



RESEARCH INSTITUTE FOR TECHNOLOGY AND INNOVATION

IPTI

ACTIVITIES REPORT

2020



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ART, SCIENCE, AND TECHNOLOGY TO DEVELOP COMMUNITIES

The Research Institute for Technology and Innovation (IPTI) is a non-profit institution founded to build and establish a model to overcome the intergenerational transfer of poverty, a problem impacting millions of people in Brazil and around the world.

IPTI began taking its first steps in October 2003 in the city of São Paulo. In 2009, the organization moved its headquarters to one of the poorest cities in Brazil, Santa Luzia do Itanhý, in southern Sergipe state, to develop customized solutions for highly vulnerable regions. The city has since become our model laboratory for the development of social technologies and to overcome the poverty trap.

In practice, both IPTI and Santa Luzia do Itanhý's community identify a social problem and jointly develop innovative solutions that will bring benefits to the city's local reality. Upon reaching a satisfactory level of effectiveness, IPTI and the community set out to design, test, validate, and implement the Social Technology's model to ensure its scalability and reapplying in other communities in Santa Luzia do Itanhý and other regions in Brazil and the world.

BUT WHAT IS A SOCIAL TECHNOLOGY?

It is an innovative solution aimed at solving a social problem. Built in close partnership with the affected community, it adds scientific and technological expertise to local, traditional knowledge.

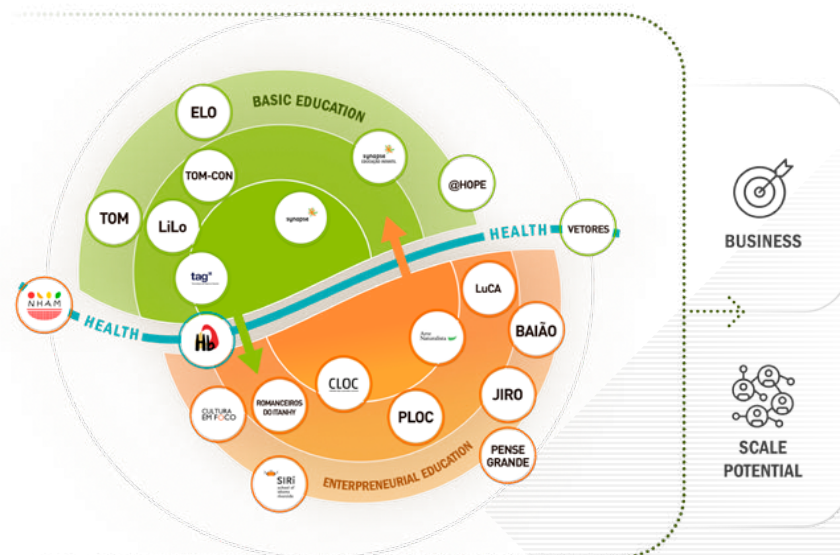
Three stages are involved in the development of a social technology. First, it needs to be effective and solve the social problem, considering the local scenario, its limitations, and capabilities; second, it needs to be scalable to be reapplied in other regions that experience similar issues. Finally, it must be sustainable, both in the financial and political dimensions as well as in management and governance.

IPTI'S HUMAN DEVELOPMENT MODEL

Intergenerational poverty transfer derives from a diversity of factors and feeds on itself, in a vicious circle. It can only be overcome with an approach that is equally multi-factorial, incremental, systemic, and evolutionary.

IPTI believes that preventing the poverty trap begins with a planned and stress-free pregnancy for every mother. It must be followed by a positive familiar environment with guaranteed early childhood education and quality literacy, besides proper health care (good nutrition, absence of anemia, visual health, etc.), providing an overall sense of well-being. These initial stages must be followed by a favorable environment for pre-teens to develop their creativity, innovation, and entrepreneurship skills, helping to turn the community into a fairer, thriving, and more pleasant place to live.

The diagram below illustrates our model. Each social technology is focused on the most relevant causes of the poverty trap, and all STs are interrelated.



Presently, IPTI is working on developing, enhancing, and reapplying 19 Social Technologies, ten of which are in the scalability and sustainability phase and being implemented in more than 30 cities in six Brazilian states.

THE SOCIAL TECHNOLOGIES DEVELOPED BY IPTI DIALOGUE AND ARE WIDELY INTEGRATE WITH THE VARIOUS SDG'S



IPTI

AND THE GOVERNMENT OF SERGIPE

NEW IDEAS TO REDUCE
INEQUALITIES AND GENERATE
SOCIAL DEVELOPMENT



Social change requires innovation in building solutions and facing challenges. In 2020, this became even more evident because of the restrictions imposed by Covid-19. The pandemic brought an urgency to develop alternatives based on science, technology, and creativity, which are precisely the foundation stones of IPTI. The Government of Sergipe shares this vision, which has proven essential in conducting successful initiatives over the last year.

Generating social impact through dialogue between the human and productive spheres is an ideal shared by IPTI and the State Secretariat for Economic Development, Science and Technology (SEDETEC). This principle drives the fruitful partnership that has resulted in the development and enhancement of social technologies that are visible in the State of Sergipe and beyond. Our state has been consolidating a platform that makes Santa Luzia do Itanhá a benchmark for the rest of the country.

Conscious that the efforts made in this cycle are fully aligned with the mission driving our department, we reaffirm our commitment to continue collaborating to facilitate actions that enable ongoing, material changes in the lives of the people of Sergipe. Inspired by the spirit of innovation that marked our last term, we are confident that the new year's challenges will be overcome and boost new conquests for our people.

JOSÉ AUGUSTO PEREIRA DE CARVALHO
STATE SECRETARY FOR ECONOMIC DEVELOPMENT, SCIENCE,
AND TECHNOLOGY

MESSAGE FROM OUR PRESIDENT

TIME TO CARE AND TO LEARN.

ESCANEE ESTE CÓDIGO COM O SEU
SMARTPHONE E TENHA ACESSO AO
RELATÓRIO DOS ANOS ANTERIORES.



With the onset of the Covid-19 pandemic, 2020 was a challenging year. Time to take care of ourselves, others, and our relationships with our community, staff, students, and their families. Because of the social distancing restrictions announced by the WHO (World Health Organization) in March, determining that all municipal public schools remain closed, we responded promptly to protect our staff and set out to review our plans for the year. Several measures were taken to get through the pandemic without placing our team at risk, and all our activities were put on hold.

With the closing of physical businesses, schools, and government agencies in the country, we adopted home officing with weekly remote meetings to monitor the impacts suffered by the interruption of all our field activities. We quickly created alternatives to execute our projects. Nevertheless, the pandemic exposed the depth of the digital divide in Brazil. According to a recent survey by IBGE (Brazilian Institute of Geography and Statistics), one out of four people has no internet access –meaning that about 46 million Brazilians are digitally excluded. This reality is no different in Santa Luzia do Itanhy (Sergipe), a city with one of the lowest HDIs in the country and the headquarters of our social technologies development laboratory.

Since the majority of children and teens are deprived of internet access, computers, and even mobile phones, not all projects were able to continue their activities as planned, especially those which were in the initial scaling phase and required more intensive physical interaction with students, such as Romanceiros do Itanhy (Itanhy Novelists), Baão (local folk music) and Arte Naturalista (naturalist art.)

In contrast, along with all the physical and emotional damage it brought, the pandemic accelerated change in some of our social technologies such as Synapse, SIRI, Synapse EI (for early childhood education), and Pense Grande (Think Big). In a beautiful display of collective effort, we created solutions that will remain as an important legacy.

Below are the actions developed in 2020 in the context of the Covid-19 pandemic, together with a description of each social technology.

RODRIGO DE MAIO ALMEIDA
PRESIDENT





synapse

The Synapse pedagogical methodology combines the field of Neuroscience with classroom experiences to help public school teachers improve teaching and learning of Portuguese and Mathematics in the first three years of elementary school.

Synapse's pillars are contextualization and planning. Its scalability model is performance-based, turning the best teachers in one city into re-appliers in other cities, ensuring empathy and effectiveness in the dissemination process.

Synapse program materials are the Pedagogical Notebook and the Lesson Plan Notebook, to support teachers, and the Digital Platform with content and activities for students, using tablets. Synapse also uses the Pedagogical Support Materials – MAP, which are playful resources teachers employ in the classroom.

The development of this methodology started in 2010 and was complete by the end of 2015. Between 2016 and 2018, the social technology was reapplied in all local and state public schools in 13 Baixo São Francisco region cities north of Sergipe. In mid-2019 and late 2020, Synapse was implemented for the first time in a different state, Maranhão, in the municipality of Bacabeira, by a teacher who was relocated from Santa Luzia do Itanhhy to be the program re-applier.

Adoption of this scalability model enabled Synapse to extend its benefits to more than 780 teachers and over 15,000 students from 135 public schools, 15 cities, and two Brazilian states (Sergipe and Maranhão).

While imposing many restrictions to the Synapse social technology, the pandemic also brought the opportunity to incorporate remote training and communication technologies with surprisingly satisfactory results. Using online teaching platforms, social media, and digital communication tools, we improved its training model, minimizing the need for physical meetings and providing cost savings for future Synapse implementations in new cities.



PROJECT NUMBERS



2016

- 9 cities
- 90 public schools
- 81 teachers (direct beneficiaries)
- 1.000 students (indirect beneficiaries)

2017

- 14 cities
- 127 public schools
- 251 teachers (direct beneficiaries)
- 5.020 students (indirect beneficiaries)

2018

- 14 cities
- 130 public schools
- 307 teachers (direct beneficiaries)
- 6.140 students (indirect beneficiaries)

2019

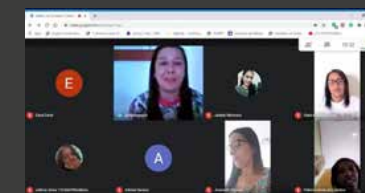
- 15 cities
- 135 schools
- 282 participating teachers (direct beneficiaries)
- 5.640 students (indirect beneficiaries)

2020

- 15 cities
- 135 schools
- 282 participating teachers (direct beneficiaries)
- 5.640 students (indirect beneficiaries)

CHALLENGES FOR 2021

- Reapply the Synapse methodology in new cities in Sergipe and Maranhão;
- Expand Synapse to cities in other states such as Ceará and Minas Gerais;
- Consolidate the hybrid format (face-to-face and online) for the Training Course based on lessons learned during the pandemic.



SYNAPSE TECHNOLOGY COMPONENTS

- Teacher's pedagogical guide;
- Lesson Plan to support the teachers in planning lessons, focusing on the pedagogical objectives in the Synapse Matrix;
- Digital platform SynapseEdu with content to support student assessment and learning;
- Pedagogical Support Materials with playful resources (MAP);
- App and Web Portal for teachers to record their lesson plans and activities and share them with other teachers.



SYNAPSE TEACHERS NETWORK (RPS)

Created in mid-2019, the Synapse Teachers Network (RPS) is an entrepreneurial initiative of literacy teachers to use the Synapse Social Technology to promote quality literacy for all children with a long-term approach, seeking to overcome the lack of continuity in public policy actions.

www.rps.org.br

Aiming to be the leading national reference for literacy by 2025, the RPS network gathers a group of committed teachers who build, apply, evaluate, and continuously improve an innovative methodology adjusted to the reality of education in Brazil.

In a partnership designed to attract the attention of Brazil's society to the cause of literacy and the efforts of public school teachers, IPTI, the Synapse network, and Artplan, an advertising agency, launched the "Unsigned Petition" campaign.

The first piece of this campaign was a 30" video, broadcast nationwide by TV Globo - also a partner in the campaign - and on IPTI's social media, among other partners. To reinforce the engagement message, the campaign also featured an online petition and a website.

www.vimeo.com/466006573 | www.chng.it/dLXNXv5KpF | www.abaxonaaoassinado.org





tag*

Tecnologia de Apoio à Gestão

TAG (Tecnologia de Apoio à Gestão) is a computer system initially developed to support school management, mainly focused on small cities that do not yet have automated information management systems.

The system works both online and offline, to be used in rural areas with no internet access and enabling synchronization using a thumb drive (and soon mobile phones), cloud data storage, and mirroring capabilities.

TAG enables greater ease and speed in maintaining records on enrollment data, student and teacher registries, grades, attendance, control of student meals, lesson plans, more efficient delivery of documents, organization of reports, and support to manage the federal government stipend program Bolsa Família, besides being integrated with the Ministry of Education's system, EducaCenso. It is a complete tool for schools and is currently the only system recognized by the Ministry of Education (MEC) as an educational technology for school management.



After its implementation, cities can use TAG free of any charge. The system has been implemented in 17 cities in the states of Sergipe and Maranhão and includes more than 100,000 students in its database.

In 2020, improvements were made to the software, enhancing viewing of the TAG system on mobiles so that in the future administrative staff can use it on tablets and mobile phones.

PROJECT NUMBERS



2016

- 9 cities
- 83 schools
- 7.150 students in database

2017

- 16 cities
- 120 schools
- 10.320 students in database

2018

- 16 cities
- 185 schools
- 60.000 students in database

2019

- 17 cities
- 198 schools
- 80.000 students in database

2020

- 17 cities
- 213 schools
- + 100.000 students in database

TAG IN HEALTHCARE AND SOCIAL ASSISTANCE

The TAG social technology's functionalities are being expanded to integrate healthcare and social assistance data in a unique database, providing multiple correlations and higher efficacy to support decision-making.

In the area of healthcare, TAG is currently in the Hb version, which enables complete monitoring of campaigns for diagnosing and preventing iron deficiency anemia in schools and identifying nutritional problems such as obesity and malnutrition among students.

In social assistance, TAG provides automated management of the Social Assistance Reference Center (CRAS), enabling matching of information about registered families in the city to daily assistance data provided by the CRAS. Automated management modules were also developed for activities of the Guardianship Council and the Municipal Council for the Rights of Children and Adolescents (CMDCA).

NEXT CHALLENGES

- Expand the use of technology in new cities in Sergipe and Maranhão in 2021 as well as in other Brazilian states;
- Develop new features for social assistance and healthcare;
- Use Artificial Intelligence to improve data management and to support decision making;
- Develop an app to synchronize offline data submission from schools to the server.

LiLO LANGUAGE AND LOGIC

The LiLo (Language and Logic) project proposes a method for teaching mathematics that respects cognitive development, replacing all the abstraction of the subject with contextualization strategies. Additionally, it encourages the use of language in the first years of elementary school to help understand the mathematical rationale.

The methodology was developed with the collaboration of teachers from five pilot schools in Santa Luzia do Itanhhy and relies on the classroom experience of teachers from the RPS - Synapse Teachers Network, aiming to integrate all the knowledge and resources of LiLo into the Synapse Social Technology content.

To facilitate the implementation of the method in the classroom, LiLo employs educational tools to motivate students, guiding them towards more effective learning.

Initially, the Pedagogical Support Kit was created to contextualize math teaching using educational games and interactive activities to address the skills in the Synapse Matrix.



In a second step, a web series, "Um Pé de Banana Nanica" (The banana tree), was produced to draw attention to the presence of mathematics in everyday life and foster more significant interest in the subject. The 13 episodes of the first season, available on YouTube, were created and produced exclusively by a workgroup formed by teens who had already developed these skills in other IPTI projects such as PLOC, Romanceiros do Itanhhy, and LuCA. The group partnered with the different areas and developed an audiovisual product, practicing skills such as scriptwriting, screenplay, sound capture, soundtrack, direction, photography, and acting.



In 2020, Lilo strengthened its connection with the Synapse Teachers Network through the joint construction of two handbooks with activities for teaching math in elementary grades 1 and 2. Explanatory videos were also produced and made available on the YouTube channel to assist teachers in constructing and applying the activities.



PROJECT NUMBERS

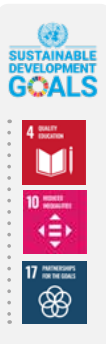


- 01 children's series "Um Pé de Banana Nanica";
https://www.youtube.com/channel/UCC8_poMop4c6smdQ0B0Qlgw
- 20 students involved in creating and producing the web series (script, pre-production, production, and post-production);
- Production of 14 videos.
<https://www.youtube.com/channel/UCNv9ZDRIGnMFvQsAz04JzhQ/playlists>

NEXT CHALLENGES

- Release the second season of the series "Um pé de banana nanica";
- Integrate the LiLo methodology into the Synapse Social Technology.





synapse

EARLY CHILDHOOD EDUCATION

Investing in the education of children in the 0-5 age group in social vulnerability helps reduce learning distortions, minimizes the need for special education, and reduces social costs in general.

With this in mind, in mid-August 2018, IPTI began to develop the Synapse Social Technology for Early Childhood Education (Synapse EI), aimed to improve the quality of early childhood education based on the development of children's cognitive and non-cognitive skills. Synapse EI is being developed in alignment with Synapse, enabling students to begin elementary school in better conditions to achieve higher performance throughout the literacy process.

The methodology is based on mapping the main difficulties identified in the classroom, planning activities, and recognizing the educational reality of schools in a participatory process involving public school teachers in Santa Luzia do Itanh. In the first phase of the project, the construction of the social technology involved six schools and 51 early childhood education professionals and directly benefited 480 children.

With the challenges in 2020, the project was adjusted to the virtual format, with special care taken to promote proper space for interaction so that teachers could take ownership of the methodology while at the same time strengthen new pedagogical practices. The imposed social distancing measures helped to identify some vital issues, such as anxiety, insecurity, low self-esteem, besides adding fear and stress to the weight of their performance as teachers. A gap was revealed in this self-perception process with the presence of all these feelings, supporting the fact that all early childhood education initiatives must consider, first and foremost, caring for those who take care of the children: the teachers.

With all its challenges, the period was also very fruitful and generated positive outcomes. The collaborative process culminated in the elaboration of the second version of the Planning Booklet, four Pedagogical Support Materials for Early Childhood Education - MAPEI's, and the creation of a Contact Network for the school community, including digital magazines and a YouTube channel.

All tools were essential to the process of appropriating the methodology and strengthening the project's focus during the social distancing period when the school community was shut down.



PROJECT NUMBERS

- New version of the Planning Book;
- 4 Pedagogical Support Materials for Early Childhood Education - MAPEI's;
- 48 videos for the Synapse-EI Contact Network playlist;
- 4 digital magazines.

CHALLENGES FOR 2021

- New version of the Planning Notebook, Pedagogical Notebook, and MAPEI's;
- Design and implement a Communication Portal to disseminate the content generated in the Synapse-EI Contact Network;
- Prepare and validate the Social Technology Reapplying Booklet;



2020 has brought a wealth of experience. In the midst of all the challenges and suffering caused by the Covid-19 pandemic, I decided to look head-on at the situation, took a deep breath, and understood that it would be a period of learning for me and everyone involved in the Synapse Social Technology for Early Childhood Education. Together, my team and all the early childhood education professionals in the Synapse EI program managed to overcome the most critical part of the period using common sense. From then onwards, we reinvented ourselves and set our creativity to work. Following the crisis cycle - common sense and reinvention - we lived through 2020 with a lot of warmth and exchange, bringing new meanings to our individual and collective actions, strengthening ourselves for the new reality of education and the return to the classroom. Above all, 2020 taught us that the project's general coordinator needs to have a holistic approach, common sense, the ability to reinvent himself/herself, and a lot of creativity to tread this very true and inspiring journey.

RAIANE RIBEIRO
SYNAPSE EARLY CHILDHOOD EDUCATION SOCIAL TECHNOLOGY COORDINATOR/RESEARCHER



@HOPE

ART & TECHNOLOGY FOR HEIGHTENED OPPORTUNITIES IN PUBLIC EDUCATION

The @Hope social technology aims to generate a public school model with a pedagogical proposal that integrates social technologies in primary education, entrepreneurship education, and healthcare.

With this in mind, we designed an architectural model and began to build a municipal public school in the community of Pedra Furada to showcase IPTI's human development promotion model and inspire other schools to follow along the same path for change.

Besides being a model school in the architectural and sustainability aspects, @HOPE seeks to develop and establish a pedagogical proposal to prepare future generations for the 21st-century demands, adding to its syllabus training in arts, technology, and entrepreneurship.

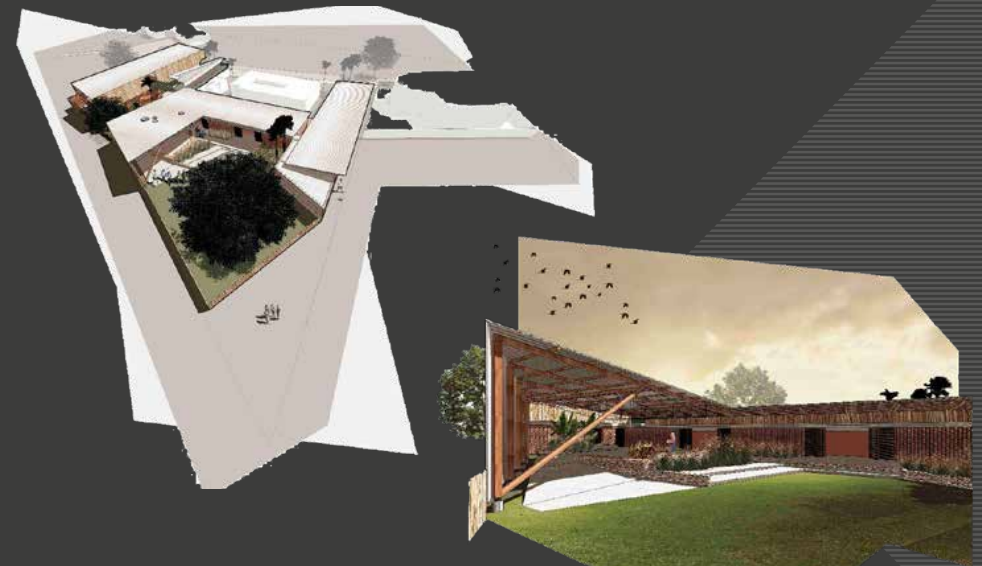
Construction of the school began in January 2020 but has suffered delays due to the pandemic. The school is expected to be complete by the second half of 2021 so that we can start developing and consolidating the pedagogical proposal for 2022 in partnership with the Pedra Furada community and the Municipal Education Department of Santa Luzia do Itanh.

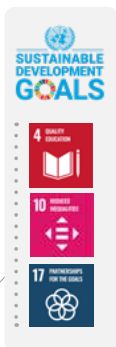


ARCHITECTURE PROJECT

The architecture project was developed in close partnership with the school community of Pedra Furada (board, teachers, employees, principal, students, and parents), generating a detailed reference document that can be seen in <https://www.ipti.org.br/athope/>.

In 2018, it won an award from the Institute of Architects of Brazil, São Paulo Chapter (IABSP) for best project design in the "Institutional Buildings - Project" category.





IPTI

ELO

THE PROJECT DID NOT CARRY OUT ACTIVITIES IN 2020

The ELO Social Technology aims to improve the relationship between family and school using mediation techniques. In addition to teaching the community to value education and knowledge, this method provides conflict resolution.

IPTI and educators carried out the diagnosis after interviewing families of some municipal schools in Santa Luzia do Itanhhy, which identified low self-esteem, psychological distress, feelings of impotence, and lack of perspective. In the case of children, issues were mainly related to health, behavior, performance, and affection.

All the knowledge gained was incorporated into the development of Synapse EI to validate some hypotheses before resuming the development of the ELO Technology.



TOM

THE PROJECT DID NOT CARRY OUT ACTIVITIES IN 2020

Portuguese for 'tone', the TOM Social Technology's goal is to promote continuous improvement in school management, taking into account both the skills and hurdles faced by Brazilian public schools.

TOM's development stages are executed in partnership with the school administration and begin with mapping all process flows, generating a self-assessment tool for the school's management. The tool helps identify problems and select priorities to be addressed through collaborative methodologies.

Between 2017 and 2018, our work involved four pilot schools that chose as their priority action the participatory construction of the School Regiment and Pedagogical Political Project (PPP) and the strategies to put them to practice. In 2018, we began to develop the first versions of these methodologies. However, the project sponsor decided to change the focus of their actions. On our side, we decided to put the development of the TOM Social Technology on hold until a new opportunity comes up with a sponsor who is committed to a long-term, constructive approach.



TOM-CON

THE PROJECT DID NOT CARRY OUT ACTIVITIES IN 2020

TOM-Con is a social technology aimed at increasing the efficiency of services provided by the Guardianship Council and the Municipal Council for the Rights of Children and Adolescents (CMDCA) through computer-based management and communication processes, in addition to improved integration of all stakeholders in the Protection Network.

This social technology involves mapping the schools' management and communication processes and developing solutions for priority issues. IPTI developed a management support module linked to TAG to support the Guardianship Council. The system supports recording and monitoring of user complaints and helps council members to prepare reports. It was also designed to enable integration with other players that make up the protection network, such as the District Attorney and the State Secretariat for Public Security. With this, the System for Ensuring Rights of Children and Adolescents (SGD) will achieve greater effectiveness in the cities.

All process stages were constructed in a participatory manner, in partnership with council members from Santa Luzia do Itanhhy. To assist the management of the CMDCA, we created a website that is integrated with the Guardian Council's system database and a Practical Guide to help council members in their everyday duties. In 2020, we began to develop a virtual environment to collaborate with training and updating of Guardianship Council staff and design expert content in podcasts about topics defined as challenging and/or complex by the council members during their field activities.

In 2020, due to the change in the composition of the Guardianship Council members and the pandemic, we did not have the opportunity to complete the process with the new members, something we hope to accomplish in 2021 in order to institutionalize the experience gained from TOM-Con and enable future reapplying throughout Brazil.



PENSE GRANDE

Pense Grande (think big) is a program created by Fundação Telefonica Vivo to teach the development of business ideas by using digital technologies. In 2019, the program was implemented in Santa Luzia do Itanhy, training the IPTI team with 18 local teenagers and young adults.

A good part of 2020 was dedicated to elaborating Financial Education and Emotional Intelligence methodologies and integrating them with the Entrepreneurship Education methodology. For Financial Education, reference materials included two games developed by Bank of America Merrill Lynch, Piquenique and Bons Negócios (good business, in Portuguese). Parallel to that, we developed training activities for new project reapplicants and created a few experimental online educational contests in some of our fields of interest.



REAPPLYING PENSE GRANDE

At the beginning of 2020, we carried out a face-to-face action to reapply the Pense Grande methodology. It involved 11 participants and was divided into four stages: awakening self-knowledge in youths, teamwork, immersion in community issues, and seeking solutions by creating digital businesses. The result was the presentation of three business proposals (pitches).

- OFT (Other Forms of Teaching): Platform in a free app format for teaching English with the difference that it is gamified;
- Itanhy Tour: Tourism agency offering experiences and knowledge in guided tours offered in English by local professionals trained in the SIRI Project;
- SLI Jobs: App offering job placement opportunities in the region of Santa Luzia do Itanhy.



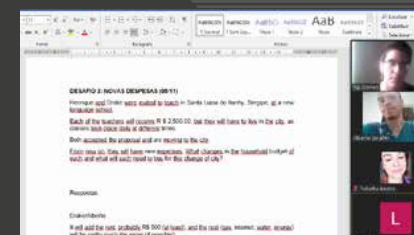
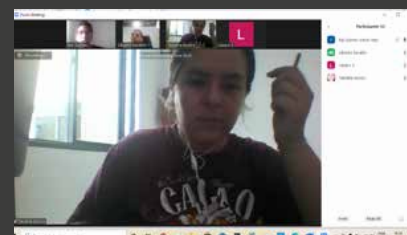
EMOTIONAL INTELLIGENCE AND FINANCIAL EDUCATION

With the social context of Santa Luzia do Itanhy being one of extreme vulnerability, with the majority of the population involved with artisanal fishing, youths see the reproduction of this model as a natural means of subsistence. As a result, they tend to easily give up on other professional possibilities. To develop these students' social and emotional skills, we organized educational contests centered around emotional intelligence and financial education.

To address emotional intelligence, we created the "Persona Challenge". This contest is formed by students in the advanced levels of the SIRI Social Technology (School of Idioms Riverside) and by reapplicants of the Pense Grande project. For three weeks, students were challenged to create characters with emotions, goals, and future perspectives. The game consists of four stages: self-knowledge, self-management, empathy, and social skills.

The financial education concepts were emphasized during the second stage and began with a presentation about the history of money, going all the way to reflections about conscious consumption. During the contests, participants executed tasks to create a company's financial plan, setting goals to follow an entrepreneurial path to expand their income generation prospects.

Most tasks were carried out in English, giving students a chance to learn new words and apply them in new contexts, besides reviewing the content learned during the project's classes. The knowledge gained in these experiences is now used as a reference for elaborating the ON Social Technology.

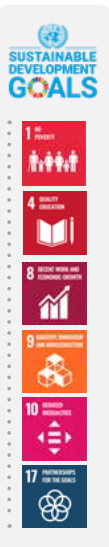


PROJECT NUMBERS

- 11 reapplicants trained in the Pense Grande methodology;
- 3 business proposals (pitches).

NEXT CHALLENGES

- Organize all lessons learned in 2019 and 2020 to develop a social technology that integrates aspects of financial education, emotional intelligence, and entrepreneurship in its methodology.



LuCA

LUZ, CÂMERA, AÇÃO

LuCA is a social technology focused on using audiovisual language to teach elementary and middle school students to produce quality content for series, films, and educational projects.

The project started in 2017, and since then, it has been selecting and training teenagers from municipal schools in Santa Luzia do Itanhil in weekly classes and workshops. Students learn about different filming techniques and sound recording software, besides editing, sound, and finishing techniques using digital cameras and mobile phones. They also have the opportunity to get in touch with activities that foster entrepreneurship.

In 2020, the first fruit of this investment emerged: Vixe Filmes, a production company created by LuCA students.

VIXE FILMES ACHIEVEMENTS

A documentary production about artisanal fisheries, "Saberes e Fazer da Pesca Artesanal" was commissioned by the state power utility company Celse - Centrais Elétricas de Sergipe - to value the culture of its local communities. The production also included a technical partnership with students from the PLOC Social Technology for audio capture. An educational workshop on sound capturing equipment was organized and offered to the local teens.



Video production for the campaign Abaixo Não-Assinado (unsigned petition, in Portuguese) in partnership with the Synapse Teachers Network (RPS) and Artplan advertising agency.



Best Sound Design at the Caruaru Film Festival for the short film "O Repto", produced by LuCA's students in partnership with Vixe Filmes. The short film was also nominated for the international film festival The Lift Off Sessions in the UK.



NEXT CHALLENGES

- Film the 2nd season of the series "Um Pé de Banana Nanica";
- Complete the second phase of the remote reapplication of the LuCA social technology in the communities of Crasto, Rua da Palha, and Cajazeiras;
- Provide classes on graphic animation.

SIRI

school of idioms riverside

In an increasingly connected world, mastering the English language has become one of the main tools for communication in all types of activities. Thus, to expand its knowledge areas and offer more opportunities for teens and young adults, the School of Idioms Riverside (SIRI) was found to be an English teaching method that values imagination and interactivity, based on educational games and the daily lives of students.

The project began in 2018 in Santa Luzia do Itanh, including youths from five communities in the region. In 2019, we integrated the methodology so that the best SIRI students could become primary English instructors in their respective schools.

In 2020, because of the coronavirus pandemic, we adapted our activities to online platforms. To provide continuity to the project, we engaged the advanced SIRI students even more strongly to engage them in all processes planned for the year.

Thus, in partnership with the Pense Grande Social Technology, we developed two activities with educational games focused on entrepreneurship. The first activity was about emotional intelligence, and the second, financial education. In both, tasks were performed in English to help students expand their vocabulary and practice pronunciation, improving their conversation, reading, and writing skills.

The online format also allowed us to carry out our exchange project with students from New York. They volunteer to help improve our advanced students' English skills through conversations on various topics such as culture, politics, and society.

In 2020, we started a collaborative process to develop the SIRI Reapplying Booklet, which will be used as a basis for the English teaching materials in the scaling process.

PROJECT NUMBERS

40 students benefited

NEXT CHALLENGES

- Complete the Reapplying Booklet with all support materials;
- Begin reapplying, carried out by students from Santa Luzia do Itanh;
- Create a social business in the field of language education.



Betty

PROFESSORA
DE INGLÊS
DO ENSINO
MÉDIO



Sobre Mim
Tenho 25 anos, sou solteira, moro com meu pai, minha mãe, meu irmão e minha irmã e sou professora de inglês em uma escola de ensino médio.

Informações Pessoais
Nome: Betty
Sexo: Feminino
Cidade: Salvador
Estado Civil: Solteira

Coisas que gosto de fazer

- Dormir, fazer exercícios físicos e dançar.

Coisas que sei fazer

- Cozinhar, andar à cavalo e dançar.

Coisas que não gosto

- Bebidas alcoólicas, fumar e ir às festas.

Coisas que quero aprender

- Ser mais fluente no inglês, ser mais saudável e conhecer mais sobre a profissão.

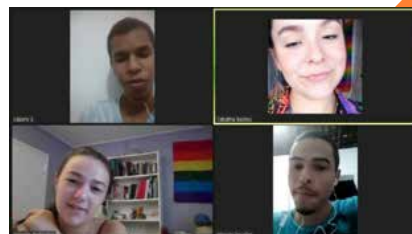
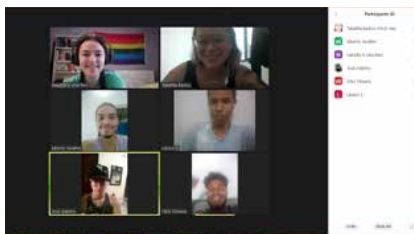


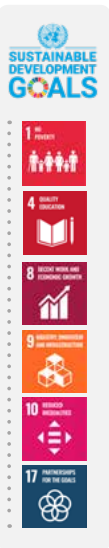
I am José Adelmo, 17, a third-year high school student, and I've participated in some projects promoted by IPTI. One of them is SIRI, the English project, where I improved my English language skills.

I started at the end of 2019, and by 2020 I was already in the advanced class. I'm still in the project, but now I am one of the reapplicants, and I have the honor to pass what I learned on to other students. The teaching materials that I use are a great help. I teach English to other students like me, who also had the same opportunity I had, and I grabbed it. This IPTI project expands my knowledge and vision! I am grateful for participating in this project as a reapplicant.

JOSÉ ADELMO

STUDENT AT COLÉGIO ESTADUAL COMMENDADOR CALAZANS





PLOC

PLOC is a social technology that aims to provide opportunities for youths who are sensitive to sound and art. It uses local sounds as tools to create opportunities for cultural and economic development.

Since 2017, PLOC has offered technical workshops on sound recording, editing, production, and composition for public school students in Santa Luzia do Itanhhy to develop soundtracks for films, games, and other potential entrepreneurial activities. In 2019, we began to reapply the methodology in the region, with seven instructors who had been students during the project's first phase.

With the pandemic in 2020, we revised our plans and tested a virtual training methodology focused on assignments that the students could execute at home.

The goal of this new experience was to work on sound construction in audiovisual and electronic music production. The tools used were WhatsApp groups and Google Classroom, in which students accessed weekly video classes, graphic and text content, exercises, knowledge tests, and a forum to discuss their questions. Part of this educational content was prepared by the reapplicants themselves, who jointly created the scripts and recorded their voices at home, over the videos produced by Vixe Filmes, the production agency started by youths from Santa Luzia do Itanhhy.



HIGHLIGHTS OF THE PLOC PROJECT IN 2020:

- Production of an EP about street markets, "Feira Livre", with the tracks Vixe (remix), Batata Doce, and Aratu;
- Participation in sound capture and sound design of the series "Tatatatu";
- Sound workshop in partnership with LuCA students;
- Reapplying the methodology in Santa Luzia do Itanhhy and in the communities of Crasto and Rua da Palha.



PROJECT NUMBERS

- 80 students benefited by 2020;
- Participation in the production of 02 audiovisual series.



NEXT CHALLENGES

- Kick off the second stage of the social technology's reapplying in three communities;
- Record and launch a new CD with the PLOC project's Orquestra Imaginária;
- Create a sounds database;
- Strengthen dialogue with the audiovisual project to create a local sound production company.

Arte Naturalista

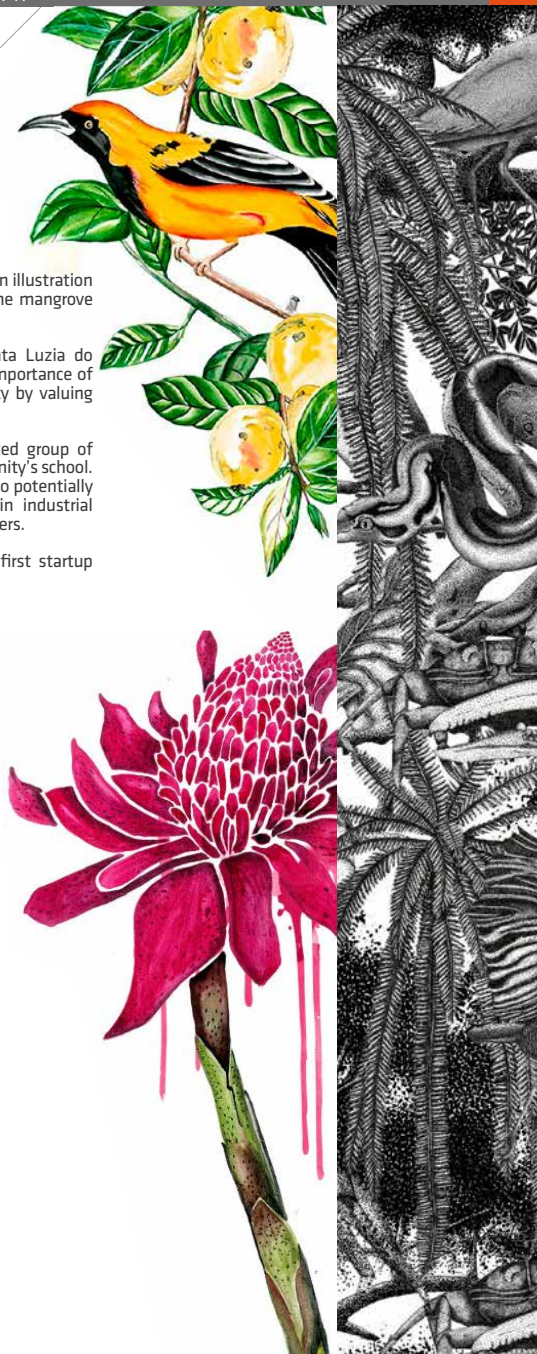
THE PROJECT DID NOT CARRY OUT ACTIVITIES IN 2020

The Arte Naturalista Social Technology aims to identify and train youths in illustration techniques – watercolor, pointillism, graffiti, and pastel – focused on the mangrove ecosystem of the region.

Inspired by the local scenario, youths from municipal schools in Santa Luzia do Itanhhy learn to illustrate the region's wildlife, raising awareness of the importance of preserving the environment and strengthening the community's identity by valuing local knowledge and traditions.

As students develop their skills, they also become part of an advanced group of illustrators, with the task of reapplying visual arts teaching in their community's school. At the end of each cycle, the group must seek to develop skills that lead to potentially successful businesses based on the principles of creative economy in industrial segments such as fashion, graphic design, and product design, among others.

Following this perspective, in 2016, Casa do Cacete was created, the first startup generated from this social technology.



CASA DO CACETE – CDC

Formed by illustrators trained within the Naturalist Art project, Casa do Cacete (awesome house, in Portuguese) has partnerships with renowned brands such as Morena Rosa, Osklen, and Insecta and offers innovative artistic residencies such as the Muralista graffiti project.

www.casadocacete.com.br

[casadocacete.br](https://www.facebook.com/casadocacete.br)

[casadocacete](https://www.instagram.com/casadocacete)

[Casa do Cacete](https://www.youtube.com/c/casadocacete)



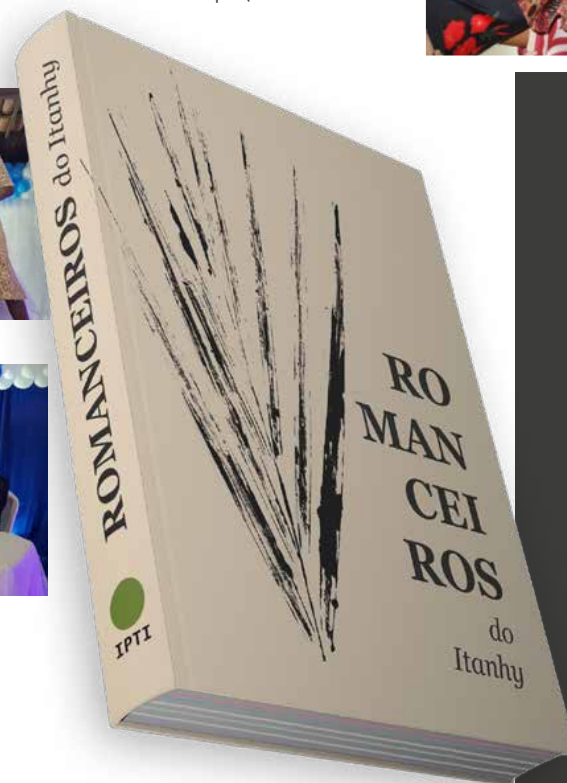
ROMANCEIROS DO ITANHY

THE PROJECT DID NOT CARRY OUT ACTIVITIES IN 2020

Romanceiros do Itanhly (novelists of Itanhly) aims to stimulate literary and artistic expression among children and teens by producing narratives and publishing their own books.

At the end of 2019, we organized a book signing for seven students from Santa Luzia do Itanhly, to launch their first literary productions in the Romanceiros do Itanhly Social Technology, during an event for friends and family.

The project started in 2021 with a version for children (children's literature), bringing together early childhood education students with teens from the Naturalist Art project. The latter will assist the children in writing and illustrating their own books, to be launched at the end of 2021. The social technology is currently being revised to a new format in 2022, with a stronger focus on narratives for social media and scripts (for films, games, etc.)





CULTURA EM FOCO

THE PROJECT DID NOT CARRY OUT ACTIVITIES IN 2020

The purpose of the Cultura em Foco Social Technology is to combine contemporary design and handicraft techniques in a permanent innovation cycle and increase competitiveness to add value to the production and assist in preserving Brazilian handicrafts.

Cultura em Foco generated surprising results: engaging artisan communities in Santa Luzia do Itanhý and five other cities in Sergipe and Alagoas, taking more than 400 products to national and international craftwork trade shows and exhibits. One spinoff of this social technology was the Origine-SE project (origin yourself, in Portuguese). Its main objective was to merge design with artisanal techniques from the state of Sergipe, developing products for the tourism segment while restoring and strengthening the identity of traditional local techniques.

In 2020, no new actions were executed in this social technology. All activities were put on hold while plans for the next steps and activities are being made, especially to incorporate new techniques and products as well as the design of a business model to render more consistent and transparent income for the artists.



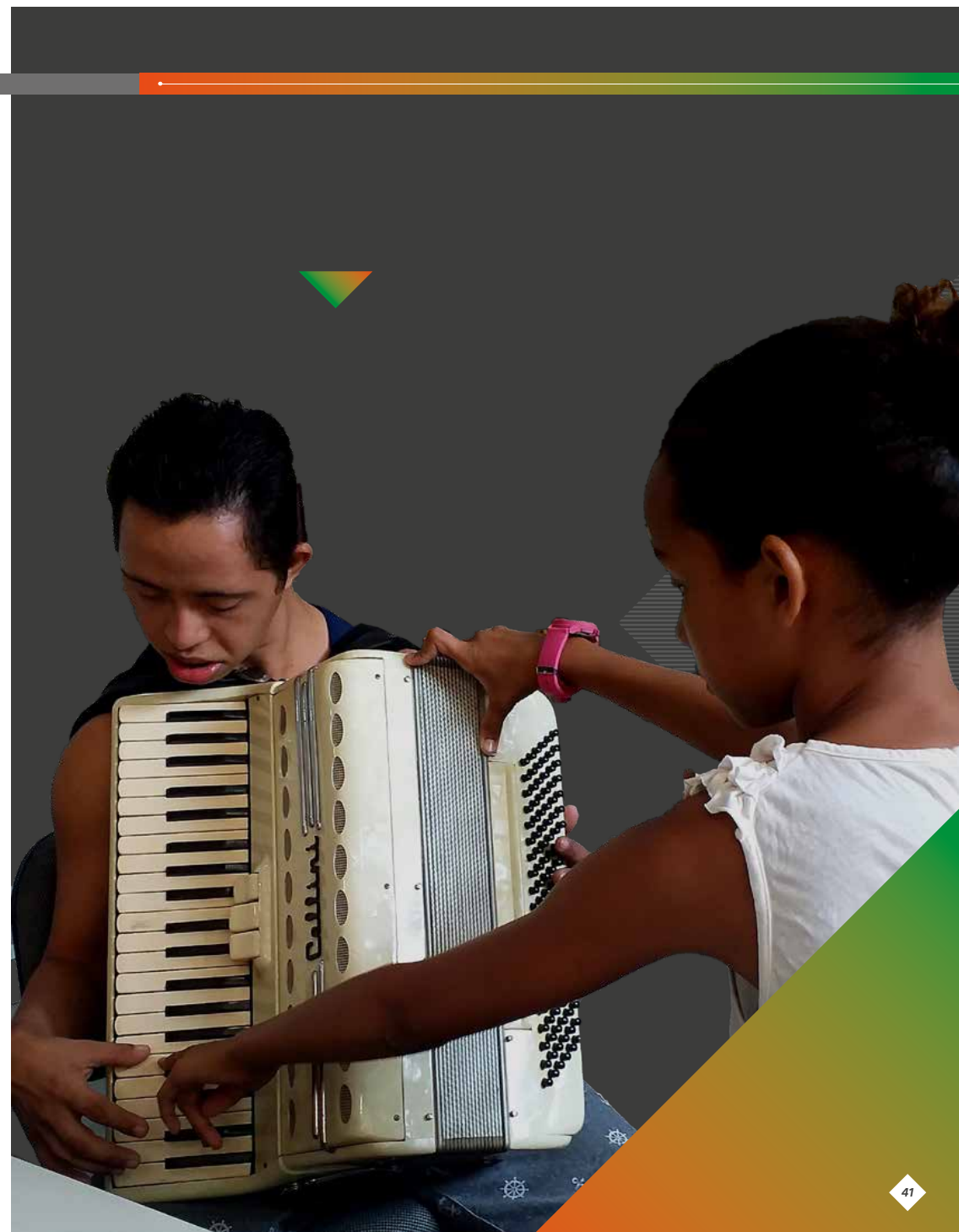
BAIÃO

THE PROJECT DID NOT CARRY
OUT ACTIVITIES IN 2020

Created at the end of 2017, the Baião project aims to preserve traditional regional music by teaching zabumba, triangle, and accordion.

The methodology was developed collaboratively using didactic tools based on pillars such as personal motivation, life story, natural intuition, and musical perception. After a selection process, students were offered weekly classes where, besides the technical part, they also learned to explore musical language, highlighting the importance of preserving the country's musical memory and discovering the values of our cultural roots through music.

Since the project's implementation demands physical classes, we chose to postpone its activities during the pandemic in hopes they may resume in 2022.



CLOC

criatividade-lógica-oportunidade-crescimento

THE PROJECT DID NOT CARRY OUT ACTIVITIES IN 2020

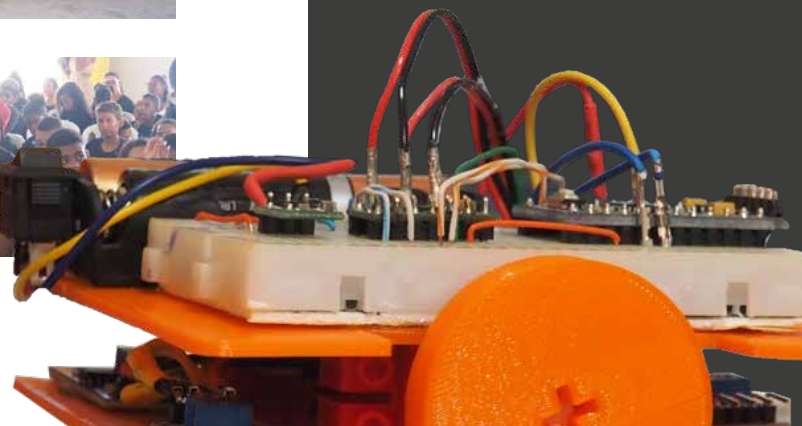
In 2013, we took the first steps towards the development of CLOC, a Social Technology that promotes creative and digital entrepreneurship in the area of Information Technology and includes the teaching of programming in public schools, in underserved, remote communities. For this, public school students from Santa Luzia do Itanhhy were selected to set up a highly qualified advanced programming center to teach computer programming and robotics in these schools in a sustainable manner, besides fostering businesses in the IT segment.

During the learning process, students develop logical reasoning and learn Scratch, HTML5, and CSS3. They then go on to Database and JavaScript at the advanced level. When students reach this level, they are invited to become programming instructors at schools in their own communities, ensuring continuity and scalability, while also creating opportunities to discover new talents.

Em 2015, com a formação da primeira turma avançada do CLOC, alguns alunos assumiram o papel na reaplicação da metodologia, que, atualmente, está presente em 10 escolas públicas dos povoados de Santa Luzia do Itanhhy, tendo beneficiado mais de 1.200 alunos, nos últimos anos.

In 2015, the first advanced CLOC class graduated. Some students took on the role of reapplying the methodology, presently implemented in 10 public schools in different communities of Santa Luzia do Itanhhy, having benefited more than 1,200 students in the last few years.

With the evolution of the project, the CLOC constituted a core of programmers formed by 396 students, of which 15 joined to create the first IT company in Santa Luzia do Itanhhy (CITI2) and 381 are in different stages of the training process. In addition, some of these students participated in the development of 3 applications and created robotics kits, consisting of recycled components, 3D printed modules, and Arduino boards all to be integrated into the Synapse social technology. The kits are used to broaden the students' learning capacity in different subjects, especially basic math.



CITI²

As an outcome of the interaction offered in the project, in 2019, CITI² (Itanhhy Integrated Information Technology Center) was created. It is the first computer programming startup in Santa Luzia do Itanhhy, initially formed by 13 partners, all of them students from the first three classes graduating in the CLOC project.

CITI²'s main customer is IPTI itself, which is gradually transferring to Santa Luzia do Itanhhy much of its demands and needs for the development of computer systems and applications, but the company's perspective is to serve customers in Brazil and abroad, as the quality and capacity to absorb new projects increases.

In 2020, in partnership with the Vectors project, the CITI² programmers actively participated in the development and test phase of the CLIC apps, together with the IPTI team. In this case, we are talking about the "Community" and "Endemic Agent" versions of the CLIC app.

MAJOR PROJECTS DEVELOPED BY CITI²:

- Website of the Municipal Council for the Rights of Children and Adolescents (CMDCA);
- CLIC Apps - VECTORS Project;
- Tourism Project Portal INFO-TUCO NETWORK.

www.citii.com.br

@citii_



NÚMEROS DO PROJETO

2016

- 689 students benefited
- CLOC Nucleus - 5 programmers (employed and in training)
- 4 schools

2017

- 689 students benefited
- CLOC Nucleus - 40 programmers (employed and in training)
- 4 schools

2018

- 800 students benefited
- CLOC Nucleus - 68 programmers (employed and in training)
- 5 schools

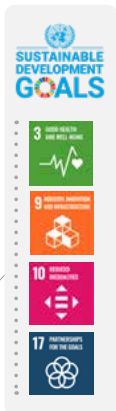
2019

- 1200 students benefited
- CLOC Nucleus - 396 programmers (employed and in training)
- 10 schools

2020

- 1200 students benefited
- CLOC Nucleus - 396 programmers (employed and in training)
- 10 schools





THE PROJECT DID NOT CARRY OUT ACTIVITIES IN 2020

Iron deficiency anemia is the most widespread nutritional disease in the world. According to World Health Organization (WHO) data, it affects 25% of the global population, with children being one of the most vulnerable groups. Its consequences are associated with poor motor and mental performance.

Hb is a social technology for diagnosis and treatment of iron deficiency anemia in schools. It was built in partnership with experts from local government education and health agencies of Santa Luzia do Itanhy, and its efficacy reduces over 80% of cases. In 2013, Hb won the Fundação Banco do Brasil award for social technologies and has already been reapplied in two cities in Sergipe and Amazonas.

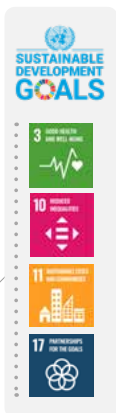
At present, we are focused on the development of a new rapid test platform based on the μ PAD (paper-based microfluidic analytical devices) methodology to replace the previously used hemoglobinometer. The new technology is cheaper and does not generate waste disposal in the environment. We will also use ferritin level blood tests to plan evidence-based measures for the prevention of anemia.

The image illustrates how this new test platform will work.



A IMAGEM ILUSTRA COMO FUNCIONARÁ ESTA NOVA PLATAFORMA DE TESTE.





VETORES

MANAGEMENT SUPPORT TECHNOLOGY FOR EPIDEMIOLOGICAL SURVEILLANCE

The Vectors project aims to build a social technology to help control vectors causing epidemiological diseases, with a particular focus on the *Aedes aegypti*, which transmits Zika, Chikungunya, and Dengue, by engaging and mobilizing communities in efforts to monitor and combat them.

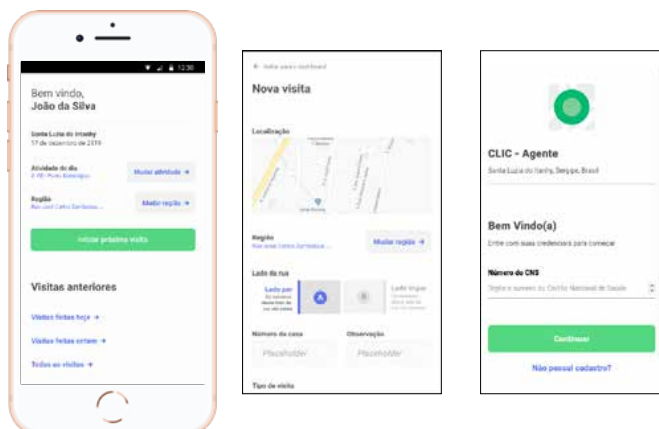
The technology is based on a mobile app that enables georeferenced monitoring of vector concentrations and efforts made by the community to reduce these concentrations and uses gaming strategies to motivate participation. The app was named CLIC and is available for download from Apple and Google app stores.

The app incorporates information related to the development and proliferation conditions of the vectors (rainfall data, temperature, soil type, rates of previous years, among others) and, in the future, it will incorporate predictive models as alerts to communities and aid public managers to make more effective decisions to minimize or prevent the problem.

In 2020, in partnership with health agents from Santa Luzia do Itanhy, the Vectors project developed three versions of CLIC for different stakeholders:

CLIC – ENDEMIC AGENT

The app replaces the old paper spreadsheets used for control and follow-up of home visits. It is also compatible with health management systems such as SisPNDC and DataSUS. In 2020, we launched the first trial version of the app on the Google Play Store for Android devices.



CLIC – COMMUNITY

It was developed to promote the participation of communities in the fight against disease vectors such as Dengue, Zika, Chikungunya, and Schistosomiasis using a gamified experience based on a system of scores and rewards for combat actions.

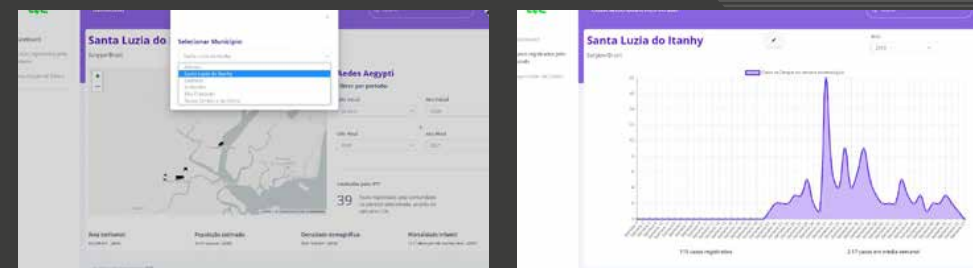
We brought together a multidisciplinary team to develop a first version of the app based on photographic recording and georeferencing of areas prone to greater vector concentration and reproduction presence. This team was composed of software and application developers, designers, project team, and representatives of the Santa Luzia community. This version was included in the Google Play Store and Apple Store. Along the year, the app was submitted to several testing cycles with the community.

To assist in the scaling of the CLIC – Community app, we developed the “The Community Counter-Attacks” episode taken from the “Guerra nas Artérias” (war on arteries, in Portuguese) comic book, which focuses on infectious disease vectors and guides the community to combat and prevent the spread of these transmitters. In addition, we partnered with ArtPlan advertising agency to improve the app's interfaces and plan strategies to increase community engagement.



CLIC – DASHBOARD

The CLIC Dashboard is a tool created to help managers make decisions for a more effective prevention of infectious disease vectors. Besides the CLIC Comunidade app, the app is integrated with various data sources such as DataSUS and SisPNDC. In the format of an interactive dashboard with maps and graphics, it helps managers to assess trends and potential danger zones for vector reproduction.



CHALLENGES FOR 2021

- Enable offline use of the app, providing a data synchronization system to use only when there is internet access, so that the app can be used in remote areas with no internet access;
- Launch of the new version of CLIC - Comunidade, including a set of features to encourage engagement, such as a reward system and invitations for new users;
- Include predictive models for the dispersion of the *Aedes aegypti* using Artificial Intelligence to predict the expansion and proliferation of mosquitoes.



IPTI 2020 ANNUAL (GLOBAL) EVENT

In 2020, the IPTI Annual Event was held, exceptionally, in webinar format on an online platform, and, once again, we were able to bring together people who believe in our mission, vision, and values based on human development.

The program was divided into two stages: the first one being exclusive for sponsors and their guests, with the theme "Navigating Changes - Map or Compass?" and counting with the presence of Saulo Barreto (founder of IPTI), Edson Matsubayashi (Director of Private Equity), and mediated by Ingo Ploeger (IP Desenvolvimento Empresarial e Institucional). In this ceremony, speakers presented the IPTI model and called for a reflection on the urgency to fight poverty globally and the need to rethink the models of private social investment.

The second part was organized for partners and supporters in the US and presented the theme "Early Education - Challenges and Solutions." To discuss the current scenario of early childhood education and its challenges, especially in impoverished and vulnerable regions. We were honored by the presence of Priscila Cruz (president of Todos pela Educação), Flávio Cunha (Professor at Rice University), Marco Antonio Vieira Souto (Head of Strategy at Grupo Dreamers), and Saulo Barretto (founder of IPTI).





biblioteca **Luminescência***

The idea of setting up a library is part of our strategy to promote human development based on integrated actions in art, science, and technology. The Luminescence Library is a great artistic inspiration for the entire community of Santa Luzia do Itanhy, especially the children and teenagers of Crasto, where it was built in 2013.

The library specializes in Visual Arts and includes children's literature since it is located next to the Sítio do Pica Pau Amarelo Children's School. It contains a rich collection of 1,272 books organized according to the Universal Decimal Classification (CDU) system and the Dewey Cutter numbers table. In addition to the book collection, other initiatives are being developed to increase interest in art.

The name Luminescence comes from the phenomenon of bioluminescence, quite common in the Crasto region due to the presence of dinoflagellates (microorganisms that emit light when excited) in coastal environments. The name is also related to Santa Luzia, the patron saint of the eyes and vision. Just as the saint protects and brings light to the citizens, the library also has the power to illuminate and enlighten the lives of those who seek knowledge.



PARTNERS AND SUPPORTERS IN 2020

ambev



FUNDAÇÃO VALE



SEDETEC
SECRETARIA DE ESTADO
DO DESENVOLVIMENTO
ECONÔMICO E DA
CIÊNCIA E TECNOLOGIA

MINISTÉRIO DA
CIÊNCIA, TECNOLOGIA
E INOVAÇÕES



FINANCIAL STATEMENTS

Title PROJECTS	Knowledge Area	Contract Period		Contracted Amount	Received Amount in 2020	Source of Funds	
						Public	Private
BAIÃO - 2º ano	Creative Economy	2018	2020	R\$ 26.400,00	R\$ 2.200,00	-	100%
CLOC - Criatividade, Lógica, Oportunidade e Crescimento - (Robótica - Fase 1)	Creative Economy and Education	2019	2020	R\$ 243.000,00	-	-	100%
Educação Infantil - Fase 2	Education	2019	2020	R\$ 252.000,00	-	-	100%
Gestão e Otimização da Rede de Proteção à Criança e ao Adolescente	Education	2018	2019	R\$ 270.000,00	-	-	100%
Gestão e Otimização da Rede de Proteção à Criança e ao Adolescente (TomCon)	Education	2019	2020	R\$ 256.500,00	-	-	100%
Legados na Educação do Maranhão	Education	2019	2021	R\$ 1.317.300,00	R\$ 652.957,85	-	100%
Lilo - Fase 2	Education	2019	2020	R\$ 180.000,00	-	-	100%
Pense Grande 2020	Creative Economy	2020	2020	R\$ 40.000,00	R\$ 24.883,84	-	100%
Pense Grande - Formação Empreendedora	Creative Economy and Education	2020	2021	R\$ 200.000,00	R\$ 200.000,00	-	100%
Arte Naturalista - Novas Linguagens	Creative Economy	2020	2021	R\$ 45.000,00	R\$ 36.000,00	-	100%
Synapse - Ceará	Education	2020	2020	R\$ 354.724,13	R\$ 354.724,13	100%	-
Convênio 892115/2019	Creative Economy	2019	2021	R\$ 500.000,00	R\$ 500.000,00	100%	-
Convênio 898364/2020	Creative Economy and Education	2020	2021	R\$ 510.000,00	R\$ 500.000,00	100%	-
Convênio 898821/2020	Creative Economy and Education	2020	2021	R\$ 1.180.000,00	R\$ 1.180.000,00	100%	-
Criança Esperança	Education	2020	2022	R\$ 159.040,00	R\$ 28.627,20	-	100%
Educação Infantil - Fase 3	Education	2020	2022	R\$ 280.000,00	R\$ 280.000,00	-	100%
Petrobras	Education	2020	2022	R\$ 3.799.516,88	R\$ 841.081,18	-	100%
LuCA	Creative Economy	2020	2023	R\$ 160.000,00	R\$ 160.000,00	-	100%
Segurança Alimentar nas Escolas (SAE)	Healthcare	2020	2020	R\$ 367.200,00	R\$ 367.200,00	-	100%
Cloc - Inteligência Artificial	Creative Economy and Education	2020	2020	R\$ 104.000,00	R\$ 104.000,00	-	100%
Vetores	Healthcare	2019	2021	R\$ 1.019.330,00	R\$ 380.899,00	-	100%
MANAGEMENT CONTRACT							
Management Contract 01/2016	Re-D	2016	2020	R\$ 958.568,00	R\$ 221.978,00	100%	-
Management Contract 075/2015	Basic Education	2015	2020	R\$ 7.464.774,92	R\$ 843.113,26	100%	-
DONATIONS	-	2020		-	-	-	-
Individual and Legal Entity	-	-		-	R\$ 784.510,51	-	100%
Assets	-	-		-	-	-	100%
SERVICES	-	-	-	-	-	-	-
PRIZE	-	-	-	-	-	-	-
Visionaris	Creative Economy and Education	-	-	-	R\$ 28.725,00	-	100%

The financial statements for the fiscal year ended December 31st, 2020, were audited by Deloitte and are available at our website - <https://www.ipti.org.br/transparencia/>

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IPTI

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