

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

CONSULTING PROJECT FOR CÂMARA MUNICIPAL DE CASCAIS WITH THE TOPIC “SHOULD CÂMARA MUNICIPAL DE CASCAIS INTRODUCE A LOCAL CURRENCY IN ORDER TO DEVELOP THE LOCAL ECONOMY AND SUSTAINABILITY?”

Câmara Municipal de Cascais Consulting Lab in introducing a Local Currency: Leading the future of municipalities

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

26.01.2020

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GROUP PART

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Abstract

The project's focus is a potential introduction of a local currency to develop the local economy and sustainability. Bearing in mind the project's focus, several analyses were conducted focusing both the internal aspects and external aspects. It was also performed a study on local currencies and cryptocurrencies, supported by renowned economist and experts on the matter; on loyalty programs and Apps developed by private firms and on technological solutions. These studies and analyses were complemented by the analysis of a survey and in-depth interviews to both citizens and local businesses. Several recommendations were designed and provided to answer the overriding question.

Keywords: Câmara Municipal de Cascais, Sustainability, Citizens, Local Businesses, CASHCAIS.

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Câmara Municipal de Cascais Consulting Lab

Firstly, the team would like to express the immense feeling of gratitude to Professor Constança Casquinho Madeira. The professor not only provided insightful and helpful guidance, but also gave us lessons, which we will surely keep and take with us to our professional and personal lives. Moreover, Professor Constança was able to encourage us, so that we always dedicated our hearts and souls to the project.

We could not fail to mention Marco Espinheira to whom we are thankful for his valuable availability and critical thinking, which encouraged us to think out of the box and to advance the project more and more. We also thank him for being the closest contact within Câmara Municipal de Cascais and for guiding us in the project.

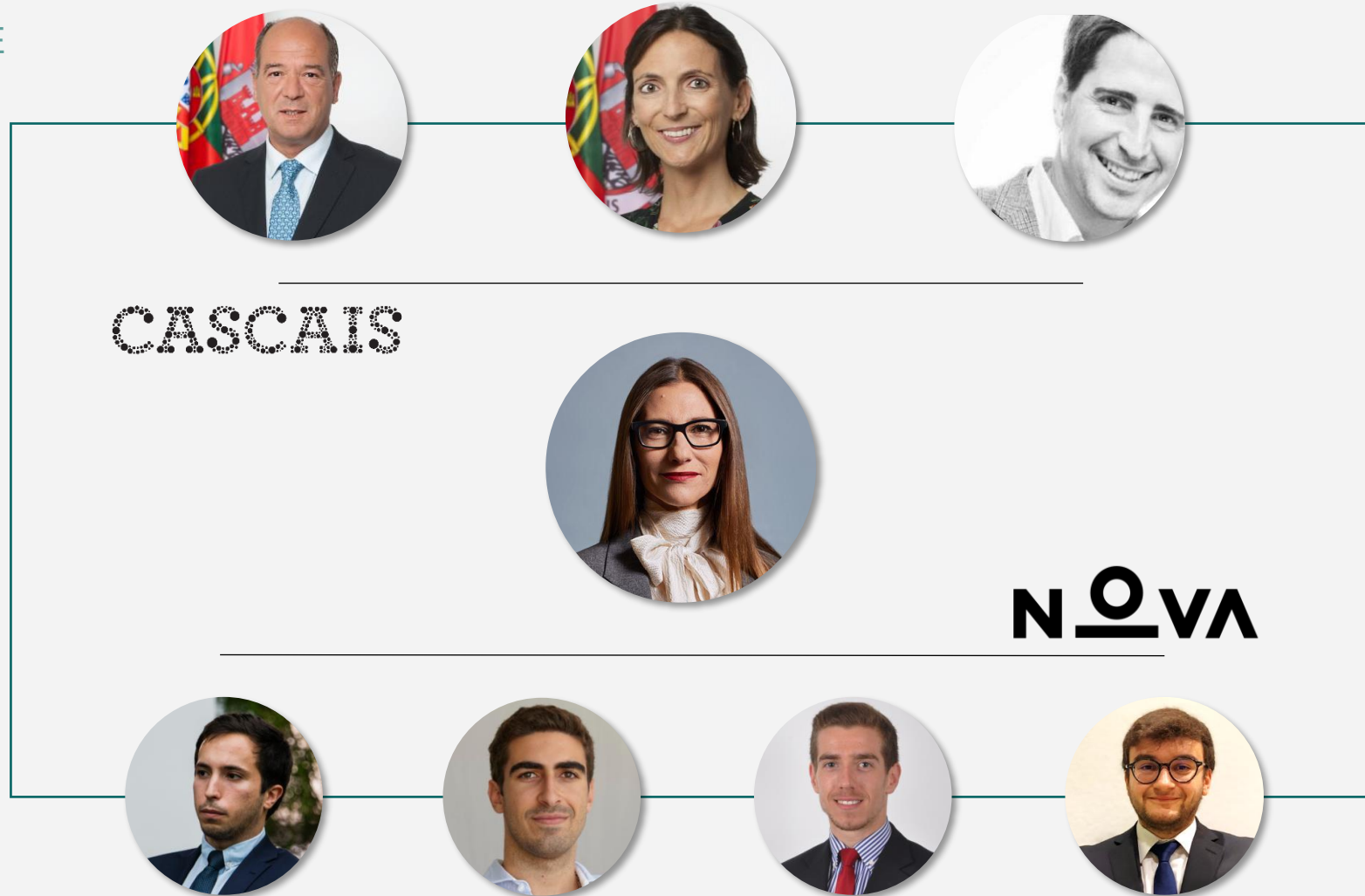
Our team also expresses its gratitude to Matilde Cardoso and her wonderful team, to whom we thank for helping us understand the City Points App.

The team also wants to leave a word of thanks to the City Councilor Joana Balsemão, and the Mayor Carlos Carreiras, for their availability and valuable insights, which contributed deeply to the development of this project.

We also want to express our gratitude to Professor Francesco Franco, Professor Pedro Brinca, Professor José Tavares, Professor Ricardo Zózimo, Professor João Amador, Professor António Barbosa and Professor Gina Pieters for their help, advisory and guidance throughout this project in topics such as local currencies, cryptocurrencies, legality of local currencies and measurement of impact.

Finally, we are truly grateful to Câmara Municipal de Cascais for being extremely welcoming and helpful. Even though we are not Cascalenses, this project gave us enough reasons to be.

INTRODUCTORY NOTE



This project is the result of a mutually benefic collaboration. As such, our team benefited from the experience and learning methods developed during the project, in which materialized the lessons and learnings in class to a real-life project. On the other hand, we expect Câmara Municipal de Cascais to have enriched from the insights and the analysis performed by the students, as well as the recommendations the Nova SBE team proposed.

GLOSSARY

AECC - Associação Empresarial do Concelho de Cascais

Baby Boomers - People born between 1946 and 1964

CBDC - Central Bank Digital Currency

Citizen - User of the CASHCAIS App in the best practice of environmental and civic sustainability actions

CMC - Câmara Municipal de Cascais

Company status - Category of the adhering company within the scope of the project (*Gold, Silver or Bronze*)

Customer - CASHCAIS App user for purchases

Gen Z - People born mid-to-late 1990s, also known as Zoomers

Gen X - People that were born between 1965 and 1980

INE - Instituto Nacional de Estatística

INESC - Instituto de Engenharia de Sistemas e Computadores, Investigação

Merchant - Partner company representative

Millennials – People born between 1981 and 1996

Partner company - Cascais company that joined the **CASHCAIS** project

Pseudocurrency – Has similar characteristics to a currency, not being considered an actual currency

Stakeholder - A person with an interest or concern in a business

Software - The programs and other operating information used by a computer

UN – United Nations

AGENDA

A. PROJECT APPROACH

B. METHODOLOGY

C. DIAGNOSIS

A. PESTEL

B. MUNICIPALITY OVERVIEW

C. SOCIODEMOGRAPHIC TRENDS

D. CMC INITIATIVES

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A. ISSUE ANALYSIS

B. ECONOMISTS' PERSPECTIVE

C. CRYPTOCURRENCY

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E. IN-DEPTH INTERVIEWS

F. SURVEY

G. CITY POINTS APP

H. LOYALTY PROGRAMS

I. BLOCKCHAIN TECHNOLOGY

J. MARKETING STRATEGIES

E. RECOMMENDATIONS

1. CITY POINTS APP UPGRADE TO CASHCAIS APP

2. ADVERTISEMENT PLAN

3. MULTITAKING TEAM FOR CASHCAIS

4. BLOCKCHAIN TECHNOLOGY IMPLEMENTATION

5. ACTION PLAN

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G. REFERENCES

H. APPENDIX

The project answers an overriding question after deep internal and external analysis that enabled the creation of a set of recommendations

EXECUTIVE SUMMARY

This project was developed in collaboration with Câmara Municipal de Cascais (CMC), under the supervision of Professor Constança Casquinho. During almost four months, progresses were made to answer the question: "Should Câmara Municipal de Cascais introduce a local currency in order to develop the local economy and sustainability?".

The developed analysis contains an overview of both internal and external analysis supported by several frameworks that focused on understanding local consumption behaviors and how they can be used and changed to achieve the goals of the project. Internally, CMC is an innovative Municipality that is continuously amplifying its range of initiatives, being City Points a clear example of that, as it was created to promote social and environmentally sustainable actions among its citizens. Its lack of users and low rating create a chance to improve it in terms of scope and awareness. Externally, the emergence of a health and economic crisis shook the world, which had an impact on, for example, the Municipality activities. As such, the creation of a potential currency was studied and, to perform this study, it was analyzed the different forms of currency and different types of local currencies. To deepen this study, meetings with renowned economists and tech experts were held. Moreover, in-depth interviews to both citizens and local businesses were conducted to better understand their concerns and their perception towards possible solutions as well as their insight on CMC activity and initiatives. The goal of this analysis focused on the internal and external environment to conceptualize the different strategic options.

Those analysis enabled the development of a set of recommendations which will generate an impact on the Municipality. Firstly, CMC should upgrade its City Points App to the CASHCAIS App, which presents many innovations, namely a renewed image, a loyalty program capable of retaining users or the integration of other initiatives that will be made available on a single App. To reach every citizen, an ambitious advertisement plan should be implemented, while CMC needs to allocate a team capable of materializing the project. As a solution for the future, CMC should begin to study an implementation plan on blockchain technology, given its advantages to the Municipality.

A literature review is provided to support the methodology and answer the overriding question. Experts were consulted and different analyses and frameworks developed to provide reliable and feasible strategic options

LITERATURE REVIEW (I/II)

In order to attain the objectives defined by the client, Câmara Municipal de Cascais, an overriding question was formulated: “Should Câmara Municipal de Cascais introduce a local currency in order to develop the local economy and sustainability?”. To face this question, we followed a methodology also known as **“The Pyramid Principle”**, which is used by the consulting firm McKinsey and is also suggested by Minto, B.. This methodology was followed to ensure a clear structured reasoning, so that the communication and reasoning could be clearly presented to the client. Following this methodology means starting by the end, that is, the team must start by the overriding question and its answer, followed by the arguments and facts to support it. As such, to answer why the overriding question can be confirmed, the team developed a **deductive reasoning**, which based on an external and internal analysis of the Municipality. Furthermore, an **inductive reasoning** was conducted to generate and develop ideas, which answer how the question could be conveyed.

Regarding the internal analysis, the Municipality overview was used to identify the main resources and activities as well as the principles that guide the political, economical, sustainable and environmental decisions. As for the external environment, we adopted **PESTEL framework**, which is a PEST extension created by Francis Aguilar. Given the different areas, which the project focus it was necessary to adopt PESTEL instead of PEST. As such, it was analysed how the political, economic, social, technological, environmental and legal components may impact CMC activity and it was understood the challenges posed by these forces and how to address them. The inclusion of the environmental and legal components in the analysis gained special relevance as sustainability is one of the main pillars of CMC and due to the legal framework of local currencies, which are currently not regulated either by Banco de Portugal or by the European Central Bank but could be subject to a future unfavourable framework.

A literature review is provided to support the methodology and answer the overriding question. Experts were consulted and different analyses and frameworks developed to provide reliable and feasible strategic options

LITERATURE REVIEW (II/II)

The Municipality overview was complemented by a **SWOT analysis**. Kotler, P. and Armstrong, G. suggest after a thorough analysis on the organization's resources and activities, as well as on the external factors, a SWOT analysis, designed and created in 1960 by Albert Humphrey, should be done so that it can be possible to point out, in this case, the Municipality's strengths, weaknesses and external opportunities and threats, which may have impact on the CMC's activities and decisions. As a final goal, the SWOT analysis guides on find how to leverage the Municipality's strengths and weaknesses to benefit from the opportunities and threats found. Moreover, a **TOWS analysis** was performed to complement the previous analyses and to comprehend how the findings in the SWOT analysis could be used to formulate possible strategic options.

Furthermore, it was considered other frameworks to deepen the analysis such as a **Resource-Based View Model** and **Porter's Five Forces**. However, these frameworks are used to understand the current competitive and/or corporate advantages and how to create others, as well as the competitive environment. In this context, CMC does not have any competitors and it cannot be considered a firm. As such, these were disregarded and not materialized.

Moreover, to assess the potentialities, feasibility and impact of local currencies or cryptocurrencies, it was held **meetings** with **renowned Nova professors** and other **economists**.

To better understand the panorama around CMC and both the citizens' behaviors and local businesses' perceptions, we adopted a **qualitative research method**, in-depth interviews, which were conducted to both firms and citizens to complement the data analysis provided by the survey, which is a **quantitative research method** of large importance to collect measurable and objective data and information about the citizens.

As for the recommendations, to assess the potential impact, it was considered the accomplishment of **Sustainable Development Goals** defined by UN and the **Stakeholders Engagement Map**, in which the goals of each stakeholder are defined, and it is evaluated whether they would be accomplished.

Main goal is to deepen the knowledge on consumers’ behaviors in Cascais to increase sustainability and develop the local economy, improving the quality of life for Cascais’ families

PROJECT UNDERSTANDING AND GOALS

SITUATION	COMPLICATION	QUESTION	ANSWER
 Câmara Municipal de Cascais has a record of positive and strong financial results.  This Municipality is revolutionizing the modernization of the public sector, having innovation as a stepping stone.  Sustainability is one of the main goals of Câmara Municipal de Cascais.	 COVID-19 has been affecting severely the economic activity in the Municipality.  Support the increasing number of local businesses in difficulties and needy families.  Difficulty to keep up with the digitalisation catalyzed by the pandemic.	SHOULD CÂMARA MUNICIPAL DE CASCAIS INTRODUCE A LOCAL CURRENCY IN ORDER TO DEVELOP THE LOCAL ECONOMY AND SUSTAINABILITY?	YES By deepening the knowledge about the businesses and local consumers’ behavior, CMC can:  Achieve good economic results, while ensuring sustainability.  Get closer to local businesses.  Providing quality of life for Cascais’ families.

The scope of collaboration includes best practices’ analysis, the conditions to adopt the defined solutions and the planning of the implementation strategy to ensure project completion

SCOPE OF COLLABORATION

IN THE SCOPE		
SHOULD CÂMARA MUNICIPAL DE CASCAIS INTRODUCE A LOCAL CURRENCY IN ORDER TO DEVELOP THE LOCAL ECONOMY AND SUSTAINABILITY?		
❖ Demographic analysis	❖ Academic insight from economists	❖ Marketing and advertising strategy
❖ Consumption and businesses trends and behaviors	❖ Deep and detailed studies on forms of currency	❖ Tasks’ definition
❖ Lessons learned from best practices	❖ Technological and digital trends	❖ Sustainability approach
		❖ Social and economic aspects
OUT OF SCOPE		
❖ Fiscal policy	❖ Internal resources allocation	❖ Financial accounting
❖ Pandemic resolution impact	❖ Project Implementation	❖ Budget constraints

The team defined goals and deliverables to develop and present to CMC during the project

GOALS AND DELIVERABLES



Collaboration Goals

- ❖ Analyze in detail the initiatives and applications developed by Câmara Municipal de Cascais.
- ❖ Comprehend and analyze the success of best practices.
- ❖ Understand both trends and behavior of businesses and of consumers in Cascais.
- ❖ Create and develop a set of recommendations, which contribute to the development of the local economic activities and contribute to the sustainability of the Municipality.

DELIVERABLES

Kick-off & Initial Diagnosis

- ❖ Internal Assessment
- ❖ Applications and initiatives developed analysis
- ❖ External factors assessment
- ❖ SWOT & TOWS Analysis
- ❖ PESTEL framework analysis

Analysis

- ❖ Summary of the meetings with renowned economists and tech expert
- ❖ Deep study on different forms of currency
- ❖ In-depth interviews and survey analysis
- ❖ Detailed analysis and provision of key takeaways on best practices

Final Recommendations

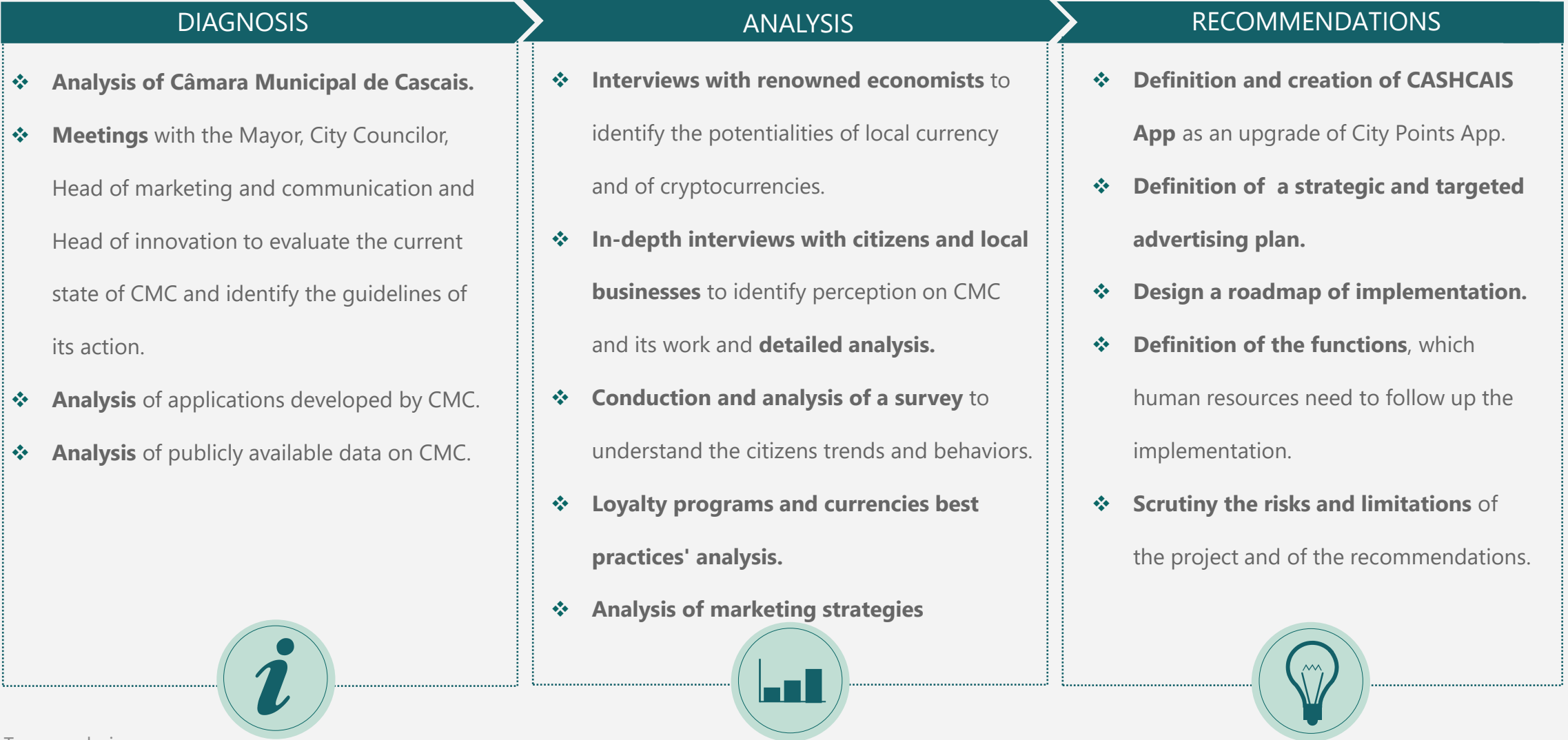
- ❖ Fundamental pillars of **CASHCAIS**
- ❖ Detailed advertisement Plan
- ❖ Technological and digital solutions
- ❖ Action Plan, approaching every single one of the recommendations
- ❖ Impact Assessment
- ❖ Presentation video

PROJECT TIMELINE



The project methodology is divided in three steps – diagnosis, analysis and recommendations – to achieve the development of a set of strategic solutions to be implemented by Câmara Municipal de Cascais

METHODOLOGY



Both empirical and analytical methods were used to define strategic recommendations to be presented to the company

METHODOLOGY | INVESTIGATION TOOLS

<u>Individuals:</u> ❖ In-depth interviews were conducted, summing a total of 20 ❖ It was created 4 different groups, according to the generation they belong to.	<u>Local Businesses:</u> ❖ 9 in-depth interviews to different sizes local businesses were conducted. ❖ 1 in-depth interview to AECC. ❖ This businesses were categorized according to its dimension.	<u>Cascais Experts':</u> ❖ Identify the strengths, weaknesses and opportunities from the different CMC departments, having held 7 meetings	<u>Economists:</u> ❖ Understand currencies with 6 renowned economists. ❖ Comprehend social impact with 1 expert. <u>Tech Expert:</u> ❖ Understand and assess Blockchain technology with 1 expert.
❖ Through Nova's platform, Qualtrics, a survey was conducted to test the adhesion to the different strategic options available, as well as the citizens' perception of the Municipality.	❖ There were a total of 449 answers. From which, 223 were from Cascais, the target group, in which the analysis was focused	IN-DEPTH INTERVIEWS MEETINGS WITH EXPERTS QUALTRICS SURVEY DATA ANALYSIS ❖ Analysis in detail of the public information available about CMC.	❖ Detailed analysis of economic data available about the Portuguese economy and consumption trends. ❖ Consulting firms' studies on digital transformation pushed by COVID-19, as well as the new marketing and advertising strategies.

Internal and external factors were analyzed for the diagnosis, which is the first step of the followed methodology. It enabled to get an overall picture of the project possibilities

OVERVIEW | DIAGNOSIS

- ❖ In the diagnosis, it is focused the analysis of **external and internal factors**, which may have impact on the development of the project.
- ❖ As for the **external factors'** analysis, the **PESTEL framework** was adopted, in which the analysis focused on **the political, economic, social, technological, environmental and legal** forces.
- ❖ As for the internal aspects' analysis, a deep **Municipality overview** was made, focusing on the history, initiatives and awards won. The Municipality overview was also complemented by a **sociodemographic analysis** of the council of Cascais. Moreover, a **detailed diagnosis to initiatives and applications** developed by Câmara Municipal de Cascais was performed.
- ❖ In order to **analyze the overall picture** of both external and internal components, a **SWOT analysis** was performed to better understand the **strengths, weaknesses, opportunities and threats of Câmara Municipal de Cascais**.
- ❖ As a final step of diagnosis, to complement the SWOT analysis, a **TOWS analysis** was made **to understand how the findings in the SWOT analysis could be useful in the formulation of potential strategic options**.

The COVID-19 situation affected the Portuguese and, subsequently, Cascais economy, which led to an increased awareness on local companies

PESTEL ANALYSIS (I/II)

POLITICAL



- ❖ **High degree of political stability** in Cascais as the management team is the same since 2011. Furthermore, **transparency** is established as one of the main pillars of the political action in Cascais.

ECONOMIC



- ❖ The **Portuguese economic activity** has been **decreasing** (-5.7% in the 3rd trimester) in 2020 and **Cascais follows the same pattern**;
- ❖ The **unemployment rate in Portugal** followed the European trend but **increased** (7.8% in the 3rd trimester of 2020) less than the European unemployment rate.

SOCIAL



- ❖ Globally and in Portugal, people are more **aware of sustainable consumption** (85% in Portugal);
- ❖ **Most consumers in Portugal** (52%) are **willing to pay more for local products**.

This pandemic boosted technological solutions, generating opportunities for digital improvements to enhance local economies and their sustainability

PESTEL ANALYSIS (II/II)

TECHNOLOGICAL



- ❖ **Most cell phone users access internet through this device (75%);**
- ❖ In Cascais, **electronic payments** represent more than **the triple of physical payments;**
- ❖ Covid-19 **boosted the companies' digital transformation.**

ENVIRONMENTAL



- ❖ The **vast majority (76%)** of Portuguese people are **conscious about the environmental problems and climate changes** and **most Portuguese people (74%) believe the environmental and climate change will continue**, despite the current health crisis.

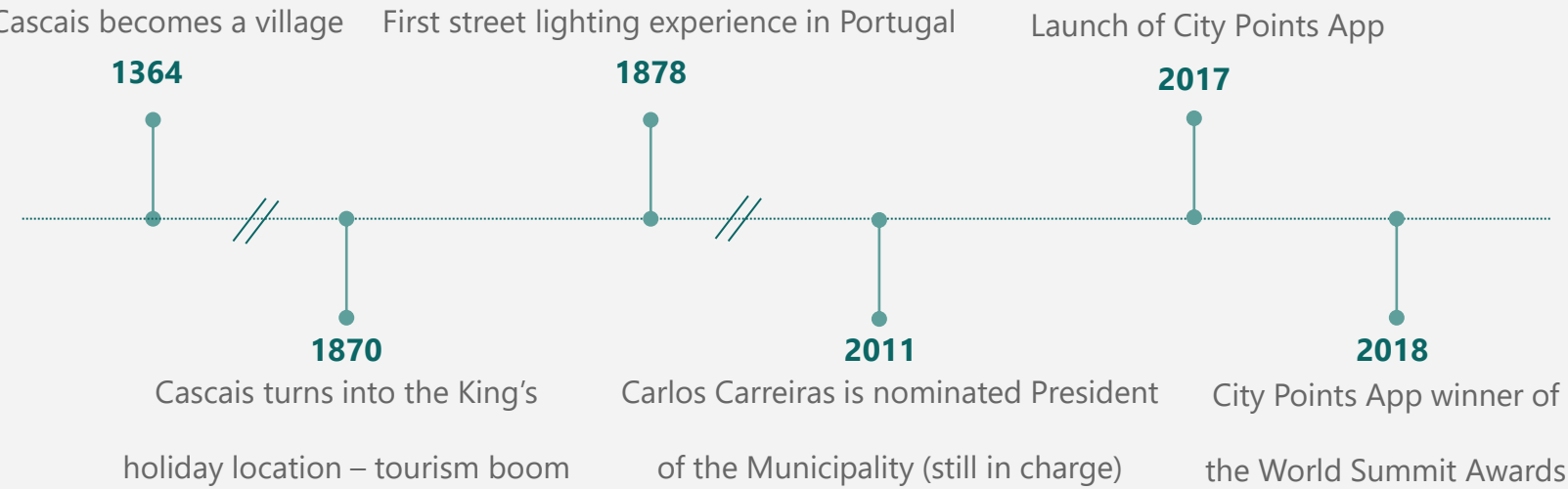
LEGAL



- ❖ There are **no specific regulations on the issuance and operation of local currencies in Portugal or in the European Union.** Consequently, it is not illegal to issue or operate local currencies, but the activity is not regulated or supervised.

The Municipality of Cascais is, since day one, focused on innovation and is pioneer in many subjects in Portugal and on the rest of the world, being awarded for several initiatives

MUNICIPALITY OVERVIEW



WHY CASCAIS?

- ❖ Touristic village with 30 kilometers of seaside and 300 days of sun
- ❖ It is 20 minutes away from Lisbon and Sintra, while remaining a quiet place
- ❖ It is one of the ten richest municipalities in Portugal

DEMOGRAPHICS

- ❖ 212.474 inhabitants, from which 25.199 are foreigners (estimate 2018)
- ❖ 142.404 inhabitants of Cascais aged between 12 and 64 years, representing 67% of the total population (ageing index lower than in Lisbon and Portugal)

OTHER AWARDS

CASCAIS

Green Project Awards – Cascais Ambiente awarded for its smart waste management platform

“Autarquia + Familiarmente Responsável” – awarded for putting families in need in the center of the decision-making

“Prémio Políticas Públicas” awarded for its Covid-19 combat mask factory and for its speed in this response, starting early to supply masks to residents at residual prices

Several trends and opportunities shall be considered by public institutions in the coming years in order to enable their modernization and economic and social development

SOCIODEMOGRAPHIC TRENDS

PROMOTION OF CIVIC PARTICIPATION

Initiatives to promote citizen participation in political decisions are increasing, trend also visible in Cascais with the implementation of the Participatory Budget or FixCascais App.

SOCIAL AND ENVIRONMENTAL AWARENESS

Impact of climate change has led to increased awareness of the citizens, companies and authorities, who design measures aimed at increasing sustainable attitudes.

SMARTCITIES DEVELOPMENT

Municipalities seek the development of innovative urban intelligence solutions in the area of sustainability, circular economy, adaptation to climate change and soft mobility

ECONOMIC INSTABILITY AND UNCERTAINTY DUE TO THE PANDEMIC

It is foreseen a GDP reduction and increase in unemployment, among other economic factors, which are dependent on the development of the pandemic and on the impact of a vaccine.

PROMOTION OF LOCAL ECONOMY

It has gained special focus in the past few months both by citizens and local authorities, who have designed economic measures aimed at local businesses.

INCREASED DEMAND FOR DIGITAL CHANNELS

Appearance of new digital methods of payment, such as MBWay and homebanking. About 94% of Portuguese have already shopped online, according to a report by Nielsen.

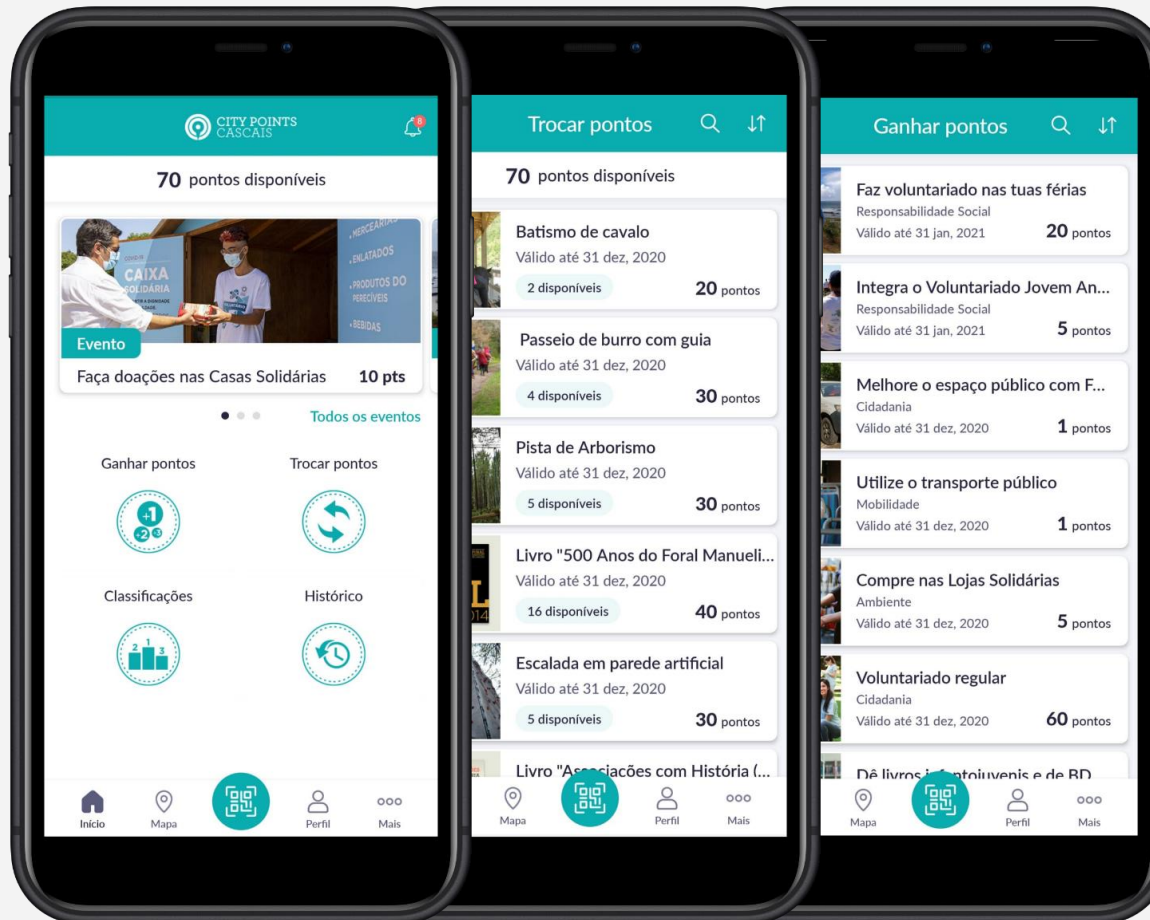


The City Points App aims to promote the good practices of citizens, rewarding them with points to be exchanged for goods and services of the Municipality of Cascais.

CMC INITIATIVES | CITY POINTS



CITY POINTS
CASCAIS



App aimed at promoting good practices on:

Environment
Citizenship
Sharing
Mobility
Social Responsibility

Methodology:

- ❖ Registration through MyCascais platform.
- ❖ Collecting points in civic and social responsibility actions.
- ❖ Exchange of points for vouchers.
- ❖ Available vouchers are issued by CMC or partner associations.
- ❖ Gamification through ranking of the users.

Figure 1,2 : City Poin App

'Compre Agora, Ganhe Depois' was one of the first initiatives that CMC implemented to face the challenges of the pandemic, aiming to increase local consumption

CMC INITIATIVES | COMPRE AGORA, GANHE DEPOIS

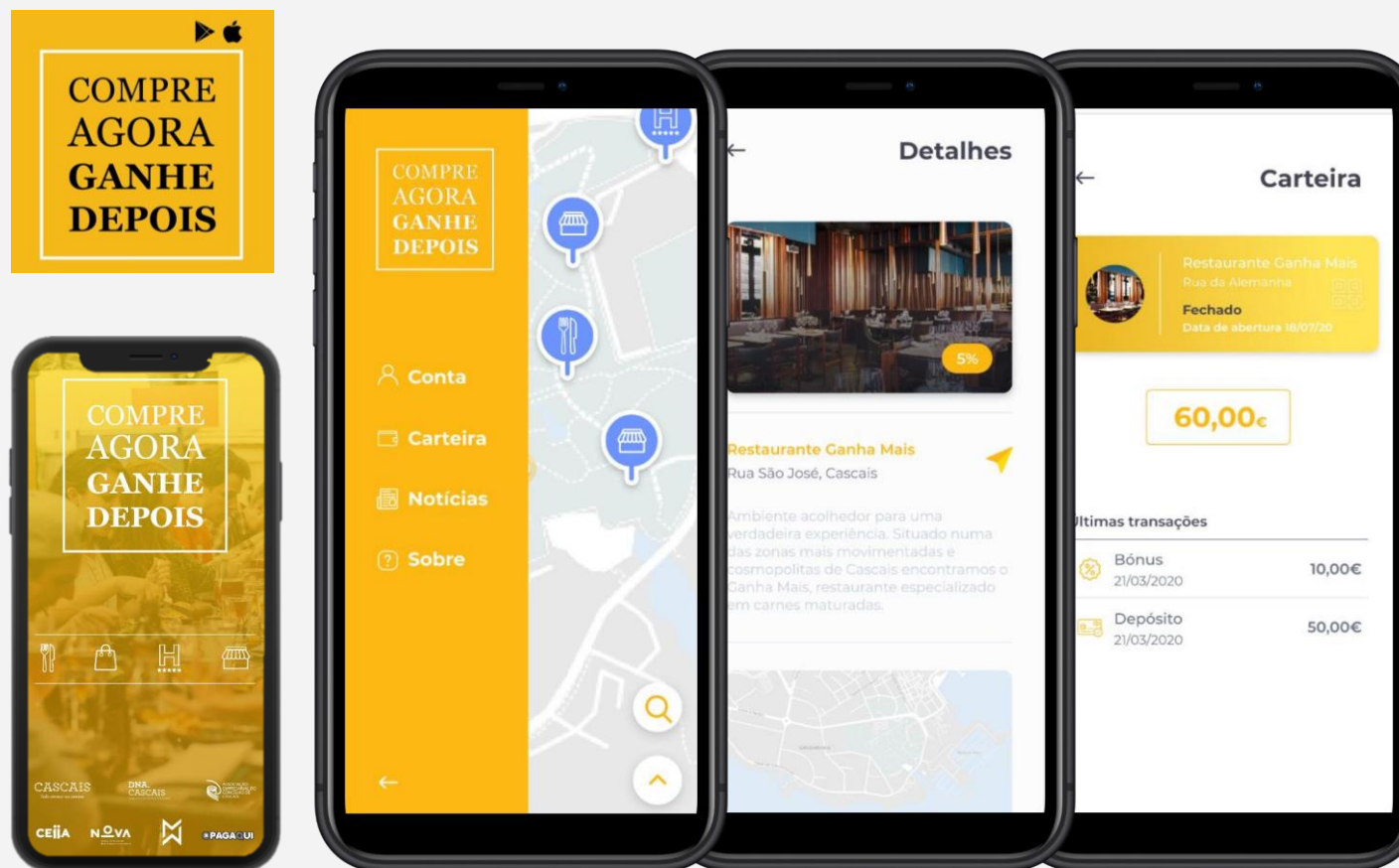


Figure 3.4: Compre agora, Ganhe depois App

- ❖ App aimed at supporting Cascais businesses in overcoming the challenges posed by the economic slowdown resulting from the **pandemic** and the decline in consumption.
- ❖ Injection of liquidity into local businesses so that they could meet their financial obligations, such as the payment of fixed costs and, at a later stage, face the expected significant fall in revenues.

Methodology

- ❖ Digital platform available on the web and mobile App.
- ❖ Purchase of vouchers for future acquisition of goods and services in partner businesses, with future value higher than current price.
- ❖ Contributed to the promotion of the proximity between the consumer and local companies.

Social well-being is essential for CMC. Over the years, especially in 2020, many social initiatives have been implemented to support families and businesses in need

CMC INITIATIVES | CARTÃO MAIS SOLIDÁRIO, SOCIAL INITIATIVES AND #EUCOMPRONOCOMÉRCIOLOCAL



Figure 5: Cartão Mais Solidário



Figure 6: Initiative 1=2



Figure 7: Initiative #EUCOMPRONOCOMÉRCIOLOCAL

Cartão Mais Solidário and other social initiatives

Evolution and expansion of several previous programs, in partnership with three well-known supermarket chains. It constitutes a new response, complementing the already existent:

- ❖ **Cascais + Solidário** – created in 2008, in partnership with social NGOs, to support people in financial vulnerability with foodstuffs or pecuniary supports.
- ❖ **Caixas Solidárias** and **Casas Solidárias** – physical spaces to deposit donations of foodstuffs and personal protective equipment for people in need.
- ❖ **Caixa Solidária Virtual / 1=2** – digital solidarity platform for donations, in which CMC will double the amount of individual contribution.

#EuComproNoComércioLocal

- ❖ Partnership between **Câmara Municipal de Cascais**, **DNA Cascais** and **AECC**.
- ❖ Platform in which businesses can announce discounts and offerings and attract clients.
- ❖ Entrepreneurs themselves define the offer.

CMC has an extensive offer of Apps and platforms in order to meet the needs of residents in the Municipality. MyCascais platform allows to connect every digital service designed by CMC, ensuring credibility and transparency .

CMC INITIATIVES | OTHER PLATFORMS



MY

CASCAIS

Authentication platform common to the different digital services of the Municipality and partners, such as **Loja Cascais, MobiCascais, Viver Cascais, Participatory Budget, Volunteering, Associativism, Cascais 360** and **City Points**.



FIX

CASCAIS

Report of abnormal situations in public spaces



2.5 ★

Downloads: +1,000



3.0 ★



MOBI

CASCAIS

Integrated mobility solution of Cascais



2.2 ★

Downloads: +5,000



2.0 ★



360°

CASCAIS

Informations about Cascais



4.4 ★

Downloads: +500



1.0 ★



EDU

CASCAIS

Informations for educational community



2.3 ★

Downloads: +5,000



3.0 ★



CASCAIS

DATA

Transparent statistical information about Cascais



LOJA

CASCAIS

Online municipal services



PARTICIPA

CASCAIS

Participative community initiatives

DNA.

CASCAIS

Empreendedorismo e Comércio

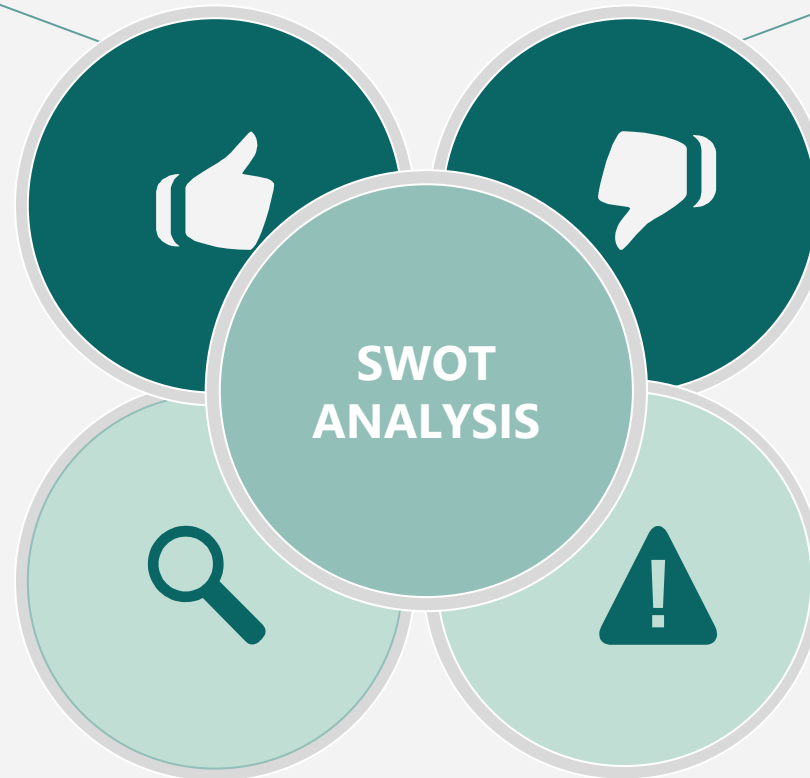
Independent non-profit association for entrepreneurship and business

The SWOT analysis allows to understand how CMC can take advantage of its strengths and diminish its weaknesses to implement a solution that develops the local economy while ensuring sustainability

SWOT ANALYSIS | CÂMARA MUNICIPAL DE CASCAIS (I/II)

STRENGTHS

- ❖ **Strong image** among the citizens
- ❖ Targeting of **sustainability as one of the guiding lines** of the political action
- ❖ **Strong and positive financial results** along the years
- ❖ **Strong and fast capability of responding to day-to-day citizens' problems** that may arise;
- ❖ **Easiness to adopt technological/digital solutions** that help both the citizens and the Municipality
- ❖ **Strong communication between departments** of Câmara Municipal de Cascais



WEAKNESSES

- ❖ **High level of dependence regarding IT issues**, namely development of Apps
- ❖ **Weak marketing strategy**
- ❖ **Human Resources allocation** to the different projects
- ❖ **Collection of data and analytical capabilities;**
- ❖ **Availability of information**, which can be **useful** both **to the citizens and to the local businesses**
- ❖ **Maintenance costs** in the different developed applications
- ❖ **Few partnerships with local businesses**

The SWOT analysis allows to understand how CMC seeks opportunities to implement a solution that develops the local economy while ensuring sustainability

SWOT ANALYSIS | CÂMARA MUNICIPAL DE CASCAIS (II/II)

- ❖ **Support citizens on how to enjoy all the features of the applications** the Municipality has
- ❖ Municipalities have been **improving their current applications**;
- ❖ **Aggregate the different applications** available to the citizens and local businesses
- ❖ **Getting closer to local businesses**
- ❖ **Develop analytical tools and skills** to support the decision-making process;
- ❖ Provide **personalized services**

OPPORTUNITIES



- ❖ **Not being able to follow the digitalization** catalyzed by COVID-19
- ❖ **Unstable economic situation**
- ❖ **Being forced to support the increasing number of needy families**
- ❖ Risk of being **unable to provide economic support to the local businesses**
- ❖ **Brand image** may be **affected** by the **lack of available information**

THREATS

The combination between external and internal factors leads to major conclusions regarding possible solutions, such as the optimization of a pre-existing CMC App or the personalization of the services provided

TOWS ANALYSIS | CÂMARA MUNICIPAL DE CASCAIS

SWOT ANALYSIS CÂMARA MUNICIPAL DE CASCAIS		Internal Aspects	
External Aspects		Strengths (S1) Strong image (S2) Sustainability as one of the guiding lines (S3) Strong and positive financial results (S4) Strong and fast capability of responding (S5) Easiness to adopt technological/digital solutions (S6) Strong communication between departments	Weaknesses (W1) High level of dependence regarding IT issues (W2) Weak marketing strategy (W3) Human Resources allocation (W4) Collection of data and analytical capabilities (W5) Availability of information (W6) Maintenance costs of the developed Apps (W7) Few partnerships with local businesses.
	Opportunities (O1) Support citizens on Apps' usage (O2) Improve Apps (O3) Aggregate the different Apps (O4) Getting closer to local businesses (O5) Develop analytical tools and skills to support the decision-making process; (O6) Provide personalized services	(O1, O2, O3, O5, O6 S1, S4, S5, S6) Optimize applications developed based on the analytical tools and skills achieved (O4 S1, S2, S3) Approach and support local businesses	(O1, O2, O3, O5 W1, W5, W6) Sign new partnerships with technological firms (O4 W2, W3, W7) Elaborate a marketing plan and allocate human resources to celebrate partnerships with local businesses (O6 W4) Based on users' data, provide personalized services
	Threats (T1) Inability to follow the digitalization (T2) Unstable economic situation (T3) Support the increasing number of needy families (T4) Inability to support economically local businesses (T5) Lack of information available may harm brand image	(T1, T2, T3, T4 S2, S3, S4, S5) Act fast on the economic and social consequences of the pandemic (T5 S1, S5, S6) Provide reliable and valuable information	(T1 W1) Vulnerability of being unable to follow the digital transformation (T2 W6) Inability to sustain costs, giving the new economic context (T4 W7) Closure of local businesses (T5 W2, W5) Endanger brand image

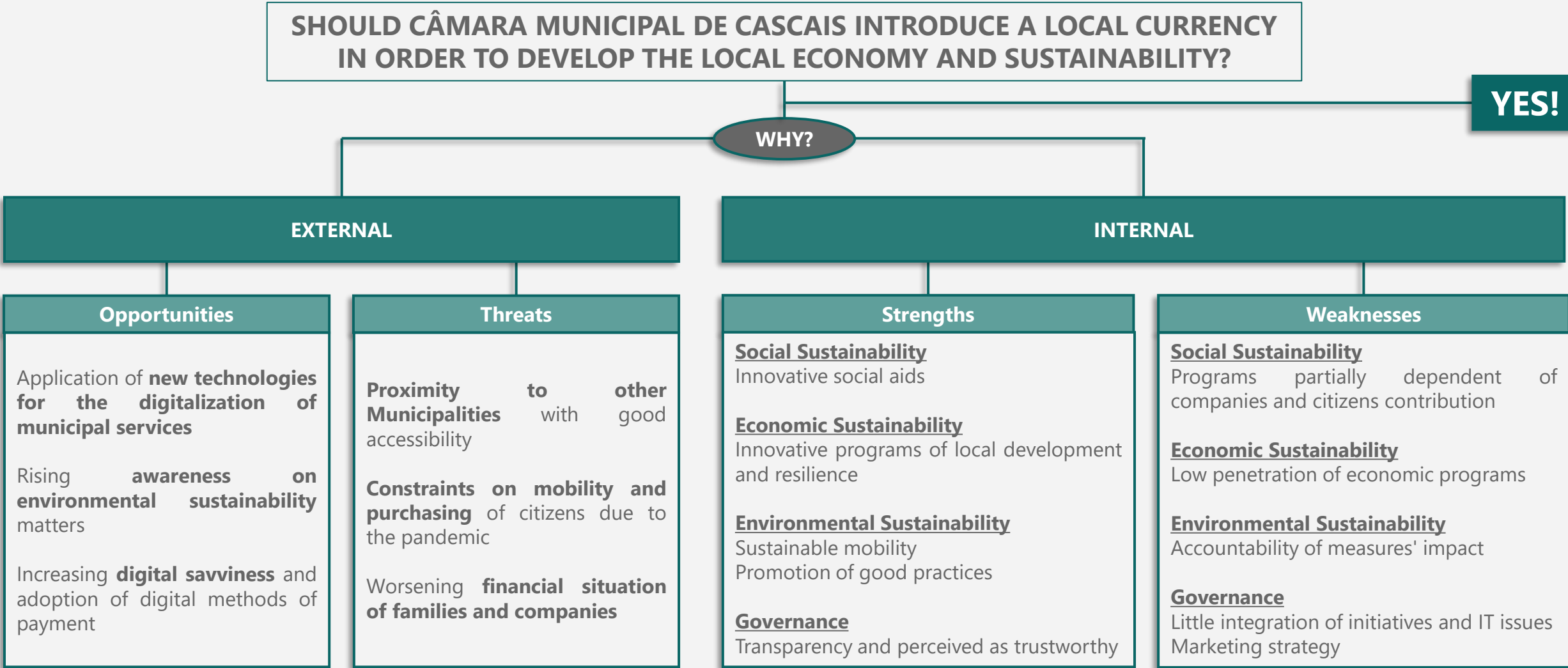
Team analysis followed a sequence supported by several investigation methods that helped to develop team recommendations

OVERVIEW & INVESTIGATION METHODS | ANALYSIS

Analysis Overview	Investigation Methods	
❖ Bearing in mind the Pyramid Principle, a deductive and an inductive reasoning were developed to, respectively, answer why the overriding could be confirmed and how it could be addressed. Therefore, several strategic hypothesis were identified and tested.	❖ Pyramid Principle ❖ Deductive Reasoning ❖ Inductive Reasoning	
❖ In order to test those hypothesis, different meeting with renowned economists were held in the first place. Moreover, it was performed a detailed analysis on different types, forms and best practices of currencies and it was taken into consideration Apps already developed by CMC; additionally, it was studied marketing strategies directed to different generations.	❖ Forms of Currencies ❖ Local Currencies ❖ Interviews with renowned Economists ❖ Generational Marketing Strategies	❖ Loyalty Programs ❖ City Points Analysis ❖ Bandwagon Effect
❖ To complement all the studies and analysis performed, it was conducted in-depth interviews to both local businesses and citizens and it was created a survey. The analysis of both the in-depth interviews and survey proved to be useful, as some major insights were taken from these.	❖ In-Depth Interviews	❖ Qualtrics Survey

The deductive reasoning helps to clarify that CMC should introduce a local currency to answer the current challenges and increase sustainability in the Municipality

DEDUCTIVE REASONING



INDUCTIVE REASONING



Neither the creation of a cryptocurrency or of a physical local currency represent a solution to the need of creating a currency for Cascais

ANALYSIS | HYPOTHESIS (I/VI)

Central Question: Should CMC introduce a local currency in order to develop the local economy and sustainability?			
Main issue	Sub issue	Hypothesis	Analysis Tools
Should Cascais create a currency or a pseudocurrency?	Should Cascais create a cryptocurrency?	No. A cryptocurrency works in a decentralized system with a large network of partners, but with little control on any transaction or even the process of issuing money. Cryptocurrency can be used wherever it is accepted, so it is not possible to enforce territorial boundaries to its use. Cryptocurrencies do not have a fixed conversion rate, meaning that it cannot ensure economic stability. Finally, although not being an exclusive feature of cryptocurrency, its adoption would require the implementation of a blockchain system.	❖ Interview specialists in cryptocurrency, economics and monetary policy ❖ Academic research
	Should Cascais create a physical local currency?	No. The creation of a physical local currency could constitute a product for the development of tourism. However, it would have major operative costs, as it would need for a unit of production of “money” notes/coins, besides the costs of monitoring and the possible legal constraints to its implementation.	❖ Interview specialists in macroeconomics and monetary policy ❖ Academic research

After a deep analysis, it seems that a digital local currency can bump on the legal framework, which leads to a rejection of this hypothesis

ANALYSIS | HYPOTHESIS (II/VI)

Central Question: Should CMC introduce a local currency in order to develop the local economy and sustainability?			
Main issue	Sub issue	Hypothesis	Analysis Tools
Should Cascais create a currency or a pseudocurrency?	Should Cascais create a digital/virtual local currency?	No. The adoption of a digital currency might have many advantages for CMC. A possible solution might be a system which allows the conversion from Euros into "Locals", the realization of payments through an App using this new currency and/or the offering of discounts for the users, leading to more incentives for consumers to purchase locally instead of importing goods and services. For the success of the implementation of a digital local currency, the creation of a taskforce in charge of the monitorization of the transactions and of the operation will be crucial. Despite this, the legal framework might become unfavorable, what supports the implementation of a more hybrid solution, with some characteristics of this hypothesis, not being a currency <i>per se</i> , but instead a "pseudocurrency".	❖ Interview specialists in macroeconomics and monetary policy ❖ Academic research ❖ In-depth interviews ❖ Survey analysis ❖ Benchmark analysis

Table 4: Hypothesis analysis 2

The most viable solution passes by creating a *pseudocurrency* by upgrading the City Points App and extending its scope to boost local trade

ANALYSIS | HYPOTHESIS (III/VI)

Central Question: Should CMC introduce a local currency in order to develop the local economy and sustainability?				
Main issue	Sub issue	Sub sub issue	Hypothesis	Analysis Tools
Should Cascais create a currency or a <i>pseudocurrency</i> ?	Should Cascais upgrade CityPoints App?	Should Cascais upgrade City Points by extending its scope to boost local trade?	Yes. Upgrading City Points to a <i>pseudocurrency</i> App will allow to extend its scope to local businesses, developing local economy and further improving sustainability habits of citizens, avoiding potential issues that might appear in case of creation of legislation regarding the creation of local currencies. This way, most of the characteristics of a currency can be implemented, leaving room to a future upgrade into a proper local currency. However, it will address local economy development in a shorter term. Moreover, using the App as a database of local businesses will create many opportunities for companies and consumers. Platform will be able to give discounts, to promote companies and to interconnect them by giving advantages for acquiring in one store to spend in the same or in another one.	❖ In-depth interviews ❖ Survey analysis ❖ Benchmark analysis ❖ Academic research

Table 5: Hypothesis analysis 3

To succeed in the implementation of the recommended *pseudocurrency*, it is important to develop an advertisement plan that creates awareness and to have a team capable of dealing with daily challenges

ANALYSIS | HYPOTHESIS (IV/VI)

Central Question: Should CMC introduce a local currency in order to develop the local economy and sustainability?				
Main issue	Sub issue	Sub sub issue	Hypothesis	Analysis Tools
Should Cascais create a currency or a <i>pseudocurrency</i> ?	Should Cascais upgrade CityPoints App?	Should Cascais promote the App in order to increase the number of users?	Yes. City and digital advertisement can reach more citizens, especially the ones who are more digitally connected and more willing to use the App and take advantage of its functionalities.	❖ In-depth interviews ❖ Survey analysis
		Should Cascais create a task-force dedicated to the App?	Yes. The creation of a taskforce dedicated to the day to day challenges of the new App will improve the response to the probable errors and suggestions of the solution, improving the relation with the users of the App.	❖ In-depth interviews ❖ Benchmark analysis

Table 6: Hypothesis analysis 4

Other features and initiatives should be implemented, namely "special weeks", creation of vouchers and a catalogue with local companies' informations

ANALYSIS | HYPOTHESIS (V/VI)

Central Question: Should CMC introduce a local currency in order to develop the local economy and sustainability?			
Main issue	Sub issue	Hypothesis	Analysis Tools
Should Cascais implement other measures for local economic development?	Should Cascais create "special weeks" to support businesses?	Yes. Promoting businesses of a specific economic activity in specific days/weeks can create impact in citizens' minds. In those days, more discounts would be available in those businesses, which would attract consumers.	❖ In-depth interviews ❖ Survey analysis ❖ Benckmark analysis
	Should Cascais issue vouchers to foster local consumption?	Yes. Cascais should develop a system of vouchers usable only in the local enterprises of the Municipality. These vouchers should be distributed among residents with a reasonably short timespan for redemption, in order to incentivize citizens visits to stores.	❖ In-depth interviews ❖ Survey analysis
	Should Cascais create a catalogue with local commerce partners?	Yes. Cascais should develop a digital comprehensive catalogue with local enterprises, in partnership with the business association and the program DNA Cascais, arranged by industry and displaying active campaigns of discount, as well as other announcements.	❖ In-depth interviews ❖ Survey analysis

Table 7: Hypothesis analysis 5

By improving governance, CMC ensures transparency and increased citizens' confidence on them, enabling to develop even more innovative solutions

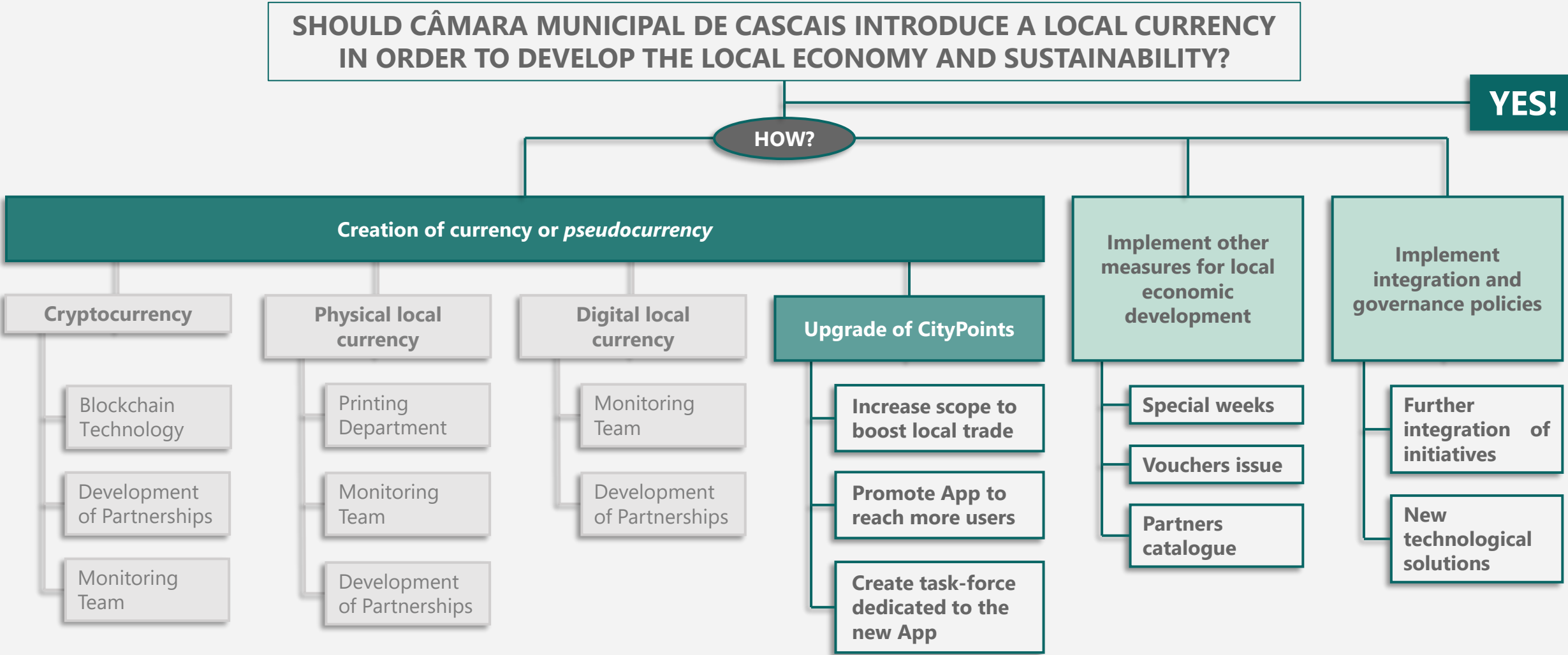
ANALYSIS | HYPOTHESIS (VI/VI)

Central Question: Should CMC introduce a local currency in order to develop the local economy and sustainability?			
Main issue	Sub issue	Hypothesis	Analysis Tools
Should Cascais implement policies reach further integration of initiatives and improve governance?	Should Cascais further integrate its initiatives in order to reach more citizens?	Yes. Cascais should further integrate its programs, already dependent of the platform MyCascais, such as 'Cartão Mais Solidário' or MobiCascais, with the presented solution, as well as facilitate its access and intercommunication.	❖ In-depth interviews ❖ Survey analysis
	Should Cascais adopt new technological solutions to keep its initiatives the state-of-the-art?	Yes. The implementation of state-of-the-art technology will allow the maintenance and even increase of the attractiveness of CMC initiatives. The implementation of blockchain technology will allow to better response to the needs of citizens, as it facilitates the recording of all operations and the quick analysis of problematics.	❖ Interview specialist in technology and blockchain ❖ In-depth interviews ❖ Survey analysis

Table 8: Hypothesis analysis 6

The elimination of some of the hypothesis regarding the creation of a currency clarify the analysis and allow to define an ambitious set of recommendations

INDUCTIVE REASONING



The different perspectives of economists regarding the impact of the implementation of a local currency are useful in the choice of the most efficient system to develop

ECONOMISTS' PERSPECTIVE - SUMMARY

					
	Professor Francesco Franco	Professor José Tavares	Professor Gina Pieters	Professor Pinto Barbosa	Professor Pedro Brinca
CRYPTOCURRENCY	✗	✗	✗	✗	✗
DIGITAL LOCAL CURRENCY	✗	?	✓	?	?
PHYSICAL LOCAL CURRENCY	✗	✓	?	?	?

The acceptance of the universe of the Municipality and the definition of incentives of the local currency against the euro as preponderant factors for the success of the new currency

ECONOMISTS' PERSPECTIVE (I/III)



POTENTIAL

- ❖ Being digital, the whole process is more transparent and safer, avoiding criminal activities.

CHALLENGES

- ❖ Universal acceptance is needed to work as a currency.
- ❖ The relation between the existence of a local currency and an increase in local consumption is not obvious.
- ❖ Coexistence with the Euro might be a problem (Gresham's Law).
- ❖ It is required to invest in a software to record transactions and to ensure a harmonious operation and security of the application.

Professor Francesco

Franco

- ❖ Assistant Professor at Nova SBE since 2004
- ❖ PhD in Economics from the Massachusetts Institute of Technology

POTENTIAL

- ❖ It is fundamentally a tourism product and a source of attraction.
- ❖ Creation of incentive to use by creating price differentiation.
- ❖ Source of revenue for CMC generated by the issued currency that is not spent – souvenir.
- ❖ Physical currency creates greater awareness and a more visible impact on local trades.

CHALLENGES

- ❖ The simultaneous existence of physical and digital currency would complicate the system.
- ❖ Requires higher investment by CMC.

Professor José Tavares

- ❖ Professor at Nova SBE
- ❖ Researcher at the Center for Economic Policy Research in London
- ❖ PhD in Economics at Harvard



The acceptance of the universe of the Municipality and the definition of incentives of the local currency against the euro as preponderant factors for the success of the new currency

ECONOMISTS' PERSPECTIVE (II/III)



POTENTIAL

- ❖ With a digital currency it is possible to record all transactions made with it.
- ❖ Possible price discrimination.
- ❖ Free transactions between users.
- ❖ With appropriate incentives, consumers will use the local currency.

CHALLENGES

- ❖ The cryptocurrency system is decentralized, so it makes no sense at a municipality level.
- ❖ Requires investment from CMC for the conversion of fiat currency into local currency.
- ❖ Physical currency may violate ECB regulations.
- ❖ Possible difficulty in acceptance by players.

POTENTIAL

- ❖ Gresham's Law is not a problem in this context;
- ❖ A local currency can lead to the replacement of imports of goods and concentrate economic activity in the region.

CHALLENGES

- ❖ The credibility of the currency will have a major impact in the success of the project.
- ❖ Conversion cost to euros.
- ❖ For non-tradable goods there may be local inflation.
- ❖ There may be "monetary cacophony" if there is replication in other municipalities.

Professor António Pinto

Barbosa

❖ Professor of
Macroeconomics and
Public Economics at
UNL until 2017

- ❖ PhD in Economics from
Virginia Polytechnic
Institute & S.U.



Local currency is a form of protectionism and an instrument of economic development through behavioral mechanisms

ECONOMISTS' PERSPECTIVE (III/III)



Professor Pedro Brinca

- ❖ Professor of Macroeconomics at Nova SBE since 2015
- ❖ PhD in Economics by the University of Stockholm and Stockholm School of Economics

POTENTIAL

- ❖ Advantages for the issuer - the development of local trade.
- ❖ Advantage for companies – increase of local demand.

CHALLENGES

- ❖ Classical economics: issuing a local currency is a form of protectionism that encourage inefficiencies.
- ❖ Currency issuance stabilizes the economy in the short term, such as in periods of crisis, but generates inflation.
- ❖ A very large number of partnerships is required, as the feasibility will depend on the size of the partner network.
- ❖ Behavioral economics: for the citizen represents less choice, which can be circumvented with some incentives, e.g., vouchers.

Cryptocurrency is a growing virtual currency that, for its characteristics, cannot be issued by a local entity such as a municipality

CRYPTOCURRENCY (I/II)

QUICK CONTEXT



- ❖ Cryptocurrency is labelled as a virtual currency, which means it is a digital token, which can be exchanged electronically.
- ❖ It is created and kept track of by a complex network of computers, using mathematical and complex formulas.
- ❖ As such, it is not controlled by a single organization or authority.
- ❖ It is seen by many people as a speculative asset, which means people can gamble to make money, but it exists the risk of losing investment.
- ❖ The first cryptocurrency developed was Bitcoin, which was launched in 2009.
- ❖ From then onwards, more cryptocurrencies such as Ethereum and Litecoin were created and developed.
- ❖ In Portugal, there has been a growth in cryptocurrency transactions.



CHARACTERISTICS



- ❖ Digital representation of value intended to constitute a peer-to-peer ("P2P") alternative to the detriment of digital legal currencies issued by governments.
- ❖ Independent of any central bank, is therefore decentralized.
- ❖ No geographical limit.
- ❖ Guaranteed by a mechanism known as encryption.
- ❖ Can be converted into legal currency and vice versa, allowing speculation.
- ❖ The demand and supply of cryptocurrencies are determined by the activities of its users, who therefore determine its value.
- ❖ Supply is limited.
- ❖ Self-regulated.
- ❖ **A municipality cannot control its emission, value or geographic limit.**

Several advantages and disadvantages come from the adoption of a cryptocurrency, from ease of access to increased regulation.

CRYPTOCURRENCY (II/II)

ADVANTAGES



- ❖ **Anti-fraud** – it is a digital currency that cannot be counterfeit.
- ❖ **Immediate purchase** – elimination of entropy in processes, such as the purchase of real estate, that typically involve several third parties, delays and payment of fees.
- ❖ **Reduced costs** – transactions do not involve fees for users.
- ❖ **Generalized access** – internet access is sufficient to access and use the system.
- ❖ **Decentralization** – a global computer network uses blockchain technology to manage the virtual currency database.
- ❖ **Universal recognition** – operates internationally allowing transactions in a very simple way.

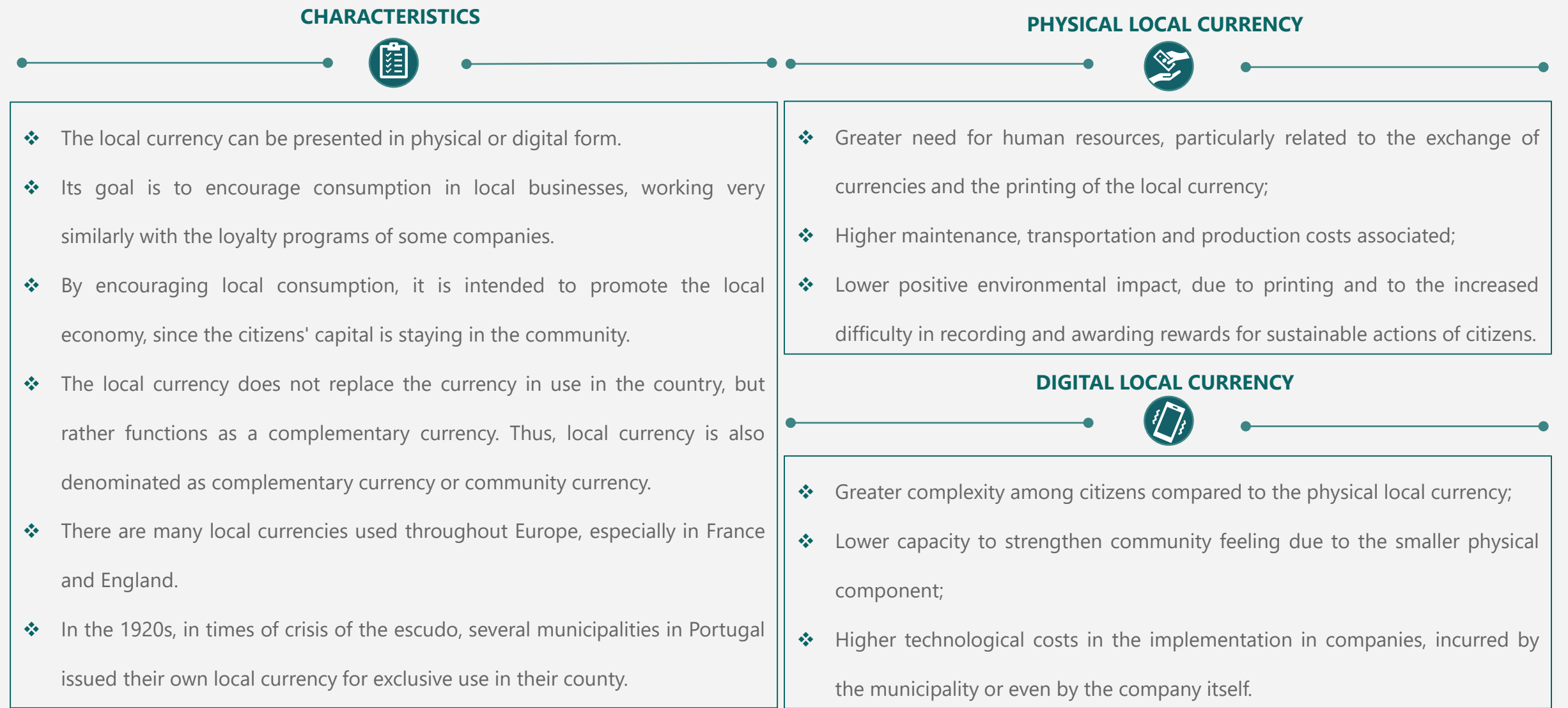
DISADVANTAGES



- ❖ **Lack of security** – There is no security network to protect virtual currency from human errors, technical failures or fiduciary fraud.
- ❖ **Increasing regulation** – regulations that may lead to a system distortion.
- ❖ **Limited Scale** – The system limits the speed and number of transactions processed, which makes it unlikely that cryptocurrencies will replace conventional credit card transactions.
- ❖ **Lack of application** – cryptocurrencies need to be truly disruptive compared to traditional payment methods, such as ensuring international transfers of low-cost money, creating complex electronic contracts, among others.

Both physical and digital local currencies have relevant characteristics for a solution, but do not guarantee, *per se*, the achievement of the final objective outlined by the Municipality

PHYSICAL VS DIGITAL LOCAL CURRENCY



The analysis of the different characteristics of five local currencies currently in use allows us to trace the desired characteristics for a system to be implemented in the Municipality of Cascais

LOCAL CURRENCY – BEST PRACTICES - SUMMARY

	 BERKSHARES	 BRIXTON POUND	 M-PESA	 SAMEN DOEN	 OSEL
Legality	✓	✗	✓	✓	✓
Physical	✓	✓	✗	✗	✗
Digital	✗	✓	✓	✓	✓
Money in the community	✓	✓	✗	✗	✓
Promotes local commerce	✓	✓	✗	✓	✓
Social impact	✗	✓	✓	✓	✓

Table 10: Local Currencies

Berkshares has overcome challenges as the success of this coin has been proven, being able to reconcile consumer interest with producer interest through its regulation

LOCAL CURRENCY – BEST PRACTICES | BERKSHARES (I/V)

GOALS



- ❖ **Encourage consumers to support local businesses** by keeping more money circulating in the community.
- ❖ It is a tangible way for residents to commit to support a more **self-sustainable regional economy** by realizing a portion of their transactions with BerkShares.
- ❖ **Neutralize the growing dilution of regional economies** through corporate consolidation, retail chains, globalization and other trends that send money out of communities.
- ❖ **Encourage local sales between businesses.**

CHALLENGES



- ❖ **Develop a distribution and accounting system** was a complex task, as it **required convincing local banks to participate** only in return with a sentiment of contribution to the community.
- ❖ Companies which agreed to accept BerkShares **needed to integrate** the currency into accounting systems and to **instruct** their employees on how to deal with BerkShares in sales.
- ❖ **Some companies were reluctant** or wanted to see how the program worked before participating.

METHODOLOGY



- ❖ Physical currency used in participating companies in Berkshire, with an inherent **discount of 10% for users.**
- ❖ It is a **legal currency**, backed in the dollar with a defined exchange rate and taxable.
- ❖ People can receive the currency by exchanging **dollars for BerkShares** at participating **local banks** and can also **request BerkShares when they receive change in their purchases.**
- ❖ **Companies** also have the option **to exchange the dollars they receive in their sales for BerkShares or to use them in their own purchases.**



Brixton Pound has kept a balance between fostering local trade and maintaining Brixton's cultural identity, although the economic and social impact is still unclear

LOCAL CURRENCY – BEST PRACTICES | BRIXTON POUND (II/V)

GOALS



- ❖ **Keep money circulating in Brixton's local economy**, in order to support people living and working in the community.
- ❖ Also driven by **social goals**, such as promoting the multi-ethnicity of the local community.
- ❖ **Rebirth of Brixton's street market**, closely related to the city and perfect reflection of Brixton's multicultural identity.
- ❖ **Support Brixton businesses and encouraging local production and trade.**

CHALLENGES



- ❖ **Cash & Carry do not accept this currency** saying it is very problematic for banks.
- ❖ **The cost of the transaction for consumers, but mainly for businesses, is relevant** because they cannot deposit in banks.
- ❖ The effective impact remains subject to discussion.

METHODOLOGY



- ❖ Customers open a Brixton Pound account.
- ❖ **Store owners can reinvest Brixton Pounds or exchange them for British Pounds.**
- ❖ **The Bank of England does not consider it a legal currency, since it has the same dynamic as a gift card** and the same kind of restrictions on where it can be spent.
- ❖ In 2011, Brixton Pound released a **digital version of the coin**, using cyclos software.
- ❖ With every transaction with Brixton Pound, **1.5% goes to the Brixton Fund**, used for micro-concessions for local projects and community groups up to £2,000.



M-Pesa offers different digital currency features in Africa, at the same time as seeks to promote the security of its users in their operations

LOCAL CURRENCY – BEST PRACTICES | M-PESA (III/V)



GOALS



- ❖ **Provide access to financial services to millions of people who own a smartphone** but do not have or have limited access to a bank account.
- ❖ **Be a safe and accessible way to transfer money, make payments, receive salaries, get short-term loans**, while reducing risks of theft and corruption.
- ❖ **Help governments collect taxes and contributions**, while allowing charities and non-governmental organizations to send money to thousands of beneficiaries at once.

CHALLENGES



- ❖ **Reliance on telecommunications/internet connectivity**, as users in rural areas with limited Internet access or irregular network connection may have problems.
- ❖ **Vulnerability to fraud**, because of people's exposure to online scams.
- ❖ **Debt creation**, as the ease with which M-Pesa's partner service, M-Shwari, allows people to get short-term loans at the touch of a button can lead to rising debt levels.

METHODOLOGY



- ❖ **Customers may register for the service at an authorized agent**, usually in a small cell phone store, **and deposit money in exchange for "electronic money" they can send** across national borders.
- ❖ **All transactions are secured. In order to complete it, a PIN and both parties receive an SMS** confirming the transferred amount. The recipient, who does not need to use the same network, **receives the electronic money in real time and can withdraw it or spend it in an M-Pesa establishment.**

Samen Doen is an initiative that combines local economy promotion through individual consumption and the defense of social causes

LOCAL CURRENCY – BEST PRACTICES | SAMEN DOEN (IV/V)

SAMENDOEN

GOALS



- ❖ Promote **social coexistence**.
- ❖ Prevent **empty commercial streets**.
- ❖ Support both **local trade and social institutions, as well as employment creation**.

CHALLENGES



- ❖ The effective impact of this currency on the local community is yet to be determined.
- ❖ **Creation of incentives for the use of the currency** at both commercial and consumer level.

METHODOLOGY



- ❖ When shopping in the participant organizations of his neighborhood, **each person receives points and supports local commerce**.
- ❖ **Each point is worth €0.01**.
- ❖ It is also possible to receive points by **performing actions for the well-being of the community**, such as being an informal caregiver.
- ❖ Every time a person receives points, **part of them goes to a personal saving goal for the community, such as a charity**. The default percentage of saving is usually 40%, but it is possible to change it.

OSEL is a Spanish local digital currency which promotes local economy, driven by social goals



LOCAL CURRENCY – BEST PRACTICES | OSEL – OFICINA PARA LA SUSTENTABILIDAD Y LA EQUIDAD LOCAL (V/V)

GOALS



- ❖ Instrument to achieve economic relations based on work and not on capital income.
- ❖ **Avoid currency accumulation and encourage its rotation in the community.**

CHALLENGES



- ❖ System is based on the mutual trust of citizens in the value of work and on the seriousness of all players.
- ❖ The **massive exchange of OSEL to euros** by citizens and businesses may not be possible because there might not be a sufficient reserve.

METHODOLOGY



- ❖ **Online currency used in local companies that can also be used physically in fairs and markets;**
- ❖ The system totals zero and there is an OSEL value range allowed to each citizen (-400 to +400) or organization (-1500 to +1500).
- ❖ There is an **oxidation coefficient for immobilized accounts.**
- ❖ It is normal to have citizens with negative currency values, because it is the only way to allow other citizens to have positive values. The former must contribute to society to earn points and the others must acquire goods or services.

Thirty in-depth interviews were conducted to individuals of different segments, companies and to AECC in order to understand the key issues to address and which hypothesis would receive more acceptance

IN-DEPTH INTERVIEWS | SUMMARY

GOALS



- ❖ Understand the degree of awareness and assess the degree of approval of City Points App and of CMC initiatives

❖ Analyze consumption habits of Cascais' citizens
- ❖ Assess the digital savviness of citizens and companies

❖ Comprehend the impact of the pandemic of COVID-19 in consumption and in in companies' billing volume



MAIN TAKEAWAYS

Little awareness of CMC initiatives

Little awareness of City Points

Local consumption might benefit from promotion, discounts on their products and transformation into more sustainable businesses

A survey was elaborated to target the citizens of Cascais and understand their consumer behavior, their relationship with CMC and their opinion regarding City Points and its potential as a renewed App

SURVEY | INITIAL DISCLAIMER, GOALS AND ANALYSIS

GOALS



- ❖ Analyze the demographics of the Municipality of Cascais
 - ❖ Determine technological and digital trends of the local consumers
 - ❖ Ascertain local consumption habits and the impact of incentives on the local consumption
- ❖ Investigate sustainable behaviors among the citizens
 - ❖ Understand people’s perception on CMC and its initiatives
 - ❖ Inquire about City Points and its potential improvements

INITIAL DISCLAIMER

The survey registered a total of **449** answers. From those, only **223 were considered** for the analysis corresponding to the **target group**, this is, **the citizens of Cascais**. As such, the **survey analysis focus on the local people of Cascais** instead of taking into account the totality of answers.

DEMOGRAPHICS



- ❖ Regarding gender, most answers were registered by females. As for age, the age range more represented is from 18 to 24 years old.
- ❖ The residence distribution was balanced, being S. Domingos de Rana the least represented and both Carcavelos e Parede and Cascais e Estoril the most represented.
- ❖ 3.26 is the average number of people per household in Cascais.
- ❖ 77% are either students or employees.
- ❖ High/middle income household were the most registered.

Cascais is a technologically advanced Municipality, meaning that there is room to provide a digital service that enhances local consumption and incentives people to act in a more sustainable way

SURVEY | ANALYSIS (I/III)

TECHNOLOGICAL AND DIGITAL TRENDS



- ❖ 99% of people from Cascais already have a smartphone.
- ❖ Social Networks are the most used App in Cascais. However, payment Apps and mobile banking are also largely represented.
- ❖ Tourism Apps and parking Apps are the Apps people less take advantage of in Cascais.

LOCAL CONSUMPTION



- ❖ Cascais' people enjoy often the products and services from the food retailers, the non-food retailers and catering sectors.
- ❖ On the other hand, the housing and financial and insurance sector are sectors, which Cascais' consumers rarely enjoy.
- ❖ Proximity and convenience are the factors that play a major role when deciding to consume locally.
- ❖ Familiar tradition and parking play have a less decisive role in shopping locally.

SUSTAINABILITY BEHAVIOR AND INCENTIVES



- ❖ 95% of people from Cascais acts towards sustainability.
- ❖ The main sustainability friendly activities are recycling, water saving, followed by local shopping.
- ❖ 75% of Cascais' people would have more sustainable actions if they had a compensation or an incentive to do it.

City Points' classification is low, meaning that it needs to be upgraded to benefit local consumers. Citizens are open to change, as they feel it is important to contribute to the development of the Municipality

SURVEY | ANALYSIS (II/III)

CÂMARA MUNICIPAL DE CASCAIS AND THE CITIZEN



- ❖ Regarding the feeling of belongingness to the community, on a scale from 0 to 10, 5.79 was the mean value as there are mixed feelings along the community.
- ❖ The most used ways to find the appropriate services within all the services are either asking friends and family or browsing.
- ❖ Cascais' people feel it is important to contribute to the development of the Municipality as, on a scale from 0 to 10, the mean value was 7.72.
- ❖ The population believes CMC promotes environmental sustainability, since, on a scale from 0 to 10, the mean value was 7.18.

CITY POINTS



- ❖ 56% of people from Cascais does not know City Points.
- ❖ From the 44% who knows City Points, only 40% have ever used it.
- ❖ From those who used it, the mean value of City Points' classification was 5.74, suggesting there is room for improvement.

BENEFITS AND APP CHANGES



- ❖ Cascais' community believes that a local App to exclusive use in Cascais, which gives benefits to enjoy on local business can be useful, since, on a scale from 0 to 10, the mean value was 7.62.
- ❖ The most valuable benefits to Cascais people are discount on the same establishments and receive a discount on a store which can be used in another establishment.

For the citizens of Cascais, the renewed App, CASHCAIS, should be a digital system where they would receive points or vouchers for every purchase in local establishments

SURVEY | ANALYSIS (III/III)

BENEFITS AND APP CHANGES



- ❖ If these benefits did not exist in the App, most people would not use it. On a scale from 0 to 5, the mean value was 3.17 for the discounts on the same establishments and the mean value for receiving a discount, which can be used in another establishment was 2.78. As such, the predisposition to use the App is vulnerable to the existence or not of these forms of benefits.
- ❖ The population believes CMC implements attitudes that promote environmental sustainability, since, on a scale from 0 to 10, the mean value was 7.18.
- ❖ Most Cascais' people would rather enjoy these benefits on an improved City Points rather than a brand-new App.
- ❖ 75% of the community of Cascais would use digital points system in a form of an App, which would permit saving in purchases.
- ❖ The most preferred forms to enjoy the benefits are digital vouchers (32%) , accumulation of points/money to use in a future a purchase (31%), followed by direct discounts on products (27%). On the other hand, the least preferred form is physical vouchers (11%).
- ❖ Generally, the existence of these forms of benefits would increase the number of purchases in local businesses. However, 36% of Cascais' people claim that the number of purchases will maintain with existence of physical vouchers, 26% with direct discounts on products and 25% with digital vouchers.
- ❖ 75% states they would exchange Euros for a local currency to exclusively use in local businesses if it meant increasing the purchasing power.
- ❖ As for the App name, the most preferred name is **CASHCAIS** (47%), followed by Cascais pocket (19%) and All-in Cascais (19%).

INDIVIDUAL PART

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Work Project carried out under the supervision of:

Professor Constança Monteiro Casquinho

26.01.2020



Four main recommendations were developed to achieve project goals. The upgrade to the CASHCAIS App involves several sub-recommendations that ensure App improvements

EXECUTIVE SUMMARY | RECOMMENDATIONS

1 | CITY POINTS APP UPGRADE TO THE CASHCAIS APP

1.1 | RENEWED IMAGE AND NAME OF THE APP

1.2 | INTEGRATE WITH MYCASCAIS PLATFORM

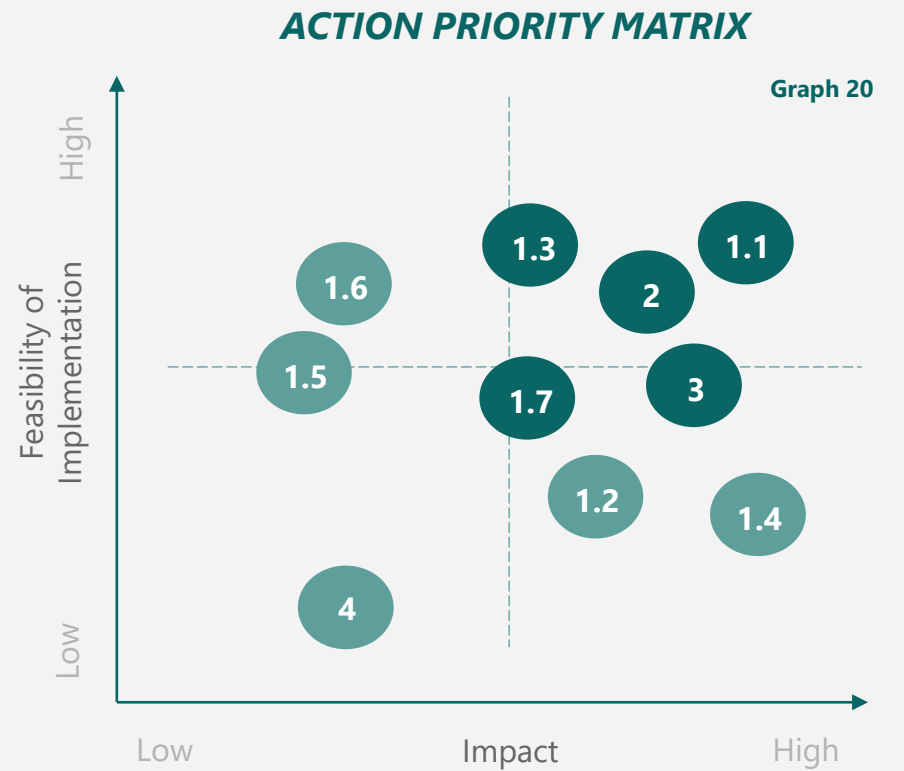
1.3 | MAINTAIN THE REWARD OFFERED BY CITY POINTS

1.4 | CREATE A LOYALTY PROGRAM EXTENDED TO ALL BUSINESSES IN THE MUNICIPALITY OF CASCAIS

1.5 | DONATIONS BUTTON

1.6 | INTEGRATION OF CARTÃO MAIS SOLIDÁRIO

1.7 | OTHER FEATURES



2 | ADVERTISEMENT PLAN

3 | CREATE A MULTITASKING TEAM TO WORK ON CASHCAIS APP

4 | BLOCKCHAIN TECHNOLOGY IMPLEMENTATION

INCREASE ENVIRONMENTAL SUSTAINABILITY

PROMOTION OF LOCAL BUSINESSES

REDUCTION OF SOCIAL ASYMMETRIES

GOVERNANCE

The City Points upgrade increases sustainability at 4 levels – promotion of local businesses, reduction of local asymmetries, increase of environmental sustainability and governance

RECOMMENDATION 1 | CITY POINTS APP UPGRADE TO THE CASHCAIS APP

REASONING

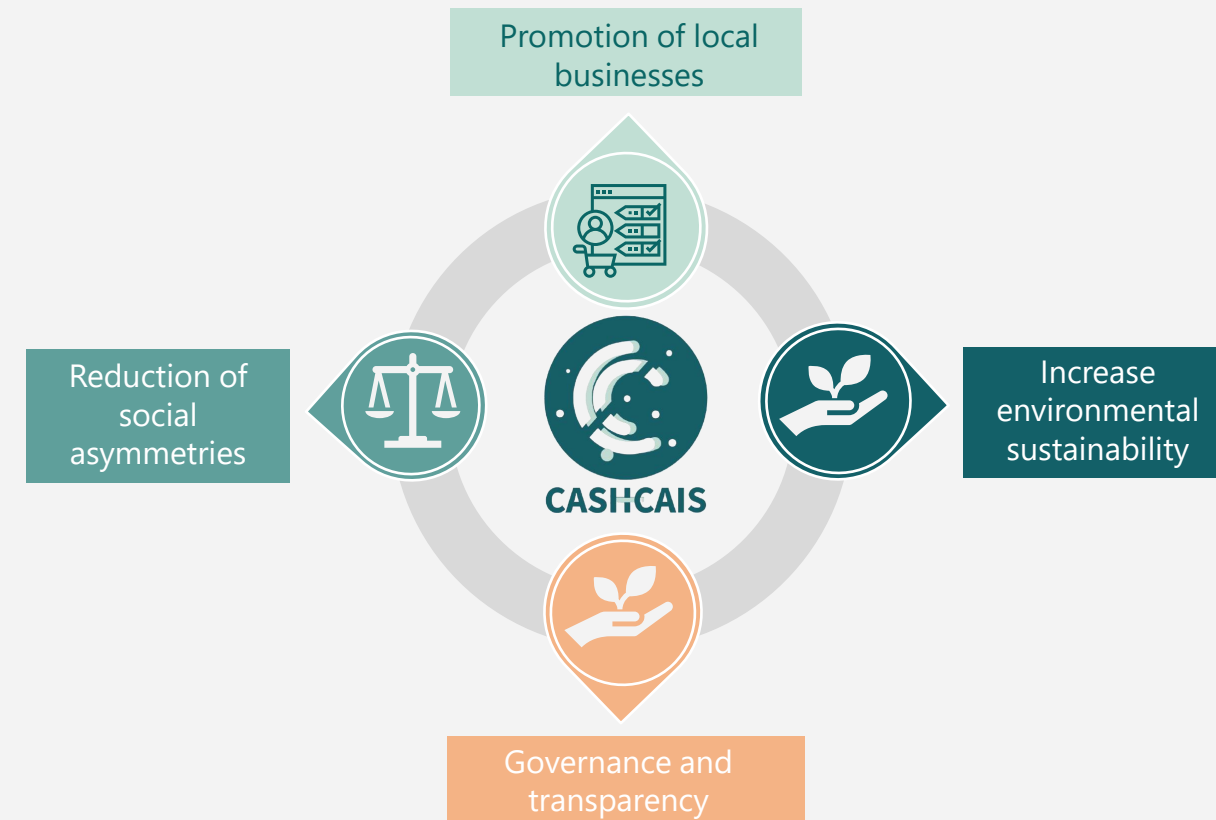
- (1) In accordance with the trends analyzed and survey results, it is recommended a digital solution since these means are increasingly used, even as payment instruments,
- (2) The Municipality already has an App which objective wants to keep. It would make sense to maintain it for several reasons, including:

- ❖ Ensuring the **credibility** of the initiatives implemented by the Municipality - instead of abandoning a project and betting on a new one, it is recommended to invest in the innovation of City Points to better respond to the needs of residents.
- ❖ Leverage current City Points users as a starting point for the new App.

ACTION

- (3) Expansion of the scope of City Points App in order to increase sustainability in the Municipality at the level of its 4 fundamental pillars, with a special focus on the economic aspect in order to mitigate the negative impact of the pandemic both socially and from the local business point of view.

The **CASHCAIS** project provides for greater sustainability robustness in Cascais at the level of its 4 pillars: economic, environmental, social and governance.



A renewed image and name allows to improve the object of the App, at the same time that retains already registered users

RECOMMENDATION 1 | CITY POINTS APP UPGRADE TO THE CASHCAIS APP SUB - RECOMMENDATION 1.1 | RENEWED IMAGE AND NAME OF THE APP

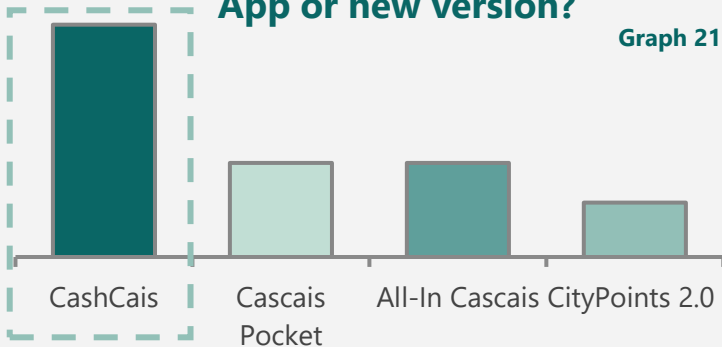


Figure 10: CASHCAIS App

REASONING

- ❖ Once the objective of the App is changed, a different name and image should be sought and more adapted to the purpose of the “new” App.
- ❖ Users will not associate previous technical issues to the renewed App. In fact, a new image and name allows to major technical changes that would not be possible otherwise.
- ❖ According to our survey, less than half of the respondents knew or used City Points, which gives an opportunity to modify the App and ensure that it will not be noticed by most of the citizens. For those, Cascais will launch a new App, not a renewed one.

What should be the name for this new App or new version?



47% of respondents to our survey attested that the name **CASHCAIS** is an appealing name and appropriate to the type of App that is recommended.



Figure 11: CASHCAIS App

Integrating MyCascais with Facebook and Google accounts eases the login and enables access to crucial information about the users

RECOMMENDATION 1 | CITY POINTS APP UPGRADE TO THE CASHCAIS APP

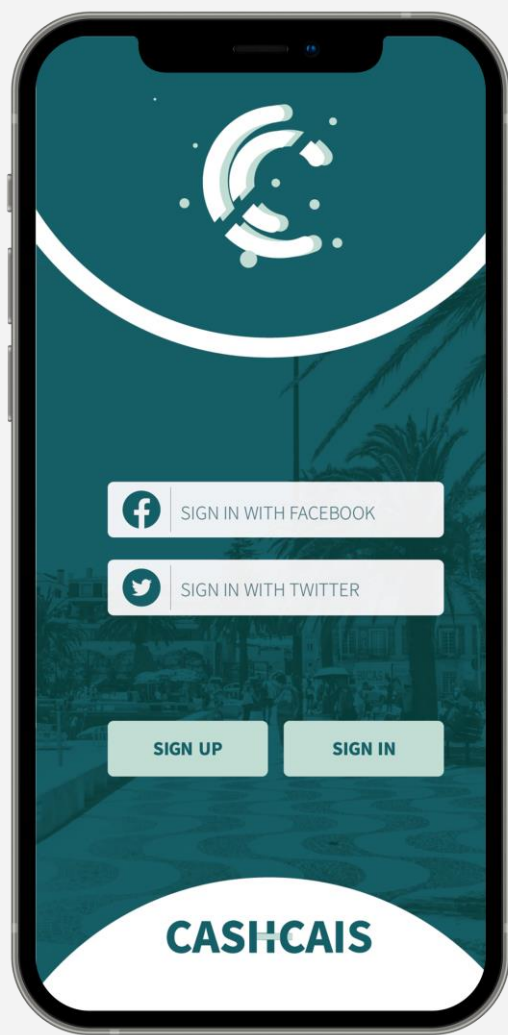
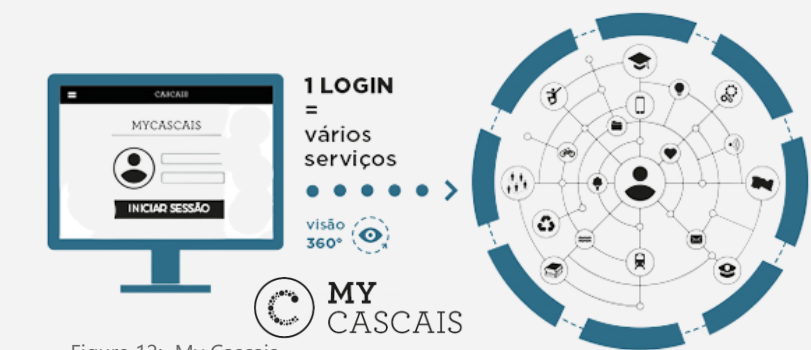
SUB - RECOMMENDATION 1.2 | INTEGRATE WITH MYCASCAIS PLATFORM

DESCRIPTION

The first registration is made on *MyCascais* platform, in the same way that it happens at the moment with the City Points App.

This will make it possible to:

- ❖ Integrate with other applications of the CMC
- ❖ Control problems (legal, duplication) with candidate users by registering the taxpayer number.



In order to facilitate login to the App, we recommend the creation of the option of integrating My Cascais account with:



FACEBOOK ACCOUNT



GOOGLE ACCOUNT

making this option also available in other applications of the Municipality.

The object of the City Points App remains in the renewed App, as it is possible to accumulate CASHCAIS by performing sustainable actions. The newness is that it can be spent on any partner company

RECOMMENDATION 1 | CITY POINTS APP UPGRADE TO THE CASHCAIS APP

SUB - RECOMMENDATION 1.3 | MAINTAIN THE REWARD OFFERED BY CITY POINTS

REASONING

- Citizen accumulates CASHCAIS for sustainability or citizenship actions
- ❖ In accordance with what was already happening with the City Points App, the user of the application will accumulate **CASHCAIS** when carrying out sustainability actions or eligible good civic practices within the scope of the App.
 - ❖ The added benefit is that the accumulated **CASHCAIS** can be spent on any partner company. That way the user is less limited and can use his **CASHCAIS** balance according to his needs and preferences, valuing this prize.



Figure 14: CASHCAIS App

CASHCAIS can be promoted as a local currency, although it is not for legal purposes. However, it has key currency characteristics

RECOMMENDATION 1 | CITY POINTS APP UPGRADE TO THE CASHCAIS APP

SUB- RECOMMENDATION 1.4 | CREATE A LOYALTY PROGRAM EXTENDED TO ALL BUSINESSES IN THE MUNICIPALITY OF CASCAIS (I/VII)

WHAT IS EXACTLY CASHCAIS?

- ❖ **CASHCAIS** will be a form of "local currency" for marketing and project promotion issues and for the sake of aligning CMC's medium / long term expectations.
- ❖ Although the name may suggest otherwise, **CASHCAIS** is not actually a local currency. First, as we have seen, for legal reasons due to ECB ambiguous regulations. Then, because, although it can fulfil the essential functions of a currency, as reserve of value, unit of account and means of exchange, some of its characteristics are in line with those of a currency, such as durability, since the project is expected to have a limited duration, acting in the short term in response to an unexpected negative impact.
- ❖ **CASHCAIS** is a form of digital *pseudocurrency* that can be generated as an award for good practices (sub-recommendation 1.3) or through the loyalty program created in the Municipality as a form of "cashback" for purchases made in local shops in Cascais.
- ❖ Thus, **CASHCAIS** represents value that is accumulated in an individual balance of the user of the CASHCAIS App and that can be used in partner companies or for other purposes as we will see.



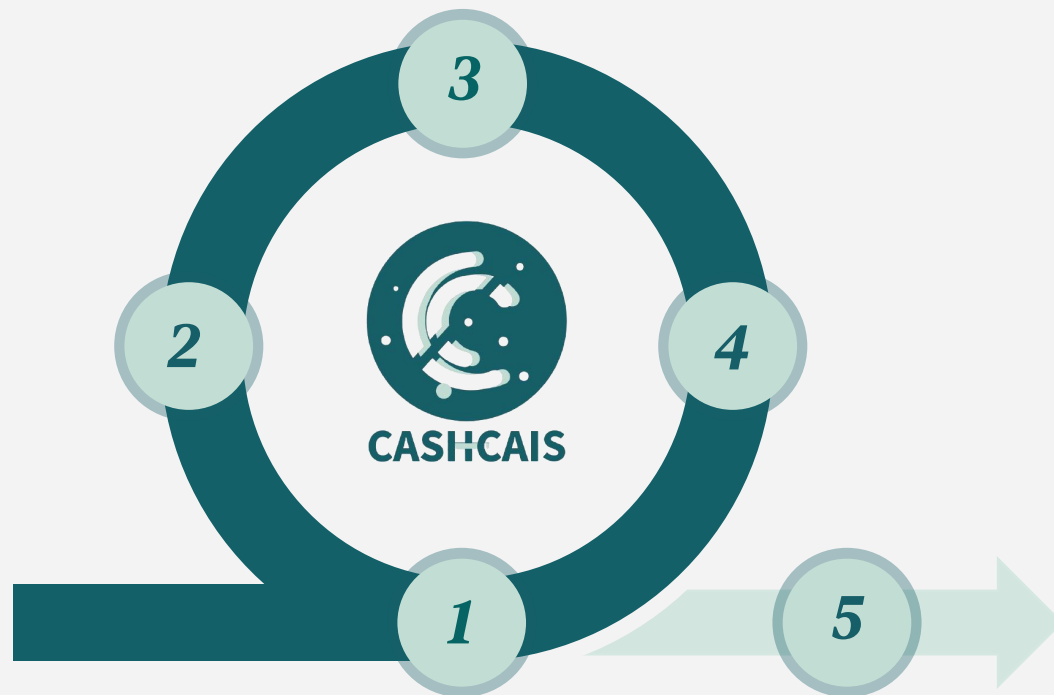
Figure 15 CASHCAIS logo

CASHCAIS life-cycle starts when a user buys locally or performs sustainable actions. It is the merchant's decision to let CASHCAIS continue in the cycle or exchange them for Euros

RECOMMENDATION 1 | CITY POINTS APP UPGRADE TO THE CASHCAIS APP

SUB- RECOMMENDATION 1.4 | CREATE A LOYALTY PROGRAM EXTENDED TO ALL BUSINESSES IN THE MUNICIPALITY OF CASCAIS (II/VII)

LIFE-CYCLE OF CASHCAIS



- 1**
 - 1.1** Customer buys locally and accumulates **CASHCAIS**
 - 1.2** Citizen accumulates **CASHCAIS** for sustainability or citizenship actions
- 2** Customer discounts **CASHCAIS** and pays the remainder (when needed) to the merchant
- 3** **CASHCAIS** are transferred to the merchant's account
- 4**
 - 4.1** The merchant discounts **CASHCAIS** in other companies as a final consumer
 - 4.2** The merchant transfers **CASHCAIS** to employees as a bonus
- 5** The merchant exchanges his **CASHCAIS** balance for Euros with CMC

The user can choose to present his mobile phone number, his QR Code or a voucher at the time of purchase, easing the way CASHCAIS are used

RECOMMENDATION 1 | CITY POINTS APP UPGRADE TO THE CASHCAIS APP

SUB- RECOMMENDATION 1.4 | CREATE A LOYALTY PROGRAM EXTENDED TO ALL BUSINESSES IN THE MUNICIPALITY OF CASCAIS (III/VII)

1

1.1

Customer makes purchases locally and accumulates CASHCAIS

The amount of **CASHCAIS** obtained in each purchase differs depending on the merchant chosen, taking into account the status of the company.

1.2

Citizen accumulates CASHCAIS for sustainability or citizenship actions

Using the same process as the City Points App, the user will accumulate **CASHCAIS** when carrying out sustainability actions or good citizenship practices.

How to authenticate the user of the App?

The customer should provide mobile phone number associated with the CASHCAIS App;

Generate QR code on the CASHCAIS App to be read by the merchant's device.

If applicable, the customer must select the vouchers to be used for that purchase before providing the mobile phone number or QR code.



Figure 16: CASHCAIS App

Local companies are divided into three categories to allow to a more specific support. It also encourages companies to increase their sustainability

RECOMMENDATION 1 | CITY POINTS APP UPGRADE TO THE CASHCAIS APP

SUB- RECOMMENDATION 1.4 | CREATE A LOYALTY PROGRAM EXTENDED TO ALL BUSINESSES IN THE MUNICIPALITY OF CASCAIS (IV/VII)

DESCRIPTION

- ❖ The universal character of the **CASHCAIS** App is essential to its success. Thus, no sectors or companies were defined to be excluded *a priori* from the project.
- ❖ However, following the strategy and identity of CMC, it is recommended to assign different status to each company adhering to the project, based on criteria of dimension (number of employees and annual turnover) and sustainability (5-stage sustainability journey).
- ❖ The value generated in **CASHCAIS** will be greater the smaller the size of the company and the more sustainable it is.
- ❖ Consumers who buy from companies with Gold or Silver status will always have a benefit that varies with the amount of the purchase. To obtain a benefit in companies with Bronze status, consumers need to have vouchers available for those specific partner companies.

After analyzing the companies of the Municipality of Cascais and considering the costs of the project, we recommend that the support given by CMC is as follows (Note: these data is a suggestion and must be subject to further analysis)

1 CASHCAIS = 1 EURO

			
Status	Gold	Silver	Bronze*
Number of employees	Up than 3	Up to 10	More than 10
Annual turnover	Up to 200 000 EUR	Up to 1 Million EUR	More than 1 Million EUR
	&	&	OR
Stage Sustainability Journey	Phase 5 or 4	Phase 5, 4 or 3	Phase 5 to 2
Support for every 20 EUR in purchases	1 CASHCAIS	0.5 CASHCAIS	VOUCHERS

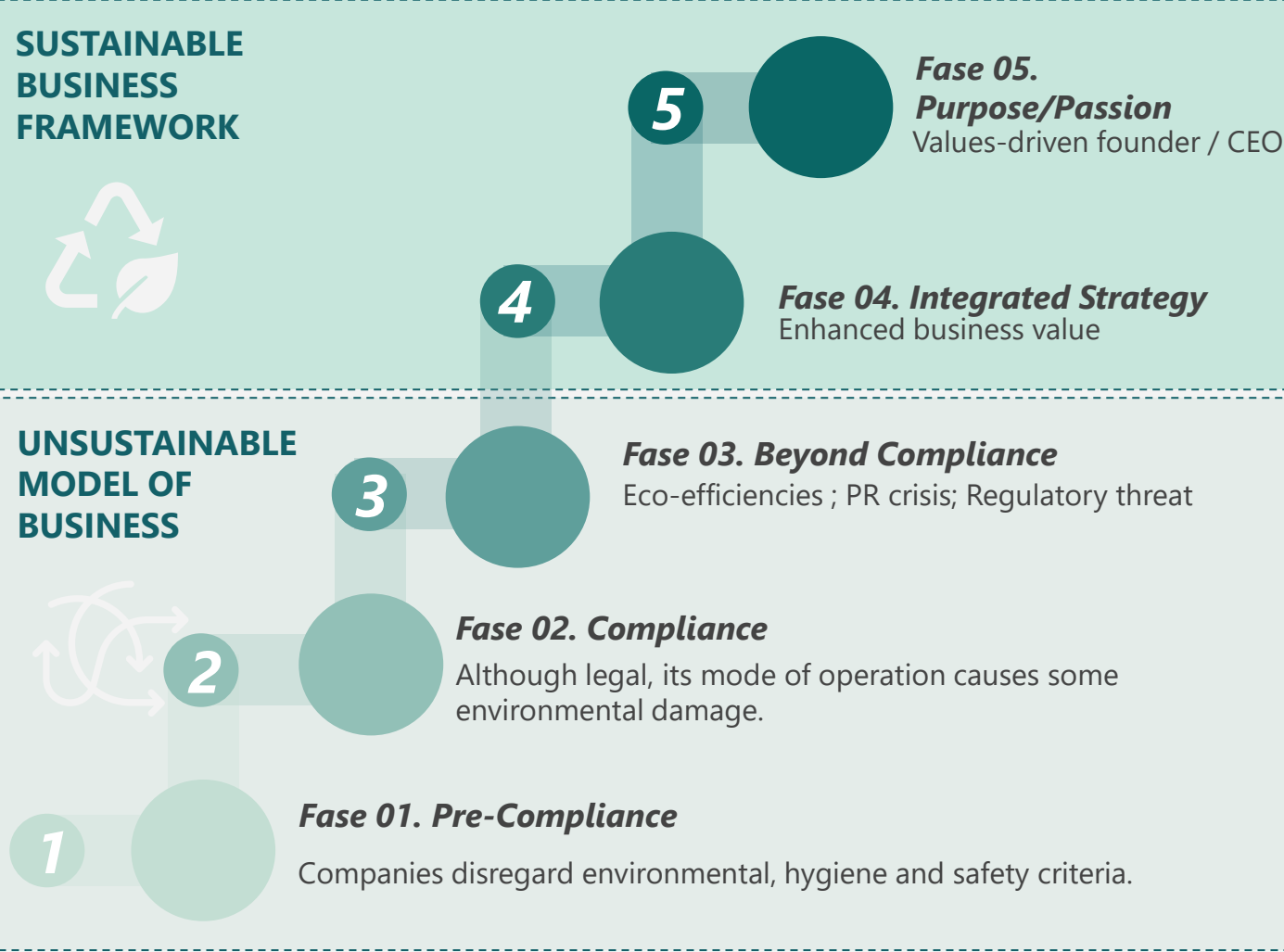
Table 13: Classification of businesses

Local companies are divided into three categories to allow a more specific support. It also encourages companies to increase their sustainability

RECOMMENDATION 1 | CITY POINTS APP UPGRADE TO THE CASHCAIS APP

SUB- RECOMMENDATION 1.4 | CREATE A LOYALTY PROGRAM EXTENDED TO ALL BUSINESSES IN THE MUNICIPALITY OF CASCAIS (V/VII)

DESCRIPTION
❖ The 5-stage sustainability journey defines the different phases in which companies can find themselves in terms of sustainability, assigning criteria for the definition of their degree of sustainability. ❖ According to the research done, there are three reasons / incentives for companies to seek to increase their degree of sustainability and, therefore, move on to the next stage of the journey. In this case, with the CASHCAIS project, companies will have an incentive to capture new opportunities to increase their degree of sustainability. ❖ Thus, it is recommended to define specific metrics to evaluate each company by sector in relation to its degree of sustainability.



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**CONSULTING PROJECT FOR CÂMARA
MUNICIPAL DE CASCAIS WITH THE TOPIC
“SHOULD CÂMARA MUNICIPAL DE CASCAIS
INTRODUCE A LOCAL CURRENCY IN ORDER TO
DEVELOP THE LOCAL ECONOMY AND
SUSTAINABILITY?”**

APPENDIXES

André Francisco de Jesus Amores Lourenço | #28891

Fábio Manuel Pachon David | #40555

Guilherme Madureira Coelho | #41049

Miguel Santos Pinto | #29332

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

26.01.2020



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- B. PESTEL
- C. TOWS
- D. ADDITIONAL ANALYSIS
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 - B. CBDC
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- F. SURVEY
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The fact that the group has members from different courses fostered a dynamic and motivating working environment

APPENDIX A | TEAM MEMBERS (I/III)



André Lourenço

EDUCATION

- ❖ Bachelors in Economics at Nova SBE
- ❖ International Master in Management at Nova SBE

PROFILE AND BACKGROUND

- ❖ Organizer of Economia Viva 2020
- ❖ Former Vice-President of Nova Economics Club
- ❖ Vice-President of Nova SBE Student's Union



Guilherme Coelho

EDUCATION

- ❖ Bachelor in Economics at Faculdade de Economia do Porto
- ❖ Master in Management at Nova SBE

PROFILE AND BACKGROUND

- ❖ Experience in financial management on a hotel group
- ❖ Experience in sales and events' organization
- ❖ Participation in social actions as a volunteer
- ❖ Football player



Manuel Pachon David

EDUCATION

- ❖ Bachelors in Economics at Católica-Lisbon SBE;
- ❖ International Master in Finance at Nova SBE;

PROFILE AND BACKGROUND

- ❖ Experience in Banking and Auditing
- ❖ Participation in social actions as a volunteer
- ❖ Interested in Politics and Music



Miguel Pinto

EDUCATION

- ❖ Bachelors in Economics at Nova SBE
- ❖ Master in Management at Nova SBE

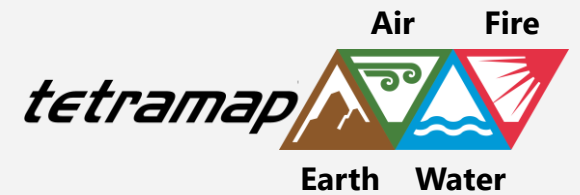
PROFILE AND BACKGROUND

- ❖ Experience in associative leadership
- ❖ Experience in events' organization
- ❖ Interested in Politics

The project enabled all the members to grow in consultancy projects. The long-distance reality was a huge challenge that the team had to overcome and learn how to deal with

APPENDIX A | TEAM MEMBERS (II/III)

TEAM MOTIVATION AND LESSONS LEARNED



André Lourenço

- ❖ Participating in a pioneer project in Portugal is challenging and requires full-time dedication.
- ❖ Sometimes hardwork is not enough and it may be necessary to have a good team, as it happened in this project with our team.



Guilherme Coelho

- ❖ Working with such an innovative Municipality was quite a challenge, as it is highly demanding, and its internal organization differs from those of private companies
- ❖ To adapt and overcome are the biggest lessons learned from this project



Manuel Pachon David

- ❖ This project was extremely challenging and enriching due to the moment the world is experiencing and the characteristics of our client.
- ❖ It was an honor to work with CMC and develop a pioneering project in Portugal with a City Council that is effectively an international example.



Miguel Pinto

- ❖ Developing this project in times of uncertainty and disruption was very stimulating and challenging, as we have been working in an innovative solution with a great potential impact.
- ❖ Among the several lessons learned, I would highlight the adaptability to long-distance teamwork



The Belbin test was performed to identify the strengths and weaknesses of the team. It allowed to develop an action plan that improved team efficiency

APPENDIX A | TEAM MEMBERS (III/III)



TOP 3 ROLES IN THE TEAM:

- ❖ Team Worker (121)
- ❖ President (112)
- ❖ Monitor (73)



BOTTOM 3 ROLES IN THE TEAM:

- ❖ Finisher (31)
- ❖ Intellectual (46)
- ❖ Operational (48)

ACTION PLAN

Not only hard skills, but also soft skills are essential for consulting projects success.

In this way, each member of the team performed Belbin test to identify the strengths and weaknesses of the team. In order to try to compensate for the lack of soft skills inherent in the bottom 3 roles, the team decided:

- ❖ Hold weekly meetings with brainstorming sessions on the different topics covered throughout the project in order to bring together different ideas and increase the group's creativity;
- ❖ Define weekly deadlines with individual goals for each team member in order to ensure continuous and efficient work;
- ❖ Initial definition of main points to always keep in mind and have greater consideration, being they structuring and organizing the project and working methodologies.

Team Member	PRE President	ST Strategist	INT Intellectual	MON Monitor	OPE Operational	TW Team Worker	PRO Prospector	FIN Finisher
André Lourenço	21	12	8	20	26	32	4	17
Guilherme Coelho	26	14	31	4	8	24	33	0
Manuel Pachon David	44	13	7	25	2	44	5	0
Miguel Pinto	21	31	0	24	12	21	17	14

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There is a high level of confidence in the Municipality of Cascais due to its high political stability and transparency. This environment is the basis for innovation

APPENDIX B | PESTEL ANALYSIS (I/X)

POLITICAL



1

High Political Stability in Cascais:

- The **same political party** has been running the Municipality for **several years**. The president of the Municipality has been in charge since 2011.
- Throughout Cascais history, there were recorded **low corruption rates**, which further suggest the political steadiness.
- Establishment of **Transparency as one of the principles** of the Municipality.

KEY TAKEAWAYS

1. The **economic prosperity**, the **low corruption** rates and the **high transparency** create **high levels of confidence** in terms of political action.
2. The **local political stability enhances the local economic activity**.
3. The stability of the political spectrum generates a propitious environment to **innovation**.
4. Despite the pandemic and the fall of the economic activity, the political stability in Cascais is expected to continue as, historically, in Cascais, the political environment is not deeply affected by crisis.

COVID-19 affected the economy both globally and locally. As the fall was severe, it is expected that it will recover in 2021, even with a significant degree of uncertainty

APPENDIX B | PESTEL ANALYSIS (II/X)

ECONOMIC



1

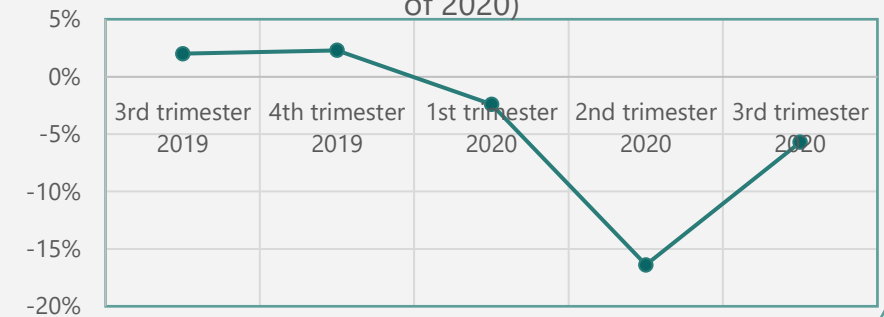
Fall in the Economic Activity in Portugal:

- The pandemic affected severely the Portuguese **economic activity** that was growing in 2019 and **fell steeply during 2020**, due to the stop in the activities in the economic sectors, being the highest decrease(-16.4%) in the second semester.

GDP Growth in Portugal

Graph 21

(the third trimester of 2019 to the third trimester of 2020)



KEY TAKEAWAYS

1. Despite the current fall in the economic activity, **the confidence in the markets was not as damaged as expected**, since the economic crisis was not caused by market failures.
2. In theory and empirically, after a health crisis or a war situation, **the economic activity is expected to grow** in the subsequent period.
3. It is **expected an economic growth in 2021**, but it is yet uncertain the growth rhythm.
4. The Portuguese economic activity should also grow in 2021 as result of the recovery from the pandemic situation.

Following the Euro-zone trend, the down on the economy also reflects on the unemployment rates

APPENDIX B | PESTEL ANALYSIS (III/X)

ECONOMIC

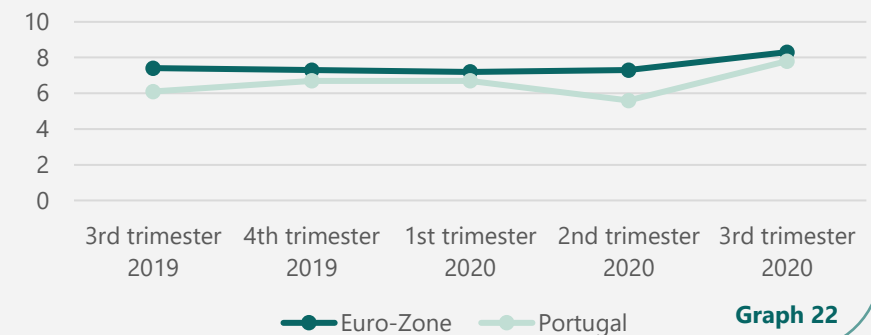


2

Unemployment increase in Portugal:

- As a consequence of the economic crisis triggered by the pandemic, **the unemployment raised both in the Euro-Zone and in Portugal.** However, **Portugal's unemployment rate is lower than in the Euro-Zone.**

Unemployment Rate: Euro-Zone and Portugal
(the third trimester of 2019 to third trimester of 2020)



KEY TAKEAWAYS

- The **economic activity slowdown raised**, as expected, **the unemployment in the Euro-Zone.**
- The **trend of unemployment in Portugal followed the Euro-Zone trend**, but it was lower than the latest.
- The **expected economic growth in 2021** should have a **positive impact on the unemployment** both in the Euro-Zone and in Portugal.
- It is **unpredictable the expected decrease in the unemployment rate** in 2021 as the economic growth is also uncertain.

Nowadays, sustainable consumption is a reality for the portuguese population. Therefore, companies must adapt processes in order to retain and attract consumers

APPENDIX B | PESTEL ANALYSIS (IV/X)

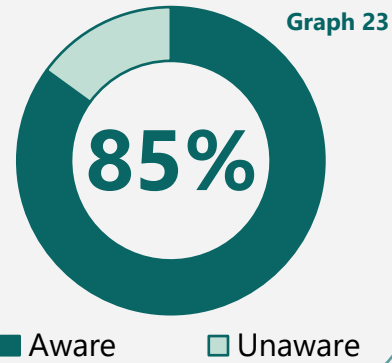


1

Increase in the awareness of sustainable consumption:

- As the **environmental and ethical problems** around the companies’ production process and its products have been raised, the consumers have been adopting **sustainable consumption**, which means that people are choosing **certain products over others that are less environmentally and ethically friendly**. In Portugal, **85% of the population are aware** of this type of consumption.

Sustainable Consumption Awareness in Portugal



KEY TAKEAWAYS

- Furthermore, **92% of the Portuguese population** feel that they **act for a sustainable consumption on a daily basis**.
- More and more **Portuguese consumers demand products, which protect or promote the sustainability**.
- This **demand is not yet met by the supply**, which have **been unable to provide products** at an **accessible price** or to **provide offers or solutions** .
- On the other hand, only **16% of the Portuguese population** believe that **technological innovation can boost sustainable consumption**.

The pandemic made people care more about local companies, which represents an opportunity to boost local economic activity

APPENDIX B | PESTEL ANALYSIS (V/X)

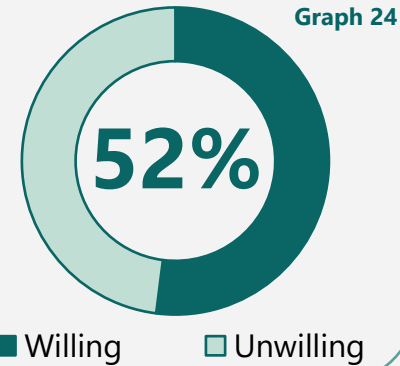


2

Most Portuguese consumers are willing to pay more for local products:

- Covid-19 boosted the solidarity** among the **Portuguese consumers**. As such, **52% of the Portuguese population is willing to pay more for local products** in order **to support local businesses** that were severely affected by the breakdown in the economic activity, due to the pandemic situation in Portugal.

Portuguese consumers willing to pay more for local products



KEY TAKEAWAYS

- Portuguese solidarity has permitted the survival of some local businesses, but there are a lot that had to close doors, as such the **supply of local produced goods has been decreasing during the pandemic**
- It is expected that **more people purchase local produced goods** and boost even more the local economic activity.
- The Portuguese population values products that are not only produced locally, but also that **promote sustainability**. Moreover, the **willingness to pay for this type of products is large**.

As almost everyone has a smartphone, e-commerce is rising and people are now more willing to buy online than ever

APPENDIX B | PESTEL ANALYSIS (VI/X)

TECHNOLOGICAL



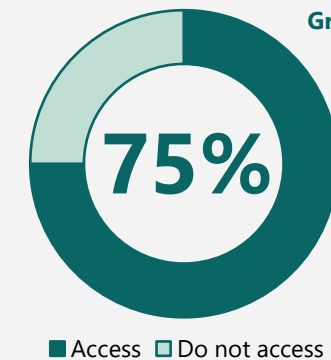
1

The majority of mobile phone users in Portugal access internet through this device:

- In 2018, **75% of the Portuguese mobile phone users accessed internet through this device.**
- In 2019, the **smartphone was the device most used to access internet in Portugal.**

Access Internet Through Mobile Phone in Portugal

Graph 25



KEY TAKEAWAYS

1. The **number of mobile phone users, who accessed internet** through this device is **expected to increase** even more.
2. Despite the increase in the leadership of smartphone as the elected mean to access internet, there has also been an increase in the use of other devices to access internet, which means that **people are using more and more different devices (eg. smartphone, tablets, laptop) to access internet.**
3. As a result of the increase in the access to internet from different devices, people look **more often for products and services' information in the internet** and **often purchase items through internet (e-commerce)**

Another impact of COVID-19 is related to the payment methods. In fact, electronic payments have surpassed physical payments and it is expected that this difference will increase in the following years

APPENDIX B | PESTEL ANALYSIS (VII/X)

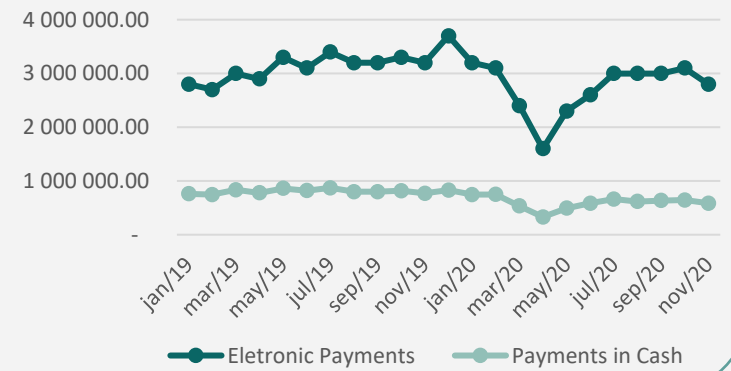


2

Electronic payments represent more than the triple of physical payments in Cascais:

- In Cascais, **electronic payments** is the preferred mean to **make payments**, suggesting a clear **declining in payments in cash**. On the other hand, the **fall in the payments was caused by the economic slowdown during the quarantine period**.

Payments in Cascais per type
(january 2019 to november 2020) **Graph 26**



KEY TAKEAWAYS

1. Portuguese people **prefer to use electronic payments methods** instead of the physical one as it is **more convenient and flexible**.
2. The acceleration of the digitalization caused by COVID-19 also had impact on the methods of payment, being **the electronic method the most used** as vehicle of payment in the e-commerce sector.
3. As some **platforms are developing their own electronic payments methods** or other similar **digital solutions**, and, on the **consumer side**, there are **benefits, which value electronic payments**; it is believed that **in the future people will choose electronic payments rather than payments in cash**.

Digital transformation is no longer a competitive advantage. Companies are trying to find new ways of customer engagement

APPENDIX B | PESTEL ANALYSIS (VIII/X)

TECHNOLOGICAL



3

The businesses' digitalization process was accelerated by COVID-19:

- Globally, **97% of enterprises' decision makers** believe the pandemic **sped up their company's digital transformation**.
- COVID-19 also **accelerated companies' digital communications strategy** by an average of **6 years**.

Decision makers who believe
COVID-19 accelerated the
digitalization

Graph 27



KEY TAKEAWAYS

1. COVID-19 provoked an **acceleration of the digital transformation** and, as a result of this acceleration, **telework has been adopted**.
2. The pandemic forced enterprises to **change its communications channels** and to **strongly invest in digital marketing**.
3. Companies were also made to **adapt its customer engagement**. However, **most of these businesses are still trying to find new ways of customer engagement**.

As the world worries about climate change and other environmental problems, Portuguese people are adapting their consumption habits and demand environmentally friendly products

APPENDIX B | PESTEL ANALYSIS (IV/X)

ENVIRONMENTAL

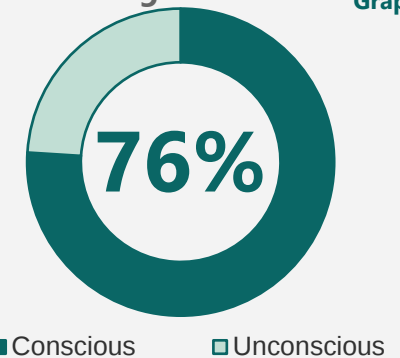


1

The businesses' digitalization process was accelerated by COVID-19:

- 76% of the Portuguese population are conscious about the environmental problems and the climate change;
- Giving the health crisis and a probable economic crisis, 74% of respondents believe that society's concern about climate change will continue.

Environmental issues and climate change consciousness in Portugal in 2020
Graph 28



KEY TAKEAWAYS

1. Despite the health and economic crisis in Portugal, **Portuguese people are still concerned about the environmental and climate change issues.**
2. The **environmental concern in Portugal extends to the Portuguese consumption habits.** Nowadays, more and more people demand for **environmentally friendly products.**

There is no specific regulations regarding local currencies. "Leiria coin" is a good implementation example of a pseudocurrency that didn't find any legal problems

APPENDIX B | PESTEL ANALYSIS (X/X)

LEGAL



1

The Legal Framework of Local Currencies in the EU is ambiguous

There are no specific regulations on the issuance and operation of local currencies in Portugal or in the European Union. Consequently, it is not illegal to issue or operate local currencies, but the activity is not regulated or supervised. There are some forms of "currency" in the Eurozone, in countries like Netherlands, France and Italy. **In Portugal, there is "Leiria Coin", which takes a form of voucher** to support needy families.

KEY TAKEAWAYS

1. Virtual local currency issuers are not obliged to register or to request authorization to operate to the Banco de Portugal or the ECB.
2. The activity has no prudential supervision of risks or criminal activity, therefore the monitoring of the activity by the issuer is fundamental to the success of the implementation, bringing credibility to the currency and control over the carried-out operations.
3. To avoid a future unfavorable legal framework, the Eurozone members can **implement some characteristics of currencies creating a "pseudocurrency"**.

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A TOWS analysis, derivative from the SWOT analysis, enables to connect the four factors to have an improved view that can help in achieving the project goals

APPENDIX C | TOWS ANALYSIS – CÂMARA MUNICIPAL DE CASCAIS

Strengths & Opportunities	Strengths & Threats	Weaknesses & Opportunitites	Weaknesses & Threats
(O1, O2, O3, O5, O6 S1, S4, S5, S6) Leverage on the strong image and strong intra communication, efficient responsiveness and adaptability to emerging technology to optimize applications developed based on the analytical tools and skills achieved. (O4 S1, S2, S3) Backed by a strong brand image, strong financial results and keeping sustainability as a guideline, approach and support local businesses.	(T1, T2, T3, T4 S2, S3, S4, S5) Take advantage of the financial results, technological adaptability to act fast on the economic and social consequences of the pandemic to sustain sustainability as a guideline. (T5 S1, S5, S6) Provide reliable and valuable information, obtained through intra communication, through the different platforms.	(O1, O2, O3, O5 W1, W5, W6) Sign new partnerships with technological firms to develop what is pretended and provide data about the Apps. (O4 W2, W3, W7) Elaborate a marketing plan specific to local businesses and allocate human resources to celebrate partnerships with these businesses. (O6 W4) Collect data about users' behaviours and analyse it to be able to provide personalised services.	(T1 W1) Possibility of being unable to follow digital transformation boosted by COVID-19 (T2 W6) The worsen of the economic situation provoked by the pandemic may mean the inability to sustain costs. (T4 W7) As economic health worsens, the lack of partnerships may imply the closure of local businesses. (T5 W2, W5) Endanger brand image due to the lack of information and well defined marketing strategy.

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The Gresham's Law states that when two currencies co-exist the "bad" currency tends to drive out the "bad" one

APPENDIX D | GRESHAM'S LAW



Sir Thomas Gresham

(1519-1579)

"Bad currency tends to drive good currency out of the market."

When precious metals like gold or silver were used to make the coins, many people melted the coins in better condition to sell in the form of jewelry and other utilities.

According to Gresham's Law, nowadays, people are expected to retain and use better preserved and beautiful coins and, on the other hand, stop using those that are older and worn.

APPLIED TO THE CONTEXT



Applying the concept to the situation in question and assuming that both currencies are accepted under the same conditions and are easily liquid, people would start to use the local currency for transactions, keeping sums of money in Euros. They will therefore start to prefer to cover their expenses with euros, saving euros reserves.

However, in the event of a loss of local currency value, Gresham's law operates the other way around, using people the euro in their transactions. In other words, in case of loss of incentives to use the local currency, people will stop using it in their transactions, and will again prefer to use the euro.

APPENDIXES

- A. TEAM
- B. PESTEL
- C. TOWS
- D. ADDITIONAL ANALYSIS
 - A. GRESHAM'S LAW
 - B. CBDC
- E. IN-DEPTH INTERVIEWS
- F. SURVEY
- G. SUSTAINABILITY PILLARS
- H. MODELS OF BLOCKCHAIN TECHNOLOGY
- I. IMPACT OF THE PROJECT
 - A. FINANCIAL IMPACT
 - B. SUSTAINABLE DEVELOPMENT GOALS
 - C. STAKEHOLDERS ENGAGEMENT MAP
- J. STRATEGY CANVAS
- K. HOW TO USE CASHCAIS



CBDCs are a type of currency implemented at a national level, as it is controlled by a central bank, which are the cases of Petro or DCEP

CENTRAL BANK DIGITAL CURRENCY

QUICK CONTEXT



- ❖ A CBDC is a Central Bank Digital Currency.
- ❖ CBDC appears as the level of globalization and digitalization increases.
- ❖ CBDC emerges as a potential step towards a cashless society.
- ❖ Giving the digital degree in this era, CBDC can be considered a different form of holding money between physical cash and digital bank money.
- ❖ As such, CBDC can guarantee the access to central bank issued money (like physical cash), but in a digital form.
- ❖ However, CBDC is different from a typical cryptocurrency as it is controlled by a central bank.



CHARACTERISTICS



- ❖ Issued by central banks, who therefore control its supply and its value.
- ❖ Is centralized.
- ❖ No space for speculation in the exchange with the physical currency.
- ❖ Uses a blockchain-based token to represent the digital form of a fiat currency of a particular country (or region), being complementary to the legal currency in circulation.
- ❖ Easy conversion to physical money.
- ❖ Examples: Petro (Venezuela), DCEP (China), Euro Digital (Eurozone).
- ❖ **Legally cannot be implemented at a municipality level.**

Neither a cryptocurrency system nor a CBDC are possible solutions to the goal of the Municipality due to its basic characteristics. It is possible, however, to adopt several characteristics of these systems for the recommended solution.

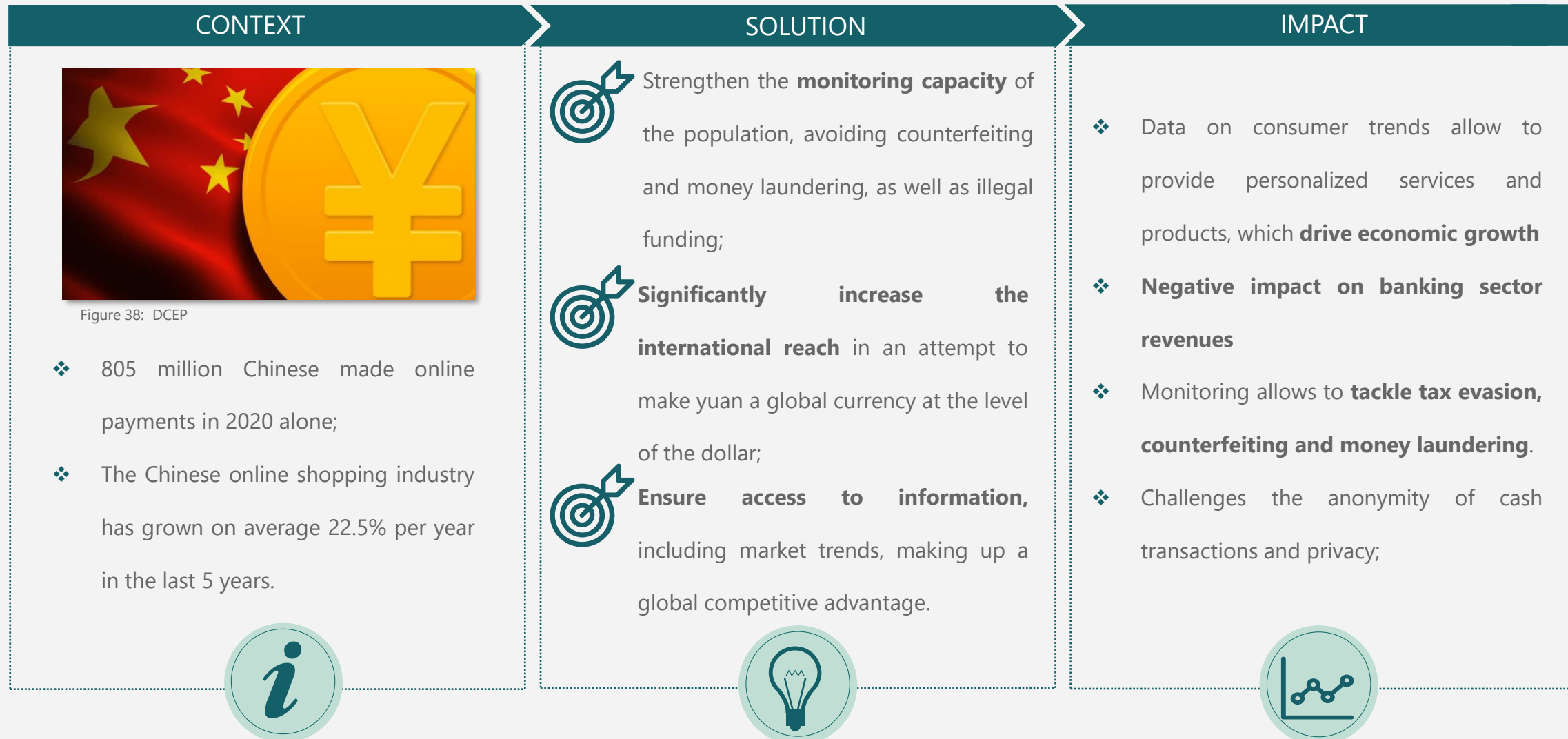
Petro is a complementary currency to Bolivar, design in response to the Venezuelan economic crisis, which ended up aggravating existing issues and creating new ones

CBDC - VENEZUELA CASE - PETRO



China has entered the testing phase of a new digital currency complementary to the yuan, aiming a leading position for the country in the digital currency market

CBDC - CHINA CASE - DIGITAL CURRENCY ELECTRONIC PAYMENT (DCEP)



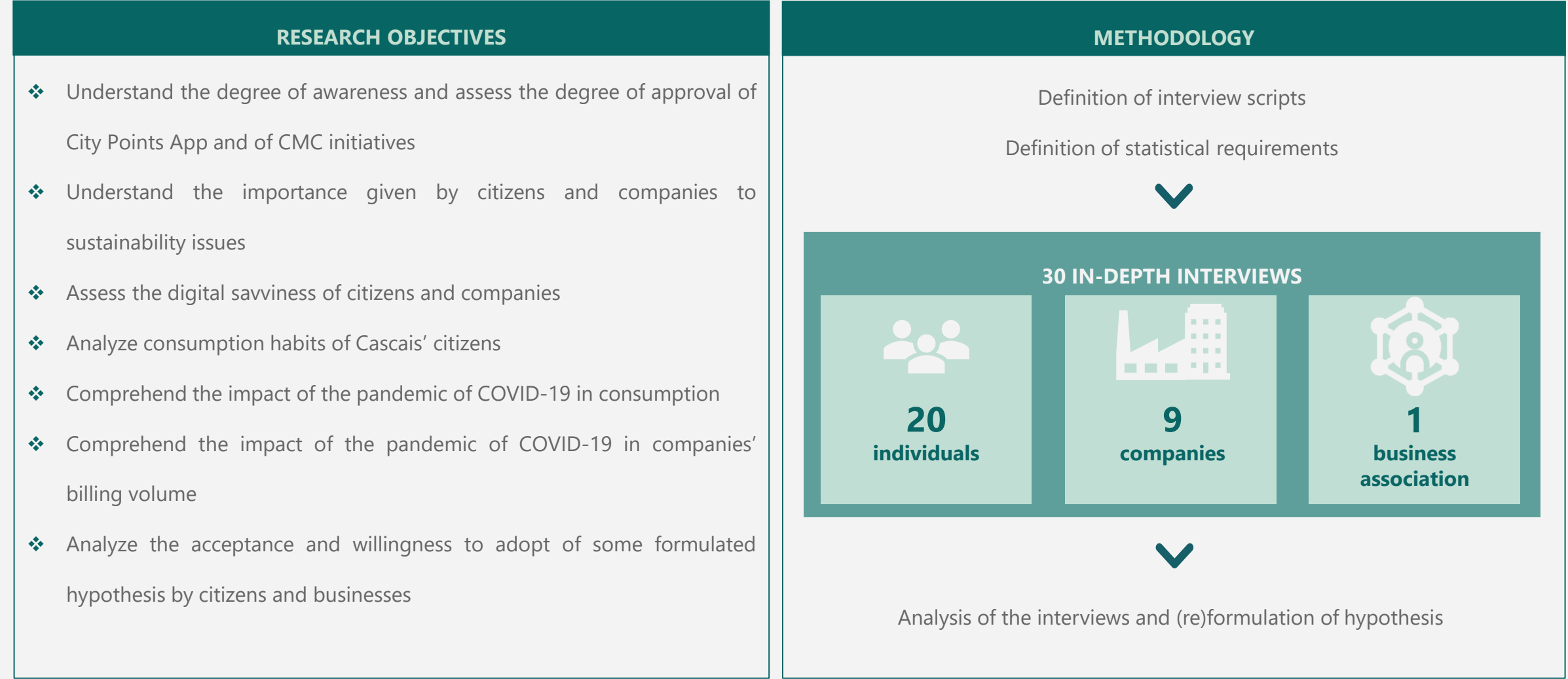
APPENDIXES

- A. TEAM
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- K. HOW TO USE CASHCAIS



The in-depth interviews to citizens and companies of Cascais followed a concrete methodology to collect homogeneous answers that can support the hypothesis

APPENDIX D | IN-DEPTH INTERVIEWS (I/XIV)



Twenty interviews were conducted, half of them to Gen Z and Millennials and the other half to Gen X and Baby Boomers

APPENDIX D | IN-DEPTH INTERVIEWS (II/XIV)



20
individuals

Generation Z
7-23 years old



♂ 3 ♀ 3

Millennials
24-37 years old



♂ 2 ♀ 2

Generation X
38-53 years old

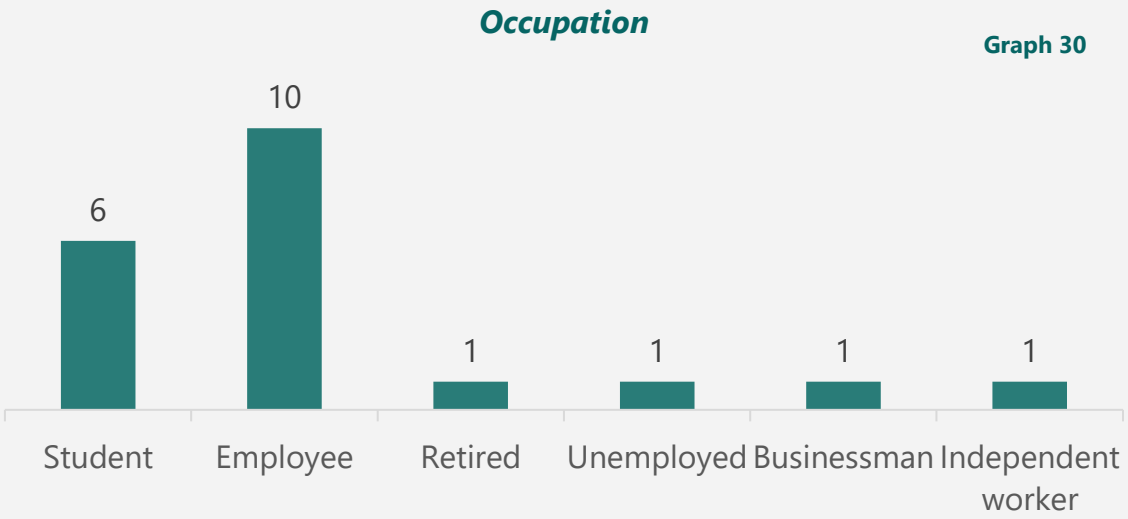
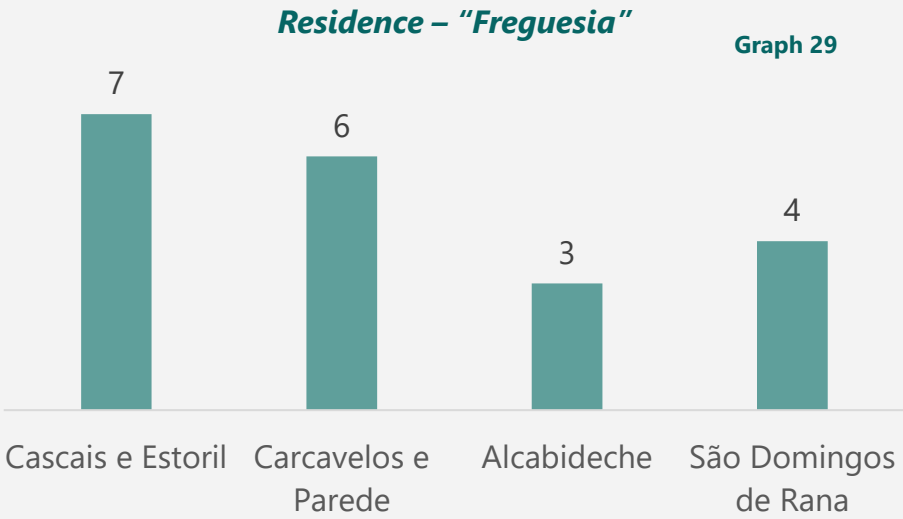


♂ 3 ♀ 2

Baby Boomers
54-76 years old



♂ 4 ♀ 1



Gen Z is price sensitive, which is a main reason for not purchasing locally. However, they understand the necessity of developing the local economy

APPENDIX D | IN-DEPTH INTERVIEWS (III/XIV)



Generation Z
7-23 years old

6
individuals

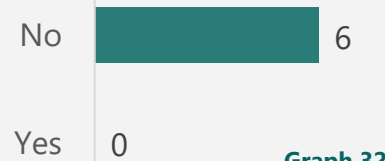
Characteristics

Digital natives
Realistic behavior
Ethical consumption

Awareness of City Points

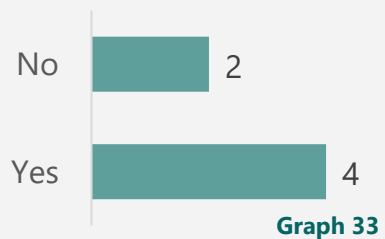


Performs purchases in local commerce?



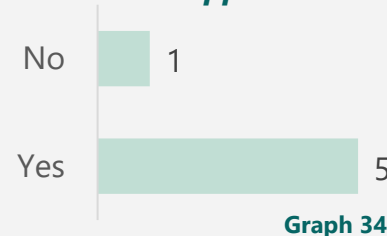
Although being more aware of sustainability issues and of the benefits of consume locally to the development of the local economy, interviewees from Generation Z do not perform purchases in local commerce (besides restaurants) because they are more price sensible and because they have few awareness of the localization and offered services of local businesses.

Feeling of a sense of community in Cascais



The majority of the interviewees from this generation feels there is a sense of community in Cascais and understands the necessity to develop the economy of local community. Either way, the feeling or the lack of it is mostly motivated by the proactivity of CMC in its initiatives and the penetration of the institutional communication.

Would use CASHCAIS App?



Most Zoomers would use an App with the characteristics of **CASHCAIS**, provided a good communication of the initiative by CMC. For half of the interviewed, the App would be useful even without the monetary benefits for its users, as they feel there is a lack of information about local businesses in the Municipality of Cascais.

On the contrary, interviewed Millennials purchase in local commerce, because they prefer local products

APPENDIX D | IN-DEPTH INTERVIEWS (IV/XIV)



Millennials
24-37 years old

4
individuals

Characteristics

Globalists

Questioners

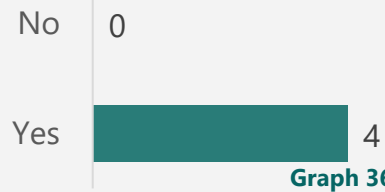
Experience consumption

Awareness of City Points



Graph 35

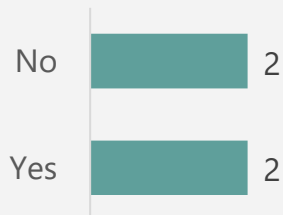
Performs purchases in local commerce?



Graph 36

Millennials have more purchasing power than the younger generation and are also conscient about sustainability issues and the benefits of local economy development. As such, all interviewed say they buy products in local commerce, especially groceries and fresh produces.

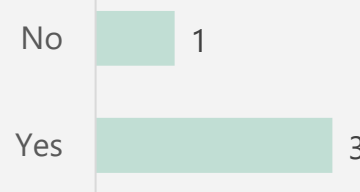
Feeling of a sense of community in Cascais



Graph 37

As Zoomers, the existence of a sense of community in Cascais is not consensual among Millennials. Moreover, that feeling is also driven by the perception of proactivity of CMC regarding the response to the pandemic and to sustainability issues. It is also mentioned that the main weakness is a perceived lack of communication of CMC which does not allow a higher sense of community.

Would use CASHCAIS App?

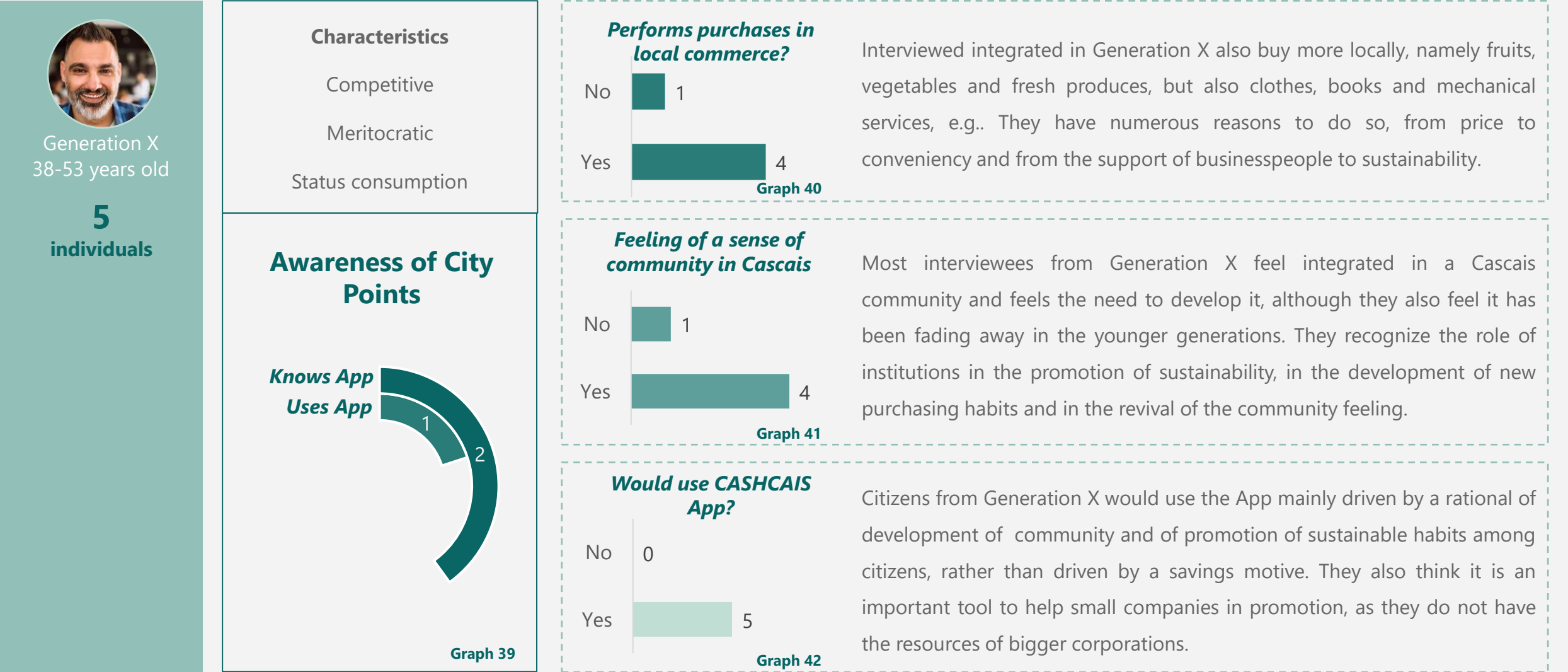


Graph 38

Millennials think Municipalities should have initiatives to boost local commerce in comparison to shopping centers and hypermarkets, being mostly open to use a solution like **CASHCAIS** in the future.

Gen X interviewees present a similar behavior to Millennials regarding local commerce

APPENDIX D | IN-DEPTH INTERVIEWS (V/XIV)



Performs purchases in local commerce?

No

Yes

1

4

Graph 40

Interviewed integrated in Generation X also buy more locally, namely fruits, vegetables and fresh produces, but also clothes, books and mechanical services, e.g.. They have numerous reasons to do so, from price to conveniency and from the support of businesspeople to sustainability.

Feeling of a sense of community in Cascais

No

Yes

1

4

Graph 41

Most interviewees from Generation X feel integrated in a Cascais community and feels the need to develop it, although they also feel it has been fading away in the younger generations. They recognize the role of institutions in the promotion of sustainability, in the development of new purchasing habits and in the revival of the community feeling.

Would use CASHCAIS App?

No

Yes

0

5

Graph 42

Citizens from Generation X would use the App mainly driven by a rational of development of community and of promotion of sustainable habits among citizens, rather than driven by a savings motive. They also think it is an important tool to help small companies in promotion, as they do not have the resources of bigger corporations.

Source: In-depth Interviews analysis, Team analysis

108

Every generation states that they would use an App like CASHCAIS

APPENDIX D | IN-DEPTH INTERVIEWS (VI/XIV)



Baby Boomers
54-76 years old

5
individuals

Characteristics

Idealists

Collectivists

Ideologic consumption

Awareness of City Points

Knows App
Uses App



Graph 43

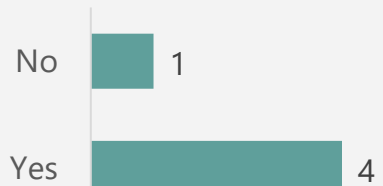
Performs purchases in local commerce?



Graph 44

Baby Boomers have habits of consumption in local businesses, although not for every product and service. They mainly consume fresh produces, biological products and clothes in the local commerce. Their environmental consciousness might play a role in their preference for local commerce. However, they are mainly driven by time, quality and accessibility reasons.

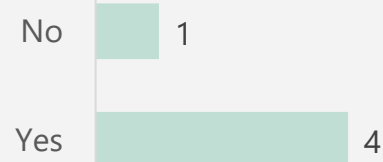
Feeling of a sense of community in Cascais



Graph 45

The majority of Baby Boomers believe there is a sense of community among Cascais citizens. They consider CMC shall have a role in the promotion of good practices and in giving support to the citizens aiming to have more sustainable actions.

Would use CASHCAIS App?



Graph 46

Most Baby Boomers would also join an initiative such as **CASHCAIS**. They value loyalty programs, are used to deal with them and think it is an important part of the project. Finally, they mention it will be important to have support in order to deal with using issues.

Nine companies presented several perspectives on the issues discussed. Their backgrounds differ to eliminate biased conclusions

APPENDIX D | IN-DEPTH INTERVIEWS (VII/XIV)



9
companies

3

restaurants and similar



100 % acceptance of digital payment methods

Performance of CMC



Graph 47

Online business database



Graph 48

- ❖ Less open to innovation;
- ❖ Mostly against local currency per se because of complexity;
- ❖ Parking fees as barrier for consumers.

4

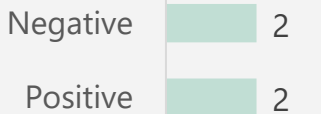
retailers and manufacturers



100 % acceptance of digital payment methods

(1 does not accept Multibanco because of the fees)

Performance of CMC



Graph 49

Online business database



Graph 50

- ❖ More open to innovation;
- ❖ Open to introduction of local currency;
- ❖ Parking fees as barrier for consumers.

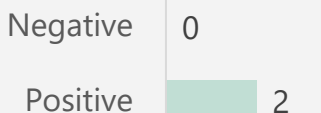
2

inelastic demand providers of G&S



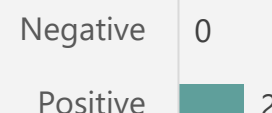
100 % acceptance of digital payment methods

Performance of CMC



Graph 51

Online business database



Graph 52

- ❖ Open to innovation;
- ❖ Divided on the introduction of local currency;
- ❖ Parking fees as barrier for consumers.

In addition, an interview to a business association of Cascais to give an overview of local problems, namely regarding the pandemic reality

APPENDIX D | IN-DEPTH INTERVIEWS (VIII/XIV)



1

business
association



1532 member businesses

412 retailers

519 services providers

587 restaurants and similar

11 hospitality

3 food-processing industry

Context

- ❖ Pandemic is causing liquidity problems to companies because of the drop in revenues but maintenance of fixed costs;
- ❖ Very positive assessment of CMC measures to support local businesses;
- ❖ Businesses need to rethink the methodology of their operations to adapt to the new reality.

New App

- ❖ Concern about the visibility of the App and the awareness of its benefits;
- ❖ App should have ease and intuitive access;
- ❖ Important functionalities: shipping management, digital payment systems;
- ❖ Concern about cost of transaction inside the App;
- ❖ Companies should be willing to promote themselves through the App and to offer discounts which complement the ones already offered by CMC.

In-depth interviews made confirmed that there is little awareness of City Points and that there is space to upgrade to a new App, if advertised well

APPENDIX D | IN-DEPTH INTERVIEWS (IX/XIV)

HIGHLIGHTS

“CMC is proactive but it does not communicate its initiatives properly”

“CMC is very concerned about sustainability measures”

“If I had the awareness that I was contributing to something in the Municipality, I would participate more”

“I feel an initiative like this would further develop the feeling of belonging to the community of Cascais”

“If people knew there were buying alternatives next to their home, people would have more interest about local business”

“Institutions have responsibility in transforming people’s bad habits”

MAIN CONCLUSIONS AND HYPOTHESIS TO TEST



Little awareness of CMC initiatives



Little awareness of City Points



Local consumption might be boosted by:

- ❖ Increasing awareness of businesses existence
- ❖ Creating discounts to decrease prices and to promote business
- ❖ Promoting their transformation into more sustainable businesses



A new App or an upgrade to the current one should have a consistent advertisement plan and contain relevant functionalities, such as FAQ

An interview guide was developed to ensure that there was comparable answers from each interviewee. However, the interviews were not strictly guided by this paper, as the goal was to let the interview flow naturally

APPENDIX D | IN-DEPTH INTERVIEWS (X/XIV)



20
individuals

Evolving Cascais through local currency



In-Depth Interviews Guide - personas:

Section A- Personal component

1. How old are you?
2. What is your profession?
3. What is your place of residence?
4. What are your qualifications?
 - Elementary School ____
 - High School ____
 - Bachelor's Degree ____
 - Master's Degree ____
 - PhD ____
5. What is your professional status?
 - Unemployed ____
 - Employed ____
 - Self-employed ____
 - Retired ____
 - Student ____
 - Internship ____
6. In average, what is your household's monthly income?
 - < 600€ ____
 - 600 € - 1000€ ____
 - 1000 € - 1500 € ____
 - 1500 € - 2500 € ____
 - 2500 € - 3500 € ____
 - > 3500 € ____

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Evolving Cascais through local currency



Section B - Environmental sustainability and local consumption

1. In your day-to-day, do you take actions aimed at promoting a greater environmental sustainability?
 - 1.1 If so, please give three examples.
2. Will a reward make you have attitudes more environmentally friendly? Why?
3. How important is it for you that CMC values environmental sustainability?
4. Are you aware of initiatives taken by the CMC in this area? Which ones?
5. Do you know City Points app?
 - 5.1 Do you use it or have you ever used it?
 - 5.2 How do you rate it?
 - 5.3 How often do you use it?

Section C - Digital Savviness

1. Do you use smartphone?
2. In average, how many time, per day, do you use your smartphone?
3. Currently, do you use applications to realize digital payments and/or transfers, such as MBWay, mobile banking or home banking?
 - 3.1 If not, for some particular reason?
 - 3.2 If yes, what are the biggest advantages of using this method?

Section D – Local Consumption/New Platform

1. Do you usually shop at local businesses?
2. What are the reasons for buying (or not) at the local level? Name two at least.
3. What types of products/services do you buy from local businesses?
4. Is it important for you to contribute to the development of the Municipality of Cascais? Do you consider that there is a community feeling in Cascais?
5. What do you think about the possibility of using an exclusive application for the Municipality of Cascais which offers benefits in purchases in local companies?
6. Would your predisposition to use the app change if there were no such benefits?
7. In addition to the exclusive app, would you use a physical local currency and/or vouchers?

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Interviews to individuals were summed up in the table below

APPENDIX D | IN-DEPTH INTERVIEWS (XI/XIV)

Individuals (subject number)		1	2	3	4	5	6	7	8	9	10
Gender		Male	Male	Female	Male	Female	Male	Male	Male	Female	Female
Age		24	57	42	21	43	63	23	43	22	30
Freguesia		Alcabideche	Carcavelos e Parede	Cascais e Estoril	São Domingos de Rana	Carcavelos e Parede	Cascais e Estoril	Cascais e Estoril	Cascais e Estoril	São Domingos de Rana	Carcavelos e Parede
Occupation		Student	Employee	Employee	Student	Employee	Retired	Student	Employee	Student	Employee
Environmental sustainability	Has environmentally sustainable attitudes	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Reward for environment-friendly attitudes	✓	✓	✓	✓	x	✓	✓	✓	✓	✓
	CMC current innitiatives	?	?	✓	✓	?	✓	✓	✓	?	✓
	Knows the app	✓	x	x	x	✓	✓	✓	✓	x	✓
	Has used the app	x	-	-	-	x	x	x	✓	-	✓
	City Points	-	-	-	-	-	-	-	x	-	✓
	Currently uses it	-	-	-	-	-	-	-	x	-	✓
	Finds it useful?	-	✓	✓	✓	x	✓	x	✓	✓	✓
	Reason not to use	Unawareness of how it works	Unawareness	Unawareness	Unawareness	Unawareness	Unawareness	Does not find it useful	Lack of login maintenance	Unawareness	-
Digital savviness	Uses smartphone	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Time of use of smartphone per day (in hours)	4	3.5	2.5	6	3	1.5	2	1.5	4	3
	Uses MBWay	✓	✓	✓	✓	✓	x	x	✓	✓	✓
	Uses homebanking/mobilebanking?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Reasons	Accessibility	Accessibility	Speed, efficiency	Accessibility	Accessibility	Accessibility, usefulness	Utility given to each app	Accessibility, speed	Speed, COVID-19	Accessibility, speed
	Buys in local commerce (besides restaurants)	✓	✓	✓	x	✓	✓	x	✓	x	✓
Local Commerce	Reason	Better quality of products	Time management	Prices, accessibility	Accessibility	Better know produts and people	Accessibility	Unawareness	Support commerciants, ecological and carbonic footprint	Unawareness	Accessibility
	Products and services	Groceries, Meat	Biological products	Only fruits	-	Almost everything	Bread	-	Fruit and vegetables, books, mechanic services, leisure	-	Groceries
	Cascais	✓	x	✓	✓	✓	✓	✓	✓	x	x
	Important to develop Cascais	✓	x	✓	✓	✓	✓	✓	✓	?	✓
	Would use an app exclusive in Cascais with benefits in local commerce	?	x	✓	✓	✓	✓	✓	✓	✓	✓
	Predisposition to use app without benefits	=	=	↓	↓	↓	↓	=	↓	=	↓
CASHCAIS	Would use local currency	?	x	?	✓	x	✓	x	✓	✓	x
	Would use vouchers	✓	?	✓	✓	✓	✓	✓	✓	✓	✓

It is possible to compare their answers in every touched point in the interviews

APPENDIX D | IN-DEPTH INTERVIEWS (XI/XIV)

Individuals (subject number)		11	12	13	14	15	16	17	18	19	20
Gender		Male	Female	Male	Male	Female	Male	Female	Male	Male	Female
Age		25	35	66	58	19	23	21	53	48	60
Freguesia		Cascais e Estoril	Alcabideche	Carcavelos e Parede	Carcavelos e Parede	São Domingos de Rana	Cascais e Estoril	São Domingos de Rana	Alcabideche	Cascais e Estoril	Carcavelos e Parede
Occupation		Unemployed	Independent Worker	Businessman	Employee	Student	Employee	Student	Employee	Employee	Employee
Environmental sustainability	Has environmentally sustainable attitudes	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Reward for environment-friendly attitudes	x	✓	✓	✓	x	✓	✓	✓	✓	✓
	CMC current initiatives	?	✓	?	✓	✓	✓	✓	?	?	✓
City Points	Knows the app	x	✓	x	✓	x	✓	✓	x	x	✓
	Has used the app	-	x	-	✓	-	x	✓	-	-	x
	Currently uses it	-	-	-	✓	-	x	✓	-	-	-
Digital savviness	Finds it useful?	x	x	✓	✓	x	✓	✓	✓	✓	✓
	Reason not to use	Unawareness	Does not find it useful	Unawareness	-	Unawareness	Unawareness of how it works		Unawareness	Unawareness	Unawareness of how it works
	Uses smartphone	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Local Commerce	Time of use of smartphone per day (in hours)	5	3	1	2	2.5	3	5	1.5	1.5	2
	Uses MBWay	✓	✓	x	✓	✓	✓	✓	x	✓	x
	Uses homebanking/mobilebanking?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cascais	Reasons	Speed	Accessibility, speed	Fees, accessibility	Accessibility	Accessibility	Accessibility	Utility given to each app		Fees	Speed, efficiency
	Buys in local commerce (besides restaurants)	✓	✓	✓	✓	x	x	x	✓	x	✓
	Reason	Sustainability	Products quality	Products quality and people	Accessibility	Price	Unawareness	Time management	Different products	Time management	Product quality
CASHCAIS	Products and services	Groceries	Groceries	Bread, groceries	Meat and fish	-	-	-	Clothes, groceries	-	Clothes
	Sense of community	x	✓	✓	✓	x	✓	✓	✓	x	✓
	Important to develop Cascais	✓	✓	✓	✓	?	✓	✓	✓	?	✓
	Would use an app exclusive in Cascais with benefits in local commerce	✓	✓	✓	✓	?	✓	✓	✓	✓	✓
	Predisposition to use app without benefits	=	↓	↓	↓	=	↓	↓	↓	=	↓
	Would use local currency	✓	✓	x	✓	x	✓	x	✓	x	x
	Would use vouchers	✓	✓	✓	✓	?	✓	✓	✓	✓	✓

Table 20: In-Depth Interview 2

Behind the same reasoning, interview guides were designed for companies and for the business association of Cascais

APPENDIX D | IN-DEPTH INTERVIEWS (XIII/XIV)



9
companies

Evolving Cascais through local currency

Nova CASCAIS

In-Depth Interviews Guide - companies:

Section A – Company's numbers

1. What is your industry?
2. How many years has the company been operating?
3. How many workers does your company have?
4. Can you estimate your company's annual billing amount?
5. Given the current moment, have you had or foresee a decrease in revenues and subsequent dismissals? What is the value of the losses?

Section B – Métodos de pagamento

1. Do you use digital systems for registrations and payments?
2. Are you open to accept a new payment method? With what conditions? Do you think this can benefit your company?
3. Are you familiar with the latest payment methods such as MBWay and cryptocurrency? What do you think of them?

Section C – App

1. Do you think you will benefit from entering in an app listing companies of Cascais and in which you can advertise your company and give benefits to users (discounts, ability to perform payments, etc.)?
2. Is this app attractive by itself or do you think you will need more incentives to join the project? What kind of incentives?
3. What disadvantages do you see in joining a project like this?
4. What features would you like to see in such an application?

Section D – Câmara Municipal de Cascais

1. CMC has been showing concern for local businesses. Do you feel that it should act here as a driver of local economy and thus participate in a project of this nature?

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1
business
association

Evolving Cascais through local currency

Nova CASCAIS

In-Depth Interview Guide – Associação Empresarial do Concelho de Cascais:

Section A – Business context

1. How many companies are members of Associação Empresarial do Concelho de Cascais?
2. Is it possible to give us figures for the number of companies in each sector/industry?
3. What is the impact of the pandemic on local small and medium-sized enterprises? Given the current moment, is there a forecast of decrease in revenues of companies and subsequent dismissals?

Section B – Câmara Municipal de Cascais

1. How do you assess the relationship of Câmara Municipal de Cascais with Associação Empresarial?
2. How do you evaluate the action of Câmara Municipal in supporting local businesses?
3. What is the biggest challenge you foresee for local commerce?
4. What do you think CMC could implement in order to develop local businesses?

Section C – App – Catalog

1. Do you think companies will benefit from entering in an app listing companies of Cascais, from which clients can interact with businesses having knowledge of promotions, for example?
2. What disadvantages do you see in joining a project like this?
3. What features would you like to see in such an application?

Section D – App – payment methods/vouchers

4. Among member companies, how many use or are open to using digital systems for registrations and payments?
5. Do you believe there is openness for accepting a new digital payment method? Under what conditions?
6. What incentives do companies need to implement the use of the new app?
7. Do you think they would be open to join an app that would work on a system similar to loyalty programs, allowing discounts on the purchase or in part of it?
8. Would companies be willing to promote promotions through this app? Under what conditions?
9. Would companies be willing to make a discount on the purchase if they knew they would be reimbursed of that value by a trusted entity, such as CMC, for example? Under what conditions?
10. Would companies be willing to promote other not reimbursed discounts through the app, complementary to discounts reimbursed by the other entity?

Consulting Lab – André Lourenço, Guilherme Coelho, Manuel Pachon e Miguel Pinto

Small and medium enterprises were interviewed, in which some of them decreased in billing volume due to the pandemic

APPENDIX D | IN-DEPTH INTERVIEWS (XIV/XIV)

Company	1	2	3	4	5	6	7	8	9
Type	Innelastic demand provider	Restaurants	Restaurants	Innelastic demand provider	Retail commerce	Retail commerce	Retail commerce	Restaurants	Manufacture
SME	✓	✓	✓	✓	✓	✓	✓	✓	✓
Decrease in billing volume	x	✓	✓	x	✓	✓	x	✓	x
#EuComproNoComércioLocal	✓	x	x	x	x	✓	x	x	x
DNA Cascais	x	x	x	x	x	x	✓	✓	✓
Openness to innovation	✓	x	✓	✓	✓	✓	✓	✓	✓
Digital Payment Methods	Multibanco	✓	✓	✓	✓	✓	✓	✓	x
	MBWay	✓	✓	✓	✓	✓	✓	✓	✓
Database for local businesses has mainly advantages	✓	✓	x	x	✓	✓	✓	✓	✓
Parking complaints	✓	x	x	x	✓	x	x	✓	x
Performance of CMC is mainly positive	✓	x	✓	✓	x	x	✓	✓	✓
Openness to introduction of local currency	x	x	✓	✓	✓	✓	✓	x	✓

Table 21: In-Depth Interview 3

APPENDIXES

- A. TEAM
- B. PESTEL
- C. TOWS
- D. ADDITIONAL ANALYSIS
 - A. GRESHAM'S LAW
 - B. CBDC
- E. IN-DEPTH INTERVIEWS
- F. SURVEY
- G. SUSTAINABILITY PILLARS
- H. MODELS OF BLOCKCHAIN TECHNOLOGY
- I. IMPACT OF THE PROJECT
 - A. FINANCIAL IMPACT
 - B. SUSTAINABLE DEVELOPMENT GOALS
 - C. STAKEHOLDERS ENGAGEMENT MAP
- J. STRATEGY CANVAS
- K. HOW TO USE CASHCAIS



A survey was elaborated to target the citizens of Cascais and understand their consumer behavior, their relationship with CMC and their opinion regarding City Points and its potential as a renewed App

APPENDIX E | SURVEY GOALS & INITIAL DISCLAIMER

- ★ Analyze the demographics of the Municipality of Cascais.
- ★ Determine technological and digital trends of the local consumers.
- ★ Ascertain local consumption habits and the impact of incentives on the local consumption.
- ★ Investigate sustainable behaviors among the citizens.
- ★ Understand people's perception on CMC and its initiatives.
- ★ Inquire about City Points and its potential improvements.

Initial Disclaimer

The survey registered a total of **449 answers**. From those, only **223 were considered**, which correspond to the **target group**, the **citizens of Cascais**. As such, the **survey analysis focus on the local people of Cascais** instead of taking into account the totality of answers.

A full description of the survey was made before it starts so that people who answered could understand the goal of the conducted survey

APPENDIX E | SURVEY QUESTIONS (I/VI)



Duração: O questionário que se segue tem a duração média de 5 minutos.

Objetivo: Este questionário, desenvolvido no âmbito do projeto final dos Mestrados em Gestão e Finanças da Nova School of Business and Economics, tem como objetivo a recolha de dados relativos aos hábitos de sustentabilidade e de consumo no comércio local, com especial incidência no município de Cascais. É, contudo, destinado a todos os consumidores, não apenas aos que residem no município supramencionado.

Participação: A sua participação é completamente voluntária.

Anonimato: Toda a informação concedida é anónima e confidencial. Analisaremos os dados de forma agregada.

Caso tenha alguma dúvida relativa a este questionário, por favor contacte:

André Lourenço
28891@novasbe.pt

Guilherme Coelho
41049@novasbe.pt

Manuel Pachon David
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Miguel Pinto
29332@novasbe.pt

Que idade tem?

<18

18-24

25-34

35-44

45-54

55-65

>65

Selecione o género com que se identifica

Masculino

Feminino

Prefiro não dizer

Qual a sua situação profissional?

Trabalhador por conta de outrem

Estudante

Trabalhador independente

Desempregado

Empresário

Reformado

Qual o número de pessoas pertencentes ao seu agregado familiar?

Em média, qual o rendimento mensal líquido do seu agregado familiar?

<600€

600€ - 1000€

1000€ - 1500€

1500€ - 2500€

2500€ - 3500€

>3500€

Possui smartphone?

Sim

Não

Quais as funcionalidades que utiliza no seu smartphone?

Redes sociais

Funcionalidade QR Code

Mobile banking

Apps de viagem e turismo

Apps de pagamentos (ex: MbWay)

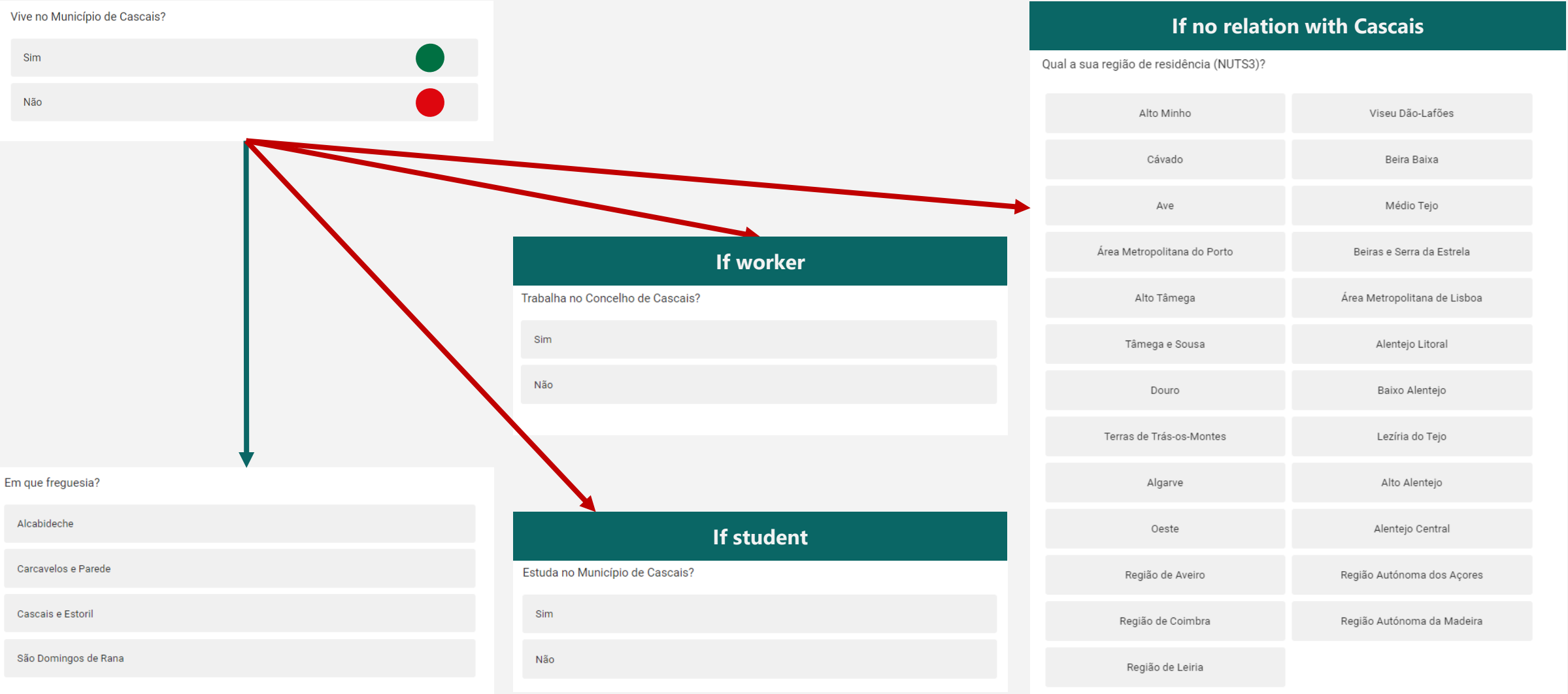
Apps de compras

Apps de estacionamento

Outras

To segment respondents, they had to answer if and where they lived, worked or studied in Cascais

APPENDIX E | SURVEY QUESTIONS (II/VI)



Some questions regarded the frequency and the reasons behind local purchases

APPENDIX E | SURVEY QUESTIONS (III/VI)

Com que frequência faz compras no comércio local?

	Nunca	Raramente	1 a 2 vezes por mês	1 vez por semana	2 a 5 vezes por semana	Diariamente
Restauração	☐	☐	☐	☐	☐	☐
Alojamento	☐	☐	☐	☐	☐	☐
Comércio a retalho de bens alimentares	☐	☐	☐	☐	☐	☐
Comércio a retalho de bens não alimentares	☐	☐	☐	☐	☐	☐
Financeiros e seguros	☐	☐	☐	☐	☐	☐
Saúde	☐	☐	☐	☐	☐	☐
Atividades culturais e recreativas	☐	☐	☐	☐	☐	☐

Com que frequência faz compras no comércio local no Município de Cascais?

	Nunca	Raramente	1-2 vezes por mês	1 vez por semana	2-5 vezes por semana	Diariamente
Restauração	☐	☐	☐	☐	☐	☐
Alojamento	☐	☐	☐	☐	☐	☐
Comércio a retalho de bens alimentares	☐	☐	☐	☐	☐	☐
Comércio a retalho de bens não alimentares	☐	☐	☐	☐	☐	☐
Financeiros e seguros	☐	☐	☐	☐	☐	☐
Saúde	☐	☐	☐	☐	☐	☐
Atividades culturais e recreativas	☐	☐	☐	☐	☐	☐

Quais as razões para comprar (ou não) localmente?

Proximidade	Estacionamento
Comodidade	Tradição familiar
Contacto próximo com os comerciantes	Preço
Confiança nos produtos e serviços prestados	Outro

Como procura pelo serviço adequado dentro dos serviços existentes no Município?

Motor de busca

Folhetos informativos

Amigos

Outro

Website do Município

É importante para si contribuir para o desenvolvimento do seu município?

Nada importante

Muito importante

0

1

2

3

4

5

6

7

8

9

10

Considera que existe um sentimento de pertença à comunidade cascalense?

Discordo totalmente

Concordo totalmente

0

1

2

3

4

5

6

7

8

9

10

Porquê?

Sustainability questions helped to better understand the view of the citizens regarding this topic

APPENDIX E | SURVEY QUESTIONS (IV/VI)

No seu dia-a-dia toma atitudes que visam uma maior sustentabilidade ambiental?

Sim

Não

Selecione as atitudes de sustentabilidade ambiental que pratica no seu dia-a-dia:

Poupança de água nas atividades diárias

Poupança de energia elétrica nas atividades diárias

Reciclagem

Utilização de transportes públicos

Uso de materiais reutilizáveis

Compras no comércio local

Compra de produtos biológicos

Outra

O facto de existir uma recompensa poderá fazer com que tenha mais atitudes amigas do ambiente?

Sim

Não

Considera que a Câmara Municipal de Cascais implementa atitudes que promovem a sustentabilidade ambiental?

Discordo totalmente

Concordo totalmente

0

1

2

3

4

5

6

7

8

9

10

Porquê?

Conhece a app CityPoints do Município de Cascais?

Sim

Não

Usa ou já usou a app CityPoints?

Sim

Não

Como avalia a app?

Insuficiente

Excelente

0

1

2

3

4

5

6

7

8

9

10

O que pensa sobre a possibilidade de usar uma aplicação exclusiva para o Município de Cascais que ofereça benefícios em compras em empresas locais?

Nada importante

Muito importante

0

1

2

3

4

5

6

7

8

9

10

Que benefícios são mais importantes para si enquanto utilizador dessa aplicação?

Descontos em compras no mesmo local

Poder receber um desconto num estabelecimento para utilizar noutro

Ter acesso aos dados dos mais diversos estabelecimentos

Estar a par das últimas novidades locais

Outro

A sua predisposição em usar essa app alterar-se-ia caso não existissem estes benefícios?

Não se alterava

Alterava-se totalmente

0

1

2

3

4

5

Descontos em compras no mesmo local

Poder receber um desconto num estabelecimento para utilizar noutro

Ter acesso aos dados dos mais diversos estabelecimentos

Estar a par das últimas novidades locais

Preferia usufruir desses benefícios numa app diferente, que funcionasse à semelhança de uma moeda local, ou através do reforço de funcionalidades da app CityPoints?

Através de uma app diferente

Através da app CityPoints

A key part of the survey was related to the willingness to adopt of a digital points system that would allow to save money when purchasing locally

APPENDIX E | SURVEY QUESTIONS (V/VI)

Usaria um sistema de pontos digital (app) que lhe permitisse poupar nas suas compras?

Sim

Não

De que forma seria mais fácil obter descontos para as suas compras?

Vouchers físicos

Vouchers digitais

Acumulação de pontos/dinheiro para gasto numa compra futura

Promoções em determinados produtos

Outro

Se representasse mais poder de compra, trocaria euros por uma moeda local que apenas pudesse usar no comércio local do seu município?

Sim

Não

De que forma a existência (ou não) dos seguinte benefícios iria afetar a quantidade de compras que efetua atualmente no comércio local?

	Aumentava	Não afetava	Diminuía
Vouchers físicos	☐	☐	☐
Vouchers digitais	☐	☐	☐
Acumulação de pontos/dinheiro para gasto numa compra futura	☐	☐	☐
Promoções em determinados produtos	☐	☐	☐

Qual o nome para esta nova app ou nova versão?

CityPoints 2.0

CashCais

Cascais Pocket

All-In Cascais

Outro

There were questions made for those who had no relations with Cascais to better understand their behaviors

APPENDIX E | SURVEY QUESTIONS (VI/VI)

Different questions for those with no relations with Cascais

Com que frequência se desloca ao Município de Cascais?

Nunca

Menos de uma vez por ano

Menos de uma vez por mês

Mensalmente

Semanalmente

Diariamente

Considera que a sua Câmara Municipal implementa atitudes que promovem a sustentabilidade ambiental?

Discordo totalmente

Concordo totalmente

0

1

2

3

4

5

6

7

8

9

10

O que pensa sobre a possibilidade de usar uma aplicação exclusiva para o seu Município que ofereça benefícios em compras em empresas locais?

Nada importante

Muito importante

0

1

2

3

4

5

6

7

8

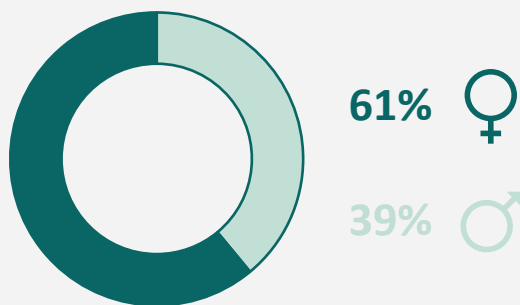
9

10

A demographic analysis was performed to better understand how different segments of Cascais behave

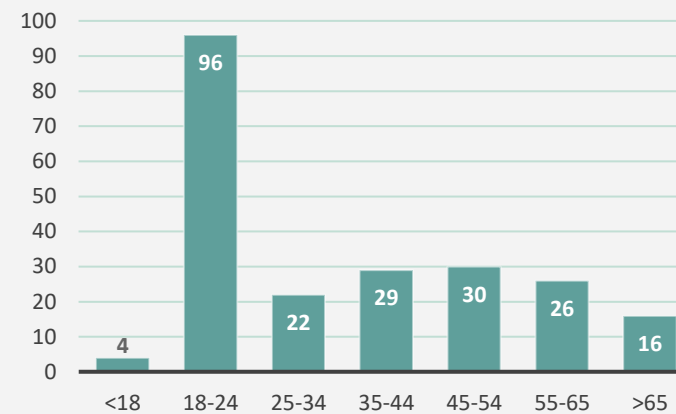
APPENDIX E | DEMOGRAPHIC ANALYSIS (I/II)

Gender



Graph 53

Age



Graph 54

Residence

Alcabideche: 22%
Carcavelos e Parede: 29%
Cascais e Estoril: 29%
S. Domingos de Rana: 20%



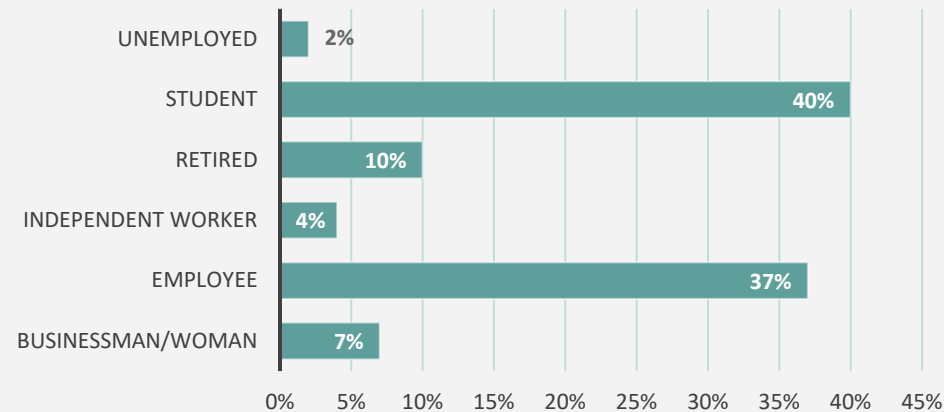
People in Household

3,26 is the average number of people in Cascais's households.

The sample shows gender, age or occupation of Cascais' citizens. The mode of the household income distribution is between 1500€ and 2500€

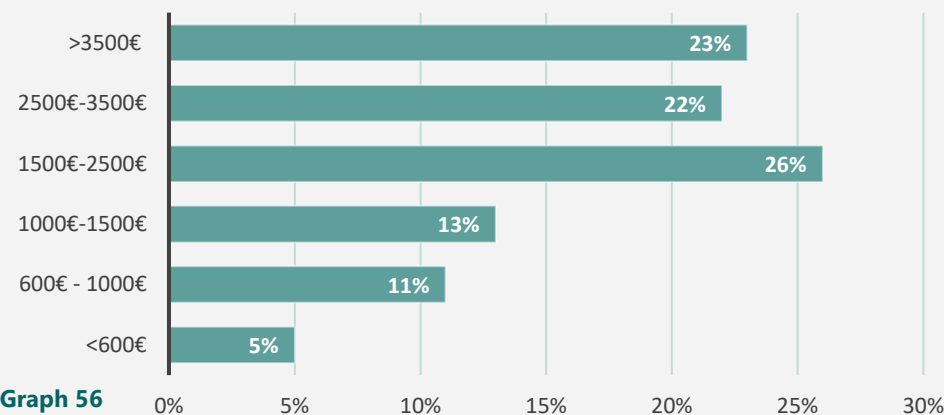
APPENDIX E | DEMOGRAPHIC ANALYSIS (II/II)

Occupation



Graph 55

Household Income Distribution



Graph 56

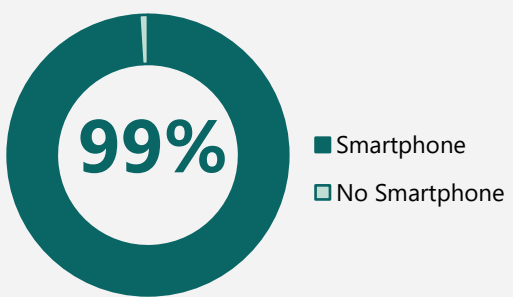
Demographic Analysis Key Takeaways

- Regarding gender, most answers were registered by females. As for age, the age range more represented is from 18 to 24 years old.
- The residence distribution was balanced, being S. Domingos de Rana the least represented and both Carcavelos e Parede and Cascais e Estoril the most represented.
- 3,26 is the average number of people per household in Cascais.
- 77% are either students or employees.
- Most observations are seen in the high/middle income households.

A technological and digital survey analysis was performed to check what kind of Apps people use in their daily routines

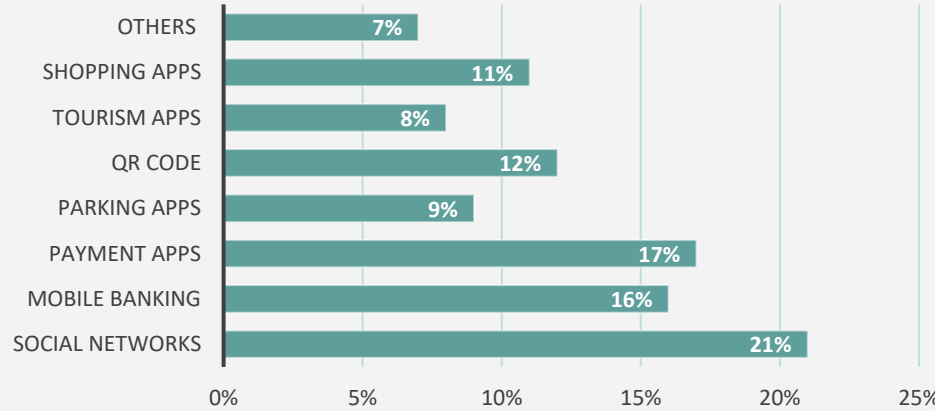
APPENDIX E | TECHNOLOGICAL AND DIGITAL TRENDS ANALYSIS

Smartphone Users



Graph 57

Most Used Apps per Type



Graph 58

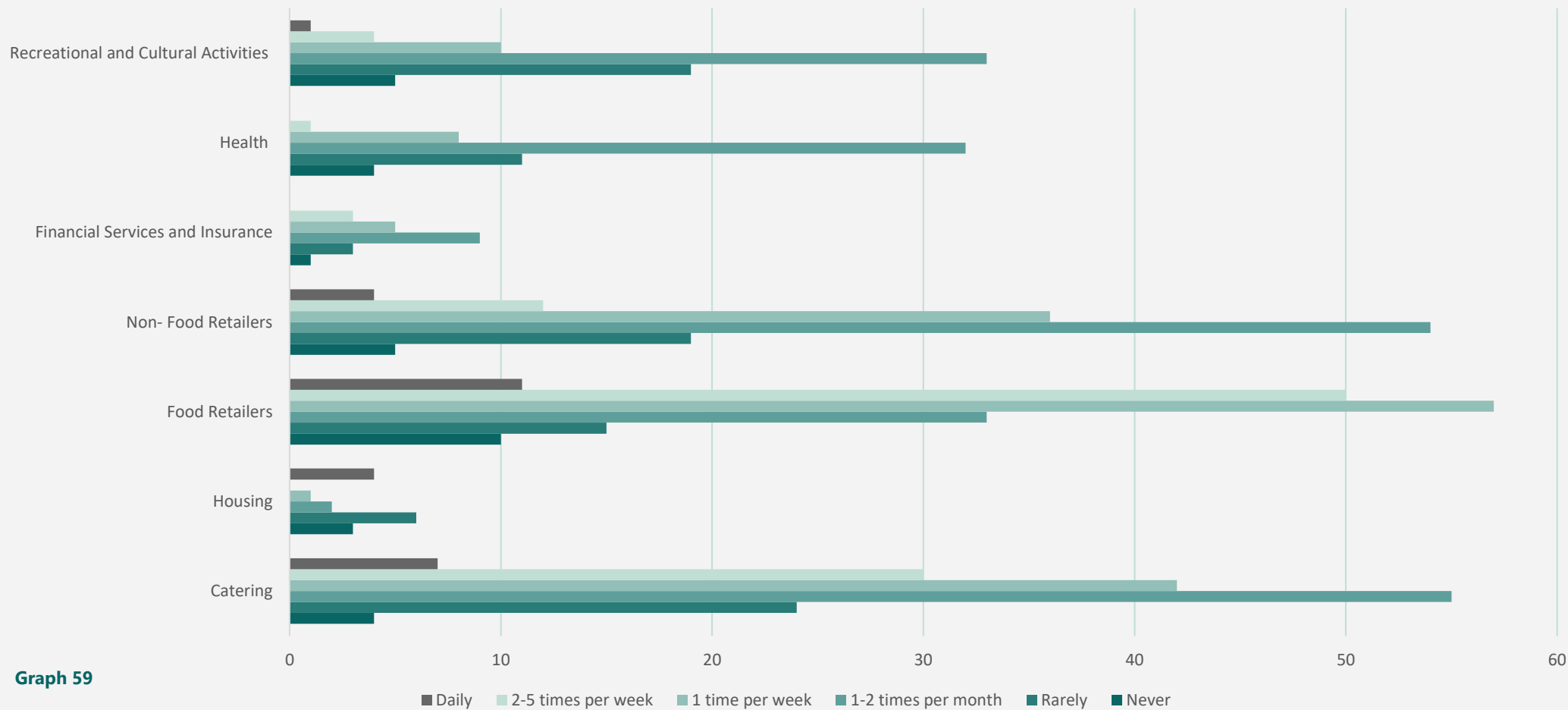
Technological and Digital Trends Analysis Key Takeaways

- 99% of people from Cascais already have a smartphone.
- Social Networks are the most used App in Cascais. However, payment Apps and mobile banking are also largely represented.
- Tourism Apps and parking Apps are the Apps people less take advantage of in Cascais.

A local consumption analysis shows that people go more frequently to food and non-food retailers than to other type of commercial establishments

APPENDIX E | LOCAL CONSUMPTION ANALYSIS (I/II)

Frequency with which people go to different commercial establishments

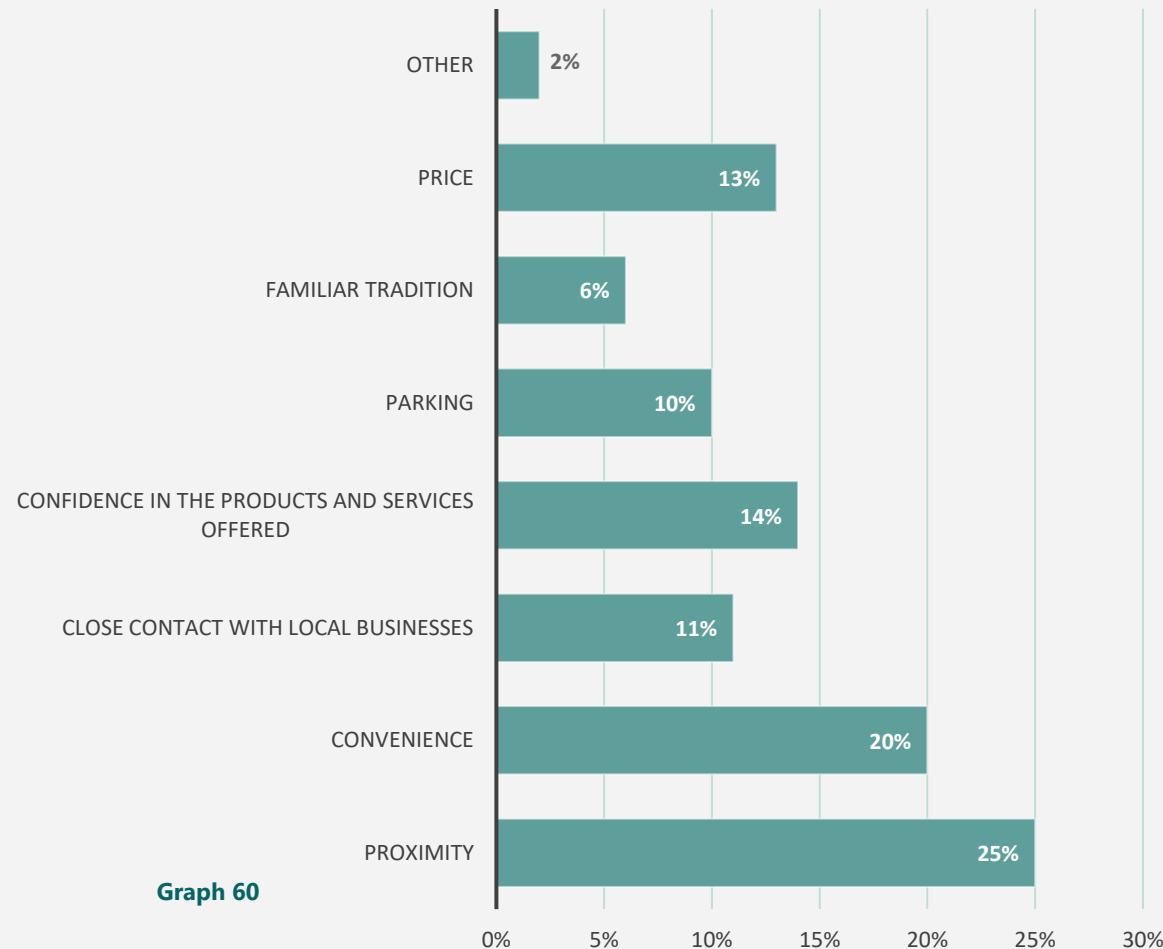


Graph 59

There are many reasons to shop locally and the survey points that proximity and convenience are the most important ones for inhabitants of Cascais

APPENDIX E | LOCAL CONSUMPTION ANALYSIS (II/II)

Reasons to Shop Locally



Graph 60

Source: Survey analysis

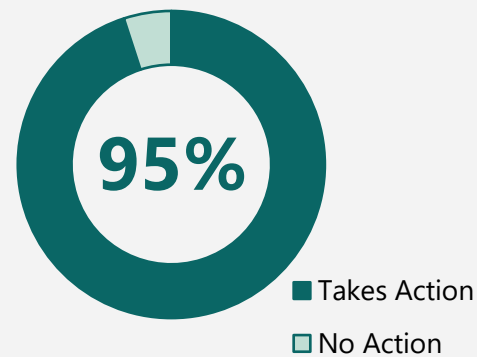
Local Consumption Analysis Key Takeaways

- 🔑 Cascais' people enjoy often the products and services from the food retailers, the non-food retailers and catering sectors.
- 🔑 On the other hand, the housing and financial and insurance sector are sectors, which Cascais' consumers rarely enjoy.
- 🔑 Proximity and convenience are the factors that play a major role when deciding to consume locally.
- 🔑 Familiar tradition and parking play have a less decisive role in shopping locally.

To better understand the sustainable actions performed by citizens, many questions regarding this subject were conducted, which stated that most of them already take sustainable actions but would take more if encouraged

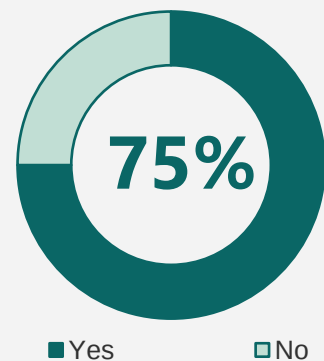
APPENDIX E | SUSTAINABILITY BEHAVIOR AND INCENTIVES ANALYSIS

Sustainable Attitudes and Actions



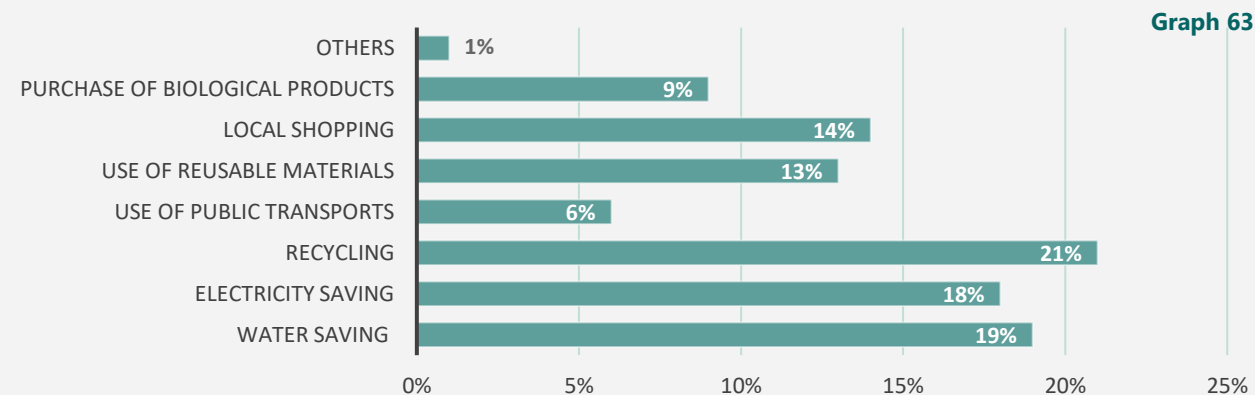
Graph 61

Would a Compensation Incentivize Sustainable Actions?



Graph 62

Sustainability Friendly Activities



Graph 63

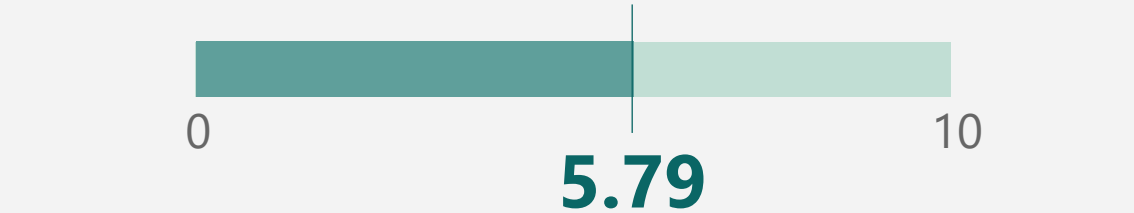
Technological and Digital Trends Analysis Key Takeaways

- 95% of people from Cascais acts towards sustainability.
- The main sustainability friendly activities are recycling, water saving, followed by local shopping.
- 75% of Cascais' people would have more sustainable actions if they had a compensation or an incentive to do it.

A sense of belonging to the community is being lost throughout the years and people feel that they can contribute more to the development of the Municipality

APPENDIX E | CÂMARA MUNICIPAL DE CASCAIS AND THE CITIZEN ANALYSIS (I/II)

Do you consider that there is a feeling of belonging to Cascais' community?



Graph 64

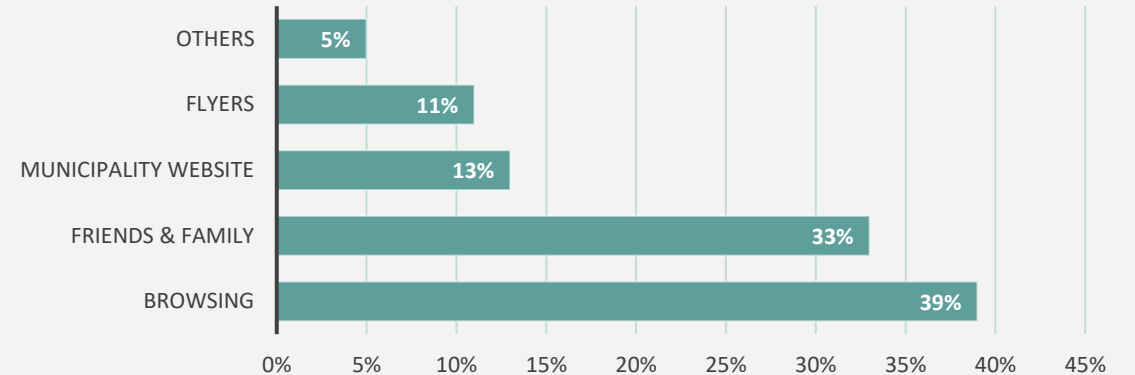
Why?

"The proximity of President, Carlos Carreiras, and the strategy of **bringing people closer to the community** (as the message reflects: "from people to people") works for me.." I was born in Cascais, I live in Cascais and I **hope to die in Cascais**

"I think that **feeling was lost many years ago** ... I would like to say that the pandemic is making people come together in community, as before, but I don't know if this spirit of inter-help will endure, unfortunately."

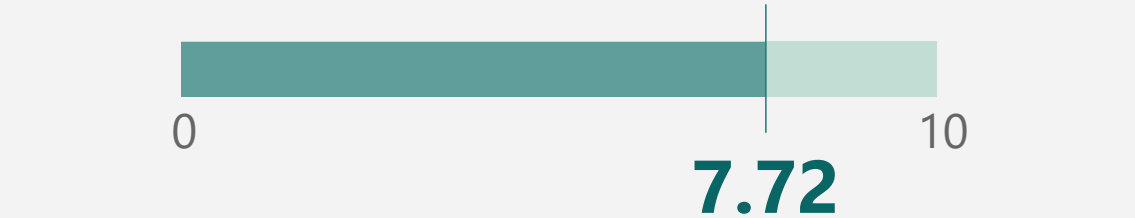
Graph 65

How do you look for the appropriate service within the existing services in the Municipality?



Graph 66

Is it important to you to contribute to the Municipality development?

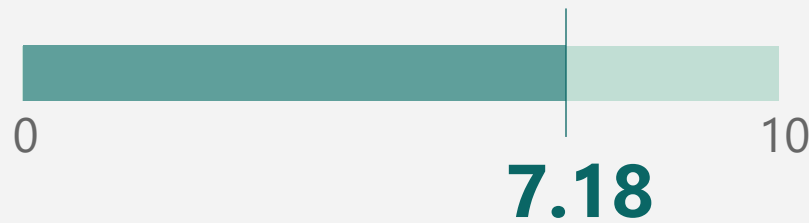


Graph 67

Cascais' citizens believe CMC implement attitudes that promote environmental sustainability, such as making available sufficient recycling containers and providing water dispensing machines

APPENDIX E | CÂMARA MUNICIPAL DE CASCAIS AND THE CITIZEN ANALYSIS (II/II)

Does CMC implement attitudes that promote environmental sustainability?



Graph 68

Why?

"Because it implements **practical and concrete measures**: it makes available to the citizens sufficient containers to deposit the sorted household waste, promotes the non-use of plastic bags on the market; placed water dispensing machines in municipal buildings to avoid plastic bottles, etc."

"There **have always been initiatives to favor environmental sustainability** and they are adapting and renewing over time."

Câmara Municipal de Cascais and The Citizen Analysis Key Takeaways

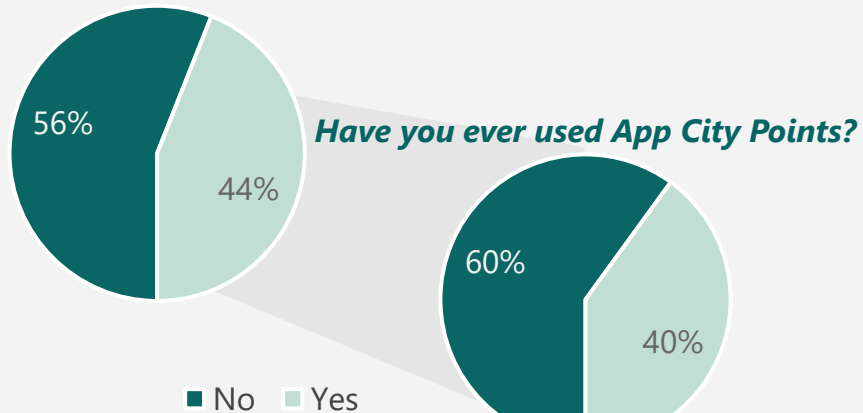
- Regarding the feeling of belongingness to the community, on a scale from 0 to 10, 5.79 was the mean value as there are mixed feelings along the community.
- The most used ways to find the appropriate services within all the services are either asking friends and family or browsing.
- Cascais' community feels that it is important to contribute to the development of the Municipality as, on a scale from 0 to 10, the mean value was 7.72.
- The population believes that CMC implements attitudes that promote environmental sustainability, since, on a scale from 0 to 10, the mean value was 7.18.

City Points is not ranked high by its users and most of the citizens do not know the App

APPENDIX E | CITY POINTS ANALYSIS

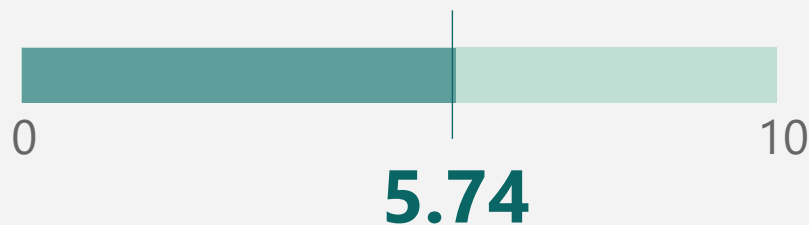
City Points' Awareness and Usage

Do you know the App City Points?



Graph 69, 70

City Points' Classification



Graph 71

City Points Analysis Key Takeaways

- 56% of people from Cascais does not know City Points.
- From the 44% who knows City Points, only 40% have ever used it.
- From those who used it, the mean value of City Points' classification was 5.74, suggesting there is room for improvement.

The survey sought which benefits most matter for a user in an App designed for local consumers. Further, the discounts that can be used either in the same store or in a different one are the benefits that most affect consumers

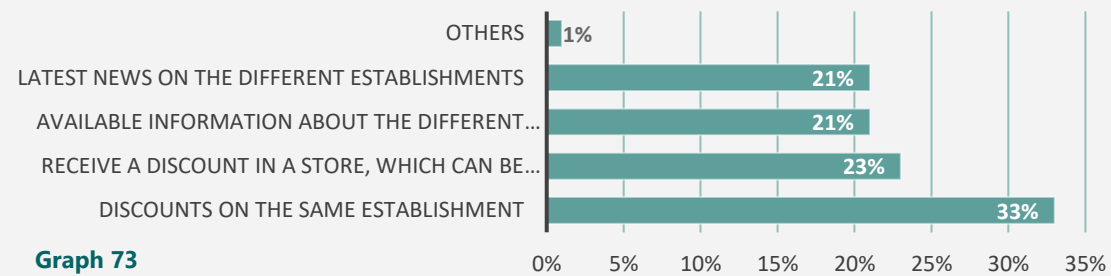
APPENDIX E | BENEFITS AND APP CHANGES ANALYSIS (I/V)

Exclusive application for the Municipality of Cascais that offers benefits in local shopping



Graph 72

What benefits are the most important to you as a user of that application?



Graph 73

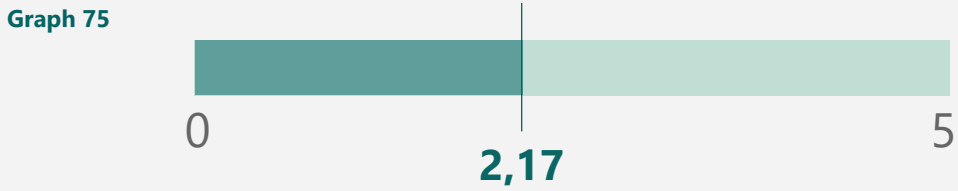
Would your predisposition to use this App change if these benefits did not exist?

Discounts on the same establishment



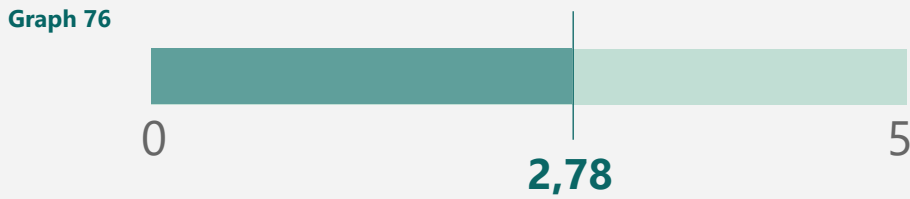
Graph 74

Available information about the different stores



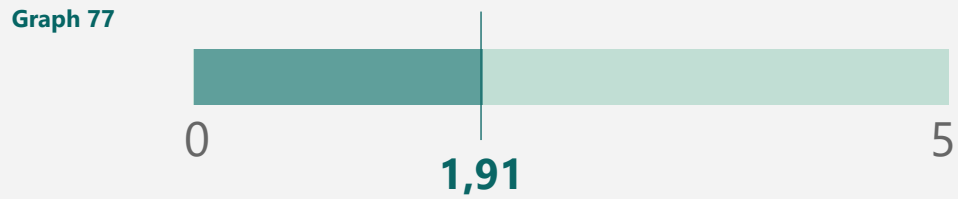
Graph 75

Receive a discount in a store, which can be used in another one



Graph 76

Latest news on the different establishments



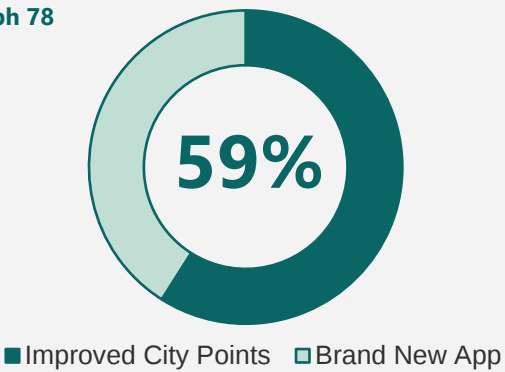
Graph 77

Also, the survey shows that citizens prefer an evolution of City Points with a digital points system that allows savings in purchases

APPENDIX E | BENEFITS AND APP CHANGES ANALYSIS (II/V)

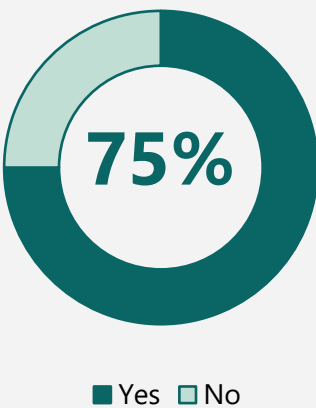
In which App do you prefer to enjoy the benefits?

Graph 78



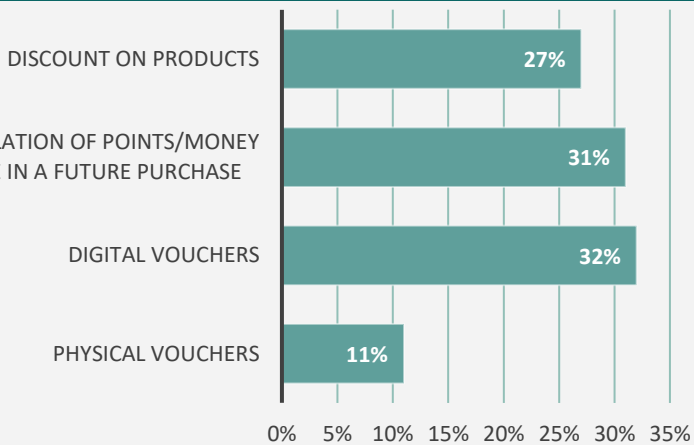
Digital points system (App) that allows saving in purchases

Graph 79



Preferable ways to benefit from discounts

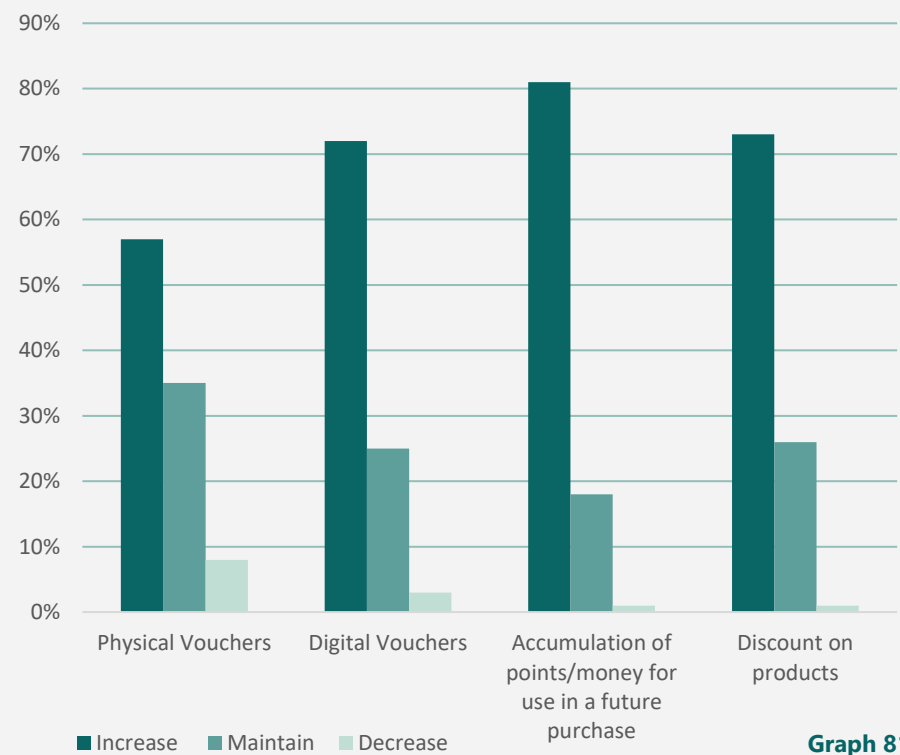
Graph 80



CASHCAIS was the elected name by Cascais' citizens

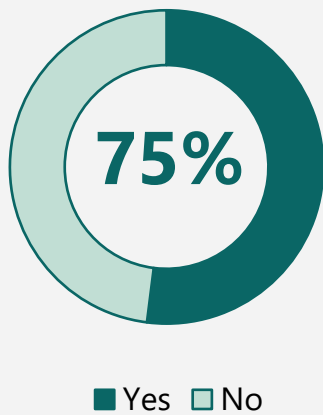
APPENDIX E | BENEFITS AND APP CHANGES ANALYSIS (III/V)

The impact of the existence of certain benefits on the amount of purchases in local businesses

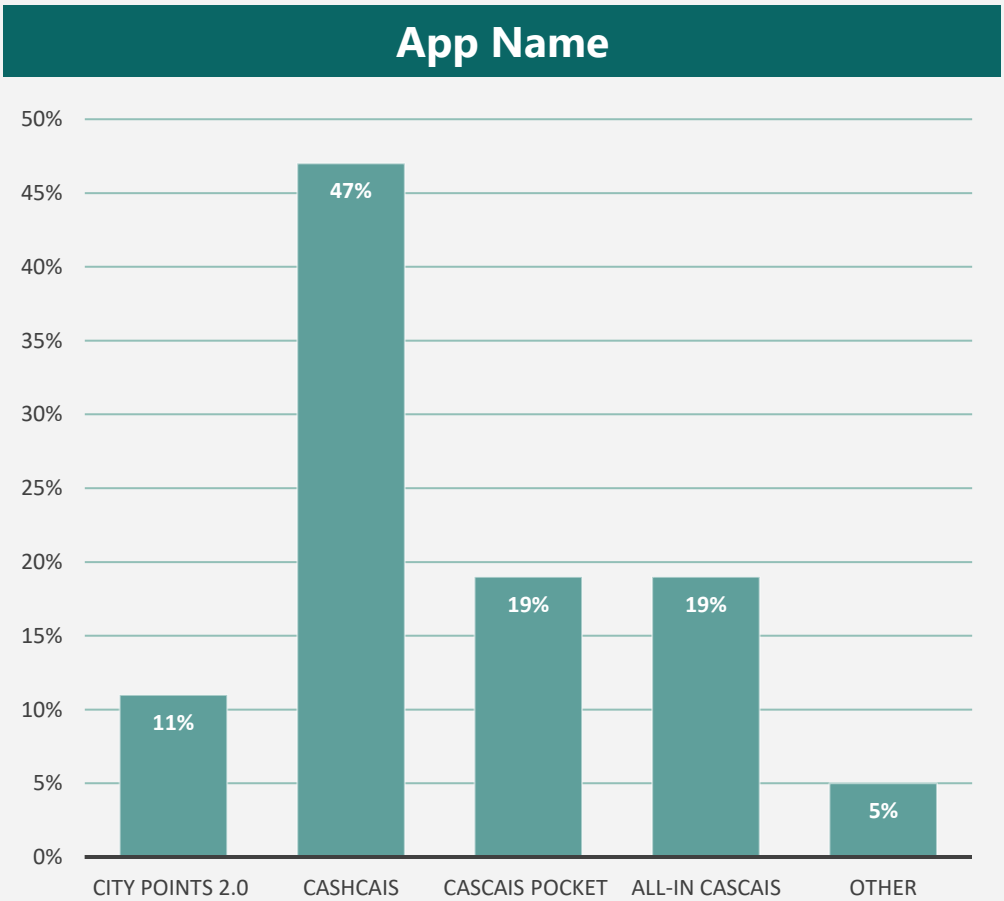


Graph 81

Increase purchasing power by exchanging euros for a local currency to exclusive use in local commerce



Graph 82



Graph 83

To sum up, Cascais' inhabitants are open to a renewed App that would benefit them as local consumers

APPENDIX E | BENEFITS AND APP CHANGES ANALYSIS (IV/V)

Benefits and App Changes Analysis Key Takeaways

-  Cascais' community believes that a local App to exclusive use in Cascais, which gives benefits to enjoy on local business can be useful, since, on a scale from 0 to 10, the mean value was 7.62.
-  The most valuable benefits to Cascais people are discount on the same establishments and receive a discount on a store which can be used in another establishment.
-  If these benefits did not exist in the App, most people would not use it. On a scale from 0 to 5, the mean value was 3.17 for the discounts on the same establishments and the mean value for receiving a discount, which can be used in another establishment was 2.78. As such, the predisposition to use the App is vulnerable to the existence or not of these forms of benefits.
-  Most Cascais' people would rather enjoy these benefits on an improved City Points rather than a brand-new App.
-  75% of the community of Cascais would use digital points system in a form of an App, which would permit saving in purchases.

Furthermore, they believe they would increase the number of purchases in local stores if digital vouchers and direct discounts are issued

APPENDIX E | BENEFITS AND APP CHANGES ANALYSIS (V/V)

Benefits and App Changes Analysis Key Takeaways



The most preferred forms to enjoy the benefits are digital vouchers (32%) , accumulation of points/money to use in a future a purchase (31%), followed by direct discounts on products (27%). On the other hand, the least preferred form is physical vouchers (11%).



Generally, the existence of these forms of benefits would increase the number of purchases in local businesses. However, 36% of Cascais' people claim that the number of purchases will maintain with existence of physical vouchers, 26% with direct discounts on products and 25% with digital vouchers.



75% states they would exchange Euros for a local currency to exclusively use in local businesses if it meant increasing the purchasing power.



As for the App name, the most preferred name is CASHCAIS (47%), followed by Cascais pocket (19%) and All-in Cascais (19%).

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Sustainability has four main pillars – environmental, social, economic and governance – through which the project relies on

APPENDIX F | SUSTAINABILITY PILLARS



To define a sustainable business there are several metrics that go from energy and water consumptions to the safety of the workplace

APPENDIX F | SUSTAINABILITY METRICS

Energy	❖ Energy consumption, kWh/year ❖ Energy use in offices, kWh/m2 ❖ Energy saved due to implemented improvements, %	Materials	❖ % of non-renewable materials ❖ % of recycled materials used ❖ Product recycling rate, % ❖ Packaging materials recycling rate, %
Water	❖ Water consumption ❖ % of water recycled ❖ % of water reused	Social	❖ Workplace safety ❖ % of innovations that include sustainability goals ❖ % of sustainability awareness training penetration
Waste	❖ Waste by type and disposal method	Management	❖ % of suppliers reviewed in the context of sustainability ❖ % of suppliers that comply with the established sustainability strategy
Emissions	❖ Toxic emissions ❖ CO2 emissions direct ❖ CO2 emissions indirect ❖ CO2 emissions from business travel per employee ❖ Nitric oxide emission ❖ Sulfuric oxide emission		

The sustainability journey is one of the criteria that categorizes companies in Cascais to define the support CMC will give them

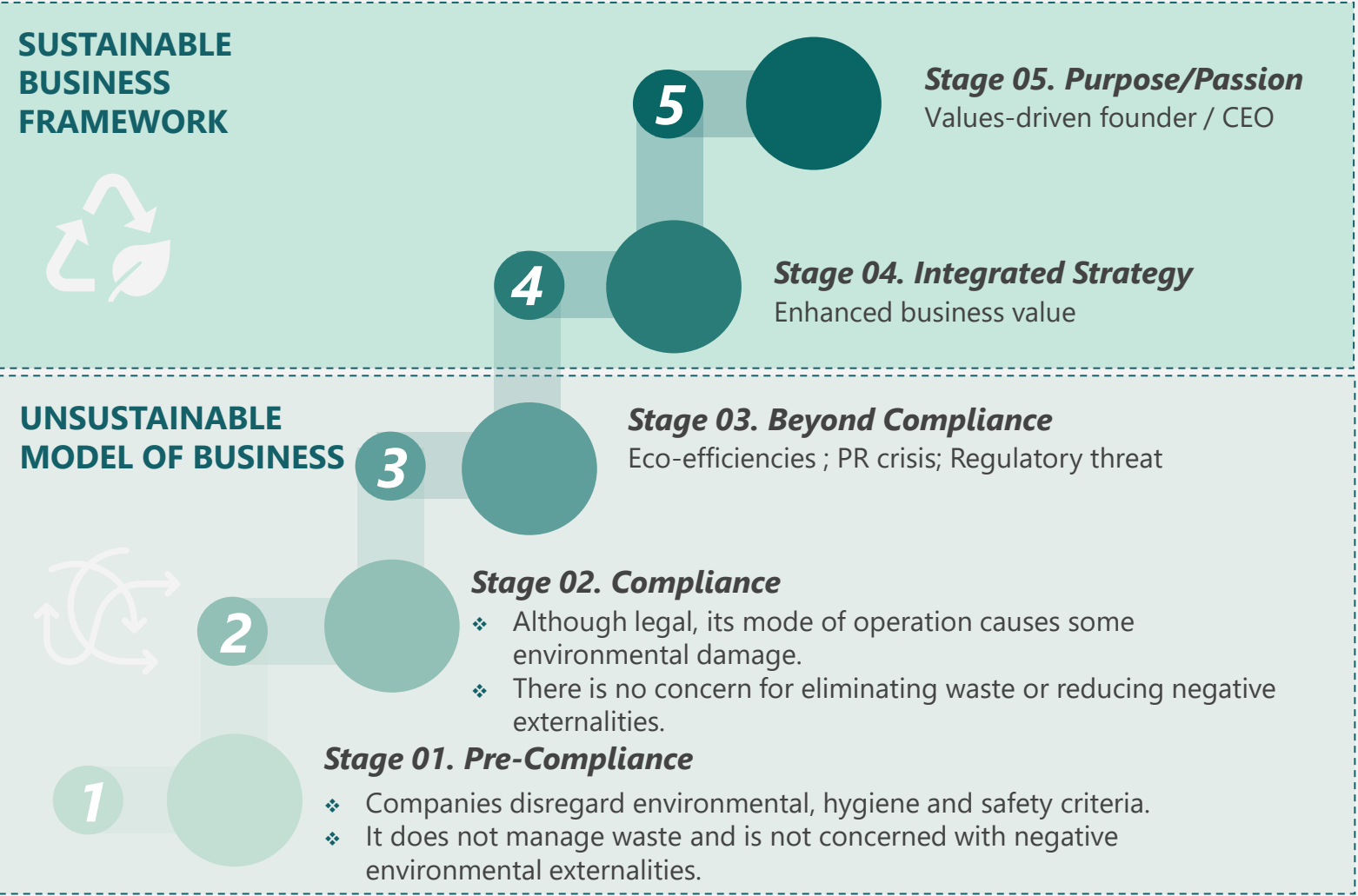
APPENDIX F | 5-STAGE SUSTAINABILITY JOURNEY

Why do companies might want to move from one Stage to another?

DO THE RIGHT THING

CAPTURE NEW OPPORTUNITIES

MITIGATE NEW RISKS



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Several blockchain models are being implemented in organizations, from which it is possible to highlight three – public, private and consortium models

APPENDIX G | BLOCKCHAIN TECHNOLOGY – MODELS

PUBLIC

- ❖ Decentralized
- ❖ Eliminates middle-man
- ❖ Accessible to all
- ❖ Not permissioned
- ❖ All transactions are checked and synchronized before they are entered into the system – less efficiency
- ❖ Completely safe
- ❖ Slow process that generates significant energy expenditures

PRIVATE

- ❖ Non-decentralized
- ❖ There is a control hierarchy, promoted by an entity that holds control
- ❖ The user inserts and checks a certain transaction - greater efficiency
- ❖ Very useful for business use, since it does not make your network open to the outsider

CONSORTIUM

- ❖ Decentralized between the different entities but compliant with certain rules and requirements
- ❖ Operates under the control of a group of equally powerful entities
- ❖ Maintains efficiency and allows beneficial cost reduction for an organization that wants to optimize communication between the various participants of the same sector

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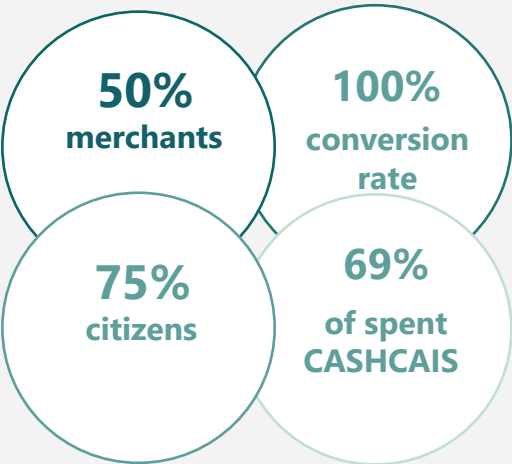
The cost projection involves the support CMC will give to local companies to face this crisis and to accelerate local recovery

APPENDIX HA | FINANCIAL IMPACT (I/II)

Cascais companies' turnover by activity				
Activity	2018	2019	2020	2021
Wholesale and retail	1 947 097 000	1 989 933 134	1 591 946 507	1 798 899 553
Accomodation and catering	485 589 000	496 271 958	240 691 900	321 263 513

Table 22: Cascais Companies' Turnover

Team estimates



Project costs for CMC		
Activity	< 10 employees	> 10 employees
Wholesale and retail	13 201 318	14 081 406
Accomodation and catering	2 357 609	2 514 783
Total	4 000 867	4 000 867*
		8 001 734

*Amount on issued vouchers is never higher than the amount of **CASHCAIS** for companies with less than 10 employees

Table 23: Project Costs

Several estimates and computations were made to get an accurate projection of the financial costs that the project may require to support

APPENDIX HA | FINANCIAL IMPACT (II/II)

COMPUTATIONS

Cascais companies' turnover by activity and year

- ❖ 2019 – based on Portuguese economic growth for the year (2,2%)
- ❖ 2020 – based on the breakdown of both specific activities due to the pandemic crisis (20% break in wholesale and retail and 51,5% break in accommodations and catering in Cascais)
- ❖ 2021 – based on the expected recovery after the resolution of the pandemic and a consequent return to normality (FMI expects a 6,5% growth)

Support given by CMC

- ❖ Based on information regarding Cascais companies with less and more than 10 employees, it was possible to compute the percentage of support given by CMC for those companies

Variables

- ❖ Merchants: an estimate of the percentage of companies that will adhere to the project
- ❖ Consumers/citizens: an estimate based on survey analysis
- ❖ **CASHCAIS** spent based on previous data regarding City Points. Only 69% of City Points earned were spent by users
- ❖ **CASHCAIS** conversion to Euros: it is expected that, in the long-term, all issued **CASHCAIS** are converted in Euros

Total cost

- ❖ They are the product of the supported costs multiplied by the four indicated variables

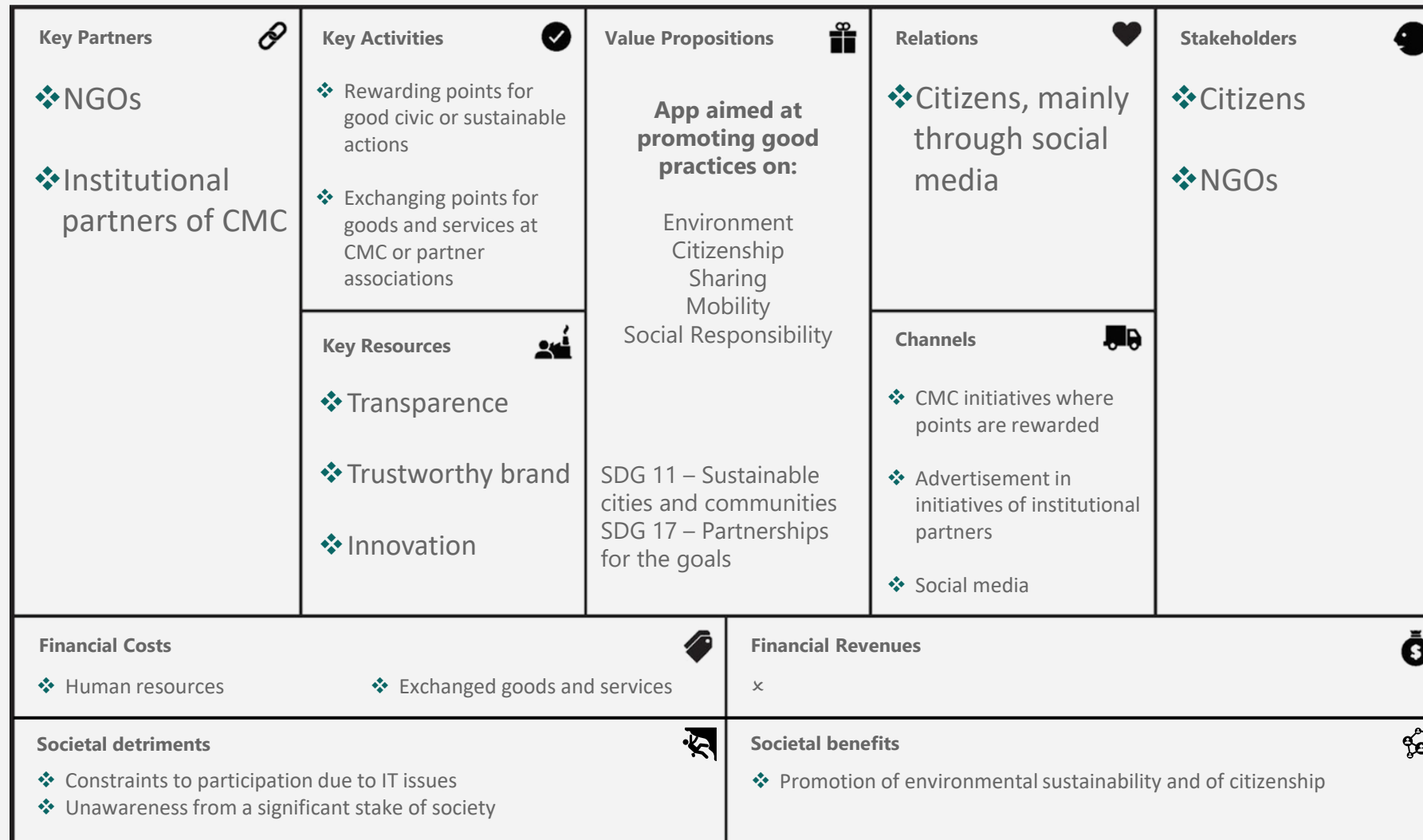
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In order to assess the current overview of City Points project and its social impact, it was drawn a Business Model Canvas

APPENDIX HB | BUSINESS MODEL CANVAS – AS IS



CITY POINTS

From the Business Model Canvas of the current situation of City Points, it was drawn a new model, in order to better understand the impact of the recommendations

APPENDIX HB | BUSINESS MODEL CANVAS – TO BE

Key Partners  ❖ NGOs ❖ Institutional partners of CMC ❖ Lidl, Continente, CascaisShopping and Pingo Doce ❖ AECC	Key Activities  ❖ Rewarding CASHCAIS for actions ❖ Earn CASHCAIS in local commerce ❖ Exchanging points for goods and services at CMC, partner associations and local businesses	Value Propositions  App aimed at promoting: Good civic and environmental practices, Support of families with financial vulnerability Local economic development SDG 11 and SDG 17 SDG 1, SDG 2 and SDG 10 SDG 8 and SDG 12	Relations  ❖ Citizens, through social media, exposure in partners and physical ads ❖ Local businesses, also through a commercial team	Stakeholders  ❖ Citizens and families ❖ NGOs ❖ Local businesses
Key Resources  ❖ Transparence ❖ Trustworthy brand ❖ Innovation ❖ Multi-tasking team	Financial Costs  ❖ Human resources ❖ Exchanged goods and services			
Financial Revenues  x		Financial Costs  ❖ CASHCAIS creation and future exchange for euros		
Societal detriments  x		Societal benefits  ❖ Promotion of environmental sustainability and of citizenship ❖ Support families and local businesses		



CITY POINTS



INTEGRATION OF CURRENT INITIATIVES (CARTÃO + SOLIDÁRIO)

UPGRADE TO CASHCAIS

SDGs are important to measure the impact recommendations will have in sustainability

APPENDIX HB | IMPACT – SUSTAINABLE DEVELOPMENT GOALS (I/II)



Figure 39: Sustainable Development Goals

The Municipality of Cascais has a clear commitment to adapting the local community to the objectives of sustainable development, in order to reach cities with less social asymmetries, greater growth and competitiveness and less negative environmental impact.

The current **City Points App** was awarded in the **2017 World Summit Awards for its digital innovation with impact in society**, contributing to:

- ❖ Involvement of citizens in transforming the community into a more sustainable place with a better quality of life;
- ❖ Promotion of common goals for social good, while promoting its services and product

A certain recommendation will impact a specific SDG while another one will have a different impact. The integration of 'Cartão Mais Solidário' impacts SDGs that weren't possible for the renewed App to impact without it

APPENDIX HB | IMPACT – SUSTAINABLE DEVELOPMENT GOALS (II/II)

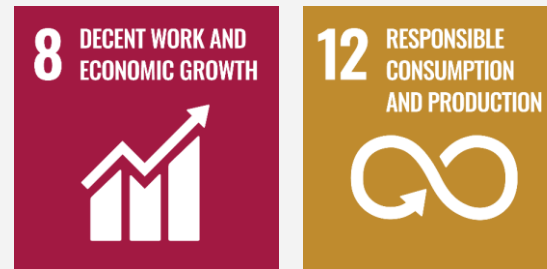
City Points

The current City Points App contributes to two SDGs and **CASHCAIS** will further contribute to them:



Expansion of the scope to businesses

Contribution to a sustainable promotion of local culture and products and to jobs creation:



Integration with other initiatives

Integrating initiatives such as 'Cartão Mais Solidário' will allow the concentration in one platform of direct answers to 7 SDGs:



CASHCAIS



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CMC, citizens and companies will be impacted in different ways. In fact, their points of interest are different, too

APPENDIX HC | STAKEHOLDERS ENGAGEMENT MAP

		Interests	Impact					
			1	2	3	4	5	U
 CÂMARA MUNICIPAL	CMC	• Promotion of Local Commerce					X	
		• Reduction of Social Asymmetries						X
		• Increase Environmental Sustainability				X		
	Citizens	• Economic Benefits					X	
		• Reducing the Environmental Footprint			X			
	Businesses	• Supporting Local Commerce					X	
		• Increase Revenues				X		
		• Social Responsibility		X				

1- Little or no impact; 2- Low impact; 3- Moderate impact; 4- High impact; 5- Very high impact; D- Unknown impact

Table 23: Stakeholders Engagement Map

KEY TAKEAWAYS

- ❖ **CASHCAIS** should have a positive impact on the majority of the interests of the different stakeholders.
- ❖ However, it should not have a large impact on the social responsibility of each firm as it heavily relies on the strategy of each business.
- ❖ Moreover, it is difficult to foresee the impact on the reduction of social asymmetries.

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The upgrade of City Points App allows to continue its blue ocean position

APPENDIX I | STRATEGY CANVAS

Main takeaways

The upgrade of City Points to **CASHCAIS** will allow the expansion of the blue ocean strategy in which City Points was already positioned. It is improving the response to every component, except the environmental one and the caused ecological footprint, since City Points already had a strong response to this matters.

Compared to the other best practices of local currency and loyalty programs Apps, **CASHCAIS** will address new and different citizens' demands, unique in the current strategic landscape as it is only partially addressed by the other Apps. As a matter of fact, besides from scale, **CASHCAIS** will have a response at least as better as one from a best practice case.



Graph 84

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The most important methods to accumulate CASHCAIS are the ones that weigh more, while the others will give consumers less CASHCAIS but will be important too to achieve other goals

APPENDIX J | HOW TO USE CASHCAIS AS A CONSUMER – SUMMED UP

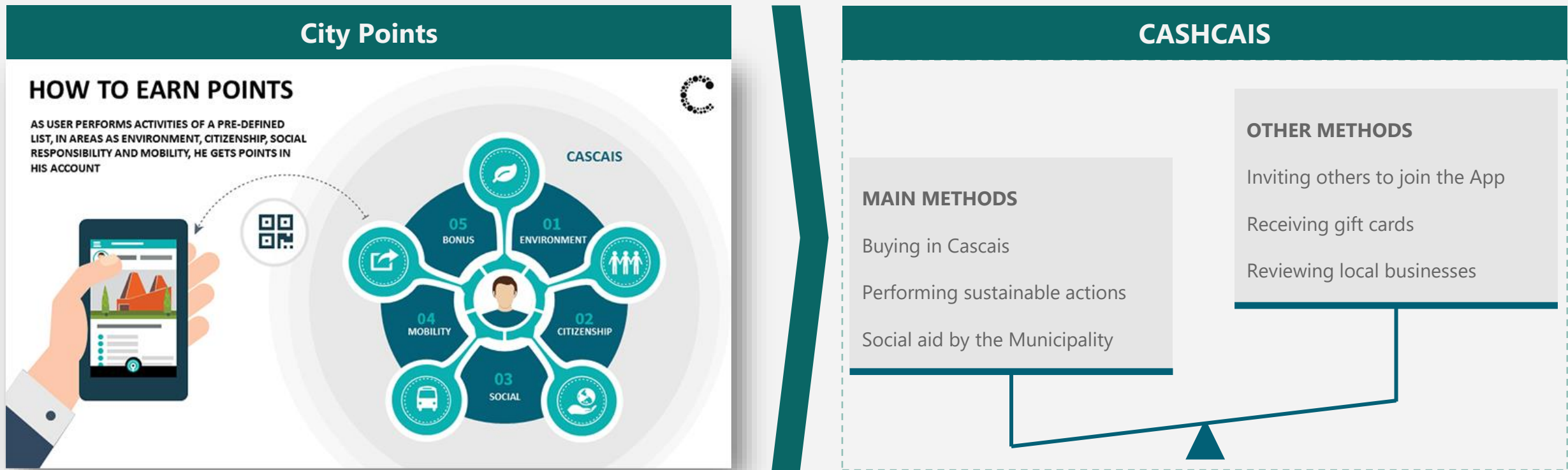


Figure 40: City Points

The City Points main characteristic of rewarding points for eligible behaviors will be maintained in CASHCAIS App

APPENDIX J | HOW TO USE CASHCAIS AS A CONSUMER – SUMMED UP

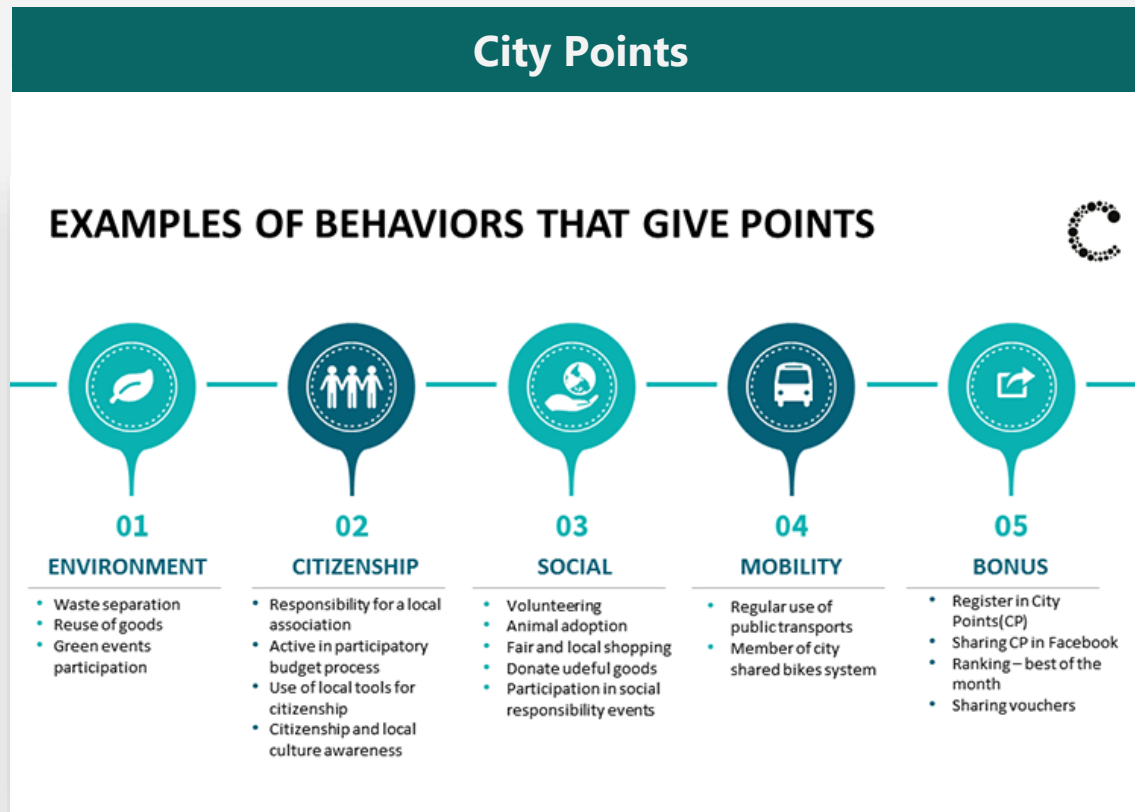


Figure 41: City Points

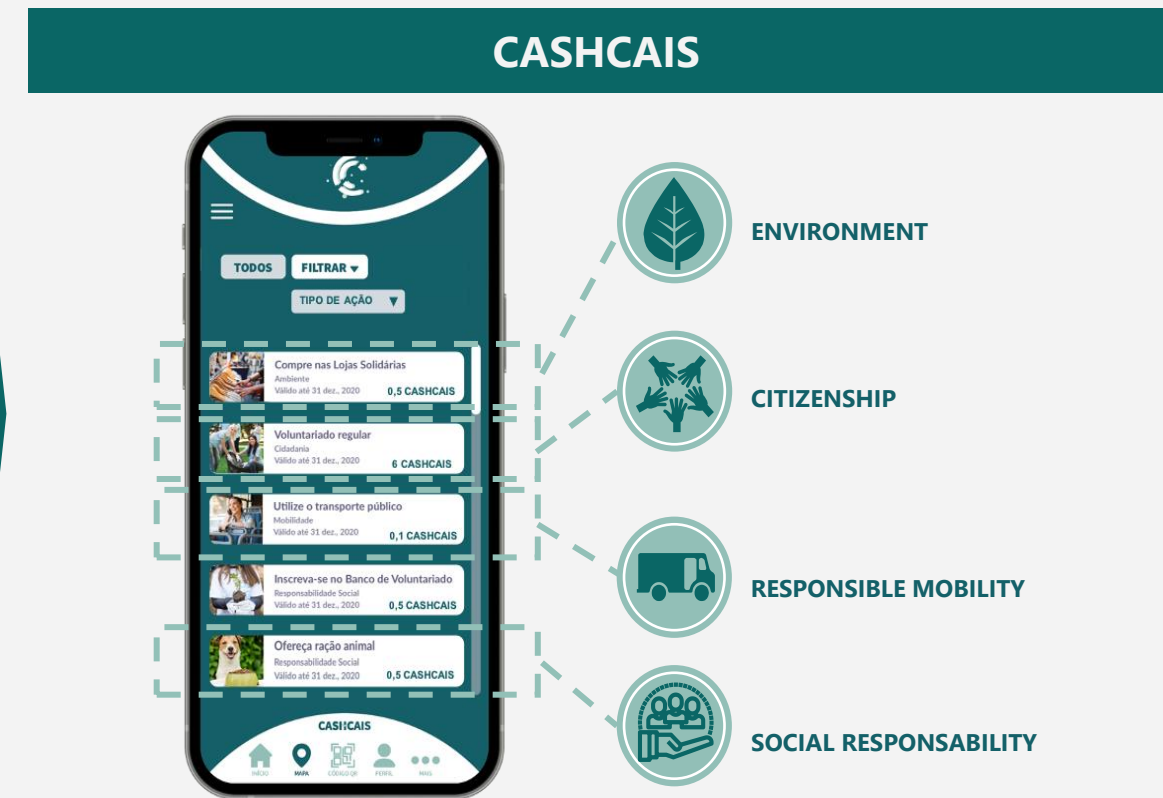


Figure 42: CASHCAIS App

The current method to spend points will be developed and the number of locations where to spend balance will be expanded

APPENDIX J | HOW TO USE CASHCAIS AS A CONSUMER – SUMMED UP

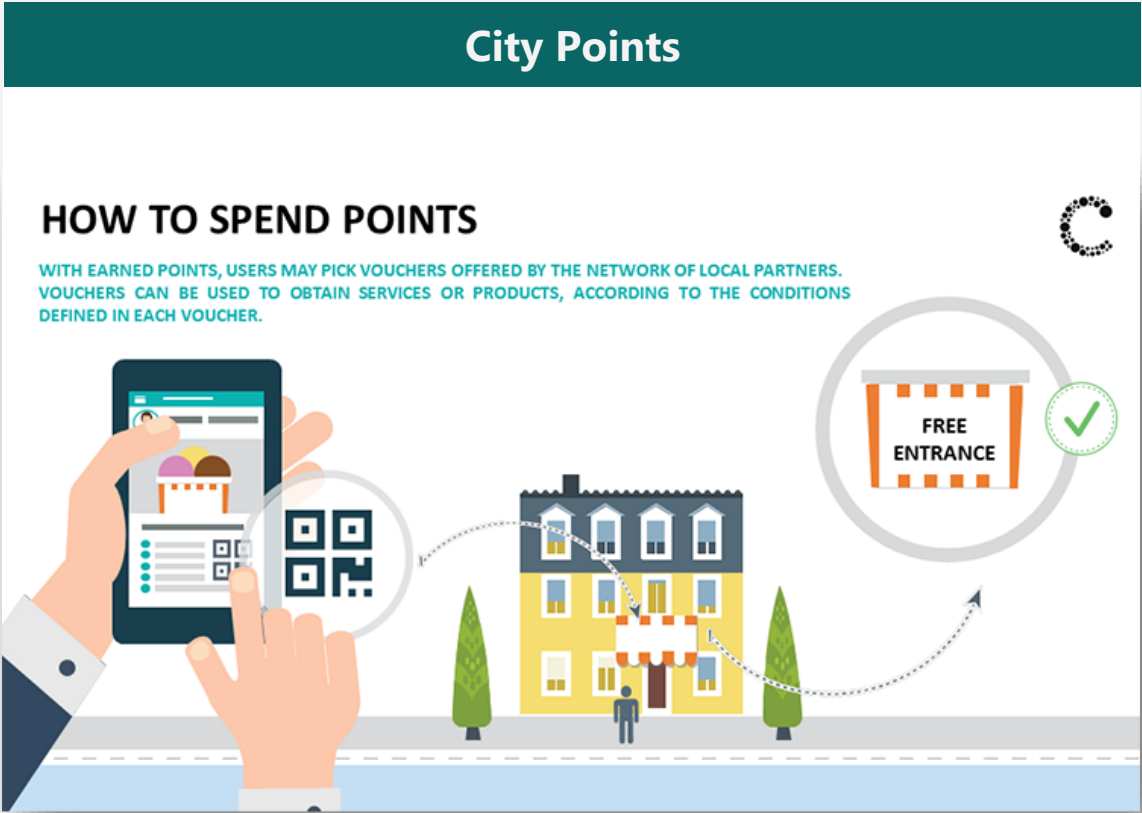


Figure 43: City Points



Figure 44: CASHCAIS App