Final Report

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Social Impact Bond
Academia de Código Bootcamps

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Executive Summary

The Academia de Código Bootcamps (ACB) SIB was part of the first edition of Social Impact Bonds (SIB) where outcome payments were contracted through Portugal Social Innovation (PSI), a Portuguese outcomes fund. This SIB was launched in January 2017 and implemented in the region of Fundão, Portugal.

The Academia de Código Bootcamps are implemented by CodeForAll, and their goal is to retrain unemployed individuals as computer programmers.

According to OneValue, an unemployed individual receiving unemployment benefits represents a monthly cost of €511 for Social Security. It is also estimated that Europe has a shortage of approximately 900,000 professionals in the field of information and communication technologies (ICT), with 15,000 missing in Portugal alone. The Academia de Código Bootcamps intervention focuses on this mismatched demand and supply, allowing its students to radically change their professional paths.

ACB SIB investors included the Associação Shared Services & Outsourcing Platform (ASSOP) and the Calouste Gulbenkian Foundation (CGF). The service providers were CodeForAll (responsible for the project's implementation in the field) and MAZE (responsible for the project's monitoring and performance management). The entity responsible for outcome-based payment and investor reimbursement was Portugal Social Innovation. The public entity responsible for monitoring the project was the IEVT (the national Institute of Employment and Vocational Training).

The ACB SIB worked with 174 unemployed individuals, divided into 9 Bootcamps with 18 to 20 students each. The contracted outcome was the entry into employment of 11 students per Bootcamp. This project required an investment of around €683,700.00, about €40,000.00 below what had been initially budgeted. Investors were reimbursed for approximately €646,370.00 for delivered outcomes.

The present report summarizes the main events and most relevant learnings acquired throughout the project's three year's implementation.

How did the intervention go? The Academia de Código Bootcamps SIB delivered all its contracted results, providing labour market entry for a minimum of 11 students per Bootcamp, within the contracted period.

How did the partnership work out? Investors played a very active role in supporting the project, in addition to the cash advancement. The support of the entire consortium of partners was both operational and strategic.

How did the financial reimbursement process take place? The SIB financing mechanism within the context of PSI, implies highly complex bureaucratic processes. Financial reporting occurs upon approval of expenses, after outcome delivery is validated. The implications of this mechanism led to the restructuring of the SIB's financial model, putting considerable cash flow pressure on investors and service providers.

How can the response to young unemployed or underemployed people be improved? Improving this response will demand increased focus on results, working closely with companies and assessing their needs, making training models and their respective content more flexible, and investing in skills on high demand in the labour market, such as computer programming.

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Acronyms and abbreviations

ACB	Academia de Código Bootcamps
AEP	Active Employment Policies
ASSOP	Associação Shared Services & Outsourcing Platform
CGF	Calouste Gulbenkian Foundation
CV	Curriculum Vitae
ICT	Information and communication technologies
IEVT	Institute of Employment and Vocational Training
MAZE	MAZE Impact S.A.
OP ISE	Operational Programme for Social Inclusion and Employment
PSI	Portugal Social Innovation
RC	Request for Clarifications
RR	Reimbursement Request
SIB	Social Impact Bond
SSI	Social Security Institute

Introduction

The Academia de Código Bootcamps integrated the first edition of Social Impact Bonds (SIBs) where outcome payments were contracted through Portugal Social Innovation.

A Social Impact Bond (SIB) is a type of outcome-based contract which uses financing from social investors to cover the implementation costs of a certain intervention, in this case, the Academia de Código Bootcamps. Alongside private partners, the public sector establishes concrete and measurable outcomes, with investors being reimbursed if, and only if, those outcomes are delivered. The SIB occurred in Fundão, between January 2017 and April 2020.

The ACB SIB was financed by the Associação Shared Services & Outsourcing Platform (ASSOP) and by the Calouste Gulbekian Foundation (CGF). The Academia de Código SIB worked with 174 unemployed individuals, divided into 9 Bootcamps with 18 to 20 students each. The contracted outcome was the entry of 11 students into employment per Bootcamp.

How did the intervention go?

Quick Reply

The Academia de Código Bootcamps SIB achieved all its contracted outcomes, integrating a minimum of 11 students in the labour market, within the contracted period, for all Bootcamps.

Photo by Code For All

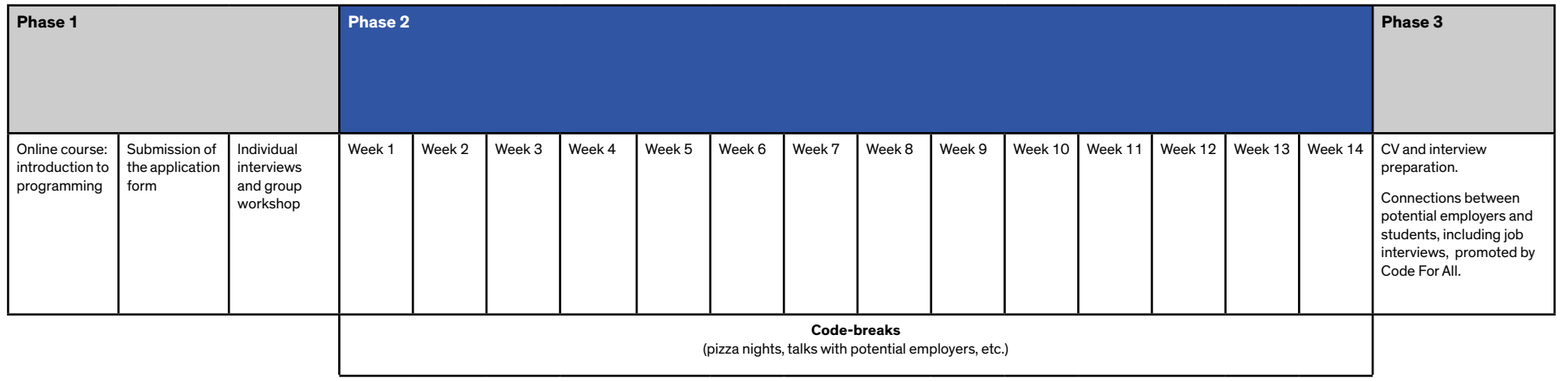
Intervetion

Methodology

CodeForAll is responsible for the development and implementation of the Academia de Código Bootcamps (ACB) intervention, an intensive computer programming training programme. The main goal of the intervention is that participants enter the labour market as programmers within 3 to 4 months after concluding the Bootcamp.

The intervention is divided into three key moments: "Selection", "14-week Bootcamp" and "Labour market entry".

Figure 1 Structure of the intervention. Academia de Código Bootcamps Source: MAZE and Code For All



Phase 1- Selection:

The Academia de Código attributes great importance to the selection phase:

1. **To apply, students must attend a free online course: introduction to programming.** This phase is used to provide candidates with basic knowledge and guarantee they are sufficiently motivated to participate in the intervention;
2. Students who complete the online course are invited to fill in **the application form, which retrieves information on their profile and motivations;**
3. From the submitted applications, **approximately 30 candidates are selected for individual interviews and a group workshop** that simulates a day at a Bootcamp.
4. **From the 30 final candidates, 18 to 20 students are selected to join the Bootcamp,** based on their performance in the interview and during the workshop. .

Phase 2 - 14-week Bootcamp

Bootcamps last 14 weeks and take place 5 days a week, 8 hours a day. The intensity of the intervention allows a great deal of technical knowledge to be passed on, but it also works as a stimulus for the participants´ self-esteem, motivation and work capacity.

The Bootcamp´s technical contents are generally organized in four modules:

5. **Java programming;**
6. **Advanced concepts and tools;**
7. **Database, Frameworks, and Web Development;**
8. **Frontend Javascript programming.**

The programme's contents were progressively adjusted throughout the project to better reflect labour market needs and the students´ learning experience.

Besides the technical programme, Code For All organizes various Code Breaks during the Bootcamp. Code Breaks are informal moments that include activities such as pizza nights and talks with potential employers.

A code marathon (Hackaton) is also held for each Bootcamp, challenging teams of students to develop technological solutions within a 48-hour deadline, with the support of qualified professionals.

Phase 3 - Labour market entry

The support provided by the Academia de Código is adapted to each student's needs and demands, generally including assistance for CV and interview preparation. Code For All promotes connections between potential employers and students. The relationship between students and enterprises is encouraged from the beginning of the Bootcamp, through the Code Breaks and the Hackaton.

"Typically, a class will have one teacher for a group of 20 people. We have 3 full-time. What`s the reason for this? It's simple, it's focused on our goal. We don't want unevenness, and we don't want one half the class to be behind the other half. We have a very ambitious model, where we try to transform a person without an IT background into a programmer within 14 weeks. Our bootcamp is very intensive and very immersive: 14 weeks, 10 hours a day, with many projects being conducted out of hours on a daily basis. Every day brings a huge amount of knowledge, and no one can start the next day with doubts or questions. We have 3 teachers, and each student is followed individually, both during class time and out of hours. If someone is falling behind and needs help to move on to the next day without any doubts, because some students find it harder than others, there is a teacher who stays until midnight to answer any questions"

André Machado, Academia de Código COO and Business Development Director
October 2020

Intervention

Schedule

In this Social Impact Bond, the Academia de Código sequentially implemented 9 Bootcamps, in Fundão, between January 2017 and December 2019. Each Bootcamp had between 18 and 20 students, a total of 174 unemployed individuals.

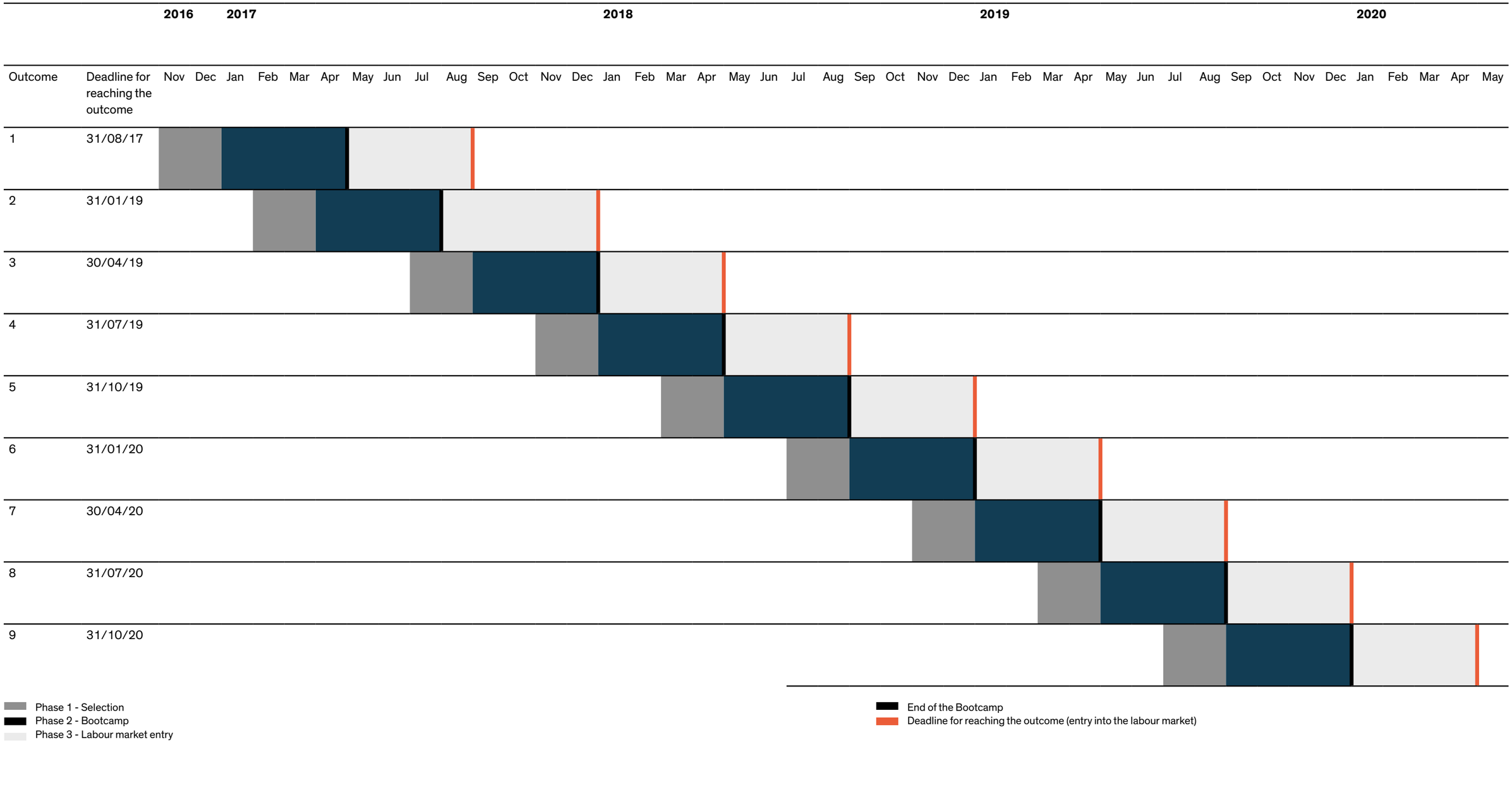


Figure 2 SIB execution schedule. Academia de Código Bootcamps. Source: MAZE

Data Analysis

Participant profile

Between January 2017 and December 2019, a total of 174 participants passed through nine ACB SIB Bootcamps. While the first five Bootcamps had 20 participants each, Bootcamps 6 to 9 had 18 or 19 participants. The downsizing of classes in comparison to the initial proposal happened mainly because of the candidates' characteristics. The team of instructors notified project managers that, due to the high number of students in need of extraordinary individual support to keep up with the programme, classes with more students would not be sustainable.

In the application, it was established that the programme was aimed for people up to 30 years old. However, the standard and quality of candidates led Academia de Código to accept many older students. An individual explanation was presented to Portugal Social Innovation (PSI) regarding each student over 30 years old.

The participants of the 9 Bootcamps had an average age of 29 when entering the programme. Bootcamps 3 and 6 were the youngest and oldest, respectively.

Amongst all participants, 16% were female, reflecting a general tendency for asymmetric gender distribution in the field of computer programming. However, there was only one Bootcamp with no female participants.

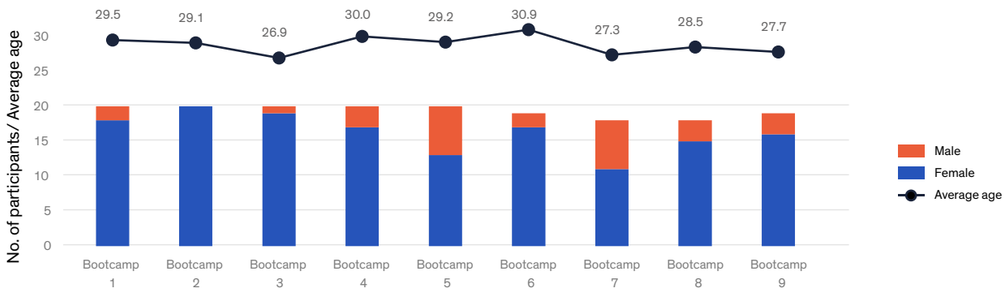


Figure 3 Participants' average age and gender distribution, per Bootcamp. Source: MAZE, from application forms shared by Code For All.

Around 60% of participants were residing in the central region of Portugal at the time of their application, with all others relocating from other areas of the country to participate in the programme.

The predominance of participants from the central region is not surprising, since the Bootcamps took place in Fundão. It is also relevant to mention that 40 students relocated from the Lisbon and Tagus Valley Region to participate in the Bootcamp, a movement which goes against the general trend of internal migration in Portugal and is in line with the national hinterland development goals.

Around 64% of all participants had attended university, 34% of which had completed a bachelor's degree and 16% a master´s degree. Around 35% of students had secondary or lower academic levels.

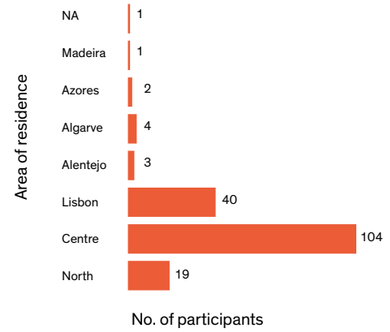


Figure 4 Participants by area of residence. Source: MAZE, from application forms shared by Code For All.

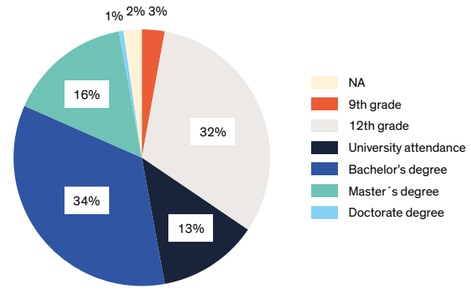


Figure 5 Participants by educational attainment Source: MAZE, from application forms shared by Code For All.

It was established in the application that the project would be focused on young people with higher education. However, similarly to what happened with the age criterion, there were many candidates with strong profiles but without higher education. With this in mind, Academia de Código selected a few candidates without higher education, presenting an explanation for each situation to PSI.

Amongst participants with university experience, around 20% studied engineering. In total, about 44% studied exact sciences and life sciences. Around 32% of the participants studied social sciences. Close to 11% of participants studied arts & performance and 4% studied humanities, including languages, philosophy and archaeology.

The diversity of education profiles amongst the Bootcamps' students corroborates the versatility of the programme and its team of instructors, as well as the potential programming has to change professional paths, regardless of each participant's background.

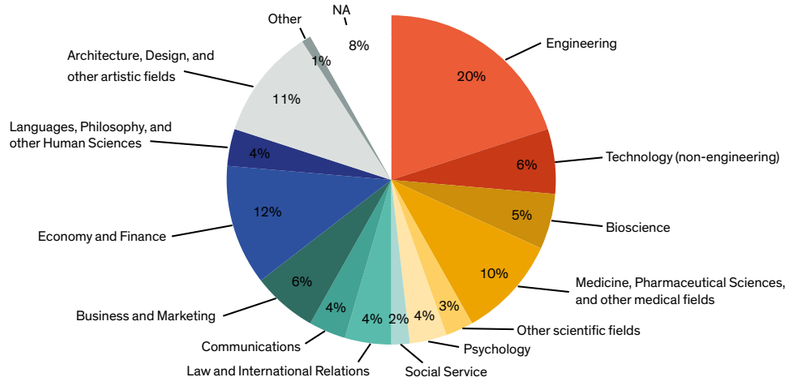


Figure 6 Participants who attended or attend higher education, by area of study.
Source: MAZE, from application forms shared by Code For All.

> "We have no prejudice, and it doesn't matter if the person only completed year 9 or has a PhD. What does matter is that the person shows logical ability, willingness to learn, and above all, strong motivation to change paths, because that's what will make a difference. What happens is that on average we approve 10% of our candidates."
>
> **André Machado, Academia de Código COO and Business Development Director**
> October 2020

“The bootcamp gave me a great mindset to believe in myself and get it into my head that I can do it.”

“The ability to get to know myself better, and be able to think I'm capable of doing something when I set my mind to it . Before I entered the bootcamp, I didn't have that awareness. I looked at certain things, such as programming and would say: “I can't, I can't, I'll never be able to learn this”. After concluding the Bootcamp, I can now understand, if I want, I can do the most ridiculous and complicated thing... if I want to. The bootcamp gave me a great mindset to believe in myself and get it into my head that I can do it.”

Fundão Bootcamp participant

October 2020

Bootcamp Performance

During Bootcamps students are evaluated by their respective instructors in three categories: soft skills, technical skills and dedication. These variables were determined by the Academia de Código instructors in order to pedagogically assist students. There were a few adjustments made to the evaluation methodology throughout the duration of the Bootcamps, including the scale and frequency with which students are evaluated. These changes were made by suggestion of the team of instructors, who considered more frequent and granular evaluations to be relevant and necessary.

It is important to underline that the scoring attributed by instructors is relative. Students are evaluated in terms of their performance in previous weeks, as well as their classmates´ performance, which makes comparisons between Bootcamps a difficult task to accomplish. Anyhow, a few patterns in the students´ performances can be observed.

Performance Evaluation			
Evaluation categories	Soft skills Technical skills Dedication		
Evaluation scale for each category	3 levels: Highly satisfactory Satisfactory Highly unsatisfactory	5 levels: Highly satisfactory Quite satisfactory Satisfactory Unsatisfactory Highly unsatisfactory	5 levels: Highly satisfactory Quite satisfactory Satisfactory Unsatisfactory Highly unsatisfactory
Frequency of evaluation	Fortnightly	Fortnightly	Weekly
Bootcamps	Bootcamp 1 Bootcamp 2	Bootcamp 3	Bootcamp 4 Bootcamp 5 Bootcamp 6 Bootcamp 7 Bootcamp 8 Bootcamp 9

Figure 7 Performance evaluation methods and their evolution throughout the project, per Bootcamp. Source: MAZE

Technical Skills

The students' technical performance tends to improve as the Bootcamp progresses. This trend is observed despite the programmatic content's increase in rhythm and difficulty over the course of the Bootcamp. The team of instructors emphasizes that the Bootcamp's dynamic nature prepares students for the demands and rhythm of the labour market.

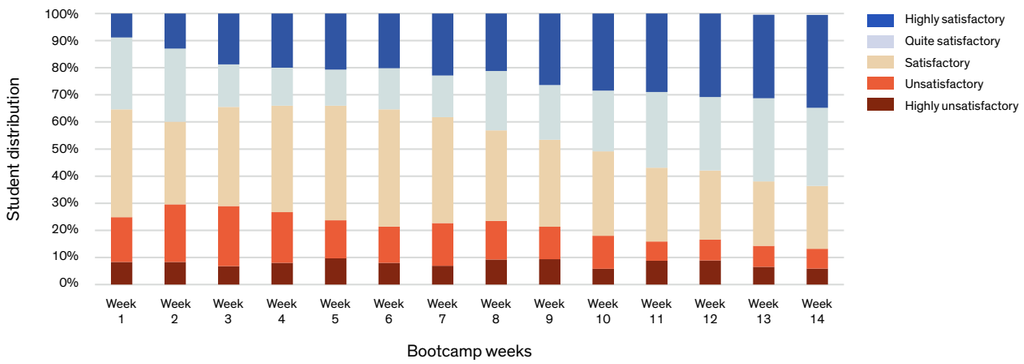


Figure 8 Trend of the average evaluation distribution regarding technical skills (Bootcamps 1 to 9).
Source: MAZE, sourced from data shared by Code For All via AidHound.

Soft skills

Two different patterns can be observed concerning soft skills. On one hand, most students tend to improve over the course of the programme, working on issues such as shyness, stress management and conflict management. However, there is a minority of students whose soft skills tend to deteriorate, potentially as a direct result of the programme's high level of pressure and pressing requirements. As the programme moves forward, it becomes more and more clear if a student's personality is not compatible with the profile of a computer programmer. The fact that these situations represent a minority validates Academia de Código's selection process.

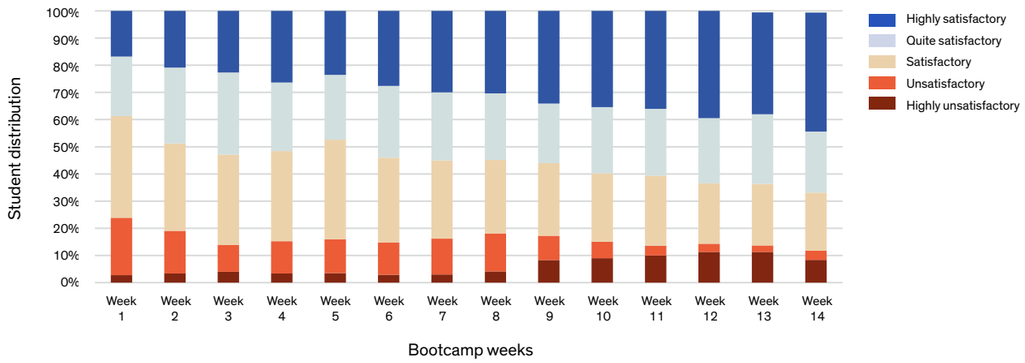


Figure 9 Trend of the average evaluation distribution regarding soft skills (Bootcamps 1 to 9).
Source: MAZE, sourced from data shared by Code For All via AidHound.

Dedication

Dedication is the category with the most variable progression between Bootcamps. On average, the number of participants with a highly satisfactory level of dedication tends to increase during the first half of the Bootcamp and stabilize during the second half.

It is worth noting that there were Bootcamps where dedication reached its peak halfway through the programme and descended again slightly in the last few weeks. This pattern could be the result of built-up fatigue taking its toll during the last stretch of the programme, and the fact that students start focussing on entering the labour market.

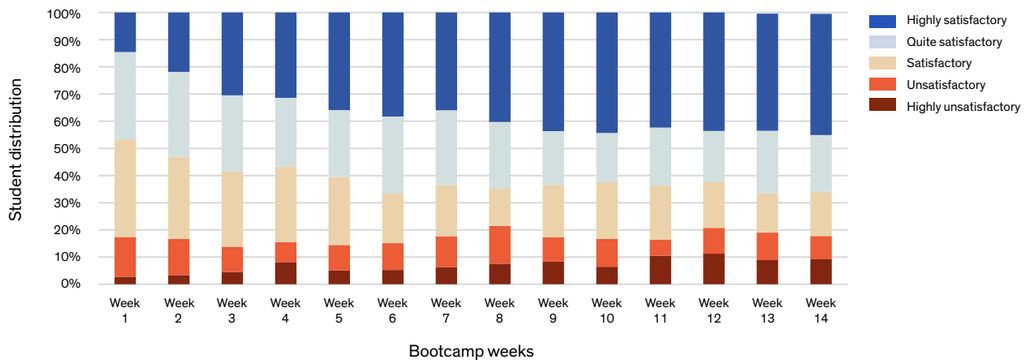


Figure 10 Trend of the average evaluation distribution regarding dedication (Bootcamps 1 to 9).
Source: MAZE, sourced from data shared by Code For All via AidHound.

"It was the hardest thing I've ever done in my life. It's very intense, we can't expect to have time to do anything else. There are always things to do, to study. Every day we had to present a summary of the previous class. We also had to make presentations about important people in the field or new technologies, all this besides the classes. It really is very intense. That's three and a half months where you forget everything else. But for me the effort was worthwhile. In addition to learning a new profession, I think I've also grown a lot on a personal level, because it takes a lot of willpower, a lot of resilience and a lot of teamwork."

Fundão Bootcamp participant
October 2020

Contracted outcomes

- To prove compliance with the contracted outcomes, Academia de Código retrieved 124 contracts over the course of the SIB. Approximately 70% of the retrieved contracts are open-ended or indefinite (two terms used interchangeably to refer to contracts that do not have a pre-established time-limit), reflecting the stability of the career opportunities promoted by the intervention.
- The average salary considered in the retrieved contracts is €887. In most cases, this is an entry-level salary.

Note that:

- in Portugal, workers receive the above-mentioned amount 14 times a year (holiday and Christmas allowances are added to the 12 months of work), and;
  - in 2017, 2018, and 2019, the average gross monthly base salary in Portugal was €943, €970, and €1005[1], respectively.
  - the referred amounts only represent the gross monthly base salary and do not include other incomes, such as meal allowance.

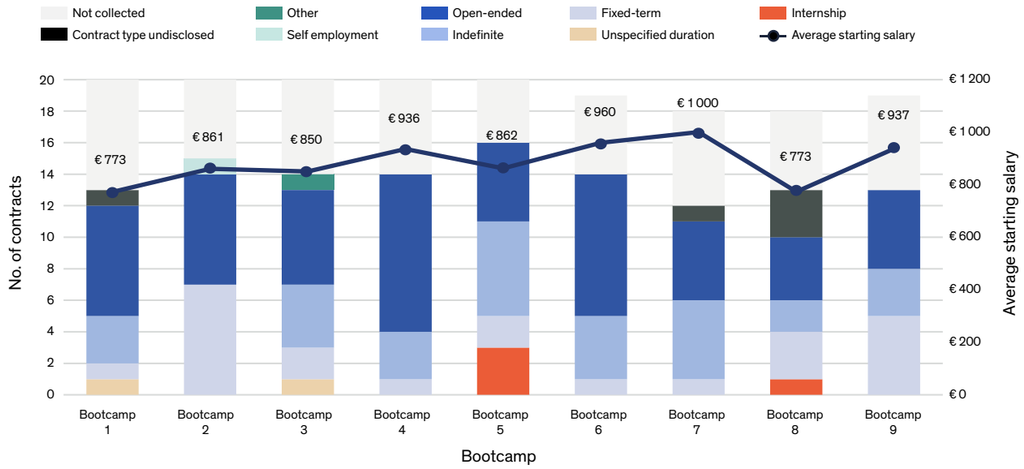


Figure 11 Contracts retrieved per Bootcamp, per type of contract and average salary per Bootcamp.
Source: MAZE

Around 50% of students, for whom work contracts were retrieved, were hired by Altran and DXC Technology. The remaining retrieved contracts are distributed between other employers, including Code For All itself, which hired four SIB students as instructors. PSI did not consider contracts signed with Code For All eligible for outcome purposes.

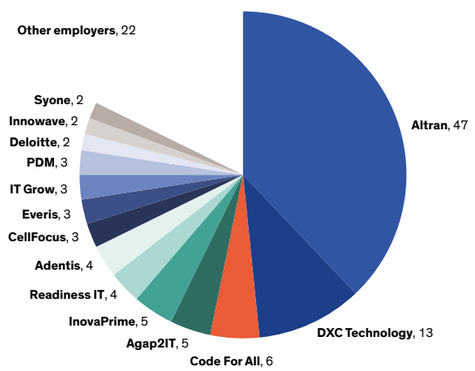


Figure 12 Percentage of contracts retrieved per employer.
Source: MAZE

1. PORDATA, 2021

"I would never be working at Altran if it weren't for Academia de Código. I wouldn't be in Fundão, I don't know where I'd be. I don't know if I'd be working at all. I was tired of living at my parents' house. I'd finished my degree in 2011 and had been at my parents' house for 7 years, waiting to find a proper job. It was a turnaround in my life and I owe it all to the Academia de Código."

Fundão Bootcamp participant
October 2020

In line with the goal of the intervention, the outcome indicator established for the SIB was the entry of unemployed individuals into employment.

This indicator is aligned with one of the Portuguese government´s priorities, identified by PSI: boosting the (re)entry into employment of unemployed citizens, especially those belonging to younger age groups and affected by long-term unemployment, fostering vocational retraining in areas in demand on the labour market, such as ICT.

At the time of the application, each Bootcamp was to have 22 participants, of which at least 11 should enter the labour market within the established dates. However, all Bootcamps had less participants than predicted. The first five Bootcamps had 20 participants, and the following ones counted with 18 to 19 participants. It is important to mention that, despite the actual size of classes, the contracted goal was set at 11 participants, so smaller classes represented an increased risk of non-compliance with the contracted outcome.

The project delivered all nine contracted outcomes.

Contracted outcome for all nine Bootcamps:

Entry into employment of a minimum of 11 students, within the deadline established in the application

(3 to 4 months after the end of Bootcamp). The outcome is considered valid when it is verified that students were unemployed at the time of admission.

All outcomes were delivered.

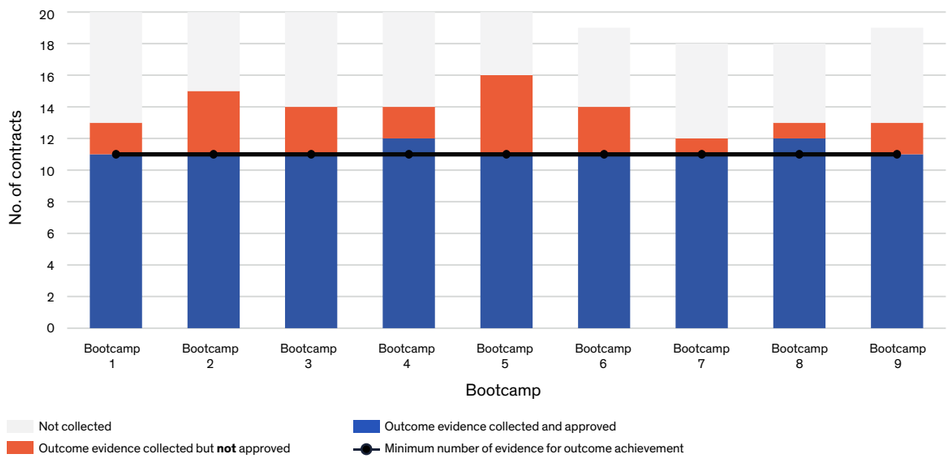


Figure 13 SIB contracted outcomes Source: MAZE

Reasons for the ineligibility of evidence regarding labour market entry	
No. of cases	Situation description
8	No proof of unemployment was provided.
6	The contracts presented were signed with Code For All, which is an implementing entity, and therefore considered ineligible.
4	The contract presented is an internship contract.
2	The employment contract was signed outside the period established for outcome delivery.
1	The participant presented proof of labour market entry not signed by the participant himself/herself.
1	The participant presented a doctoral scholarship which was not considered eligible.
1	The participant presented proof of registering the beginning of his/her professional activity as an independent worker with the IRS.

Although all outcomes were delivered, the success rate was very close to the minimum limit.

The difficulty in delivering outcomes is a structural feature of a social impact bond, which illustrates that the established goals are ambitious and reveal great potential for change.

However, we have considered it relevant to point out some of the main critical factors identified:

The need to present proof of unemployment: there were various cases in which Code For All retrieved work contracts for students who had not presented proof of unemployment. This formality led to a few hired students not being considered for the outcome, and is the main explanation for the asymmetry between the 124 contracts retrieved (see figure 11) and the 101 contracts considered for the outcome (see figure 13).

Ambiguous situations: many ambiguous situations arose where it was unclear if the evidence would or not be considered eligible, such as: participants hired by Code For All; participants who registered the beginning of their professional activity as independent workers with the IRS; participants with internship contracts and entry into employment taking place 1 and 2 days after the deadline. These situations were evaluated by PSI case by case.

Difficulty in obtaining evidence: an increase in participants' concern regarding the protection of their data was felt. In some cases, this became an obstacle to obtaining work contracts, which constitute proof of outcome delivery.

Changes in the region's biggest employers' hiring policies: in 2018, some international companies established in Fundão changed their hiring policies, limiting job opportunities to people with a bachelor's degree and, in some cases, a master's degree. This new policy affected the hiring rate amongst students from the Academia de Código Bootcamps. It is important to point out that, according to the representatives of those same enterprises, this policy was established through central decision-making and was not aligned these enterprises' very positive experience with ACB SIB alumni.

Bootcamp downsizing: initially, each Bootcamp was predicted to have 22 students, reflecting the goal of 11 participants within a 50% success rate. In reality, every Bootcamp had less than 22 participants, which increased the success rate needed to deliver the outcome to numbers between 55% and 61%.

Incentive created by the outcome: the outcome established for this SIB was the employment of 11 participants per Bootcamp. No financial incentive was determined in case this number of contracts was surpassed. For that reason, once the evidence for 11 participants of a certain Bootcamp is retrieved, the incentive to assign the resources necessary to obtain additional evidence is low.

What were the dynamics of the SIB partnership?

Quick Reply

Investors played a very active role in supporting the project, in addition to the capital advancement. The consortium's support was also operational and strategic, especially from MAZE and the Institute of Employment and Vocational Training.

The Social Impact Bond

Structure

A Social Impact Bond (SIB) is a type of outcome-based contract which uses financing from social investors to cover the implementation costs of a certain intervention, in this case, the Academia de Código Bootcamps. Alongside private partners, the public sector establishes concrete and measurable outcomes to be achieved, with investors being reimbursed if, and only if, those outcomes are delivered.

In the case of the Academia de Código SIB, the project was funded by ASSOP and the Calouste Gulbenkian Foundation. This financing covered the costs regarding the implementation of the Academia de Código Bootcamps by Code For All, and the performance management tasks carried out by MAZE.

Upon outcome delivery, Portugal Social Innovation (PSI) reimburses investors. The project's total investment was planned to cover its estimated cost of €723,500.00. This amount equals the potential investor reimbursement, placing the cap of the internal return rate for investors at 0%. It is important to emphasize that investors who pay corporate tax can enjoy indirect return on investment through a tax incentive, which allows 130% of the total amount spent within each tax period to be reported as expenditure, regardless of any eventual future reimbursement.

In line with the goal of the intervention, the outcome indicator established for the SIB was the entry of unemployed individuals into employment.

Determining outcome payers

This project's structure of payment by outcome differs from the architecture of the original mechanism. In this case, the outcome payer, which is PSI, is not the public sector partner benefiting from outcome delivery.

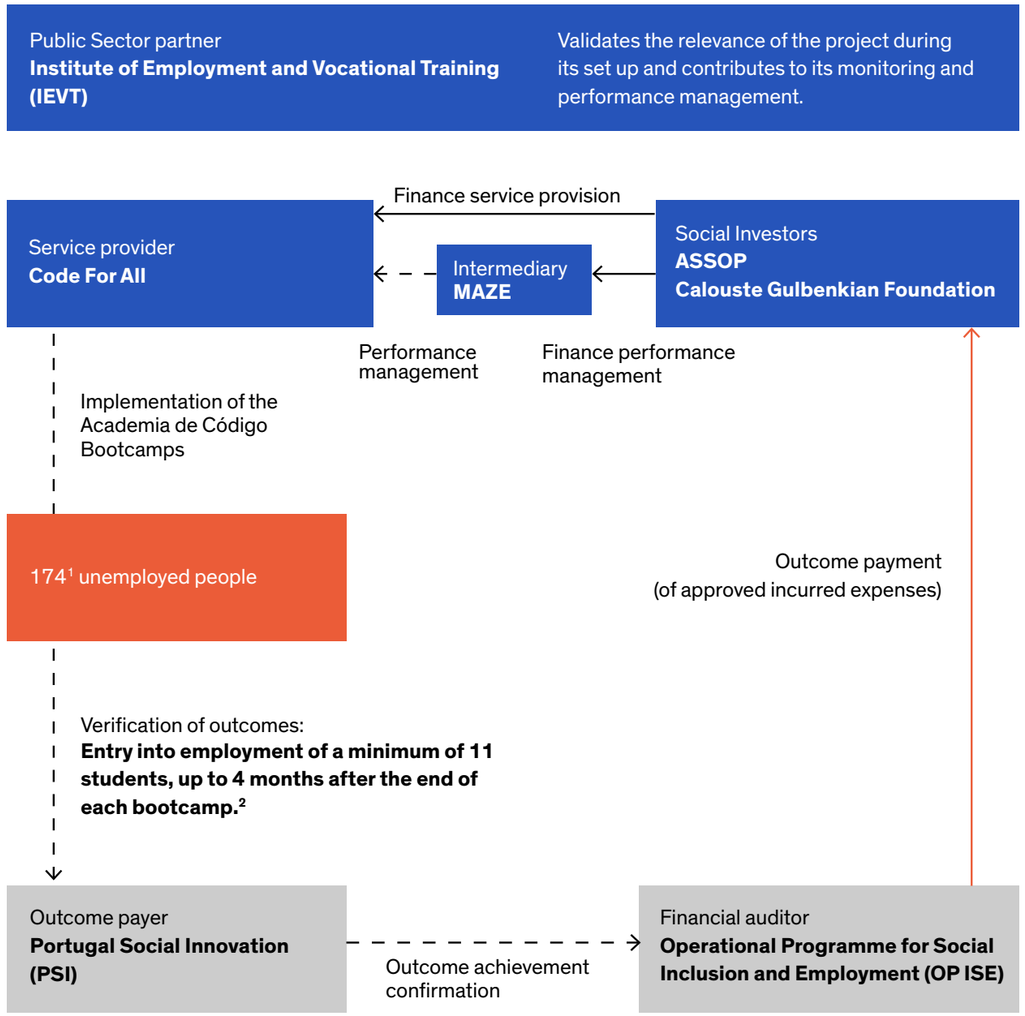
Entry into the labour market represents a direct saving for the Social Security Institute (SSI), as well as for the Institute of Employment and Vocational Training, the partner which validated the relevance of the Academia de Código's intervention.

The fact that the outcome payer is not the public entity, or public entities, benefiting from the intervention, limited incentives to ensure the integration of SIB learnings into public policy.

Absence of an independent evaluator

During the SIB application process, it was decided with the outcome payer that an independent counterfactual evaluation did not qualify as an eligible expenditure for the project, since proof of outcome delivery was ensured through administrative evidence (proof of unemployment and employment contracts).

The absence of an independent evaluation greatly limits the learnings that can be drawn from this SIB, since there is no comparable control group against which it would be possible to establish the additionality of the intervention.



1. It was initially planned for Academia de Código to work with 198 unemployed people, across nine groups of 22 participants each. However, to guarantee that all students got an appropriate level of personalized support, a group size reduction was negotiated with Portugal Social Innovation: from 22 to 20 participants per Bootcamp. In some Bootcamps (6, 7, 8, and 9) the classes were reduced further, at the request of the team on the ground. This led to a final number of 174 beneficiaries. The outcome target, defined in absolute terms, was left unchanged throughout these negotiations: 11 students per bootcamps.

2. The limit dates for achieving each outcome were defined in absolute terms in the initial negotiations. This meant that the number of days between the end of each Bootcamp and the respective limit date for reaching the outcome changed slightly depending on the timing of the Bootcamps themselves.

Figure 14 Structure of the Academia de Código Bootcamps Social Impact Bond. Source: MAZE

Reimbursement requests

The onerous financial reporting requirements associated to reimbursement requests absorbed an enormous amount of resources from the Code For All and MAZE teams. The general delay in reporting outcomes, reimbursement requests and payments were essentially a result of the demanding and complex nature of this process.

The reimbursement request process

Within the context of the PSI payment for outcomes fund, reimbursement for investment does not only depend on outcome delivery, but also on the reporting of all expenses incurred during the intervention period. After the outcomes have been verified, only the amount corresponding to expenses incurred by service providers (Code For All and MAZE), and considered eligible by the OP SIE, is paid to investors.

The physical and financial reporting of this SIB is conducted through Balcão2020, the digital platform that manages all financing associated to European Structural and Investment Funds (ESIF).

For each outcome delivered, a request for the reimbursement of the associated amount is made. For each reimbursement request service, providers must:

- report all expenses incurred during the corresponding period (personnel costs, purchase of goods, services and general expenses);
- provide additional evidence for 10% of expenses submitted up to a maximum of 30 expenses.
- present a report on the physical execution of the project;
- present outcome evidence.

Figure 15 illustrates the typical reimbursement request process.

The analysis of the intervention's physical evidence and the validation of outcome delivery is performed by PSI. Once the outcome is delivered, financial reporting and eligibility of expenses are verified by the OP SIE. If outcomes are approved and the financial report is validated, payment is made to investors, with or without an amount reduction due to ineligible expenses.

Payment after expenses and financial reporting to the OP SIE are requirements for compliance with the regulations of the European Social Fund, which finances part of the PSI outcomes-based payment fund. Nevertheless, the level of detail of the financial reporting and auditing included in reimbursement requests represents an intense bureaucratic process, which consumes a disproportionate amount of time from the organisations involved in the SIB.

Figure 15 Reimbursement request process. Source: MAZE

Physical reporting

Outcome reporting depends on the collection of physical evidence, approved in the SIB application. For a participant to fulfil all the necessary requirements and be considered in the outcome, Code For All needs to collect the following documents:

Proof of unemployment:
Statement issued by employment services in an IEVT centre confirming the participant´s unemployed status when entering the programme or a statement from the Social Security Institute confirming the participant made no contributions during the months of the Bootcamp.

a. Work Contract:
Work contract, signed prior to the deadline established for the delivery of the outcome of the respective Bootcamp.

The main challenge in collecting outcome evidence is related to the fact that the aforementioned documents must be obtained by the Bootcamps' students. There were many cases of students who did not collect their proof of unemployment, did not share their work contract or simply ceased answering the Code For All team after the Bootcamp ended.

Code For All made great efforts to guarantee that at least 11 evidence packs were collected for every Bootcamp.

Besides outcome evidence for each one of the participants, the following items are also presented:

1. participants' application forms;
2. a sample of the class summaries;
3. weekly performance evaluations for each participant;
4. attendance registers for each participant;
5. participation certificates;
6. Bootcamp syllabus and schedule.


INSTITUTO DO EMPREGO E FORMAÇÃO PROFISSIONAL, IP

Centro de Emprego e Formação Profissional de Castelo Branco
Serviço de Emprego de Castelo Branco

Declaração

Declara-se para os devidos efeitos que o/a utente portador/a do Cartão do Cidadão com o número , residente em , se encontra inscrito/a no Centro de Emprego e Formação Profissional de Castelo Branco com o id desde , na situação de desempregado/a à procura de novo emprego.

05 de Maio de 2018.

IEFP

Figure 16 Proof of unemployment example.
Source: MAZE and Code For All


CONTRATO INDIVIDUAL DE TRABALHO SEM TERMO
-CONSULTOR-

ENTRE:

PRIMEIRA CONTRATANTE, NIPC , com sede , matriculada na Conservatória do Registo Comercial de Lisboa, adiante designada como **Primeira Contratante** ou **Empregadora**;

E

SEGUNDO(A) CONTRATANTE, natural de contribuinte fiscal n.º portador(a) do Cartão de Cidadão n.º válido até residente em NISS , adiante designado como **Segundo(a) Contratante** ou **Trabalhador(a)**

Ambas as partes acordam em celebrar o presente contrato de trabalho sem termo, o qual livremente discutiram e aceitaram, nos termos da legislação aplicável e das cláusulas seguintes:

Cláusula 1.ª
(Natureza do contrato e início de vigência)

O presente contrato é celebrado sem termo e entrará em vigor no dia , data em que se inicia a efectiva prestação de trabalho.

Cláusula 2.ª
(Categoria Profissional e Funções)

1. O(A) Segundo(a) Contratante compromete-se a prestar à Empregadora e a exercer, sob a sua autoridade e direcção, as funções correspondentes à categoria profissional de .
2. No exercício das suas funções, caberá ao(à) Segundo(a) Contratante, designadamente, as seguintes:
   - realizar e/ou coordenar os projectos tecnológicos que lhe a seu cargo;
   - garantir a conformidade dos deliverables dos projectos e das exigências dos clientes;
   - assegurar a continuidade do desenvolvimento dos projectos para garantir a perfeita gestão dos recursos humanos implicados, incluindo a sua própria participação;
   - representar a empresa nos registos de realização tecnológica dos projectos e, fundamentalmente, a satisfação dos clientes;
3. O(A) Segundo(a) Contratante reconhece a responsabilidade das funções que exerce perante os projectos e os clientes e compromete-se a preservar o interesse objectivo dos projectos que os clientes confiam à Primeira Contratante.

Figure 17 Employment contract example.
Source: MAZE and Code For All

Investors

ASSOP

ASSOP is an association that represents the interests of several digital enterprises with a strong presence in Fundão, in alignment with the municipal innovation and investment strategy.

The first two Academia de Código Bootcamps outside Lisbon were simultaneously implemented in Fundão before the start of the SIB in April 2016, within a joint initiative piloted by the Fundão City Council and Code For All.

The success of this pilot experience and its relevance in terms of generating talent for the local ecosystem of technology enterprises, led ASSOP to invest in the SIB in order to finance the ambition of implementing 9 Bootcamps, sequentially, over the course of three years.

The relationship created between Code For All and local key partners conveyed a lot of confidence in the decision to invest in the SIB.

ASSOP considers that the project was a success, mainly because the Academia de Código was able to remain relevant in terms of market dynamics, and managed to guarantee a high rate of employability throughout the duration of the project. Code For All and ASSOP estimated the project's real employability rate at over 90%. From this local investor's perspective, the rigidity of the evidence required by the SIB, and the criterion which establishes that this employability rate must be delivered up to 3 months after the end of the Bootcamp, justifies the difference observed in comparison to the success rate officially reported in the SIB.

From ASSOP's perspective, one of the hardest aspects of the project's execution was the lack of agility in processes associated with the SIB, specifically those regarding outcome evidence and reimbursement requests. The slow response and bureaucracy associated to these reporting processes did not allow for rapid, effective and agile planning in the transition from an SIB financing model to a long-term model associated to a sustainable business model.

Although the outcomes were delivered, the SIB created some cash flow constraints for ASSOP, since the investment was made in 2017 and only started being recovered in 2020. This was very limiting for a small organisation which had to fund itself to secure the initial investment.

Finally, ASSOP believes that this solution has great potential for scalability through its integration in national public policies and responses, namely via the actions of the IEVT, although this potential has not yet materialised.

To ensure the continuity of this response after the end of the SIB, the municipality of Fundão invested in a project which finances Income Share Agreements for students who do not have the financial capacity to pay for this programme: students apply and attend the Bootcamp but only start repaying if and when they enter the labour market, with a 24-month grace period to make the payment.

"The innovation ecosystem in Fundão had been growing well, for the scale of the municipality, since 2013. In 2016, the lack of computer programmers to keep up with the growth of the enterprises established in this region was already a problem. This is a nationwide problem, and was also a problem in Fundão. We wanted to believe in this solution, in an innovative process, and in pilot initiatives. At first, I confess, it was quite difficult to convince employers to recruit people. It was all very recent. Enterprises were still very attached to the traditional recruitment processes in these areas and there was some scepticism. We asked for this vote of confidence, enterprises responded well and from then on outcomes started being delivered. Enterprises began giving us very positive feedback on peoples' skills [Academia de Código Bootcamp participants]."

Ricardo Gonçalves, Coordinator of the Fundão City Council Innovation and Investment Cabinet and ASSOP representative.
October 2020

The Calouste Gulbenkian Foundation

For the Calouste Gulbenkian Foundation (CGF), the investment in Portugal Social Innovation's first generation of SIBs, which includes the Academia de Código Bootcamps SIB, sought to mobilize the use of this financial instrument and bring new investors to the social investment space.

From the Foundation's perspective, this tool proposed a combination of very interesting features for any type of private investor: the ability to practice philanthropy and obtain return, if the projects achieve the predicted outcomes.

In this sense, the financing of the Academia de Código Bootcamps SIB fits the Foundation's social innovation and ecosystem construction goals, and not only specific employability goals.

Employability was a topic the Foundation actively pursued at the beginning of the decade, when youth unemployment rates were at a peak. During this period, the Foundation has produced a great deal of work by promoting various initiatives within this thematic field.

More recently, the CGF has specifically focused on the field of knowledge, including skill development.

In the specific case of the Academia de Código, the goal was to work with unemployed young people and give them a differentiated profile, in line with the skills most sought after in the labour market and for new digital jobs.

The project's outcomes validate this commitment: they were all delivered, even exceeding the goal established for the project.

The Foundation believes that the Covid-19 pandemic and digital transformation will make the programmer training market increasingly competitive. This context will demand more and more adaptability from responses such as the Academia de Código Bootcamps and, in an even more critical way, from public employment and retraining responses. Recognizing this challenge, several features of this response promote confidence in its ability to remain relevant:

- the relation between the short duration of the intervention, the investment per student and the high success rate indicates a very promising cost-benefit ratio;
- these Bootcamps are specifically designed for unemployed people, take place in small groups (up to 20 students) and receive intensive support from a team of instructors, which includes a large number of former students. These differentiating features give the intervention potential for profound social change, besides positioning itself as a training complement to the traditional educational path
- One of the priorities for the Foundation was to ensure project learnings were incorporated into public policy decisions, namely by the IEVT.
- In this sense, the involvement of public partners could have been even greater and more strategically thought out since the beginning of the project. This will be a priority for the Foundation's potential future investments.

"Our first urge was to understand to which extent we could build this ecosystem in Portugal. We needed to have stories to tell, and, at the beginning, we were looking for those stories. When the opportunity came about to work with the Academia de Código Bootcamps, we chased it. In fact, this was a field in which we hadn't yet considered applying a social impact bond, but we couldn't pass the opportunity of testing this instrument in a real life context. And we did it just at the right moment, because it effectively put us on the map and made us realize that this tool had added value."

Luís Jerónimo, Director of the Gulbenkian Sustainable Development Programme at the Calouste Gulbenkian Foundation.
October 2020

Public Sector

IEVT – Institute of Employment and Vocational Training

The Institute of Employment and Vocational Training (IEVT) was represented at most partner meetings over the course of the project.

Besides initially validating the importance of the contracted outcomes, the regional delegation for the centre maintained a close relationship with the project.

Among other tasks, this partner's role included providing:

- support for the dissemination of Bootcamps at the beginning of the SIB;
- technical support in identifying alternative ways of proving unemployment and labour market entry;
- issuing technical opinions to inform some of PSI's decisions regarding the eligibility of atypical sets of outcome evidence.

According to the IEVT, the Academia de Código's presence in Fundão had a very important impact and boosted the local economy. Namely, because it ensured the attraction of young talent to the region, which in many cases ended up entering the Central region's labour market (including Fundão), even in the case of students who had relocated from other parts of the country to participate in the Bootcamp.

One of the improvement points identified by the IEVT. was the importance of reinforcing contacts with enterprises within the region from the outset, in order to ensure the ecosystem's increased receptivity to hiring students without higher education in this particular field.

The expectation is that the Covid-19 pandemic will accelerate the focus of IEVT training on new technologies, to the detriment of other less pertinent fields.

Although the incorporation of SIB learnings into public policy was not strategically delineated from the start, it is expected that this experience will still fulfil its potential to influence this transition.

"One of the Bootcamp model's most distinctive features (besides encompassing a much smaller number of people in comparison to the work carried out by the IEVT), is its constant effort to place trainees in the labour market, within a short period of time."

Sandra Jesus, Regional Delegation of the Centre, Institute of Employment and Vocational Training
December 2020

"One of our main goals would be to help the IEVT conduct tests to determine whether investing in a programming course, such as the Academia de Código Bootcamps, would result in less expenses or a more attractive cost-benefit ratio compared to those the IEVT has with other training programmes. If this type of intervention manages to provide more ambitious job opportunities to young unemployed people, it may be a win-win situation for the IEVT and the public sector in general: savings with long-term employability incentives, due to faster labour market entry, and future tax gains."

Francisco Palmares, Project Manager at Calouste Gulbenkian Foundation
May 2020

"Naturally, a Social Impact Bond is considered a success if the contracted outcomes are delivered. This is the simplest and most immediate indicator of the impact generated by the intervention. It means that the Bond was well designed, adjusted to the potential of reality itself and that the proposal is effective. But its success is never limited to these indicators. Ultimately, it is also measured by its ability to influence the evolution of systemic social responses, generating broader impacts and fostering more effective intervention methodologies."

Filipe Almeida, President of Portugal Social Innovation
February 2021

PSI

Portugal Social Innovation (PSI) is a public initiative that aims to promote social innovation and boost the social investment market in Portugal. This initiative mobilised €150,000,000 from the European Social Fund, under the Portugal 2020 Partnership Agreement, to finance 4 instruments, including Social Impact Bonds, for which there is a €15,000,000 payment for outcomes fund.

The SIBs funded by PSI must have a minimum amount of €50,000 and act in one of the following fields: digital inclusion, justice, health, education, social protection and, in the case of Academia de Código Bootcamps, employment. PSI's role in these mechanisms is to pay for the contracted outcomes. Investor reimbursement takes place upon outcome delivery. Outcome delivery is evaluated by the PSI technical evaluation team, which verifies that the evidence gathered validates the delivery of the contracted outcome.

The SIB funding model was created with the primary goal of developing pioneering projects with potential to contribute towards the development of public policy.

Since increasing proximity to public policy bodies is one of the SIB's goals, the consortium's expectation was to involve PSI as a moderator in all contacts with the public sector partner, which in this case is the Institute of Employment and Vocational Training. In order to ensure the integrity of the evaluation process, the team responsible for moderating contacts with the public institute could not have been the evaluation team, who must have minimal contact with the service provider and the SIB consortium. This task should have been pursued by PSI's activation team.

Since the Academia de Código Bootcamps were part of PSI's first SIB cohort, there is a set of learnings we consider relevant for the future and able to improve the articulation of projects developed with PSI, as well as increase the potential contribution of successful methodologies for public policy development. These learnings include:.

- creating a contact point between the consortium and the PSI activation team to promote greater collaboration between the projects and the outcome payer;
- developing an impact assessment that is independent from the outcome evaluation, which investor payments and methodology integration depend upon;
- defining a roadmap together from the outset in order to integrate the learnings of the project in terms of public policy, and ensure the initiative is up-scaled if outcomes are delivered;
- promoting a closer relationship between the public institute responsible for overseeing the issue and the implementing organisation;
- reducing the burden imposed by financial reporting, in the short-term, through simplified cost methodologies for reimbursement;
- making an effort, in the medium term, for outcome payments to be informed by the value generated for the public sector and not only by the project's implementation cost.

It would also be important to consider opening thematic calls to respond to priority problems regarding public policy, in order to ensure greater alignment between SIB outcomes and the government's priorities. Opening thematic calls would also make it easier to create rate cards that determine the amount to be paid per outcome, in connection to the cost of the problem.

Performance Management

In order to guarantee performance management for the Academia de Código Bootcamps SIB, MAZE is responsible for implementing processes for regular performance management and monitoring. This monitoring allowed MAZE to report the progress of the intervention's implementation to other partners and develop mitigation strategies for risks associated with the project.

Besides performance management, and given the onerous reporting requirements associated with reimbursement requests, MAZE supported Code For All and investors in the preparation, review and submission of financial documents.

The partnership management process took place within four categories of interactions:

1. monitoring via AidHound
2. touch-point meetings with the project team;
3. partner meetings;
4. interactions related to reimbursement requests.

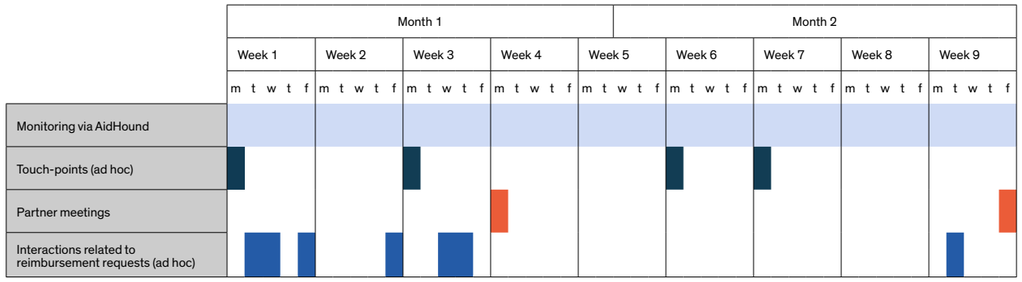


Figure 18 Structure for monitoring the Academia de Código Bootcamps intervention, an illustrative example. Source: MAZE

"We often tend to neglect the role of intermediaries. However, MAZE played a decisive role both in designing the project and managing it on a daily basis. The quality of this work has culminated in the success of the interventions and good response to investors. The way this was managed from the start, with monthly meetings and regular updates, gave everyone confidence, from investors to beneficiaries and also, I would like to believe, the public sector."

Luís Jerónimo, Director for the Gulbenkian Sustainable Development Programme at the Calouste Gulbenkian Foundation.
October 2020

Monitoring via AidHound

Frequency: Continuous (until the end of Bootcamp 7)

Description: AidHound is a data management platform designed for the social sector. This platform was used to register, organize and share data between Code For All's team of instructors and MAZE, throughout the first 7 Bootcamps.

Information shared through the platform includes data concerning the participants' attendance, their performance in terms of technical skills, soft skills and dedication, and their participation in the Hackatons. For each participant, the team of instructors filled in 15 forms.

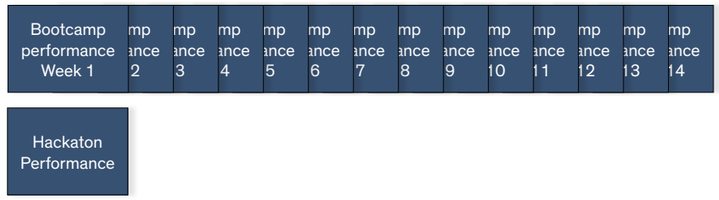


Figure 19 Forms filled in via AidHound per student. Source: MAZE

This data collection made it easier for MAZE to access the information. Consequently, relevant information regarding risk reached investors in a timelier manner.

However, despite potential advantages for the partnership as a whole, the team of instructors offered resistance to using AidHound.

As opposed to what happens with other service providers, Code For All has the technical capacity to develop its own data management system.

From the instructors' perspective, using this platform exclusively for the SIB, often represented double the work. The use of AidHound was therefore abandoned during Bootcamps 8 and 9, and the same information was shared via email, being extracted from Code For All's internal control system.

Touch-point meetings with Code For All instructors and project management teams

Frequency: Variable

Description: MAZE held frequent touch-point meetings with the team of instructors by phone or via email (biweekly to monthly, depending on the groups and phases of the project). During these contacts, MAZE gathered perceptions on the Bootcamp's progress and the level of risk associated to each participant from the team of instructors.

MAZE also promoted touch-point meetings with the project management team, with variable frequency. Touch-point meetings were moments during which internal and external challenges were discussed, and relevant mitigation strategies were developed.

These contacts were also useful to plan and schedule tasks related to reimbursement requests.

MAZE also sought to gather information on the participants' labour market entry process, during contacts with the team of instructors and the management team.

MAZE and Code for All faced some challenges in securing points of contact between their organizations. As a result, a few cases of information asymmetry took place, hindering the project´s risk management.

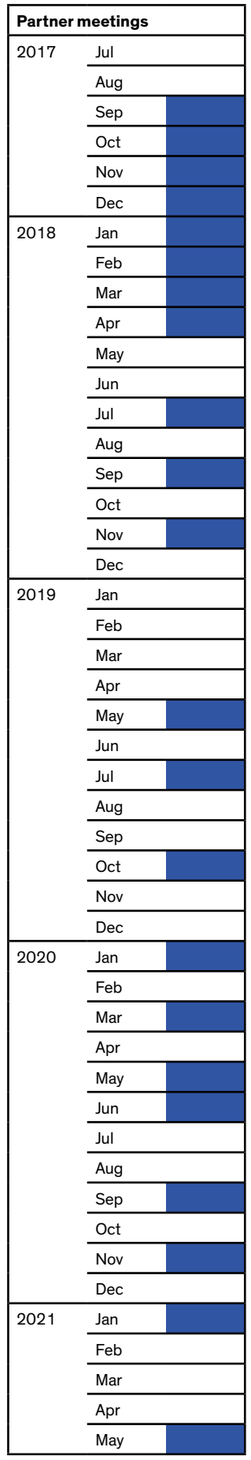


Figure 20 Partner meetings held. Source: MAZE

Partner meetings

Frequency: Monthly to Bimonthly (when possible)

Description: MAZE promoted bimonthly meetings between investors, Code For All and the Institute of Employment and Vocational Training to stimulate communication between the different partners. These meetings were particularly relevant for managing partners' expectations and co-designing mitigation strategies for identified risks.

Within the SIB reporting period, 22 Academia de Código Bootcamps SIB partner meetings took place (see figure 20 for more details).

However, since the project's investor payment process was extended until July 2021, some extraordinary partner meetings were necessary.

External documents prepared: Summary presentations for partner meetings

Interactions related to reimbursement requests

Frequency: Variable

Description: a series of extraordinary meetings and contacts are associated to the reimbursement request schedule.

Internally, these interactions included Code For All's management and financial teams. In some cases, ASSOP was also included in its role as majority investor.

Externally, these interactions extended to PSI and OP SIE.

Tasks performed by MAZE:

- → organizing and verifying outcome evidence;
- → preparing the outcome summary presentation;
- → consolidating expense listings associated to the outcome;
- → pre-submitting the expense listing on Balcão2020;
- → preparing a pending evidence tracker (no longer necessary after the third outcome);
- → supporting the collection of financial evidence related to Code For All;
- → retrieving evidence related to MAZE;
- → organizing retrieved evidence;
- → submitting physical and financial evidence on Balcão2020 in collaboration with Code For All;
- → articulating responses to clarification requests made by PSI and OP SIE.

External documents prepared: outcome summary presentation; pending financial evidence tracker; financial reporting guide for reimbursement requests; Balcão2020 user guide.

How did the financial reimbursement process go?

Quick Reply

The SIB financing mechanism within the context of PSI, requires highly complex bureaucratic processes. Financial reporting occurs upon approval of expenses, after outcome delivery is validated. The implications associated to this mechanism led to the restructuring of the SIB's financial model, placing considerable cash flow pressure on investors and service providers.

The financial model

Reimbursement requests

Financial reporting

The total approved budget for the Academia de Código Bootcamps SIB was €723,500.00, distributed over nine periods, associated to the delivery of its nine contracted outcomes.

The expenses reported for some of the reimbursement requests were quite different from the respective budgeted amounts. The most significant difference was identified in the first reimbursement request, and was the result of a large investment budgeted for equipment which finally was not necessary.

It is important to mention that in the case of SIBs within the context of the PSI outcome-based payment fund, investors are subject to two types of financial risk:

- → as with all SIBs, investors are not reimbursed if outcomes are not delivered;
- → on the other hand, investors are subject to losses due to expenses incurred but considered "ineligible" by the OP SIE. Since service providers are responsible for expense reports and compliance with all OP SIE regulations, investors only have limited control over this process.

Reimbursement request	**Expense period associated to each outcome**		
	Start	**End**	**Budgeted expenses**
Outcome 1	01/01/2017	31/08/2017	183,250.00 €
Outcome 2	01/09/2017	31/12/2017	79,950.00 €
Outcome 3	01/01/2018	30/04/2018	65,300.00 €
Outcome 4	01/05/2018	31/08/2018	77,950.00 €
Outcome 5	01/09/2018	31/12/2018	79,950.00 €
Outcome 6	01/01/2019	30/04/2019	65,300.00 €
Outcome 7	01/05/2019	31/08/2019	77,950.00 €
Outcome 8	01/09/2019	31/12/2019	77,950.00 €
Outcome 9	01/01/2020	30/04/2020	15,900.00 €
		Total	**723,500.00 €**

Figure 21 Budgetary plan submitted with the application. Source: MAZE, adapted from the budget submitted with the application.

Outcome payment funding source	**Totals**	**2018**	**2019**	**2020**
Contribution from the European Social Fund	€614,975.00	€413,440.00	€188,020.00	€13,515.00
National Public Contribution (State Budget)	€108,525.00	€72,960.00	€33,180.00	€2,385.00
Total financing planned	**€723,500.00**	**€486,400.00**	**€221,200.00**	**€15,900.00**

Figure 22 Table showing the origin of funds planned for the SIB's outcome-based payments, "Financing modality". Source: OP SIE

Budget		**Execution**				
Reimburse-ment request	Budgeted expenses	Reported expenses	Difference between reported and budgeted	Expenses approved by OP SIE	Expenses **not** approved by OP SIE	Difference between approved and budgeted
Outcome 1	183,250.00 €	169,780.57 €	-13,469.43 €	161,031.93 €	8,748.64 €	-22,218.07 €
Outcome 2	79,950.00 €	79,945.58 €	-4.42 €	75,624.53 €	4,321.05 €	-4,325.47 €
Outcome 3	65,300.00 €	58,514.25 €	-6,785.75 €	39,325.58 €	19,188.67 €	-25,974.42 €
Outcome 4	77,950.00 €	74,306.62 €	-3,643.38 €	73,371.70 €	934.92 €	-4,578.30 €
Outcome 5	79,950.00 €	73,943.84 €	-6,006.16 €	73,943.84 €	0.00 €	-6,006.16 €
Outcome 6	65,300.00 €	69,079.15 €	3,779.15 €	69,079.15 €	0.00 €	3,779.15 €
Outcome 7	77,950.00 €	68,318.95 €	-9,631.05 €	68,318.95 €	0.00 €	-9,631.05 €
Outcome 8	77,950.00 €	69,001.75 €	-8,948.25 €	69,001.75 €	0.00 €	-8,948.25 €
Outcome 9	15,900.00 €	20,806.16 €	4,906.16 €	16,671.09 €	4,135.07 €	771.09 €
Totals	**723,500.00 €**	**683,696.87 €**	**-39,803.13 €**	**646,368.52 €**	**37,328.35 €**	**-77,131.48 €**

Figure 23 Budget execution and expenditure approval by OP SIE.
Source: MAZE, adapted from information available via Balcão2020 and Prior Hearing Notifications received by investors

Reimbursement Requests

The difference between budget and execution

In the course of the SIB, a total of €683,696.87 in expenses was reported. This amount was almost €40,000.00 below budget.

The difference between the budget and its execution was caused by three main factors:

- an investment of €30,000.00 in equipment was planned for the beginning of the project, but was not necessary in the end;
- the amount budgeted for the project's dissemination was considerably higher than the expenses incurred;
- the amount budgeted for the acquisition of other goods and services (besides communication) was considerably higher than the amount spent.

Two additional observations about the contrast between the project's budget and its financial execution:

- expenses with human resources turned out to be over budget, reinforcing the team's essential role in the project's success;
- throughout the project, some types of expenses incurred by Code For All stopped being submitted for approval, as they were deemed 'ineligible' by OP SIE in previous reimbursements.

This means that the reported amount underestimates the project's real cost, and the respective difference has been absorbed by Code For All.

Expenditure deemed 'ineligible' by the OP SIE

OP SIE has deemed a total amount of €37,328.35 in expenses as ineligible. Amongst these, €37,085.84 corresponded to expenses incurred by the Academia de Código, and the remaining €242.51 to expenses ncurred by MAZE.

While recognizing that expense reporting could have been conducted in a more rigorous manner, it is also important to point out that payment after expenses does not go hand in hand with the DNA and basic principles of a Social Impact Bond.

These cutbacks had to be absorbed by the partnership, although the respective outcomes were delivered, which has generated a great deal of frustration amongst partners.

During the course of the project, in an attempt to align incentives for more rigorous expense reporting, the cutbacks were absorbed by service providers. For this to happen, the originally planned financial flows between investors and service providers were altered.

The initial rationale that service providers should receive the entire investment until reimbursement 6 took place was changed to ensure that reinvestment in service providers would be planned for until the end of the project.

In the context of discussions concerning the project's financial close, investors agreed to cover 50% of expenses cut by OP SIE and transferred the equivalent amounts to the service providers.

"During this process, the outcomes and the provision of services, as well as the value the latter creates, were not the main focus. The genesis of the Academia de Código is based on a study by the European Commission, which estimates that a NEET costs the Portuguese government €8400 a year. In another context, the price per student would be thought to be lower than this amount, by efficiently generating value for society. Due to the way the SIB was structured, within the framework of Community funds, it had to be based on an expenditure rationale. This goes against the idea that the service we're providing creates value for society. As a consequence, the rationale ceases to be: "how much is this service worth"; and becomes: "how much did this service cost"."

Bernardo Afonso, CFO of Academia de Código
October 2020

Delays in submitting refund requests

The reimbursement requests were submitted with several months' delay in regards to the initially planned schedule.

Refund Request 1 was submitted in April 2018, 7 months after the scheduled date. In terms of external factors, this delay was related to a technical problem with Balcão2020. Internally, the first reimbursement was particularly difficult because it was the first to be submitted by the project (and the first to be submitted at national level within the context of the PSI SIB outcomes fund).

The delay in processing reimbursement request 1 was partly responsible for the delays in the submission of subsequent requests.

Delays in the submission of reimbursement requests were mostly a result of onerous financial reporting requirements, rather than the requirements of reporting delivered outcomes.

The hiatus between the planned schedule and its execution (see figure 24) reflects the demands this process represents for service providers, the amount of clarification requests made by the OP SIE regarding financial evidence and, in certain periods, the speed of the OP SIE itself.

Figure 24 thoroughly illustrates the delays of the SIB's outcome submission process and outcome payments. The main reasons for delays in outcome submissions included:

- technical problems with the Balcão2020 platform, which prevented the submission of reimbursement requests and were greatly responsible for the delay in the submission of RR1;
- lack of knowledge regarding the physical and financial reporting process, which led to an additional delay in the submission of RR1;
- changes in the financial team responsible for conducting Code For All's financial reporting, and changes in the MAZE team, led to a loss of acquired knowledge on the process, which justified the delay in submitting the second outcome;
- highly demanding financial reporting requirements and long periods of associated clarification requests;
- delay on behalf of Code For All in preparing the financial (and at times physical) evidence associated to reimbursement requests;
- delay on behalf of the OP SIE in initiating the financial analysis after reimbursement requests were submitted.

The learnings obtained from the first reimbursement requests made it possible to prepare reimbursement requests 7, 8 and 9 more expeditiously.

The delays in submitting and validating reimbursement requests culminated in a 1 year delay of the project closing, compared to the initially planned schedule.

	Reimbursement request 1	Reimbursement request 2	Reimbursement request 3	Reimbursement request 4	Reimbursement request 5	Reimbursement request 6	Reimbursement request 7	Reimbursement request 8	Reimbursement request 9
Sep17	Submission of RR1								
Oct17									
Nov17	Payment of RR1								
Dec17									
Jan18		Submission of RR2							
Feb18									
Mar18		Payment of RR2							
Apr18	Submission of RR1								
May18	Payment of RR1		Submission of RR3						
Jun18									
Jul18			Payment of RR3						
Aug18									
Sep18		Submission of RR2		Submission of RR4					
Oct18									
Nov18				Payment of RR4					
Dec18									
Jan19		Payment of RR2			Submission of RR5				
Feb19			Submission of RR3						
Mar19					Payment of RR5				
Apr19									
May19						Submission of RR6			
Jun19									
Jul19			Payment of RR3			Payment of RR6			
Aug19									
Sep19							Submission of RR7		
Oct19			Submission of RR4	Submission of RR5					
Nov19							Payment of RR7		
Dec19									
Jan20								Submission of RR8	
Feb20									
Mar20			Payment of RR4					Payment of RR8	
Apr20				Payment of RR5					
May20									Submission of RR9
Jun20									
Jul20									Payment of RR9
Aug20						Submission of RR6	Submission of RR7		
Sep20									
Oct20						Payment of RR6			
Nov20							Payment of RR7	Submission of RR8	
Dec20									
Jan21									Submission of RR9
Feb21									
Mar21								Payment of RR8	
Apr21									
May21									
Jun21									
Jul21									Payment of RR9

Planned submissions / payments
Actual reimbursement request submissions
Actual outcome payments

Figure 24 Schedule of planned and submitted reimbursement requests. Source: MAZE

"The issue of pressure caused by the delays in reimbursement requests and payments was the greatest difficulty ASSOP had to face as an investor in this bond.

Everything else, regarding articulation with partners, was perfect. We never had any kind of entropy or difficulty with matters taken on by ASSOP, the Calouste Gulbenkian Foundation, the Academia de Código and MAZE. There was no deviation of any kind. It was the slow response and bureaucracy associated to the processes which became the biggest problem: the SIB ended in late 2019 and we only reached reimbursement 6 or 7 at the end of 2020. Perhaps we will only have this situation concluded at the end of 2021. For a small enterprise like ASSOP, which had to finance itself to ensure investment, this is complicated and diminishes its capacity to work on the solution itself and its sustainability. At the moment we still have all these burdens on our back."

Ricardo Gonçalves, Coordinator of the Fundão City Council Innovation and Investment Cabinet and ASSOP representative
October 2020

Financial flows

The real investor payment schedule was delayed much more than predicted at the time of the application, largely due to the onerous requirements associated to financial reporting. The particularities of this payment scheme forced partners to reorganize the schedule and risk distribution associated to the project's financing.

In an SIB, financial risk is – totally or partially – diverted from service providers to investors. The Academia de Código Bootcamps SIB investors transferred four tranches of initial investment to the ACB to cover implementation costs during the first 17 months of the intervention.

The SIB´s financial model was designed according to a recycling logic. It was planned that investors would fully reinvest their reimbursed amounts in service providers for the first five outcomes and partially for reimbursement 6, in order to cover the remaining implementation costs until the end of the intervention.

While the intervention's execution suffered no delays in terms of the established deadlines, cash flow between investors, service providers and PSI suffered a delay of approximately 12 months.

Besides the delay of reimbursements, there were also changes made to the amounts reimbursed, reflecting the difference between budget and its execution, as well as the expenses considered ineligible by the OP SIE. By the end of the project, this expense "cutback" was absorbed by Code For All and MAZE, respectively. However, in the context of discussions concerning the project's financial close, investors agreed to cover 50% of these expense "cutbacks", transferring the corresponding amount to service providers.

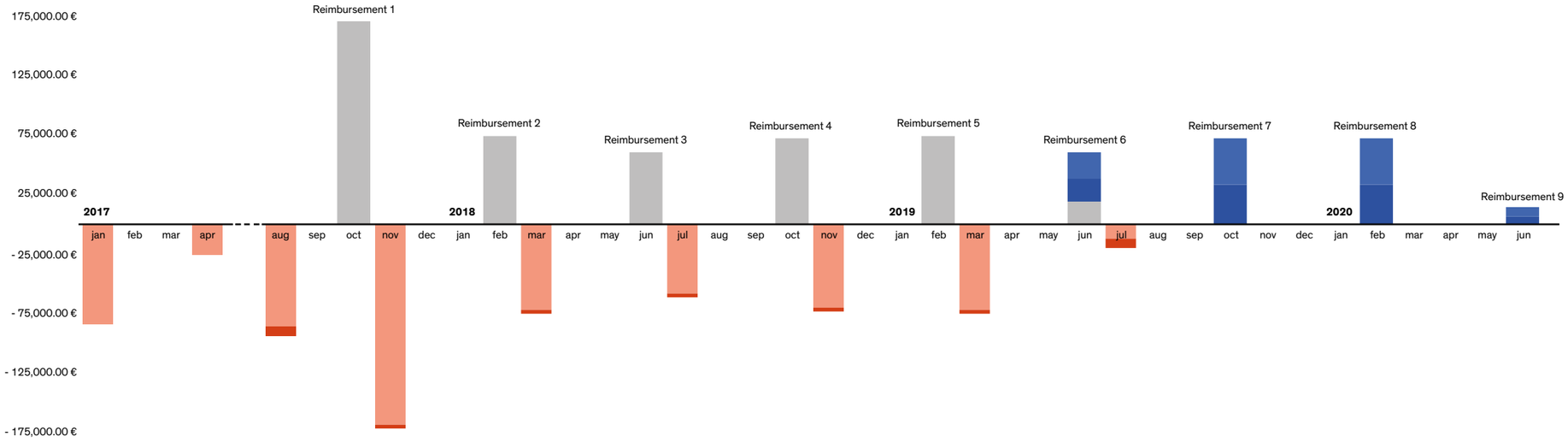
The new cash flow model was redesigned to consider a partial reinvestment in service providers until the last outcome. This design guarantees the latter have additional incentive to report as rigorously as possible up to the ninth reimbursement request. It is important to mention that this model implies both organizations partially support implementation costs with their own funds until the end of the project.

The idiosyncrasies regarding the financial risk of SIBs structured within the context of the PSI outcome-based payment fund could become a contributing factor in the alienation of potential investors. Since even in a context where outcomes are met, the rate of return for investors can still be negative.

The outcome payment process is very bureaucratic and may extend well beyond the planned time frame.

At the end of the project, and taking the partial absorption of expense "cutbacks" into account, investors recovered approximately 91.4% of their initial investment. The internal rate of return for investors was approximately -2.7%.

Plan



Execution

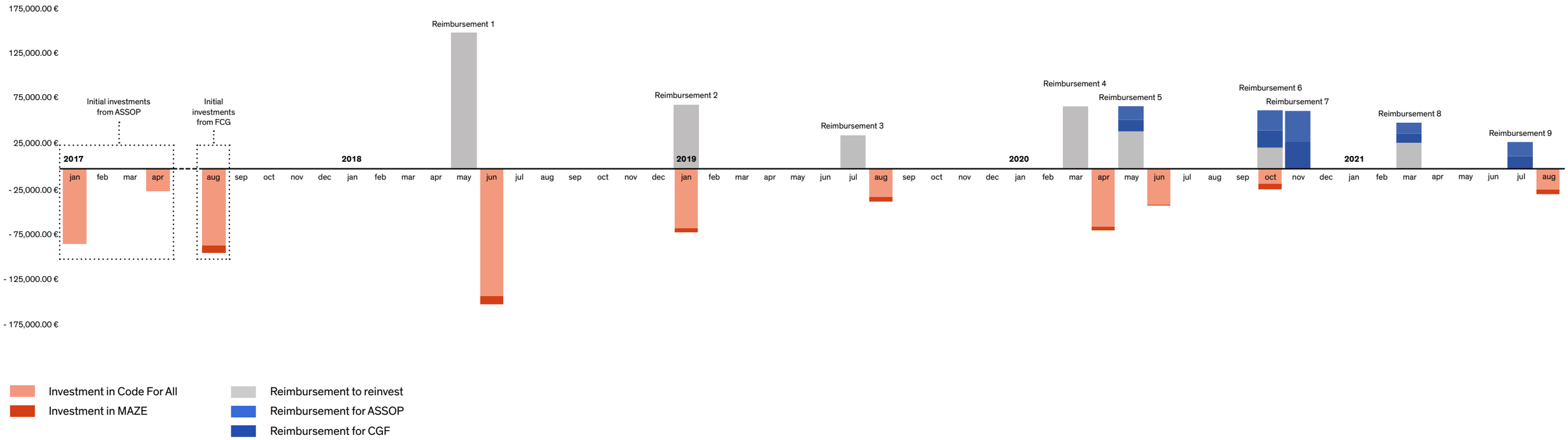


Figure 25 Cash flows between investors, service providers and outcome payer (planning versus execution). Source: MAZE

How can the response to unemployment (or underemployment) amongst young people be improved?

Foto by Priscilla Du Preez at unsplash.com

Quick Reply

Improving this response will involve increasing focus on results, working closely with enterprises and assessing their needs, creating flexible training models and content, and focusing on skills in high demand on the labour market, such as computer programming.

Public policy

Current response

The social problem

The unemployment rate amongst the under-25 population in Portugal was 24% in 2017. In the following years, it remained above 18%[1].

In March 2021, 50,906 unemployed young people under the age of 25, and 93,313 unemployed young people between the ages of 25 and 34, were registered with the Institute of Employment and Vocational Training (IEVT)[2].

In terms of young population, the analysis of individuals marginally attached to the labour market, and normally classified as inactive, is also relevant.

These individuals express willingness to accept job offers, but do not report any recent active job search diligence. In reality, the probability of transition to employment of the marginally attached (13.4%) is much closer to that of the unemployed group (19.8%) than to that of others within the inactive group (3%)[3].

In addition to these, there are also young employees who are willing to retrain in areas with more potential of bringing them personal satisfaction, higher incomes and more promising professional paths.

The lack of representation of younger age groups in the labour market compromises Portugal's competitiveness within the context of an ageing population, undermining its economic growth and development.

On the other hand, from a public health and individual well-being perspective, there is vast literature which suggests that unemployment amongst young people is associated with poorer mental and physical health.

While youth unemployment persists, it is estimated that in 2020 Europe registered a shortage of around 900,000 information and communication technology (ICT) professionals, 15,000 of which in Portugal4. This represents a barrier to the development of Portuguese enterprises and the ability to attract large-scale foreign employers.

The Public Answer

Because the problem of youth unemployment in Portugal is the result of a complex range of factors, the actions of the public sector can apply to a wide range of areas (from labour market flexibility to education policies). However, within the context of this report and the Academia de Código Bootcamps' scope of action, it makes sense to reflect on public initiatives explicitly focused on promoting employment and vocational training and retraining.

In Portugal, the management and implementation of Active Employment Policies (AEP) which aim to increase employability among people experiencing difficulty in entering the labour market, is the responsibility of the IEVT. These policies are divided into several measures with different characteristics and variable levels of effectiveness, both in terms of the macroeconomic context and beneficiaries' initial situation[4].

The substantial range of AEPs implemented in Portugal in the last decade, can be assigned to three areas:

1. Employment
2. Vocational training
3. Vocational retraining

These policies unfold into a very diverse range of social programmes and responses, integrating professional traineeships, recruitment support programmes, apprenticeships and other occasional support. These are also complemented by network intervention programmes, such as the Youth Guarantee programme.

1. INE, PORDATA, 2021
2. 4. IEFP, I.P., 2021.
3. Banco de Portugal, 2020
4. European Commission (2014) E-skills in Europe Portugal Country Report

Public investment

The evaluation of public responses to social problems should consider the relation between the cost of providing this response and the outcomes it achieves.

In terms of training and retraining this comparison is essential. The cost associated to a (re)training programme can only be considered in terms of its results, including:

- → whether or not there has been labour market entry assignable to that programme;
- → the swiftness of the labour market entry;
- → the characteristics of these labour contracts in regard to salary and employment relationship;
- → the sector's growth prospects and associated career progression;
- → the level of satisfaction of the person employed with regard to the professional opportunity.

The One Value platform gathers and systematizes costs for the public sector in several social responses.

In 2016, the typical training and insertion of a young person in the Portuguese labour market represented a cost of approximately €15,800 for the IEVT, having last been updated in 2016. This amount includes an apprenticeship course with an estimated cost of €9,538, a professional traineeship and an employment premium paid after the professional traineeship[5].

This estimate does not include indirect social and economic costs of youth unemployment. The Academia de Código Bootcamps cost the public sector around €3,715 per student. This value includes the project's performance management costs.

If we focus on the success stories and only take into account the 101 students reported for outcome purposes, and who produced all the evidence required by the SIB contract, the public sector paid around €6,400 per employed student.

Confidence in the fact that these labour market entries were a direct result of the programme is quite high, since all the presented contracts fit the computer programming profile and, as such, would not be accessible to these students before they attended the Bootcamps.

It is important to point out that the number of students who actually entered the labour market after the Academia de Código Bootcamps is higher than reported.

Besides these amounts, there was an additional cost of around €215 per student, borne by investors and service providers (mostly by Code For All), as a consequence of expense "cutbacks" made by OP SIE.

The potential direct return of this public investment has three cornerstones: savings on future employment support measures that will no longer be necessary, savings on future unemployment benefits, additional revenue from the IRS.

Given the cost of each success case for the public sector, within the context of an intervention model with no associated financial risk (no labour market entry means no payment from the public sector), the return on a public investment in the Academia de Código Bootcamps represents a high value proposal.

	Public Sector	Investors	Service Providers	Total
Cost per person that benefited from the service	3,714.76 €	107.27 €[#]	107.27 €	**3,929.30 €**
Cost per person that entered the job market, according to the terms of the SIB contract	6,399.70 €	184.79 €[#]	184.79 €	**6,769.28 €**

[#] Assuming a cost of capital of 0%.

Figure 26 Unitary final intervention costs per stakeholder. *Source: MAZE*

5. One Value, 2021

"Test after test, enterprises returned to recruit more people and salaries kept rising"

"When we started in 2015, we had a lot of difficulties. It's not easy to convince heads of human resources, who are used to hiring people with bachelor's and master's degrees in engineering, that a person with a degree in PE or without a degree, is fit to start a career as a programmer after 14 weeks' training. We knew we were going to find some resistance, and we did. At the time, enterprises agreed to start in test mode. Bootcamp students started with lower salaries because enterprises still didn't fully believe in the model. But the situation progressively changed and, test after test, companies returned to recruit more people and salaries kept rising. Today, an Academia de Código student, regardless of their background, will often work under the same conditions as a student with a master's degree in computer engineering. This reveals the quality our students deliver once they're inside, and reflects the confidence enterprises have in Academia de Código. "

André Machado, Academia de Código COO and Business Development Director
October 2020

Looking forward

As with so many other social problems, the cost of ignoring youth unemployment is and will be much greater than the investment needed to tackle it.

The experience gained from the Academia de Código Bootcamps SIB comprises a series of learnings which can be incorporated into public employment policies, including:

- **any public employment policy response must establish the outcomes it aims to achieve very clearly and guide training experiences according to these outcomes.** Always keeping outcomes in mind is the Academia de Código Bootcamps' key to the success;
- **maintaining an open dialogue with enterprises about their needs in terms of technical and non-technical skills is essential to guarantee that the training offer remains relevant,** Code For All maintains constant dialogue with the main employers in the field of computer programming and incorporates their needs and feedback in the Bootcamps' design;
- **investing in training areas in high demand on the labour market is one of the most powerful ways of ensuring labour market entry, with high salaries and good prospects for career progression. The skills gap in the field of computer programming explored by this intervention is far from being fulfilled.** As mentioned earlier, the Academia de Código Bootcamps exploit the shortage of approximately 15,000 professionals in the field of information and communication technologies (ICT), in Portugal;
- **within the technological field, where the skills sought by the market are constantly changing, it is essential that training content is adapted in real time and contracts with training entities not only allow but also encourage this change.** The Bootcamps' curriculum was adjusted over the three years of the intervention, ensuring that students focused on programming language and skills better suited to the labour market;
- **in markets with worker shortages, enterprises are more willing to be flexible with their criteria for educational attainment and focus on candidates' skills. This flexibility improves the prospects of trainees with lower educational attainment and, consequently, can be a great source of motivation.** Today, students from the Academia de Código, regardless of their background, will often work under the same conditions as a student with a master's degree in computer engineering;
- **creating high-intensity training experiences with competitive access can serve a subgroup of unemployed, high potential and motivated young people particularly well.** It is very clear that a programme like the Academia de Código Bootcamps does not work for all profiles of unemployed young people. However, for unemployed young people who demonstrate the appropriate commitment and motivation, the program's selectivity and intensity act as extremely strong psychological stimuli and mark the beginning of a new way of life;
- **investing in the quality and sexiness of the training experience is key to grasping students' interest and contributing towards increased commitment and motivation.** The Academia de Código invests in a strong image and powerful communication. The training facilities allude to an innovative start-up environment rather than a training setting, and all the equipment is professional. These aspects make the Bootcamps' students feel proud and honoured to be able to attend the programme, which has evident effects on their performance. This type of image also allowed the programme to reach out to unemployed young people with some prejudice towards traditional training programmes;
- **differentiated reskilling requires intense support during training and must include preparation for approaching the labour market.** The Academia de Código Bootcamps have 3 full-time instructors for each Bootcamp with 20 students, and include individualized support for addressing employers.

"Academia de Código's goal is not the training itself, but to change lives."

"Typically, training solutions follow the model we know from school: a teacher who passes on knowledge and a class of students who learn, some better and faster than others. Some work more at home and grasp the subject, others don't. The result is that at the end of the year or course, there is always a huge learning gap between students.

We don't do any of that. The Academia de Código's goal is not the training itself, but to change lives. We want our students to be so well prepared they can really start a new career as programmers.

For our ultimate goal to be successful, an impeccable selection of students is key. That is why we are so rigid with selection: we have no prejudice towards the candidates' formal education, and it doesn't matter if the person only completed year 9 or has a PhD. What does matter is that the person shows logical ability, willingness to learn, and above all, strong motivation to change paths, because that's what will set them apart.

In a traditional training model, a class has a teacher for a group of 20 people. We have three full-time teachers. There is personalized assistance for each and every student, both during class and out of hours. If someone is falling behind and needs help to move on to the next day without any doubts, there is a teacher who stays until midnight to answer any questions. We do not want gaps and we don't want one half of the class to be weaker than the other half, and this is the only way we can achieve that goal.

That's the big difference between us and others. For us, training is just a means to an end, employability is the end result we're constantly focused on."

André Machado, Academia de Código COO and Business Development Director
October 2020

Conclusion

The Academia de Código Bootcamps SIB was a success in the sense that it allowed the implementation of an innovative intervention for the promotion of youth employability, with outstanding results, and the testing of an outcome contracting mechanism. Recognition on behalf of participants, implementation entities, investors and public sector partners reinforces this account.

The ACB SIB worked with 174 unemployed individuals, divided between 9 Bootcamps, with 18 to 20 students each. The project achieved the 9 contracted outcomes: from the 9 Bootcamps, at least 11 students entered the labour market under 4 months after the end of intensive training. In total, 101 students were taken into account for outcome purposes.

This project required an investment of €683,696.87, about €40,000.00 below the initial budget. The cost of each student who benefited from the intervention was €3,929.30 and the cost of each student who entered the labour market under the terms established by the SIB was €6,769.28. Given the cost of each success case, within the context of an intervention model with no associated financial risk for the public entity, the Academia de Código Bootcamps represented a high value proposal for the public sector.

The SIB financing mechanism, within the context of PSI, implied highly complex bureaucratic processes. Payments to investors depended on the verification of outcome delivery but were based on the reporting of incurred costs and dependent on the reported expenses being considered "eligible". The implications of this mechanism were the biggest pain point during the project's three years, and led to the restructuring of the SIB's financial model, putting considerable cash flow pressure on investors and service providers.

Social investors recovered around 91.4% of their initial investment. The final internal rate of return for investors was approximately -2.7%. It is important to point out that a positive financial return was not the priority for investors, who consider this project as an overall success.

The expectation is that this experience may contribute to the promotion of outcome orientation, the optimisation of Active Employment Policies, through the assimilation of alternative approaches which increase their effectiveness and efficiency, and to inform the next generation of outcome-based commissioning instruments, allowing them to provide better incentives for all parties involved.

MAZE's Public Sector team. Photo: Luís Macedo