldn't find elsewhere.
- 18 out of 21 respondents agreed that the Trezeo app was easy to understand.
- 19 out of 21 respondents said they would be disappointed if they could no longer use Trezeo.

The survey also indicated positive changes for Trezeo users in the time they had been using the app, such as:

- Borrowing less from friends, family or others (10 out of 21 respondents)
- Spending less time budgeting/managing money (10 out of 21 respondents)
- Saving more each month (9 out of 21 respondents)
- Struggling less to make ends meet (8 out of 21 respondents)
- Worrying less about money (7 out of 21 respondents).

In addition, user data showed that 13 of 24 users who had used the app's credit facility had seen an improvement in their credit score in the first three months of using Trezeo. While this does not show a causal relationship between using Trezeo and credit score changes, it is nonetheless positive that 10 users saw an improvement in their existing credit score; and three users went from having a 'thin file' (i.e. no credit score) to having a credit score.

In terms of future app development, the two most popular features that respondents felt they would use if they were available in Trezeo were:

- Sickness cover in case they were unable to work (up to £300 per week) (14 out of 21 respondents)
- The ability to pay for business expenses like fuel or vehicle hire from their Trezeo account (10 out of 21 respondents).

In the second phase of OB4G, Trezeo's turned its attention to deploying at scale by looking to partner with employment platforms that could, for example, subsidise the costs of Trezeo membership. In January 2020, it partnered with the work platform Labour Xchange, which was a fellow participant in the RSA's Economic Security Impact Accelerator, in order to roll out the income smoothing product to care workers who were contracted (but not employed) by local councils (Trezeo, 2020).

Labour Xchange is a work platform for blue collar workers and the under-employed who want to top-up their income. In January 2020, it had 12,000 users and 370 businesses signed up. Jonathan Key, Co-Founder of Labour Xchange sees a partnership with Trezeo as "*a really pragmatic way of making things better… one of the things I love about Trezeo is that we can use it to provide a whole raft of support packages so people just aren't left on their own*." Source: https://www.youtube.com/watch?v=8_o8uFuEvqQ

WHAT HAPPENED AFTER OB4G

After OB4G, Trezeo continued to develop and - in March 2020 - added new products including medical support, enhanced personal accident insurance, sickness insurance and cashback. In April 2020, it was selected to take part in BOOST, an innovation scale-up programme run by the Inclusive Economy Partnership (from which OB4G was also conceived). BOOST's focus was on leveraging the Inclusive Economy Partnership network to help businesses scale and provide access to the social investment sector. For Trezeo, its key value was making introductions to potential partners who could connect Trezeo with their self-employed workforces, particularly in the care and transport/logistics sectors.

The COVID-19 pandemic heavily impacted self-employed and gig workers who deliver essential services, like the truck drivers and delivery workers who are Trezeo's core customer base. While many Trezeo members continued to work during the pandemic, their earnings were severely reduced during the national lockdown and they had little or no financial protection if they fell ill.

> "… we have many self-employed and gig workers who deliver essential services like truck drivers and delivery workers. While these workers are keeping many essential services running, they have no financial protection and many are scared of getting sick." (Garrett Cassidy, July 2020)

Trezeo took the following steps to support its members during the early pandemic:

- Accelerated the development of its sickness insurance and extended complementary cover to existing members in early March to the end of June.
- Introduced forbearance measures on credit and proactively engaged with members to support them through any financial difficulties they experienced.
- Provided information on Government support available to members, including information in Portuguese for the Brazilian community.

The pandemic also meant that Trezeo's planned rollout with partners including Labour Xchange was paused until the second half of 2020, as these partners dealt with the immediate implications of COVID-19 and in some cases put operational changes on hold. In turn, this resulted in a delay in Trezeo's planned funding round until later in 2020.
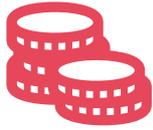
2.3 DUCIT.AI'S STORY
CHALLENGE: INCOME & EXPENDITURE

Ducit.ai was first incorporated as a private limited company in 2017 and became fully operational in October 2018 when it joined the NatWest Accelerator Fintech programme. Its three founders have backgrounds working in the financial services industry in software development, data and analytics and their stated mission is "*to deliver intelligent banking for all through the power of artificial intelligence.*" [5] Ducit.ai became authorised by the Financial Conduct Authority as an account information service provider in Feb 2019, around the same time that it joined the OB4G programme.

What is Ducit.ai?

Ducit.ai applied to OB4G to develop its transaction categorisation engine, which draws in Open Banking data and automatically sorts transactions into different categories of spending and income.

The solution aims to improve the accuracy and speed with which advice agencies and creditors can complete Income and Expenditure (I&E) statements for their clients/customers.

THE PRODUCT

Transaction categorisation is the process of understanding the context of each transaction that someone makes on their bank or payment account. Ducit.ai's categorisation engine uses artificial intelligence (combined with natural language processing, pattern detection and business rules) to automatically categorise banking transactional data obtained directly from banks through Open Banking with the consumer's consent. This process happens in real-time and creates a custom categorisation with a detailed breakdown of transactions that provides insight into an individual's financial situation (Ball, 2020).

Prior to joining OB4G, Ducit.ai had tested a prototype (or early model) transaction categorisation engine with several UK financial institutions using real customer data, highlighting its potential to categorise transactions more accurately. It saw OB4G as an opportunity to significantly accelerate its development.

THE POTENTIAL

Ducit.ai's categorisation engine aims to eliminate the inefficiencies and inaccuracies that it saw in existing transaction categorisations.

In OB4G, this was applied to the income and expenditure process, whereby a debt adviser or debt collection agent puts together an income and expenditure (I&E) statement based on information provided by a client or customer, to work out a realistic debt repayment plan. This can often be an intensively manual and time-consuming process. As a result, 'I&E fatigue' – where people have to repeat the process for different services or agencies – is a leading cause of them dropping out of advice services or processes (OB4G, 2018).

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[5] https://www.ducit.ai/about/

By automating the I&E process using up-to-date transaction data, Ducit.ai's categorisation engine has the potential to make this a quicker, smoother, more accurate process that can save time and improve consumer outcomes. Ducit.ai estimates that its technology can reduce by up to 80% the associated costs of manually producing a statement of someone's income and expenditure (Ball, 2020).

THE IMPACT OF OB4G

OB4G enabled Ducit.ai to work towards three major goals: (1) to produce an AI-powered analysis of income and expenditure that was granular and accurate; (2) to build an interface for debt advice charities to use this new technology; and (3) to deploy the technology with debt advice charities. Within the timescale of OB4G it achieved the first two of these goals but work on the third was ongoing.

For Ducit.ai, OB4G was "*transformational'* because of its combination of funding and resource; interaction with Charity Partners; hands-on support and feedback from Nationwide's OB4G team; and access to Nationwide's bank transaction data which for optimising the transaction categorisation engine was "*gold dust*":

> *"… it gave us so much. It gave us validation of what we wanted to do through conversations with the charities and we only got access to the charities through [the OB4G team], they expanded our networks through their connections. They gave us funding through to July [2020] which has given me the room that I need now to do the fundraising otherwise it would have been impossible… If I went to an investor it would have cost me 20% of the company." (Interview with Ducit.ai, February 2020)*

From Ducit.ai's perspective, the missing piece of the jigsaw – and a key learning from OB4G – was the need for parallel investment in debt advice charities so they could deploy new technology at scale:

> "… *if they [debt advice charities] can't create enough bandwidth to move away from paperwork what you end up with is the capability that is live, it's available to them, it's free, but it's not being used. And that's a challenge now.*"
> (Interview with Ducit.ai, February 2020)

Goal 1: An AI-powered granular analysis of income and expenditure

During the Explore & Develop stage of OB4G, Ducit.ai worked on refining its transaction categorisation engine to fine-tune its classification of income and outgoings. It introduced Companies House data into the process, for example, to help classify as many transactions as possible as accurately as possible by understanding the context of each of them.

> *"…so we see a transaction coming through for, I don't know, for AG Thomas and we see that there is an AG Thomas within the Companies House, we understand what kind of, the nature of that business and what is the likely, what is the probability of that being a specific category."* (Interview with Ducit.ai, May 2019)

Real-life transaction data was required to optimise the models that power Ducit.ai's transaction categorisation engine. Ducit.ai used Open Banking data from various partners

including fellow OB4G Challengers and, crucially, Nationwide Building Society which provided an anonymised dataset of around 9 million bank account transactions. It also benefitted from feedback on the categorisation taxonomy from its Charity Partner, the Money Advice Trust.

From this, Ducit.ai created a taxonomy of 100 categories for income and expenditure that separates out debits and credits (e.g. gambling and gambling pay-outs; investment and investment income). By contrast, banks may only classify transactions into a relatively small number of generic categories such as 'personal', 'shopping' or 'bills' (Garcia-Navarro, 2019). This means that Ducit.ai's categorisation can provide a debt adviser or financial services provider with a detailed picture of an individual's financial situation. In the latest tests, the categorisation engine accurately classified over 85% of transactions across all categories.

Goal 2: An interface for debt advice charities to use the technology

In the Accelerate stage of OB4G, Ducit.ai worked closely with its Charity Partners to build a debt advice interface so that debt advice charities have the capability to automatically generate an income and expenditure statement from Open Banking data (with the clients' consent) powered by Ducit.ai's transaction categorisation engine.

> *"… we think it will save 30-45 minutes potentially from that [initial debt advice] phone call, from our experience."* (Interview with Ducit.ai, May 2019)

The features of this debt advice interface include:

- **An app** that advisers and clients log into, via which the client can consent to share their bank transaction data with Ducit.ai. At the adviser end, the app classifies that data according to Ducit.ai's taxonomy.
- **A data dashboard** that can provide a range of insights into the client's financial situation based on their Open Banking data, such as the distribution of their income and expenditure over a chosen timeframe (up to 12 months).
- **Data visualisation tools** which includes the Ducit.ai taxonomy mapped against the Standard Financial Statement[6] to facilitate a conversation with debt clients about their income and outgoings; and a heatmap that flags potential issues such as big changes in cash use or increases in gambling spend.

Ducit.ai's debt advice interface went live in November 2019 and is available to debt advice charities free-of-charge:

> *"… we want to continue with the service across whatever charities we've implemented free of charge for them, because the cost for us it will be negligible, the benefit for them will be quite significant"* (Interview with Ducit.ai, May 2019)

Figure 2.2 shows the client view of the app. The app can also be downloaded and used by individuals who want insight into their financial situation; this general public version offers

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[6] The Single Financial Statement is designed to provide a universal income and expenditure statement that debt advisers and creditors can use, together with a single set of spending guidelines. Source: https://sfs.moneyadviceservice.org.uk/en/what-is-the-standard-financial-statement

other functions such as an affordability score so users can check the amount they can afford to borrow based on an up-to-date assessment of their income and outgoings.

Figure 2.2 Ducit.ai app user interface
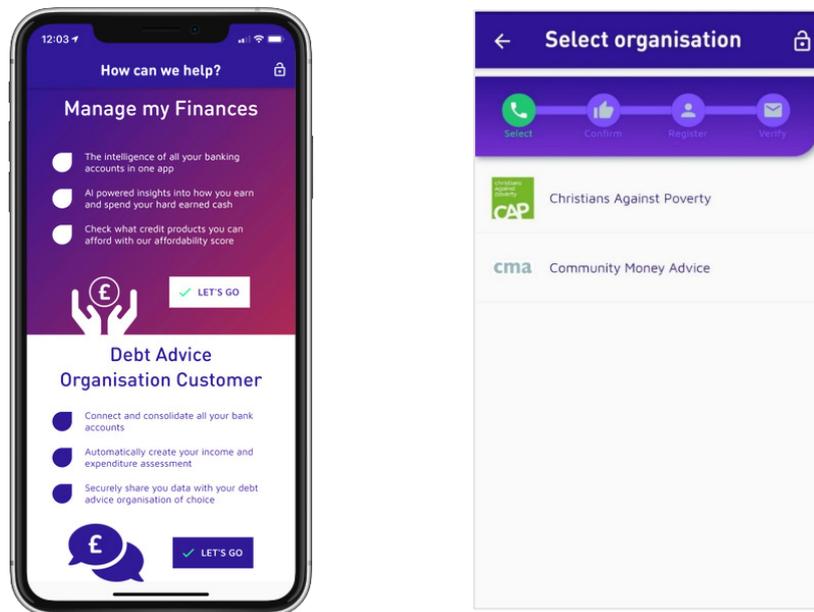
Goal 3: Debt advice charities deploy the technology

Having optimised its categorisation engine and built the debt advice interface, Ducit.ai's third goal was to trial the technology with debt advice charities with a view to deploying it at scale.

In summer 2019, Ducit.ai began discussions with Christians Against Poverty (CAP – a national debt advice charity) about trialling its debt advice interface with a small number of clients. The trial was to focus on clients who were repaying their debts via a debt management plan set up by CAP, and who were due to have their mandatory annual review which includes a review of their income and expenditure.

In the trial, clients would first complete the usual manual assessment of their income and expenditure, which involves sending paperwork such as bank statements and bills to their CAP debt adviser. The client and adviser go through the paperwork (usually on the telephone) to produce an updated income and expenditure statement and, if appropriate, amend their debt repayment or discuss other debt solutions. The client and adviser would then use Ducit.ai's debt advice interface to complete a second income and expenditure statement based on the clients bank transaction data. This would enable a comparison between a manual process and an Open Banking-powered process (see below).

In preparation for the trial, CAP surveyed 603 of its clients who were due to have an annual review to identify suitable candidates (i.e. who were comfortable using similar technology). The survey found that 62% of client households regularly used the internet, were able to make online purchases, could download and use apps, and knew how to use online banking.

In addition, the PFRC research team produced a plan to evaluate the impact of the technology, including the following measures:

- The time taken for the adviser to construct the I&E statement using the debt advice interface compared to the standard manual process.
- Whether the debt solution indicated by the AI-generated I&E statement differed from that derived from the manual I&E statement.
- How the two I&E statements compared, e.g. the proportion of spending allocated to different categories, and the number of uncategorised transactions.
- The classification accuracy of the manual I&E compared to the AI-powered I&E.
- Qualitative feedback from advisers and clients about the automated process compared to the manual process.

Although CAP clients were onboarded[7] to the debt advice interface in anticipation of the trial starting in January 2020, CAP did not have the capacity to proceed due to unprecedented demand for its service (Ascher and Reid, 2019). If the trial does go ahead in the future, there is an evaluation plan in place, and we know that a sizable number of CAP clients could benefit from an automated I&E process. In planning the trial, CAP also identified another potential use case for Open Banking transaction data, which is to check a client's eligibility for hardship and other grants.

WHAT HAPPENED AFTER OB4G?

Since completing OB4G, Ducit.ai successfully applied to join the eighth cohort of the Accenture Fintech Innovation Lab as part of its Open Data stream, which ran from January to March 2020. During the three-month accelerator programme, fintechs are partnered with senior executives from major financial institutions to fine-tune and develop their technologies and business models (Finextra, 2020).

It has also completed all of its technical development (including the launch of its mobile consumer app) and onboarded its first commercial client in September 2020. It has been in talks with several large financial services firms (including Nationwide) about the commercial applications of its technology e.g. to help firms assess affordability in mortgage lending and reports a significant demand for its platform due to the economic impacts of COVID-19.

It has worked with Community Money Advice - another debt advice charity – that wanted to deploy the debt adviser interface across its debt advice centres. Having successfully completed the sandbox onboarding and testing (i.e. in a safe testing environment), the work is on hold because Community Money Advice has experienced the same high demand for its service as CAP which severely limited its capacity for innovation.

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[7] Onboarding is the process through which a user starts their journey as a customer or client of a financial institution such as a bank, third party provider or debt advice service. It usually comprises multiple activities including fulfilling due diligence and legal requirements (such as know your customer and anti-money laundering checks), opening an account and making it operational (Gundaniya, 2020).
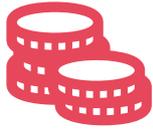
2.4 OPENWRKS' STORY
CHALLENGE: INCOME & EXPENDITURE

OpenWrks was founded in 2015 with the belief that the financial services industry could do a better job of understanding their customers and building financial solutions more tailored to them.

Realising early on the potential of Open Banking, OpenWrks became the first Third Party Provider (TPP) to be authorised by the FCA and successfully integrate with the CMA-9 banks. Its account aggregation platform allowed other tech companies to access Open Banking data.

Prior to OB4G, the OpenWrks team had participated in Nesta's Open Up 2018 Challenge, a prize fund to advance the future of small business banking. In early 2019, as part of OB4G's Accelerate pathway, OpenWrks took part in Accenture's Fintech Innovation Lab. While both these start-up innovation programmes were commercially useful, the 'for good' element of OB4G was something that particularly appealed to the OpenWrks team.

What is OpenWrks' I&E solution?

OpenWrks applied to OB4G to develop its I&E solution. This uses Open Banking data to assess a consumer's income and outgoings allowing them to quickly build an accurate I&E statement.

This statement can then be saved and securely shared with third party organisations, including creditors and debt advice agencies.

OpenWrks applied to the 'Accelerate' path of OB4G to scale their solution, having already launched it into beta (the last stage of testing before a product is released commercially).

THE PRODUCT

OpenWrks had already been working on the I&E challenge before the OB4G programme. They aimed to use OB4G to develop an Open Banking solution – called *MyBudget* – to reduce the time and stress of completing an I&E for the consumer and provide a more accurate assessment of their disposable income to help creditors set affordable debt repayments.

THE POTENTIAL

With more I&E statements being completed than ever before, the OpenWrks team aimed to reduce the time and resources expended on I&E statements by consumers, debt agencies and creditors while at the same time improving their accuracy.

THE IMPACT OF OB4G

OB4G's Accelerate pathway gave OpenWrks an opportunity to refine and test a product that was better suited to '*financially squeezed*' consumers.

Goal 1: Refine the MyBudget solution

OpenWrks successfully used OB4G to refine three key features of its *MyBudget* solution:

- **Automatic categorisation and Conversational AI** – the solution was refined to automatically categorise as many transactions as possible and use Conversational AI to ask the user 'smart' questions to fill in any remaining gaps (for example, spending on cash that cannot otherwise be categorised).
- **Passporting the I&E budget** – users can save the completed budget and securely share it with other organisations.
- **White labelled** – the solution was white labelled[8], allowing partner organisations to use their own branding (where allowed, in line with regulation). OpenWrks' aim was to offer it first to debt advice organisations and then to creditors.
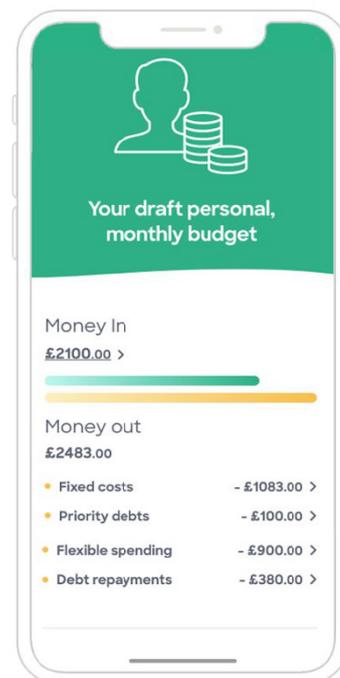
Goal 2: Test the MyBudget solution

Early in the OB4G programme, OpenWrks acquired another OB4G Challenger, Tully, with whom it already had a working relationship. As Tully was using the beta version of the OpenWrks I&E solution to provide consumers with debt advice, this meant the OpenWrks team could spend more time conducting initial qualitative testing with potential users (i.e. Tully users), to explore how participants interacted with various stages of the app journey.

OpenWrks also conducted a range of internal tests of *MyBudget* to explore the impact that it might have for both individual users and for organisations that they work with such as creditors or debt advice services. They found that:

- The average time taken for users to complete their budget was 17 minutes.
- Debt advisers or creditor staff would then spend an average of 3 minutes 'reworking' the budget, meaning that it took approximately 20 minutes to complete a budget.
- This was in comparison to OpenWrks's estimate of 40-60 minutes for existing processes.

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[8] White labelling is when a product or service created by one company (in this case OpenWrks) is marketed or used by a different company (such as a lender or debt agency) using its own branding, thereby effectively integrating the product or service into its business.

WHAT HAPPENED AFTER OB4G?

Having successfully tested and refined the *MyBudget* solution within the OB4G programme, the OpenWrks team began partnering with a range of organisations. *MyBudget* is now deployed by more than 10 organisations (banks, car finance and energy companies) in different ways, including helping lenders assess customers' affordability and helping debt advisers to reach a debt solution with their clients.

In response to the coronavirus pandemic, OpenWrks created a Payment Relief solution, which enabled companies to offer their customers an automated online channel by which they could apply for payment support (for example, a payment deferral). This was designed to alleviate some of the pressures that firms' call centres faced as they switched to home working during the first national lockdown and, in some cases, capacity issues due to staff illness.

Demand for *MyBudget* also increased because of the pandemic, as consumers faced more financial uncertainty and as much of society turned to digital solutions. In September 2020, the team estimated they were on track to have 10,000 completed I&Es per month by the end of 2020. They also report that the Conversational AI feature they developed through OB4G (a chatbot called Sadie) has proved particularly useful, as customers can use it to easily and quickly inform their creditor or debt adviser if their income has reduced or stopped since their last paycheque.

In July 2020, OpenWrks announced that it was '*working with The Money and Pensions Service to provide digital affordability assessments as part of their digital enhancements to debt advice*' (OpenWrks, 2020a). This is part of the Money and Pensions Service (MaPS) Pilot of Adviser Capacity and Efficiency (PACE), to explore whether tools such as *MyBudget* can increase the efficiency and accuracy of the I&E stage of the debt advice process. The pilot went live in October 2020 (Barber, 2020), with StepChange Debt Charity, the Money Advice Trust and Citizens Advice all involved. People contacting the MaPS virtual call centre are asked if they wish to self-serve their I&E using Open Banking. If they do, their completed I&E is automatically shared with the relevant debt charity and used to provide the customer with debt advice. The solution is also being piloted with the Nationwide Building Society Collections and Recovery team from October 2020.

In September 2020, OpenWrks sold its account aggregation platform (which enables third parties to access Open Banking data from multiple banks through one interface) to focus on enhancing its suite of applications (OpenWrks, 2020b).

2.5 TOUCO'S STORY
CHALLENGE: MONEY MANAGEMENT & HELP

Touco was an early-stage start-up company when it applied to OB4G. Set up in 2018 and originally called Toucan, it won the Santander's Open Banking hackathon[9] in March that year and became incorporated as a private limited company in August. In January 2019 it was a finalist in the Innovating for Ageing competition to find solutions to the challenges faced by vulnerable consumers in later life (Innovating for Ageing, no date). Its founders have backgrounds in fintech, software engineering and business finance.

THE PRODUCT

Touco was conceived as an app that uses Open Banking transaction data to help people get money management support from carers, family members and friends using a simple traffic light system of alerts. At the time of applying to OB4G, Touco's proposition was a proof of concept – this is an early stage in the development process to verify that an idea or theory has the potential for real-world application (Techopedia, 2020) before a prototype product is built.

> *"… at that stage Toucan was just some designs and some research that I'd done with Santander and not very much else."* (Interview with Touco, May 2019)

While there are many personal financial management apps on the market, in Touco's view these tend to be designed for confident budgeters who are comfortable with numbers and graphs. In contrast, its target audience was people who are less financially capable.

THE POTENTIAL

Touco aims to provide a way for people to get money management support from someone they trust, so they can stay on top of their finances, avoid debt problems, and reduce anxiety and stress around money management. It is intended as a light-touch alternative to Power of Attorney which legally gives someone else the power to make decisions about your property and financial affairs or your health and welfare (GOV.UK, no date). It is also a

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What is Touco?

Touco is an app that uses Open Banking transaction data to enable people to get support with their finances from a trusted ally, such as a family member, friend or support worker.

It does this by sending simple alerts when, for example, the user's bank balance falls below a certain level or a certain number of transactions have been made in a short period of time.

It was designed to be particularly relevant for people whose mental health may make it difficult to manage money at certain times.

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[9] A hackathon is a coding marathon that lasts from a few hours to few days. It brings together software programmers and related specialists such as graphic designers who form collaborative teams that compete to produce the best project to a predefined challenge. Winning projects are awarded in cash or other prizes (Wikipedia, 2020; Challengerocket.com, 2018).

secure alternative to the risky informal workarounds that people may use if they want help to manage their finances like sharing PINs and online banking passwords (Murray, 2016).

Although Touco was primarily conceived to help the one in four people with mental health problems who also report personal debt (Fitch et al, 2007), it can be applied to any situation where people are less financially capable, e.g. because of cognitive impairment.

THE IMPACT OF OB4G

Fundamentally, OB4G meant that Touco could move from being an idea to being a business. In the words of one of its co-founders: "*basically without them [OB4G] we wouldn't exist as a business*" (Interview with Touco, May 2019). Touco looked to empirical research to address OB4G's Money Management & Help challenge. It worked in close collaboration with its Charity Partner – the Money and Mental Health Policy Institute – and the University of Northumbria to collect new data that it used to ideate, prototype and pilot the Touco app.

Goal 1: Ideation

Ideation is the process of generating ideas, challenging assumptions and looking for alternative ways to view problems. To this end, Touco used the Explore & Develop phase of OB4G to carry out qualitative research to better understand financial anxiety in the general population; and a quantitative survey of people with mental health conditions to explore their views and experiences of getting money management support from trusted allies (such as friends and family members) and gauge their interest in money management alerts.

Touco's qualitative study comprised one-to-one interviews with 22 younger working adults on modest incomes who lacked confidence or found money management stressful. They were recruited through an online community and via a market research agency. The interviews explored causes of money stress and anxiety; what information and insight might help people stay financially healthy; and how this could be displayed in an intuitive and engaging way. Participants identified a range of potentially helpful prompts and alerts including 'save to spend' amounts and spending alerts e.g. related to patterns of spending or bank balances.

Touco's online survey of people with mental health conditions was facilitated by their Charity Partner, the Money and Mental Health Policy Institute, which has a 5,000-strong research community. The survey received around 250 responses and found that over 40% of respondents had received money management support from someone they trusted in the last two years, often sharing their debit card and PIN or their online banking credentials which put them at risk of financial abuse. Most respondents who received support said they would find third party alerts useful; and 60% thought a simple 'red flag' alert would be most useful rather than disclosing account or transaction details (Kursar, 2019a).

Goal 2: Prototype

A prototype is an early model of a product that is built to test a concept or process. With OB4G making it possible to expand its team (in particular bringing on board a developer and a designer), Touco used the research findings from its ideation phase to design and develop a prototype app that could be piloted in the second phase of OB4G. The prototype app enabled users to set alerts if (1) their balance fell below a set amount (2) they withdrew a

certain amount of cash or (3) they spent a certain amount in a 24-hour period (excluding rent and bills). If users chose to nominate a trusted ally to help them manage their money, they could also nominate the ally to receive an alert.

Figure 2.3 Screenshots of Touco prototype app (Source: Kursar, 2019a, page 46)
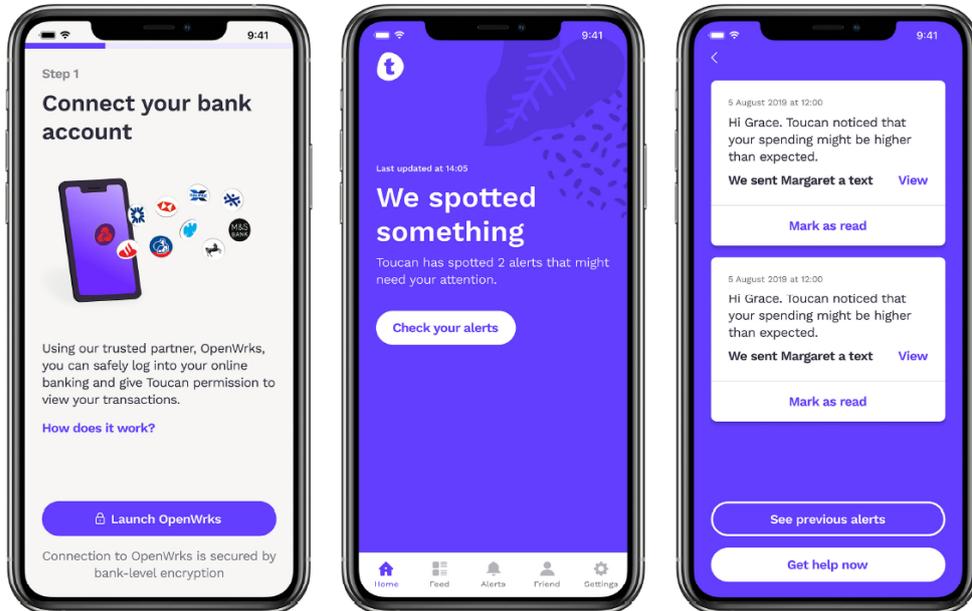
Goal 3: Pilot

In the Accelerate stage of OB4G, Touco worked with the CoCreate research group at the University of Northumbria[10] to pilot its prototype app. The app was piloted by 14 members of the Money and Mental Health Policy Institute research community who had responded to Touco's earlier survey and expressed interest in taking part in further research.

Over the course of the three-month pilot, participants completed a weekly research diary and were interviewed in depth at the start and end of the study. This qualitative data was supplemented by analysis of data from the prototype app, particularly around the use of alerts and interactions with trusted allies. Full details of the study and its findings are reported in Kursar (2019a), from which the following key findings are taken.

In total, 430 alerts were sent across the 14 participants during the pilot; 75% of these alerts signalled that the participant had reached their daily spending threshold. In terms of the impact of the app, the qualitative data showed that the alerts did trigger money conversations which had a range of benefits including:

- Participants opening up about their finances in a way they had not done before.
- Participants benefitting from practical help with money e.g. looking over a budget with a trusted ally or discussing possible ways to cut back on spending.

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[10] https://cocreatenorthumbria.org/

- Participants building better financial habits e.g. regularly checking account balances and planning ahead.

Figure 2.4 Pilot participant views about the impact of Touco (Kursar, 2019a, p29 and p32)

> "He has definitely changed since we've been able to talk and everything about money. So it has been a really good thing. A really, really good thing"
>
> *'Paul's' partner*

> "It helped me to stop ignoring my bank and open my bank account and look at it and budget"
>
> *'Sarah'*

Based on the pilot study, Touco went on to design a second version of the app. The pilot also provided valuable insights about further development, which included designing a version for trusted allies, based on evidence from the pilot that they would value more support.

WHAT HAPPENED AFTER OB4G?

Its achievements in the OB4G programme meant Touco was able to leverage further business and product development opportunities (as described below) - including serious interest from several large financial institutions. However, a major challenge from its point of view has been finding a sustainable business model that could generate a revenue stream to support further investment in its product development – particularly as its target audience is unlikely to be able to afford (or be willing to pay) for its products.

> *"We basically put a halt on anything product related, while we make sure that we can fund it appropriately, and it can be sustainable… in order to both help as many people as possible but most importantly find a way to monetize that in an ethical way."* (Interview with Touco, September 2020)

In this respect, it felt that a closer relationship with Nationwide's product teams and business owners from the outset of the programme could have been beneficial. From the perspective of Nationwide's OB4G team, however, it was important that Challengers had the freedom to innovate without being unduly influenced by Nationwide's own business needs (Collard and Evans, 2019).

In terms of business development, in early 2020 Touco participated in London Barclays Accelerator, a 13-week programme to fast-track fintech businesses. This culminated in a Barclays Techstars Demo Day in May 2020 which is a way of connecting fintech founders with potential investors (Techstars, 2020). While Touco felt the programme was valuable in terms of networking and new client opportunities, due to the COVID-19 pandemic it had to be held virtually, with none of the physical face-to-face interaction that can help cement business relationships. Participating in the programme also meant shifting their focus away from product development, which in hindsight they felt should have remained their priority.

Regarding product development, following its successful OB4G pilot study Touco went on to be a Finalist in Nesta's Open Up 2020 Challenge, receiving a grant of £100,000 in November

2019 to build and test a new version of the app that could be scaled to large numbers of users (Open Up 2020; Kursar, 2019b). Although the new app was successfully launched in June 2020, Touco encountered issues with user testing (due to the pandemic) and had problems onboarding both the user and their nominated ally to the app – a process which felt onerous relative to its perceived value. As a result, Touco onboarded fewer people than they hoped. As the user/ally collaboration is a significant feature of the app, further development is needed to resolve these problems.

> *"…the kind of magic of what we've built, which I still think is really valuable, is this collaboration between two people and the kind of information sharing. But the inherent problem there is that you do need to have two people, and you need to onboard those two people. So that's what we need to figure out."* (Interview with Touco, September 2020)

In the wake of COVID-19, Touco was awarded a £45,000 grant by Innovate UK to spend six months (from June to the end of November 2020) to bring forward the building and testing of its planned Care Card (Patel, 2020). This is a restricted access prepaid card designed to provide a safe way for individuals to give money to a helper to spend on their behalf[11] – an issue that was sharply exposed during the first UK lockdown when 2.5 million people were advised to stay at home or 'shield' (Kleinman, 2020). For a variety of reasons, Touco returned most of the grant: they faced difficulties meeting the grant timescales; there was extra investment required that was not covered by the grant; and while several banks expressed strong interest in the product, without an existing revenue stream or confirmed client, Touco felt unable to justify the additional investment in a period of such great uncertainty.

> *"…to build a product and then not have a customer for it, and not be able to monetize it, it's just too risky in these times."*
> (Interview with Touco, September 2020)

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[11] https://usetouco.com/

2.6 TULLY'S STORY
CHALLENGE: MONEY MANAGEMENT & HELP

Tully is a provider of digital debt advice. It launched in March 2018 and has been authorised as a Payment Services Directive agent since February 2019. It was built on a belief that there are too many barriers to accessing debt advice and that a well-designed digital journey would encourage more people to seek advice earlier.

THE PRODUCT

Early on in its business, Tully was interested in the use of Open Banking data to help their debt advice clients construct a budget – an assessment of their money coming in and going out used to recommend an appropriate debt solution. They later developed the idea of 'Money Coaching', which was the basis of their application to OB4G.

What is Tully Money Coaching?

Tully is a digital debt advice provider, and through OB4G it developed a web-app called 'Money Coaching'.

Money Coaching analyses a user's transaction data through Open Banking, and then gives them a series of saving 'challenges' to choose from, helping them to reach a financial goal that they set when they first sign-up.

The idea behind Money Coaching was to create a web application that would analyse a user's transaction data via Open Banking and then give them a range of financial 'challenges' to choose from, such as reducing spending in a certain category or at a certain merchant (for example, coffee shops). It would also identify other types of saving that the user might be able to make, such as switching their utilities providers. By making these changes, it was hoped that the user would be better able to reach their longer-term financial goals.

THE POTENTIAL

Money Coaching was developed to help tackle three key problems:

1. **Dealing with data** – most people may not have the time or ability to analyse their own financial activity.
2. **Finding purpose** – individuals may struggle to make positive budgeting decisions because they haven't committed to long-term SMART goals (Specific, Measurable, Achievable, Relevant, Timebound).
3. **Feeling supported** – people may avoid discussing money with friends and family, meaning they might lack social support on financial matters.

Its aim was to address these problems by helping individuals understand the choices that they make around money and encouraging them - using a combination of their own data and behavioural psychology - to make different choices so their money went further each month. Whereas other 'money coaching' tools, they felt, were either very generic or very prescriptive, Tully Money Coaching aimed to give users a range of 'challenges' to choose from, based on their own banking data. By tackling some of the underlying spending

challenges facing the individual (for example, high expenditure on certain bills), Tully hoped that Money Coaching would make debt solutions more sustainable in the long-term.

THE IMPACT OF OB4G

The benefit of OB4G for Tully was that it enabled them to develop their early Money Coaching concept into something more rounded and interactive than they had originally considered, and more quickly than would otherwise have been possible. They were also able to test and pilot the prototype they developed, as we describe below.

As noted previously, early in the OB4G programme Tully was acquired by OpenWrks - another OB4G Challenger - and became part of the OpenWrks Group. Tully was already using OpenWrks' Open Banking account aggregation platform prior to OB4G as well as being co-located in the same building in Nottingham.

Goal 1: Develop and test the Money Coaching concept

For Tully, the first few months of OB4G were about testing the Money Coaching concept and a range of hypotheses that they had. This involved initially working with The Money Charity – their charity partner on OB4G – who provided useful feedback on their ideas and theories. They then tested an early prototype with participants on a market research panel, in particular looking at the app's ability to generate challenges that users would engage with and whether users successfully completed the challenges (i.e. by reducing their spending). While the findings of the research were largely positive, they also suggested ways to improve the app.

Goal 2: Pilot the Money Coaching app

Having successfully tested their ideas in the early phase of OB4G, the Tully team worked to build a fully functional Money Coaching web-app which they piloted with HSBC customers in Spring 2020. This pilot - of 221 users - showed that:

- 57 per cent of users successfully 'passed' the savings challenge they chose.
- On average, users saved £30 per month over the course of the pilot.
- 56 per cent of users opted for monthly challenges, rather than weekly ones.
- Most users opted for challenges related to grocery spending.

> *"The challenges were spot on and made me realise I could save money by making small changes. If I hadn't signed up I wouldn't have thought money coaching was something I needed!"* (Testimonial from Money Coaching user, provided by Tully)

WHAT HAPPENED AFTER OB4G?

Following the pilot, HSBC's Financial Fitness Team chose to implement Money Coaching as a third-party product and now offers the app to customers via the HSBC website.[12] The Persistent Debt team at Nationwide Building Society has also implemented the Money Coaching product. It is intended to be used as a way of showing customers where they might be able to save money that could be put towards long-term credit card debts. In

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[12] https://www.hsbc.co.uk/tully/

November 2019, Tully was a Finalist in Nesta's Open Up 2020 Challenge and awarded £50,000 to further develop its digital debt advice proposition.

As with many businesses, the coronavirus pandemic caused Tully to re-prioritise certain aspects of their work, choosing to place more emphasis on an emergency response tool. Economic changes also meant that the strategic priorities of some prospective clients shifted away from saving money.

Additionally, Money Coaching was affected by the substantial changes which occurred in the population's spending patterns because of national restrictions in response to the pandemic – with spending on retail and hospitality, for example, taking huge hits. This meant that some of the challenges offered in the Money Coaching app were no longer as appropriate and that historical spending data became less relevant than it previously had been. Nevertheless, as the application uses the last three months' transaction data to suggest its challenges, it can adapt to clients' lifestyle changes relatively quickly – and the team at Tully remained confident that the product would be an invaluable tool in helping people get back on their feet after the pandemic.

3.

EVALUATING USER IMPACTS

This chapter describes our work with Challengers to design an impact evaluation framework for end users and highlights some of the practical issues related to assessing the impact of fintech.

The purpose of impact evaluation is to assess whether the intended changes have occurred for service users from an intervention such as a product, service or programme; and to attribute the observed changes to the intervention, for example by collecting data before and after an intervention; or comparing the outcomes of recipients of an intervention to those of a control group who did not receive the intervention (Harrison-Evans, Kazimirski and McLeod, 2016).

While this type of evaluation is most often associated with government, public sector or third sector initiatives, we believe it is equally important to build a credible evidence base around the outcomes and impacts of for-profit technology and innovation (such as Open Banking) for end users where currently there is a lot of interest and activity but little in the way of independent evaluation or freely available published information.[13]

As none of the Challengers was at the stage of scaling or deploying their product at the time of the OB4G programme, we were not able to fully assess the impact of their products and services on end beneficiaries. We did, however, work with Challengers to design an evaluation framework for end beneficiaries; and support them to conduct small-scale user research to test how they could measure the impacts of their products and services on the people who use them and inform their product development. This work also provided insights into some of the practical issues involved in evaluating fintech products and services. Together, these findings start to fulfil the criteria identified by Harrison et al (2016) for a proportionate evaluation design, as illustrated in Figure 3.1.

Figure 3.1 Criteria for a proportionate evaluation design (authors' adaptation of Harrison et al, 2016, page 10)

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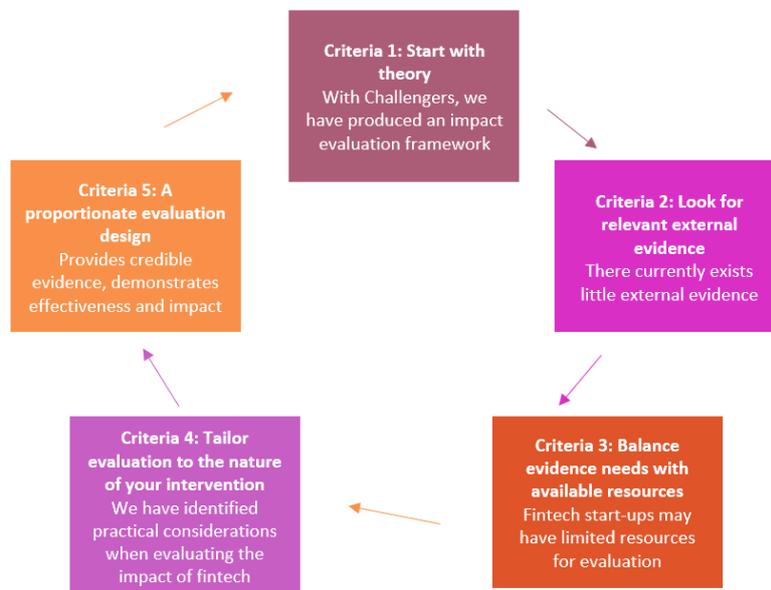
[13] The UK's Open Banking Implementation Entity (OBIE) has consulted on a Consumer Evaluation Framework that is designed to assess the outcomes of Open Banking for individual consumers and SMEs. This work has been championed by the Independent Consumer and SME Representatives to the OBIE. See
https://www.openbankingexpo.com/insights/insight-a-year-to-reflect-by-faith-reynolds/

3.1   OB4G IMPACT EVALUATION FRAMEWORK

The impact evaluation framework was developed using a combination of desk research; a workshop with all five Challengers in July 2019; and conversations with the Challengers in a series of meetings over autumn/winter 2019. While the OB4G Challengers proposed quite different approaches to tackle the three Challenges, we identified three common impacts that could potentially be measured at a programme level:

Time: Can Open Banking-enabled products and services offer time-savings for users (both individual consumers and

Money: Can Open Banking-enabled products and services positively impact the financial situations of users?

Wellbeing: Knowing the relationship between people's wellbeing and their financial situation, can Open Banking-enabled products and services support users' wellbeing?

Table 3.1 sets out our impact evaluation framework which maps these three common impacts against the three OB4G Challenges and the Challengers' use cases. It also describes some of the early insights from the Challengers' stories about the impacts of their products and services and their potential target audiences.

This demonstrates the potential for OB4G products and services – if scaled - to deliver time savings and money benefits for individuals and organisations; and improved wellbeing for significant numbers of people in the UK. While some OB4G products have already scaled, others had yet to do so for the reasons described earlier.

Table 3.1 OB4G impact evaluation framework – preliminary metrics and potential target audience

	Challenger/Use case	Time	Money	Wellbeing	Potential target audience
Income smoothing	**Trezeo** Turns variable income into a regular pay cheque for independent workers	10 out of 21 users surveyed said they **had to spend less time budgeting or managing money** by using Trezeo.	10 out of 21 users surveyed said they **borrowed less** by using Trezeo. 9 out of 21 users surveyed said they **saved more** each month by using Trezeo.	8 out of 21 users surveyed said they **struggled less to make ends meet** by using Trezeo. 7 out of 21 users said they **worried less about money** by using Trezeo.	A**round 5 million people in the UK do platform work weekly** (i.e. find jobs via a website or app)[14] who could benefit from products like Trezeo.
Income & Expenditure	**Ducit.ai** Uses AI to improve the categorisation of Open Banking data for debt advice charities **OpenWrks** Creates accurate I&E statements online for creditors	Ducit.ai and OpenWrks showed that between **20-45 minutes** can be saved from the I&E process by generating a statement from Open Banking data.	Individuals have a **better understanding** of their financial situations. Debt repayment arrangements are more likely to be **affordable and sustainable**. A more efficient use of resources means debt advice charities and creditors can **help more people**.	A quicker, more accurate process **reduces 'I&E fatigue'** and may result in better outcomes for individuals that in turn reduce money-related anxiety.	There are approximately **1,250 debt advice organisations** in the UK (mostly non-profit)[15] that could benefit from products like Ducit.ai and OpenWrks, as well as a wide range of creditors such as **lenders, energy providers, and housing providers**.

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[14] https://fullfact.org/economy/has-gig-economy-doubled/
[15] http://www.bris.ac.uk/media-library/sites/geography/pfrc/pfrc1807-vulnerability-the-experience-of-debt-advisers.pdf

Table 3.1 OB4G impact evaluation framework – preliminary metrics and potential target audience

	Challenger/Use case	Time	Money	Wellbeing	Potential target audience
Money management & help	**Touco** Sends alerts to a trusted ally when the user has money issues	Users may save time because Touco helps them **manage their finances more effectively and plan ahead**.	In Touco's user research, **75% of alerts signalled that daily spending thresholds had been reached**. Users also benefitted from **practical help with money** and built **better financial habits**.	In Touco's user research, **participants opened up about their finances** in a way they had not done before.	In the UK, **around 13 million** with mental illness[16] and **6.3 million** people with life-limiting health problems[17] could benefit from products like Touco.
	Tully Offers users personalised, data-led Money Coaching	Users may save time because Money Coaching helps them **manage their finances more effectively and plan ahead.**	In a pilot of Money Coaching, users saved on average **£30 per month**.	In a pilot of Money Coaching, **57 per cent of users successfully 'passed' the savings challenge they chose**.	The people who could benefit from products like Money Coaching include the **8.9 million people in the UK who have borrowed more because of the pandemic** and the **4,341 people a day** made redundant in September to November 2020.[18]

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[16] https://www.england.nhs.uk/mental-health/
[17] https://www.aberdeenstandard.com/docs?documentId=GB-280920-130082-1
[18] https://themoneycharity.org.uk/media/January-2021-Money-Statistics.pdf

3.2 IMPACT EVALUATION: PRACTICAL ISSUES

To design an impact evaluation that is proportionate and meaningful requires an appropriate balance to be struck between an organisation's evidence needs and its available resources; and for evaluation to be tailored to an intervention (Harrison-Evans, Kazimirski and McLeod, 2016). Relating this to the OB4G programme, three very practical issues stand out about evaluating the impacts of Open Banking-enabled products and services that are designed to meet the needs of people who are '*financially squeezed*':

- **Make it accessible** - we worked with some of the Challengers to design user surveys that asked about the experience and impacts of using their OB4G proposition. Practical considerations included testing survey questions to make sure they were easily comprehensible (to cater for different literacy levels and people whose first language is not English). As two-thirds of Trezeo's first cohort of users were first-language Portuguese, for example, its user survey was made available in both English and Portuguese, with back translation[19] to make sure the meaning of the questions was the same in both languages.

- **Minimise disruption to the customer journey** - impact evaluation can involve collecting user data before and after an intervention, to assess the changes that have occurred. We explored with Challengers the option of conducting short user surveys during the onboarding process to collect data before customers or clients began using the proposition. While possible, at this early stage of the customer relationship Challengers were keen to ensure that onboarding was as smooth as possible so that users were not discouraged from completing the process. This would mean ensuring that any survey questions asked at this stage were not unduly burdensome or off-putting. Collecting data later in the customer journey when a relationship had been established was felt to be more straightforward.

- **Triangulate data from different sources** – while user surveys can provide valuable data to help evaluate impact, our work with Challengers also highlighted the potential to triangulate anonymised data from different sources to build a rounded picture of the impacts for users of Open Banking-powered products and services. These data sources might include firms' own user research conducted as they develop and test their propositions; Open Banking transaction data to capture objective changes in users' money habits; and credit reference agency data to explore changes in relation to borrowing, debt and credit scores.

In combination, these practical lessons - along with the Challengers' stories and the impact evaluation framework - provide a solid foundation for the future assessment of Grounded Innovation approaches to real-life challenges.

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[19] Back translation is a quality assurance process where translations are compared with the original text for quality and accuracy.

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