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Information Technology Training for Socially Vulnerable People: An Innovative Active Teaching and Learning Methodology with Social Impact

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Abstract

Following the COVID-19 pandemic, a paradox arose in the Brazilian labor market: a high demand for qualified professionals in technological fields and a shortage of workers capable of filling these opportunities due to a lack of knowledge. This scenario affects everyone from young people in Brazilian public high schools to domestic workers with low levels of education, from north to south of the country. To address this issue, this research aims to demonstrate the development of an active, scalable, and sustainable teaching and learning methodology with a real impact, designed to empower socially vulnerable individuals of different age groups, developing behavioral and technical skills in Information Technology content. The content explored ranged from digital literacy to introductory programming knowledge. In total, 24 projects were carried out using this methodology between 2022 and 2026 for different groups. Specifically in 2025, the methodology was applied in 7 initiatives, involving 3 Higher Education Institutions (providing 7 professors), 13 partner companies (from the private, public, and non-profit sectors), 190 university students, and 295 members of civil society. As a result, the model impacted university students, improved their soft skills required by the job market and also brought the Institutions closer to the surrounding community. Future work is projected to formalize a qualitative analysis, based on research on dropout rates from weekly meetings and the level of satisfaction of the target audience. In parallel, an evaluation will be conducted to measure the contribution to the individual-organization compatibility of the faculty and their Universities.

Keywords: Ânima HUB, Education, Active Methodologies, Digital Inclusion, Flipped Classroom.

1 Introduction

In the research by Cardoso et al. (2020), it is possible to verify an analysis of the difficulties encountered in accessing technology in Brazil, intensified by the impacts of the COVID-19 pandemic. The study points out that 63% of the 1,500 Brazilian Education Secretariats did not have the planning and resources to teach remotely during the pandemic period. In more recent times, Amorim et al. (2025) also questioned the interactions between citizenship and digital technologies, since the authors found in their analysis that the lack of access to the internet, adequate technological devices, and digital skills limits the inclusion of large segments of the population, perpetuating inequality in Brazil. The research relied on relevant knowledge bases, such as Google Scholar, Scientific Electronic Library Online - SCIELO, and PubMed/Medline, and considered 410 papers from 2019 to 2024.

Given this scenario, we reiterate that, although it is a criterion recently added to the exercise of citizenship by the population, access to and mastery of the use of technologies have become essential aspects for Brazilians today. The problem, however, extends beyond mere physical access (the 'digital divide') and involves the concept of 'digital inequality,' which focuses on disparities in skill, use, and outcomes among different social segments (DiMaggio & Hargittai, 2001). This perspective is particularly relevant in vulnerable regions, where technological exclusion directly compromises opportunities for social mobility and effective citizenship. Thus, realizing the large portion of the population that may be unaware of these possibilities raises several concerns, such as: are elderly Brazilians enjoying digital services in a dignified way? Is this segment of the population receiving reliable guidance to advance in the technological field and fully receive their rights guaranteed by the Government? Furthermore, are young people from peripheral communities in Brazil properly trained to enter the increasingly technological job market?

These and other questions illustrate that the exercise of citizenship, as well as its rights and duties, are intertwined with the mastery (even if basic) of and access to technology resources (Medeiros et al., 2025; Ventura, 2025). In light of the analyses presented and for future studies, it is necessary to present the concept of social impact specifically for Brazilian universities. According to Fedato et al. (2025), there has recently been an update to this group, expanding its scope of action, migrating from the traditional relationship restricted to teaching and research, and presenting a relevant impact on the social and economic development of the regions in which they are located. Even with the updates, the research still shows the need for adjustments and better-targeted funding so that Higher Education Institutions (HEIs) actually contribute to the third sector. Although there are Technological Innovation Centers (NITs) linked to HEIs, specific guidelines related to this type of action become more evident and, at the same time, more necessary.

Social projects correspond to a concept of giving back to society, focusing on impacting people who are deprived of some type of resource. Furthermore, proposals for work with differentiated teaching methodologies are already permeating the academic environment and using technological knowledge to disseminate knowledge and opportunities. Within this context, innovation and entrepreneurship programs have become increasingly common in academia. A question that can be asked in this context is: why not undertake and innovate in a social context? Based on this hypothesis, the Ânima HUB, described in Leal et al. (2023.b), has its technology-based innovation methodology adapted to the demands of society. As references for this premise, there are the projects developed by Leal et al. (2023.a) and Leal et al. (2025), which are respectively the Favelaware, Jovem Tech, and Mulheres Tech projects. Both projects inherit characteristics from the Ânima Hub Innovation program, described in Leal et al. (2023.b), where connections between companies and academic teams focus on mutual

partnership projects. The specific projects described fall under the social scope program of Ânima Hub, where partner companies enable actions in specific audiences of society, as a way to combat social inequality. Leal et al. (2023.a) demonstrated the impacts of the Favelaware and Jovem Tech projects in 2022. Leal et al. (2025) presented the 2023 results for the Mulheres Tech project. Two concepts that permeate these projects are Service-Learning (an active teaching methodology that combines pedagogical objectives with community services, promoting the academic and civic education of students) and Community-Based Learning (an educational approach that integrates academic teaching with community engagement, using real-world experiences to enrich learning) (Jacoby, 1996; Shumer, 1994; Stanton et al., 1999). To validate the social utility and pedagogical impact of such engagement, especially on the university students' development of soft skills, the methodology must be framed within the Scholarship of Teaching and Learning (SoTL). This framework, rooted in the 'Scholarship of Engagement' (Fear & Sandmann, 2016)

Based on this premise, it was possible to raise the following questions: did the projects continue? Which audiences were served? Which partners continued? What numbers were achieved? Thus, in 2025, Ânima Hub reaffirmed its premise that social impact is an essential part of innovation. Through projects that combine technology, education, and citizenship, we invite students and teachers to act as agents of transformation, bringing knowledge and opportunities to communities in Brazil.

This context makes it possible to establish the following research hypothesis: the established active teaching and learning methodology, operationalized at Ânima Hub, in the Brazilian scenario, is sustainable and scalable, resulting in a demonstrable increase in the number of community members and university students impacted in 2025 compared to the baseline period (2022-2023).

Given these questions, the main objective of this research is to demonstrate the continuity of the aforementioned projects in 2025, with evaluations of their impacts. Specific objectives include: identifying those involved who remained in the projects, presenting the 2025 results, and comparing them with previous events. It should be noted that the research is justified by the direct impact on the lives of the people involved, highlighting a connection between science and technology focused on people who lack resources considered basic, resulting in a deprivation of opportunities and knowledge in an era where AI and other concepts have become fundamental for accessing the market and addressing everyday issues.

2 Materials and Methods

2.1 Technology Applied in the Social Scope

Amorim et al. (2025), as mentioned, in their review of 410 articles on the subject, reinforce in their research the importance of new studies that deepen the interactions between technology and citizenship, stimulating reflections on the historical context, the benefits provided, and the need to investigate more deeply the relationship between technology and citizenship, especially in vulnerable contexts. Fedato et al. (2025) reinforced the issue that universities have worked on the perspective of acting in the third sector. However, even with NITs (Technology Innovation Centers) and a conceptualization referencing the interaction between companies, research, and society, an optimization of social impact actions still remains.

Other works were listed by Leal et al. (2025) on actions related to this purpose, focusing on evaluating teaching-learning methodologies, outcomes, opportunities, and limitations for vulnerable social groups. This need for community-based interventions is also evident in the Global South, where studies show successful results. Sujarwo et al. (2022), for example,

documented how a community-based digital literacy model in Indonesia empowered women entrepreneurs, positively affecting their sales and local tourism, despite challenges related to rural infrastructure and the need for continuous support. This demonstrates that the localized, community-driven approach adopted by Ânima HUB is consistent with effective methodologies applied in similar developing contexts. Table 1 shows the works from 2023 onwards.

Table 1: Summary of Related Works Found in the Literature

Paper	Objective	Descripton	Results
(Aleti et al., 2023)	Group Discussion/ Deductive Approach	Identification of three forms of socialization that are used in learning and using technologies: Reciprocal Socialization; Self-socialization and Outsourcing.	Project carried out only at one university and in a way that does not absorb other national and international audiences.
(Kim et al., 2023)	PRISMA	They highlighted that there are different terms in the literature to indicate the hesitation, discomfort and anxiety behaviors of the elderly.	Despite conceiving the existence of terms for behavior, an association is not made between them and their predictors, so no means or actions are suggested to work on these habits.
(Riadi et al.,2022)	PRISMA-P / RoB 2.0	It was raised that to guarantee success in digital interventions, there must be social interactions, human support and adaptation of interventions to each person's individual conditions.	The studies do not have qualitative components, making it impossible to understand the basis that caused the failure or success of each intervention.
(Ahmad et al.,2022)	ROSES	They concluded that when instructing elderly, it is necessary to prioritize environments for socialization to maintain interest, in addition to providing a safe environment for feedback, but without evaluation criteria.	During the review, no materials were presented regarding the population of South America in general, so this area of analysis is requested.
(Choudhary et al., 2022)	PRISMA	There was an increase in the level of self-realization from the participants. It was noticed that developed countries work more with the elderly population and developing countries work with populations in vulnerable situations.	The research method employs keywords in the English language as parameters, which may limit the method's reproducibility in other languages and the comparison of other papers.
(Sujarwo et al., 2022)	Instruction based on examples	The public who received the digital training began publishing routines on social networks, which positively affected their sales.Local tourism was promoted in the locality and the use of technology contributed to reaching more customers.	On the other hand, the rural infrastructure and the need for continuous support with the new work tool made this process more challenging.
(Kokorelias et al.,2022)	PRISMA	It was noticed that when using technologies to support the hospital-home transition, it is beneficial to prioritize Web tools and use tablets and mobile applications to monitor body function and health status (including mental status).	The review was unable to bring heterogeneity to the study group, meaning that the perception of characteristics of education, race, ethnicity and culture, in addition to age, was lost.

Source: (Adapted from Leal et al., 2025)

It can be assumed that the topic is not only present, but also demands further effort today, since the need persists in Brazilian society. This research, given the proposed framework, focuses on the target population of socially vulnerable individuals across Brazil, segmented into two main groups for intervention: Underprivileged Youth (young people from Brazilian outskirts and

less fortunate communities) targeted by the Favelaware and Jovem Tech projects) and working women (specifically domestic workers with basic or no knowledge of technology) targeted by the Mulheres Tech project. The total sample for the 2025 analysis comprises 485 individuals, including 190 Ânima students and 295 members of civil society (the community students).

Participants from the community (students) were selected through a non-probabilistic sampling process with defined criteria: the partners who are in contact with the communities carry out the process of disseminating information, registering, and selecting students from the communities. It is an internal process, where Ânima Hub only awaits the result to carry out the process of connecting with the students and Ânima teachers for the projects. The primary inclusion criterion was being part of the target social groups (underprivileged youth or domestic workers) lacking basic technological resources, in line with the project's objective of digital inclusion. As a standard ethical procedure, as with all school projects, the data of all participants is collected and stored, respecting the Brazilian LGPD (General Data Protection Law), with the due consent of the guardians (in the case of minors).

The data presented in this article is quantitative and descriptive, focusing on project continuity and scalability. Data collection was based on secondary administrative records from 2025, including: University and Campus involved; Number of university students and community members impacted; Identification of maintained and new partner companies. Descriptive statistical analysis (counts) was used to compare the 2025 results with the baseline data from 2022-2023. As future analysis, the long-term evaluation framework will incorporate a qualitative research component. Framed by the principles of the Scholarship of Teaching and Learning (SoTL), this planned data collection will focus on systematic surveys to measure two key outcomes: (1) the retention of participants, assessed via dropout rates from weekly meetings, and (2) the subjective experience and satisfaction level of the target audience with the applied methodology and course content. This approach ensures that the evaluation of the Service-Learning experience moves toward quantifying the actual acquisition of competencies and the individual impact on the students and faculty involved.

2.2 Ânima Hub Connection Methods

According to Leal et al. (2023.b):

> "*Ânima HUB is organized by thematic Laboratories (Labs). A Lab is a structure organized by campuses to promote technological innovation projects in a thematic area: Health Lab, Engineering Lab, etc., which are developed by multidisciplinary research groups of students led by professors (these groups are called Squads)*".

Figure 1 demonstrates the project connection process, where Ânima HUB, as a technology-based innovation and entrepreneurship program of the Ânima Ecosystem, enables these projects to be conducted by squads, which are formed by partner projects, people, and companies. Table 2 describes each stage.

In summary, the projects, represented by the squads, of Ânima Hub connect people, faculty, and students, as well as companies, to form work squads for the development of technological innovation projects. However, as already mentioned, a question has been present since the creation of Ânima Hub in 2021: how can innovation and entrepreneurship contribute to the social sphere? Thus, the same connection procedure was adapted for connecting projects that would use partnerships and knowledge of information technology (among others) to promote actions in the social sphere.



Figure 1: Project definition process, student enrollment and squad development
Source: (Leal et al., 2023.b)

Table 2: Table description Ânima HUB Process

Step	Objective	Description
1	Proposal submission notice	professors, students, those responsible for Ânima's areas of knowledge and companies indicate projects via notice.
2	Curation of proposals	the Ânima HUB team receives the proposals and curates them.
3	Approval of proposals	the Ânima HUB team approves the proposals with the directors and managers of the areas
4	Development	agile methodologies are used for project development. An adaptation of these methodologies was necessary to fit the needs of the HUB. After approval of the proposals, there is an announcement for the entry of students and advisors who will be part of the team of each project (squad). A squad is an organizational model formed by a multidisciplinary team responsible for a mission. Each team has 3 important moments during the development of projects: discovery, so that everyone has the same view of the problem; sprint 1, for the team to make a partial delivery of what was developed; sprint 2, for the team to make the final delivery for the semester. Projects that deliver value have the chance to present their project to influential people in IT and compete for an award for the best project
5	Shark HUB	A competition to encourage team engagement. In it, four main categories would receive the 40 best squads (10 for each of the categories: Agro & Health; Engineering, Design & Quantum; Legal & Business; Humanities, Social, Communication & Fashion)
6	Feedback and Certification	The participation of students and professors is proven with participation certifications, with assignment of workloads for participation in extension and research projects

Source: (Authors)

2.3 Social Projects Formation

The Ânima HUB connection methodology is based on the premise of connecting people, partner companies, and students. The same premise is applied to social projects. In this type of initiative, the partnership aims to provide resources for teaching basic technology skills, thus creating opportunities and improving the quality of life for disadvantaged and deprived populations. Among these groups are women and young people in vulnerable situations.

2.3.1 Favelaware and Jovem Tech Project Methodology

According to Leal et al. (2023.a), both the Favelaware and Jovem Tech projects work on the premise of a model based on the Flipped Classroom model. This model focuses on the development of hard and soft skills in university students and the educational formation of underprivileged young people from Brazilian outskirts. Also according to Leal et al. (2023.a), the process is described in Figure 2. For its analysis, Table 3 summarizes the described process:

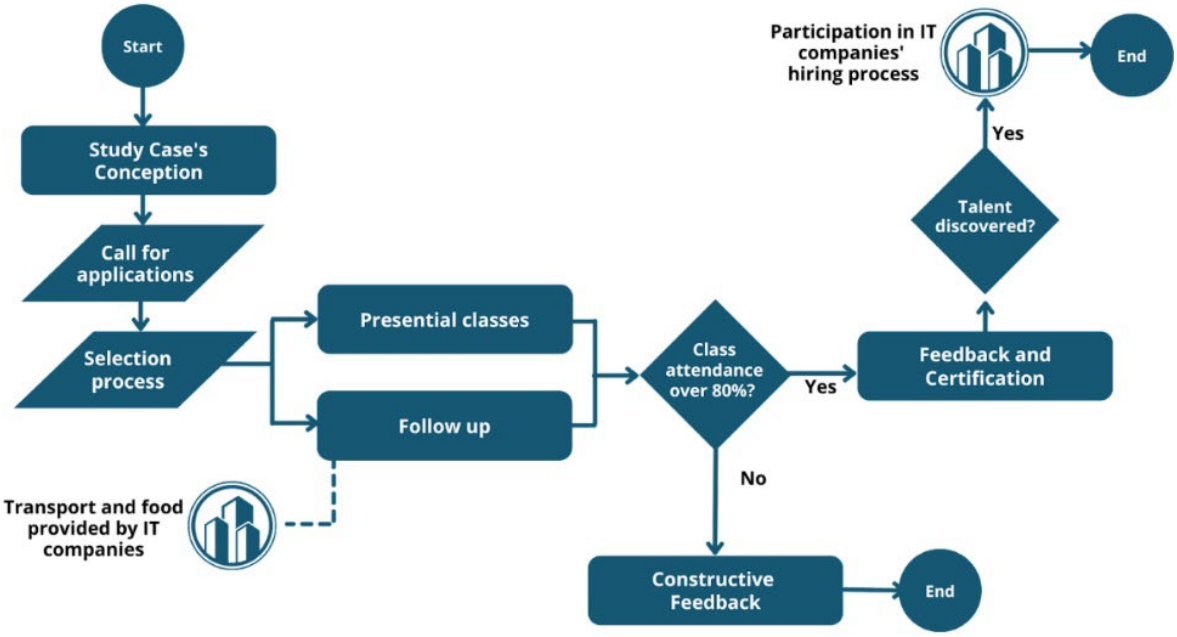


Figure 2: General Scheme of the Proposed Teaching-Learning Model
Source: (Leal et al., 2023.a)

Table 3: Favelaware and Jovem Tech

Step	Objective	Description
1	Case Study Conception	The process flow starts with university professors gathering with non-governmental organizations (ONGs) of less fortunate communities to present the model and understand the need of adaptations considering outskirts characteristics. Some regions may be dangerous, and some young citizens may not have enough family support.. Once the project is approved by the ONG, university professors start gathering with IT companies and the universities board to get support with the infrastructure and resources needed for the project, such as: transport, food and scheduling and preparation of the university classrooms andlaboratories for the classes. Finally, when all the details are settled and documented, the call for the applications starts
2	Call for Applications	Young people subscribe to participate in the selection process from the application form. The propagation of the projects with the details of the selection process took place in schools, on the social networks of partner companies and ONGs, in the physical locations of the ONGs.
3	Selection Process	Applications are read and analyzed by professors and the ONG analysts, and the results are published and sent to the candidates, through phone calls and a list published on the projects' social networks.
4	Presential Classes and Follow up:	Since most of the young from the communities do not have computers at home and in order to connect them to the university environment, classes are taken in the universities by its students and in the case of Favelaware, classes took place at the partner ONG.Students must learn by themselves about IT area (the digital world, logic and computational reasoning, development of software, among others) - content given by

Step	Objective	Description
		professors. Then, beyond bringing the content to be discussed with professors and classmates-from traditional flipped classroom method, they also have to give lessons about the content they learned to the young people from the outskirts. Since classes are in-person, students from universities and young people from the communities receive help for transportationand food from IT Companies and Non-governmental organizations (ONG), partners of the universities. The professors also followup young people's attendance to classes and they only get certification if their classattendance is more than 80%.
5	Constructive Feedback	If young people's attendance is lower than 80%, leaders from the ONG are notified, they inform young people's parents to understand what is happening and gather with the young to give constructive feedback
6	Feedback and Certification	Young people with the attendance higher than 80% receive a certificate for conclusion of the course in a symbolic graduation event.

Source: (Leal et al., 2023.a)

In a methodological analysis, the 2025 project followed the premises of the methodology described above. For a benchmark regarding the evolution of the projects, it is necessary to define a reference point for evaluation, this reference being the results achieved by Leal et al. (2023.a). The comparison will focus on the number of people involved, people impacted, and partners involved. Table 4 shows the reference points for analysis.

Table 4: Favelaware and Jovem Tech

University	Favelaware Una	Favela Tech IBMR	Jovem Tech Uniritter
Period	from April/2022 to "ongoing"	from May/2022 to August/2022	From September/2022 to December/2022
Number of university students	8	6	6
Number of Professors	2	4	3
Number of Outskirts Young People Assisted	38	24	38
Partners	Mundiale, Obras Pavonianas	Gerando Falcões and Instituto Entre o Céu e a Favela	CUFA (Central Única das Favelas), HMidia and Sinergy

Source: (Leal et al., 2023.a)

2.3.2 Methodology of the Mulheres Tech project

Flipped Classroom and the Development of Soft Skills in Teams are primary elements of the projects to be developed. Since 1965 those fundamentals are used today in projects for knowledge disseminating, with the focus proposed in this research (Tuckman, 1965; Bishop & Verleger, 2013). According to Leal et al. (2025), the Mulheres Tech project represents a pedagogical approach based on "Inverted Classroom" and aims to promote digital inclusion for domestic workers. In this process, university students taught the classes to the enrolled participants. Also according to Leal et al. (2025) apud Bishop & Verleger (2013, p. 1))

> *"The flipped classroom is a new pedagogical method, which employs asynchronous video lectures and practice problems as homework, and active, group-based problem-solving activities in the classroom".*

The Mulheres Tech project assimilates the challenge of working on the issue of bringing technological knowledge to women who do not have access to certain resources considered basic for contemporary society. Also according to Leal et al. (2025), the proposal of the Mulheres Tech project *"was developed using an adapted flipped classroom approach, where students not only discuss the content taught by teachers in the classroom with their peers, but also teach the same content to domestic workers under the supervision of a teacher"*.

The methodology involves some reference steps:

- **Connections and partnerships:** companies that promote this type of project are invited to provide support through resources and operational conditions. Partnerships can be with companies already connected to the Ânima Ecosystem, or new partnerships can be formed.
- **Definition of content:** As already described in Leal et al. (2025), the content to be taught is outlined between the students who will teach and the responsible teachers, emphasizing that the classes were given to domestic workers with basic or no knowledge of technology.
- **Conducting the classes:** As shown in Figure 3, the classes follow the same roadmap, although the content may vary and is updated semi-annually, according to the demands of the social context.

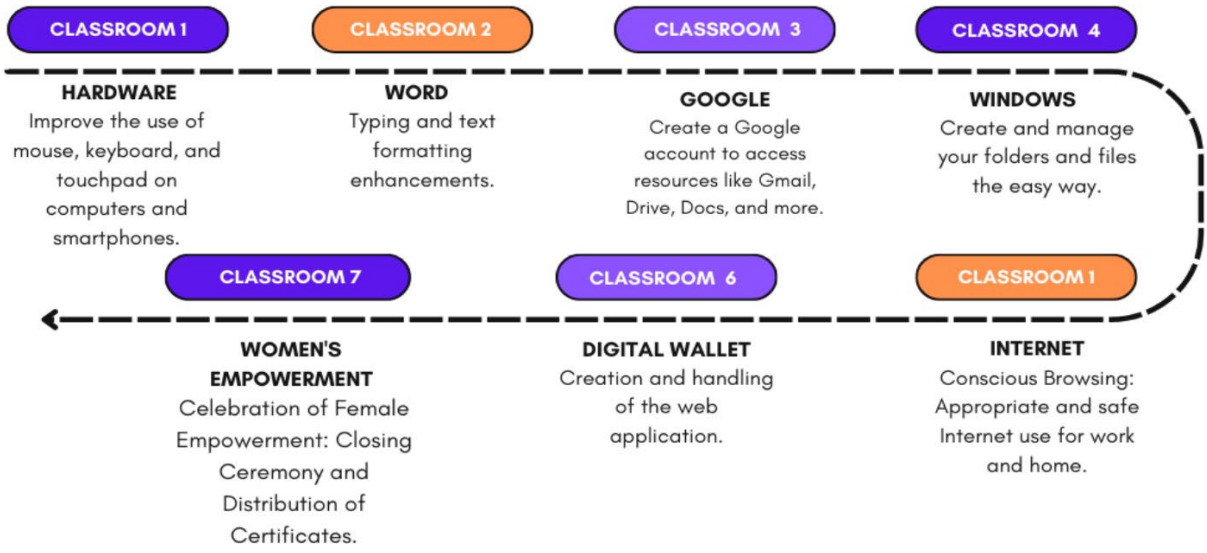


Figure 3: General Scheme of the Proposed Teaching-Learning Model
Source: (Leal et al., 2025)

Thus, this research focuses on questioning the continuity, in 2025, of these projects, both Favelaware, Jovem Tech and Mulheres Tech. Were they maintained? What partnerships were maintained or built? How many people were impacted? A quantitative analysis is described in the results.

3 Results

Democratizing access to technology by making it a tool for empowerment is a way to empower vulnerable segments of society, propelling them into the contemporary job market. By fostering applied research with social impact, involving students and teachers as protagonists of change, such projects enable the development of skills in digital and socio-emotional knowledge, preparing people for the job market and for life in an increasingly digital world. Strengthening partnerships with social organizations expands the reach and relevance of

actions. Based on the proposed methods for social projects, 24 projects were carried out using this methodology between 2022 and 2026 for different groups. The following results focus on the performance of 3 projects that operated throughout Brazil in 2025.

3.1 Jovem Tech – Connecting Youth and Technology

Jovem Tech is an initiative connected to Ânima HUB that aims to bring young people from technology communities and the digital world closer together, creating opportunities for learning, employability, and social transformation. Through training pathways, the project connects participants to higher education and the job market, developing both technical skills and socio-emotional abilities. In 2025, Jovem Tech was implemented in three UniRitter university units, as shown in Figure 4, with strong engagement from students and faculty of the Ânima Ecosystem, as well as strategic partnerships with social organizations and companies committed to digital inclusion.



Figure 4: Participants of Jovem Tech - 2025 edition
Source: (Authors)

Table 5: Project locations and details

University/Campus	UniRitter / FAPA	UniRitter / Zona Sul	UniRitter / Canoas
Advisor	Msc. Adriano Menezes da Silva	PhD. Leonardo Albernaz Amaral	PhD. Leonardo Albernaz Amaral
Local Support	PhD. Leonardo Albernaz Amaral	-	-
Participant	90 Ânima students and 90 young people from the community.	30 students from Ânima | 50 young people from the community	15 students from Ânima | 35 young people from the community
Partner companies	Cootravipa, CUFA/RS (Instituto Social 10), Exatron, Novus, FKS and Porto Alegre City Hall (First Lady's Office).	Cootravipa, CUFA/RS (Instituto Social 10), Exatron, Novus, FKS and Porto Alegre City Hall (First Lady's Office)	Cootravipa, CUFA/RS (Instituto Social 10), Exatron, Novus, FKS and the City Hall of Canoas (Department of Education)

Source: (Authors)

In summary, the project's impact in 2025 reached 310 people, including 135 Ânima students and 175 young people from the community. Comparing this with Leal et al. (2023.a), as described in Table 4 and referencing Table 5, the 2025 Jovem Tech Uniritter project increased

from 6 Ânima students to 135 and from 38 people served to 175 young people. The partnership with CUFA was maintained, but new partnerships were established, such as with Exatron, Novus, and FKS.

3.2 Favelaware: Digital Inclusion in Communities

Favelaware is a project that promotes digital inclusion and the development of technological skills in Brazilian communities. In 2025, the initiative took place at UNA Cristiano Machado, with classes taught by students and teachers from the Ânima Ecosystem. The project was led by Professor PhD. Rafaela Priscila Cruz Moreira, with a core group of 12 Ânima students and 30 community members. The work period ran from August 5, 2025 to August 1, 2026 (i.e., ongoing). Partner companies included Obras Pavonianas, Mundiale, and Rede Transformar.

Comparing this to the data in Table 4, specifically the results of Favelaware Una, the partnerships were expanded with the addition of Rede Transformar. The project directly empowered 42 people and offered basic training in technology, digital citizenship, and connections to job opportunities. In addition to leaving a legacy in the communities of Belo Horizonte, Favelaware achieved national recognition: the 2024 Human Being Award (Figure 5), granted by ABRH (Brazilian Association of Human Resources), one of the most important awards in the country for initiatives that promote social transformation and the value of people management. This award reinforces that Favelaware is not just a digital inclusion project, but an example of social innovation that inspires and transforms.



Figure 5: Favelaware Una - Ser Humando 2024 Awards

Source: (Authors)

3.3 Mulheres Tech: Democratizing Digital Access for Working Women

The Mulheres Tech program is a digital literacy program that promotes access to the digital world for domestic workers, developing autonomy and expanding skills in communication, access to information, and insertion into the labor market. In partnership with Themis – Gender, Justice and Human Rights and FENATRAD, the project also encourages advocacy in public policies that guarantee social rights. Important information about the second edition, in 2025, is described in Table 6:

Table 6: Project locations and details

University/Campus	**Anhembi Morumbi/ Piracicaba**	**UniRitter/Canoas**	**UniRitter/Porto Alegre**
Advisor	Msc. Flavia Goes Vieira Salgueiro	Msc. Victória Chaves Cardoso	PhD. Raquel Bello Vazquez
Local Support	Msc. Rosana Fonseca Bucheri	PhD. Raquel Bello Vazquez	-
Participant	5 students from Ânima | 18 from the community	2 students from Ânima | 28 from the community	36 students from Ânima | 44 from the community
Partner companies	-		THEMIS e FENATRAD
Period	20/09 a 08/11/2025	08/10 a 26/11/2025	08/10 a 03/12/2025

Source: (Authors)



Figure 6: Course completion
Source: (Authors)

3.4 Evaluation of the Continuity Process

In 2025, Ânima Hub reaffirmed its commitment to social transformation, directly impacted 485 people, including students from the Ânima Ecosystem and community members. Each project – Women in Tech, Young Tech, and Favelaware – not only promoted digital inclusion but also paved the way for autonomy, employability, and citizenship. These results demonstrate that technology and education, when combined, are powerful forces for reducing inequalities.

In total, there will be 7 initiatives by 2025, involving 3 universities, 7 campi, 190 university students, and 295 members of civil society.

Table 7: Project locations and data

Project	University	Region	Ânima Students	Community Students
Mulheres Tech	Anhembi Morumbi	Piracicaba	5	18
Mulheres Tech	UniRitter	Canoas	2	28
Mulheres Tech	UniRitter	Porto Alegre	36	44
Favelaware	UNA	Cristiano Machado	12	30
Jovem Tech	UniRitter	FAPA	90	90
Jovem Tech	UniRitter	Zona Sul	30	50
Jovem Tech	UniRitter	Canoas	15	35
Total (7 Projects)			190	295

Source: (Authors)

To demonstrate the scalability and efficiency of the methodology, a comparative analysis was performed using the average impact per initiative as a clear denominator (Table 8). In the baseline period (2022-2023), the three projects achieved an average impact of 33.3 community members per initiative (100 members / 3 projects). In 2025, the 7 initiatives resulted in an average impact of 42.1 community members per project (295 members / 7 projects). This increase in the average impact per project, alongside the expansion to 7 initiatives, confirms the hypothesis of scalability and sustainability of the active teaching methodology in the Brazilian context.

Table 8: Project locations and data

Period	Projects	Community Members Impacted	Average Impact per Initiative
2022-2023 (baseline)	3	100	33,3 members/project
2025	7	295	42,1 members/project

Source: (Authors)

The Ânima Hub methodology, by requiring university students to teach IT content to community members, fits within the Service-Learning model. This model integrates relevant community service into the academic curriculum, promoting the development of soft skills in higher education students while addressing social needs. The project development process adopts a Community-Based Learning approach, where the design of the curriculum and model (Step 1 of Table 3) is carried out in partnership with Non-Governmental Organizations. This ensures that the methodological adaptation is sensitive to the peripheral characteristics and social context of the participants.

4 Conclusion

During the survey, it was observed that the demand for projects and incentives that bring technology, digital literacy, and support to people in social vulnerability remains a reality. There is still a significant pain point for society in terms of support for those who lack basic resources. However, it is possible to measure that good practices were maintained and, in some cases, expanded their operations. Partnerships with companies continue to be a valuable support for enabling the execution of projects of this nature.

The three projects demonstrated the capacity for sustainability, remained viable, and increased the number of people impacted. Although there is no presumption to attribute all improvements

to the lives of the people served. It is a fact that the projects, which started in 2022, are still operating and delivering value to the issue in focus in 2026.

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Themis, Fenatrad, Rede Transformar, Mundiale, Cufa, Cootravipa, AOPA, Prefeitura de Porto Alegre, Prefeitura de Canoas.

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