

A Work Project, presented as part of the requirements for the Award of a Master's degree in Management, from the Nova School of Business and Economics.

A consulting project, part of the Consulting Labs, for Câmara Municipal de Cascais, with the topic:

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# **IMPLEMENTATION OF A LOCAL DIGITAL CURRENCY IN CASCAIS, ENHANCING ECONOMIC, ENVIRONMENTAL, SOCIAL AND HUMAN SUSTAINABILITY**

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Work project carried out under the supervision of: Professor Constança Monteiro Casquinho

17-12-2021

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## Abstract

The Consulting Project focuses on the “Implementation of a Local Digital Currency in Cascais, Enhancing Economic, Environmental, Social and Human Sustainability”. The work project includes model design, pilot establishment, partners and citizens value proposition, Town Hall processes and financial projections. To perform an in-depth analysis and provide valuable recommendations, external and internal analysis were conducted, as well as hypothesis testing (using co-creation meetings, surveys, personas design and data analysis). The outcome is a set of recommendations developed for partners, consumers, and for the Town Hall. Finally, to ensure the long-term success of the pilot, an action plan was defined.

To successfully implement a local digital currency in Cascais, the pilot phase of the project should be monitored. The monitoring can be done using a Balanced Scorecard, which defines the goals of the project, key performance indicators as metrics of success of these, and initiatives to achieve them. Additionally, an estimate of the financial investment required was performed, aiming to assess how these can vary according to different scenarios in terms of uptake and duration of the pilot. Finally, as a step to move the project to the scale-up phase, Cashcais should be registered as a virtual asset in BdP.

**Keywords** | App, Cascais Town Hall, Circular Economy, Citizenship, Consulting, Digital Transformation, Economics, Environment, Health, Implementation, Local Currency, Minimum Viable Product, Network Effects, Pro-Environmental Rewards, Strategy, Sustainability

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We also thank the Jury President, and Discussant, for their presence in the thesis defense and the time to analyze our work project.

Finally, we are thankful to our families and friends who always supported and encouraged us.

## Glossary

**AML/CFT:** Anti-Money Laundering / Combating the Financing of Terrorism

**BdP:** Banco de Portugal

**BMC:** Business Model Canvas

**BSC:** Balanced Scorecard

**CC:** Cascais

**CI:** Confidence Interval

**CMC:** Câmara Municipal de Cascais

**CP:** City Points

**CRM:** Customer Relationship Management

**Economic Sustainability:** Sustainability of economic capital, that is, maintaining capital

**Environmental Sustainability:** Refers to the maintenance of natural capital and to the human impact

on natural systems.

**Human Sustainability:** Sustainability of human capital, constituted by health, education, skills, knowledge, leadership and access to services

**IRS:** Imposto sobre o Rendimento das Pessoas Singulares

**IT:** Information Technologies

**KPI:** Key Performance Indicators

**Leads:** People who are potentially interested in buying your products or services

**ME:** Margin of Error

**NMS:** Nova Medical School

**ROI:** Return on Investment

**SCQA:** Situation, Complication, Question and Answer

**SGDs:** Sustainable Development Goals

**SME:** Small and Medium Enterprise

**Social Sustainability:** Sustainability of social capital, constituted by investments and services that create the basic framework for society (shared values and equal rights)

**VS:** Versus

Note: due to the client preference in having the output in Portuguese, the native language of the City Hall workers, some details of the workproject are in Portuguese as they could not be translated and were the final product delivered to the client. The main language of the workproject is English (United States).

## A diagnosis and a deep internal and external analysis enabled the development of a set of recommendations with the purpose of answering the main question surrounding this project

### Executive Summary

- The project was a **consulting lab**, supervised by Professora Constança Monteiro Casquinho with the duration of 4 months. In deep collaboration with **Câmara Municipal de Cascais**, advances were made to answer the question **“Should CMC create a local digital currency, Cashcais, to promote economic, environmental, social and health sustainability?”**.
- The **goal of this project** is to advise and plan the implementation of this digital local currency with the aim of **stimulating not only the local economy**, but also promoting **environmental, social and human sustainability** in the Cascais municipality.
- Firstly, a situation analysis was made, and various frameworks were studied to understand the **current internal and external environment** surrounding CMC. Afterwards, an in-depth study of the project was made through **an issue tree analysis**. The **deductive reasoning** allowed to determine the internal drivers that led CMC to create Cashcais, and the **inductive reasoning** dictated the line of actions CMC should follow, with some of **the key hypothesis** deeply analyzed subsequently.
- In order to **formulate the strategy**, the opinion of Cascais citizens regarding this project was taken into account, through a **survey** launched all over CMC’s social accounts. The results obtained with this survey allowed **to gather contacts of citizens** who expressed their interest in the project. Furthermore, it also served as basis for a clearer **segmentation** of the people **for the pilot program**, along with a statistical approach to all variables that should be studied in order to maximize the project’s overall success.
- This analysis and diagnosis enabled the development of a **set of recommendations** which were divided into the different groups of stakeholders of this project: **partners, consumers and Town Hall**. The recommendations for the partners included an **onboarding process, sustainable certification** and **payment process**, whereas for the customers an **incentive system** and a **marketing strategy** was suggested. Finally, for the Town Hall, the recommendations covered the guidelines for the **integration of current programs, an antifraud strategy, the legal process and project monitoring**.

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# The cooperation between CMC and Nova SBE benefits both parties, sharing a common goal to bring this project to life

## A.1. Project Methodology | Introductory Note

**OVERVIEW** | This master thesis is the result of a project from the **Consulting Labs** - team-based work projects that work on real-life projects from real-life clients who seek recommendations. In this case, it is a mutual beneficial **collaboration** between Nova SBE Master students, working as a consultants, and **Câmara Municipal de Cascais**, who is the client. On the one hand, the team can benefit from a **hands-on-approach in consulting**, being able to apply the concepts learned throughout the Master course. Furthermore, the team has the chance to **deepen its knowledge in such a nationally and internationally recognized municipality**, as well as the opportunity to **learn from highly qualified professionals**. On the other hand, CMC can have an **external unbiased analysis** on its innovative project and take advantage of the insights and problem-solving skills of young recent-graduates. Overall, promoting a fruitful and valuable relationship between both entities.

**OBJECTIVE** | The team was asked to design the **implementation plan** in order to **launch the pilot project of a local digital currency, Cashcais**, whose viability had been previously analyzed by two previous Nova SBE teams.

### Nova SBE Team



Filipe  
Gonçalves



Madalena  
Fernandes



Margarida  
Damas



Pedro  
Mello Vieira

**Advisor:** Professor Constança Monteiro Casquinho

### CMC Team

- Deputy to the Mayor's Office: Ms. Anceliana Ramos
- Advisor: Ms. Inês Proença
- Advisor: Ms. Mafalda Silveira

### CMC Board

- President of Town Hall: Mr. Carlos Carreiras
- Head of Future: Mr. Marco Espinheira
- Councillor: Ms. Carla Semedo
- Concillor: Ms. Joana Pinto Balsemão

## Previous projects identified the three main objectives and a set of recommendations guiding the development of the local currency, Cashcais

### A.2. Project Methodology | Previous Thesis Goals and Recommendations

#### Context

This implementation project follows two consulting field labs. The first team found a solution that spoke of two objectives: **to boost the local economy and increase municipal sustainability** (environmental and social). The second team added a third goal: **to reduce social asymmetries**.

It was concluded that the Cascais Town Hall **could achieve these objectives through its own local currency – CASHCAIS** – and it was decided that the local currency would be implemented at the end of 2021.

Cashcais is the **first digital currency of the municipality**. It is a 100% digital solution that works through a mobile application. The app will allow all its users (i) access the different ways to earn Cashcais, (ii) access the balance through a virtual wallet, (iii) access a market where they can find out about the partner companies.

Team  
Fall  
2020

#### Thesis Goal

Study the viability of Cashcais, for which the team conducted both internal and external analysis to understand local consumption

#### Main recommendations

1. Replacement of the City Points program whose performance is low
2. Include the solidarity card
3. Constant advertising to drive the project
4. Team dedicated to Cashcais project

Team  
Spring  
2021

Implement a solution that can simultaneously stimulate local economy and encourage sustainability

1. Scale the model, involving more participants, focusing on:
  - a) Value proposition for both stakeholders (consumers and companies)
  - b) Tourism as a way to scale and promote the local currency
  - c) Technology to improve the experience
2. Achieve financial sustainability

## A literature review was made based on experts' analysis and frameworks which provided reliable and well-founded sources to support the project methodology and final recommendations

### A.3. Project Methodology | Literature Review (I/II)

The Consulting Field Lab aims to represent a real-life consulting project. At the beginning of a project, as stated in the book “The Trusted Advisor” by Maister (2000), an advisor must strive to build and maintain a trustworthy relationship with the client. According to “The McKinsey Way” by Rasiel (1999), a consultant role should focus on problem-solving, and the solutions must be fact-based, rigidly structured and hypothesis-driven. To help define the solution, Minto (2008) outlines the importance of starting with the overriding question, then answering the question by elaborating why the solution is possible (Deductive Reasoning) and how can the organization apply the solution (Inductive Reasoning). Firstly, Cashcais was portrayed as a **Local Currency**. Vaga and Kovács-Szamosi (2020) define a local currency as a voucher in a local area that is introduced to support local enterprises and secure the citizens’ needs in the local area. After an internal analysis, a **Business Model Canvas** was designed, which according to Osterwalder and Pigneur (2010), describes the rationale of how an organization creates, delivers, and captures value. When conducting a pilot program, it is crucial to gather and apply feedback, so the pilot was designed to use an **Agile Methodology** developed by Sutherland et al. (2001) that allows iterative development, rapid and flexible response to change and promote communication between the development team and the client. To ensure the vision and future development of the application are aligned with the recommendations, as Ries suggested in “The Lean Startup” (2001), a **Minimum Viable Product** (MVP) was created with the use of wireframes, allowing to collect validated learning about customers. **Personas** were designed which allowed to identify and prove a shared basis for communication and design decision for relevant groups, as proposed by Kurosu (2015). In Cascais “Everything starts with people”, with this motto, a **Survey** was developed and conducted, which Scheuren (2004) defines a survey as a method of gathering information from a sample of individuals. After, a **Market Segmentation** was developed, which according to Tynan and Drayton (1987) is a crucial marketing strategy. It aims to identify and delineate market segments that would then become targets for the marketing plan, since the segmentations allow a better fulfilment of users needs.

## A literature review was made based on experts' analysis and frameworks which provided reliable and well-founded sources to support the project methodology and final recommendations

### A.3. Project Methodology | Literature Review (II/II)

In regards to the external analysis, a **PESTLE framework** was examined, so to understand how macro-environmental factors have an impact on the Municipality. Francis Aguilar is an Harvard professor considered to be the inventor of PEST in 1967, when he aborded in his book “Scanning the Business Environment”, how Political, Economic, Social and Technological elements affect businesses. The model was later extended to include other factors such as Legality and the Environment, PESTLE. The analysis of these 6 factors helped understand the obstacles affecting CMC and how the Municipality should address them.

In terms of the internal environment, a **SWOT analysis**, credited to Albert Humphrey, was made so to complement the external analysis made before. It allows to define what are CMC strengths and weaknesses, as well as the possible external threats and opportunities that should be taken into account. This permits to use the Municipality’s strengths and weaknesses so to leverage from the opportunities and threats. Afterwards, a **TOWS analysis** was made to understand how the results of the SWOT analysis can help recognize what are the possible strategic options the Municipality can pursue so to improve its current position. **McKinsey 7-S framework** was designed by Peters, Philips and Waterman (1980), who were McKinsey consultants at the time. This framework allows to look into CMC’s organizational design key elements: systems, strategy, structure, shared values, skills, staff and style, so to understand how and if they will allow CMC to achieve its goals. Afterwards the **Customer Lifecycle Model** was analysed, since it showcases the process customers will go through since becoming aware of the app until possibly becoming a loyal user. It also allows to understand where in the cycle improvement from CMC is needed.

As an approach to the Marketing personas, the book “Crossing the Chasm”, written by Moore (1991), was studied. This book is closely connected to the **Technology Adoption Lifecycle Model**, which depicts that when a new technological product is introduced in the market, people can be grouped in 5 different groups depending on their attitude towards this. Since CMC is introducing a new digital platform and concept, this book helped us understand how people will react to it and how can we group them into similar segments.

## The focus of the pilot project is to verify the viability of the CASHCAIS scale-up, promoting social, environmental and economic sustainability

### A.4.a. Project Methodology | Project Approach – Scope and Timeline

Full timeline on [Appendix 2](#)

#### Project Scope

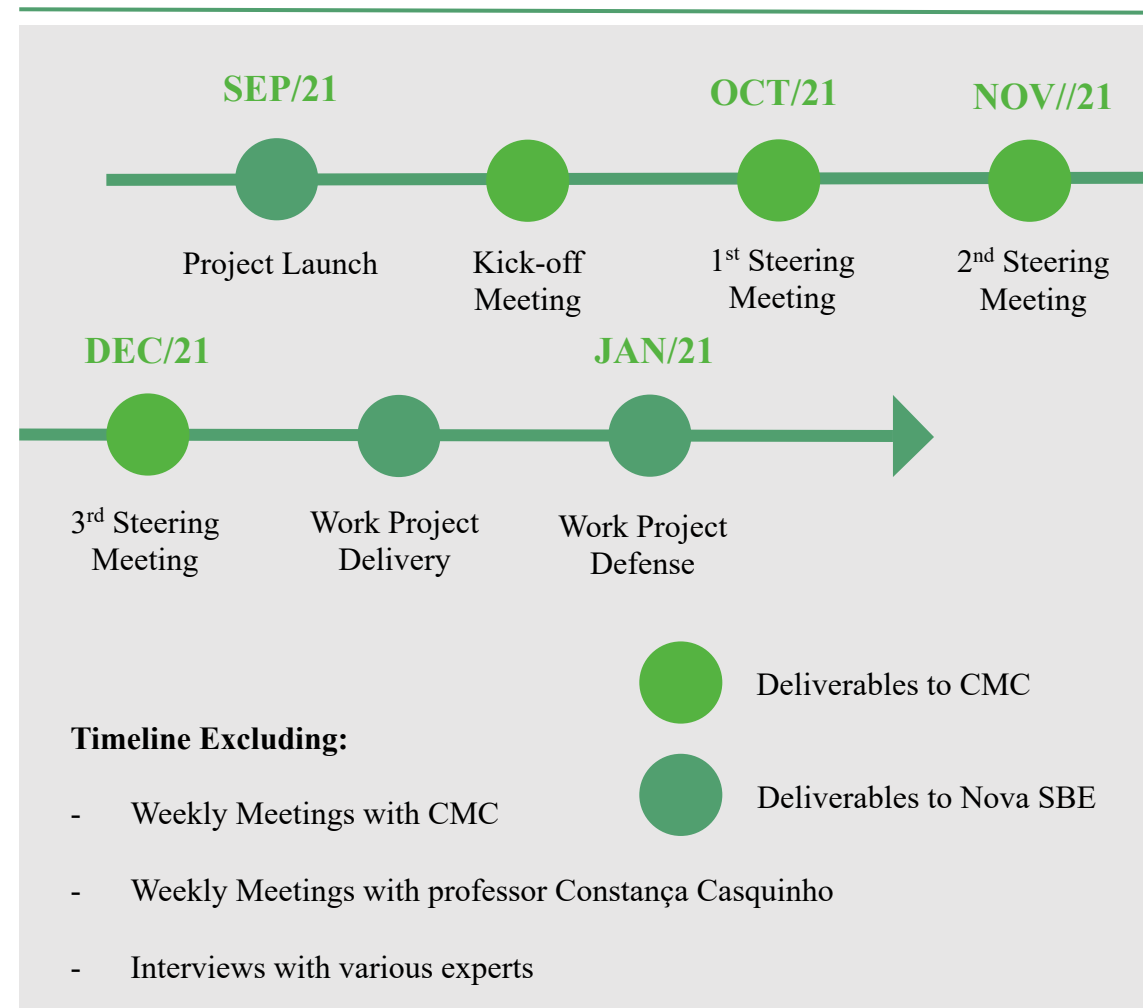
##### IN SCOPE

- Review past projects
- Identification and segmentation of consumers and partners
- Wireframe of the application
- Balanced Scorecard design
- Definition and design of the payment process
- Commercial strategy for partners
- Follow the creation of the sustainability certification
- Formulation of the reward system for sustainable actions
- Follow the creation of the digital application
- Guidelines for the communication plan
- Financial projections

##### OUT OF SCOPE

- Cashcais application programming
- Integration of the Cashcais application with the current Cascais Town Hall applications
- Content creation and publication (Marketing)

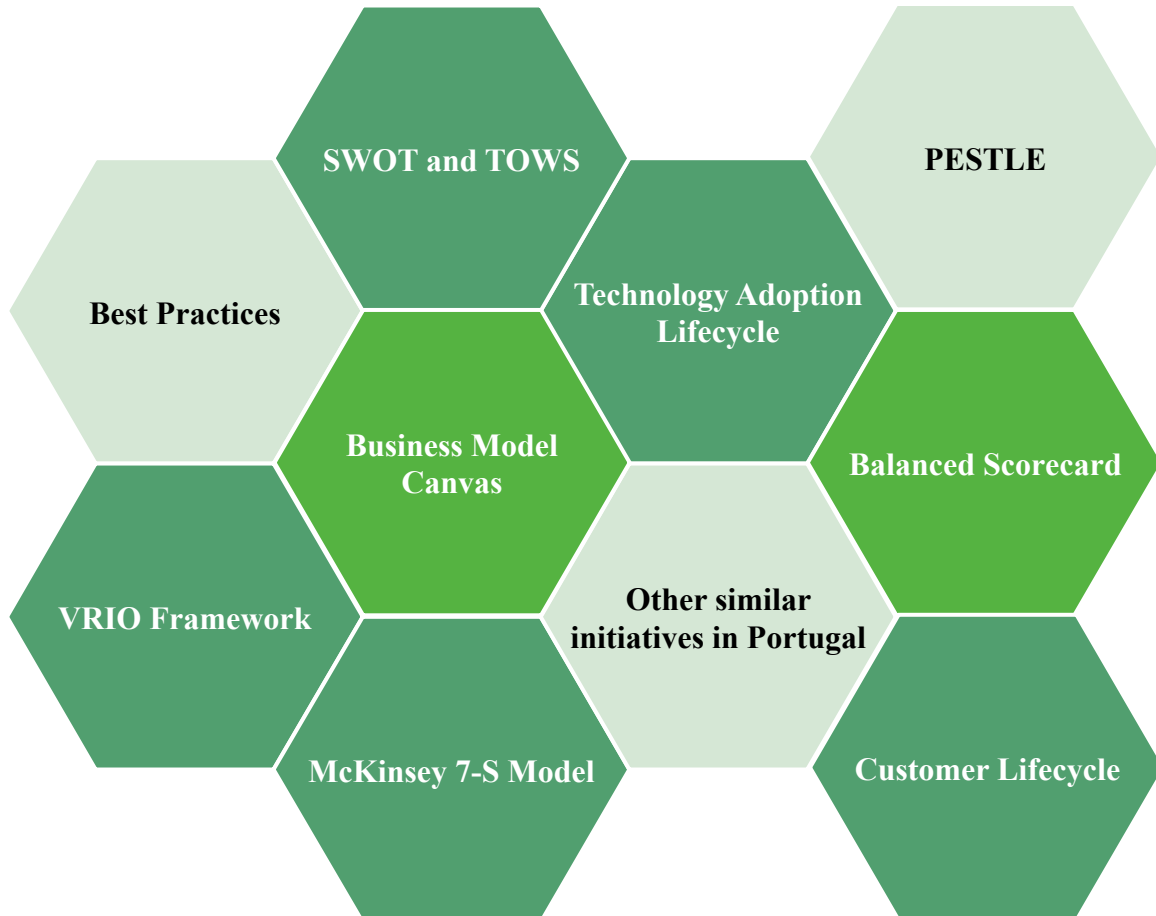
#### Timeline



## To ensure the quality of the recommendations, both quantitative and qualitative investigation methods were performed

### A.4.a. Project Methodology | Project Approach – Research Methodology

With the aim of analyzing the **internal** and **external** context of CMC, as well as to formulate and study hypotheses, the following academic frameworks were used:



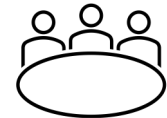
Source: Team Analysis

To complement the analysis driven by the academic frameworks to gain further insights on the project, the following **qualitative and quantitative research methods** were also conducted:

#### Internal Sources



Internal Town Hall Data



Town Hall Specialists Interviews  
(7 Interviewees)

#### External Sources



Academic Experts Interviews  
(6 interviews)



Benchmark Analysis  
(6 foreign local currencies)  
(4 national local currencies)



Conducted Survey  
(1k Respondents)

## Taking into consideration the post-pandemic context and the pillars where CMC has been putting efforts, the Town Hall should create a local digital currency, leveraging 4 key areas

### A.4.a. Project Methodology | Project Approach – SCQA and Issue Tree Overview



#### Situation

CMC is a public entity that governs the municipality of Cascais. New trends and external factors are emerging, and CMC wishes to keep up, to be able to maintain its **innovative and supportive reputation**. Hence, **CMC seeks recommendations to remain a successful Town Hall in future**, surpassing its electors' expectations.



#### Complication

Cascais wishes to **increase its sustainability in environmental, social, economical and health terms**. With concern to the environment, Cascais has already launched an app, **City Points**, which potential and reach could be further expanded. Socially, the municipality registers some **social disparities** (for instance, 1 153 families in 2018 lived in precarious conditions). In the economical area, the Town Hall aims to **strengthening its business activity post-COVID**. Finally, the health of Cascais citizens can also be improved at a time when people are paying more attention to their well being. Furthermore, **Cascais has launched several apps and the functionalities could be available in fewer applications**.



#### Question

Should CMC create a local digital currency, Cashcais, to promote economic, environmental, social and health sustainability?

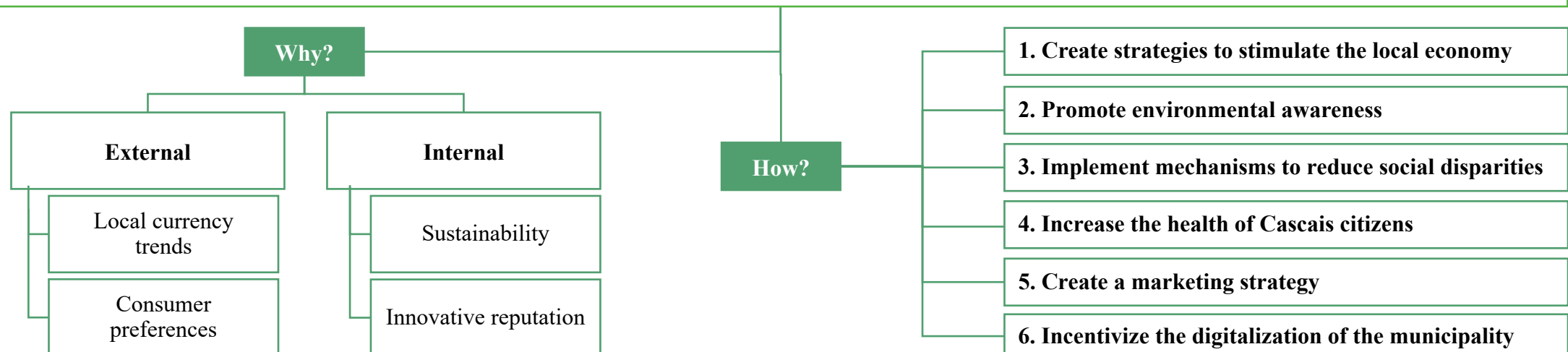


#### Answer

Yes



#### Reasoning



## Unlike private companies, the main goal of Town Halls is to maximize the quality of life of citizens and defend their interests, proactively working for a better society

### B.1.a. Situation Analysis | External – Sector Overview

Town Halls represent citizens and have the executive power in municipalities. Their main aim is to **define and execute policies that develop the municipality in different areas** (social, environmental, communications, cultural, scientific, education, sports, energy, defense, health, mobility, among others).

Main differences	Private companies	Town Halls
<b>Main goal</b>	Maximize profit and shareholder value	Maximize the quality of life of citizens and defend their interests
<b>Main source of income</b>	Sales	Budget assigned by the Government

Taking into consideration the trends and benefits of local currencies, **several municipalities have launched their own**, in an attempt to boost the local economy or promote certain behaviors, namely in the environmental area.

Cascais will hopefully be the **fifth municipality to successfully implement a local digital currency, Cashcais**, impacting the social, economic, environment and health fields.

Cascais  
Cashcais



## Since the post-pandemic economic activity in Portugal is expected to grow, CMC should leverage on the increase of technological and environmental awareness to introduce Cashcais successfully

### B.1.a.i. Situation Analysis | External – Sector Overview: PESTLE

The **Portuguese political risk** is one of the **lowest**. In Cascais, the board team is the same for 10 years. **The transparency of municipal management** was promoted through several initiatives, which allow the development of more democratic and participated governance models.

The **social inequality in Portugal is higher than in most advanced countries**. While the average Gini Coefficient of Income Inequality is 30.3, Portugal scores 31.7. The poorest 20% of household earn only 7.8% of total income.

Any new local currency must go through its **legalization with Banco de Portugal**, so to be able to operate legal in the country in question.



Due to the pandemic, Portuguese economic activity decreased in 2020 and Cascais followed the same pattern. However, the **post-pandemic Portuguese economy is projected to grow** by 4.8% in 2021, 5.8% in 2022 and 2.8% in 2023.

The **internet penetration in Portugal stood at 84.2%** in January 2021. The number of mobile connections in Portugal in January 2021 was equivalent to **155.1%** of the total population.

Portugal was named one of the most **eco-friendly countries in the world (6<sup>th</sup> place)** and CMC already has an **environmentally conscious strategy** supported by Cascais Ambiente.

PESTLE is a strategic tool to analyze the external environment to check which factors might impact the success of Cashcais. The conditions on these 6 areas of the current Portuguese and Cascais' environment seem to favor the implementation of the Cashcais program as there is high political stability in Portugal and Cascais to implement this long-term project; a need to boost the economy; a concern to reduce social disparities; an increase in the technological market; already some legally approved local coins; and an alarm on climate changes.

## Local currencies have many benefits and there are already several examples of other currencies which serve as a benchmark for the development of this project

### B.1.b. Situation Analysis | External – Local Currency Definition and Best Practices

#### Local currency

##### Definition



Circulates at a **community level**, mostly local;



Serves as a **complementary** to the nations' **legal currency**;



Local currency **circulates faster** in the economy **leading to better local economic** activity.

##### Key Benefits

1. **Encouragement to shop locally**, i.e., at local businesses accepting this currency;
2. **Money** remains **inside** the **community**, instead of being transferred to big international companies;
3. **Increase local production and employment**;
4. **Decrease carbon footprint** by avoiding as much transportation;
5. **Generates a sense of community** among the municipality.



**Bristol Pay** is a payment system for online and offline transactions. It is a 'closed loop', meaning all users will have an account on the platform. It has a token system rewarding users for social and environmental actions.



Starting as a school project, **Chiemgauer**, is a local currency used in Bavaria Germany. It is equal to 1 euro and is only valid for three months after purchase to ensure people use it quickly instead of saving it.



**REC (Real Economy Currency)** is Barcelona's local currency. It allows transactions within the community between anyone who accepts its. This system is complementary to the euro.



**Vilawatts** is Viladecans (Spain) local currency. The objective is to reward citizens for their energy savings, which are then converted into this digital currency called Vilawatt. It is being used in around 400 businesses around the city.



**Calgary Dollar** can only be used within the city of Calgary, Canada, and is equal to one federal dollar. For each purchase there is a 10% cashback in Calgary Dollars.



**Brixton Pound** was created in response to a financial crisis. It encourages local trade, supports independent businesses and builds a human-scale circular economy.



**Moeda Mor** is a local currency, equivalent to the euro, circulating in Montemor-o-Novo, Portugal, with the goal to stimulate local economy.


## A circular economy brings economic, social and environmental benefits. Different cities have already committed to become circular in the near future

### B.1.c. Situation Analysis | External – Circular Economy Definition and Key Factors


#### Context and Advantages

Circular economy gives a tool to **tackle climate change, grow prosperity, jobs, and resilience** while cutting greenhouse gas emissions, waste and pollution. It is based on **three principles**:


#### Eliminate waste and pollution

**Avoid creating waste** using materials that can be reused,  recycled, or composted. Using renewable energy to power the city and transportation making the City healthier and cleaner.

#### Circulate products and materials

 **Keep product in use** to avoid single use products: reuse, repair, and refurbish can help circulate products. Also, **promote sharing services** rather than own connecting people and communities.

#### Regenerate nature

 **Regenerate natural systems** so that valuable nutrients return to the soil and air and water quality improves in the city.

Building a **circular economy can bring economic, social and environmental benefits**. A successful circular strategy will improve air quality, urban health, and enhance social interactions, making the cities more attractive and livable.

	Amsterdam	Glasgow	London	Peterborough
Description	Amsterdam city government created the Sharing Economy Action Plan. It is designed to benefit the city, businesses and citizens showing the importance of sharing platforms	Partner with Zero Waste Scotland, Glasgow City Council set out circular economy vision to support economic development, resource recovery and reuse, and carbon reductions	Advisory services and investment guidance to SMEs to explore circular economy markets. London wants to meet zero waste challenges into opportunities	Committed to be a circular city by 2050. Brings together local partners to integrate circular values to drive economic growth, meet local needs, connect communities and reduce impact on environment
Outcomes	Currently 150+ sharing economy platforms active in Amsterdam	Built environment, food, textiles, plastics energy initiatives. Increased crowdsourcing ideas	700 hours of bespoke support to 112 SMEs including circular diagnostics	70 organizations have signed the Circular commitment; 315 registered users
Progress	Economic, environmental, social benefits and awareness	Carbon and energy savings. Number of organizations engaged	Increased SME profitability. Waste diverted from landfill	Waste diverted from landfill. Avoidance of new purchases

## Cascais is recognized as a good place to live and CMC's efforts have been recognized internally and externally by several awards

### B.2.a. Situation Analysis | Internal – Town Hall Overview

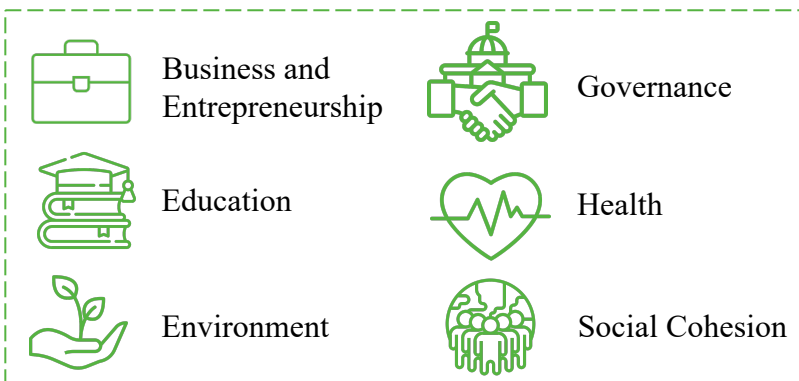


In Cascais, “everything starts in people”, demonstrating the customer-centric approach of this Town Hall. The strategic vision of Cascais Town Hall is to “position Cascais as the best place to live one day, one week or a lifetime”.



97,4 km<sup>2</sup>

Town Halls aggregate **several areas of action**, helping citizens achieve a good quality of life. For those living in Cascais, CMC has **been concentrating efforts and acting on the following fields:**



214 134 inhabitants  
(2021)

As a new mandate begins, Viva Cascais defines as **pillars** the following **4 specific areas** of focus for the next 4 years:

The **Cascais** app will serve as a means to reach the following goals

Accelerating the recuperation of the economy, employment, opportunities and income;

Promoting natality;

Fighting climate change;

Achieving cohesion, solidarity and sustainability (*Estado Social Local*) in the areas of health, habitation, education and mobility.



1 216€ average income  
(2019)








122,1 purchasing power  
per capita (2017)

The municipality has had national and international **recognition by its initiatives:**

- The app *City Points* was awarded with the **World Summit Awards** by the United Nations;
- The program *Accessible Masks* won the national award given by the **Public Policies Institute** of ISCTE.

## The Cashcais program is a holistic app that will incorporate several already implemented initiatives from CMC

### B.2.a.i. Situation Analysis | Internal – Town Hall Overview: Initiatives Overview (I/II)

	Purpose	Methodology	Incorporation in Cashcais
 <p><b>My Cascais</b></p>	To make <b>registration</b> easy in all Cascais's initiatives	It is an <b>authentication platform</b> designed to serve as a <b>login</b> for all CMC's initiatives. One log-in can be used in several services.	Cashcais will incorporate MyCascais <b>login registration</b> .
 <p><b>City Points</b></p>	To <b>promote good practices</b> on several areas (environment, citizenship, social, mobility and sharing)	Registration on the app through MyCascais; Performing good practices that help increase Cascais well-being; <b>Collecting points</b> for the actions performed; <b>Exchanging points for vouchers</b> that can be exchanged for prizes; <b>Prizes</b> in accordance with CMC's goals and are financed by CMC; <b>Gamification</b> by awarding and ranking users.	Instead of giving points that can be exchanged into prizes, CMC will <b>award users in Cashcais</b> (the local currency).
 <p><b>CARTÃO MAIS SOLIDÁRIO</b></p>	To <b>support financially</b> people affected by the pandemic, with euros to <b>buy food</b>	Financially vulnerable people (1 <sup>st</sup> and 2 <sup>nd</sup> levels of "IRS") apply to <b>receive 75€ or 100€ in a budget to help them to buy groceries</b> at Continente, Lidl and Pingo Doce. People can apply in the Town Hall building.	People will <b>receive less in euros</b> and <b>will receive the other part</b> (plus a <b>surplus</b> ) in Cashcais.
 <p><b>1=2, Plataforma de Donativos</b></p>	To <b>financially support</b> those in need	Digital platform where people could make monetary donations and CMC would double the amount donated. Then, CMC would distribute the donations. <b>It ended in 2021.</b>	People will have the possibility to <b>donate Cashcais</b> earned.
 <p><b>Fix Cascais</b></p>	To <b>report abnormal situations</b> in Cascais' public places	People can <b>improve Cascais public spaces</b> , by reporting bad traffic signalization, need for street cleaning, damaged items, among others, and be <b>awarded in City Points</b> .	Incorporation of City Points and, consequently, of FixCascais.

# The Cashcais program is a holistic app that will incorporate several already implemented initiatives from CMC

## B.2.a.i. Situation Analysis | Internal – Town Hall Overview: Initiatives Overview (II/II)

	Purpose	Methodology	Incorporation in Cashcais
	To <b>allure people to buy local products</b> instead of in bigger institutions	Platform in which businesses in Cascais can <b>advertise themselves</b> by announcing their <b>discounts and offerings</b> in order to attract more clients. Offers and discounts are <b>defined by the business' owners themselves</b> .	Cashcais will allow businesses (with sustainability certification) <b>to advertise through the app</b> .
	To offer an <b>integrated solution for mobility in Cascais</b>	Citizens, workers or students of the Cascais Municipality can register on MobiCascais, through MyCascais, in order to enjoy <b>free access to MobiCascais buses network</b> . Also serves as parking app in Cascais and renting Cascais scooters' network.	Not integrated in Cashcais, but <b>CMC may opt to give Cashcais for the usage of MobiCascais</b> .
	<b>Physical alternative to the MobiCascais app</b> to use the free transportation in Cascais	It is a card that came as an alternative to MobiCascais for people to get access to free transportation in Cascais. Citizens, workers or students of the Cascais Municipality need to register on MyCascais, have a <b>passport photo and pay 7€ to get Viver Cascais card</b> .	The Viver Cascais card will serve as the <b>physical card for Cashcais</b> .

### Other CMC's initiatives, which will not be integrated in Cashcais



Information about  
Cascais



Information for  
educational community



Statistical Information  
about Cascais



Online municipal  
services



Participative  
Community Initiatives



Supportive Initiative  
to Culture

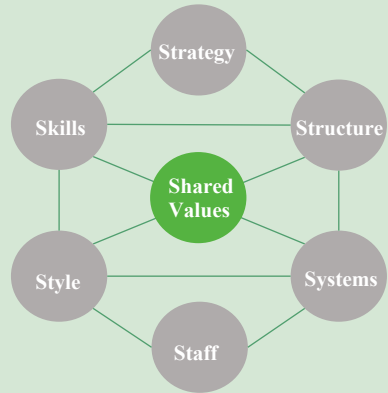


Non-profit association  
for businesses

## The McKinsey 7-S Model allows to understand how key elements of CMC are working together to achieve effectiveness

### B.2.a.ii. Situation Analysis | Internal – Town Hall Overview: McKinsey 7-S Model (I/II)

#### McKinsey 7-S Model



- The McKinsey 7-S Model is a strategic tool that examines the **organizational design of a business**;
- Examines how **seven fundamental elements of the company work together to achieve effectiveness**. The elements are: strategy, structure, systems, staff, style and skills and can be classified as either “Soft Ss” or “Hard Ss”;
- While “Soft Ss” are abstract, intangible and can be encountered in the organizational culture, “Hard Ss” are easily spotted and changed;
- Due to the interconnection between elements, a **domino effect exists** when modifying one component in order to maintain the balance;
- “**Shared Values**” are the **foundation of any business** and are crucial to the development of all other components.

#### Hard Elements

##### Strategy

- **Strategy** is a well designed plan supported by the organization culture, to reach a sustainable competitive advantage. **CMC strategy is to elevate the municipality of Cascais through stimulating local economy, as well as encouraging social and environmental sustainability.**

##### Structure

- **Structure** is how a business is organized. **CMC consists of a president and councillors**, one of which is appointed vice-president. Its **election is made every four years** by the citizens registered in their area. The number of councillors can vary depending on the number of voters in the municipality. Currently, CMC has a President and ten councillors.

##### Systems

- **Systems** relate to the organizations’ decisions and procedures that make up the typical operations within the company. There some **systems that characterize CMC’s daily operations, such as *acinGov*, *Portal Executivo* and an *Intranet*.**

## The shared values of CMC are a steady foundation to the development of all other elements. The soft elements, staff, style and skills are aligned with CMC's vision and mission

### B.2.a.ii. Situation Analysis | Internal – Town Hall Overview: McKinsey 7-S Model (II/II)

Soft Elements	Staff	<ul style="list-style-type: none"> <li><b>Staff</b> refers to all human resources and talent management related to company decisions, such as training, recruiting, and rewards systems. Being a public entity, <b>CMC uses SIADAP 123</b>, which is an <b>integrated management and performance evaluation system destined for employees in public companies</b>.</li> </ul>
	Structure	<ul style="list-style-type: none"> <li><b>Style</b> is the style of leadership employed. The way leaders and top management act establishes a code of conduct for the rest of the company. The municipality of Cascais has a <b>democratic leadership style</b>, focusing on the <b>transparency between the Town Hall and the citizens</b>. This commitment to <b>transparency aims to increase citizens' confidence</b> in local political power, which, due to the particular closeness between institutions and citizens, is increasingly essential.</li> </ul>
	Systems	<ul style="list-style-type: none"> <li><b>Skills</b> are the capabilities that allow employees to reach their goals. <b>Employees</b> at CMC are all <b>aligned with the Town Hall's mission and values</b>. Employees are given all the tools and support to allow them to reach their goals. <b>Constant communication and engagement</b> between departments are also a <b>critical success factor</b> for CMC and the development of its employees.</li> </ul>
Shared Values		<ul style="list-style-type: none"> <li><b>Shared Values</b> are the foundation of any business generally include the vision, the mission and values. The shared values are crucial to development of all other elements and allows for a maintenance of the organizational design. CMC has the mission to manage the territory of Cascais and the strategic vision to affirm Cascais as the best place to live at any point in time. The values are governance, social cohesion, economic development, and environmental sustainability.</li> </ul>

**The SWOT analysis examines what CMC has as strengths and weaknesses, at an internal and external level, which helps having a holistic view when implementing projects**

### B.2.a.iii. Situation Analysis | Internal – Town Hall Overview: SWOT

#### SWOT

This framework allows to understand a company's current competitive position and develop a strategic action plan, through an analysis of internal and external factors.

- **Powerful image** among citizens;
- **Innovative and technological reputation;**
- **Good financial results** throughout the years;
- **Know-how** and experience with previous apps (City Points);
- Well built **relationships with partners;**
- **Team aligned** with CMC's values and goals;
- **Great communication** between departments.

S  
Strengths

- **Huge dependence** on app developers and IT;
- **Perception and association** to an app (City Points) **without major adoption;**
- **Outdated Marketing;**
- **Scarce** and multitasking **human resources;**
- Slow processes;
- **Different structure and goals every 4 years.**

W  
Weaknesses

- **Trend of local digital currencies** arising all over the world;
- First polyvalent digital local currency to be used massively in Portugal;
- Further **improve its image** as **innovative** and technological;
- **Facilitate** and **improve the life** of Cascais **citizens;**
- **Increase of post-COVID digitalization;**
- **More sustainability** and **health concerns** in society;
- Get **closer to local enterprises.**

O  
Opportunities

- Existence of a **national currency;**
- **Currency being launched by the public sector** and being subject to its challenges;
- **Need to correspond to promises** made both to consumers and partners.

T  
Threats

## A TOWS analysis allows for a mix of the previously seen external and internal factors leading to a better visualization of major possible solutions to the current situation

### B.2.a.iv. Situation Analysis | Internal – Town Hall Overview: TOWS

		Internal Aspects	
		Strengths	Weaknesses
External Aspects	Opportunities	<ol style="list-style-type: none"> <li>1. Trend of local digital currencies arising globally</li> <li>2. First polyvalent digital local currency to be used massively in Portugal</li> <li>3. Improve image as innovative and technological</li> <li>4. Facilitate and improve the life of Cascais citizens</li> <li>5. Increase of post-COVID digitalization</li> <li>6. More sustainability and health concerns in society</li> <li>7. Get closer to local enterprises</li> </ol>	<ol style="list-style-type: none"> <li>1. Powerful image among citizens</li> <li>2. Innovative and technological reputation</li> <li>3. Good financial results throughout the years</li> <li>4. Know-how and experience with previous apps</li> <li>5. Well built relationships with partners</li> <li>6. Team aligned with CMC's values and goals</li> <li>7. Great communication between departments</li> </ol>
	Threats	<ol style="list-style-type: none"> <li>1. Existence of a national currency</li> <li>2. Currency being launched by the public sector and being subject to its challenges</li> <li>3. Need to correspond to promises made both to consumers and partners</li> </ol>	<ol style="list-style-type: none"> <li>1. Huge dependence on app developers and IT</li> <li>2. Perception and association to an app (City Points) without major adoption</li> <li>3. Outdated Marketing</li> <li>4. Scarce and multitasking human resources</li> <li>5. Slow processes</li> <li>6. Different structure and goals every 4 years</li> </ol>

**(O1, O2, O5 | S2, S3, S4) Optimize** the **app** based on the analytical tools and skills achieved

**(O1, O2, O4, O5, O6, O7 | S1, S2, S3, S6) Leverage** on **CMC assets** and **skills** so the respond accordingly and swiftly to the post-COVID trends

**(O1, O2, O3, O5 | W2, W3) Develop** and **design** a new **marketing strategy** to **increase brand awareness** and expose the right brand perception

**(O4, O5, O6, O7 | W1, W2, W3, W4, W5) Consider outsourcing** some services in order to **guarantee efficiency** in current and new projects

**(T1, T2 | S1, S2, S3) Take advantage** of its **assets**, such as its image reputation and good financial results to successfully implement the project, **bearing** in mind the **potential threats** and a **plan** to address them

**(T3 | S1, S5, S6, S7) Ensure** that the **right** and **reliable information** is **transmitted** to the public, avoiding overpromising and underdelivering

**(T1 | W2, W5, W6) Fear of not having enough uptake** on the local digital currency

**(T2, T3 | W1, W4, W6) Incapacity to support the costs** involved

**(T3 | W1, W2, W3, W5) Jeopardizing brand image**

## The Customer Lifecycle Model allows to illustrate the journey a customer goes through from becoming aware of a product until eventually becoming loyal

### B.2.a.v. Situation Analysis | Internal – Town Hall Overview: Customer Lifecycle (I/II)

#### Customer Lifecycle Model

- Describes all the **process a customer goes through** since becoming aware of a product or service until having longtime loyalty towards the company;
- There are **five stages** to this process: **reach, acquisition, conversion, retention and loyalty**;
- This model gives the company a full depiction of the consumer's journey and **showcases where a change or improvement is in order**.

**Reach:** The prospect comes across the brand and becomes aware of its products and services. The goal in this stage is **to form a link between the brand and a need**, current or future;

**Acquisition:** **Attract the previously reached customers** and deepen the association between the brand and need;

**Conversion:** After a connection between the brand and the customer is formed, the **customer effectively buys the product** or service;

**Retention:** In this stage, it is important to **keep the customer**, thus the company should focus on **increasing customer satisfaction and value from its offerings**;

**Loyalty:** Finally, a customer becomes loyal if he/she is continuously happy and **repeatedly buys from the brand**. Loyal customers can **later become advocates** for the brand.



## During the customer journey, there are some strategic touchpoints CMC should take into consideration to help smooth the transition from an-only aware to a loyal user of the app

### B.2.a.v. Situation Analysis | Internal – Town Hall Overview: Customer Lifecycle (II/II)

#### REACH

During this phase, CMC should leverage **on social media marketing, SEO and advertisement** so to reach and get the attention of as many people as possible. This will eventually generate **word-of-mouth** around the app and benefits of using the digital local currency, Cashcais and **create interest and curiosity** in the mind of customers.

#### ACQUISITION

This stage starts when a customer enters the CMC website or social media accounts or if he/she calls looking for more information about the app or about Cashcais. It is important that CMC presents, on its websites or accounts, **all the right and helpful information**. If the customer happens to call, it is necessary that there is someone on the other side capable to answer all possible concerns and questions, but also inquire for and understand further information on customers needs.

#### CONVERSION

After gaining all the possible information and understanding of what CMC is offering, the prospect likes and is interested in this offering, so joins the app and the Cashcais program. CMC must make clear that the customer did not just join an app but **entered a relationship with CMC**.

#### RETENTION

The stage of conversion does not guarantee that the prospect will continuously use the app. Thus, it is necessary that CMC **understands the level of satisfaction of its users and if there are any areas of improvement** to increase customer satisfaction and product value. It can be done by sending **surveys** or by measuring the **Customer Satisfaction Score**. As mentioned before, this allows to continuously make improvements and have a better customer service experience. Moreover, it is important that, in this stage, CMC offers its customers exclusive advantages, such as discounts or referral benefits.

#### LOYALTY

This final stage, nurtured by all the others, is of great importance. Not all customers will become loyal, but the ones who will, act as a **brand advocate** and will **recommend** the app and Cashcais program to other people. This stage is very important for the long-term and guaranteed success of the app. These brand advocates should be closely followed and paid attention to.

## By analyzing Cashcais in the VRIO framework, in a business competitive hypothetical scenario, CMC would have Unused Competitive Advantage, lacking organizational functions to have long-term success

### B.2.a.vi. Situation Analysis | Internal – Town Hall Overview: Resource-Based View Model

#### VRIO Framework

- VRIO framework is a strategic analysis tool that allows businesses to **uncover which sustainable competitive advantages they own** and, hence, protect them.
- When talking about sustained competitive advantages, it is meant **long-term**, not easy to duplicate competitive advantages and they are **crucial for a business long-term success**;
- In an hypothetical scenario where CMC strives for competitive advantage, Cashcais was analysed through VRIO framework, to evaluate whether this resource would have sustained competitive advantage and long-term success.

#### Value

Will CMC offer a service that adds value to its citizens? - **YES**

- For citizens and businesses;
- Economic, environmental, social and healthy impact;
- Integration of several services already provided by CMC.

#### Organization

Does CMC have the required organization and people? - **NOT YET**

- CMC has a great team of people;
- CMC's mentality is future-oriented;
- Due to high volume of services / innovations, CMC seems to have growth pain problems.

#### Rare

Is Cashcais something rare in Portugal? - **YES**

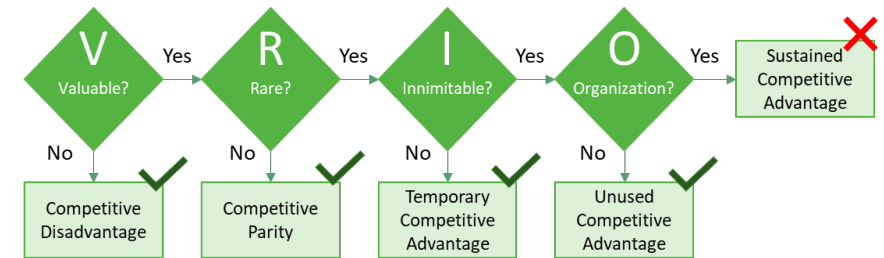
There are some local coins in Portugal, but none is:

- As aggregated as this one;
- Tries to boost the municipality economy;
- Has value proposition to businesses.

#### Inimitable

Is Cashcais something easily inimitable? - **NO, BUT...**

**Why not?** Requires huge financial resources; huge monitorization; expertise is not readily available, and CMC already has some similar services. **But** there are already some local currencies in place.



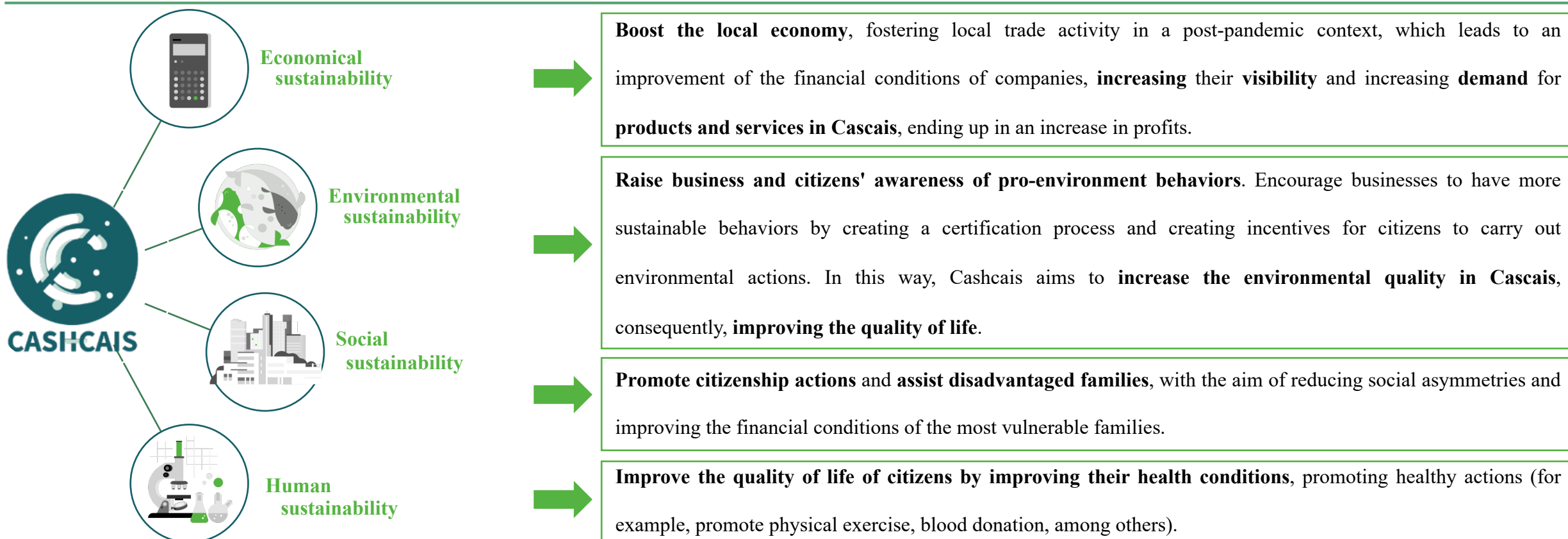
CMC is lacking the organizational functions required for the issuance of a local currency, thus having an **Unused Competitive Advantage**. However, there is still opportunity to use this advantage and implement Cashcais.

**Cashcais vision is to be a currency for everything and for everyone. The goals are to foster economical, environmental, social, and human sustainability**

### B.3.a. Situation Analysis | Cashcais Project – Objectives

**Cashcais strategic vision is to be a **currency for everything and for everyone**, establishing a circular economy in the municipality**

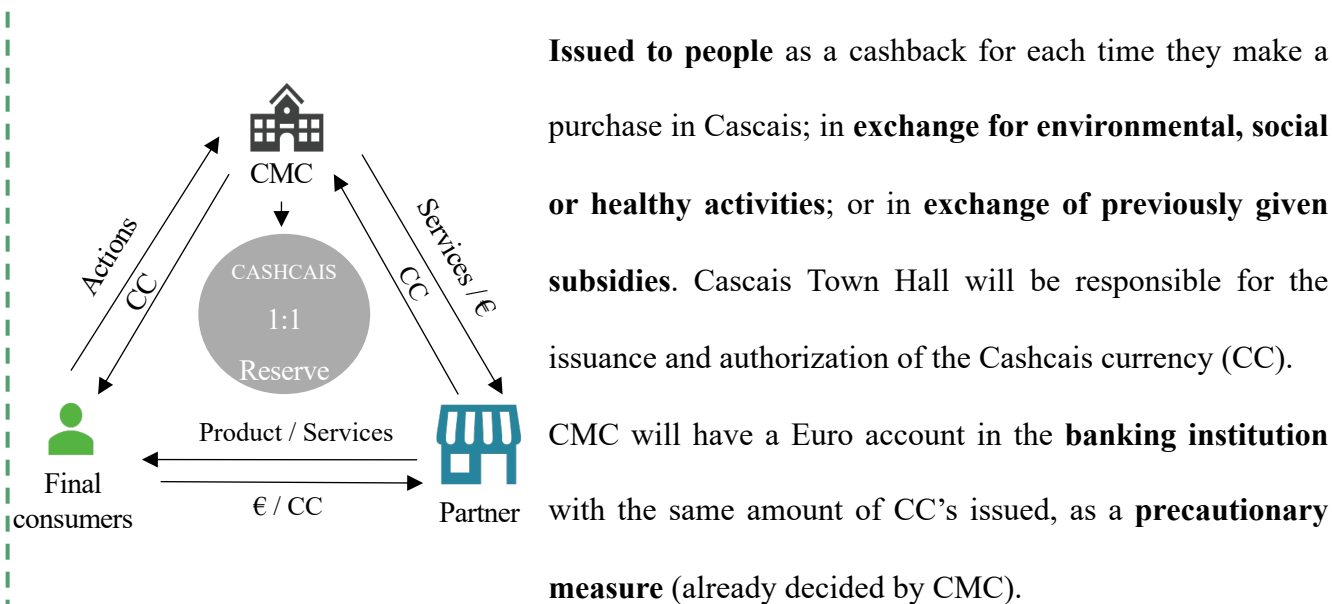
On the one hand, it aims to **offer companies a communication space** and foster intra-county business. On the other hand, **providing citizens better financial conditions**, equal opportunities, encouraging more conscious consumption and promoting healthy habits



## Cashcais will be given to people in form of cashback, as a reward for the performance of sustainable actions and as part of a social program

### B.3.b. Situation Analysis | Cashcais Project – Model Overview

#### Cashcais Is The New Future Local Currency Of The Cascais Municipality



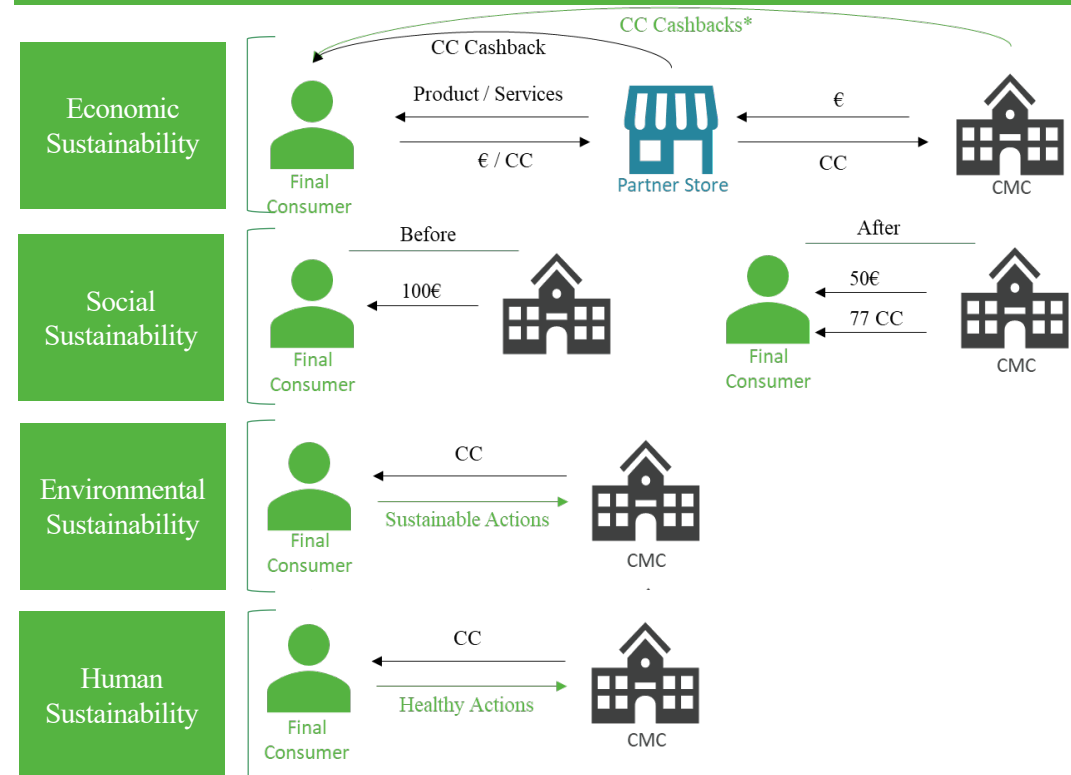
#### Why a 1:1 exchange rate?

The value of CC is not supposed to vary, but to remain constant over time (in what regards people perception). For the sake of **simplicity**, Cashcais digital coin will have a 1:1 exchange rate with the Euro. Hence, the **value of Cashcais will be based on the value of the Euro**.

Source: Nova SBE Team Spring 2021, Team Analysis

Full list of actions on [Appendix 6](#)

#### Cashcais Model Per Objective



#### What are Sustainable actions?

Sustainable actions are actions that **increase the well-being of Cascais' citizens**, hence increasing the overall wellbeing of the Town Hall.

**The BMC defines how Cashcais creates, delivers, and captures value for the citizens and partners shops. The output of the different block are key tools for Cashcais long-term success**

### B.3.b.i. Situation Analysis | Cashcais Project – Model Overview: Business Model Canvas

#### Key partners

- Software development company;
- Bank responsible for holding Cashcais reserve;
- Payment solution developer.

#### Key activities

- Provide channel of communication to local partners;
- Promote sustainable and social actions in Cascais municipality.

#### Key resources

- Customer service staff;
- Marketing staff;
- Financial staff;
- Sales staff.

#### Key values

- Positive external communication;
- Environmental responsible;
- Social responsible;
- Promoting local consumption;
- Fostering business activity and relationship among Cascais businesses;
- Increasing visibility of small enterprises.

#### Key customers relationships

- Customer service;
- Data treatment;
- Feedback incorporation.

#### Key channels

- Mobile app;
- Social media;
- Newsletter;
- World of mouth;
- Local newspaper.

#### Key customers

- Citizens:
  - Cascalenses;
  - Workers in Cascais;
  - Students in Cascais;
  - Foreign Tourists;
  - Other Portuguese;
- Partners shops:
  - Restaurants;
  - Supermarkets;
  - Bakery and pastry shops;
  - Grocery stores.

#### Cost structure

- **One Time:** Software development; City Points integration; Legal services; Project launch event;
- **Monthly:** Human resources; Environmental action rewards; Sustainable Certification rewards; “Cartão Mais Solidário”; Application maintenance; Marketing; Account Management; CRM.

#### Revenue streams

- National and International funding.

## An agile methodology should be adopted by CMC when running the pilot and when scaling-up for the implementation of Cashcais

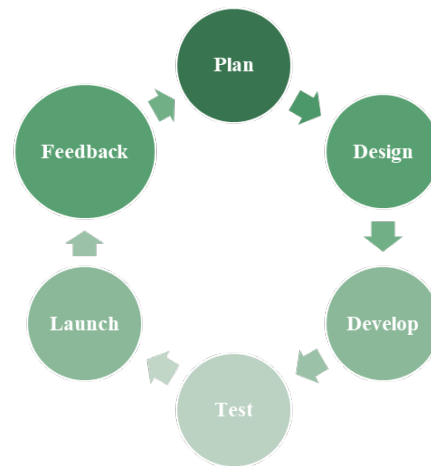
### B.3.c. Situation Analysis | Cashcais Project – Pilot Agile Methodology and Scale-up

#### Pilot Program – A closed circuit

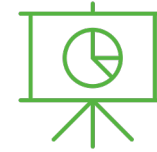
The **objective** of this experience is to **test several initial hypothesis, in a closed circuit** (no more than 5 000 people – decision of CMC), in order to posteriorly implement, in an effective way, the local digital currency in the Cascais municipality. The hypothesis to be tested are related with the **target consumer and partners segments**, as well as the **best marketing approach** (aiming to design reach and retention strategies) and best **applications/functionality** of the app.

#### An Agile Methodology for the Pilot

Using an **Agile Methodology**, CMC should, in a **continuous** manner, **evaluate the data received** from the pilot and take the best **measures to be implemented**, which will be confirmed by the data. **CMC should have a list of KPIs** (see [Monitorization plan](#)) in order to better **analyze** and take conclusions from the **data received** on the pilot.



#### Scale-up Implementation



After verifying the **pilot results**, the **objective** is to make the necessary **changes** to the initial **project** to **obtain** the **best results** in the **scale-up implementation** and for this implementation of the Cashcais program to run as effective and smoothly as possible for all the Cascais citizens.

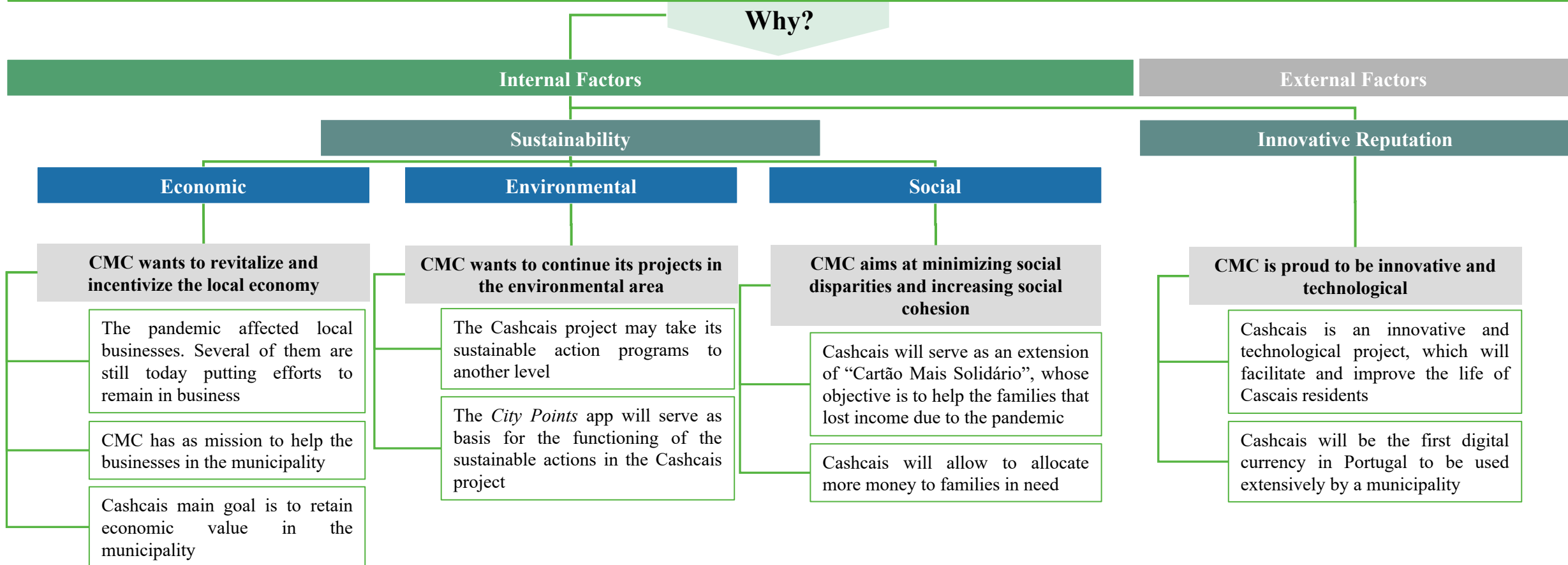


Again, an **agile methodology** will be the best one once the scale-up implementation has occurred, as the expertise and knowledge regarding economic, social, environmental and health-related local digital currencies are very few.

## The internal drivers that led CMC to create Cashcais are its innovative reputation as well as the desire to promote economic, environmental, social and human sustainability

### C.1. Project In-Depth Analysis | Deductive Reasoning (I/II)

Should CMC create a local digital currency, Cashcais, to promote economic, environmental, social and health sustainability?



# New consumer trends and other local currencies are boosting, from an external perspective, the creation of a local digital currency in Cascais

## C.1. Project In-Depth Analysis | Deductive Reasoning (II/II)

Should CMC create a local digital currency, Cashcais, to promote economic, environmental, social and health sustainability?

Why?

Internal Factors

External Factors

Trends

Local and Digital Currency

Consumers

National

International

Municipal

Non-Municipal

Some Town Halls have been using local currency, either to dynamize the local economy or increase the number of social actions

Moeda-Mor is a local currency from Montemor-o-Novo to dynamize the local economy

Moeda Maior is from Campo Maior and residents can exchange social actions by “Majores”, with which they can buy food at a local communitarian grocery

Some sports institutions have used the ‘Fan Token’, as a way to increase the associates and supporters’ interest for their clubs

Estrela da Amadora has partnered with BetsPlayer, such that associates benefit with the club’s sales

Sporting CP has created a “fan token” in partnership with Bitci, which can be exchanged by unique experiences

There are several international local digital currencies

With a great focus on the economy, there is Brixton Pound (created to deal with the 2008 crisis), REC from Barcelona and Calgary Dollar (which is in place since 1996 and offers a 10% *cashback* on each purchase made with Calgary Dollar)

Focusing on social impact, there is Bristol Pay, which donates funds for projects with environmental and social impact, and Chiemgauer, with the aim of regional development, promoting NGOs and increasing sustainability

Consumers are getting more technological

Consumers are starving for the modern and and technological

Consumers are getting more price sensitive

Studies indicate the veracity of the statement, specially for younger generations

Consumers are more concerned about social and environmental sustainability

Consumers prefer ethical and/or sustainable products

## In order to be able to create local digital currency, Cashcais, CMC should follow six line of actions: business activity, environmental awareness, social disparities, healthy lifestyle, marketing and digitalization

### C.2. Project In-Depth Analysis | Inductive Reasoning

Detailed Reasoning on [Appendix 3](#)

Should CMC create a local digital currency, Cashcais, to promote economic, environmental, social and health sustainability? Yes

#### How?

1. Create strategies to increase business activity in Cascais	2. Promote environmental awareness	3. Implement mechanisms to reduce social disparities	4. Encourage a healthy lifestyle among citizens	5. Create a marketing strategy	6. Incentivize the digitalization of the municipality
<p>To increase business activity in Cascais, should CMC:</p> <ul style="list-style-type: none"> <li>• Encourage businesses to offer <b>cashback in Cashcais</b> to consumers?</li> <li>• Cover <b>different consumer groups</b>?</li> <li>• Impose <b>restrictions</b> for consumers on the purchases of certain products in Cashcais?</li> <li>• Encourage local <b>suppliers</b> to offer cashback in Cashcais to partners?</li> <li>• Include only local companies?</li> <li>• Allow <b>municipal taxes</b> to be paid in Cashcais?</li> </ul>	<p>To promote environmental awareness, should CMC:</p> <ul style="list-style-type: none"> <li>• Raise consumer and partners <b>awareness</b>?</li> <li>• Incorporate <b>City Points</b>?</li> <li>• Offer <b>additional</b> cashback or prizes as a reward?</li> <li>• Create a <b>table of classifications</b> of sustainability actions?</li> <li>• Increase the cashback that <b>sustainable partners</b> offer?</li> <li>• Create or use an <b>external sustainability</b> certification?</li> </ul>	<p>To reduce social disparities, should CMC:</p> <ul style="list-style-type: none"> <li>• Give a <b>bonus</b> to the beneficiaries of the “Cartão Mais Solidário” in Cashcais?</li> <li>• Segment Cashcais users according to their <b>social class</b>?</li> </ul>	<p>To encourage a healthy lifestyle, should CMC:</p> <ul style="list-style-type: none"> <li>• Raise consumers <b>awareness</b> of health and well-being issues?</li> <li>• Include the <b>health factor</b> in the application?</li> <li>• Define any <b>limits</b> regarding the health component?</li> </ul>	<p>To create marketing strategy, should CMC:</p> <ul style="list-style-type: none"> <li>• Create a <b>referral program</b> for partners and consumers?</li> <li>• Use both <b>digital and traditional</b> strategies?</li> <li>• Create <b>physical card</b>? How to send?</li> <li>• Download app on the app store, google store and website?</li> <li>• Have different consumer and partners segments and a <b>target strategy</b> for each group?</li> <li>• Use <b>sales promotions</b> to reach consumers and partners?</li> </ul>	<p>To digitalize the municipality, should CMC:</p> <ul style="list-style-type: none"> <li>• Migrate the <b>City Points</b> application?</li> <li>• <b>Digitalize</b> “Cartão Mais Solidário”?</li> <li>• Set-up <b>anti-fraud mechanisms</b>?</li> </ul>

## To boost commerce in Cascais, consumers should receive cashback, should be segmented and should not be able to buy all products with Cashcais. Furthermore, partners should receive cashback, and should belong to Cascais

### C.3. Project In-Depth Analysis | Hypothesis Analysis (I/XII)

\*"To be studied" hypothesis are the new hypothesis in the Cashcais project or new approaches to a topic

Issue	Sub-Issue	Hypothesis	Status	Analysis
Should CMC create strategies to encourage commerce in Cascais?	Should Cascais encourage businesses to offer cashback in Cashcais to consumers?	A1 It is necessary to offer a value proposition in order to attract consumers to the Cashcais network. Thus, besides a local currency promoting proximity consumption, the benefit of belonging to this network will be the cashback received for each purchase made at partners.	Approved by CMC	BA CC
	Should CMC cover different consumer groups?	A2 To promote local commerce, consumers must be segmented into groups, to create differentiated strategies adapted to the profile of each consumer group.	Default design of the model	SY PD
	Should CMC impose restrictions for consumers on the purchases of certain products in Cashcais?	A3 The aim of the local currency is not to encourage the consumption of products that are harmful to consumers' health and services that encourage addictions or illegal practices.	Approved by CMC	BA CC
	Should CMC encourage local suppliers to offer cashback in Cashcais to partners?	A4 It is necessary to offer a value proposition in order to retain value in Cascais and encourage local commerce. However, apart from the hotel sector, few companies have local suppliers which will lead to few local B2B transactions.	To be studied*	BA
	Should CMC include local companies?	A5 Only local companies and suppliers should have the opportunity to join the Cashcais network in order to encourage local purchases, both B2B and B2C. By buying locally, Cascais' economy will be stimulated, leading to its growth.	Default design of the model	SY
	Should CMC allow municipal taxes to be paid in Cashcais?	A6 The advantage of being able to pay the municipal taxes in Cashcais is that partners can use their Cashcais as well as enjoy a discount when making this transaction in Cashcais.	Depending on pandemic	CC

Legend:

YES

Hypothesis Validated

NO

Hypothesis Not Validated

BA

Benchmark Analysis

CC

Co-Creation Meetings

DA

Data Analysis

PD

Personas Design

SY

Survey Analysis

35

## To promote environmental awareness, the municipality should raise awareness among its citizens and incorporate the City Points App. CMC should offer cashback and additional rewards to exemplary consumers

### C.3. Project In-Depth Analysis | Hypothesis Analysis (II/XII)

\*\*“To be studied” hypothesis are the new hypothesis in the Cashcais project or new approaches to a topic

Issue	Sub-Issue	Hypothesis	Status	Analysis
Should CMC promote environmental awareness?	Should CMC raise consumers awareness of environmental issues?	B1 By raising consumer awareness of environmental issues, consumers will buy in a more sustainable way, so-called conscious consumerism. This happens when purchases are driven by a commitment to make decisions that have a positive social, economic and environmental impact. This awareness can also lead to an increase in sustainable actions.	Default design of the model	CC SY
	Should CMC incorporate City Points?	B2 By incorporating the City Points application, CMC will be creating a platform that allows consumers to be more informed and enjoy benefits for being active citizens and participating in sustainable actions. It is important to study which actions should be rewarded.	Approved by CMC	CC DA
	Should CMC offer additional prizes as a reward?	B3 By offering additional prizes only to a limited number of exemplary citizenship and sustainability consumers, CMC will be promoting and rewarding above-average levels of community outreach, leading citizens to be more participative. The prizes can include offering additional cashback to this target group.	To be studied*	BA SY
	Should CMC use a gamification strategy?	B4 By using a gamification strategy, CMC promotes healthy competition among consumers to be the most active in the community.	Approved by CMC	BA SY
	Should CMC raise partners awareness of environmental issues?	B5 By raising partners' awareness of environmental issues and challenging them to achieve the sustainable certification, CMC will be promoting greater environmental awareness in the municipality.	Approved by CMC	SY
	Should CMC increase the cashback that sustainable partners offer?	B6 By increasing the cashback of partners with the sustainable certification, CMC will be encouraging more responsible and sustainable consumption, thus promoting environmental and social awareness in the municipality.	Default design of the model	CC SY

Legend:

YES

Hypothesis Validated

NO

Hypothesis Not Validated

BA

Benchmark Analysis

CC

Co-Creation Meetings

DA

Data Analysis

PD

Personas Design

SY

Survey Analysis

36

## To promote environmental awareness, the municipality should create its own certification. To reduce social asymmetries in Cascais, “Cartão Mais Solidário” beneficiaries should receive a bonus in Cashcais

### C.3. Project In-Depth Analysis | Hypothesis Analysis (III/XII)

Issue	Sub-Issue	Hypothesis	Status	Analysis
Should CMC promote environmental awareness?	Should CMC create a sustainability certification?	B7 By creating its own sustainability certification for partners, CMC can incorporate the reality of different businesses and the municipality into the process of certifying them. It is important to create a process with transparent metrics that validates the positive impact of the company and study the feasibility for CMC to audit all partners.	Approved by CMC	BA CC SY
	Should CMC use an external sustainability certification?	B8 By using an external sustainability certification, CMC would simplify the whole certification process. However, CMC aims to help small businesses to be sustainable and conscious. By using an external certification, the outreach to these businesses would be less.	Not validated	DA CC
Should CMC implement measures to reduce social asymmetries?	Should CMC give a bonus to the beneficiaries of the “Cartão Mais Solidário” in Cashcais?	C1 With this bonus, card beneficiaries can benefit from more disposable income. In this way, the bonus may increase the quality of life of these beneficiaries.	Approved by CMC	DA CC
	Should CMC segment Cashcais users according to their social class?	C2 Cashcais will be able to help its citizens who receive social support, by increasing their disposable income. The purpose of a local currency differs from a traditional currency since it aims at circulation and exchange, rather than accumulation. The cashback attribution according to social class will have clauses to be detailed later.	Not validated	DA

## To properly promote the project, both consumers and partners will have to be segmented into different groups that will have their own marketing strategy tailored to the group

### C.3. Project In-Depth Analysis | Hypothesis Analysis (IV/XII)

Issue	Sub-Issue	Hypothesis	Status	Analysis
Should CMC create marketing strategies?	Should CMC segment consumers by different groups?	D1 Using a statistical test, the different consumer groups should be established, which can be differentiated by age, location, occupation, income, gender, or even by "Cartão Mais Solidário" users and former City Points app users, or even a mix of these.	Default design of the model	DA
	Should CMC segment partners by different groups?	D2 Using a statistical test, the different groups of partners should be established, differentiated by their industry, sector, degree of sustainability, company size or financial liquidity.	Default design of the model	DA
	Should CMC adapt a target strategy for each group of both consumers and partners?	D3 After segmentation of the different consumer and partner groups, promotion strategies should be tailored to each group. The three main marketing strategies are Digital Marketing, Traditional Marketing and Promotional Marketing.	Default design of the model	SY
	Should CMC promote the app in order to increase the number of users?	D4 The promotion strategy should involve both City Marketing, which is based on promoting the municipality of Cascais. Additionally, digital advertising will be an important promotion strategy to reach more people, especially those who are more digitally connected and who will be the people most likely to join the app and take advantage of its features.	Default design of the model	SY
	Should CMC use sales promotions to reach consumers and partners?	D5 CMC should use a sales promotion strategy that encourages consumers to buy with Cashcais. For example, CMC should develop a voucher system, which can only be used in the municipality of Cascais and will be present in the app or card and have a time limit for use, which will encourage citizens to buy locally.	Default design of the model	BA
	Should CMC create campaigns to support partners?	D6 Supporting and promoting companies of specific economic activities on specific days/weeks can create a positive impact on citizens' mind. On those days/weeks, those specific partners will offer more discounts (supported by CMC), which will attract more consumers.	Default design of the model	BA SY

**To properly promote the project, CMC should create a referral program, and a physical card. The application should be available in both App Store and Google Store.**

### C.3. Project In-Depth Analysis | Hypothesis Analysis (V/XII)

\*\*"To be studied" hypothesis are the new hypothesis in the Cashcais project or new approaches to a topic

Issue	Sub-Issue	Hypothesis	Status	Analysis
Should CMC create marketing strategies?	Should CMC create a referral program for partners and consumers?	D7 For new users of the app, a reference code will be given to the consumer, such as "invite a friend and win X Cashcais". This will lead to an increase of users of the application and, consequently, to an increase of purchases in Cashcais.	To be studied*	BA
	Should CMC use both Digital Marketing and more traditional strategy?	D8 To be able to reach a wider audience, with people of all ages and backgrounds, extensive promotion should be done using both traditional and new media, such as social media.	Default design of the model	BA
	Should CMC create a physical card?	D9 A physical card will allow CMC to reach a wider audience, mainly less tech savvy consumers such as the elderly, but also consumers who do not have access to a smartphone, or access to mobile data. However, a physical card will also entail more operational costs.	To be studied*	BA CC SY DA
	Should CMC have the application present in the App store and Google store?	D10 It is important to be able to find the application on all types of smartphones, from all brands and software providers, whether iOS or Android. Therefore, the app should be present in all online shops.	Default design of the model	SY
	Should CMC allow the application to be downloaded directly from the website?	D11 To make the process more user-friendly, and not confuse the user, the application will only be found in online shops, so that with just one click it can be downloaded.	Not validated	BA
	Should CMC send the physical card to users' home and allow pick-up at CMC?	D12 An application process for the physical card will be available by filling in a form. The card can then be picked up at CMC or sent home, depending on the consumer's preference.	Default design of the model	SY

## CMC should migrate and digitise existing programs as well as create anti-fraud mechanisms to promote the success of the municipality's digitization

### C.3. Project In-Depth Analysis | Hypothesis Analysis (VI/XII)

\*\*"To be studied" hypothesis are the new hypothesis in the Cashcais project or new approaches to a topic

Issue	Sub-Issue	Hypothesis	Status	Analysis
Should the CMC encourage digitization in the municipality?	Should CMC migrate the City Points application?	E1 When migrating the existing City Points application in addition to the active users, CMC should leverage the current knowledge of the application and also migrate functionalities and actions that have been successful. The current active users of the application will also be important to help create the network effect.	Approved by CMC	DA
	Should CMC digitalize "Cartão Mais Solidário"?	E2 By digitizing the "Cartão Mais Solidário" program, CMC will be able to strengthen the social support of the local community. These users are also important to help create the network effect.	Approved by CMC	DA SY
	Should CMC set up anti-fraud mechanisms?	E3 An anti-fraud system makes it possible to guarantee the security of all operations as well as considerably reducing the risk of major financial losses.	Default design of the model	BA
Should CMC promote health and well-being awareness?	Should CMC raise consumers awareness of health and well-being issues?	F1 Studies indicate that people are increasingly more concerned about their health and fitness. Thus, following this trend and the pandemic health side effects, CMC should invest in promoting a healthier lifestyle for its citizens.	To be studied*	DA
	Should CMC include the health factor in the application?	F2 Including this component in the application of Cashcais would go in line with CMC vision. It would be able to improve the quality of life of citizens by improving the health of citizens, reducing health spending, leading to an overall higher happiness rate. However, it should be carefully thought to benefit the community and not only the individual.	To be studied*	BA
	Should there be any limits regarding the health component?	F3 Some matters should be carefully reviewed by CMC. It is risky to give cashback or some sort of reward to actions such as blood donations.	To be studied*	DA

## The Cashcais program should include B2B relations which will foster the local economy and develop the municipality while facilitating and reducing cost

### C.3. Project In-Depth Analysis | Hypothesis Analysis (VII/XII): A4 – “Should CMC encourage local suppliers to offer cashback in Cashcais to partners?”

#### Importance of the B2B relationship

B2B's more sustainable relationships are not restricted only to the buying and selling procedure. They are also based on the mutual contribution to the development of both parties, minimizing risks and leveraging on efficiency.



Incorporating the suppliers into the Cashcais program will allow this type of relationship.

#### Benefits of incorporating suppliers into the program



##### Process facilitation for B2B companies

Suppliers and buyers meet in the same application, facilitating the entire procedure through an **increase in efficiency and simplicity of the relationship.**



##### Cost reduction

Of course, buying locally implies **less necessary transportation and storage expenses**, as suppliers and producers will be closer.



##### Higher billing for businesses

The **cashback** companies will receive when buying from suppliers belonging to the Cashcais program will not only encourage companies to join and use the program but will **increase profit for them.**



##### Fostering the local economy and developing the municipality

Buying from local suppliers (rather than international suppliers) allows for **higher billing and this increased profit margin strengthens the local economy.** Collaboration between companies is fundamental for the development of the municipality.

#### Action Plan

- **Contact suppliers** and introduce the Cashcais program and its benefits.
- **Integration of suppliers** in the application.

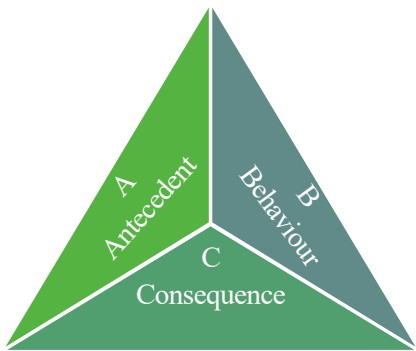
Therefore, CMC should include suppliers in the application, fostering B2B development

## The Board shall offer additional cashback and additional prizes to a limited number of exemplary users as a reward for environmental actions

### C.3. Project In-Depth Analysis | Hypothesis Analysis (VIII/XII): B3 – “Should CMC promote environmental awareness by offerings prizes as a reward?”

#### Model ABC

There is a model, the ABC model, consequence of the antecedent behavior, which serves as a **theoretical basis to improve the behavior.**



#### 1 Announce positive consequences

**People persist in maintaining old patterns** of behavior, **despite awareness of the negative consequences** for the environment and knowing viable alternatives to their current behavior.

#### 2 Introduce positive or negative consequences for environmental behaviors

**Additional rewards are particularly effective** in situations where **people are aware that their actions are harmful** to the environment, have the ability to change their behavior, but lack enough motivation to change.

**The introduction of monetary rewards can change behavior for the better.** On the other hand, **it can suppress the influence of personal norms or moral obligations.** Therefore, they have to be understood as a form of support and managed as extrinsic motivations.

#### Reward users



##### General users

**General users should be given a positive consequence** in order to change their current behavior and **encourage more sustainable practices.**



##### Exemplary Users

**Exemplary users (top 10%) who take more action should be awarded** to continue and **trigger exemplary behaviors of peers.**

#### Action Plan

- Analyze when it is appropriate to apply additional consequences
- Determine the amount of the reward per share
- Set % of users who are entitled to and prizes

**Therefore, CMC should create an initiative to offer cashback and additional prizes as a reward for environmental actions**

## Gamify environmental actions can be beneficial to increase the level of sustainability of the municipality, contributing to greater environmental awareness among consumers

### C.3. Project In-Depth Analysis | Hypothesis Analysis (IX/XII): B4 – “Should CMC promote environmental awareness using a gamification strategy?”

#### Role in awareness raising

Environmental action campaigns, which use **gamification**, have been **successful in exciting consumers** about environmental practices.

#### Advantages



Reach wider audiences



Increase competition



Create network effects



Reward behavior

#### Case studies



**Initiative launched in 10 UK cities**, with the aim of **promoting walking, running and cycling** from home to school or just leisure. Users register on the platform and **simply pass the "Beat the Street" card** in the locations to earn points.

The app has more than 100,000 users. There is a leaderboard and **prizes for the groups of users who most often pass the card.**



Thesis project “The effect of gamification on environmental knowledge and behaviors”

By conducting two experiments, it was concluded that:

1. There was a **10% increase in test result** when **learning used gamification**;
2. There was a **41% increase in recycling** when **gamification was introduced.**

#### Action Plan

Design a gamification program for the Cashcais application:

- Dynamic profile
- Leaderboard (Initiative 7)
- Invite friend
- Badge system

**Therefore, CMC should use a gamification strategy to increase the number of environmental actions**

**A referral program can be crucial in achieving a critical mass point, since the project depends on network effects, and can help spread the word among the community**

### C.3. Project In-Depth Analysis | Hypothesis Analysis (X/XII): D7 - "Should CMC create a referral program as part of Cascais marketing strategy?"

#### Advantages of referral programs

Marketeers say...

- **88%**: they use **referral marketing**. "It adds a growth channel";
- **60%**: "referral programs **generated** a high volume of **leads**";
- **78%** (B2B marketeers): "it generates leads of good or excellent **quality**";
- **54%**: "referral marketing has a **lower cost-per lead**, maximizing ROI".

#### Case studies



**Dropbox** is a well-known online storage company. Its referral campaign entailed **offering a free 500MB of space to both the advocate and the referred consumer** – "For every friend who joins and installs Dropbox on their computer, we'll give you both 500MB of bonus space (up to a limit of 16GB)".



This campaign resulted in a **boost of total signups by 60%**, as Dropbox effectively took advantage of the overall consumer need of more space storage.



**Uber** has one of the most recognized referral programs, which has been essential to its business model, as it **heavily relies on network effects**. Its **referral program is for both for riders and drivers** and its success lies on 1) easy access to the program on the app, 2) mobile-friendly features, 3) unique referral codes for each user, 4) several sharing options of the codes and 5) dual-sided incentives (for both the advocate and the referred new user on the platform). This program has been one of the **factors behind the huge worldwide success** of the company.

#### Action Plan

- Design a referral program
- Define which are the rewards for bringing a new user for the app

**Therefore, CMC should have a referral program to guarantee a critical mass of consumers and partners, crucial for network effects**

## Some citizens would like to access Cashcais functionalities through a physical card, which creates an emotional connection to the service

### C.3. Project In-Depth Analysis | Hypothesis Analysis (XI/XII): D9 - "Should CMC create a physical card as part of Cashcais marketing strategy?"

#### Advantages of physical cards

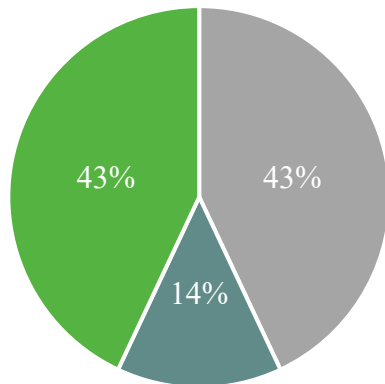
- No need for internet;
- **Tangible** symbol of trust;
- **Accessible to everyone** (especially elderly and people with no access to a smartphone or internet).

#### Disadvantages of physical cards

- **Not as easy to track** consumer activity as when using the app;
- Too many cards in the wallet.

#### Majority of respondents want to use the card

“Would you rather use a physical card instead of the app? (With access to the same functionalities)”



- No, I would rather use the mobile app
- Yes, I would rather use a physical card
- I would like to use both

#### Case studies



**In the study** “Tangible objects create an emotional connection to a service” (2020), it is revealed that touching a **physical product metaphorically** translates into perceived mental connection towards the service. This consequently leads to a **stronger psychological connection**, eventually leading to an **increase behavioral indentation** towards that service. It is also revealed that this only happens when this object is of high aesthetic appeal.



**In another study**, after undergoing in-depth interviews with mobile app users, Hyeuk (2016) came to the conclusion that the **Starbucks card** was **attractive to users** because “the design of Starbucks” cards always made them want to **have and use them**.

#### Action Plan

- Design the physical card with an aesthetic appeal
- Link the physical card with the app

Therefore, CMC should provide a physical card, to build emotional connection with potential and existing customers, reaching wider audience.

## Studies indicate people are increasingly concerned about their health. Therefore, CMC should add a health strand to the Cashcais by offering incentives to users to perform healthy activities

### C.3. Project In-Depth Analysis | Hypothesis Analysis (XII/XII): F1, F2, F3 - "Should the CMC promote human sustainability?"

#### The health of citizens is in line with the objectives of the CMC



Health is one of the seven main pillars presented in the Viva Cascais strategy program for 2021-2025.

Offer of **incentives** (in Cashcais) to perform healthy activities



Increase in the number of **participants** in physical activities and awareness



Improve the **quality of life** of citizens:

1. Improving the health of citizens
2. Less health spending
3. Higher happiness rate



#### People are increasingly concerned about their health and healthy choices

##### Self-care

- Concern for health and well-being in a holistic and preventive way



Studies indicate that people are **increasingly concerned** about their **health** and **fitness**.

#### There are similar programs with the same purpose, which can be incorporated



Healthy Challenges

Health Academy x CMC



+Saúde Todos os Dias

Academia da

Saúde x CMC



Vitality

Multicare

#### Action Plan

- Review the different hypotheses on this topic
- Collaborate with the NMS team
- Define the activities to be inserted into the program
- Design the gamification process of the activities

Therefore, CMC should add a health component to Cashcais planning

## To ensure the quality of the recommendations, both quantitative and qualitative investigation methods were performed

### D.1. Strategy Formulation | Investigation Methods

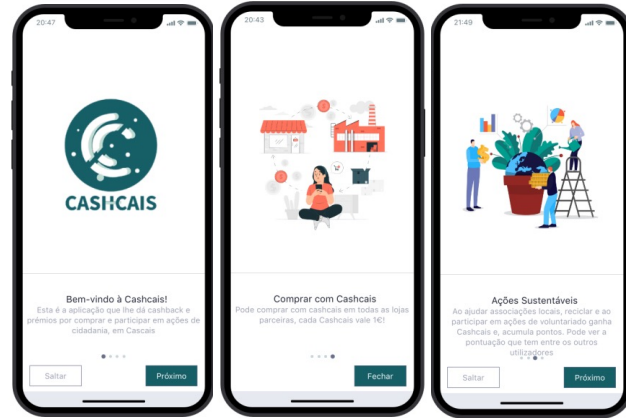
Co-creation meetings <span>CC</span>	Meetings with Experts (6 meetings)	Survey (1 011 Answers) <span>SY</span>	Personas Design (6 Personas) <span>PD</span>	Data and Benchmark Analysis <span>DA</span> <span>BA</span>
<ul style="list-style-type: none"> <li>Weekly meetings with Deputy to the Mayor's Office, Ms. Anceliana Ramos to co-create project recommendations;</li> <li>Three meetings with Ms. Rosário Daugbjerg to retrieve detailed and extensive information about the City Points application, lessons learned and suggestions to integrate the app;</li> <li>Meeting with Ms. Vera Brito to gather information about CMC data procedures;</li> <li>Meeting with Ms. Inês Proença to co-create the certification process;</li> <li>Meeting with Ms. Mafalda Silveira to guarantee social inclusion;</li> <li>Meeting with Ms. Teresa Varandas and Ms. Joana Godinho from financial department to analyze financial projections;</li> <li>Meeting with a company, Cashcais development partner, to discuss and co-create wireframe and payment process.</li> </ul>	<p>Meetings with experts in <b>balanced scorecard</b> (Prof. João Silveira Lobo), <b>marketing</b> (Prof. Pedro Gardete), <b>statistics</b> (Prof. Luís Catela Nunes) and <b>behavioral science</b> (Prof. Irene Consiglio), <b>philosophy of money</b> (Mr. Eduardo Ferracioli), <b>rewarding healthy behavior</b> (Mr. Ricardo Leitão and Mr. Ricardo Caldeira).</p>	<p><b>Survey developed</b> in Qualtrics to check Cascais' citizens' perception regarding the possibility of introducing a new local currency; <b>to measure Cascais' citizens acceptability and motives</b> towards the different functions of the currency; <b>to test hypothesis</b> / beliefs about Cashcais; to have a better and <b>more accurate Marketing segmentation</b>; and to have already a bank of contact information of <b>candidates for the pilot.</b></p>	<p><b>6 personas</b> were designed based on <b>common characteristics, the propensity</b> to use and <b>adhere to a new technological product</b> and the <b>main motives to join Cashcais</b> out of Economic, Social, Environmental and Human. Some of the characteristics that were taken into account were age, salary, technological level, free time and if they already used digital payments.</p>	<p><b>Consulting books</b> best practices study; <b>Detailed analysis of Câmara Municipal de Cascais</b>; Best practices and benchmark <b>analysis of European local currencies</b>; <b>Banco de Portugal</b> and <b>Diário da República legislation</b> on how to <b>register a virtual asset</b> in Portugal; <b>Bcorp benchmark</b> analysis on sustainability practices, measurement, and certification process; <b>Ellen MacArthur Foundation research</b> and case studies from cities on European circular economy; Further research on <b>papers, newspapers, consulting firms' studies</b> and <b>specialized companies.</b></p>

## Wireframe were designed to clarify consistent ways for displaying the information of Cashcais project on the user interface on key pages

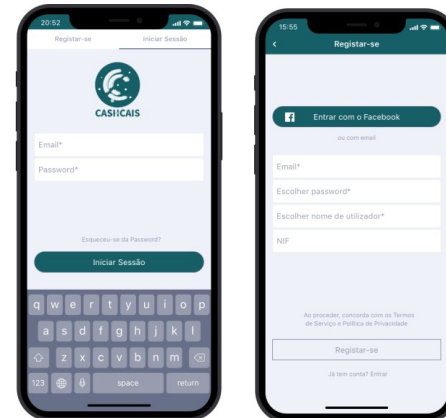
### D.3.b. Strategy Formulation | Pilot Program Overview – Minimum Viable Product: Wireframe (I/III)

The features of the application must be adapted to each type of user. The Cashcais application should be designed considering the citizens, partner stores and CMC. After logging in, the interface and features will be adapted for type of user.

The following screens show a general view of the application with details from each type of user.

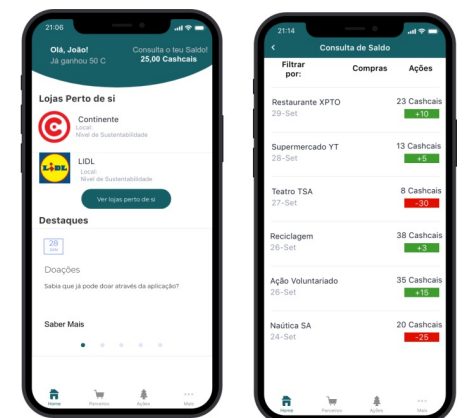


The home pages, after downloading the application, make a general walk through of the application to the user. First, there is a greeting to the consumer, followed by a brief explanation of the features and benefits present in the application, namely sustainable purchases and actions.



The first page will be "Log in", the user enters the data, from the MyCascais platform.

The "Register" page will be integrated with the MyCascais platform. Registration only needs to be done once, per user. If the user is already registered with MyCascais, just log in.

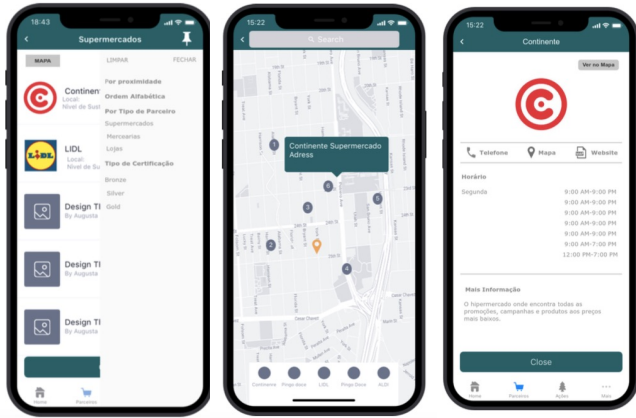


The main page "Home" is divided into three sections. A greetings section, current balance and accumulated Cashcais. On the second, the user will be able to see which shops are near, as well as nearby shops map. Finally, the user will be able to see highlights made available by CMC.

After click on "Check your Balance!", a list of all transactions appears. The user will be able to see how you earned and spent Cashcais. It should also be possible to filter.

## Wireframe were designed to clarify consistent ways for displaying the information of Cashcais project on the user interface on key pages

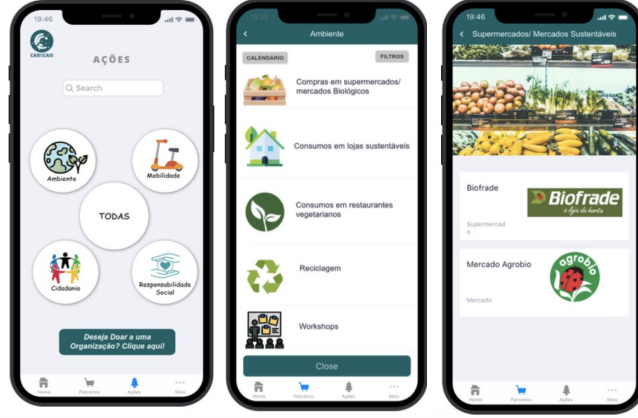
### D.3.b. Strategy Formulation | Pilot Program Overview – Minimum Viable Product: Wireframe (II/III)



When selecting filters, a side page will appear with possible filters, such as distance, alphabetical order, size, or even sustainability level.

On the map the user will be able to view the store in question, as well as similar stores and partners that are within walking distance of the user.

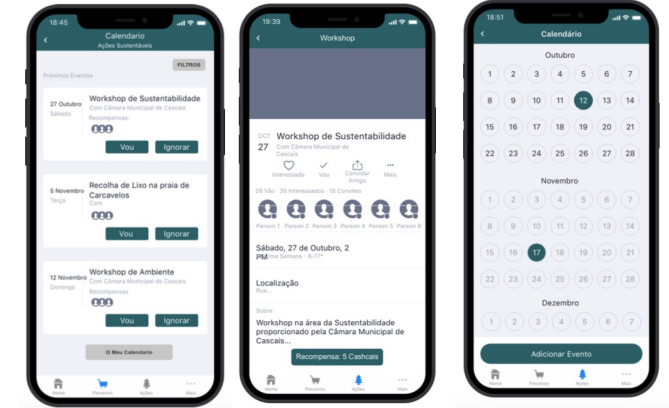
On this page, the user will be able to consult all the information about this partner. For example, the phone number, the partner on the map, the link to the website, the opening hours and, finally, more information that partners find necessary or important the user knows.



The main action page will be available for the same features as the partners' main page. However, a donations button will be present.

As with partners, a list of all actions, in this case, environmental, will appear. From this page, the user can filter these actions and also direct the user to a calendar, which will be explained later.

By clicking on one of the environmental categories on the previous page, such as "shopping in supermarkets/organic markets", a new partner page offering these products and services will appear.



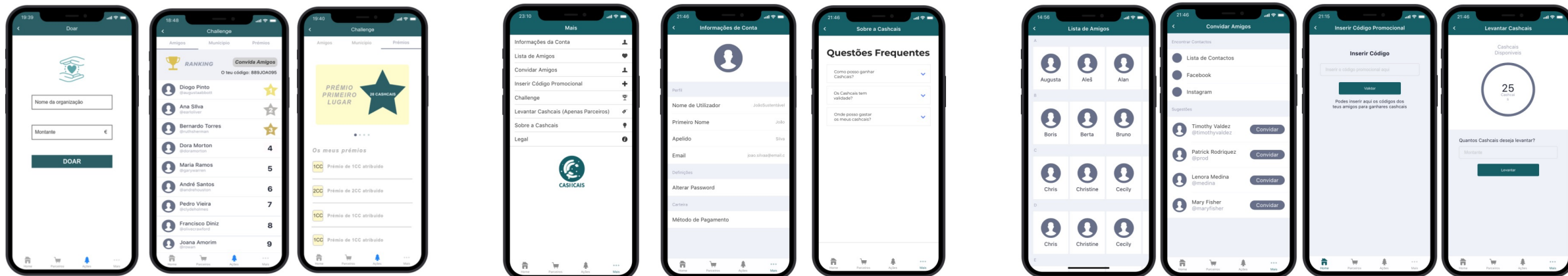
On this page, the user will be able to find a calendar of upcoming sustainable events and activities. The user can filter these events, for example, by activity type, by month, among others.

Here is a more detailed example of a workshop, in this case, on sustainability. On this page, the user can show interest, confirm presence and even invite a friend to join the workshop.

On the next page, a calendar with the actions/activities in which the user is subscribed will appear and a reminder will appear one day before the activity progresses.

## Wireframe were designed to clarify consistent ways for displaying the information of Cashcais project on the user interface on key pages

### D.3.b. Strategy Formulation | Pilot Program Overview – Minimum Viable Product: Wireframe (III/III)



On the "Donate" page, the user can choose the amount and organization.

Finally, the challenge page will display a ranking of the users who have done the most sustainable actions and activities. The user can see a ranking table of friends or the municipality in general.

On the next page, the prizes available will be displayed, as well as the prizes that you have already received with this challenge.

The user will be able to consult all the information about the account, friends list, invite friends, enter promotional code, collect Cashcais, FAQ and legal regulations.

On the "Account Information" page, the user should be able to see username, first name, last name, email, change your password and access payment methods.

On the "About Cashcais" page, the user can see a comprehensive and exhaustive list of all common questions about the app.

The user will be able to see the entire list of friends who currently have the Cashcais application.

On the "Invite Friends" page, the user should be able to invite friends from your contact list and directly from other platforms, such as social networks.

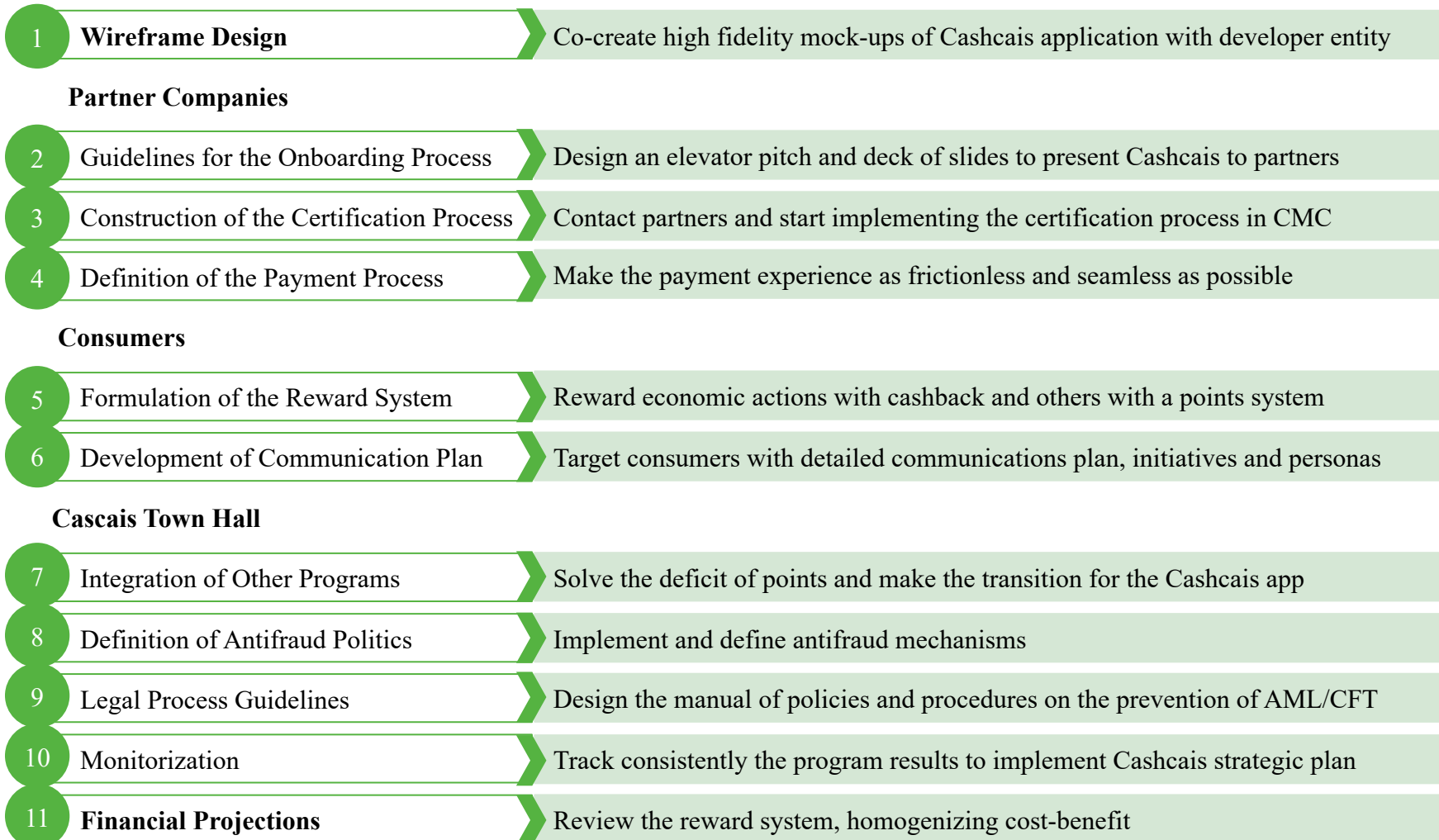
On the "Insert Promo Code" page, the user should be able to enter promotional codes - these may be from friends or special events of the Chamber.

Lastly, partners can exchange (withdraw) their Cashcais for euros with the Chamber.

## For a successful implementation of the pilot program, which requires efforts across several areas, the following action steps are recommended

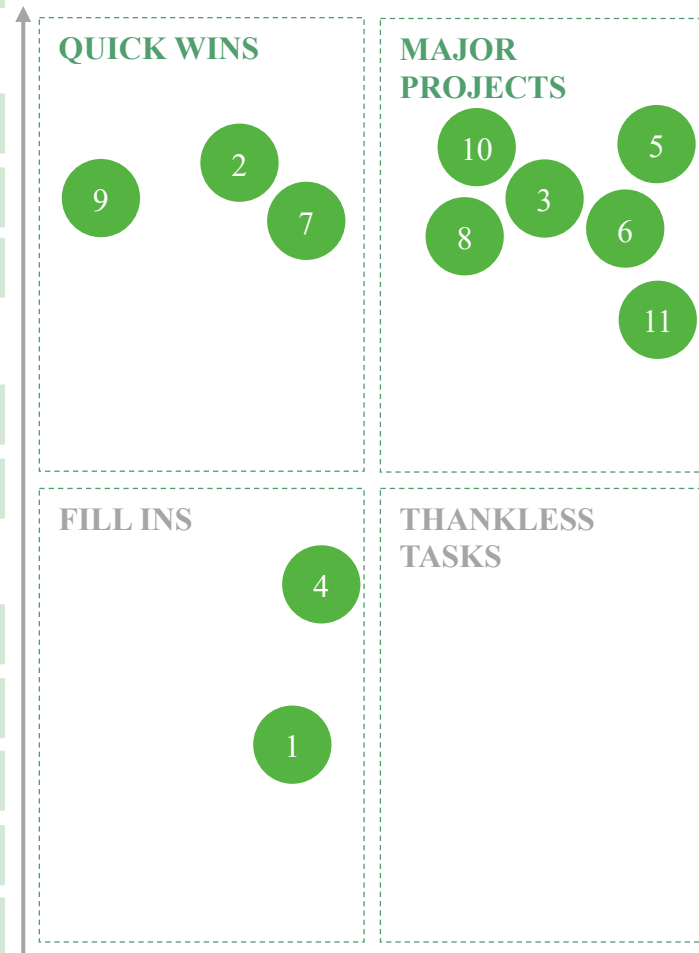
### E.1. Recommendations | Overview

#### SPECIFIC RECOMMENDATIONS



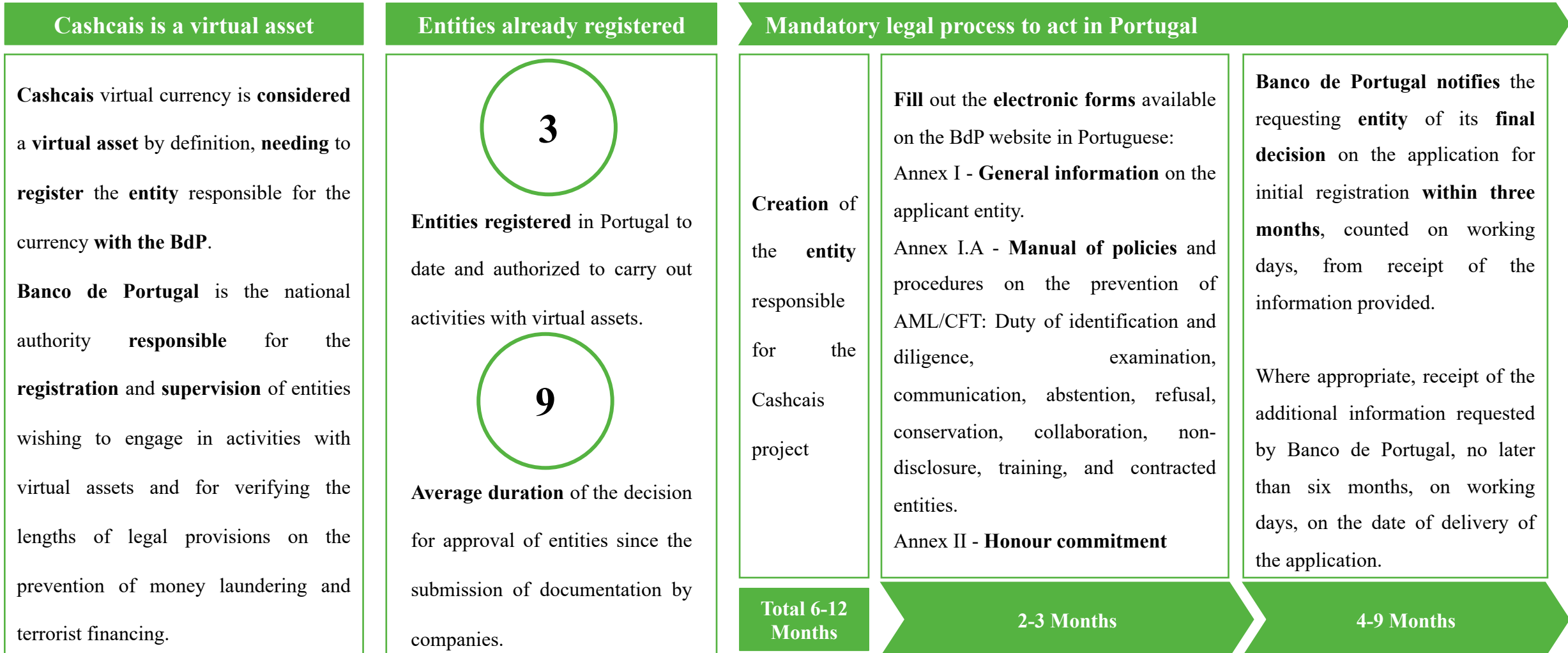
#### IMPACT-EFFORT MATRIX

##### IMPACT



## Cashcais being a virtual asset will have to register with Banco de Portugal, going through a process that can take from 6 to 12 months

### E.4.c. Recommendations | Town Hall – Legal Process



## In order to ensure the success of the project, its performance should be monitored as well as metrics of success should be defined, which can be visually established in a Balanced Scorecard

### E.4.b.i. Recommendations | Town Hall – Monitoring (I/VIII): Balanced Scorecard

#### Definition

A Balanced Scorecard is a set of measures resulting from the strategy of an organization. Hence, it can be used as a **communications tool**, a **measurement system** and a **strategic management system**.

#### History

It was developed in 1992 by a Harvard Professor, Robert Kaplan, and a consultant, David Norton. After conducting a study aiming to explore new methods of performance measurement, the two concluded the activities that drive performance are the **customer** issues, **internal business** processes, **employee activities** and **shareholder** concerns. The outcome was the tool which they named “The Balanced Scorecard – Measures that Drive Performance”.

#### Rationale

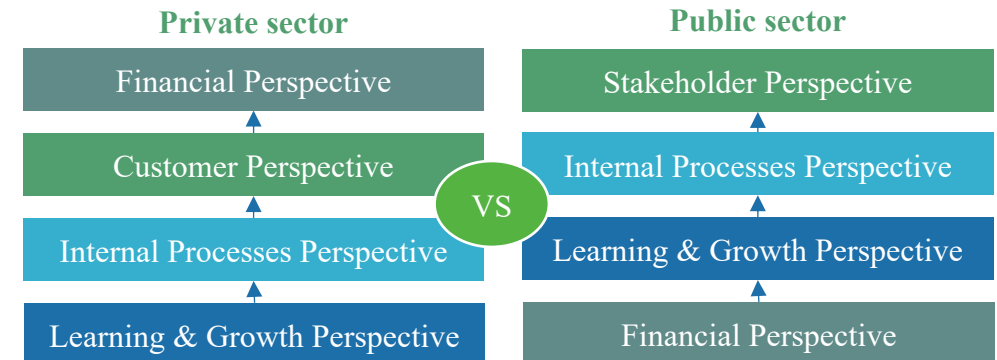
It is the most suited tool in this case because it illustrates in a **visual way** the objectives of an entity (strategy map) and tells the story across **four perspectives** by creating a chain of **cause-and-effect relationships** and measuring each objective. For the purpose of executing a strategy, meeting customer needs and demonstrating accountability, the Balanced Scorecard is the best tool.

#### Advantages

The biggest advantages of the Balanced Scorecard framework is that 1) it brings **simplicity** in a visually pleasant format, 2) it **focus on the strategy** and 3) it **aligns**. Hence, it ends up demonstrating accountability, generating results, improving performance considering the mission, attracting scarce resources, driving change and inspiring trust.

#### Perspectives

The Balanced Scorecard aims to examine the strategy. For the strategy to be effective, it must consider four aspects: the financial aspirations, the markets served, the processes to be conquered and the people and their skills who will be determinant for the success of the strategy. The ultimate goal in the private sector is to improve bottom-line performance. In the public sector, the entity exists for a higher purpose. Hence, as the objectives of each sector are different, the cause-effect relationships between each perspective in each sector are also distinct. In the public sector, **the framework starts with a mission statement from which flows the stakeholder perspective**.



## The Balance Scorecard developed enshrines 4 strategic themes, 42 objectives, 78 performance indicators and 17 initiatives

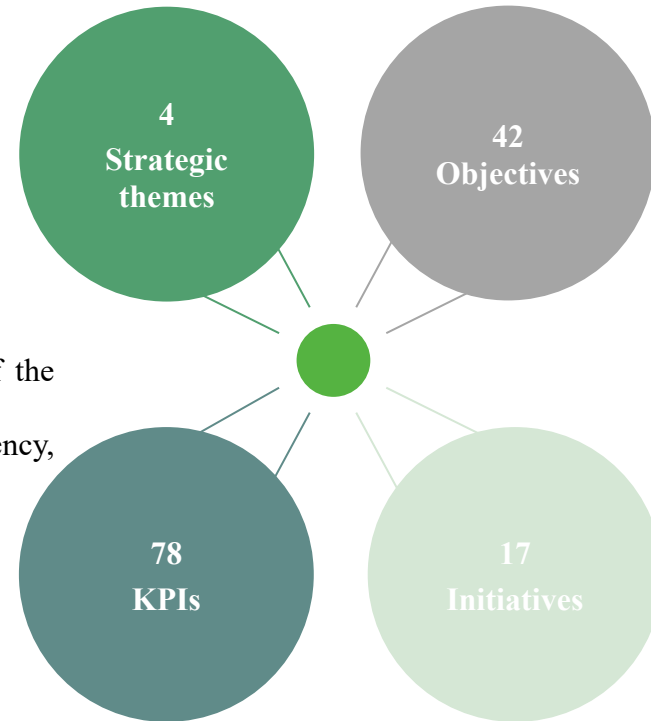
### E.4.b.i. Recommendations | Town Hall – Monitoring (II/VIII): Balanced Scorecard

Four **strategic themes** that support the Cashcais project were defined:

- Promoting Economic Sustainability;
- Promoting Environmental Sustainability;
- Promoting Social Sustainability;
- Promoting Human Sustainability.

In order to monitor and establish the success metric for each of the objectives, **KPIs** were defined (including lag/lead, metric, frequency, polarity, data source and target for 2022 and 2023):

- 28 KPIs for the Stakeholders' Perspective;
- 27 KPIs for the Internal Processes' Perspective;
- 13 KPIs for the Learning & Growth Perspective;
- 10 KPIs for the Financial Perspective.



After defining strategic themes, **objectives** were structured:

- 16 objectives for the Stakeholders' Perspective;
- 14 objectives for the Internal Processes' Perspective;
- 7 objectives for the Learning & Growth Perspective;
- 5 objectives for the Financial Perspective.

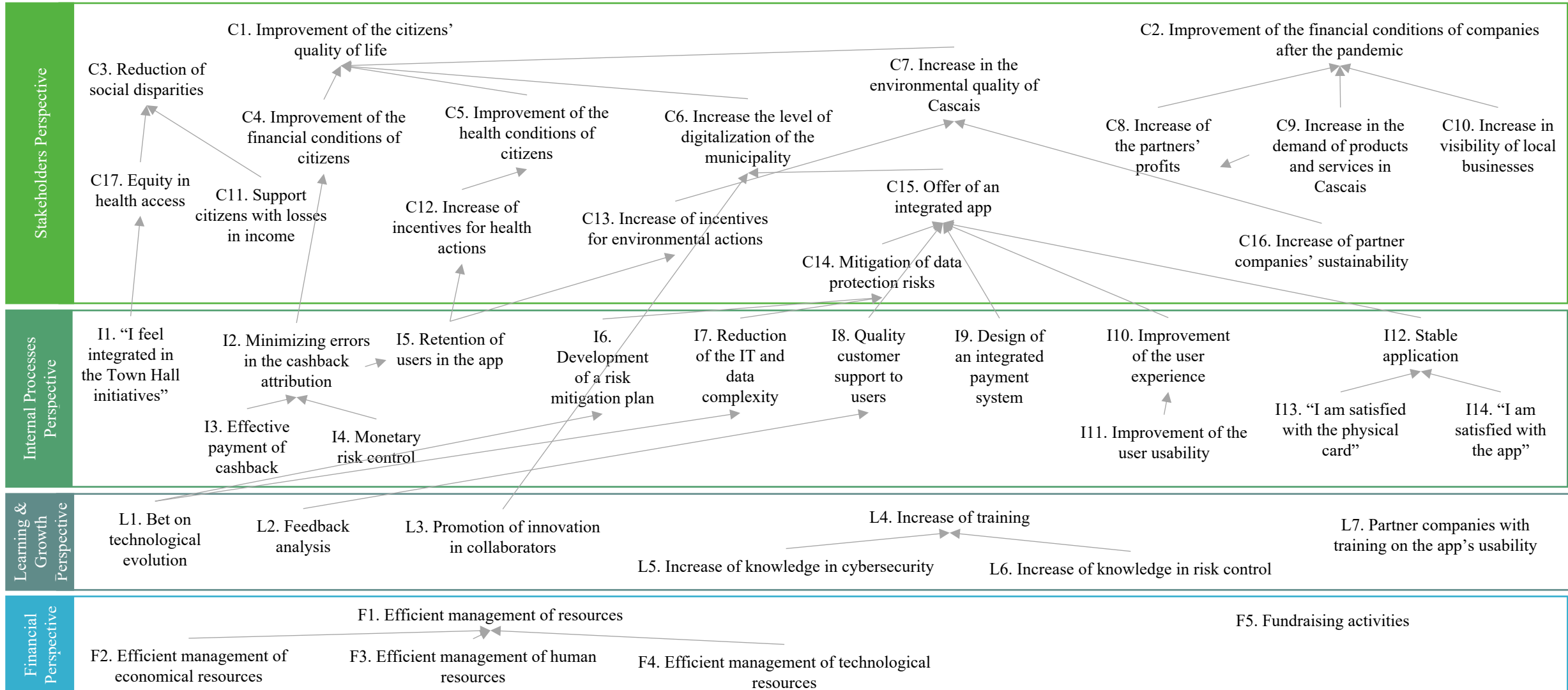
Lastly, **initiatives** were defined to achieve the proposed goals for KPIs (having in mind that with the evolution of application development, more initiatives will emerge):

- 13 initiatives from the Stakeholders' Perspective;
- 1 initiative from the Internal Processes' Perspective;
- 3 initiatives from the Learning & Growth Perspective.

Note: **The interpretation of the KPIs is more meaningful if considered as a whole, instead of isolated numbers.**

## To achieve CMC's ambition of launching a local digital currency that fosters 4 sustainability areas, the following Balanced Scorecard was developed, ensuring all the perspectives are covered

### E.4.b.i. Recommendations | Town Hall – Monitoring (III/VIII): Balanced Scorecard



**To assess the performance of the implementation of the application and whether its objectives are being achieved, some indicators have been defined to measure performance**

#### E.4.b.i. Recommendations | Town Hall – Monitoring (IV/VIII): Balanced Scorecard

Full list of KPIs on [Appendix 10](#)

### Stakeholders Perspective

Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
C7. Increase in the environmental quality of Cascais	Municipal recycling rate* <span style="color: green;">P</span>	Lag	Evolution of the municipal recycling rate	Annual	Positive	Eurostat	55%	56%
	Usage of public transports* <span style="color: green;">P</span>	Lead	Increase in the number of people, in percentage, that travel using public transportation in Cascais	Monthly	Positive	MobiCascais	+5%	+8%
Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
C13. Increase of incentives for environmental actions	Number of actions realized in the environmental area <span style="color: green;">P</span>	Lag	Number of actions realized in the environmental area through the Cashcais app	Annual	Positive	App	50.000	75.0000
	Number of partnerships established with organizations <span style="color: green;">P</span>	Lead	Number of partnerships done in the scope the Cashcais program in the environmental area  Note: This indicator is limited to the number of organizations that exist in the municipality	Annual	Positive	App	20	25

\*This indicator may be affected by external factors

Phase to begin measurement



Scale-up



Pilot

**Several strategic initiatives have been defined to achieve the proposed goals – some demand more effort and create more impact, if a comparison is made between the 17 initiatives**

#### E.4.b.i. Recommendations | Town Hall – Monitoring (V/VIII): Balanced Scorecard

	Done by the team	Developed by CMC	Impact			Effort			Department				Notes	
			High	Medium	Low	High	Medium	Low	Environment and Social	IT	Financial	Training		
1. Offering cashback														
2. Offering sustainable cashback														
3. Creating a physical card														Integrate VivaCascais
4. Creating an online platform														
5. Paying with the app														
6. Reducing paper waste by issuing receipts on the app														Extra idea
7. Creating a leaderboard														Included in City Points
8. Creating a list of sustainable actions														
9. Designing the reward system														
10. Integrating the existing CMC apps														
11. Creating the criteria for the sustainable certification														Prepared by team
12. Attributing a stamp to sustainable partners														
13. Defining the conversion of existing stamps														
14. Creating a customer support system														
15. Offering workshops														
16. Incentivizing team bonding initiatives														
17. Enhancing the relationship with Nova SBE														Workprojects

**Several strategic initiatives were defined to achieve the proposed goals on the KPIs, for each of the objectives, in order to guarantee the project's success**

**E.4.b.i. Recommendations | Town Hall – Monitoring (VI/VIII): Balanced Scorecard**

Full list of initiatives on [Appendix 10](#)

### Initiatives from the Stakeholders' Perspective

Objective	Initiative	Description	Beginning	Duration	Cost	Responsible
C13. Increase of partner companies' sustainability	<b>12. Attributing a certification to partner companies with sustainable practices</b>	Attribution of a certification to the partner companies that are classified as sustainable, according to the criteria defined by CMC, in the form of a stamp that confers benefits to the sustainable companies and consumers who purchase in these stores	Pre-pilot	Ongoing	To be defined	Environment department
	<b>13. Defining the conversion of external stamps partner companies may already possess</b>	Definition of the conversion between the levels of sustainability achieved through the CMC certification and any sustainable certification already obtained through other entities (eg. B-Corp)	Pilot	Two weeks	0€	Environment department

### Initiatives from the Learning & Growth Perspective

Objective	Initiative	Description	Beginning	Duration	Cost	Responsible
L4. Increase of training	<b>15. Offering workshops</b>	Implementation of free workshops for CMC's employees such that they can acquire the knowledge and skills necessary to the performance of their functions	Pilot	Ongoing	To be defined	Human resources department
	<b>17. Enhancing the relationship with Nova SBE</b>	Promotion of the relationship established with Nova SBE university, by participating together in initiatives such as hackathons or master thesis. Thereby, CMC has the opportunity to learn directly with the academia	Ongoing	Ongoing	0€	Cashcais Team

## The implementation of the Cashcais local currency project and the objectives that are associated with it are directly connected with the SDGs from the United Nations

### E.4.b. Recommendations | Town Hall – Monitoring (VII/VIII)

More developed on [Appendix 11](#)

The Cashcais project aims to increase the sustainability level of several areas. As a public entity implementing such an innovative project, its **goals coincide** with some of the Sustainable Development Goals proposed by the United Nations and requiring a call of action. Hence, CMC is putting efforts on the municipality sustainability and contributing for a better world.

 <p><b>1</b> NO POVERTY</p>	<p><b>3</b> <b>objectives</b> (C1, C4, C11)</p>	 <p><b>2</b> ZERO HUNGER</p>	<p><b>1</b> <b>objective</b> (C1)</p>	 <p><b>3</b> GOOD HEALTH AND WELL-BEING</p>	<p><b>3</b> <b>objectives</b> (C1, C5, C12)</p>	 <p><b>4</b> QUALITY EDUCATION</p>	<p><b>4</b> <b>objectives</b> (L3, L4, L5, L6)</p>
 <p><b>7</b> AFFORDABLE AND CLEAN ENERGY</p>	<p><b>3</b> <b>objectives</b> (C1, C3, C7)</p>	 <p><b>8</b> DECENT WORK AND ECONOMIC GROWTH</p>	<p><b>4</b> <b>objectives</b> (C1, C3, C4, C11)</p>	 <p><b>9</b> INDUSTRY, INNOVATION AND INFRASTRUCTURE</p>	<p><b>2</b> <b>objectives</b> (C2, C6)</p>	 <p><b>10</b> REDUCED INEQUALITIES</p>	<p><b>2</b> <b>objectives</b> (C2, C6)</p>
 <p><b>11</b> SUSTAINABLE CITIES AND COMMUNITIES</p>	<p><b>2</b> <b>objectives</b> (C3, C7)</p>	 <p><b>12</b> RESPONSIBLE CONSUMPTION AND PRODUCTION</p>	<p><b>3</b> <b>objectives</b> (C7, C13, C16)</p>	 <p><b>13</b> CLIMATE ACTION</p>	<p><b>3</b> <b>objectives</b> (C7, C13, C16)</p>	 <p><b>15</b> LIFE ON LAND</p>	<p><b>3</b> <b>objectives</b> (C7, C13, C16)</p>

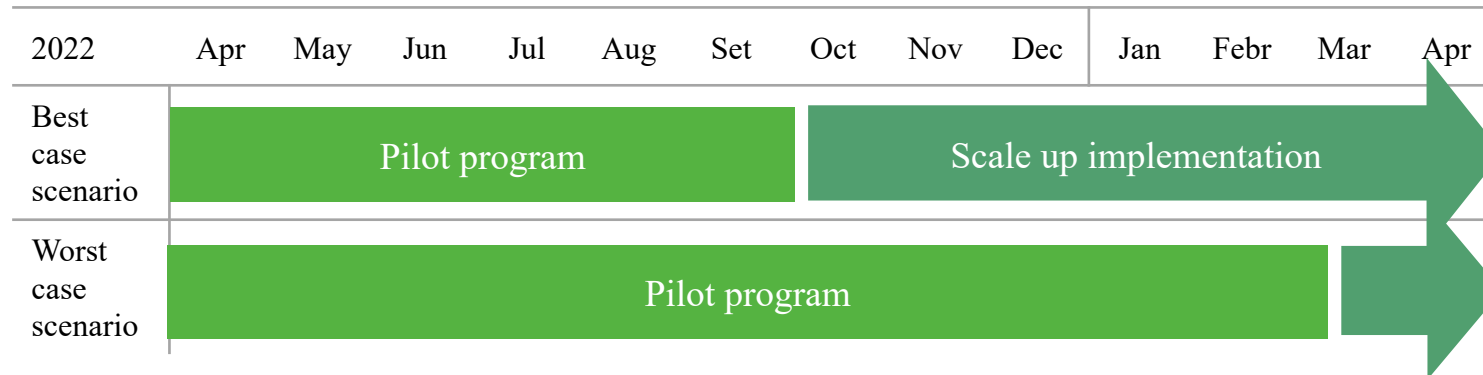
## To ensure the success of the project, an implementation schedule should be followed with the planning and monitoring cycle defined

### E.4.b. Recommendations | Town Hall – Monitoring (VIII/VIII)

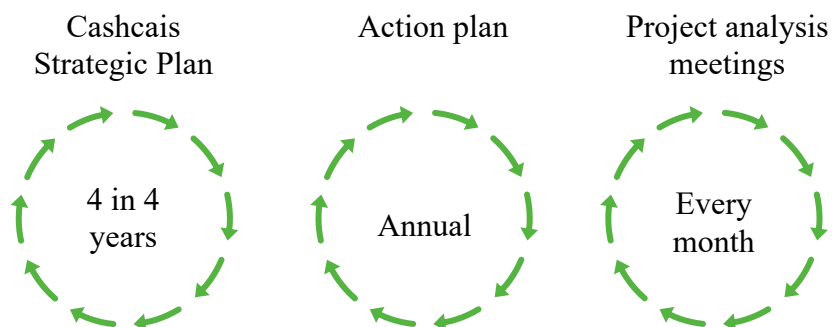
#### Implementation of the Cashcais Strategic Plan



#### Timeline



#### Planning and Monitoring Cycle



#### Main goal of each project phase

Pilot

The aim of this experiment will be to test a series of initial hypotheses, in a closed circuit (at least 3 000 users), to subsequently effectively implement the local currency throughout the municipality of Cascais. The hypotheses to be tested have to do with the target group of consumers, partners and the best marketing approach.

Scale-up

The project will be open to all consumers who want to participate in the project, whether through the application, physical card or both. As for partners, all those who are part of the app development ecosystem (being customers of the associated bank) and have their activity in Cascais, can also belong to the network and benefit from the advantages of the local digital currency of this municipality.

**The investment inherent to the pilot phase depends on the uptake and the pilot's duration, being able to vary between 370 000€ and 2,6M€**

### E.5. Recommendations | Financial Projections (I/II)

Scenarios in detail on [Appendix 12](#)

#### Different scenarios

Scenario	Investment		Costs - Duration		
	One-time	Monthly	6 months	12 months	18 months
1 Lower uptake	220 000€	25 000€	370 000€	530 000€	670 000€
2 Expected uptake		55 000€	550 000€	880 000€	1,2 M€
3 Higher uptake		130 000€	1,0 M€	1,8 M€	2,6 M€

#### Assumptions:

- Values represent estimates
- Financial projection during the pilot phase
- Scenarios depend on the success of the project
- Sustainable rewards based on the current City Points model (but considering 1 point = 0,1 CC)

According to the duration of the pilot programme, the financial projections for the pilot period will differ. Still, it must be acknowledged that the longer the duration of pilot, more hypothesis will be tested. Each proposed duration has a rationale behind:

#### 6 months

The minimum time the pilot can last to allow for the registration of the local digital currency as a virtual asset in Banco de Portugal.

#### 12-18 months

Enough time to legalize the currency, prepare the scale-up phase and normalize the usage of the Cashcais app among consumers and partners. As Cascais has a large population, it doesn't exist any project of this kind in Portugal yet and it involves a lot of variables, it may prudent to run the pilot for a larger period of time.

**For an expected uptake of consumers and partner companies on a 12-month pilot phase, the largest investment is represented by the rewards from sustainable actions**

## E.5. Recommendations | Financial Projections (II/II)

Scenarios in detail on [Appendix 12](#)

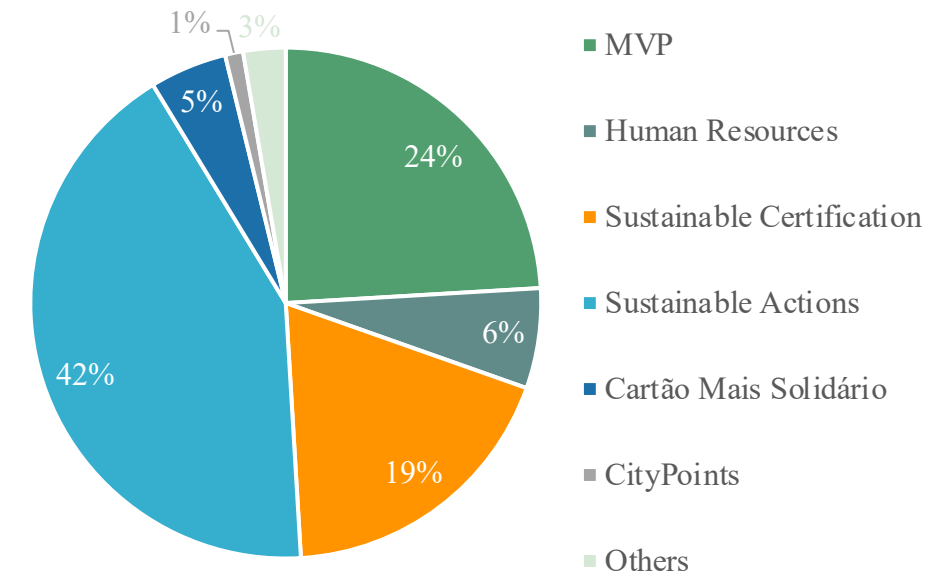
### Investment details

1 **Expected uptake** ~880 000€

MVP	
Deployment	200 000€
Maintenance	11 070€
Initiatives	
<i>Cartão Mais Solidário</i>	42 840€
Sustainable Actions	370 525€
Sustainable Certification	163 586€
City Points	10 000€
Human Resources	
Customer Support / Sales	16 800€
Marketing	8 400€
Financials	8 400€
IT Services	16 800€
Legal Staff	5 200€
Others	23 501€
<b>Total Investment (12 months)</b>	<b>877 121€</b>

Investment breakdown for a pilot duration of 12 months with expected uptake

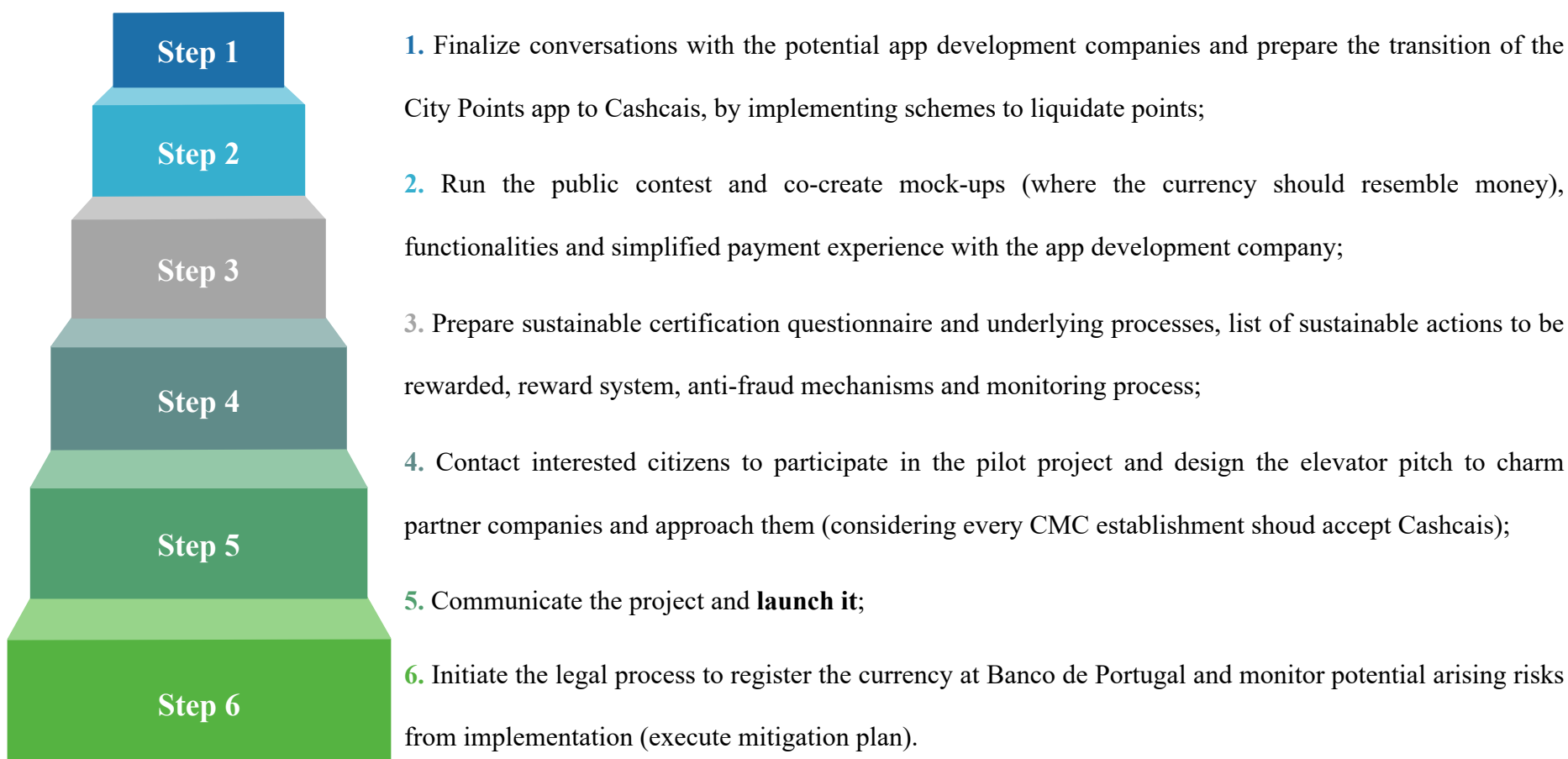
### Costs breakdown



## Lastly, CMC should start executing the proposed action plan, in order to have all the tools and processes ready to be used in the pilot phase

### E.7. Recommendations | Final Recommendations

CMC should put into practice an **action plan** in order to implement the local digital currency soon and have all the necessary processes ready to action:













Note: “How to sustain high performance in the public sector?”  
by McKinsey

1. **Create transparency** (performance metrics, stretch targets and digital tools for sharing)
2. **Involve managers in the solution** (motivational dialogues and agile methodologies)
3. **Empower the people** (nonfinancial incentives and skills for success)

**As every project, the Cashcais project may also carry some risks. However, as long as the client remains agile and prepared to implement the mitigation plan, no risk is harmful**

## F. Risks, Limitations & Further Research | Risks

 Low  Medium  High

RISK	CAUSES	PROBABILITY	IMPACT	MITIGATION
<b>Lack of human resources</b>	The number and expertise of people assigned is not enough to meet the workload			Consider increasing the size of team
<b>Few partners in the network</b>	The benefits and/or conditions of the project did not attract companies			Put more efforts on the onboarding process
<b>Few citizens in the network</b>	The benefits of the project did not attract citizens			Identify if the problem of few users is related to 1) lack of awareness or 2) lack of interest. If 1), invest in a targeted marketing strategy. If 2), redefine the value proposition to serve the citizens' needs
<b>Technical issues on the app</b>	The app has a larger volume of users than expected and/or some unfixed bugs			Have an internal programming team or an outsourcing company solving problems quickly
<b>Budget constraints</b>	The project exceeds the volume of expected users and surpasses the available assigned budget			Find additional revenue sources to face the increased expense (for example, application to funds)

## The project underlays some limitations, which must be considered as reading the final product and implementing the recommendations

### F. Risks, Limitations & Further Research | Limitations



The **results of the survey** must be carefully interpreted as they reveal people's intentions, which may be different from their actions. Furthermore, the sample of some age groups was not representative enough in the survey (younger and older generations), meaning that no conclusion can be drawn in these segments. Additionally, when running the pilot and considering the survey results, there should be a **control group** in order to make accurate interpretations.



As the pandemic continues and new restrictions are in place, the **evolution of the pandemic** must be considered as it can strongly influence the circulation of the currency as well as the proposed recommendations.



Throughout the 4 months of the project and interaction with the client, it should be taken into consideration that the team may have been subject to **bias**. Probably, the most prominent bias were the information bias, anchoring bias and framing bias. However, the team always carried a consultant-curious mindset.



The constant **change of scope** posed an additional challenge to team, requiring an extra effort in terms of time management and motivation. However, it brought real-life learnings as to what to expect as a consultant.

**Some details of the project should be further studied, in a comprehensive and in-depth analysis, in order to accurately draw conclusions and improve the interest of the project**

## F. Risks, Limitations & Further Research | Further Research

### Survey

Gather more data of Cascais and other municipalities' citizens through surveys to have a **more viable data set**.

### Economic and Environmental Research

Further research on the **benefits of local currencies** to foster Cascais economy. Further research the impact of the project in the environment of Cascais. Monitor and design how to best value each sustainable action developed by citizens.

### Idea Bank Validation

Further research on the hypothesis made on the Idea Bank and proceed with an **action plan**.



### Partner Interest

Conduct a market research and interview partners to **gather interest** in Cascais. Understand if the value proposition is **aligned with their needs**. Develop action plan and re-design model to meet their needs and wants.

### Monitor Pilot

Monitor KPIs of the pilot phase and use **agile methodology** to improve the application and model design.

### Other Municipalities

Study the **interest of other municipalities'** citizens in the project.

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## Appendix Agenda

1. [Appendix 1: Team Members](#)
2. [Appendix 2: Project Timeline](#)
3. [Appendix 3: Inductive reasoning](#)
4. [Appendix 6: Actions to be included on the app](#)
5. [Appendix 10: Balanced Scorecard](#)
  - I. [KPIs](#)
  - II. [Initiatives](#)
6. [Appendix 11: SDGs in-depth](#)
7. [Appendix 12: Financial projections](#)
8. [Appendix 13: Recognition](#)



**We are a motivated and hardworking team ready to implement such an innovative and original project**

## Appendix 1: Team Members

TEAM FALL 2021



Fire



President  
and  
Teamworker

**FILIPE  
GONÇALVES**



### EDUCATION

- BSc in Computer Science and Business Management at Iscte - IUL
- MSc in Management at Nova SBE, with specialization in Strategy and International Business

### PROFILE

- Internship in strategic consulting in the digital area
- Internship in project management and low-code development



Water



Teamworker

**MADALENA  
FERNANDES**



### EDUCATION

- BSc in Management at Nova SBE
- Exchange semester at the Universidad de Navarra
- MSc in Management at Nova SBE, with specialization in Marketing

### PROFILE

- International and national volunteering
- Experience in Marketing, NGOs, and customer service



Water



Teamworker

**MARGARIDA  
DAMAS**



### EDUCATION

- BSc in Management at Nova SBE
- Exchange semester at ZSEM, Croatia
- MSc in Management at Nova SBE, with specialization in Strategy and International Business

### PROFILE

- Projects in the consulting area
- Marketing and international expansion experience
- Experience in the Town Hall of Abrantes



Air



Intellectual

**PEDRO MELLO  
VIEIRA**



### EDUCATION

- BSc in Management at Nova SBE
- Exchange semester at the University of Victoria in British Columbia, Canada
- MSc in Management at Nova SBE, with specialization in Strategy and International Business

### PROFILE

- Internship in a consulting company in the area of enterprise applications

## Personality

### Appendix 1: Team Members



#### Filipe Gonçalves



Fire



President and  
Teamworker

#### Tetramap Element

The fire element is always looking at the positive side of life, they love to explore possibilities and inspire others to see bright futures. Fire Elements are colorful, love variety, and have a great sense of fun! Fire element is full of ideas and inspire and excite us to create bright futures together.

Source: Belbin, Tetramap

#### Belbin Team Role

The President's role in a team is to clarify objectives and define the business agenda by establishing priorities. It is mostly a coordination job and leverage the data to allow a better decision-making. The Team Worker role is to promote unity and harmony within a group, being always ready to help colleagues.

This group work gave me the opportunity to develop my leaderships skill by working as team manager and manage the relation with our stakeholders, namely the client, and the software company provider.

My goal was to learn as much as possible to be able, as a team, to deliver real impact for the client.

#### Key Takeaways

The Consulting Lab was an incredible opportunity to co-create a project that will benefit more than 200.000 citizens in the municipality of Cascais. Topics such as sustainability, recycling and circular economy are some of my major interests and could learn more about them in this project. Working with a Town Hall was very rewarding, not only because of the intrinsic characteristics but also because of their vision, in Cascais “Everything starts with people”, that motto drove my ambition to build a project with real benefits.

# Personality

## Appendix 1: Team Members



### MADALENA FERNANDES



Water



Teamworker

### Tetramap Element

Water Elements are important in maintaining teams together and keeping the harmony and flow within. They are caring and loyal and feel deeply for others. They are very inclusive and show great effort and patience.

### Belbin Team Role

Team Workers are co-operative, diplomatic and perceptive. They are the group members who provide support and make sure that everyone is working together effectively. Usually play a role of negotiators by listening and averting friction. Team Workers are extremely flexible and versatile, and as such are highly comfortable with working with diverse people and groups. Always ready to help its colleagues and promote harmony and unity. This group work allowed to further develop my teamworking skills, as well as many other skills by being forced to work in such an intense and demanding environment.

### Key Takeaways

It was a great privilege to be part of the consulting lab and to be able to work with such an innovative and dynamic Town Hall as CMC. This project was quite a challenge, as it was highly demanding and required full time and dedication. However, it was a very rewarding project to be a part of and I was able to learn in depth about several exciting topics, such as sustainability and local digital currencies, which allowed me to increased my knowledge and my interest in such areas.

## Personality

### Appendix 1: Team Members



#### MARGARIDA DAMAS



Water



Teamworker

#### Tetramap Element

The water element is considered calm, consistent, deep, but under pressure can be hesitant. They are governed by feelings and think in a collaborative way, being people-oriented. In a team, they bring harmony, inclusivity, patience and loyalty, while being very practical.

Source: Belbin, Tetramap

#### Belbin Team Role

The Teamworker is the most enthusiastic member of the team, always ready to help colleagues, usually knowing their needs, expectations and worries. The Teamworker seeks to promote a good work environment, encouraging others to express themselves freely and being very supportive on others' relevant ideas.

This group work was important for me grow as a team member and to work on my developing opportunities. I always remained positive, enthusiastic and supportive, proactively seeking to deliver relevant recommendations for CMC to reach its goals.

#### Key Takeaways

It was an honour to be able to be part of the Consulting Labs and be able to learn so much in a short amount of time. I was able to have a taste of a consultant's work life and was exposed to the importance of co-creation with the client. At the same time, I was able to learn more about the public sector and explore in-depth digital currencies. All in all, it was a very rewarding project, which brought valuable key learnings for life and where my focus was to deliver the maximum value to our client and, consequently, Cascais citizens.

## Personality

### Appendix 1: Team Members



**PEDRO MELLO  
VIEIRA**



Air



Intellectual

#### Tetramap Element

The air element is a clear element on the team: the one that brings logic and is critical (even with himself). He tries to rationalize all the ideas / methodologies used in the group work and is always seeking for potential problems for nothing in the work delivered to be left unexplained. Everything needs to have a logic.

Source: Belbin, Tetramap

#### Belbin Team Role

The intellectual is an idea-generator person, who feeds the group new and innovative solutions to the problems the face faces. Usually, the Intellectual seeks the root of the problems / questions in order to propose new procedures and objectives.

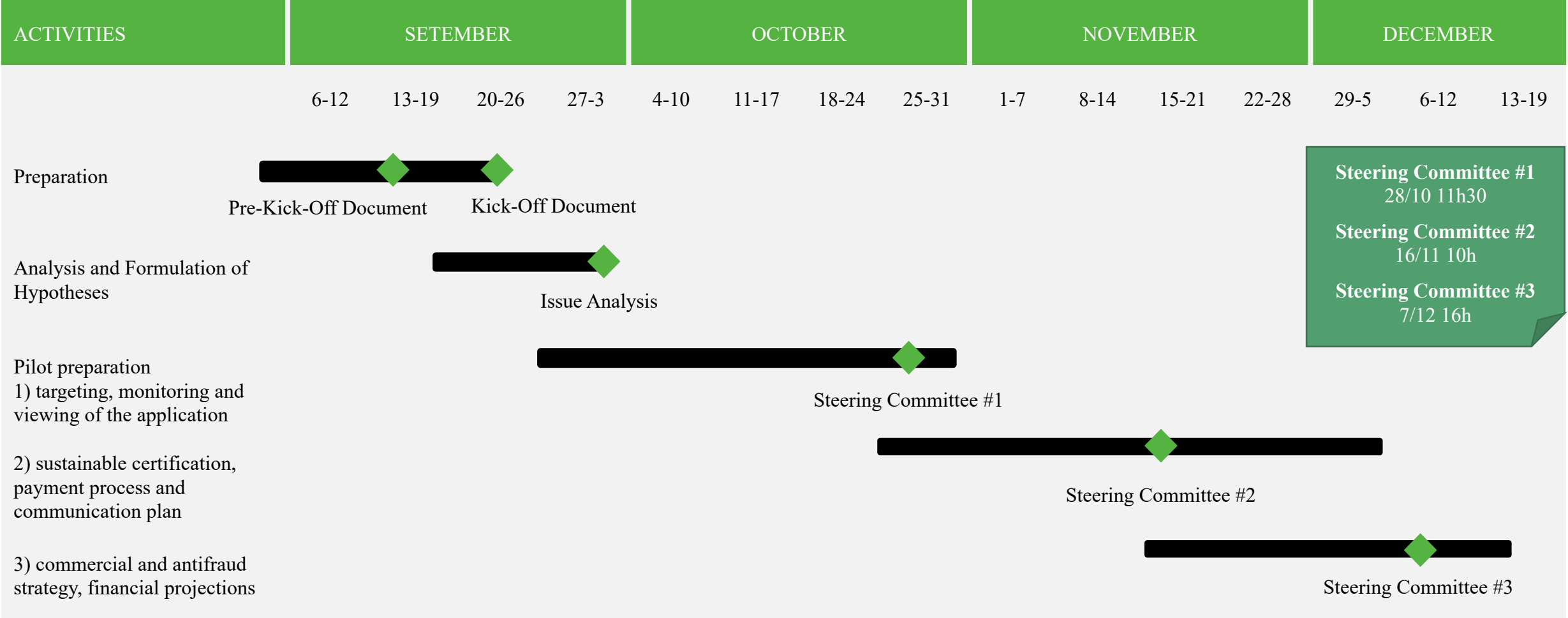
My group work allowed me to develop my creative and imaginative role by trying to figure out new ideas and solutions in a topic that is not my area of expertise – local coin and technology sector, while also trying to be able to meet all the proposed deadlines by the team.

#### Key Takeaways

The Consulting Lab was the cherry in the top of the cake of my Nova experience. It allowed me to explore my 4.5-year learnings at Nova by putting them to practice. However, it was a highly challenging experience, as we needed to cope / negotiate the client's expectations, as well as trying to incorporate economic and business theory to a real-life situation. It is also really rewarding seeing that our recommendations will someday gain life and that Cashcais, a project I'm honored to call "our own" will help more than 200.000 people in Cascais.

With the duration of nearly 4 months, the project was divided in 4 phases, an initial kick-off meeting and 3 steering committees where there was continuous communication between the team and CMC

Appendix 2: Project Timeline



Process Milestone

## In order to be able to implement the local currency and meet its objectives, value retention strategies must be created within the municipality of Cascais

### Appendix 3: Inductive Reasoning

Should CMC create a local digital currency, Cashcais, to promote economic, environmental, social and health sustainability?

How?

1. Create strategies to increase business activity in Cascais

2. Promote environmental awareness

3. Implement mechanisms to reduce social disparities

4. Encourage a healthy lifestyle among citizens

5. Create a marketing strategy

6. Incentivize the digitalization of the municipality

#### 1.1. Consumer

##### 1.1.1. Cashback

Cascais companies that participate in the project will offer different *cashback* for each purchase

How?

Purchases in Euros

Purchases in Cashcais

Purchases in Euros+Cashcais

Where?

Small local stores

Supermarkets

Different sectors

Others

##### 1.1.2. Coverage

The Cashcais program will cover different groups of consumers

Área Metropolitana de Lisboa residents

Cascais residents

Cascais workers and students

Others

Other Portuguese

Foreign tourists

##### 1.1.3. Limitations

CMC should impose product limits

Alcoholic drinks

Cigarettes

Gambling

Evening entertainment

## In order to be able to implement the local currency and meet its objectives, value retention strategies must be created within the municipality of Cascais

### Appendix 3: Inductive Reasoning

Should CMC create a local digital currency, Cashcais, to promote economic, environmental, social and health sustainability?

How?

1. Create strategies to increase business activity in Cascais

2. Promote environmental awareness

3. Implement mechanisms to reduce social disparities

4. Encourage a healthy lifestyle among citizens

5. Create a marketing strategy

6. Incentivize the digitalization of the municipality

#### 1.2. Partner companies

##### 1.2.1. Cashback

The Cascais companies that participate in the project will receive cashback in Cashcais when buying from local suppliers

How?

Purchases in Euros

Purchases in Cashcais

Purchases in Euros+Cashcais

Where?

Cascais-based suppliers

##### 1.2.2. Coverage

In order to boost the local economy, businesses in the project need to be local

Cascais Companies

Cascais-based suppliers

##### 1.2.3. Municipal Taxes

User companies of the application will be able to pay the municipal fees in Cashcais

CMC Investment

# Environmental awareness of consumers is indispensable in the creation of local digital currency, promoting environmental sustainability

## Appendix 3: Inductive Reasoning

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2.1 Consumer

2.1.1. Awareness

2.1.2. Incorporation of the *City Points* app

2.1.2. Reward citizenship

The Town Hall should raise awareness for environmental issues

Which sustainable actions should be awarded?

Recycling urban waste

Commuting on public transports

Volunteering actions

Blood donation

Ride-sharing services

Animal adoption

Others

2.1.2.1. Rewards

2.1.2.2. Leaderboard

2.1.2.1.1. Cashback

2.1.2.1.2. Awards

CMC will offer additional cashback to consumers

CMC will offer different awards to consumers

Define the additional cashback percentage

Define awards in exchange for accumulated points

Define which consumers can take advantage of this reward

The app will have a leaderboard table ranking the more selfless citizens are

CMC will be promoting and rewarding above-average levels of community outreach

Additional prizes will be offered to only to a limited number of exemplary citizenship and sustainability consumers

# The environmental awareness of partner companies is indispensable in the creation of the local digital currency, promoting environmental sustainability

## Appendix 3: Inductive Reasoning

Should CMC create a local digital currency, Cashcais, to promote economic, environmental, social and health sustainability?

How?

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### 2.2 Partner companies

#### 2.2.1. Awareness

The CMC should raise awareness among companies for environmental issues

#### 2.2.2. Cashback

The CMC should increase the cashback offered by sustainable partners

Different cashback percentage

Segmented by type of business/sector/industry

Segmented by different levels of certification

#### 2.2.3. Sustainable certification

##### 2.2.3.1. CMC

CMC should create a sustainable certification

Create survey

Create certification process

Define different levels

Create auditing process

##### 2.2.3.2. External

CMC should use an external sustainable certification

Choice of partner

# The creation of a local currency will reduce the verified social asymmetries, by supporting citizens who are most in need

## Appendix 3: Inductive Reasoning

Should CMC create a local digital currency, Cashcais, to promote economic, environmental, social and health sustainability?

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3.1. “Cartão Mais Solidário”

3.1.1. Bonification

The beneficiaries of this program will receive a bonification in Cashcais

Investment from CMC

Increase in disposable income

Propensity to save and spend on products and services that are not commodities (e.g. in culture)

3.2. Fair Cashback

The Cashcais app users should receive more or less cashback, according the social status

Consumer

With social support

Without social support

Discount given by the partner company

Increase in quality of life

# The health issues awareness and reward of specific health related actions promotes healthy lifestyle in Cascais citizens

## Appendix 3: Inductive Reasoning

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4.1. Awareness

The Town Hall should raise awareness for health issues

4.1. Reward

Cashback

CMC may offer additional cashback to consumers

Define the additional cashback percentage

Define which health related actions can take advantage of this reward

Define which consumers can take advantage of this reward

Awards

CMC will offer different awards to consumers

Define awards in exchange for specific health actions

## CMC should create a strategy tailored to different types of consumers covering digital, traditional and promotional channels

### Appendix 3: Inductive Reasoning

Should CMC create a local digital currency, Cashcais, to promote economic, environmental, social and health sustainability?

How?

1. Create strategies to increase business activity in Cascais

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#### 5.1. People

##### 5.1.1 Consumer

##### 5.1.2 Partner Companies

There should be an adapted and targeted strategy for each group, within consumers and partners

Age

Location

Occupation

Income

Gender

Participation in Cascais initiatives (Cartão Mais Solidário or City Points)

Industry

Sector

Level of Sustainability

Dimension

Financial Liquidity

#### 5.2. Promotion

##### 5.2.1 Consumer

##### 5.2.2 Partner Companies

The promotion will be based on the economic, social and environmental benefits that the local digital currency, Cashcais, brings to the municipality

**Digital:** Social Networks, marketing automation platforms (Email marketing, SEO, CRO)

**Traditional:** TV, magazines, newspapers, outdoors

**Promocional:** Discounts, promotions, vouchers

## Product features and positioning must be adapted to the characteristics of different consumers and partners

### Appendix 3: Inductive Reasoning

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4. Encourage a healthy lifestyle among citizens

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5.3. Product

5.3.1 Consumer

5.3.2 Partner

The application should be user friendly, but complete in terms of content and services

Application and/or physical card

Balance Query

List of Sustainable Actions

List of Partners

Account Information

Balance Query

Manage company information

List of Partners

“Cash-out” form

5.4. Place

5.4.1 Consumer

5.4.2 Partner

Cashcais consumers will be able to purchase the product through a physical card or the application

Local Digital Currency - Cashcais

Physical Card: In Cascais Town Hall

Application: In the App store/Google store

## In the digitization of the municipality, the City Council should integrate the City Points, digitize the *Cartão Mais Solidário* and design anti-fraud mechanisms

### Appendix 3: Inductive Reasoning

Should CMC create a local digital currency, Cashcais, to promote economic, environmental, social and health sustainability?

How?

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3. Implement mechanisms to reduce social disparities

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5. Create a marketing strategy

6. Incentivize the digitalization of the municipality

#### 6.1. Program Integration

##### 6.1.1. City Points

It is necessary to migrate the City Points app

Integrating current users

Integrating current functionalities

Creating the transition process

Creating the conversion system from City Points to Cashcais

Creating F.A.Q. section

Designing interactive *mock-ups*

Designing user stories for each functionality

#### 6.2. Program Digitalization

##### 6.2.1. “Cartão Mais Solidário”

The benefits of “Cartão Mais Solidário” will be integrated in the new app

Integrating beneficiaries

Creating the transition process

Creating F.A.Q. sections

Designing interactive *mock-ups*

Designing user stories for each functionality

#### 6.3. Antifraud mechanisms

Antifraud mechanisms should be designed to protect CMC

Designing mechanisms for the different ways to receive Cashcais

Creating an auditing process

Defining exceptions and limits for each of the functionalities

## Cashcais should include environmental, social, human and animal actions. The rewards should take into account CMC's needs and resources

### Appendix 6: Actions to be include on the app

#### Environmental Sustainability

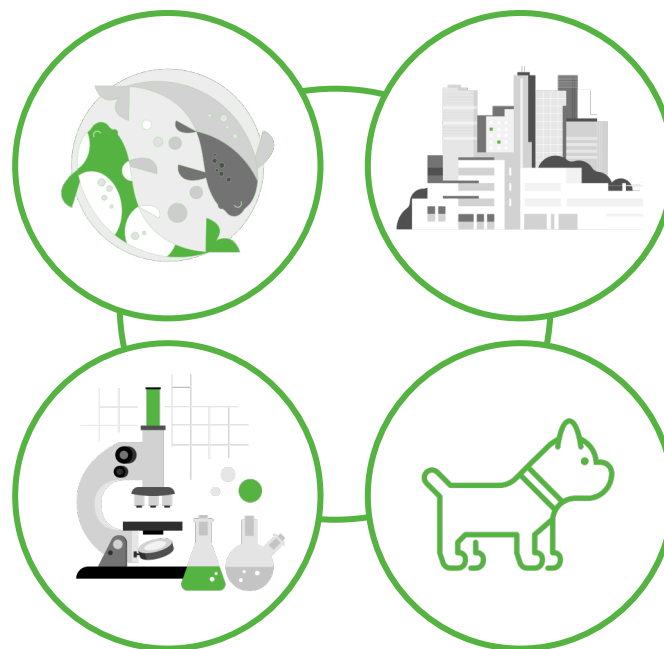
Maximum annual points

- iREC – Innovate Recycling 4 200 points
- Use public transport - MobiCascais buses 365 points

#### Human Sustainability

Maximum annual points

- Buy Quinta do Pisão organic products 260 points
- Donation of intimate hygiene products 80 points



#### Social Sustainability

Maximum annual points

- Donation to Solidarity Houses 520 points
- Annual Youth Volunteering 25 points
- FIX Cascais 365 points
- Blood donation 60 points
- Shop in solidarity stores 260 points
- Regular volunteering 60 points
- Give children's books 20 points

#### Animal Sustainability

Maximum annual points

- Donate animal feed 60 points
- Adot an animal 50 points

\* To define the rewards of each action, CMC's needs should be taken into account and the rewards normalised, such that the rewards stimulate the sustainability areas that are most lacking in the municipality by intrinsic motivation

**To assess the performance of the implementation of the application and whether its objectives are being achieved, some indicators have been defined to measure performance**

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### Stakeholders Perspective

Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
C1. Improvement of the citizens' quality of life	<b>Customer Satisfaction Score (CSAT)</b> <span style="float: right;">P</span>	Lag	Measuring the satisfaction of citizens, using a 1-5 scale: Very dissatisfied; Dissatisfied; Neutral; Satisfied; Very Satisfied. To calculate as a percentage, use the following formula: [number of satisfied citizens (4 and 5) / number of answers] x 100	Per trimester (during 1 <sup>st</sup> year)  Per semester (after 1 <sup>st</sup> year)	Positive	Survey in the app	4	4.5
	<b>OECD Better Life Index*</b> <span style="float: right;">S</span>	Lag	Measuring the quality of life of citizens using the OECD framework	Annual	Positive	Survey (can be digital or integrated in pre-existing ones)	5.5	6
Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
C2. Improvement of the financial conditions of companies after the pandemic	<b>Profitability improvement</b> <span style="float: right;">P</span>	Lag	(Average profit in the end of the period – Average profit in the beginning of the period) / Average profit in the beginning of the period	Per trimester (during 1 <sup>st</sup> year)  Per semester (after 1 <sup>st</sup> year)	Positive	Eg. Sabi (or dashboard from the developer company)	-	-

\*This indicator may be affected by external factors

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#### Stakeholders Perspective

Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
C3. Reduction of social disparities	<b>Gini Index*</b> <b>S</b>	Lag	Measure of social disparities, in terms of income distribution, in the Cascais municipality	Annual	Negative	INE	30	29
	<b>Disposable income of lower social class*</b> <b>S</b>	Lag	Evolution of the disposable income of the lower social class, after the inclusion in the program and suport in <i>cashback</i>	Annual	Positive	Town Hall	-	-
	<b>Voluntary actions</b> <b>P</b>	Lead	Number of voluntary actions done in the social area that increase the quality of life of the most vulnerable	Annual	Positive	App	5.000	10.000
Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
C4. Improvement of the financial conditions of citizens	<b>Average disposable income*</b> <b>S</b>	Lag	Evolution of the available income of Cascais citizens	Annual	Positive	Eg. INE, Pordata	-	-

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### Stakeholders Perspective

Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
C4. Improvement of the financial conditions of citizens	<b>Amount of Cashcais assigned</b> <b>P</b>	Lag	Amount of Cashcais assigned directly to people in vulnerable situations with access to social support	Per trimester (during 1 <sup>st</sup> year)  Per semester (after 1 <sup>st</sup> year)	Positive	App	-	-
Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
C5. Improvement of the health conditions of citizens	<b>“I feel good”**</b> <b>P</b>	Lag	Measuring the satisfaction of citizens, using a 1-5 scale: I feel terrible; I don't feel good; I feel normal; I feel good; I feel amazing. To calculate as a percentage, use the following formula: [number of citizens feeling well (4 and 5) / number of answers] x 100	Annual	Positive	Digital survey	4	4.5

\*This indicator may be affected by external factors

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Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
C6. Increase the level of digitalization of the municipality	Percentage of CMC programs that are digitalized <b>S</b>	Lag	(Number of programs digitalized / Total number of programs) x 100  Note: Only for programs that integrate the project	Annual	Positive	Town Hall	-	-
	Number of downloads of the app <b>S</b>	Lead	Number of downloads of the Cashcais app, since the beginning of its availability, comparing with the number of inhabitants in Cascais	Cummulative	Positive	App	5.000	15.000
Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
C8. Increase of the partners' profits	Purchases made in partner companies* <b>P</b>	Lag	Evolution of the number of purchases made in partner companies	Annual	Positive	Financial partner	-	-
	Average purchase value* <b>P</b>	Lag	Average of the purchase value made in partner companies	Monthly	Positive	Financial partner	-	-

\*This indicator may be affected by external factors

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### Stakeholders Perspective

Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
C9. Increase in the demand of products and services in Cascais	Frequency of purchases* <span style="color: green;">P</span>	Lead	Average frequency of purchases in the partner companies	Monthly	Positive	Financial partner	-	-
	Accumulated Cashcais <span style="color: green;">P</span>	Lead	Total amount of Cashcais accumulated through cashback received due to buying at partner company	Cumulative	Positive	App	-	-
	New clients* <span style="color: green;">P</span>	Lead	(Number of clients at the end of the period – Number of clients at the beginning of the period) / Number of clients at the beginning of the period	Monthly	Positive	App	-	-
Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
C10. Increase in visibility of local businesses	Number of events, promotion of local business* <span style="color: green;">P</span>	Lead	Number of events in the municipality of Cascais which aims to promote local business	Annual	Positive	Town Hall (markets, events)	96	120

\*This indicator may be affected by external factors

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## Appendix 10: Balanced Scorecard - KPIs

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### Stakeholders Perspective

Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
C11. Support citizens with losses in income	Number of citizens with access to social support* <span style="background-color: #90EE90; border-radius: 50%; padding: 2px;">P</span>	Lead	Number of people with access to social support given by the Town Hall. Eg. Cartão Mais Solidário	Annual	Positive	Town Hall	-	-
C12. Increase of incentives for health actions	Number of actions done in the health area <span style="background-color: #90EE90; border-radius: 50%; padding: 2px;">P</span>	Lag	Number of actions done in the health area through the Cashcais app	Annual	Positive	App	200	500
	Number of partnerships established with health organizations <span style="background-color: #90EE90; border-radius: 50%; padding: 2px;">P</span>	Lead	Number of partnerships realized in the scope of the Cashcais program with organizations acting in the health area  Note: This indicator is limited to the number of organizations that exist in the municipality	Annual	Positive	App	10	18

\*This indicator may be affected by external factors

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### Stakeholders Perspective

Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
C14. Mitigation of data protection risks	Number of accesses to confidential data <b>P</b>	Lead	Number of accesses to confidential data in the app	Monthly	Negative	App	-	-
	Risk weighted index <b>P</b>	Lag	Quantifies the level of risk of the project. Number of violations of data categorized by impact: events of critical risk, average risk, low risk (using weighted average)	Monthly	Negative	App	-	-
Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
C15. Offer of an integrated app	Number of integrations <b>P</b>	Lead	Number of integrations with other API, applications	Annual	Positive	App	-	-

**To assess the performance of the implementation of the application and whether its objectives are being achieved, some indicators have been defined to measure performance**

### Appendix 10: Balanced Scorecard - KPIs

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#### Stakeholders Perspective

Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
C16. Increase of partner companies' sustainability	<b>Rate of partners classified as sustainable</b> <span style="color: green; border: 1px solid green; border-radius: 50%; padding: 2px;">P</span>	Lag	Percentage of partner companies that obtain one of the levels of sustainability, according to the Town Hall criteria, comparing to the ones that are not sustainable	Annual	Positive	Town Hall	-	-
	<b>Number of events or actions*</b> <span style="color: green; border: 1px solid green; border-radius: 50%; padding: 2px;">P</span>	Lead	Number of events/actions in which the Town Hall promotes sustainability among the partner companies	Annual	Positive	Town Hall	-	-

\*This indicator may be affected by external factors

**To assess the performance of the implementation of the application and whether its objectives are being achieved, some indicators have been defined to measure performance**

### Appendix 10: Balanced Scorecard - KPIs

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#### Internal Processes Perspective

Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
I1. “I feel integrated in the Town Hall initiatives”	“I feel integrated”* <b>P</b>	Lag	Percentage of citizens that agree or totally agree, in a Likert scale of 5 points, that the app contributes for the integration of citizens in the municipality	Annual	Positive	Survey in the app	70%	85%
	“The Cashcais app contributes for social equality” <b>P</b>	Lag	Percentage of citizens that thinks about this app, when asked about social support entities in the municipality of Cascais	Annual	Positive	Survey	70%	80%
Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
I2. Minimizing errors in the cashback attribution	Number of errors <b>P</b>	Lag	Number of errors occurred in the cashback attribution	Annual	Negative	App	-	-
	Number of complaints from users <b>P</b>	Lead	Number of complaints regarding the attribution of cashback done by users	Annual	Negative	App	-	-

\*This indicator may be affected by external factors

**To assess the performance of the implementation of the application and whether its objectives are being achieved, some indicators have been defined to measure performance**

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#### Internal Processes Perspective

Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
I3. Effective payment of cashback	<b>Average payment time</b> <b>P</b>	Lead	Average time it takes the payment of cashback to be available at the client's account	Monthly	Negative	Payment system	-	-
I4. Monetary risk control	<b>Inflation in the municipality*</b> <b>S</b>	Lag	Measurement of the inflation rate in the Cascais municipality and follow-up of its evolution	Annual	Neutral	ECB	2%	2%
I5. Retention of users in the app	<b>Customer retention rate</b> <b>P</b>	Lag	(Number of users at the end of the period – Number of users acquired during the period) / Number of users at the beginning of the period	Annual	Positive	App (Number of users)	60%	75%
	<b>Satisfaction index</b> <b>P</b>	Lag	Percentage of citizens that agree or totally agree, in a Likert scale of 5 points, to recommend the app to a friend, family member or known person	Annual	Positive	Survey in the app	60%	75%

\*This indicator may be affected by external factors

**To assess the performance of the implementation of the application and whether its objectives are being achieved, some indicators have been defined to measure performance**

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#### Internal Processes Perspective

Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
I6. Development of a risk mitigation plan	Regularity of audits to data security <b>S</b>	Lead	Number of audits made to data security	Annual	Positive	Audit reports	2	4
	Percentage of data penetration <b>P</b>	Lead	Percentage of times that data is compromised using data penetration tests	Annual	Negative	Test reports	2	4
Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
I7. Reduction of the IT and data complexity	Percentage of security software updated <b>S</b>	Lag	Percentage of security software that is updated (the main cause of 16% of data violations is a vulnerability on an outsourced software)	Annual	Positive	App	90%	95%
	Number of users with larger access <b>P</b>	Lag	Number of users that have privileged access to the app	Per semester	Negative	App	-	-
	Percentage of data cryptography and automatic backup <b>P</b>	Lag	Percentage of cryptographed data and with automatic backups, managed by a software that prevents data losses	Annual	Positive	App	-	-

**To assess the performance of the implementation of the application and whether its objectives are being achieved, some indicators have been defined to measure performance**

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### Internal Processes Perspective

Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
I8. Quality customer support to users	<b>Ticket answer time</b> <b>P</b>	Lead	Average answer time to users' requests Note: Only answers that provide value to the customer	Monthly	Negative	Customer support system	12 working hours	10 working hours
	<b>Average repairing ticket time</b> <b>P</b>	Lead	Average time until the problem is considered as solved	Monthly	Negative	Customer support system	24 working hours	16 working hours
	<b>Number of recurring problems</b> <b>P</b>	Lead	Number of problems that are recurring among users	Monthly	Negative	Customer support system	-	Reduce 50% in comparison to 2022
	<b>Total number of tickets</b> <b>P</b>	Lead	Number of problems occurred that led to a ticket generation	Monthly	Negative	Customer support system	-	Reduce 20% in comparison to 2022
Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
I9. Design of an integrated payment system	<b>Number of types of payment accepted</b> <b>P</b>	Lead	Number of types of payment accepted aiming to integrate the process payment  Note: This indicator is limited to the existent number of types of payment	Cumulative	Positive	Terminal Payment Partner Data	5	15

**To assess the performance of the implementation of the application and whether its objectives are being achieved, some indicators have been defined to measure performance**

## Appendix 10: Balanced Scorecard - KPIs

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### Internal Processes Perspective

Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
I10. Improvement of the user experience	Percentage of citizens satisfied with their experience on the app <b>P</b>	Lag	Percentage of citizens that is satisfied or very satisfied with their experience on the app	Per trimester (during 1 <sup>st</sup> year)  Per semester (after 1 <sup>st</sup> year)	Positive	Survey on the app	70%	80%
Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
I11. Improvement of the user usability	Success rate in creating a new account <b>P</b>	Lead	Percentage of users that install the app and use it vs install the app and only use it once	Monthly	Positive	App	75% vs 25%	80% vs 20%
	Time to register a new account <b>P</b>	Lead	Average time that the user takes to create a new account	Monthly	Negative	App	2 min	1min 30seg

**To assess the performance of the implementation of the application and whether its objectives are being achieved, some indicators have been defined to measure performance**

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### Internal Processes Perspective

Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
I12. Stable application	Inactivity time <b>P</b>	Lead	Average time in which the app is not functional	Monthly	Negative	App	-	-
	Average time between failures <b>P</b>	Lead	Average time between system failures of the app	Monthly	Negative	App	-	-
	Number of critical problems <b>P</b>	Lead	Number of problems categorized as critical	Monthly	Negative	App	-	-
Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
I13. “I am satisfied with the physical card”	Net promoter score <b>P</b>	Lag	Annual survey regarding the satisfaction with the services offered by the Town Hall, classified from 1-10, to be answered by the municipality citizens who are users of the physical card	Annual	Positive	Survey	7	9
	Percentage of citizens satisfied with the physical card performance <b>P</b>	Lag	Percentage of citizens (users) that is satisfied or very satisfied with the physical card, using a Likert scale from 1-5: Very dissatisfied, Dissatisfied, Neutral, Satisfied, Very satisfied	Annual	Positive	Survey	70%	80%

**To assess the performance of the implementation of the application and whether its objectives are being achieved, some indicators have been defined to measure performance**

## Appendix 10: Balanced Scorecard - KPIs

Phase to begin measurement

S

Scale-up

P

Pilot

### Internal Processes Perspective

Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
I14. “I am satisfied with the app”	Net promoter score <span style="color: green; border: 1px solid green; border-radius: 50%; padding: 2px;">P</span>	Lag	Annual survey regarding the satisfaction of users with the services offered by the Town Hall, classified from 1-10, to be answered by the municipality citizens’ who are users of the app	Annual	Positive	Survey in the app	7	9
	Number of positive reviews from users <span style="color: green; border: 1px solid green; border-radius: 50%; padding: 2px;">P</span>	Lag	Number of positive reviews from app users in comparison to the total number of reviews done to the app	Annual	Positive	App	-	-
	Percentage of citizens satisfied with the app performance <span style="color: green; border: 1px solid green; border-radius: 50%; padding: 2px;">P</span>	Lag	Percentage of citizens who are satisfied or very satisfied with the app in a Likert scale from 1-5: Very dissatisfied, Dissatisfied, Neutral, Satisfied, Very satisfied	Annual	Positive	Survey in the app	70%	80%
	Time spent on the app <span style="color: green; border: 1px solid green; border-radius: 50%; padding: 2px;">P</span>	Lead	Average screen time per day, report on a weekly basis, comparing the evolution week per week	Weekly	Positive	App	-	-

**To assess the performance of the implementation of the application and whether its objectives are being achieved, some indicators have been defined to measure performance**

### Appendix 10: Balanced Scorecard - KPIs

Phase to begin measurement

**S**

Scale-up

**P**

Pilot

#### Learning & Growth Perspective

Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
L1. Bet on technological evolution	<b>Percentage of CMC programs that are digitalized</b> <b>S</b>	Lag	(Number of digitalized programs / Total number of programs) x 100  Note: Only for programs that integrate the project	Annual	Positive	Town Hall	-	-
Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
L2. Feedback analysis	<b>Number of initiatives launched based on feedback</b> <b>S</b>	Lag	Number of initiatives which are incorporated based on feedback received through surveys	Annual	Positive	Survey	-	-
Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
L3. Promotion of innovation in collaborators	<b>Number of innovative practices implemented*</b> <b>S</b>	Lag	Number of practices implemented by the Town Hall which are considered innovative	Annual	Positive	Town Hall	-	-

\*This indicator may be affected by external factors

**To assess the performance of the implementation of the application and whether its objectives are being achieved, some indicators have been defined to measure performance**

### Appendix 10: Balanced Scorecard - KPIs

Phase to begin measurement

**S**

Scale-up

**P**

Pilot

#### Learning & Growth Perspective

Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
L3. Promotion of innovation in collaborators	<b>Number of workshops / debates*</b> <b>S</b>	Lead	Number of workshops done with the goal of promoting innovation in the Town Hall and number of workshops in which the Town Hall participates	Annual	Positive	Workshop reports	2	4
Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
L4. Increase of training	<b>Number of hours of training*</b> <b>S</b>	Lead	Number of hours of training available to each collaborator	Annual	Positive	Training reports	-	-
	<b>Percentage of collaborators with at least 40 hours of training</b> <b>S</b>	Lead	Percentage of collaborators that had access to at least 40 hours of training per year	Annual	Positive	Training reports	-	-

\*This indicator may be affected by external factors

**To assess the performance of the implementation of the application and whether its objectives are being achieved, some indicators have been defined to measure performance**

## Appendix 10: Balanced Scorecard - KPIs

Phase to begin measurement

S

Scale-up

P

Pilot

### Learning & Growth Perspective

Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
L5. Increase of knowledge in cybersecurity	Number of hours of training* <span>S</span>	Lead	Number of hours of training available to each collaborator in cybersecurity	Annual	Positive	Training reports	1h30	3h00
	Percentage of collaborators covered <span>S</span>	Lag	Percentage of collaborators which had access to cybersecurity training	Annual	Positive	Training reports	10%	20%
Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
L6. Increase of knowledge in risk control	Number of hours of training* <span>S</span>	Lead	Number of hours of training available to each collaborator on risk control	Annual	Positive	Training reports	1h30	3h00
	Percentage of collaborators covered <span>S</span>	Lag	Percentage of collaborators that had access to risk control training	Annual	Positive	Training reports	10%	20%

\*This indicator may be affected by external factors

**To assess the performance of the implementation of the application and whether its objectives are being achieved, some indicators have been defined to measure performance**

### Appendix 10: Balanced Scorecard - KPIs

Phase to begin measurement



Scale-up



Pilot

### Learning & Growth Perspective

Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
L7. Partner companies with training on the app's usability	<b>Number of hours of training</b> <span>P</span>	Lead	Number of hours of training available to each partner company	Annual	Positive	Training reports	2h00	3h00
	<b>Percentage of partner companies with at least 4 hours of training</b> <span>P</span>	Lag	Percentage of partner companies that had access to at least 4 hours of training per year	Annual	Positive	Training reports	50%	80%
	<b>Percentage of partner companies covered</b> <span>P</span>	Lag	Percentage of partner companies which had access to training	Annual	Positive	Training reports	100%	100%

**To assess the performance of the implementation of the application and whether its objectives are being achieved, some indicators have been defined to measure performance**

## Appendix 10: Balanced Scorecard - KPIs

Phase to begin measurement

S

Scale-up

P

Pilot

### Financial Perspective

Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
F1. Efficient management of resources	Planned resources vs Used resources <span style="color: #0070C0; font-weight: bold; border-radius: 50%; padding: 2px;">S</span>	Lag	$(\text{Used resources} / \text{Planned resources}) \times 100$	Annual	Negative	P&L	-	-
	Percentage of cost reduction <span style="color: #0070C0; font-weight: bold; border-radius: 50%; padding: 2px;">S</span>	Lag	Percentage cost reduction	Annual	Positive	P&L	-	-
Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
F2. Efficient management of economical resources	Percentage of cost reduction <span style="color: #0070C0; font-weight: bold; border-radius: 50%; padding: 2px;">S</span>	Lag	Percentage cost reduction of economical resources	Annual	Positive	P&L	-	-
Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
F3. Efficient management of human resources	Percentage of cost reduction <span style="color: #0070C0; font-weight: bold; border-radius: 50%; padding: 2px;">S</span>	Lag	Percentage cost reduction of human resources	Annual	Positive	P&L	-	-

**To assess the performance of the implementation of the application and whether its objectives are being achieved, some indicators have been defined to measure performance**

### Appendix 10: Balanced Scorecard - KPIs

Phase to begin measurement

S

Scale-up

P

Pilot

#### Financial Perspective

Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
F4. Efficient management of technological resources	Percentage of cost reduction <span style="float: right;">S</span>	Lag	Percentage cost reduction of technological resources	Annual	Positive	P&L	-	-
Objective	KPI	Lag/Lead	Metric	Frequency	Polarity	Data source	2022 Target	2023 Target
F5. Fundraising activities	Number of applications to funds <span style="float: right;">S</span>	Lead	Number of applications successfully done to Portuguese and European funds	Annual	Positive	Financial report (Town Hall)	-	-
	Percentage of the budget covered by funds <span style="float: right;">S</span>	Lag	Percentage of the budget assigned to the Cashcais program that is secured by funds	Annual	Positive	Municipal budget	-	-
	Number of private funders <span style="float: right;">S</span>	Lead	Number of private funders who decide to fund the Cashcais program	Annual	Positive	Financial report (Town Hall)	-	-
	Amount raised per type of fund <span style="float: right;">S</span>	Lead	Amount raised per each type of funding source (applications to funds, fundraising activities, private funding)	Annual	Positive	Financial report (Town Hall)	-	-

**Several strategic initiatives were defined to achieve the proposed goals on the KPIs, for each of the objectives, in order to guarantee the project success**

### Appendix 10: Balanced Scorecard - Initiatives

#### Initiatives from the stakeholders' perspective

Objective	Initiative	Description	Beginning	Duration	Cost	Responsible
C1. Improvement of the citizens' quality of life	1. Offering cashback	Design of the cashback attribution to all users of the Cashcais app who make purchases in the partner companies of the program	Pilot	Ongoing	To be defined	Financial Department
Objective	Initiative	Description	Beginning	Duration	Cost	Responsible
C3. Reduction of social disparities	1. Offering cashback	Design of the cashback attribution to all users of the Cashcais app who make purchases in the partner companies of the program	Pilot	Ongoing	To be defined	Financial Department
	2. Offering sustainable cashback	Design of the extra cashback attribution to all users of the Cashcais app who make purchases in the partner companies of the program with a sustainable certification	Pilot	Ongoing	To be defined	Financial Department
	3. Creating a physical card	Creation of a physical card, with the same purpose as the app, such that citizens without a smartphone, access to the internet or technological knowledge can also have and benefit from the local currency	Scale-up	To be defined	To be defined	Financial Department
	4. Creating an online platform	Creation of an online platform, to be used as a complement of the physical card, such that these consumers can have access to the same functionalities as the app users	Scale-up	To be defined with the developer company	To be defined	IT team from CMC together with the developer company

**Several strategic initiatives were defined to achieve the proposed goals on the KPIs, for each of the objectives, in order to guarantee the project success**

### Appendix 10: Balanced Scorecard - Initiatives

#### Initiatives from the stakeholders' perspective

Objective	Initiative	Description	Beginning	Duration	Cost	Responsible
C4. Improvement of the financial conditions of citizens	1. Offering cashback	Design of the cashback attribution to all users of the Cashcais app who make purchases in the partner companies of the program	Pilot	Ongoing	To be defined	Financial Department
	2. Offering sustainable cashback	Design of the extra cashback attribution to all users of the Cashcais app who make purchases in the partner companies of the program with a sustainable certification	Pilot	Ongoing	To be defined	Financial Department

Objective	Initiative	Description	Beginning	Duration	Cost	Responsible
C7. Increase of the environmental quality of Cascais	2. Offering sustainable cashback	Design of the extra cashback attribution to all users of the Cashcais app who make purchases in the partner companies of the program with a sustainable certification	Pilot	Ongoing	To be defined	Financial Department
	5. Paying with the app	Incorporation of the payment functionality in the Cashcais app	Pre-pilot	To be defined with the developer company	To be defined	Developer company
	6. Reducing paper by issuing receipts on the app	Reduction of paper production and waste by making available on the app the receipts of purchases made in partner companies using the local currency	Pre-pilot	To be defined	To be defined	Developer company

**Several strategic initiatives were defined to achieve the proposed goals on the KPIs, for each of the objectives, in order to guarantee the project success**

### Appendix 10: Balanced Scorecard - Initiatives

#### Initiatives from the stakeholders' perspective

Objective	Initiative	Description	Beginning	Duration	Cost	Responsible
C7. Increase of the environmental quality of Cascais	7. Creating a leaderboard	Creation of a leaderboard such that competition can be stimulated among users of the app and consequently increasing the number of sustainable actions	Pilot	Ongoing	Incorporation of the <i>City Points</i> leaderboard	IT team from CMC together with the developer company

Objective	Initiative	Description	Beginning	Duration	Cost	Responsible
C13. Increase of incentives for environmental actions	8. Creating a list of sustainable actions	Creation of a list with all the sustainable actions at an environmental level to be incorporated in the Cashcais app and which will be rewarded in the local currency	November	Two weeks	0€	Nova SBE Team
	9. Designing the reward system	Design of the correspondence between the sustainable action done and the amount received as a reward	November	Two weeks	0€	Nova SBE Team

Objective	Initiative	Description	Beginning	Duration	Cost	Responsible
C15. Offer of an integrated app	10. Integrating the existing CMC apps	Integration of some of the already existing apps in the new app for the local currency, Cashcais (for example, integration of the <i>MyCascais</i> authentication and incorporation of the <i>City Points</i> app)	Pre-pilot	To be defined with the developer company	To be defined	IT team from CMC together with the developer company

**Several strategic initiatives were defined to achieve the proposed goals on the KPIs, for each of the objectives, in order to guarantee the project success**

### Appendix 10: Balanced Scorecard - Initiatives

#### Initiatives from the stakeholders' perspective

Objective	Initiative	Description	Beginning	Duration	Cost	Responsible
C13. Increase of partner companies' sustainability	11. Creating the criteria for the sustainable certification	Creation of a list with the proposal of the criteria that can be evaluated in the creation of the certification of CMC partners	November	Two weeks	0€	Nova SBE Team

#### Initiatives from the Internal Processes perspective

Objective	Initiative	Description	Beginning	Duration	Cost	Responsible
I8. Quality customer support to users	14. Creating a customer support system	Creation of a customer support system, such that users of the app can receive help whenever needed	<i>Scale-up</i>	Ongoing	To be defined	Cashcais Team

**Several strategic initiatives were defined to achieve the proposed goals on the KPIs, for each of the objectives, in order to guarantee the project success**

### Appendix 10: Balanced Scorecard - Initiatives

#### Initiatives from the Learning & Growth perspective

Objective	Initiative	Description	Beginning	Duration	Cost	Responsible
L1. Bet on technological evolution	5. Paying with the app	Incorporation of the payment functionality in the Cashcais app	Pre-pilot	To be defined with the developer company	To be defined	Developer company
	10. Integrating the existing CMC apps	Integration of some of the already existing apps in the new app for the local currency, Cashcais (for example, integration of the <i>MyCascais</i> authentication and incorporation of the <i>City Points</i> app)	Pre-pilot	To be defined with the developer company	To be defined	IT team from CMC together with the developer company

#### Initiatives from the Learning & Growth perspective

Objective	Initiative	Description	Beginning	Duration	Cost	Responsible
L4. Increase of training	16. Incentivizing team bonding initiatives	Incentivize team bonding activities, such that the group dynamics on CMC can be improved, leveraging on its potential and empowering employees with new skills	Scale-up	Each year	To be defined	Human resources department

## The implementation of the Cashcais local currency project and the objectives that are associated with it are directly connected with the SDGs from the United Nations

### Appendix 11: SDGs in-depth



SGD number 1 aims to eradicate poverty, which includes social protection systems as well as ensuring the poor and vulnerable have equal rights accessing to economic resources. The ultimate goal of objectives C1 (Improvement of citizens' quality of life), C4 (Improvement of citizens' financial situation) and C11 (Empower citizens with loss of income) is to protect the inhabitants of Cascais and guaranteeing they don't reach poverty. To fulfil this ambition, CMC actively takes care of the most vulnerable. The Cashcais application will serve as another tool.

**3**  
**objectives**  
**(C1, C4, C11)**



The initiatives behind SGD number 2 are related with food: to end hunger, to achieve food security, to improve nutrition and to promote sustainable agriculture. Objective C1 (Improvement of citizens' quality of life) wishes that the Cashcais program helps increasing the purchasing power of citizens such that nutrition and food security are taken as given.

**1**  
**objective**  
**(C1)**



One of the goals of the Cashcais program is to achieve health sustainability. Hence, the objectives C1 (Improvement of citizens' quality of life), C5 (Improvement of the health conditions of Cascais citizens) and C12 (Increase of incentives for healthy actions) are in line with the proposed actions by the United Nations. Specially after the pandemic and with the mental health trend, it is vital to focus on providing initiatives that promote well-being and a healthy lifestyle.

**3**  
**objectives**  
**(C1, C5, C12)**

## The implementation of the Cascais local currency project and the objectives that are associated with it are directly connected with the SDGs from the United Nations

### Appendix 11: SDGs in-depth



Goal number 4 focuses not only on ensuring equitable and inclusive quality education, but also on promoting lifelong learning opportunities for all citizens. One of the targets is to increase the number of citizens who have the relevant skills of employment and decent jobs. Therefore, Cascais Town Hall wishes to provide these tools to its employees, such that they can keep up with the technological knowledge required to perform the job. Objectives L3 (Fostering innovation on collaborators), L4 (Increase training), L5 (Increase cybersecurity knowledge) and L6 (Increase in risk control knowledge) aim at qualify the Cascais Town Hall team with the necessary skills and valuable learning opportunities on the job.

**4**  
**objectives**  
(L3, L4, L5,  
L6)

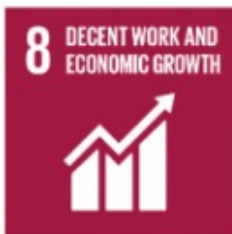


SGD 7 has as target to make energy services universally accessible, affordable, reliable and modern as well as increasing the share of renewable energy in the total energy mix. The Cascais local currency has as objectives the improvement of citizens' quality of life (C1), the reduction of social disparities (C3) and the increase of the environmental quality of the municipality (C7). Hence, by achieving the previous 3 goals, the Cascais Town Hall is on the right path to ensure that every Cascais citizen has affordable and clean energy.

**3**  
**objectives**  
(C1, C3, C7)

## The implementation of the Cashcais local currency project and the objectives that are associated with it are directly connected with the SDGs from the United Nations

### Appendix 11: SDGs in-depth



Goal number 8 is related to the promotions of sustained, inclusive and sustainable economic growth, ensuring employment and decent work for all. With the fulfilment of objectives C1 (Improvement of citizens' quality of life), C3 (reduction of social disparities), C4 (Improvement of the financial conditions of Cascais inhabitants) and C11 (Empowering the inhabitants that suffered losses in income), the Cashcais program is line with the SDGs of the United Nations by empowering citizens with tools that allow and stimulate economic growth.

**4**  
**objectives**  
(C1, C3, C4,  
C11)



The ninth sustainable development goal wishes to build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation. Some of the targets include achieving infrastructures that support both economic development and human well-being as well as enhancing scientific research and upgrading the technological capabilities of industrial sectors. The Cashcais program aims the same, namely with goals C2 (Improvement of the financial conditions of companies post-pandemic) and C6 (Increasing the digitalization of the municipality).

**2**  
**objectives**  
(C2, C6)

## The implementation of the Cashcais local currency project and the objectives that are associated with it are directly connected with the SDGs from the United Nations

### Appendix 11: SDGs in-depth



One of the pillars of the Cashcais program is to foster social sustainability, that is, to reduce social disparities (objective C3) and to empower inhabitants that suffered losses in income (objective C11). SDG number 10 aims to reduce inequality within and among countries, just like Cascais strives to eliminate inequalities in the municipality, which have been increased during the pandemic. Ensuring equal opportunity as well as empowering and promoting social, economic and political inclusion of all are common targets of the United Nations and the Cascais Town Hall.

**2**  
**objectives**  
(C2, C6)



Another pillar of the United Nations actions has to do with infrastructures. SDG 11 focuses on ensuring access to adequate, safe, inclusive and affordable housing, transportation systems and public spaces. With a local currency, Cascais should be able to reduce social disparities (objective C3) and increase environmental quality of the municipality (C7). Hence, the money and sustainable actions generated by the implementation of a local currency should stimulate a sustainable city and community.

**2**  
**objectives**  
(C3, C7)

## The implementation of the Cashcais local currency project and the objectives that are associated with it are directly connected with the SDGs from the United Nations

### Appendix 11: SDGs in-depth



Related with the increase in the global “material footprint”, goal 12 has been established, in order to ensure sustainable consumption and production patterns. Hence, the targets include managing and using efficiently the natural resources, reducing waste, encouraging companies to adopt sustainable practices and raising awareness for a sustainable lifestyle. Likewise, one of the big motivators behind the Cashcais project is to promote and increase sustainable actions, which is reflected in the objectives C7 (Increase of the environmental quality of the municipality), C13 (Increase of the incentives for environmental actions) and C16 (Increase of the sustainability of partners).

**3**  
**objectives**  
(C7, C13,  
C16)



Directly correlated with responsible consumption and production, the United Nations urges leaders for the need take immediate action to combat climate change and face its consequences. Thus, having as target the integration of climate change measures in the planning of entities. Cascais Town Hall is contributing for this goal by including in the application features that contribute to increase the environmental quality of the municipality (objective C7), to increase of the incentives for environmental actions (objective C13) and to increase of the sustainability of partners (objective C16).

**3**  
**objectives**  
(C7, C13,  
C16)

## The implementation of the Cashcais local currency project and the objectives that are associated with it are directly connected with the SDGs from the United Nations

### Appendix 11: SDGs in-depth

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SDG 15 calls out to action on terrestrial ecosystems, forests, combating desertification, land degradation and diversity loss. One of the targets of this goal is to integrate ecosystem and biodiversity values on the local planning which will be possible for the Cascais Town Hall once the Cashcais project is implemented. By achieving objectives C7 (Increase of the environmental quality of the municipality), C13 (Increase of the incentives for environmental actions) and C16 (Increase of the sustainability of partners), Cascais will be closer to contribute to SDG 15.

**3**  
**objectives**  
(C7, C13,  
C16)

## The investment inherent to the pilot phase depends on the uptake and the pilot's duration and various assumptions were made in order to make the estimates

### Appendix 12: Financial Projections

#### Initial Assumptions

In order to perform the following financial projections, some assumptions were made. These should be considered when analyzing the results.

The 3 scenarios represent a lower, expected and higher uptake in all of the analyzed parameters. That is, the lower uptake represents the lowest case scenario of uptake on the beneficiaries of Cartão Mais Solidário, Sustainable Actions done by consumers and Sustainable Certification achieved by partner companies. Hence, no mixed scenarios were calculated – for example, combining a high number of beneficiaries of Cartão Mais Solidário and low number of partner companies with high sustainable certification. In other words, the lower uptake scenario corresponds to the extreme less costly scenario, whereas the higher uptake corresponds to the extreme most expensive scenario. The expected scenario corresponds the most likely uptake of the project during the pilot phase, considering the City Points results.

The main idea of the financial projections presented is to provide an order of scale to the project, as well as a tool that is ready and can be editable in the future.

Assumptions considered throughout all scenarios:

List of Actions		
Parameter	Percentage	Cashcais
iREC	75%	0,1
Others	25%	1,9
Churn rate		20%

## The investment inherent to the pilot phase depends on the uptake and the pilot's duration – in a high uptake lasting 12 months, the expected investment is 1 800 000€

### Appendix 12 | Financial projections – Higher uptake

1

Higher uptake

Total Cost

12 months

~1,8 M€

MVP

Deployment	200 000€
Maintenance	11 070€

Initiatives

<i>Cartão Mais Solidário</i>	194 400€
Sustainable Actions	617 541€
Sustainable Certification	654 343€
City Points	10 000€

Human Resources

Customer Support / Sales	16 800€
Marketing	8 400€
Financials	8 400€
IT Services	16 800€
Legal Staff	5 200€

Others 23 562€

**Total Investment (12 months) 1 766 516€**

#### *Cartão Mais Solidário*

Parameter	Value
Number of Cartão Mais Solidário beneficiary families	900
Aid for families with max 3 elements	75€
Aid for families with 4 or more elements	100€
% families with max 3 elements	40%
% families with 4 or more elements	60%
% agreement to participate in the study	100%
Average aid received per family	90€
% of <i>Cartão Mais Solidário</i> support given in Cascais	20%
<b>Total (monthly)</b>	<b>16 200€</b>
<b>Total (yearly)</b>	<b>194 400€</b>

#### Sustainable Actions Rewards

Parameter	Value
Number of users	5 000
Average number of sustainable actions per user per month	19
Average reward per action	0,55€
<b>Total (monthly)</b>	<b>51 462€</b>
<b>Total (yearly)</b>	<b>617 541€</b>

#### Sustainable certification

Parameter	Value
% Bronze Partner Companies	10%
% Silver Partner Companies	20%
% Gold Partner Companies	30%
% Diamond Companies	40%

#### Cashback from Sustainable Certification

Parameter	Value
Number of partner companies	100
% Sustainable partner companies	60%
Average revenue per partner company	30 294€
Average cashback rate of total bill	3%
<b>Total (monthly)</b>	<b>54 529€</b>
<b>Total (yearly)</b>	<b>654 343€</b>

## The investment inherent to the pilot phase depends on the uptake and the pilot's duration – in the expected uptake lasting 12 months, the expected investment is 880 000€

### Appendix 12 | Financial projections – Expected uptake

1 Expected uptake		Total Cost 12 months
		~880 000€
MVP		
Deployment		200 000€
Maintenance		11 070€
Initiatives		
<i>Cartão Mais Solidário</i>		42 840€
Sustainable Actions		370 525€
Sustainable Certification		163 586€
City Points		10 000€
Human Resources		
Customer Support / Sales		16 800€
Marketing		8 400€
Financials		8 400€
IT Services		16 800€
Legal Staff		5 200€
Others		23 501€
<b>Total Investment (12 months)</b>		<b>877 121€</b>

<i>Cartão Mais Solidário</i>	
Parameter	Value
Number of Cartão Mais Solidário beneficiary families	700
Aid for families with max 3 elements	75€
Aid for families with 4 or more elements	100€
% families with max 3 elements	60%
% families with 4 or more elements	40%
% agreement to participate in the study	60%
Average aid received per family	85€
% of <i>Cartão Mais Solidário</i> support given in Cascais	10%
<b>Total (monthly)</b>	<b>3 570€</b>
<b>Total (yearly)</b>	<b>42 840€</b>

Sustainable Actions Rewards	
Parameter	Value
Number of users	3 000
Average number of sustainable actions per user per month	19
Average reward per action	0,55€
<b>Total (monthly)</b>	<b>30 877€</b>
<b>Total (yearly)</b>	<b>370 525€</b>

Sustainable certification	
Parameter	Value
% Bronze Partner Companies	50%
% Silver Partner Companies	30%
% Gold Partner Companies	15%
% Diamond Companies	5%

Cashback from Sustainable Certification	
Parameter	Value
Number of partner companies	50
% Sustainable partner companies	30%
Average revenue per partner company	30 294€
Average cashback rate of total bill	3%
<b>Total (monthly)</b>	<b>13 632€</b>
<b>Total (yearly)</b>	<b>163 586€</b>

## The investment inherent to the pilot phase depends on the uptake and the pilot's duration – in a low uptake lasting 12 months, the expected investment is 530 000€

### Appendix 12 | Financial projections – Lower uptake

		Total Cost
		12 months
1	Lower uptake	~530 000€
MVP		
	Deployment	200 000€
	Maintenance	11 070€
Initiatives		
	<i>Cartão Mais Solidário</i>	9 600€
	Sustainable Actions	185 262€
	Sustainable Certification	27 264€
	City Points	10 000€
Human Resources		
	Customer Support / Sales	16 800€
	Marketing	8 400€
	Financials	8 400€
	IT Services	16 800€
	Legal Staff	5 200€
Others		23 483€
	<b>Total Investment (12 months)</b>	<b>522 280€</b>

<i>Cartão Mais Solidário</i>	
Parameter	Value
Number of Cartão Mais Solidário beneficiary families	500
Aid for families with max 3 elements	75€
Aid for families with 4 or more elements	100€
% families with max 3 elements	80%
% families with 4 or more elements	20%
% agreement to participate in the study	40%
Average aid received per family	80€
% of <i>Cartão Mais Solidário</i> support given in Cascais	5%
<b>Total (monthly)</b>	<b>800€</b>
<b>Total (yearly)</b>	<b>9 600€</b>

Sustainable Actions Rewards	
Parameter	Value
Number of users	1 500
Average number of sustainable actions per user per month	19
Average reward per action	0,55€
<b>Total (monthly)</b>	<b>15 439€</b>
<b>Total (yearly)</b>	<b>185 262€</b>

Sustainable certification	
Parameter	Value
% Bronze Partner Companies	80%
% Silver Partner Companies	15%
% Gold Partner Companies	4%
% Diamond Companies	1%

Cashback from Sustainable Certification	
Parameter	Value
Number of partner companies	25
% Sustainable partner companies	10%
Average revenue per partner company	30 294€
Average cashback rate of total bill	3%
<b>Total (monthly)</b>	<b>2 272€</b>
<b>Total (yearly)</b>	<b>27 264€</b>

## Cashcais has already captured mediatic attention before its implementation, revealing its innovative and curious character

### Appendix 13| Recognition

Overall, the Cashcais project has had mediatic attention and our team's work has been recognized in the launch of this innovative local currency in Portugal.

The team is actively looking forward to see the results of the pilot experiment implemented soon, hoping its efforts have delivered the maximum value to contribute for the project's mass success.

#### Vem aí a Cashcais: moeda local digital de Cascais

17-11-2021



Cascais vai ter uma moeda local digital.

Chama-se Cashcais é uma moeda local digital e vai ser posta em circulação no concelho através de uma aplicação móvel.

Na fase final de implementação, a Cashcais nasceu no âmbito de um projeto académico em parceria com a Universidade Nova SBE.

Neste momento decorre um questionário muito importante para a concretização deste projeto. **Participe aqui.**



Fotografia: Ana Luzia

### Vem aí a Cashcais: uma moeda digital para promover a economia local

Criada em parceria com a Universidade Nova SBE, a moeda deverá ser posta em circulação através de uma aplicação móvel.