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**Code For All: A Case Study in Entrepreneurial Finance - Evaluation of a Social Impact
Start-up from a Venture Capital Firm's Perspective**

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ABSTRACT

While the many examples of start-up funding journeys offer a large basis for analysis, the scarcity of social impact ventures leaves many pending questions about funding these types of ventures. We review the history of a Portuguese start-up named “Code For All” by creating a case study. We draw conclusions on which typology of financing fits best with the social impact start-up, analyze how a venture capital firm would assess and value Code For All, and lastly determine a rationale of how such a venture could quantify their impact on society.

Keywords:

Social impact, Entrepreneurship, Social Entrepreneurship, Entrepreneurial Finance, Start-up Funding, Venture Capital, Code For All

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1. PROLOGUE

It was a rainy afternoon in January 2019 when the co-founders João Magalhães and Domingos Guimarães just finished their new year's management meeting. The intense meeting encompassed many discussions on the start-up's strategic direction including upcoming decisions on how to fund the business moving forward. Throughout 2014, João and his friends recognized a mismatch between the high number of intelligent but unemployed people and the urgent need for new talent in the IT industry. During many conversations, they developed the vision of starting a for-profit business that simultaneously maximizes societal impact in the form of reskilling Portuguese citizens for IT jobs. Even though they all were confident about the business model, only João was determined enough to take the risk. Subsequently, he founded Code For All in early 2015.

Code For All's core product was an immersive coding bootcamp, where around 20 students came together for a full-time 14-week program in one of four locations across Portugal. In these camps, students gained knowledge in several relevant programming languages while working together on projects or individual exercises. To differentiate the impact of these bootcamps, Code For All implemented a placement team, which helped the participants find a suitable job or internship in the IT industry after graduating. The founders were especially proud of their 96% employment rate, which was significantly above the industry average.

Besides the vision of reskilling talent for the IT industry, Code For All was also keen to solve the root of the scarcity of new IT talent. Hence, as a second business unit with the name ubbu, the start-up developed a platform that playfully introduced programming classes for kids in schools within the age range of six-twelve years. Code For All aimed to raise interest in

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programming topics at an early education stage as well as increase the general skillset for logical and problem-oriented thinking.

Finally, staying true to the old business proverb “the best way to stay in business is to be in business”, Code For All realized that companies not only were interested in new reskilled talent but also aimed to train their existing IT workforce on the ever-changing trends in the IT market. For this, they needed external expert trainers to carry out specific workshops. Given its bootcamps, Code For All was able to provide such trainers. As a result, a third business branch emerged recently in providing employee training to corporations in programming and other IT topics.

While initially hoping, the management team around João quickly realized that they could not bootstrap their entire business operations. Although the overall business revenue was growing at a fast pace, Code For All needed additional financial resources to support this growth. This was mainly caused by delayed payments from foundations and an overall net income margin close to zero, naturally creating liquidity bottlenecks. Thus, to open up more locations for their immersive bootcamps, the start-up started raising cash with debt-crowdfunding campaigns, common bank loans, and redeemable equity.

In early 2019, Code For All’s success got the co-founders to consider increasing their effort to scale the start-up. Even though they saw plenty of opportunities to increase the profitability of the firm, they did not want to jeopardize their initial vision. They suspected that a new funding round would be a landmark decision that would pose many questions for the company's future. To support continuous strong revenue growth, will they even need to increase external funding? What were the ideal funding options for the start-up; was debt financing still suitable, or should they focus on larger-scale equity investors? Would more capital jeopardize the social impact

they had been making? João shut his laptop and knew that there were complex decisions to come, with various opinions in the room. (Magalhães, personal conversation to authors, October 28th, 2022)

2. CODE FOR ALL'S JOURNEY

The founding story of Code For All might not have been as straightforward as some other founder stories circling through the media but is by virtue of this even more refreshing. Neither did João's career path lead directly toward the founding idea nor was he the one initiating it. After his master's at the business school NOVA SBE, he became a transaction advisor in a major consulting firm. With his focus on finance and strategy, he later joined the private equity division of a bank and several other consulting companies.



Picture 1: Code For All founding team, Domingos and João (Fi-compass 2022).

“With hindsight, I can say that all my different experiences were critical for where I am today. I was more of an allrounder than a specialist. But this gave me the knowledge of understanding how a business works from various standpoints. However, during all that time I knew that something was missing, I couldn't see my impact on the businesses I consulted or on society.”
(Magalhães, personal conversation to authors, October 28th, 2022)

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In 2010, João worked lost his job since the bank he has been working for went bankrupt. What seemed to be a tragedy at that moment, João will later describe as a blessing. His desire to build his own company grew but before he could take that risk, he first needed to secure a stable source of income. João once again joined a consulting company and simultaneously worked on start-up ideas that were worth pursuing. After some time, João was invited to join a discussion that five of his friends had started some while ago. The group saw a huge gap between the unemployment numbers and the high demand for trained IT employees. Especially in Portugal where the unemployment number rose to 150 thousand and the IT sector lacked 15 thousand skilled employees (Anselmo and Charro 2022). This demand/supply problem didn't seem to fix itself. They knew that solving this issue would not only benefit the government but also society. The friends figured that if they would be able to successfully train only 10% of the unemployed and transfer them to open positions, they could have an immense impact. Even though the approach seemed logical there were still a lot of open questions they did not yet have the answers to. Free coding courses were already available online but did not seem to have the desired effect. How could they find and address the unemployed people, that would be eligible for such retraining? How could they build a program that has a higher success rate of transferring their graduates to actual jobs? What skills do Portuguese companies require?

After taking all these questions into account, the group of friends came up with the idea of a bootcamp approach paired with a unique selection process and a specialized placement team. Ultimately, it was more a joint effort than individuals pushing the idea forward. Even though the friend group was confident with the outcome, no one was comfortable committing their full time and energy to the project. In the end, João was the one who believed the most in the idea and was willing to take the risk to kick off the project. Out of the five initial friends, only João and partly Domingos actively started to build the business model, and in January 2015, the

company was officially founded. Only two years, a third member of the group, Rui joined as the CTO. Bernardo Afonso continued to promote the start-up to potential stakeholders and supported João without joining the company until he officially became CFO in 2019 (Magalhães, personal conversation to authors, November 7th, 2022).

In 2016, Code For All launched its first bootcamp. At this point, the content and organization were a typical ‘minimum viable product’ and not even close to the standards the company later established. Friends and family helped to promote the course to attain the first 50 applications. After the launch, João soon had to discover why other existing free online services were not able to close the supply and demand gap in the IT sector. Although Code For All had a unique selection process and spent a considerable time in face-to-face teaching, big IT companies did not want to recruit from them. João reflected:

“They were hesitant with our graduates because they had no official university degree. Despite the lack of supply, companies couldn’t be convinced. Even by using my entire network, I was merely able to get our graduates internships. Nevertheless, this was the start we needed. I was certain that those alumni were highly skilled and will succeed once they had a foot in the door” (Magalhães, personal conversation to authors, November 7th, 2022).

After the second bootcamp, Code For All gained some traction. The graduates that started as interns were soon offered jobs and the reputation of the program increased with every employee placed in reputable companies. In 2019, IT consulting companies, and tech start-ups were now eager to recruit the best bootcamp attendees. Code For All was able to break the prejudice against coding camps by going the extra mile and improving certain aspects the competitors were missing.



Picture 2: Bootcamp setting (Gulbenkian 2022).

Simultaneously with the launch of the first bootcamp, Code For All's second business unit was built. Following the goal to change people's lives and motivate them to become software developers, João and his team envisioned a second element he wanted to approach. As the bootcamps only addressed the imminent market shortage of software developers, the structural imbalance persisted. The root of the problem existed in the education system. Up until then, children, the future workforce, did not have enough touchpoints with programming, nor were they actively motivated to pursue a career in that field. João and his team knew that this needed to change to comply with the current development of the society and business world. Some online coding platforms for kids were available in Portugal, but they only had content in the English language and were run by American companies. Therefore, these solutions haven't tapped into the Portuguese market nor were these companies able to acquire any school partnerships, like in the US. Intuitively then, Code For All worked relentlessly to build a platform for Portugal. Still, 'just starting' bears its problem as João remembers: *"The most difficult part was to tailor the content to the kids. It needed to be playful and interesting, yet informative. Furthermore, we needed to consider the different ages young learners will enter our learning experience. It was a huge stretch to work on the bootcamps and build a platform for children. During that time every employee was kind of working on both projects*

simultaneously. In the end, we simply made it happen” (Magalhães, personal conversation to authors, October 28th, 2022).

Up until this point, this second business unit was also run under the Code For All brand. After the first pilot projects at schools in Lisbon, the management team understood they were facing a branding issue. Students didn’t respond to the naming of their product. Therefore, Code For All, decided to name their platform for children ‘ubbu’. In that same rebranding initiative, the team also decided that the bootcamp business unit will be rebranded as Academia de Código (AdC), as participants understood the Portuguese naming better. Code For All remained as the overall company name and will persist as the brand for international expansion undertakings.



Figure 1: Logos of Code For All's business units (Academia de Código 2022; ubbu 2022).

Based on the placement success of the bootcamp graduates, Code For All started to build strong relations with partner companies. João blissfully recalls: *“The success of our alumni was not left unheard of. The companies that hired our graduates were very happy about the skills of their new employees. Of course, we were delighted by the feedback, because it showed that what we have built also helped Portuguese companies. However, CEOs and CIOs told me about the insufficient level of coding skills in their existing workforce. They even requested to sign up their employees for our bootcamps, but this did not comply with our philosophy”* (Magalhães, personal conversation to author, October 7^h, 2022).

After several requests from corporations, João and his team felt pushed to build an additional revenue stream and extend the value chain. Code For All has already been working at full capacity so sparing current coaches for corporate training was not an option. Still, considering their continuous pipeline of highly trained graduates, they figured out a way to make it work. By the end of 2018, Code For All officially introduced a new subsidiary that focused on training the IT departments of partner companies and completed the first project. Due to Code For All's business network and the pulling demand, the leadership team was sure it was creating a complementary, and profitable third business unit. João and his team were also optimistic about growing this business unit in the future.

Overall, by the beginning of 2019, Code For All had 41 employees, mainly structured in the departments of training, business development, admission, placement, pedagogical, and marketing departments. Code For All had successfully established its three business models and was recording rapid growth in AdC and ubbu. The corporate training business unit was just starting, but the hopes were high that it will follow a similar success pattern. João was very happy about what they have achieved so far. Hoping to build on such a track record, he was excited and motivated to push the company to even higher spheres.

3. BUSINESS MODEL

As indicated, the business structure of Code For All was split into three branches. The first two, Academia de Código, with its immersive bootcamps, and ubbu, as the programming platform for kids in schools, accounted for the key revenue streams. They presented the vision of how the firm was supposed to create value and impact. As the latest opportunity, corporate training made up the third business branch. While posing rather stark growth opportunities, this branch only accounted for a minimal share of Code For All's revenues in 2018.

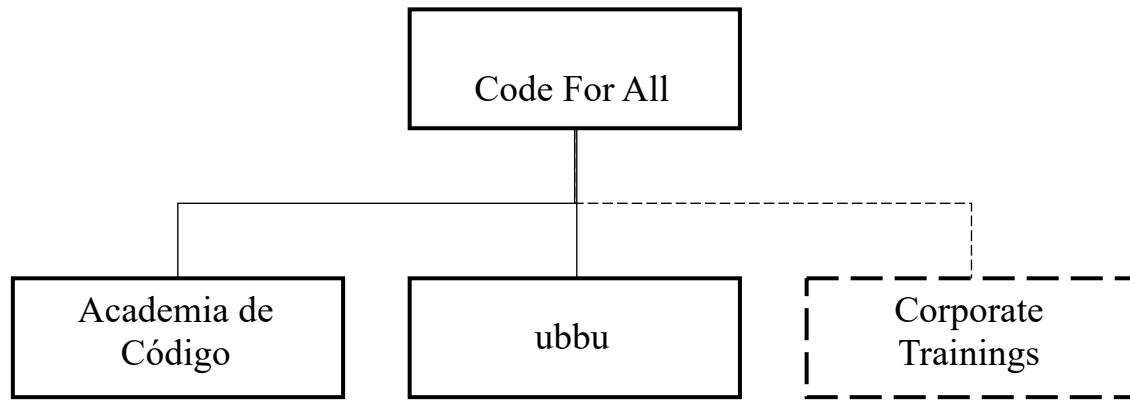


Figure 2: Business structure of Code For All (own figure).

3.1 Academia de Código

The concept of immersive bootcamps encompassed three main stages; the admissions process, the implementation of the bootcamp, and the placement of students in the industry.

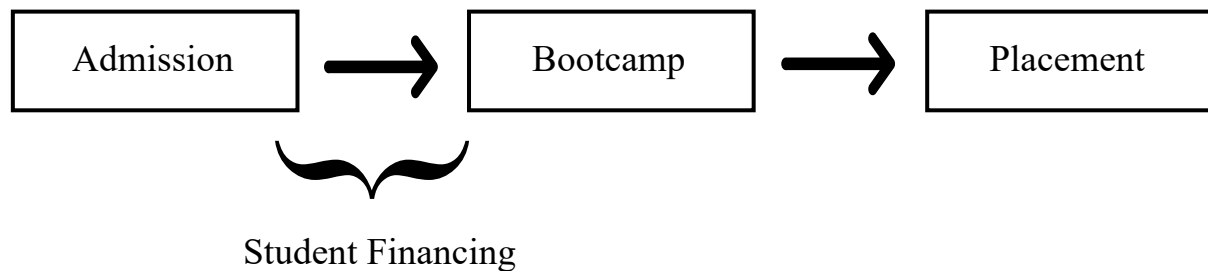


Figure 3: Academia de Código's work areas (own figure).

Admission Most bootcamps had a limited capacity of 20 spots, depending on the location. At the same time, Academia de Código, received around 100 applications per bootcamp, resulting in an admission rate of roughly 20%. A dedicated team handled the screening and evaluation of interested candidates. While initially manageable, the admissions team quickly changed the process of individual review to digital applications. The idea moving forward was to establish several digital application stages. The candidate had to start with 60 hours of programming courses and exercises while being evaluated. Once a certain level of hours was reached, candidates were invited to a case study workshop, followed by a final interview. Only after this stage, applicants were admitted or rejected. With this approach, it was easier to filter

out candidates that were not dedicated to learning, and at the same time, the admissions team was able to work more efficiently with the potential candidates.

For the applicants to be successfully admitted to the bootcamp, the existing knowledge of computer science and work experience were less relevant than the willingness to learn something new. Since coding was rather complex and 14 weeks was a limited time frame, it was vital for the participants to possess the necessary motivation to overcome the challenges they would face in the bootcamp. Selecting the right candidates also facilitates successful job placements of their graduates. João rationalized their screening criteria as follows: *“We placed great emphasis on identifying the right people with high potential. The candidates have the chance to prove their willingness to switch professions in the several stages of our admission process. However, if we do not see the dedication to learn, the candidate will not be admitted”* (Magalhães, personal conversation to author, October 28th, 2022).

Student financing Academia de Código charged around €6,000 for the bootcamp, which was commonly financed directly by the students. As candidates were often unemployed and the money was supposed to be of secondary concern for students, Academia de Código offered different ways of financing the program. Firstly, it was possible to pay the fee in three installments: One upfront payment when the candidate got admitted, the second payment right before the bootcamp started, and the last payment usually two weeks after the kick-off. Additionally, Academia de Código worked together with banks to give out loans to the participants, which they had to pay back as soon as they found a job. Moreover, since most students failed the bank's risk assessment, there were also agreements with banks to provide funding with a warranty, issued by Academia de Código. This was one of the unique aspects of the start-up that differentiated them from other coding schools. They went the extra mile to

enable reskilling for the unemployed. Because of these extraordinary social impact efforts, AdC qualified for a further way to finance their students' tuition: A foundation invested in a social impact bond that financed the tuition for more than 170 AdC students (Magalhães, personal conversation to author, October 28th, 2022).

Bootcamp Academia de Código offered bootcamps in four locations: Lisbon, Fundão, Terceira, and Porto. In every city, there were two bootcamps held per year. Throughout the year 2018, Academia de Código had a total number of 200 participants in their bootcamps and this number grew steadily every year, as more locations were added within the country.

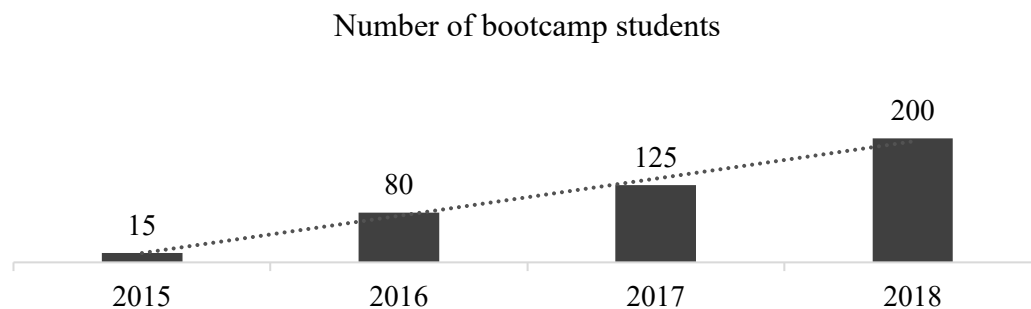


Figure 4: Number of bootcamp students per year (own figure).

The full-time bootcamps were held in presence from Monday to Friday. The teaching methods consisted of typical lectures, group projects, and lab exercises. During the times when no bootcamps were taking place, the trainers improved the curriculum as they aimed to avoid static lecture-style classes. Instead, they focused on giving students the ability to create something on their own. To achieve that, a more practice-oriented approach with a ‘learning-by-doing’ mindset was taught. Throughout the course, students achieved proficiency in multiple programming languages such as JavaScript, GitHub, or SQL among other frameworks useful for future jobs. The acquired skills qualified them for various job profiles. Previous participants’ positions ranged from software engineering or full-stack developers to IT consultants (Magalhães, personal conversation to author, October 28th, 2022).

Placement The vast majority of students successfully graduated from the program. This led to the next step of Academia de Código's student journey: Job placements. The placement rate was the key metric to measure this department. Code For All's graduates reached an outstanding value of 96% within three months after graduating. Responsible for this achievement was a dedicated team established to accompany participants in the transition phase of bootcamp and job entries. A part of this team manually helped students to personalize applications and create meaningful resumes. However, the goal of this department was to shift the focus from manually helping the individual participants with their applications to focusing more on building relationships with companies. While initially, it has been difficult to convey the quality of the provided education, Academia de Código managed to build up trust and longer-term relationships with companies. Other members of the placement team were responsible for communicating with IT recruiters, as well as human resource managers to enable a personal fit. The variety of companies hiring graduates ranged from consultancies and IT companies to tech start-ups. Larger firms often hired in volume to build teams for new projects, while start-ups usually searched for people in specific positions. João further stated:

"The recruiters started to trust the quality of our program because they saw the graduates were well-equipped for the positions. It helped us to build a strong reputation which increased demand from other companies. This differentiates us from other businesses that follow a similar approach. Our placement rate shows the satisfaction of both, the students, and recruiting companies." (Magalhães, personal conversation to author, October 7th, 2022)

Candidate story Miguel's career path posed as a great example of a bootcamp graduate success story. He studied business at a university in Lisbon. After he graduated, he heavily struggled to find a job in his study area. A friend told him about Academia de Código after he

was already unemployed for several months. As Miguel was frustrated with his search for his first job, he decided to apply for a bootcamp in Lisbon. He already had one introductory class in programming at his university but did not have much experience in the computer science area. Nevertheless, he was interested in digital topics and could imagine himself working in this area. Miguel had the chance to show his motivation during the admissions process and was ultimately invited to the ninth bootcamp of Academia de Código, which took place in 2017. After the intensive 14 weeks of learning to code in various programming languages, he successfully finished the bootcamp and soon worked together with the placement team on his job applications. Since Code For All has already built strong relationships with several companies, Miguel was quickly provided with companies that fit his interests. Within merely four weeks of finishing the program, he received an offer as a software developer from a big auditing company, which wanted to establish a new digital tax advisory team (Academia de Código 2018).

João commented on candidate stories like Miguel's: *"This is a very common case because a lot of our students come to us with a similar frustration about the Portuguese job market. At the same time, we often see a high willingness to leave the comfort zone and a strong motivation to start a new career"* (Magalhães, personal conversation to author, October 28th, 2022).

3.2 ubbu – The learning platform for kids

ubbu, the second business branch, sought to solve the root of the software developer shortage. By integrating basic programming curriculums into the educational system, the company aimed to prepare children for a digital workplace, hopefully nurturing their programming skills and thus employability. After securing Code For All's first school partnerships, teachers at several schools in Portugal worked together with hundreds of kids between the ages of six to

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twelve. Code For All created an online platform where children could gain first programming experiences with games, videos, exercises, and other tools. The project later advanced to a few small pilot projects in other countries.

Establishing the curriculum and content for the platform was very complex and required the collaboration of several areas within Code For All. Out of the total 41 employees, the start-up allocated seven people to form three teams that exclusively work for ubbu. The pedagogical team understood the needs and capabilities of kids at a certain age. This was highly relevant, as there were major differences in requirements between children at the age of six, compared to students at the age of eight, for instance. The pedagogical team was working together with the technical experts and the team that conceptualized the curriculum for the students.

At the beginning of 2019, Code For All already managed to create seven unique curriculums for the individual age groups from six to twelve. The next steps for ubbu were to add further curriculums and age groups to the platform, which took into account the progress each user made after each year on the platform. For instance, a seven-year-old student that has worked on the platform for one year within the curriculum for six-year-olds required different content than a first-year seven-year-old kid. Therefore, the number of unique curriculums for different skill levels kept increasing with each year of being in business and demanded large investments in software development.

The platform received positive feedback from the schools, as teachers took part in a survey that proved ubbu achieved a net promoter score of 75 (out of 100), which is indicating that the teachers would very likely recommend the platform to others. This success was also highlighted by the increasing number of schools using ubbu and, at the same time, the total number of

students using the platform. After four years, ubbu had a total users CAGR of 270%. Hence, the founders felt confirmed in their market assessment of ubbu's scalability and projected a CAGR for the succeeding 5 years of roughly 100%. Furthermore, the founders developed the ambition not to limit the offering to schools but also to expand to an open platform. João and his team were placing a lot of effort and trust in the scaling opportunities of ubbu. However, this business unit has a high burn rate and is partially financed by the profitability of AdC and corporate training (Magalhães, personal conversation to author, October 7th, 2022).

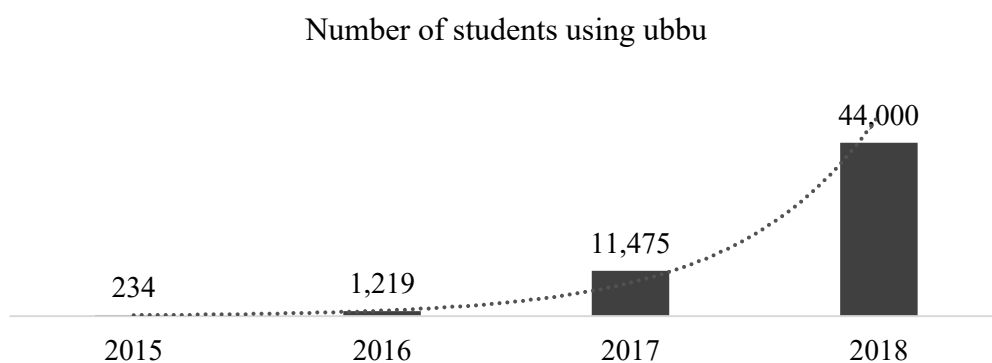


Figure 5: Number of students using ubbu from 2015-2018 (own figure).

The team envisioned further social impact. Improving coding skills often accompanies performance enhancement in other areas. The founders believed that practicing programming in the form of games and other activities would improve the students' capabilities in school-related topics, such as maths or general problem-solving (Magalhães, personal conversation to author, October 28th, 2022).

Because of the major social impact that ubbu was creating, this business unit was also partially financed by a social impact bond. Thus, ubbu was required to meet certain impact metrics. More precisely, a Portuguese foundation initially invested in ubbu and launched a study after the 18-month pilot about the impact programming education has on kids. The study showed performance improvements in math, logical thinking, and overall motivation to go to school.

Consequently, public entities reimbursed parts of the investment to the foundation based on reaching these metrics (Fi-Compass 2018).

3.3 Corporate Training

The third and smallest business branch emerged just recently. Code For All received requests about upskilling corporate employees in the field of programming and coding. As a result, they started hosting a pilot corporate training for the employees of a current partner firm. Only two instructors from Code For All were providing the course and no employee was exclusively working for this new business unit. By establishing this business unit, Code For All entered a new segment in the market of educating people in computer science. While they reskilled people in their bootcamps, within the corporate training they were planning on upskilling IT teams that had already acquired extensive knowledge in this field. During the training, Code For All gained valuable insights into future projects and plans of the corporation.

Being a service business unit, the corporate training branch underlies a significantly lower cost structure than that of AdC and ubbu. As no additional platform or substantially different learning curriculum was needed, it was predicted that each project would solely incur variable personnel costs. This unit thus was different in the possibility to variably adjust to customer demands. Using the pilot project as an anchor point, customers were predicted to pay relatively large sums for the upskilling service of Code For All. Overall it was cheaper to educate current personnel, instead of hiring new people. While currently operating with business units that potentially yield margins of 10-30%, corporate training projects were projected to yield a profit margin of 65%. Therefore, the start-up identified this field not only as an opportunity for a new revenue stream but also one with high profitability prospects (Magalhães, personal conversation to author, October 7th, 2022).

The co-founder explained this novel business area: *“The successful pilot corporate training opened a door to bigger companies. They discussed project plans with us and asked if we could establish a team for various specific projects with our graduates. This business unit is still in its early stages and probably does not have the highest priority for us right now, but we might see a business opportunity here due to the frequent requests, and potentially large revenue stream”* (Magalhães, personal conversation to author, October 28th, 2022).

3.4 Marketing

AdC’s marketing efforts focused on maximizing the reach of its bootcamps without widening the target group. Despite the steadily growing marketing budget, Code For All’s popularity was mainly based on the word of mouth. Successfully placed graduates recommended AdC to peers that were either unemployed or dissatisfied with their job. A questionnaire found that approximately 40% of applicants decided in favor of AdC due to these private recommendations. All other marketing activities were outsourced to an agency that specialized in online advertising. Here, roughly 95% of the online marketing budget was allocated on Facebook ads. The corporate training branch capitalized on the network of AdC and thus did not need additional marketing (Magalhães, personal conversation to author, October 28th, 2022).

3.5 Social Impact

One of the key motivations for João to found Code For All was the social impact he envisioned being able to provide. This aspect was therefore deeply rooted in the DNA of the company. Academia de Código was not only changing lives on the individual level but also extensively helping the general public. On average, according to the calculations of the ‘OneValue’ initiative, the Portuguese government spent around €6,200 in social welfare per unemployed

person per year (Anselmo and Charro 2022). Thus, by educating unemployed candidates and with a placement rate of 96% that practically ensures graduates a job, the start-up was not only saving the government welfare spending but also increased the number of people that paid taxes. Given the current income tax rate of around 35% and an average yearly income for software developers of 25 thousand euros per year, Code For All calculated an increased public tax income of roughly €9,000 per life changed. These numbers made a quantification of social impact more tangible for Code For All. As a result, it enabled the start-up to receive more public funding in the form of grants (Magalhães, personal conversation to author, October 28th, 2022).

The second social condition Code For All was aiming to heavily improve was the education of children at a young age with initial programming topics. Here, they are directly addressing the fourth Goal of the SDGs: Improving Education. Gamifying activities within a programming platform for kids would ensure an increase in interest in the computer science area, which subsequently would lead to a higher amount of young professionals going into the IT industry of Portugal (Magalhães, personal conversation to author, October 28th, 2022).

4. INDUSTRY, COMPETITION & CHALLENGES

Code For All's two main business units, AdC and ubbu were part of the e-learning market. E-learning is defined as a formalized teaching method with the assistance of electronic resources like computers. The learning experience can happen in- or outside of classrooms, however, the use of computers and the Internet is a key component (The Economic Times 2022). AdC's bootcamps solely used face-to-face training sessions, held on campus, to achieve faster and more direct feedback loops while teaching important coding skills. Nevertheless, they still competed with pure online programs as they offered a similar product and could satisfy the same need in a slightly different way. Whereas ubbu, the online learning platform, was categorized as a purely online learning product for children.

4.1 Industry Analysis – Academia de Código

The employee shortage in IT jobs drove the growth of coding training camps and online courses. However, teachers were scarce and thus the drastic increase of training camps resulted in a shortage of teachers. Anyhow, AdC was able to employ enough trainers and was also capable of directly recruiting from their graduates.

The customers that used coding training were driven by different motivations, e.g., unemployment, job transition, or enhancing career opportunities (Falconer 2022). Portugal's unemployment rate was at 6.46%, accounting for 665 thousand potential customers for AdC. In 2019, 25% of Portuguese internet users used online learning in some way, 5% more than in 2015 (Eurostat 2019). Furthermore, the risen awareness of the increasing number of jobs that required coding skills boosted the demand for these specific programs (Training Industry 2019a). As the number of e-courses offered grew just as quickly, customers had a wide variety of options to choose from. Subsequently, the bargaining power of customers was rather high. Still, the increase in demand was mainly fueled by the success of low-cost, pure online courses, e.g. Udemy, and Data Camp, for which the switching costs were considerably lower than for more expensive on-campus bootcamps. Moreover, since customers that preferred face-to-face learning were geographically constrained, they inherited a lower bargaining power. In Portugal, only a handful of bootcamp alternatives were available if potential customers were not willing to take on long commuting times. In addition, revenues from bootcamp customers are normally non-recurring. In contrast to the online platforms, the bootcamp approaches target customers that want to reskill. Once they participated in a such program, they want to have learned everything they need to get a job in that respective field. Hence, they would only upskill in specific competencies, a service AdC did not offer.

As there was no real substitute for e-learning, the threat of substitution was considerably low. Even though companies offer further training themselves, they often relied on e-learning

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solutions, and self-developed programs were merely accessible to their employees. The fragmented e-learning market comprises a high number of established companies, which offered a wide variety of different learning content. In addition, many different business models with distinct target groups had emerged over the years. Though entry conditions in market niches might have been more favorable, the high cost of the initial content set-up and the shortage of trainers made new entrants unlikely. Especially as incumbent providers already developed track records and built networks, they had a competitive advantage that is hard to compensate for. Furthermore, the e-learning market already showed signs of consolidation. In 2019, a high level of acquisition by pure equity, private equity, and trade players were recorded. Deal multiples were set to rise to double-digit multiples (Giles and Hawkins 2020). Considering this market development, the threat of new entrants was rather low.

The revenues in the European E-learning market were estimated at \$350-450 million. The expected CAGR of 19% (2020-2026) indicated sufficient natural growth (Businesswire 2019). An important aspect to consider regarding the competition intensity was the geographic location of the bootcamps. Moreover, the course language was a decisive factor for potential customers. AdC solely serviced locations in Portugal. Thus, mainly coding camps in and around Portugal needed to be considered. However, pure online players were not restricted by the customer location and competed in a way with AdC, though with a different value proposition and broader target group. In general, the high number of companies in the industry indicated fierce competition. Some providers tried to differentiate themselves by narrowing their target group and tailoring their offerings. Nevertheless, the geographical restrictions need to be considered, thus the level of competition for AdC can be seen as low to medium. Academia de Código considered ten companies as their closest competitors.

4.2 In-depth Competitor Analysis – Academia de Código

To get a better overview of AdC’s closest competitors, the competitive landscape can be split up into the strategy/focus and the online/offline product offering as is figured below.

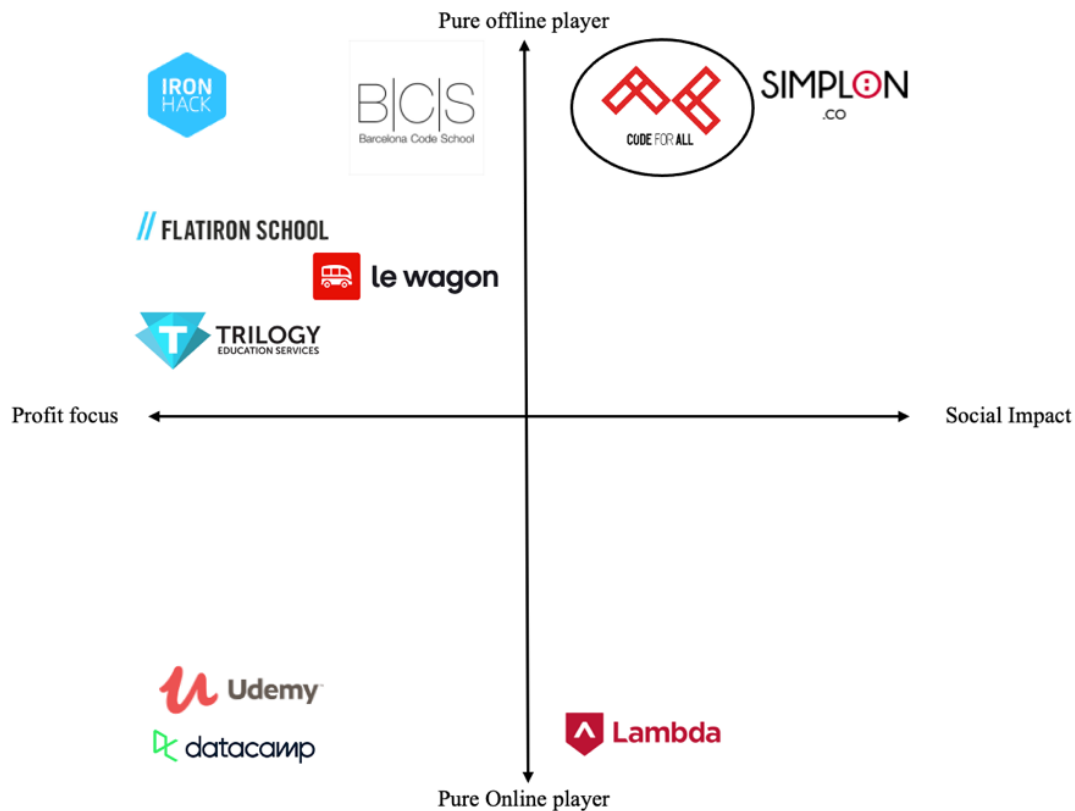


Figure 6: Competitor overview regarding product type and focus (own figure).

One of the key competitor segments of AdC has been the pure online players, e.g. Udemy, and Data Camp. The chart-topping platforms offered most of their courses in the English language and were used all over the world. Data Camp already had over three million users, 214 courses, and 173 trainers focusing on private customers and businesses (Data Camp 2019a). Companies could acquire licenses and train their staff with Data Academy courses. The basic free account enabled only limited access to content. But even the monthly \$29 premium account fee for unlimited access was substantially lower than the on-campus program tuition (Data Camp 2019b). Such low costs attracted a high number of customers that were interested in coding but did not look for a career change per se. To address the mass, players like Udemy offered a wide

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variety of different coding courses with no limitations on user numbers. Pre-selection or application processes were only found at smaller providers that served substantially different customer needs. A provider that falls out of this pattern is Lambda School. Even though their courses are only taught online, Lambda focuses particularly on the social impact of their programs. Students do not have to pay upfront and are only obliged to pay the fees if they can secure a job that pays more than \$50 thousand per year. Like AdC's business model, the tuition will be subtracted from the salary later. Overall, scalability, price advantages, and low costs represented the main advantages of these pure-online providers.

Hybrid business models like Trilogy or Le wagon offered both online and offline sessions. They tried to combine the advantages of the two formats but often lacked the product depth that, for example, Udemy offered. Trilogy, as a differentiating factor, also focused on partnerships with top-tier universities. Accordingly, they held bootcamps and workshops on university campuses like UC Berkeley and other Ivy League colleges (Berkeley Extensions 2022). Trilogy furthermore serves as proof that investors assume a high potential for these hybrid business models, as the company was acquired by 2U in 2019 for \$750 Million (Lunden 2019). On the other hand, Le wagon focused on its on-campus bootcamps. By 2019 they have built campuses in 30 different locations, including Lisbon. Thus, geographically they can be seen as a direct competitor to AdC. Differentiating though, they focused more on upskilling their potential customers rather than reskilling them.

Sole on-campus solutions like the Barcelona Code School were booked online and often involved an application and selection process as the available spots were limited. Classes took place in small groups and were held over a pre-defined time frame of a couple of weeks. Barcelona Code School, which was pretty similar to AdC in terms of selection, education, and

placement offered courses for €5,800. They also offered different financing options and scholarships. Because of the limited scalability and higher costs, these programs were in general more expensive but advertised their high quality of training and the effective placement rate (Barcelona Code School 2019).

4.3 Market Analysis - ubbu

ubbu operates in the same market as AdC, which allows many parallels to be drawn. In 2018, 1.4 million Portuguese children belonged to the primary secondary education stage (Pordata 2022). According to its business model, this value represents the total potential customers that ubbu was targeting in Portugal. In the EU, this educational group accounts for 75.3 million students, offering sufficient opportunities to expand (Eurostat 2022).

In general, three different systems to generate customers could be observed in the market. First, prioritizing school partnerships and selling the platform and content as a bundle for an overall price to schools or classes. Second, providing an online platform that is accessible to every parent or child via the internet. In exchange for a monthly fee, children could independently study programming topics in a gamified and fun way. In this scenario, the parents represent the customer while the children are the user of the platform. Once set up, this approach enables a tremendously high level of scalability. The third approach is a combination of the two mentioned above. ubbu chose the first option to enter the market. They wanted to build strong relationships with schools and further develop their content based on the feedback from the educational institutions in Portugal. Soon, João and his team planned to extend the business model to the third approach. The exact competitors were defined by the similarity of the chosen content focus. ubbu solely considered providers that teach science and coding courses as their direct competitors. Platforms like Duolingo that provide language courses to children might

have it easier to expand into this area in the future as they already built up a significant customer base. However, they were neglected as competition by ubbu so far.

4.4 Contestant Analysis – ubbu

ubbu identified CodeHS, Tynker, and Discovery Education as their main competitors since they were offering similar products to the same target group. CodeHS is an online platform that helps schools to teach computer science. Founded in 2012 they have raised \$4.2 million in cash (Crunchbase 2022). CodeHS built up a broad product portfolio, ranging from online courses for children to tools and courses for teachers. The company arranged partnerships with schools, in which the coding courses became a fixed component in the teaching curriculum (CodeHS 2019). Furthermore, CodeHS was also offering free accounts to access online courses for students. The San-Francisco based company provided different curriculums for children, depending on age and focus. Kids could learn four different programming languages and choose between different focus areas (CodeHS 2019).

Meanwhile, Tynker mainly addressed the parents of children. The courses are very playful and include child-oriented aspects like toys and games. 16 million children all over the world have practiced coding via the platform and mobile app (Tynker 2019). Discovery Education works together with ministries of education to provide transformational education programs that teach skills to teachers and students. The content was taught in-person, hybrid, and online and included coding, science, and math. By 2019 five million educators and 51 million students in over 50 countries participated in their programs. The ex-subsiidiary of the US entertainment and media company Discovery was the global leader in digital curriculum resources in K-twelve (including children from kindergarten until twelfth grade) classrooms. Compared to Tynker and CodeHS, Discovery Education also focused on social impact and teamed up with charitable organizations to provide free learning experiences (Discovery Education 2019). ubbu's main

competitors were already established players with a wide international reach. However, all of them showed different approaches and focuses regarding their target group. In Portugal, online services were available but not in the Portuguese language. Furthermore, the mentioned competitors were all based in the USA, solely expanding to Europe and other countries. In addition, it is important to mention that the Portuguese government has passed the “introduction of Information and Communications Technology (ICT) in the national curriculum” (INCoDe2030 2018). This decision will boost the demand for coding programs in Portugal and could be a great opportunity for the already established platform ubbu to capitalize on.

4.5 Comprehensive Competitor Analysis – Corporate training

Competitors in the corporate IT training landscape overlapped with those of AdC. Most of the e-learning players that offered coding courses to individuals have already expanded their offer to corporations. However, AdC’s business unit had an advantage in their home market due to the location, language, and established network of Portuguese companies. Since the corporate training emerged from the need of the partner companies, that hired AdC’s graduates, they have already implied further demand for this service.

The three different business units served different customer needs and addressed different types of customer segments. AdC’s social impact focus on unemployed customers led to a unique positioning with a rather small customer segment but no comparable competitor. Despite AdC’s privileged competitive situation, the venture was naturally confronted with two main challenges stemming from its positioning; namely scalability of its main business unit and secondly funding for the tuition of unemployed students. Specifically, Code For All’s main business unit, which focused on educating the unemployed, faced the challenge of scalability. With one of the differentiation strategies being the pre-selection of the applicants, the small pool of hard-

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working and ambitious unemployed people called for multiple locations across the country. This encompassed a large amount of capital expenditure. Similarly, the widespread and niche target group also highly limits the viability of AdC in rural locations since there would be too few potential bootcamp participants. This posed a key challenge for the venture, considering AdC's vision of giving all hard-working, talented unemployed people the opportunity to educate themselves. One example of how João overcame this challenge was through the use of a social impact bond facilitating for instance the Fundão location.

Possibly even more difficult to find a long-term solution for, was the funding of the tuition of unemployed students. Although the pre-selected students were willing to work hard and showed that they were eager to learn, they were unemployed and often came from unprivileged backgrounds prohibiting them to pay the tuition out of their own pockets. On top of that, they often did not pass bank risk assessments, failing to be granted even an education-specific loan. Hence, while AdC found its profitable and impact-rich niche it still had difficult challenges to overcome and was constantly searching for opportunities that would allow solving these issues. Besides AdC's challenges, the nature of ubbu's business model resulted in further adversities. While bootcamps also require a well-developed curriculum, an online platform aiming to educate kids in six age groups necessitates mass investments. Not only needed ubbu to come up with one curriculum for each age group, but the creators had to individualize curricula for each student group that passed a given amount of previous curricula on the platform. Thus, to satisfy every possible group from the age of six-twelve, ubbu had to create 28 curricula. After the team already took over a year to create the initial six curricula, João figured that heavy investments will keep up for at least three more years and ubbu will not become profitable during that time. Furthermore, during this time, the platform also wasn't yet open to every child but only to those studying at partner schools. This greatly limited the target group and hence,

revenues were limited. Intuitively, the success of AdC and ubbu depends on the level of programming skills the trainers have and their ability to transfer this IT knowledge in an impeccable manner. Adding to this, the corporate training unit also relies on knowledgeable trainers and arguably necessitates the most knowledgeable trainers from all the business units. Thus, for the corporate training unit, it was very important that Code For All steadily hires the most intelligent software developers and trainers. João also realized that while there existed a pull-demand for corporate training from current partner firms, acquiring new customers for this offering proves hard. In new and foreign markets, Code For All might not be able to leverage its network and would also face fiercer competition. Subsequently, he thought of this business unit as expansible but not heavily so.

5. FINANCING

Like many other start-ups, Code For All had to face many financing hardships such as communicating an attractive investment case or finding the perfect investor–start-up fit. Furthermore, given its social impact focus, Code For All had to endure non-profit stigmatization. In 2015 there were only few social impact start-ups, posing a challenge to interested investors and financing institutions in assessing risk and return on their investments. As a result Code For All was thus faced with an especially challenging funding journey that was solved in a creative manner. In its four-year history, Code For All used nothing less than five financing models; Two different crowdfunding types being the first, social impact bonds (especially financing AdC's and ubbu's development), followed by bank loans (credit line), and finally redeemable equity through a socially responsible investment firm.

5.1 The Financing History

Initially, the founders were keen on bootstrapping the entire business. Generally speaking, bootstrapping describes the process of a start-up being funded only by either the founders' own investments or the companies operating revenue to exclude external investments (Kenton

2022). However, when the founders initiated their first bootcamp, they realized students were experiencing difficulties in paying around €6,000 for their bootcamp fee. Furthermore, AdC students were facing a >90% rejection rate when applying for student loans because of their individual credit statistics. While the founders figured early that sourcing funds for their own growth path would be challenging, they quickly realized that they would also need to assist the students in financing the tuition. The many financing activities were closely tied to solving both financing students and the company's growth prospects (Magalhães, personal conversation to author, October 28th, 2022).

For their initial financing campaign that secured the first bootcamp, the founders decided to apply to what could be called the grandfather of crowdfunding: public grants from the city of Lisbon's participatory budget (Power 2021). Participatory budgets are grants of public funds where citizens can decide how to distribute these specific means. While other countries have followed, Portugal had a great history of participatory budgets. They first introduced this model in the early 2000s (Power 2021). With one of the highest votes ever recorded in Lisbon for this approval process, Code For All was able to secure the full cash amount of €150 thousand that they applied for.

Due to the widespread uncertainty about the new concept of social impact start-ups in Portugal, many institutional investors including banks stayed away from Code For All. This made crowdfunding the only possible choice left for a quick source of cash. Being a proven concept in the start-up investing industry, various forms of crowdfunding existed with each encompassing specific advantages and disadvantages. João first decided against donation-based crowdfunding as the founders projected a larger amount of cash needed than what can generally be raised solely from donations. On top of that, donation-based crowdfunding doesn't enable

the receiving party to demonstrate a financial ability to repay investors and/or shareholders. He also thoughtfully decided against equity crowdfunding as Code For All had just proven its concept but wasn't yet operating in 2015. A subsequently low valuation would have resulted in a high dilution compared to the amount of cash such a campaign would have yielded. With all other options crossed out, the founders carefully decided in favor of debt crowdfunding, also known as peer-to-peer lending (P2P) (Power 2021).

To quickly receive access to this specific kind of debt financing, Code For All used the crowdfunding platform *Raize*. With a quick onboarding time, the first campaign was live within just two weeks. Only 24 hours after the campaign went live, 138 investors raised €25 thousand for an 18-month loan at an interest rate of 9.21%. While this interest rate seemed high, the market conditions dictated such rates. Still, because of the immediate accessibility of cash, the founders were quickly hooked on crowdfunding, and Code For All started two further debt-crowdfunding P2P campaigns between March 2017 and December 2018. These campaigns raised a further €275 thousand with close to 3,000 individual investors. In the following campaigns, the interest rates dropped significantly and with larger amounts of capital being funded, Code For All also decided to increase the loan duration. The latest loan had a duration of four years at an interest rate of 4.25%. This resulted in the following debt and debt-service structure (see Figure 7).

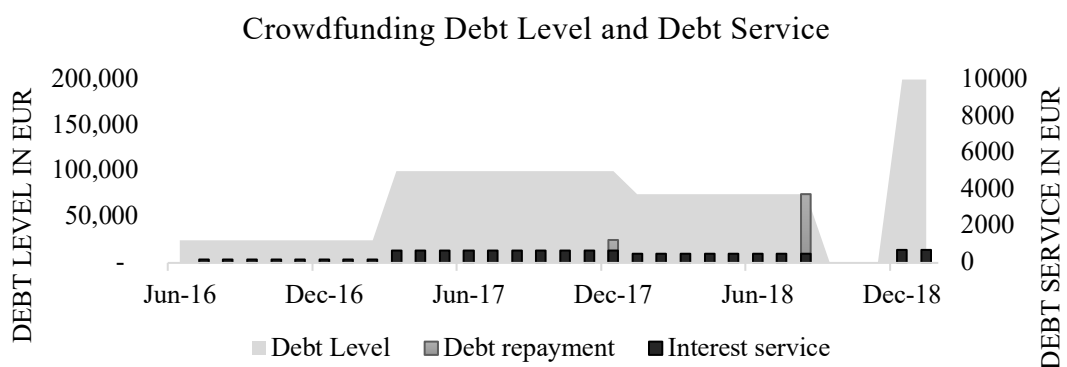


Figure 7: Graph Crowdfunding Debt Service over time (own figure).

While the well-working crowdfunding process solved AdC's short-term financing needs, it also increased its presence amongst further investors. In between the second and third crowdfunding round, Bernardo Afonso became integral to Code For All's financing journey. He acted like an angel investor and not only invested his capital but often stated Code For All's perfect repayment record to further investors. During the later equity funding process in 2018, Bernardo advocated Code For All to the social impact investment firm, *Fundo Bem Comum*. Ultimately, he joined the firm as the CFO in June 2018.

In the middle of 2017, João chronologically revisited the funding journey. He realized that even though it did make the financing harder, the social impact focus of Code For All opened up niche funding possibilities. He postulated: *"Our impact focus provided us funding opportunities, such as social impact bonds, that other start-ups simply did not have access to. Naturally, the amount of competitors for these types of financing is much lower. For example, a social impact bond enabled us to initiate a bootcamp in Fundao, a small city in rural Portugal. Here, we were able to provide education in a rural area where we otherwise couldn't have operated economically"* (Magalhães, personal conversation to author, October 28th, 2022). A social impact bond (SIB) is an agreement in form of a contract with the public sector in which the public sector commits to compensate for specific improved social conditions. Based on this contract, capital is raised from socially-motivated investors, often foundations or wealthy individuals. If these pre-determined social conditions improve, the investors then receive payments from the government. It is speculated that these reimbursements repay the initial investment plus a financial return. This yield depends on the level of fulfillment of pre-determined goals, outlined in the initial contract. These goals are coupled to the extent to which social conditions improve. In the end, SIBs aren't really bonds but rather future contracts on social outcomes (OECD 2015).

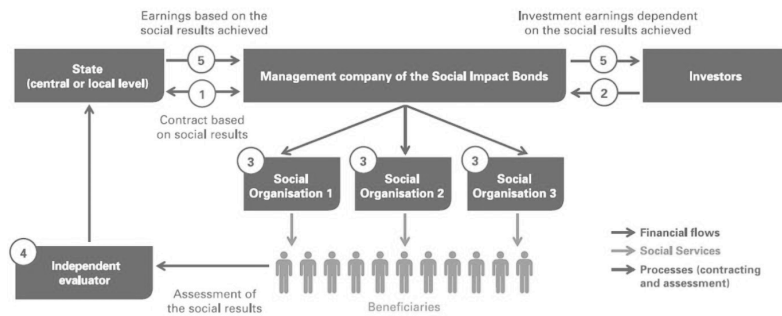


Figure 8: Social Impact Bonds described (Impact Investment 2022).

Investors previously committed €732 thousand to Code For All’s first SIB. This capital allowed AdC to reskill more than 175 individuals. Following this success, João searched for additional foundations that were willing to commit capital to these social causes. Up until 2019, the founders were able to secure high sixit-digit investments from further SIBs that were mainly compensating the social impact that ubbu was creating. However, the usage of SIBs also had negative side-effects. At times, cashflows could be delayed by months. In one instance, a bootcamp held in early 2017 was compensated 18 months later. These long-term receivables created a whole new problem. Code For All now needed to finance the costs of already held bootcamps for over two years. Bernardo, the CFO thus argued that the SIBs caused a working capital issue.

Three years after their initial fundraising efforts, Code For All had built a strong track record in their financing journey. They raised substantial amounts of cash through P2P lending and proved their for-profit approach with their strongly increasing margins. At the beginning of 2018, banks followingly became more inclined toward lending money to the venture. Therefore, to satisfy the working capital needs, Code For All drew a credit line of €100 thousand that could variably be paid back and redrawn.

Later that year, the leadership team decided to significantly lever their track record from the multiple crowdfunding rounds with larger amounts of cash, in the form of equity financing. However, João and his team wanted to stay true to their previous financing principles of limiting the number of sold shares to avoid diluting their value. Because of this belief, Code For All preferred to raise a round of redeemable equity. Generally speaking, redeemable equity is equity capital that a company agrees to buy back or may buy back at a specific date or event, as agreed in the shareholder's agreement (Lawinsider 2022). In the middle of 2018, Fundo Bem Comum, a socially responsible investment firm in Lisbon, invested in Code For All. The deal involved an overall equity value of around €350 thousand, as can be calculated from the development of the nominal equity in the balance sheet (Magalhães, personal conversation to author, November 7th, 2022).

6. THE CURRENT FINANCIAL SITUATION

Code For All successfully increased its revenues with a substantial CAGR of 59 % (2015-2018) to reach €1.4 Mio by 2018. This development proved the significant market potential that the founders expected. However, the overall profit margin was relatively stable over the years and evolved around the break-even point. For instance, the start-up realized a net income of €-2.814 in 2018 with an accumulated net income of only 34.289 euros since 2015 (see exhibit 2). Excluding fixed costs of the admissions and placement team, Code For All's bootcamps generated a gross margin of about 40%, ubbu's gross margin were slightly negative, and the corporate training unit generated a gross margin around 65% (Magalhães, personal conversation to author, November 7th, 2022).

Adding to these financial figures, the balance sheet further displayed the static financial situation. The venture's working capital of €538 thousand resulted in a current ratio of 2.4. The Cash Ratio was at a mere 0.28. Before 2018 Code For All was heavily leveraged with a

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Debt/Equity Ratio of 25.4 in 2017. After the investment of Fundo Bem Comum, this ratio drastically improved to 1.62.

During his analysis of the financial situation, the CFO discovered a typical phenomenon that young ventures are often experiencing; i.e. the difference between a start-up and a scaleup. While Code For All multiplied its revenues by 6.5x from 2015, the company's net income developed by -0.1x. What can be derived is an immense revenue development while the company even decreased its profitability. This trend often stems from the high investments that start-ups are incurring to support their strong growth. To increase shareholder return, the CFO made plans and predictions for future development. He predicted a strong increase in profitability due to finalizing investments into ubbu and increasing revenues from the corporate training unit. Ultimately, he forecasted that the heavy growth will soon also yield returns (see exhibit 4).

Compared to the predicted CAGR of online learning and bootcamp markets, the CFO predicted an overall CAGR for the future five years of revenue of 74%. He expected substantially higher growth than Technavio's market predictions (Businesswire 2019). ubbu would contribute the strongest with a forecasted CAGR of 104%. Meanwhile, AdC was projected to increase its revenues by 51% yearly. Furthermore, starting in 2020 the CFO expected that Code For All would finally be able to not only grow the top line significantly but would also scale the business to a net income margin of 16% in 2023 (see figure 9).

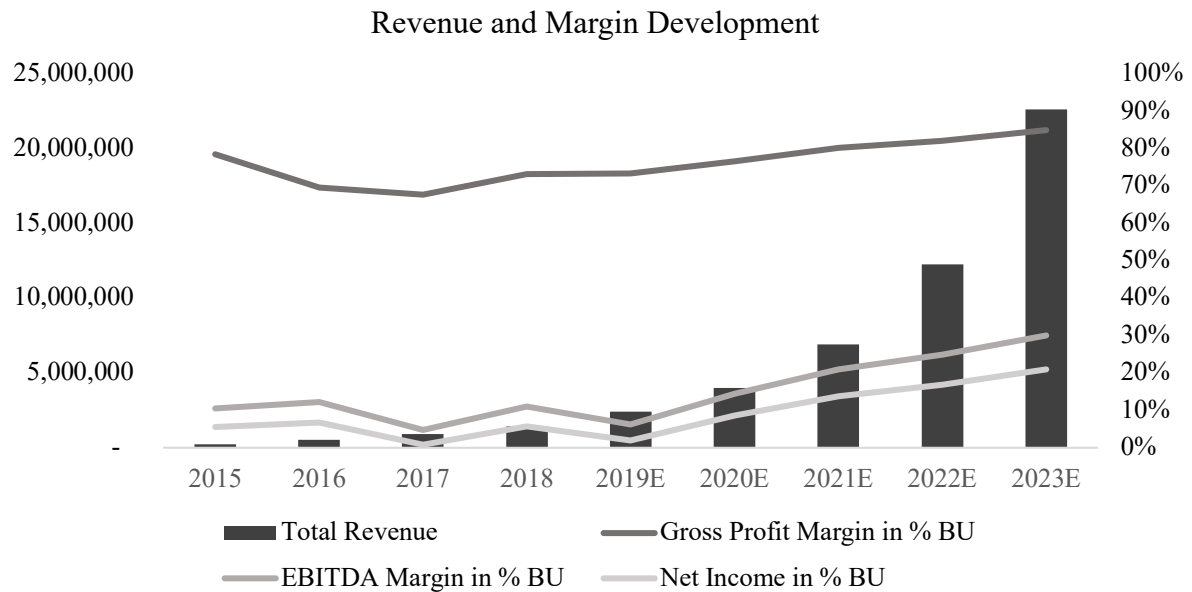


Figure 9: Revenue and Margin Development of Code For All (own figure).

Revisiting today’s situation, just after the board's new year's management meeting, important decisions are lying ahead. There have been many discussions on the start-up's future strategic direction focusing on the key idea of how to finance and potentially change the shareholder structure of the firm. Three major questions are in the center of all: If they decide to stay true to their initial strategy, and vision, can they still increase the profitability significantly? Would major external financing hinder them from staying true to these initial values? How would a venture capital firm evaluate its business?

The CFO Bernardo, who has been an Angel investor for many years, has already had the first meetings with venture capital firms. While they promised to respond to him soon, he asked himself how the VC would evaluate their company. Is Code For All even an attractive target for conventional VCs or would it be more promising to approach a social impact venture capital firm? Would the two VC types come to different conclusions? In the last board meeting the current shareholders agreed that if a VC wanted to proceed, they will ask for funding of €2 million in exchange for 8% of the company. Bernardo thought back about his time as an angel

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investor and imagined how he would assess this offer. What arguments will the counterpart have to lower the enterprise value?

7. Teaching Note (Jonas Fischer – 49036)

Synopsis of the case

João and the leadership team of the social impact start-up Code For All realized that they needed to raise external capital to faster scale their business units. As Venture Capital (VC) is an important pillar of start-up financing, it was obvious to the founders to consider this option. After the first exchanges with various investors, one VC signaled interest to advance to the Due Diligence stage. The founders were optimistic about the first interactions but knew that until a final investment decision was made, many obstacles needed to be overcome. The venture capital firm now wants to conduct a thorough analysis that examines every part of Code For All's business.

Target group

The target group of this case study is composed of master's students attending an entrepreneurial or venture capital class. This case study can also be taught in other business or social impact contexts. However, the following prerequisites need to be met: Basic understanding of start-up evaluation; knowledge of the valuation concepts: VC method, precedent transaction analysis, comparable company analysis, and DCF model. If the students do not possess financial know-how, the case can still be taught, yet without this element.

Learning objectives and key issues

The case study comprises several interesting aspects. Code For All built up three different for-profit business models, in which social impact is an important part and needs to be considered for the evaluation. Subsequently, the characteristics of the venture enable many assessment perspectives. The case study is thought to provide three key learning objectives. First, students shall understand the general process of a start-up evaluation. This involves contemplating the relevant components from a VC standpoint. Secondly, students should indicate their ability to

assess all gathered insights and interpret them towards a VC and Social Impact VC (SIVC) investment decision. Moreover, it should become clear how different investor strategies can lead to different judgments. Ultimately, based on Code For All's proposed VC investment, the students should understand the concept of start-up valuation. Even though valuing ventures can be seen as a science, this case study conveys a sense of how investors would approach this exercise and challenge the entrepreneur's valuation.

Assignment questions

1. How would a venture capital firm evaluate Code For All regarding the opportunity, team, context, and social impact? What are your findings and how would these influence the investment decision?
2. What ultimate investment conclusion would a conventional VC opposed to a Social Impact VC (SIVC) draw? How does the different investment background influence the final decision?
3. What is Code For All's implied enterprise value that was proposed by the investment suggestion the venture gave to the VC? Do you consider the suggested valuation fair? What arguments would a venture capital firm provide in a negotiation with the Code For All's founders?

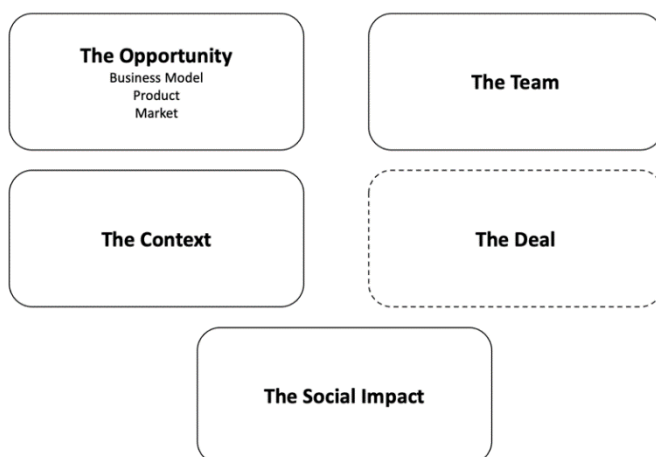


Figure 10: Adjusted start-up evaluation framework (Queiró 2022).

Teaching Structure To structure the assessment of Code For All, the framework (see figure 12) for venture evaluation should be used (Queiró 2022). This consists of the components: opportunity, team, context, deal, and social impact. The deal analysis is out of scope and can be

neglected. In addition, students will perform a quantitative financial valuation. To thoroughly assess each component, it is recommended to split the framework into three categories and assign them to different study groups. The following schedule is tailored to a 90-minute lecture. Due to the wide scope of the teaching note, students are required to read the case and quickly brainstorm the questions before class. The groups then have 45 minutes to come up with their solutions. Due to the varying workload and complexity, the split is suggested as follows: Group one: Opportunity & context; Group two: Team & social impact; Group three: Financial valuation. The team performing the financial valuation is provided with the associated excel parts including assistant information and structure. Thereafter, in the last 45 minutes the findings should be presented and discussed. Following this approach allows for a more detailed analysis and valuation, without jeopardizing the holistic learning experience. Alternatively, the whole framework can be analyzed individually. Subsequently, the findings should also be discussed in class.

Analysis

Opportunity: The framework suggests a split of the opportunity component into the business model, product, and market.

Business model: Key questions: What are the current cost drivers? How scalable and profitable is each business unit? What opportunities do you detect for each business model? Are the business models independent? Would a VC want to exclude a business unit from its investment, is this possible?

Overall: Code For All has three different business units. AdC and ubbu can be assigned to the E-learning market, though serving different customers. The corporate training unit inherits different characteristics. However, due to the provided coaches by AdC and the current reliability of the established network, they are heavily intertwined. Consequently, the three

business models are hard to separate, as most of the Code For All employees work on projects in every business unit. The following table gives an overview of important findings:

Analysis	Academia de Código	ubbu	Corporate training
Scalability/ Growth opportunities	<p>Limited</p> <p>Only 2 bootcamps per year are held per campus, so only 40 students can be enrolled per location. The potential to scale the bootcamps exists. However, at some point, a strong increase in students would require more or bigger campuses (see Excel sheet “Profit Margins”).</p>	<p>High</p> <p>As mentioned in the case, ubbu plans to open its platform to all teachers, parents, and children directly via the internet. ubbu would then be accessible to a high number of potential customers.</p>	<p>Medium/Limited</p> <p>Growth is restricted by the number of coaches. As indicated in the case, the demand from Code For All’s network is high. It can be assumed that the demand does not restrict growth for the next 3 years in Portugal. Expansion in other countries might be more difficult, due to the lack of network and high competition.</p>
Profit/Profit margin	<p>Medium</p> <p>Total Profit: ~ €12,500. Partially finances the ubbu Profit per location: €36.000 Profit per customer: 78€ Profit Margin: 1.3%</p>	<p>Negative</p> <p>Loss: ~ €60,300 High burn rate because of the R&D cost. Requires investments to scale.</p>	<p>High</p> <p>Profit: ~ €45,000 Profit per project: ~ €45,000 Profit Margin: 64% Profitability is thought to be high, due to the nature of the service.</p>
Revenue 2018	<p>€958,816 (68% of total sales) Non-recurring revenue</p>	<p>€380,707(27% of total sales) Recurring revenue</p>	<p>€70,501 (5% of total sales) Mostly non-recurring sales</p>
Expected Revenue 2023	<p>€7.627 million (34% of total revenue) CAGR: 51%</p>	<p>€13.308 million (59% of total sales) CAGR: 104%</p>	<p>€1.692 million (7% of total sales) CAGR: 74%</p>
Cost & expected cost structure:	<p>Medium</p> <p>The main costs arise from the bootcamp location, equipment and coaches. The personnel costs offer potential for cost-cutting. Up until now, the trainers have not worked at full capacity and additionally supported the other business units.</p>	<p>High</p> <p>High R&D costs will most likely persist for the next 2 years, due to the constant need to extend the platform and to develop course content. Once the content is established, the R&D costs will fall drastically. Furthermore, the cost of adding new customers to the platform will be comparably low.</p>	<p>Low</p> <p>The corporate training has a high profit margin, due to the relatively low allocation of resources. The main costs of the unit are the personnel costs of the consultants.</p>
Most important findings and outlook	<p>Scalability limits growth prospects. Consistent growth by expanding into other geographies is expected.</p>	<p>Altogether, high profitability, scalability, and growth can be expected.</p>	<p>Scalability and growth do not seem to be an issue for the corporate training unit. However, there might be a geographical constraint.</p>

Opportunities	AdC could offer pure online bootcamps to increase the number of potential customers.	Open the platform to everyone. Offer courses in various languages.	Extend the partner network to other countries before offering this service there.
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Table 1: Business model analysis of Code For All (own table).

Students should understand that ubbu displays the best fit to a highly scalable start-up profile, that VC's target. Furthermore, VCs tend to prefer recurring revenue streams (Leong 2014, 246). The platform requires more investments to scale and break even (see Excel sheet "Profit Margins"). If that is achieved, ubbu will be highly scalable as the capacity is hardly limited. In addition, Code For All could also increase its fees to price up to the competition. AdC and corporate training stand as sophisticated businesses that have already break even. As an opportunity, the bootcamps could also be offered online, though this could dilute the quality of the courses. This decision would also pose the question if broadening the target group would jeopardize the competitive advantage.

Product: The current customers of AdC are unemployed people in Portugal. The bootcamps address the urgent need for employment as well as their desire to learn something new. The competitive advantage consists of AdC's excellent performance in admission, training, and placement. The placement team's extensive network leads to an outstanding placement rate no competitor can match. Driven by its mission, Academia de Código has a well-defined customer group that no other bootcamp targets. Extending this group would expose AdC to fierce competition and diminish its USP. ubbu's product addresses the subpar IT education in K-12 classrooms. Because children have limited legal capacity, the customer group encloses parents, teachers, and everyone involved in the kids' education. The established partnerships with schools represent an important strategic advantage in terms of product development and future customer acquisition. ubbu offers a platform that convinces the user with its child-oriented design and playful learning experience. The corporate training unit addresses the need to upskill the corporate workforce in IT topics. The competitive advantage lies particularly in the established network and reputation.

Market: Students should quickly gather and assess information regarding the overall market KPIs and opportunities. Due to the limited time, calculations are not necessary. Questions to start the discussion: Is the market for the venture large or rapidly growing? What are the opportunities and challenges Code For All faces? It is important to mention that a clear market segmentation proves hard, as many competitors offer product portfolios that overlap with more than business unit, e.g., Brainstorm operates in the Coding bootcamp and corporate training market. The markets can be separated as follows:

	AdC (Coding bootcamp market)	ubbu (K-12 educational software market)	Corporate Training (IT Training market)
Current global market size/revenue	\$400 million (Business Wire 2019a)	\$3.2bn (Cision US Inc 2022)	Global 2018: \$64.6bn (Business Wire 2019b)
Expected CAGR	11% 2019-2026. (Business Wire 2019)	11% 2021-2026 (Cision US Inc 2022)	6% 2019-2024 (Business Wire 2019)
Drivers	High increase in demand for IT specialist in the past years.	Rising government initiatives. Lack of IT education in school curriculums.	Lack of IT skills in corporations. Advancing technologies lead to continuous training demand. (Training Industry 2019b)
Challenges for Code For All	Fierce competition in the overall coding bootcamp market. Online courses grow faster than in-person bootcamps (Eggleston 2019).	Educational systems and requirements vary in different countries.	Fragmented market, intense competition including big consultancies and online coding platforms
Opportunities for Code For All	Low competition and penetration within the unemployed customer segments.	Brazil's \$160 million education initiative (Holon IQ 2019) and Portuguese curriculum (see industry analysis)	High demand from partner companies. Partner network might help to bypass competition in Portugal

Table 2: Market analysis of Code For All (own table).

Students should understand that all of Code For All's business models operate in growing markets. AdC faces low competition because of its narrow customer group. However, if they decide to broaden their target group, competition, and the customer preference for pure online bootcamps will most likely compromise the good market conditions. ubbu's potential to easily expand into other markets might be limited as the requirements of the country's educational systems vary. However, government initiatives in two key markets could drive the demand for

K12 IT-education solutions. Even though, the competition in the corporate training market is high, Code For All experiences high demand from corporate partners. In conclusion, AdC and ubbu are both part of growth markets that offer comprising opportunities to expand.

Team: The founders' names can be found in the case study. Students will need to conduct further research on e.g., LinkedIn to evaluate their relevant experiences. Possible questions for in-class discussions are: Who are the key employees to analyze? What are their motivations, especially regarding social impact? What have they accomplished in the past?



João M (Founder)



Domingos G (Founder)



Bernardo A (CFO)



Rui F (CTO)

Financing/investment background as a senior analyst in a Portuguese bank	Founder of several start-ups	Extensive investment background: Analyst at citi, VP at JP Morgan Chase, Angel Investor.	Engineering background, at Ericson. International working experience in various countries.
Consulting experience in different companies	Founded several media companies	Financial advisor to the Portuguese Government. Professor at the university Católica in Lisbon	Coding/IT skills, bachelor's in electronics and computer science
Pro: Comprehensive business background and financial/strategic competencies	Pro: Extensive entrepreneurial experiences	Pro: Extensive network of businesses, government, and public institutions. Relevant financing experience	Pro: A wide range of international experience. A mixture of business, engineering, and IT skills
Investigate: No practical coding background and prior entrepreneurial experience	Investigate: President position in another company	Investigate: Many side activities and positions he still holds → 100% focus on Code For All?	Investigate: Still works as a Managing Director in his previous job, and no prior CTO role

Table 3: Evaluation of leadership team (own table).

The skills of Code For All's leadership team are complementing each other. Furthermore, the education and previous experience match the job requirements. In addition, it can be concluded, that the entrepreneurs have built up a valuable network in Portugal, that can help to drive the

business forward. Especially the diversity of the backgrounds and business contacts are very promising. Some further investigation needs to be done regarding the additional positions that Rui and Bernardo still hold. Are they fully invested in the venture? A VC requires 100% commitment to the business, especially from the leadership team (Leong 2014, 228). Moreover, the motivation for social impact did not become apparent in the CVs. None of them seemed to have engaged in social impact ventures so far.

Context: Possible questions to encourage a discussion are the following: What does the funding environment in general and in Portugal look like? What is the historic development in coding bootcamp funding? Venture capital investors deployed nearly \$131 billion across 8,949 deals in 2018. The VC market was characterized by big funding rounds and high valuations. Overall, venture capital had the highest spending year in history. However, market volatility could be a disenchant factor for the following year 2019 (CNBC 2019).

In contrast, the Portuguese VC market did not have a successful year. From 2016 to 2018 a slowdown in available investment capital was observed. One major problem was the lack of Portuguese SIVCs and relevantly sized VCs that could invest in promising start-ups Magalhães, personal conversation to author, November 7th, 2022). However, there was no lack of start-ups looking for capital. In the past nearly 1000 start-ups had to raise capital in Europe or in the US. This was merely successful because the early-stage and social impact investment market is primarily focused on local opportunities. Only in 2017, the first private early-stage VC fund in Portugal which invests in technology start-ups was founded (Essential Business 2022). On the contrary, the investment activities for coding bootcamps skyrocketed on a global scale. More than \$1 billion in funding was secured since 2019 (Holon IQ 2020). In conclusion, Code For All did not seem to have many investment alternatives due to the social impact and geographic location but not because of the business model itself as global investment numbers show.

Social Impact: The social impact is more important for a SIVC than a general VC (Azevedo, 2018). However, social impact is an important aspect of Code For All and thus should be analyzed either way. The corporate training unit does not generate real social impact and can be neglected for this component. Four questions can be asked to spark the discussion. *1. What is the outcome the venture works towards?* Code For All's goal is to reduce unemployment by teaching the IT skills, that the Portuguese economy requires. On one hand, AdC tackles the acute lack of software developers by reskilling unemployed adults in coding bootcamps. On the other hand, they aim to increase programming literacy with ubbu. The platform provides courses in coding and math for children with the purpose of educating and supporting them to pursue a career in the IT sector. *2. Who are the beneficiaries?* Code For All creates several benefits for different stakeholders. The unemployed attendees of the bootcamps benefit directly from receiving an almost certain job offer after graduation. Consequently, the government profits from lower welfare spending and a higher tax income. Furthermore, Portuguese businesses benefit from an increased supply of highly skilled workers. Children gain from better career opportunities and improved mathematical, logical, and coding skills. Especially because of the positive impact on the structural imbalance of the labor market, the overall society is a beneficiary (United Nations 2022).

3. What type of impact does Code For All have?



Figure 11: SDG impact types (United Nations 2022).

4. How much of an effect does the venture have? Quantifying social impact is a difficult exercise that is often based on vague assumptions (Miguel 2022). Regarding Code For All, the impact of AdC is easier to calculate than for ubbu as it is more imminent and quantifiable. In both cases, a correlation between social impact and revenue can be observed if the change is based

on a higher quantity rather than on price differences. In terms of total numbers, ubbu has reached more individuals than the bootcamps have (see “Business model” section). *5. Are there any limitations to the social impact?* This depends on the business model, only if all children would be educated and/or the labor market has no demand for IT specialists anymore.

The quantification of the social impact of Code For All might be subordinate to a VC but has significant importance for SIVCs. The financial returns for the SIVCs are linked to the impact of the ventures they have invested in. Therefore, measurement tools need to be implemented in order to quantify the impact of SIVCs (Miguel 2022). The mismatch of impact type and SIVC’s strategy could pose an exclusion criterion.

Final Investment Decision: *If the financial terms are neglected, would a VC invest in Code For All and which conditions would it have?* To make an accurate decision, it needs to be revised that VCs look for enterprises with high-growth potential (Greenwood, Han, and Sánchez 2022, 1). The limited scalability of AdC is the main argument against investing in Code For All. It has by far the lowest CAGR as the bootcamp approach limits the growth prospects. Venture Capital firms do not get excited about consistent growth. In contrast, ubbu has a promising outlook with seemingly unlimited scalability due to the characteristics of such a platform. Even though it has a high burn rate, the expected long-term returns are large enough to justify an investment. The corporate training business unit might have a high CAGR and relatively good scalability but is entangled with AdC. Due to high competition outside of the Portuguese market, VCs will not view this business model as very lucrative. Furthermore, the business model is widespread, and competition is high. Only the pipeline of coaches and the network represent an interesting competitive advantage. Although this unit represents a profitable business, it does not fit the profile of a unicorn, that Venture Capital investor prefer

(Entrepreneur's Handbook 2022). Therefore, it can be assumed that the VC would solely invest in ubbu. Subsequently, it would need to be separated from the other business units, which is a complex process due to the intertwined business structure. Ultimately, it can be expected that a typical VC will not invest in Code For All at this stage.

Would a social impact VC invest in Code For All and which conditions would it have? Most components will be analyzed similarly e.g., Team, market, and product. However, there are differences in the considerations regarding the social impact and business model. The wide-ranging impact that AdC and ubbu provide is attractive for an impact investor. A SIVC might not include the corporate training unit in their investment decision, because it does not have a real social impact. The social impact would need to be quantified so that the enterprise value can be adjusted respectively. Because of the narrow geographical focus of social impact VCs and their scarcity, an actual investment is unlikely.

Valuation: (The exact step-by-step approach of the valuation, instructions, and more information can be found in the attached Excel). In addition to the evaluation of the start-up, Code For All has started to have a more in-detail exchange with a venture capital firm. This led to the point that the company has proactively asked for an investment of €2 million for an 8% equity stake. There are 92 current outstanding shares, and the required return rate of the VC is 35%, reflecting a typical IRR of an investment in the early growth/expansion stage (Misiūna 2022). Based on this information, students should arrive at the conclusion that the suggested investment values the company at €25 million pre-money, implying an EV/Sales multiple of 5.35x at exit (See Excel sheet "Investment proposal"). As stated in the case question, the students should analyze whether the implied valuation is fair or not and come up with VC arguments to negotiate the prize if they see fit. To do so, information is provided to conduct four different valuation methods: comparable companies analysis, precedent transactions

analysis, DCF-three-stage model, and the VC method. VC valuations often rely on limited information and high uncertainty regarding the future. These circumstances constrain the accuracy of typical valuation methods (Carver 2012, 94). Thus, investors frequently make assumptions based on their experience (Misiūna 2022). While valuating Code For All's business models individually makes sense in theory, it is not applicable in this case (see Excel sheet "Assumptions").

After a thorough analysis of various comparable public companies, only six corporations fit Code For All's business models and were taken for further valuation. With respect to the constrained availability of public companies in the same geography, development stage, and with a similar business model, the multiples can only indicate a ballpark for the valuation. However, it can be argued that Code For All's EV/Sales are significantly higher than its public comparable corporations (see Excel sheet "Comparable Companies").

The precedent transaction analysis implies an average EV/Sales of 4.89x. Again, the comparability of those deals is compromised by geography and company size. The most recent acquisitions of AdC's competitor Trilogy (7.7x) and General Assembly (4.13x) indicate that Code For All's exit multiple could indeed be around 4.89x (see Excel sheet "Precedent Transactions").

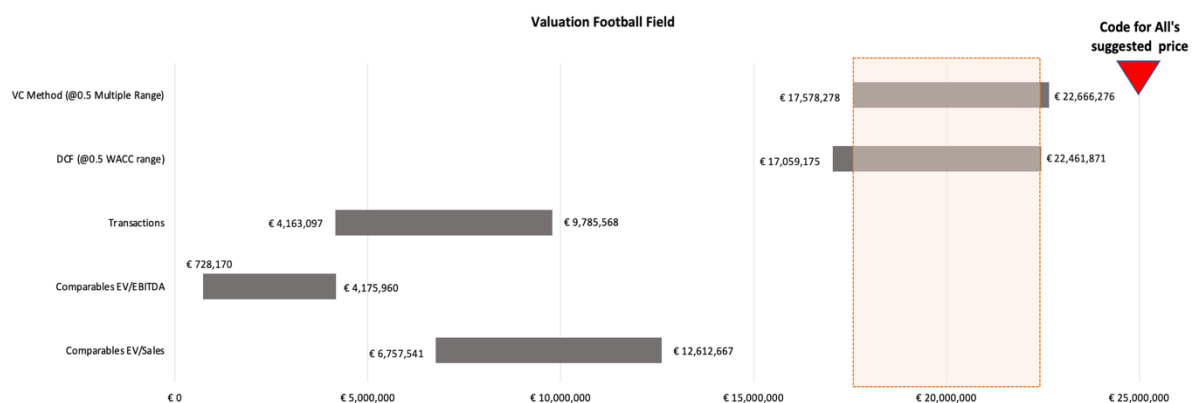


Figure 12: Valuation Football Field (own figure).

The precedent transaction multiples are also used in the VC Method. In this valuation framework, the applied multiple should comply with the choice of exit decision (Smith and Smith, 378). This approach is based on a success scenario, thus projected cash flows are based on the forecast provided by Code For All (Smith and Smith, 362). The VC method and the DCF model come closer to the suggested valuation. Nevertheless, they remain below the €25 million valuation, even though both approaches are already based on optimistic assumptions. The intersections of the two methods were chosen as the enterprise valuation range of €17 million to €22.5 million. In conclusion, the start-up overestimated its enterprise value. In the end, the suggested investment is not too far away from the VC-implied enterprise value. Therefore, it can be assumed that further due diligence and negotiation will take place. The investors will most likely argue that the applied valuation methods are based on optimistic assumptions. Therefore, the discount rate does not account for the increased risk that this success scenario will not occur. The sensitivity analysis shows that the chosen discount rate has a huge influence on the valuation. Subsequently, a venture capital firm might use this lever to slightly adjust the valuation in their favor. Increasing the discount rate or lowering the projected CF will decrease the enterprise value. Furthermore, the VC will probably use additional techniques e.g., the first Chicago method, that factor in the probability of certain scenarios. However, this is out of the case study's scope.

Epilogue

During 2019 Code For All negotiated with a VC and a social impact VC. Given the extensive track record, both were really interested in investing in the venture. The venture capital firm was fascinated by the scalability and the opportunity of ubbu. They also believed that Code For All had the right product to penetrate this growing market. Still, the VC did believe that Code For All should focus its resources solely on ubbu. The investor demanded a divestment of the other business units. The founders were in dissent, especially because they did not want to give

up AdC but also predicted that a spin-off would be rather challenging due to the intertwined business structure. The SIVC was not as skeptical about the other business models. Moreover, they were impressed by the social impact Code For All has established with its bootcamp over the past years. Even though the SIVC was confident with its investment decision, it was not based in Portugal and concluded to only invest if another Portuguese venture capital firm would co-invest. The unlucky circumstances left the founders frustrated. It showed that even with a promising product and track record, the investment decisions of VCs are often influenced by unexpected deal-breakers. After this setback, the leadership of Code For All continued to look for other types of investors. This search has proven successful. At the end of 2019, a private equity fund invested in Code For All and valued the venture at around €20 million. In conclusion, this case study is well suited to practice a holistic start-up evaluation and valuation. Due to the high number of tasks the depth of detail is limited. The case instructor can take certain parts of the teaching note and conduct a more thorough analysis. This case study is aimed to provide a learning experience and thus should not be used to grade students.

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APPENDIX

Exhibit 1: Balance Sheet

Code For All - Balance Sheet				
Balance Sheet				
(in €)	12/31/15	12/31/16	12/31/17	12/31/18
Assets				
Fixed Assets	27,791	44,932	68,018	48,596
Intangible Assets	0	0	9,991	6,655
Tangible Assets	27,791	44,932	54,031	33,897
Other fixed Assets	0	0	3,997	8,045
Current Assets	26,365	262,623	546,028	925,101
Inventories	0	0	0	0
Accounts Receivable	10,336	107,161	151,425	171,792
Other current Assets	16,029	155,462	394,603	753,309
Cash & Cash equivalents	9,808	30,257	79,199	108,849
Assets	54,156	307,555	614,047	973,697
LIABILITIES				
Equity	15,717	18,138	23,305	370,931
Nominal Capital	10,000	10,000	10,000	10,527
Other Equity	5,717	8,138	13,305	360,404
Long-term liabilities	0	97,907	133,220	216,539
Long-term financial liabilities	0	97,907	90,903	216,539
Other long-term liabilities	0	0	42,316	0
Accruals	0	0	0	0
Current Liabilities	38,439	191,510	457,522	386,228
Bank loans	0	55,201	101,940	100,835
Accounts payable	15,805	30,823	170,084	197,732
Other short-term liabilities	22,634	105,485	185,498	87,661
Liabilities	54,156	307,555	614,047	973,697
Attachments				
Working Capital	-5,470	76,338	-18,659	-25,940
Number of employees	6	15	15	24

Exhibit 2: Income Statement

Code For All - Income Statement				
	Income Statement			
(in €)	12/31/15	12/31/16	12/31/17	12/31/18
<i>FX Rate: EUR/USD</i>	<i>1.08870</i>	<i>1.05410</i>	<i>1.19930</i>	<i>1.14500</i>
Revenues	140,323	429,599	709,157	1,110,229
Other Revenues	78,030	105,761	196,592	299,795
AdC	196,518	428,288	679,312	958,816
% of Revenue	90%	80%	75%	68%
ubbu	21,835	107,072	226,437	380,707
% of Revenue	10%	20%	25%	27%
Consulting	-	-	-	70,501
% of Revenue	0%	0%	0%	5%
Net Revenues	218,353	535,360	905,749	1,410,024
COGS	0	0	0	0
Gross Profit	218,353	535,360	905,749	1,410,024
Personnel expenses	-95,079	-282,772	-469,872	-769,243
Other Operating Items	-89,290	-226,517	-392,630	-587,402
EBITDA	33,984	26,070	43,247	53,379
Depreciation and Amortizations	-3,335	-17,276	-22,689	-32,383
EBIT	30,649	8,795	20,558	20,996
Interest expenses	0	-1,059	-8,710	-6,702
EBT	30,649	7,736	11,847	14,294
Taxes	-1,615	-4,711	-6,801	-17,110
Net income	29,034	3,025	5,046	-2,816

Exhibit 3: Financial KPIs

Code For All - KPIs				
<u>Cash Conversion Cycle</u>				
AVERAGE HOLDING PERIOD	2015	2016	2017	2018
<i>Inventories</i>	0	0	0	0
<i>Cost of Sales</i>	0	0	0	0
Average Holding Period	0	0	0	0
AVERAGE COLLECTION PERIOD	2015	2016	2017	2018
<i>Receivables</i>	10.335,69	107.161,34	151.425,08	171.791,94
<i>Sales</i>	218.352,98	535.359,87	905.749,11	1.410.024,25
Average Collection Period	17,2771935	73,06092573	61,02148197	44,47019746
AVERAGE PAYABLE PERIOD	2015	2016	2017	2018
<i>Payables</i>	15805,3891	30823,18713	170084,0796	197731,5696
<i>Cost of Sales</i>	0	0	0	0
Average Payable Period	0	0	0	0
CASH CONVERSION CYCLE	2015	2016	2017	2018
<i>Average Holding Period</i>	0	0	0	0
<i>Average Collection Period</i>	17,2771935	73,06092573	61,02148197	44,47019746
<i>Average Payable Period</i>	0	0	0	0
Cash Conversion Cycle	17,2771935	73,06092573	61,02148197	44,47019746

<u>NWC</u>				
NET WORKING CAPITAL	2015	2016	2017	2018
<i>Current Assets</i>	26.365	262.623	546.028	925.101
<i>Current Liabilities</i>	38.439	191.510	457.522	386.228
NET WORKING CAPITAL	-12.074	71.113	88.506	538.874

Exhibit 4: Future Projections

Code For All - Future Projection	Income Statement Projection							CAGR			
	2015	2016	2017	2018	2019E	2020E	2021E		2022E	2023E	
(in €)											
Revenue:											
AdC	196,518	428,288	679,312	958,816	1,529,344	2,378,179	3,603,020	5,314,572	7,626,585		51%
Growth	/	118%	59%	41%	60%	56%	52%	48%	44%		
% of Revenue	90%	80%	75%	68%	64%	59%	52%	43%	34%		104%
ubuu	21,835	107,072	226,437	380,707	722,601	1,422,115	2,898,344	6,109,858	13,307,585		
Growth	/	390%	111%	68%	90%	97%	104%	111%	118%		
% of Revenue	10%	20%	25%	27%	30%	35%	42%	50%	59%		
Consulting	-	-	-	70,501	141,002	211,504	423,007	846,015	1,692,029		
Growth	/	-	-	-	100%	50%	100%	100%	100%		
% of Revenue	0%	0%	0%	5%	6%	5%	6%	7%	7%		89%
Total Revenue	218,353	535,360	905,749	1,410,024	2,392,947	4,011,798	6,924,371	12,270,445	22,626,199		74%
% increase of Revenue		145%	69%	56%	70%	68%	73%	77%	84%		
COGS	-	-	-	-	-	-	-	-	-		
% of Revenue	0%	0%	0%	0%	0,00	0,00	0,00	0,00	0,00		
Gross Profit	218,353	535,360	905,749	1,410,024	2,392,947	4,011,798	6,924,371	12,270,445	22,626,199		
Gross Profit Margin in % BU	1,00										
Personnel expenses	(95,079)	(282,772)	(469,872)	(769,243)	(1,292,191)	(2,166,371)	(3,669,917)	(6,073,870)	(10,181,790)		
% of Revenue	44%	53%	52%	55%	54%	54%	53%	50%	45%		
Other Operating Items	(89,290)	(226,517)	(392,630)	(587,402)	(949,019)	(1,604,719)	(2,769,748)	(4,662,769)	(7,240,384)		
% of Revenue	41%	42%	43%	42%	40%	40%	40%	38%	32%		
EBITDA	33,984	26,070	43,247	53,379	151,736	240,708	484,706	1,533,806	5,204,026		
EBITDA Margin	16%	5%	5%	4%	6%	6%	7%	13%	23%		
Depreciation and Amortizations	-3,335	-17,276	-22,689	-32,383	-71,788	-110,611	-182,782	-328,034	-626,191		
% of Revenue	2%	3%	3%	2%	3%	3%	3%	3%	3%		
EBIT	30,649	8,795	20,558	20,996	79,948	130,097	301,924	1,205,772	4,577,835		
Interest	-	(1,059)	(8,710)	(6,702)	(7,706)	(7,204)	(7,455)	(7,329)	(7,392)		
EBT	30,649	7,736	11,847	14,294	72,242	122,893	294,469	1,198,443	4,570,443		
Taxes	(1,615)	(4,711)	(6,801)	(17,110)	(16,789)	(27,320)	(63,404)	(253,212)	(961,345)		
Tax Rate	-	-	-	-	21%	21%	21%	21%	21%		
Net Income	29,034	3,025	5,046	(2,816)	55,453	95,573	231,065	945,230	3,609,098		
Net income Margin	13%	1%	1%	0%	2%	2%	3%	8%	16%		