

REC, citizen currency **Final report**

B-MINCOME project
November 2019

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From a political programme to a reality

1. Introduction

1.1. From a political programme to a reality

The manifesto of the party that won the municipal elections in Barcelona in 2015 included a pledge **to implement or support the launch of a complementary currency in the city as part of its policy for the local economy.** A year and a half later, the City Council decided to incorporate the creation of the social currency into the European B-MINCOME project, set up to combat poverty in the city's hardest hit areas. **The rec pilot project is the outcome of this project.**

The rec social currency is a virtual currency on a par with the euro that operates in the **ten districts of the Eix Besòs area, in the north western part of Barcelona.** The rec is one of many projects in the area, where the average income of €25,000 per capita is much lower than the average across the city of Barcelona (€35,000). Traders contractually agree to sell at the same price in recs and euros, and the currency is therefore considered to be on a par with the euro.

The rec was designed and launched by the **NOVACT Association** and was 80% funded by the B-MINCOME programme under the European Horizon 2020 **Urban Innovative Actions** initiative, with the remaining 20% funded by **Barcelona City Council**, leader of the B-MINCOME project. Barcelona City Council has supported the REC project in a range of ways.

The currency was launched on 27 September 2018 and has been in circulation for 13 months to the date of this report.

The REC was created as a method **for channelling public expenditure** towards the local economy. **533 families** in the Eix Besòs area spend 25% of the MIS (Municipal Inclusion Support) payment using recs in local, independently managed businesses that are affiliated to the currency, ensuring this spending has a positive effect on the local economy. The area suffers from commercial desertification, with a much-weakened economy.

The businesses affiliated to the REC can exchange them for euros, although the REC management team has worked hard to help them **to spend their recs in the area** wherever possible.

From a political programme to a reality

1. Introduction

1.1. From a political programme to a reality

The plan was to inject **R800,000** into the system over the life of the project. To date **R789,592 has been put into circulation**, of which **R643,532** has been exchanged for euros, generating transactions worth **R901,004**.

As the last rec payment was made just seven days before the date of this report, the monthly figures reported here are to 30 October, just before the last MIS payment on 31 October 2019, in order to compare whole months. The REC is expected to remain in use until at least 31 December 2019.

The initials REC stand for **Real Economy Currency** and in Spanish *Recurso Económico Ciudadano*, and also correspond to Real Economy Currency in English. It is also the name of the city's irrigation canal, the Rec Comptal, which has its source in the Eix Besòs area, where the project is taking place, and provides water to the whole of Barcelona.

Going beyond a specific project to distribute a minimum guaranteed income, the rec social currency was intended to help **transform the city's socio-economic model** and serve as an instrument to generate new economic circuits in the public interest, supporting the transition to a green, circular economy and the eradication of poverty.

This evaluation is made one year and one month after the launch of the REC, because of the last payment in RECS in the B-MINCOME project on the **7th of November 2019**.



Zaida Palet, Álvaro Porro and Martí Olivella in the press presentation of the rec on April 5, 2018

1. Introduction

1.2. The B-MINCOME project and Barcelona City Council

Introduction to the B-MINCOME project

The B-MINCOME project

Barcelona City Council

Introduction to the B-MINCOME project

The REC pilot project was created in association with the B-MINCOME project, which combines an investigation about different forms of a guaranteed minimum income with active social policies in Barcelona's deprived urban areas.

B-MINCOME is a **pilot project aimed at combating poverty and social exclusion**. It forms part of the European Union's Innovative Urban Actions programme and is led by the Planning and Innovation Department of Barcelona City Council's Social Rights Area.

The B-MINCOME project **lasted 36 months**, comprising 24 months of action and assessment (from November 2017 to October 2019), preceded by a year to prepare the pilot design, analyse the situation, and collect and compile data, starting in November 2016.

The aim of the B-MINCOME project was to test the effectiveness (in terms of outcomes) and efficiency (in terms of the implementation costs) of an innovative, integrated policy that combines cash transfers (the Municipal Income Support, or MIS) to help people acquire basic goods and services, with **four active policies to promote social and workplace inclusion**:



training and
employment



entrepreneurship
and the local
economy
(solidarity and
cooperation)



housing
renovation for
refurbishment
and the rental of
premises



community
participation
programme

While ensuring a minimum income, the B-MINCOME project sought to ensure that the participants **could act as freely as possible to strengthen their decision-making** abilities, so they can design their own strategies for getting out of the vulnerable situations in which they find themselves

1. Introduction

1.2. The B-MINCOME project and Barcelona City Council

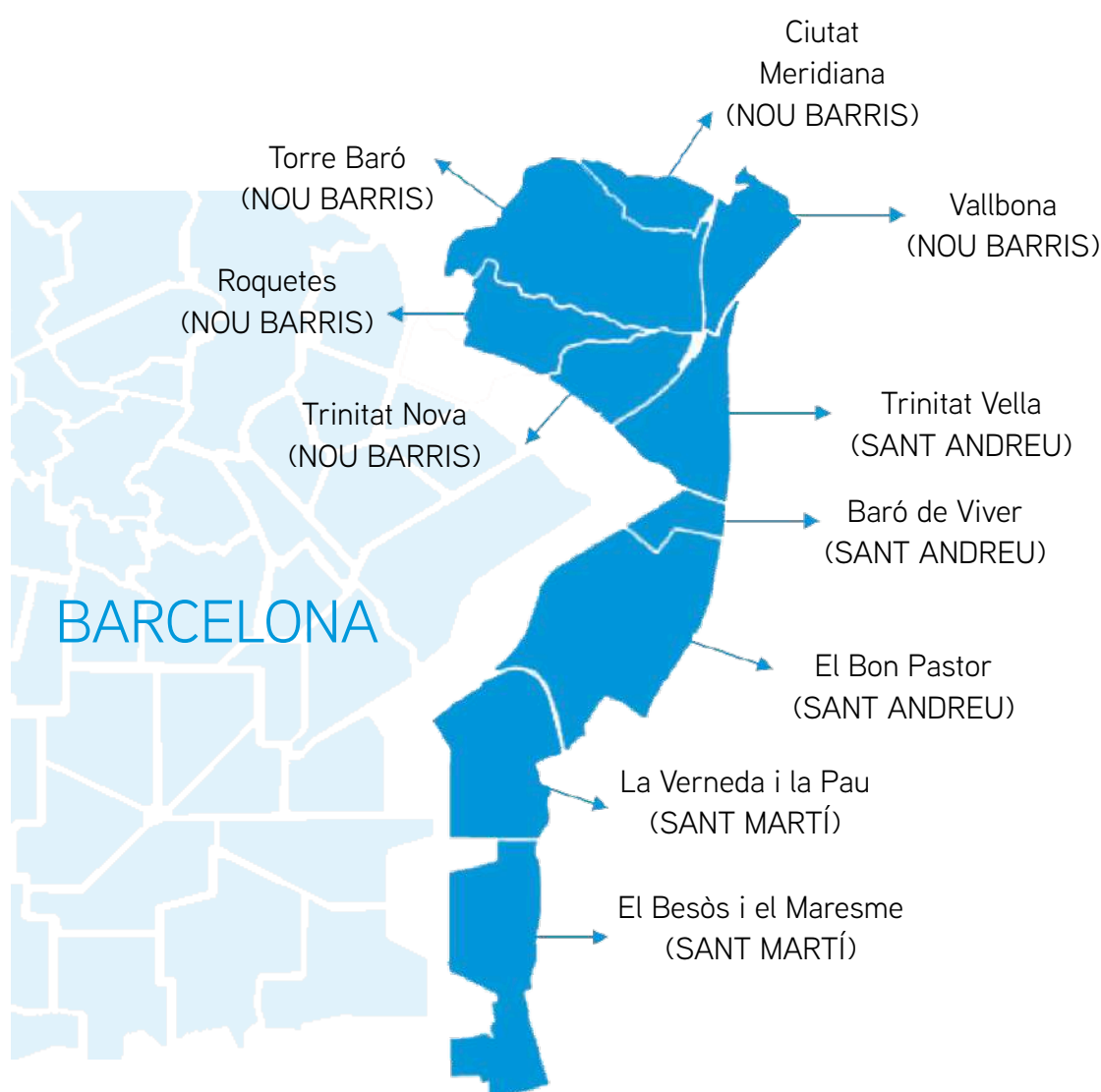
Introduction to the B-MINCOME project

The B-MINCOME project

Barcelona City Council

The aim of the project is to create **an ecosystem to combat poverty and exclusion**: by reducing dependency on public and private subsidies it will enable the participants to become more empowered and independent.

The B-MINCOME project is aimed at **1,000 vulnerable households in the ten districts of the Eix Besòs area** (Ciutat Meridiana, Vallbona, Torre Baró, Roquetes and Trinitat Nova in the Nou Barris area, Trinitat Vella, Baró de Viver and Bon Pastor in the Sant Andreu district, and Verneda-La Pau, and Eix Besòs-El Maresme in Sant Martí), one of the city's most deprived areas.



1. Introduction

1.2. The B-MINCOME project and Barcelona City Council

Demographics of the B-MINCOME project participants

The B-MINCOME project

Barcelona City Council

Demographics of the B-MINCOME project participants



87.73% of participants belong to households where the beneficiaries are of working age (16 to 64).

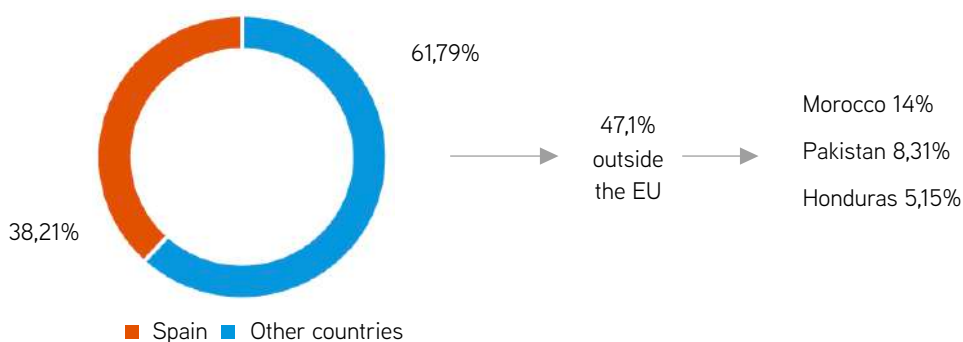


798 women (84%)

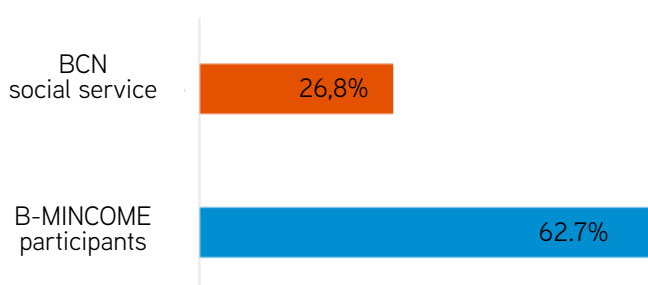


152 men (16%)

Women are overrepresented as most of the people requesting help from social services centres are women (71.5% vs. 28.1% for men) and they have therefore become the default contact person for the B-MINCOME project in each household.



Families of **four or more members**



In terms of the number of members, the most representative households are the 256 households with 4 members (27%), followed by 200 with 5 members (21.1%) and 190 with 3 members (20%).

1. Introduction

1.2. The B-MINCOME project and Barcelona City Council

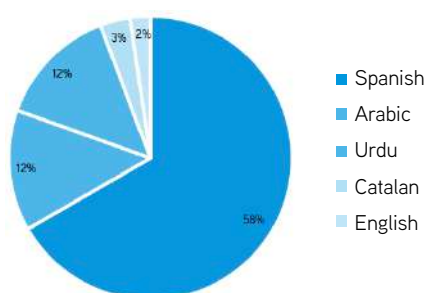
Demographics of the B-MINCOME project participants

The B-MINCOME project

Barcelona City Council

Participants' habits

The REC management team surveyed the B-MINCOME participants when they were giving them training in the use of the payment application, in May 2018. The survey was completed by **315 of the 550 users**, **70% of them women**, who would shortly be receiving payments in recs, providing the following data on beneficiaries' habits:



90% of those surveyed used **a mobile phone**

68% use it **very frequently**

66% use **e-mail**

87% **Whatsapp** is their most used app

60% use **social networks**

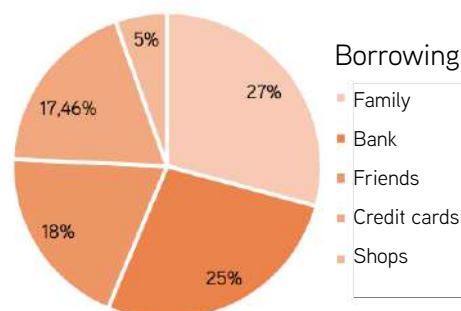
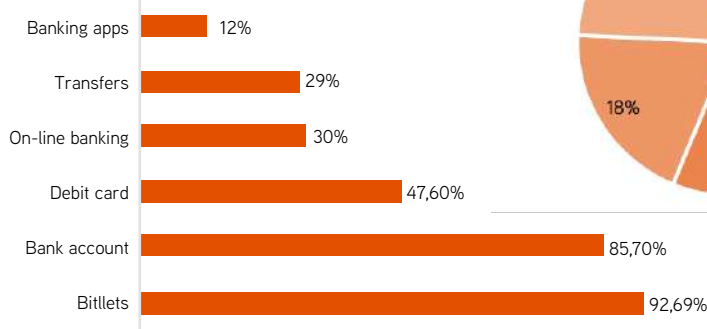
Shopping priorities

1. Quality of the product
2. Price of the product
3. Trust in the business

Type of establishment

1. Local neighbourhood shops
2. local supermarkets
3. Hypermarkets outside the district

Payment methods



21% of users stated that they send money abroad

This survey showed that the use of a payment app to shop locally was not inconceivable for these users, as most of them were familiar with mobile phones, smartphone applications and the use of bank accounts. In any case, the intense training provided in the **use of the payment app**, given to groups of five, ensured that most of the users knew how to use it when it was launched.

It is important to note that Barcelona City Council **lent 100 smartphones**, with a data plan included, to those users who did not have a suitable device or data plan, to enable them to use both the REC payment app and the B-MINCOME programme's own monitoring app.

1. Introduction

1.3. Aim of the rec and questions

Aim of the rec and questions

This self-assessment, carried out by NOVACT as the REC management team, is intended to determine if REC can meet the following socio-economic targets:



1. To be a **usable and functional payment system**, for both shoppers and traders and businesses



2. **To strengthen the network** between residents, entities and businesses to create social cohesion.



3. To ensure **money circulates and stays in the neighbourhood**, kickstarting and strengthening the local

The central question was:

**Is the REC a suitable instrument
for achieving the goals set?**

Our method

Our method for assessing the rec was as follows:

We began by identifying the features of the **local economy, the people and the social capital in place** in the area, together with Barcelona City Council's logistical and bureaucratic limitations, in order to define a **suitable monetary, legal and technological model** for the REC currency.

Once the system was launched, we carried out a qualitative and quantitative continuous assessment from September 2018 to October 2019 in order to track the economic impact, but also to assess the benefits of the social currency for individuals and the community.

A number of evaluation levels were therefore set up with different viewpoints.

The basic aims were:

To understand what **helped or hindered the achievement** of the expected outcomes and impacts related to the social currency and how to improve them.

To analyse the processes whereby the social currency promotes individual, community, business and social empowerment and improvement.

And to understand the scope thereof:

What **effects has the social currency** had on the target population and what can we do to improve?

Are the changes we have seen in the target population due to the social currency? To what extent?

This reference framework was broken down into three stages:

Stage 1: Analysis of the usability and functionality of the currency system and application for users (direct beneficiaries of the MIS and traders).

Stage 2: Analysis of the behaviour of MIS beneficiaries and traders linked to the introduction of the social currency.

Stage 3: Analysis of the circulation of the social currency in the area (economic impact), the local multiplier and other economic indicators.

Our method

Stages 1 and 2: Usability and functionality of the currency and users' perceptions

In **stages 1 and 2**, two surveys were carried out of private individuals (MIS beneficiaries) and traders, together with some interviews to determine usability, familiarisation with and use of the currency.

The **first survey** was carried out in February 2018, when the currency had been in circulation for four months.

The **second questionnaire** was carried out almost a year after the launch of the currency, in early September 2019.

We should also remember that, in retrospect, the **face-to-face training provided** to each user when they were signed up to the app provided us with vital information on potential issues for its usability, which was applied immediately to improve the app as far as possible, within the normal iterative process of making an application more usable.



Face-to-face training to B-MINCOME users

Our method

Stage 3 - local macroeconomic analysis

The focus of attention has been the third stage, given its innovative methodology, and in order to draw conclusions and develop new measures in the future.

Analysis of transactions and circulation in the local economy: the transaction data provided by the system allowed us to study aggregated transaction figures to draw conclusions. This type of analysis does not provide ex ante data.

Public expenditure local economic multiplier: the aim is to measure the local economic multiplier of public expenditure by analysing the first three transactions of the payments of the corresponding city council or public entity. The methodology is called LM3 and was developed by the New Economics Foundation. Pompeu Fabra University was hired to carry out the study.

A detailed analysis was carried out to assess its effectiveness and to allow us to make comparisons between the situation at the start and end of the project.

The methodology used produced useful information for the implementation of future economic measures.

The third stage was structured in two phases:

The first part of the study

analysed the effect of municipal expenditure in the Eix Besòs area compared with data for 2016 (economic subsidies paid to social services users, grants to local entities, etc.), helping to construct an image of the situation prior to the implementation of the citizen currency in the area and establish the bases for comparison with future years.

The second part of the study (2018 and 2019)

reviews the impact of spending in the social currency, with a detailed and specific analysis of the items related to the B-MINCOME project.

An analysis of both the planned reports would enable us to compare the multipliers for each period.

The final result had to allow us to interpret the economic impact of public expenditure in the area before and after the project.

Description of this report

Chapter 2 shows the context of complementary and social currencies and the experiences of various cities around the world, with a special emphasis on those in Western Europe, and then describes in more detail the objectives of the REC in Barcelona.

Chapter 3 describes the organization and costs of the REC.

Chapter 4 describes how users get and spend recs, as well as the dynamics of operation of REC.

Chapter 5 focuses on the results of the REC:

Are the SMI beneficiaries satisfied with the REC?

Are the traders and entrepreneurs in the performance area satisfied with the REC?

Does REC really strengthen the local economy?

Have REC traders been encouraged to try to spend on recs?

Has the expected social effect of strengthening neighborly ties?

In **Chapter 6** there are our conclusions.

2. REC, a Citizen Currency

2.1 Social and complementary currencies – the REC

Social and complementary currencies

– the REC

Social and complementary currencies are payment methods and exchange systems that function alongside conventional currencies, with the aim of bringing about socio-economic change.

As an instrument for promoting trust, boosting the exchange of goods and services between people, they **strengthen the real economy** rather than the financial economy, putting consumers at the heart of the economic cycle.

Social and complementary money systems are designed to boost **the development of the area where they are used**, contributing to the development of local trade and networks of trust between residents and users.

A study of alternative currencies (Blanc, 2018), identified seven types of alternative currency:

Group	Main features	Emergence and examples	Main effects
Group 1	General mutual credit scheme aimed at private individuals.	1983: LETS, SEL	Helping people become independent and creating local social connections based on reciprocity and market exchanges at an individual level.
Group 2	Mutual credit bank between individuals for time-based services.	1973: Voluntary work banks, time bank, Accorderies	Helping people become independent and creating local social connections based on reciprocal exchanges of time.
Group 3	Non-convertible, inclusive local currency	1991: Ithaca HOUR, Trueque, Bangla Pesa.	Promoting an inclusive and local popular economy.
Group 4	Local convertible currency	1998: Palmas, Chiengaguer, Bristol Pound, Eusko.	Promoting an inclusive and local popular economy and changing production, trade and consumption practices.
Group 5	Currencies to reward virtuous behaviours.	2000: NU Spaarkas, Sol, E-Portemonee.	Changing consumption and waste usage practices.
Group 6	Inter-company mutual credit schemes.	Años 1930: WIR i després, a partir de 1990: RES, SARDEX.	Boosting the SME economy and strengthening communities.
Group 7	Crypto-currencies	2009: Bitcoin, Dash.	Promoting exchanges free of the banking framework, official currencies and national frontiers.

2. REC, a Citizen Currency

2.1 Social and complementary currencies – the REC

Social and complementary currencies

– the REC

The REC is a group 4 currency:

As a local convertible currency, the rec falls in the fourth group, but it is referred to as a "social currency" as it is intended to combine the most interesting aspects of social currencies (groups 1, 2 and 3) with those of local currencies (groups 4 and 5). Furthermore, although the initial aim of the REC is to boost the local economy, there is nothing preventing it being used to further other goals.

In general, social currencies tend to be **self-managed and based on trust between members**, in the broader sense, while local currencies are backed by conventional currencies.

The number of cities, neighbourhoods and areas with their own local currencies is growing constantly. These include the Bristol Pound in the UK, the Sol Violette in Toulouse, the SoNantes in Nantes, the Ossetana in the town of San Juan Aznalfarache (Seville) and the Grama in Santa Coloma de Gramenet (Barcelona).



SONANTES
notre monnaie complémentaire

As far as its **governance** is concerned, although the REC has been launched in partnership with Barcelona City Council, in the long-term it is envisaged that it will be managed by a cooperative, the Taula de Canvi, which has been set up to involve the users themselves in its governance, together with other stakeholders, such as traders' and residents' associations.

**TAULA
DE >>>
CANVI**

REC >>>>>>>>
MONEDA <<<<<<<<
CIUTADANA >>

The REC monetary model

Initially backed by the euro, the REC is a **local currency** that is designed to come under **community governance** as a social currency

In regulatory terms, it is a **type 3 virtual currency**, in accordance with the European Central Bank classification scheme . This means it can be bought and sold, and is not regulated in Spain, although the funds backing the rec are held in a regulated entity.

The rec system offers professional users two types of account: **REC currency accounts and euro payment accounts.**

In order to **exchange recs for euros** it is necessary to have a **euro payment account**. This is only available to professional users, who must also act as an exchange point for changing euros to recs. The process of changing euros to recs is thus done via a professional user who acts as an exchange point.

So when **user A** wishes to exchange euros for recs, he/she enters the app and clicks on the **REC recharge button (R+)**, charging the operation to his/her debit or credit card. Then a professional user, who we will call **user P**, who will be the **exchange point** for this operation, receives **an interest- and commission-free loan in recs** from the managing entity. The loan obtained by user P will automatically be paid to user A, representing the requested recs, while the euros paid in exchange by user A will be transferred to **user P's euro payment account**.

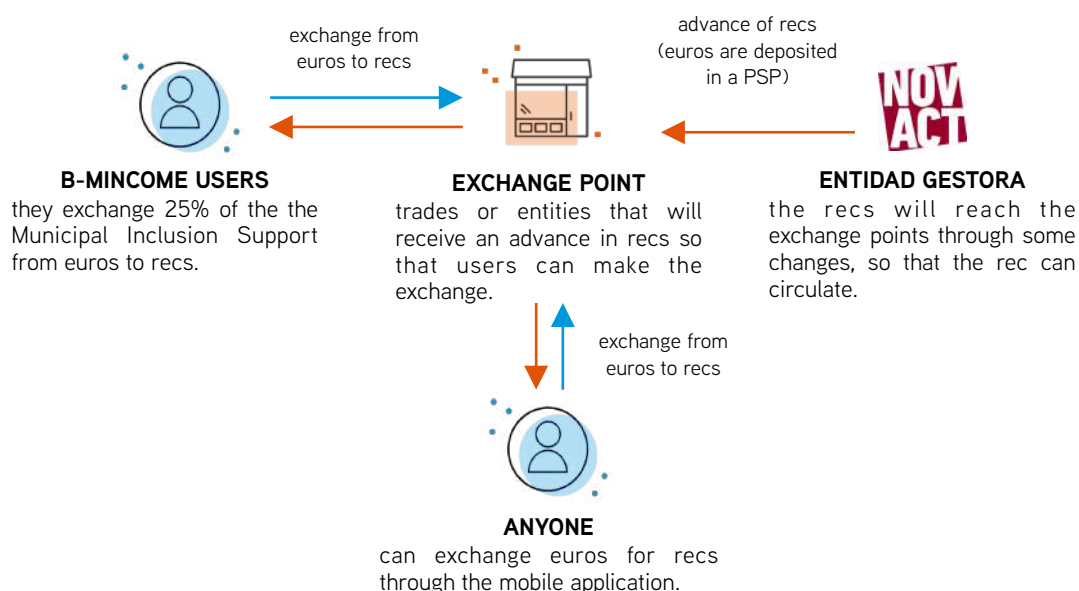
The euros in this euro payment account cannot be accessed immediately by user P until a specific condition has been met. This happens when user P wishes to exchange recs for euros. **Professional users** (such as user P) **must repay the recs** (that have been put into circulation by means of the type of loan mentioned) to the managing entity, and the same amount in euros is paid from the payment account in user P's name in the REC system to the bank authorised by user P.

The euro funds backing the REC are, thus, distributed across the payment accounts of all the professional users in the system. The managing entity just checks to ensure the condition for withdrawing euros from the system is met: the repayment of the recs put into circulation as a loan to professional users.

The REC monetary model

All the users' euro payment accounts, which hold the euros maintained by the REC organisation to back the currency, are with a **payment entity certified** by the Bank of France, a member of the euro system. NOVACT, as the currency's managing entity, is an agent of this certified payment agency.

This ensures **consumers' security in two ways**: the euro funds are held by a regulated entity, with the corresponding security for the user, while the virtual currency is not held by a regulated entity, giving it the flexibility needed to innovate and adapt to the changes in the socio-economic system that may be expected of the REC in future.



As a virtual currency, the REC is a monetary innovation and is not regulated but, as a research project, it is created for the common good. It uses the services of a regulated payment institution for greater consumer protection and has been submitted to the Bank of Spain's Financial Innovation Committee to facilitate greater use of the lessons learned from the project.

The **definition of the REC's monetary model** was drawn up by the NOVACT team with the help of legal experts hired by Barcelona City Council, and it was then reviewed by a **multidisciplinary team of experts**: economists and complementary currency promoters who issued their recommendations at a meeting held in Barcelona on 9 May 2017.

The experts were: Ann Pettifor, Bruno Theret, Esteve Badia, Franco Llobera, Hugo Godshalk, Jens Martignoni, Jim Stodder, Joey Rennert, Jordi Flores, Jordi Griera, Lachezar Dumanov, Lluís Muns, Lluís Torrens, Massimo Amato, Matthew Slater, Sybille Saint Girons and Will Rudick

3. Organisation and costs of the REC

3.1. Organisation

Organisation

NOVACT **took the lead in preparing proposals** concerning the design, implementation, monitoring and assessment of the currency.

Although **decision-making** was shared between the NOVACT currency team and **the council departments directly involved in the project**: Department of Innovation for Social Rights (responsible for the B-MINCOME project) and the Committee for the Cooperative, Social and Solidarity Economy (responsible for the social currency project).



B-MINCOME



Follow-up and publicising

A **project monitoring meeting** was held each month between members of the NOVACT currency team and representatives of the aforementioned departments. These meetings were also **sometimes attended by representatives of other departments**, such as the Department of Trade, or of Barcelona Activa (Barcelona City Council's municipal corporation for local development).

At these meetings, NOVACT presented their proposals based on the project design and implementation work carried out, and the council representatives gave their approval or proposed amendments or new ideas for using and taking advantage of the REC at municipal level.

B-MINCOME management committee

The **members of the B-MINCOME project** met each month to discuss matters requiring coordination between them, in particular how to deal with common challenges such as the delay in obtaining funding, issues related to intellectual and industrial property rights over the output of the project, and how to coordinate studies and research.



3. Organisation and costs of the REC

3.1. Organisation

Organisation

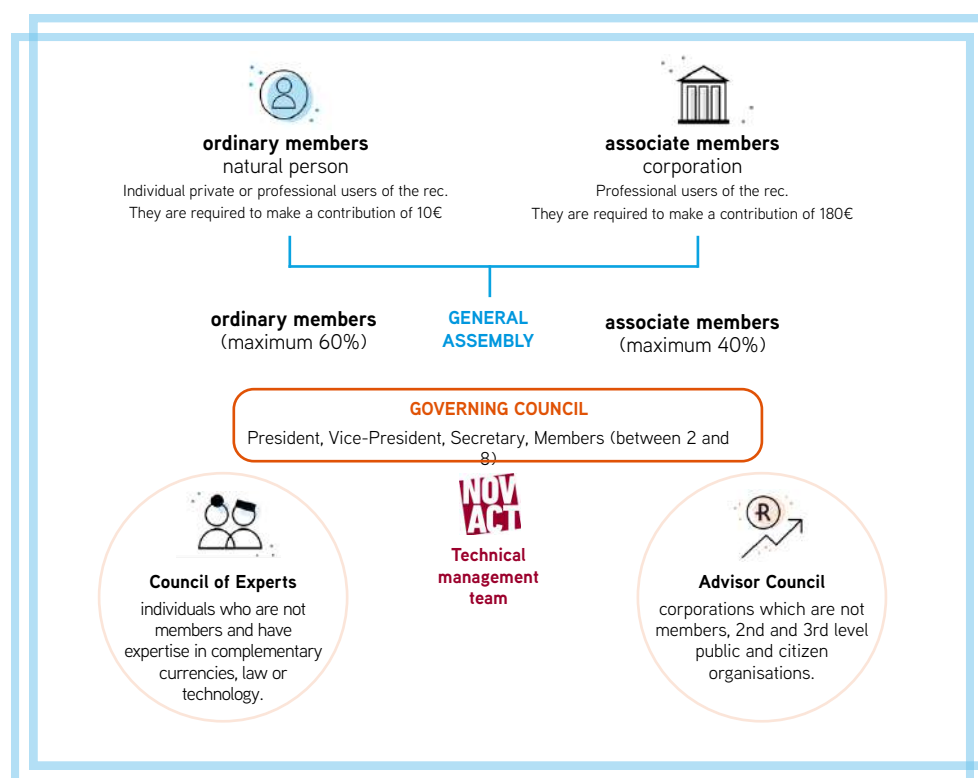
Governance

Barcelona City Council made it clear from the start that, although it would support the project, the **REC would have to be a social currency**.

This was a key condition for the development of the REC. NOVACT is an organisation whose aims include the development of socially innovative projects focused on economic democracy and direct or participative democracy. This work is carried out by NOVACT's "Lab" section, which designed and launched the REC. NOVACT is not, however, sufficiently representative and does not have the appropriate legal status to be responsible for the governance of the rec, and the need to set up a governing body for the currency was understood from the start of the project.

As the **REC is a digital platform**, the legal form deemed most suitable for its governance was a **cooperative of consumers and users** of the REC payment service. Seeking at all times a form of governance that would represent the interests of the public, those invited to participate included REC users, community entities that use the REC, in particular those based in the area where the currency was initially launched, and the REC management team.

This is the Taula de Canvi structure:

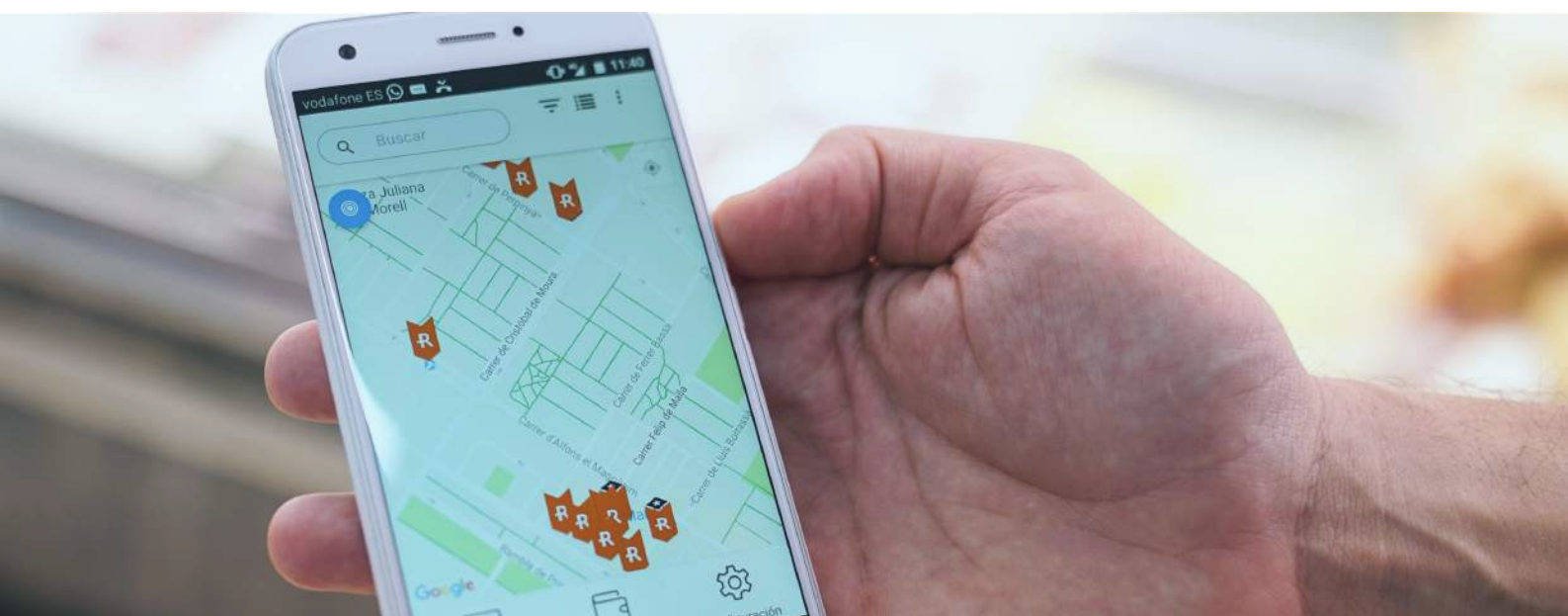


3. Organisation and costs of the REC

3.2. Costs

Costs

Expense	NOVACT	City Council	Total	%
Design	278.519,61€	108.187,88€	386.707,49€	46%
Implementation	160.505,07€	70.200,00€	230.705,07€	28%
Monitoring	82.879,03€	14.533,31€	97.412,34€	12%
Evaluation	115.758,78€	4.598,00€	120.356,78€	14%
Total	637.662,50€	197.519,19€	835.181,69€	100%



4. Earning and spending recs

4.1. Acquisition of recs by individual users

Acquisition of recs by individual users

The most common way for individuals to obtain recs to date is by **exchanging euros for recs**.

In particular, the **beneficiaries of the B-MINCOME project** exchange euros for recs each month as, when they accepted the conditions for participating in the B-MINCOME project, they also agreed to spend part of the MIS subsidy in recs.

This condition, which in legal terms is a charge associated with the subsidy, means 25% of the MIS received by the user in euros must be exchanged for recs, with the REC organisation providing the operational means to enable them to do so.

The operational procedure is as follows:



The Municipal Inclusion Support (MIS) is paid monthly via a prepaid bank card issued in the name of each programme beneficiary. Once this payment was made...



A 25% of the amount received is then charged against the card.



And then, the same amount is then credited to the user's rec account.

Individual users can also earn recs.

Users, who may or may not be linked to the B-MINCOME programme, have two options for obtaining recs: they can charge in recs for goods or services, or they can exchange euros for recs.

There is a function for exchanging euros for recs in the payment app. Users just have to enter the number of their credit, debit or prepaid card. The amount in euros is charged to said account and the same amount in recs is credited to their rec account.

Once an individual user has exchanged or earned recs, they must be spent. The managing entity does **not allow users with individual accounts to exchange recs to euros**, this facility only being available to professional users.

Professional users obtain recs by charging for goods and services

4. Earning and spending recs

4.2. Professional users obtain recs by charging for goods and services

Professional REC users are **legal entities and self-employed traders**. Professional users can obtain recs by charging for goods and services.

In turn, they can:

The **recs can be exchanged for euros** by shops, commercial companies and entities located in the area of the action.

Purchase provisions and inputs or **pay** any user in the system with the recs obtained from their sales.

In general, they are **small, independently-run local organisations** who do not have to consult anyone about purchasing decisions. The REC organisation invited traders, municipal market stall holders, wholesalers and the entities of which it was aware to participate in the system.



The majority of the traders are in the food sector, as the MIS is intended to help pay for basic goods and services

The programme was launched in **September 2018 with 82 traders**. There are currently **175 active professional users** who have joined the programme as it became established.

No professional user has been denied entry to the rec programme, although they must provide certain documentation required by the payment entity in order to have a euro account.

4. Earning and spending recs

4.2. Professional users obtain recs by charging for goods and services

Professional users obtain recs by charging for goods and services

Public authorities charging in recs

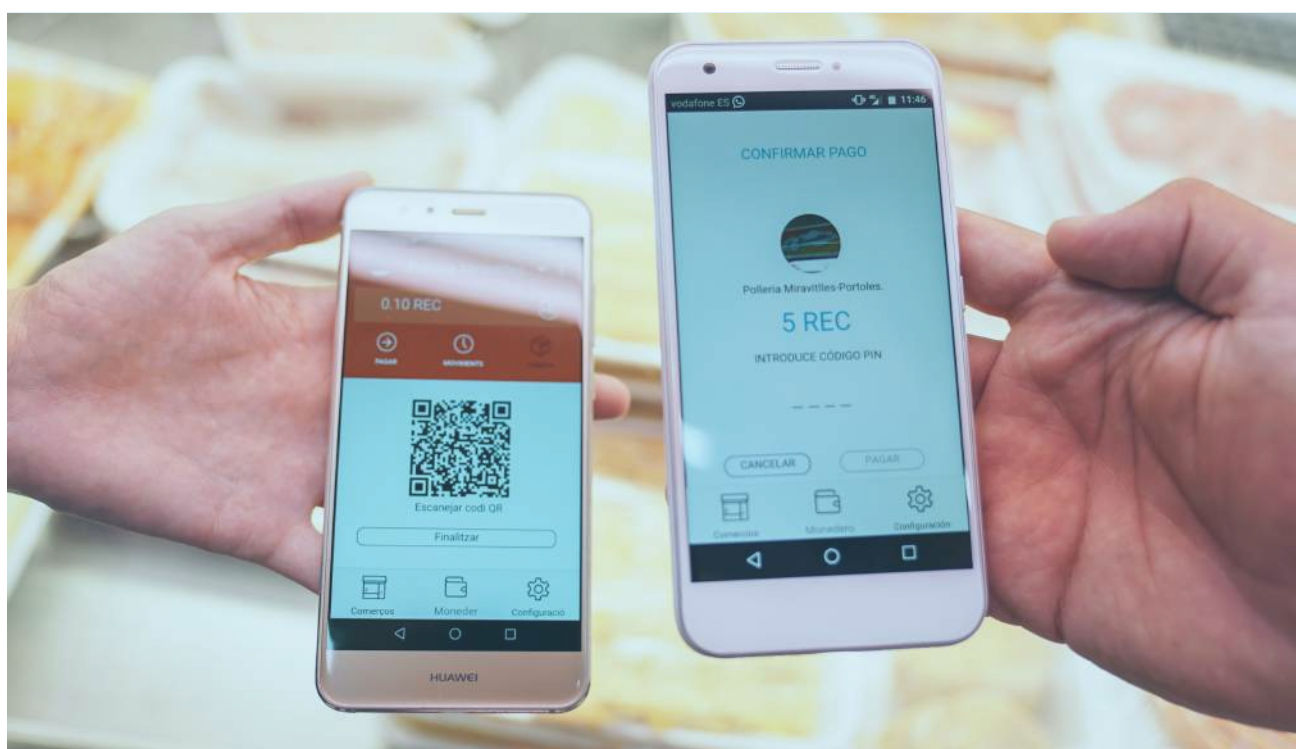
Barcelona City Council does not charge for any services in recs. The REC team has worked hard to overcome the obstacles to the city council's participation in the social currency scheme, preparing a range of proposals intended to adapt the scheme to the council's requirements so that it can participate in the REC payment platform.

These options include allowing users to pay **local authority fees and charges** in recs and the council to receive said payments in euros.

As the **REC platform manages euro accounts** for its professional users with the aforementioned payment entity, it would be possible for the city council to just open an **institutional account** in euros on the REC platform.

The REC payment platform would be responsible for **converting each payment to the council made in recs into euros** paid into the council's institutional account. There is no legal impediment whatsoever to doing this.

To date, the city council has not put this option, which numerous traders and other users have suggested, into practice. This may take place at a later stage.



Professional users obtain recs by charging for goods and services

4. Earning and spending recs

4.2. Professional users obtain recs by charging for goods and services

Les administracions públiques paguen en recs

Barcelona City Council does not make any payments in recs. Public authorities may make use of partner entities to manage certain payments.

The REC platform was initially designed to be a partner entity for the payment of the Municipal Inclusion Support (MIS). The REC payment platform would receive the funds from the council and handle the payment of the Municipal Inclusion Support (MIS) in euros to beneficiaries, subsequently charging them 25% of said amount and paying it into their rec accounts. Numerous management obstacles with the enterprise resource planning (ERP) system used by the council made this impossible.

Barcelona City Council **has included assessment criteria** that reward the use of the REC by grant recipients in the terms and conditions of some of its calls for grant applications.

The council has included this initiative in two calls for grant applications: the general grant application in the field of the **social economy and solidarity as an innovation criteria** and “Impulsem que Fas” (We support what you do) programme of Barcelona Activa, in 2018 and 2019.

5. Outcomes

5.1. Familiarity with the REC and usability

The REC and consumers

Familiarity with the REC and usability

The REC and consumers

This part is 1 and 2 stages of analysis. In general, the average income in recs for individual users of the B-MINCOME programme is R130 and all the comparable usability **indicators improved** between the first and second surveys.

Satisfaction

in September 2019 was **92% (quite or very satisfied)**, 10% higher than when this was first measured in February 2019, after the system had been running for five months.

Ease

In February 2019, **89% of consumers** found the REC payment app easy to use.

Shops

99% of users know where they can spend recs, up on the 84% reported initially.

Consumption

the REC has had an impact on individuals' consumption habits, or their perceptions thereof: **55% in the last survey**, compared with 35% in February. The main change is the switch to small, local shops and markets, followed by the fact that they now buy different products and more of them.

Impact

another impact on consumers is the feeling of helping the neighbourhood economy (87.5% of those surveyed).

Trust

increased trust among consumers towards traders: the REC has helped consumers to trust the traders affiliated to the REC more (**74% in the last survey, compared to 61% in the first**).

Digitization

when asked if the REC had helped them to improve their skills in the use of new technologies, a majority said yes in the first survey (57%), while in the second survey 64% said no.

User help service

the user help service deals with an average of just 16 queries a month from individual users. They are attended mainly by telephone or in person, and the service received a 98% approval rating from individual users. The majority of queries were received in the implementation phase of the REC.

Familiarity with the REC and usability

5. Outcomes

5.1. Familiarity with the REC and usability

The REC and consumers

The REC and consumers

An analysis of the correlations between the responses to the survey reveals two points of note:

1. The users who consider the currency has had an impact on improving the neighbourhood are those who are most satisfied with the REC in general. 7% of those surveyed consider the rec has had a negative or no impact on improving the local economy. Nevertheless, over half of these (53%) are satisfied or very satisfied with the REC currency.

The use of the currency does not, therefore, help or reinforce their perception of how the local economy is performing. Meanwhile, for the 93% of respondents who consider the currency has had a positive impact on the neighbourhood, there is a very significant correlation between this and a high general satisfaction indicator, of over 96%.

2. User satisfaction is also **correlated with changes in consumption** habits thanks to the REC. This correlation is positive and shows a strong, straight-line relationship between the two variables: as one goes up, so does the other.



5. Outcomes

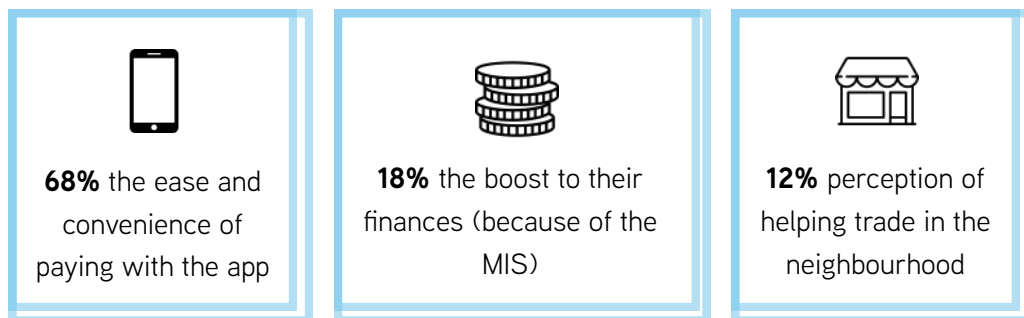
5.1. Familiarity with the REC and usability

The REC and consumers

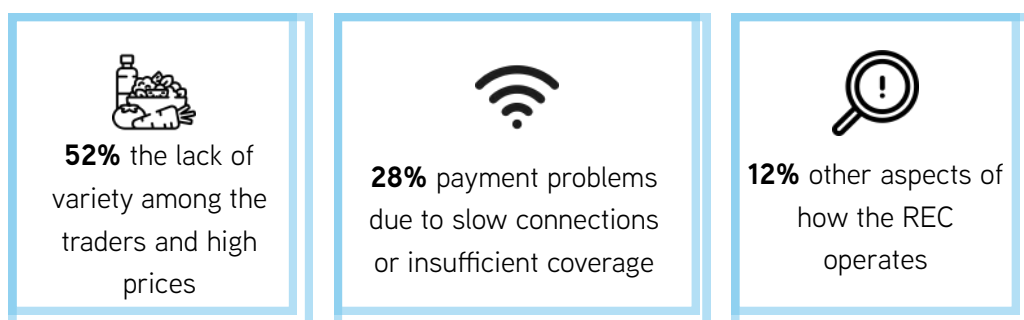
Familiarity with the REC and usability

The REC and consumers

The aspects consumers most frequently highlight spontaneously are



Negative aspects that they mention:



It is important to clarify that in some of the districts covered by the project, **mobile phone coverage** with some of the major operators is extremely poor. The municipal markets have tried to combat this issue with the installation of municipal Wi-Fi networks, but this has not been achieved for unknown reasons.

Apart from the 533 individuals participating via the B-MINCOME project, the number of private individuals who are not linked to any subsidy or the rec management team is very small (**60 individual participants**). Some of these are management staff in businesses associated with the REC, who transfer their wages from the business's professional account to their personal rec account, while others are fans of the scheme.

To date little effort has been made to raise awareness or market the rec to this type of user, as we have prioritised other lines of work.

5. Outcomes

5.1. Familiarity with the REC and usability

The REC and professional users

Familiarity with the REC and usability

The REC and professional users

The REC entered circulation in **September 2018 with 82 associated businesses**, traders who placed their trust in the programme when it did not yet exist. As the REC system became established, the number of active traders rose to **160, including two wholesalers, plus 13 local entities** (associations and foundations based in the rec area), at 30 October 2019. The **food sector** is significantly ahead of all the other sectors in the system in terms of the number of traders, revenues and payments in recs.

The average revenues for active traders in the period
studied was **R5,559**.

Satisfaction

the majority of traders were satisfied or very satisfied with the REC: **88% in the second survey** compared with 80% in the first

Operation

as in the first survey, most agreed they had received sufficient information on **how the REC works (97%)**.

Traders

the percentage that believe they know where to spend recs has slightly increased, **from 77% to 79%**.

System functionalities

professional users rate the functionality of the payment app very highly, in concrete these functionalities:

9,87 out of 10 - the map for locating businesses

9,53 out of 10 - the management of user roles in the business account

It is useful to note that this last feature allows professional users to collect payments using their smart phones, without incurring the expense of acquiring a POS device in order to do so. It also allows other people associated with the business (a shop assistant, delivery worker or co-owner) to collect payments to the business account using their own mobile phones, but not to make payments.

9,20 out of 10 - the use of a QR code to identify users

8,98 out of 10 - the option for advertising special offers

User help service

most contacts with the user help service related to **exchanging recs to euros**, which users cannot currently access automatically from the app (26%). **Professional users' satisfaction with the help service with regard to other matters, e.g. dealing with incidents, is very high (100%)**.

5. Outcomes

5.1. Familiarity with the REC and usability

The REC and professional users

Familiarity with the REC and usability

The REC and professional users

Sales	a majority of traders (66%) state that sales volumes have increased by up to 10% , a figure that has improved since the first survey, when 64% stated that sales volumes had increased by up to 5%.
Customer	a majority of traders (77%) also state that their customer numbers have increased (by up to 10%).
Sales €	however, they have not noticed a significant increase in sales in euros to these new customers: 72% have noticed no increase, although this is an improvement on the first survey, when 84% said they had not noticed an increase.
Digitization	they do not say that the REC has helped them acquire better skills in new technologies (84% gave little or no response to this question).
Consum	they don't consider that the rec has led them to change any of their consumption habits (87%).
Impact	the rec boosts local business. In the first survey, professional users' perceptions were negative (just 46% thought the rec boosted local businesses). In the second survey, however, this had changed and now a majority of traders consider that the REC has boosted local trade
Spending recs	with regard to the options for spending the recs they collect, in the first survey professional users reported that they would like to be able to pay suppliers and utility companies in recs (45%), as well as local fees and taxes (40%) . The REC management team is working on ways to advise professional users on how to pay wages in recs, an idea which has not yet been put to the network of professional users.

5. Outcomes

5.1. Familiarity with the REC and usability

The REC and professional users

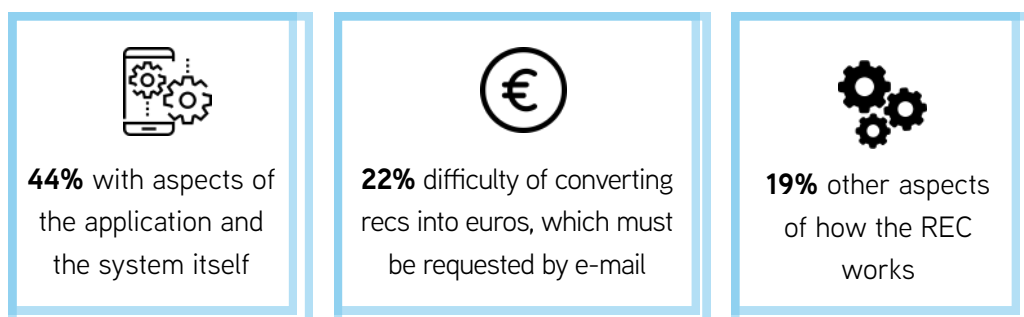
Familiarity with the REC and usability

The REC and professional users

The **positive aspects** of the REC that professional users highlight are firstly:



38% of users could not think of any negative points to highlight. As **negative aspects** they mention:



A comparison of the survey data with the transaction data in the system reveals the following:

1. The professional users who collect the **highest amounts in recs** have the **highest levels of satisfaction** and stronger perceptions that the rec is helping the local economy.
2. It is also notable that traders could be **undervaluing their revenues in recs** when they respond to the surveys. When we cross-referenced the survey responses and the turnover figures in the system,

we found 22 establishments (28.57% of respondents) who stated that they had not noticed any increase in turnover thanks to the REC, although they had collected a total of 33,632.68 recs. These 22 establishments had collected an average per shop of 1,528.75 recs, equivalent to 127.39 recs per month. The same occurred with the first survey, when 27 establishments (35% of the total) had collected to that date 33,714 recs, or 250 recs per business per month.

These traders therefore believe that the REC has had no impact on their turnover, but the system data points to this not being the case. This could be because the traders see that the customers **who spend recs in their shops are the same customers who previously spent euros and spent the same amounts**. We do not have sufficient data to assess this possibility.

5. Outcomes

5.1. Familiarity with the REC and usability

Trust and improved community relations

Familiarity with the REC and usability

Trust and improved community relations

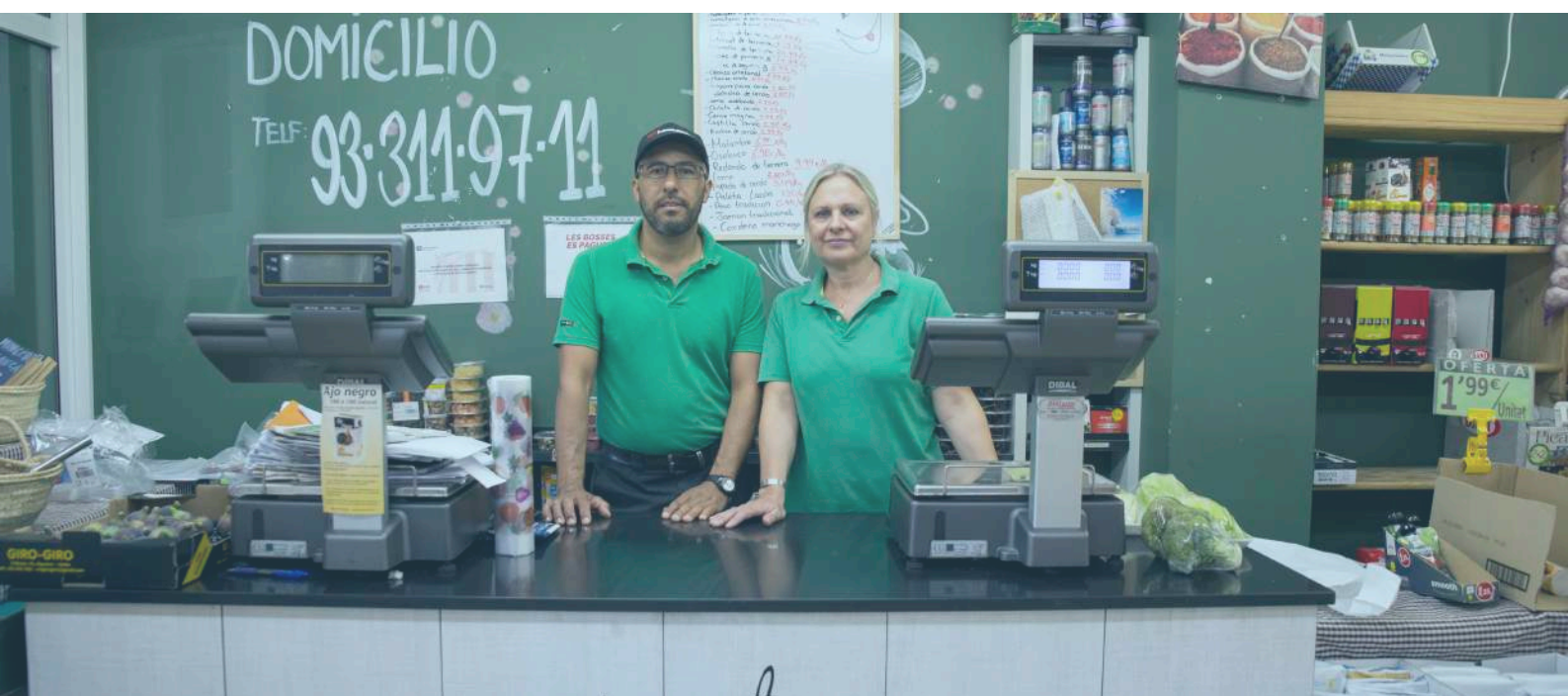
The system has not had the same impact on the different groups involved.

Individual **users associated with the B-MINCOME programme** state that the rec has given them greater confidence in the traders linked to the REC (74%).

The traders, however, **do not have similar perceptions**, with 60% stating that the rec has not helped them to establish a relationship of trust with consumers.

Clearly, however, given the time constraints of the project, it has not been possible to expand the opportunities for participation provided by the REC. The REC management cooperative was only set up three months before the date of this report.

The REC management team, meanwhile, suggested working in coordination with one of the B-MINCOME project's active policies on community action and entrepreneurship in the social and charitable economy in order to encourage the development of a platform for social interaction which would include traders. For a number of reasons external to the management team, however, this coordination was not achievable.



5. Outcomes

5.2. The impact of the REC

The impact of the REC

The REC system has been implemented through:

789.592 R

have been injected
to the Eix Besòs
area

643.532 R

was exchanged
into euros

901.004 R

worth of
transactions were
generated

5,71

average circulation
rate

from 1,91 to 2,95

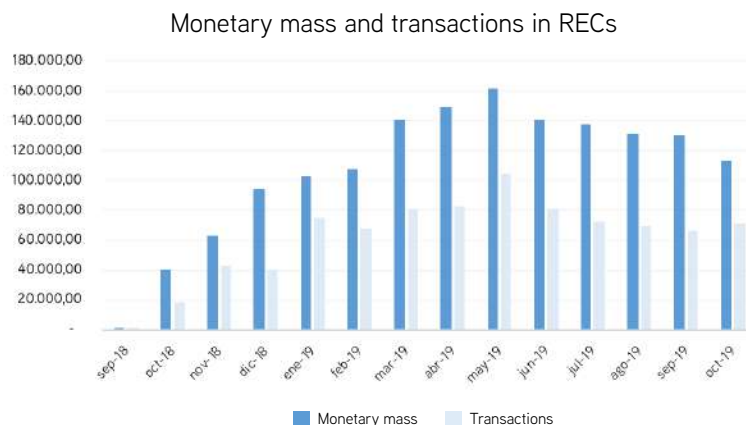
the public expenditure
local economic
multiplier rose

5.559 R

businesses have
collected on
average

Higher sales

The chart below shows the monetary injections and transactions by month.

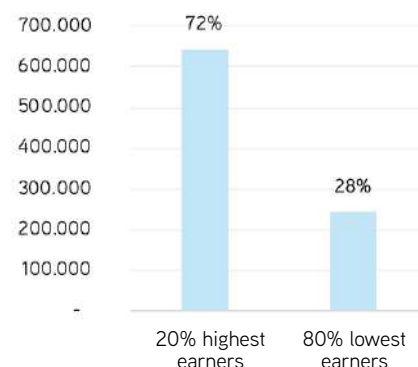


Businesses have collected on average **R5,559**, but the median is **R2,035**, suggesting a concentration of revenues.

This **concentration** can be seen in the fact that 20% of the businesses collected 72% of the revenues, as this chart reveals.

The sector with the **highest revenues** in recs was the food sector, at 74% of the total, followed by pharmacies (7%) and supermarkets (5%).

Distribution of revenues in recs



5. Outcomes

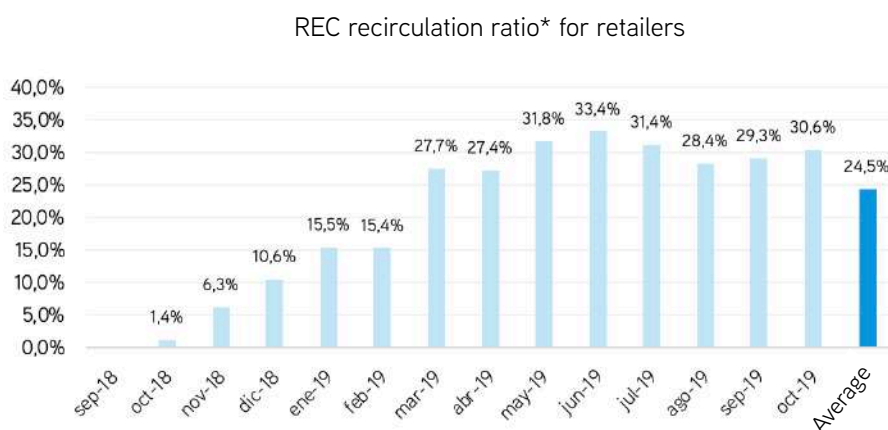
5.2. The impact of the REC

The impact of the REC

Recirculation

At the start of the project traders **were only recirculating 1.4%** of the recs collected, but at **its peak 33%** of the recs collected were being recirculated. This indicates that REC users are finding it easier to spend them, with more options for spending them, including two wholesalers in the food sector.

The **recirculation ratio** shows spending in recs as a proportion of the revenues collected in recs by professional users. The following chart shows this ratio, calculated for retail professionals, clearly climbing, going up in almost all of the 13 months since the system was launched in September 2018.



(*) Recirculation: spending by retailers as a percentage of the revenues collected by these users.

This ratio has increased thanks to **NOVACT's efforts to find suitable wholesalers** to supply the retail professionals in the REC system, two companies with this profile having agreed to join the system.

However, when this ratio is calculated for all professional users (including wholesalers) it peaks at **just 26.6%, dropping** in particular towards the end of the project, as the wholesale users are not able to find anywhere to spend the recs collected for the time being.

A report on the options **for paying wages in recs** is currently being prepared. In the absence of an existing legal framework, this will be based on a number of legal studies. Once this study is completed and can be distributed to REC users, we hope it will have an impact on the recirculation of the REC. However, the first survey of professional users showed that they are most interested in being able to use recs **to pay public authority charges**.

5. Outcomes

5.2. The impact of the REC

The impact of the REC

Recirculation

The sectors that recirculate most are

Bars and restaurants
50% of their revenues

Cultural sector, bakeries, home improvements and other services
between 30% and 34%

Although it must be noted that, while the recirculation rate of the **foodstuffs sector** is lower, at 25%, in absolute volume terms it **is ten times greater** than the aforementioned sectors put together.

Reverse changes (recs to euros)

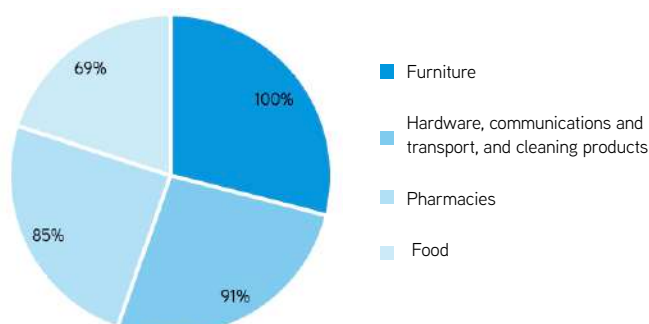
We should stress that there are no obstacles to businesses exchanging recs to euros, except perhaps the slight inconvenience of having to send an e-mail to the REC help service to request it, stating why they **need the euros to:**



There is no penalty attached to exchanging recs for euros or to the non-use of recs held (negative interest rates). All the payments made by traders in recs have been of their own volition, having been encouraged by the REC management team to use them to make payments to other businesses affiliated to the REC for the good of the system, with no additional bonuses.

The sectors with the highest reverse change rates are:

It is also useful to note that the reverse change rate is **probably inversely related to the injection of recs**, i.e. just injecting recs into the system makes the reverse change rate fall.



5. Outcomes

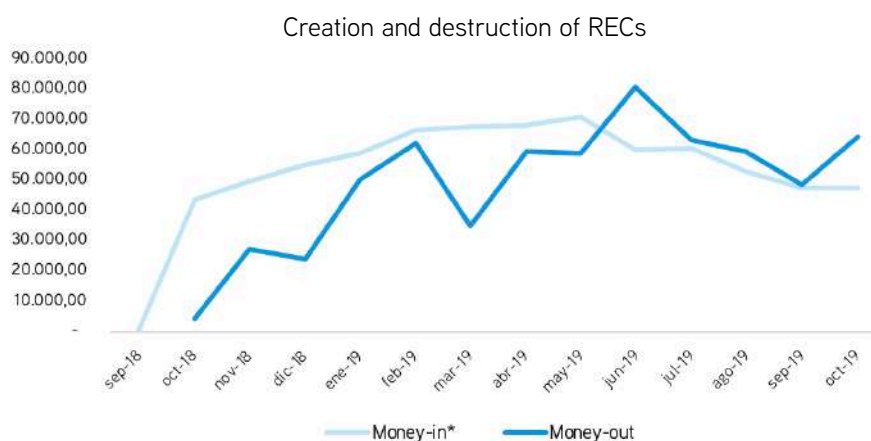
5.2. The impact of the REC

The impact of the REC

Reverse changes (recs to euros)

We have analysed the REC monetary mass figures over the period. The following chart shows the **rates of creation and destruction of RECS** over the ten months since the rec entered circulation.

The **creation of RECS**, or money-in, generally takes place when users change euros for recs. The **destruction of RECS**, or money-out, is the inverse process and occurs when recs are withdrawn from circulation when professional users ask the rec management entity to change them for euros.



The chart above shows that after nine months, **in May the monetary mass stopped growing** as the volume of recs created no longer exceeded the destruction rate. Although **the creation and destruction of RECs realigned in July**, allowing the monetary mass to stabilise once more, it is too soon to know if this trend will continue or if further destabilisation will occur.

It should be recalled that **the creation of RECs at the moment is almost 100% dependent on the city council's requirement that B-MINCOME programme participants exchange 25% of the Municipal Inclusion Support** payment they receive into recs to spend them in the local economy.



5. Outcomes

5.2. The impact of the REC

The impact of the REC

The REC's circulation speed

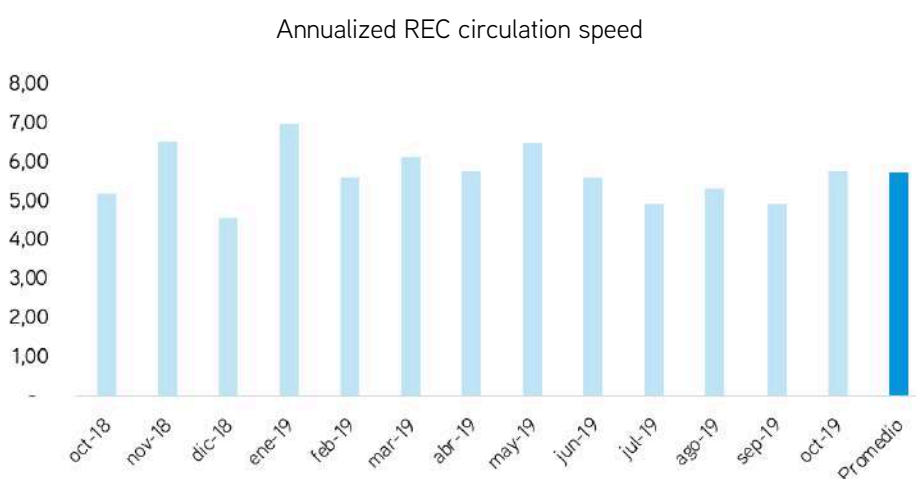
The design of a monetary system requires mechanisms to ensure circulation. The speed of money circulation is an **indicator of the functioning of a monetary system**. For example, in the conventional monetary system, financial crises are often accompanied by a fall in the speed of money circulation. A stable speed of circulation reflects a well-functioning money system.

A study on **the speed of circulation of various social and complementary currencies** (Rosa and Stodder 2012) analyzed the value of the speed of circulation of various currencies.

The REC with a **circulation speed of 5.71** would be at an intermediate value.

Among the fastest are the Palmas (Brazil) which records values of 13.5 or the Chiemgauer de Bavaria with 11.50, in the upper range.

In the lower range, the Bristol Pound, with a speed of 0.79 would be one of the slowest, passing through other currencies such as the Swiss WIR, with a speed of 2.69. At the time of this study, 2012, the euro in Spain had a circulation speed of 0.50.



This graph shows the velocity of circulation of the REC **calculated as the sum of transactions for each period divided by the average money supply for the period and multiplied by 12 to annualize the monthly values**, except for the last value which is the velocity of circulation for the last 365 days calculated as the sum of transaction volumes for this period (November 6, 2018 to November 6, 2019) divided by the average money supply for the 365 days.

5. Outcomes

5.2. The impact of the REC

The impact of the REC

The public expenditure multiplier

The public expenditure economic multiplier **rose from 1.91 as calculated for 2017 to 2.95**, calculated using the transaction data available for the first nine months the REC was operating (October 2018 to October 2019).

This means **the economic impact of local public expenditure in the ten districts of the Eix Besòs area where the project was implemented increased by 48%**, representing additional aggregated income of €728,000 in terms of projected spending.

Public expenditure in the area	Initial multiplier	Initial economic impact	Multiplier at the end of the project	Economic impact at the end of the project	Increase in economic impact
800.000 €	1,91	1.528.000 €	2,95	2.360.000 €	832.000 €

The multiplier has risen month-on-month, as the following table shows. The **Pompeu Fabra University team** that calculated the local monthly economic multiplier decided to weight the recs injected into the system each month by the number of days the recs remain in circulation, their capacity to generate transactions varying accordingly.

	Rec money-in operations	Total transactions	Monthly multiplier	Cumulative monthly multiplier	Days in the month in circulation	Days in circulation recs	Weighted multiplier
sep-18	41.379	53,44	1,00	1,00	6	402	1,00
oct-18	51.861	26.435,89	1,51	1,28	31	396	1,31
nov-18	55.041	41.720,58	1,76	1,46	30	365	1,60
dic-18	58.545	64.413,91	2,10	1,64	31	335	1,93
ene-19	66.933	54.508,45	1,81	1,68	31	304	2,07
feb-19	2.592	57.156,19	23,05	1,88	28	273	2,27
mar-19	132.999	97.489,65	1,73	1,83	31	245	2,50
abr-19	71.192	89.656,79	2,26	1,90	30	214	2,64
may-19	59.892	94.381,36	2,58	1,97	31	184	2,77
jun-19	59.671	76.002,98	2,27	2,00	30	153	2,82
jul-19	53.596	85.555,32	2,60	2,05	31	123	2,90
ago-19	47.076	56.251,69	2,19	2,06	31	92	2,89
sep-19	47.986	72.524,59	2,51	2,09	30	61	2,93
oct-19	41.446	61.416,46	2,48	2,11	31	31	2,95
TOTAL	790.208	877.567,30	2,11		402		

Calculation made by Pompeu Fabra University (from September 2018 to June 2019) and by Novact as the managing entity of the REC system (from July 2019 to October 2019) following the same methodology used by Pompeu Fabra University, based on the transaction data of the REC system.

6. Conclusions and Evaluation

6.1. Conclusions

Conclusions

The REC user surveys show satisfaction with its usability and how the REC works is rising, reaching:



92% among consumers



88% among professionals

with a perceived **positive impact on both the local economy** and most of the participants.

**The REC has been a factor
in changing consumers' habits**

in favour **of buying more in small, local shops**, although this change in consumption habits has not occurred for most of the traders in the system. Traders, meanwhile, do note improvements in their sales and in the local economy in general, and consumers feel they are contributing to the economy of the neighbourhood.

Over the thirteen months of the pilot:



**a trade income
average of more than 5.559R**

in a growing number of shops, which have doubled since the beginning of the project, with quite a concentration in the food sector, and in a group of shops (20% of the professional users who received the most, receive 72% of the total recs), but which reach all sectors.

The local economic impact of public expenditure has increased by 54%

as the public expenditure economic multiplier rose from 1.91 as calculated for 2017 using data on subsidies received in 2016, to 2.95 calculated in October 2019 using rec transaction data.

6. Conclusions and Evaluation

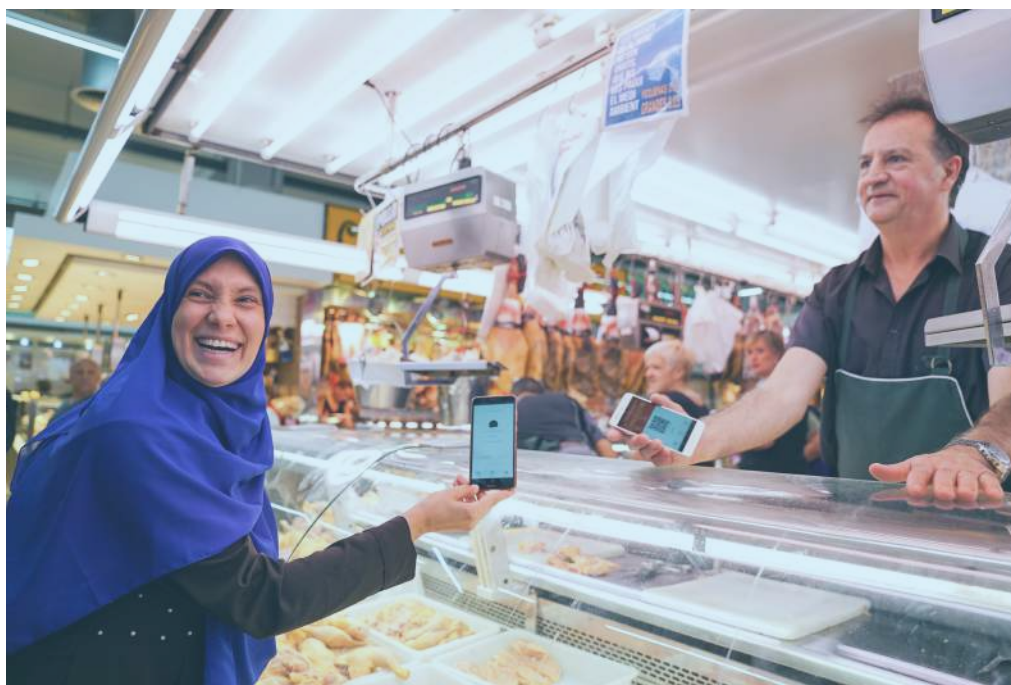
6.1. Conclusions

Conclusions

This growth **in the public expenditure economic multiplier needs to be put into context**: in just over a year and with an injection of public expenditure of just **€800,000** (the amount channelled using the REC), the economic impact on the area has increased by **€832,000**. This increase in aggregate income is almost equivalent to the cost of implementing the REC programme over three years, which amounted to €835,932.

If just 10% **of the city council's annual expenditure in grant** (40 million euros) were channelled via the social currency, the aggregate income increase generated in the area would be over **4 million euros**, even if the multiplier did not increase in line with the additional channelled expenditure, although such an increase would be more than likely.

If the cost of this payment service amounted to **2.75% of the channelled expenditure**, all the REC system operating costs would be covered, making it immediately viable (this cost for the City Council would be a 2.6% increase of the economic impact in the local economy).



Conclusions

The Pompeu Fabra University report on the multiplier concluded:

Despite the impossibility of conducting a study of the rec exchange circuit over a longer period, the results are clear and encouraging with a view to extending the scope of the pilot project implemented in 10 districts of the city of Barcelona, involving a small number of participants and a very specific mechanism for the entry of recs to the system (...) It can thus be stated that payment of part of the benefit in social currency (even the small amounts paid in the B-MINCOME pilot scheme) has a clear positive effect on the area's businesses, encouraging spending in local shops. If the multiplier reaches these values with the high rec withdrawal rates described, the possibilities of a payment system in social currency in which there are penalties linked to non-use and/or restrictions on the conversion of recs into euros are very encouraging.

The Pompeu Fabra University report also highlighted the importance of **bringing wholesalers into the system**, which was key to boosting transactions between businesses (B2B) and the growth of monthly activity rates in the circuit, **suggesting a positive outlook for the future viability of the system**. It also recommended increasing the number of individual users in the system, **encouraging more business to consumer (B2C) transactions**, e.g. by paying part of employees' wages in social currency as this would have a knock-on effect on C2B transactions, as the recipients of said wages would spend them locally in turn, and bringing more bars and restaurants into the system to stop transaction volumes falling on Sundays.

Other recommendations based on a quantitative analysis of the figures were not considered viable once the practical situation on the ground had been examined, e.g. the recommendation to increase the number of professional users in some districts, where effectively such businesses do not exist, and cannot therefore be invited to join the system.

The possibility of introducing **a penalty for exchanging recs to euros** to reduce such exchanges and encourage businesses to spend their recs, meanwhile, requires further study before putting it into practice, given the profile of the professional users in the REC system, in an area prone to commercial desertification.

6. Conclusions and Evaluation

6.2. Evaluation

Evaluation

The question we asked ourselves when assessing the REC was:

**Is the REC a suitable instrument
for achieving the goals set?**

The aims of the project were:



To provide a usable and **functional payment system**, for both shoppers and traders and businesses. .



To strengthen the network between residents, entities and businesses to create social cohesion



To ensure **money circulates and stays in the neighbourhood**, kickstarting and strengthening the local economy..

We must conclude that the REC has clearly been a **suitable instrument for achieving two out three of these goals:**

to be usable and functional for shoppers, traders and businesses, and to strengthen the local economy, boosting the economic impact of public expenditure and bringing more money into the area.

With respect to strengthening the **network between residents**, entities and businesses to create social cohesion, we must recognise that this has not been achieved during this pilot project, principally due to its short duration and the impossibility of carrying out specific measures to achieve this aim.

It is important to note that, normally, **improving neighbourhood relations is one of the aims achieved with social currencies** (Blanch 2018 and Oliveras 2017) and, indeed, consumers have reported higher levels of trust in the local traders affiliated to the REC, which is a good starting point for work in this area in the future.

R REC>>>>>>>>
MONEDA<<<<<<<<
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B-MINCOME

