

INSTITUTO DE PESQUISAS EM TECNOLOGIA E INOVAÇÃO

IPTI

ACTIVITIES

REPORT 2021



***Awaken the creative
and transforming role
of people, so they make
a difference in their
community, in Brazil,
and around the world.***



IPTI



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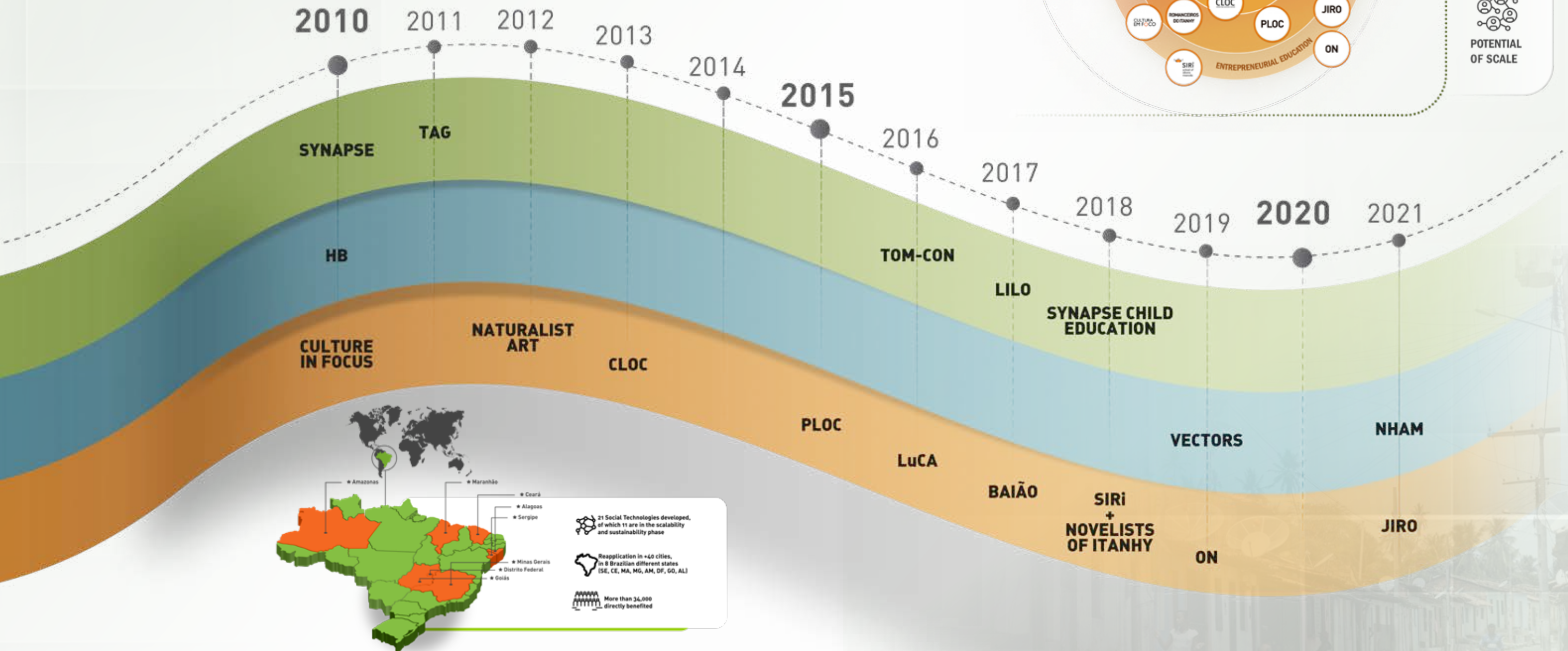
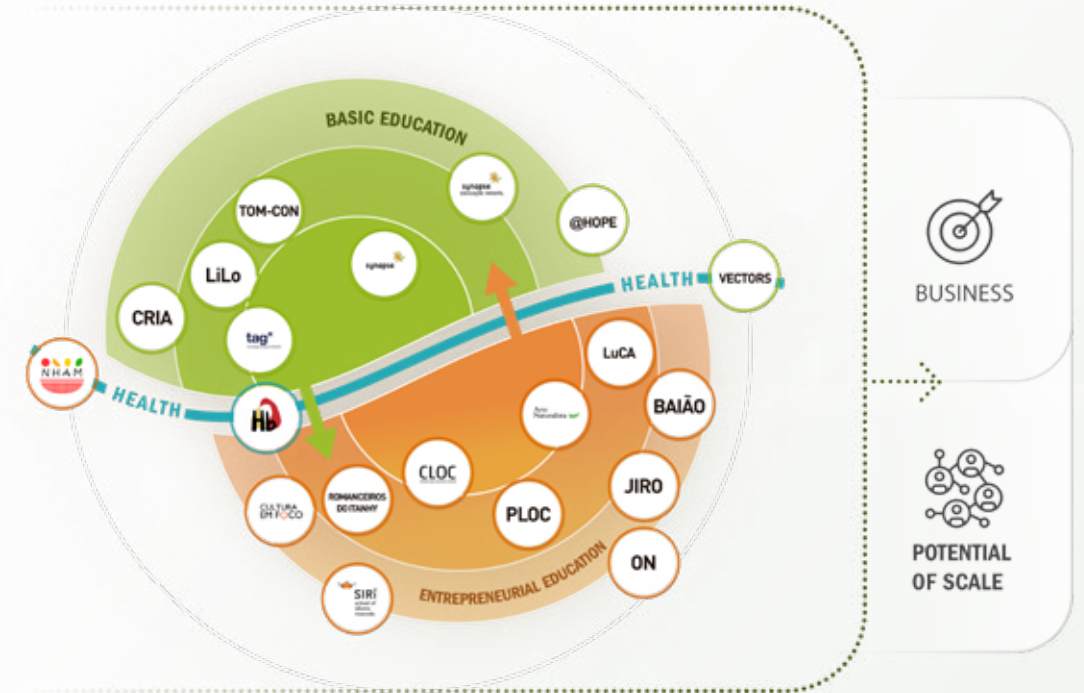
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THE HUMAN PROJECT

Our model for overcoming the poverty trap

The Human Project is a model for how art, science, technology and society can promote prosperity in underdeveloped regions based on the formation of human capital, revealing people's creative and entrepreneurial potential so that they become the main protagonists of change. At the same time, the Human Project is a solid case of inspiration and a reference for how private social investment can bring about efficient and sustainable social change.

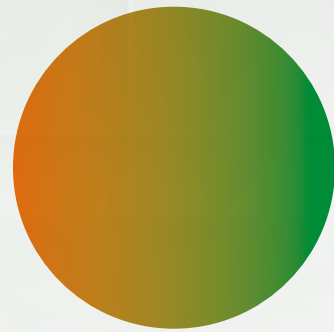
The model is based on an incremental and systemic process of Building Social Technologies to confront the main factors that contribute to the poverty trap, focusing on primary education, entrepreneurial education and basic health.



- 21 Social Technologies developed, of which 11 are in the scalability and sustainability phase
- Reapplication in +60 cities, in 8 Brazilian different states (SE, CE, MA, MG, AM, DF, GO, AL)
- More than 36,000 directly benefited

THE SOCIAL TECHNOLOGIES DEVELOPED BY IPTI DIALOGUE AND BROADLY INTEGRATED WITH THE SDGS





IPTI

AND THE GOVERNMENT OF SERGIPE

NEW IDEAS TO REDUCE
INEQUALITY AND TO GENERATE
SOCIAL DEVELOPMENT:



“ The definition of 2022 is “new beginning”. After a challenging period caused by the coronavirus pandemic, we were able to go forward with our planning, once more in a person-to-person way. During this time, new alternatives were created in science, technology and innovation, so that the community benefited and the projects that had been built over the years were not affected. It is these precepts that the State Government, together with the State’s Department of Economic, Science and Technology Development, shares with the Institute for Research in Technology and Innovation.

Throughout the year, Sedetec was able to act as an intermediary in forming new relationships between IPTI and companies installed in the state, with the aim of making them future partners in projects already up and running or in the creation of new ones, consolidating the Santa Luzia do Itanhý municipality as a reference at the state and even national level, in the construction and perfecting of social technologies.

A new cycle is beginning and, with it, the hope for renewal, always allied with the central mission, which is to make viable solutions that transform the lives of the population of Sergipe state. We believe that the challenges over the next few years will be even greater. However, we will not spare our efforts in reaffirming our commitment to IPTI and the people of Sergipe state.”

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

MESSAGE FROM THE PRESIDENT

A TIME FOR CARING AND LEARNING.

SCAN THIS CODE WITH YOUR
SMARTPHONE AND ACCESS THE
PREVIOUS YEARS' REPORT.



2021: The year we regained hope!

Despite having lived through a year still influenced by the effects of the pandemic on our lives, in 2021, we began to hope again for better days.

The vaccination was broadened nationwide, organised into priority groups according to age groups, and we gradually saw Covid statistics fall as vaccination reached more people.

Unfortunately, however, as fear of the virus receded, we began to see the social and emotional effects of the pandemic, such as hunger, unemployment, anxiety and depression. In 2021 it became evident how much our well being depends on a series of factors and how much we are social beings, needing interaction with others.

Throughout the year, we continued with our actions, initially remotely, but little-by-little via hybrid format and eventually returning to personal contact, always taking great care, following the guidelines of the health authorities, and prioritising the wellbeing of the IPTI team and our community.

We continue to make every effort to reduce the country's educational deficit, with the next few years being extremely challenging in repairing the effects of the pandemic, especially for students learning to read and write.

More than ever, the networking of our Social Technologies will be fundamental in contributing to overcoming these challenges, especially with the new projects developed over the year focused on Child Education and Food Security.

In conclusion, in 2021, IPTI celebrated its 18th birthday, and the challenges to come will be worthy of its coming of age. Congratulations to the whole team, and let's get working!

Upwards and onwards!

RODRIGO DE MAIO ALMEIDA
PRESIDENT



synapse

Synapse is a pedagogical methodology combining a knowledge of the neurosciences with experiences in the state school classroom, aimed at the improvement of teaching quality and the learning of Portuguese and Mathematics in the first three years of primary education.

The pillars of Synapse are contextualization and planning according to the aim of the teaching. The resources used in the methodology are the Pedagogical Curriculum and the Lesson Plan - a support for the teacher, and the Digital Platform, with contents and activities for the students via tablet. Synapse also has the Teaching Support Material - MAP, which are playful resources for the teacher's use in the classroom.

The development of the methodology took over a period of five years (2010-2015). During the following three years, we tested and validated the scaled-up model (reapplication), and today Synapse is being used by teachers and students in 27 municipalities in four Brazilian states.

INTEGRATION WITH OTHER SOCIAL TECHNOLOGIES OF THE HUMAN PROJECT MODEL

- SYNAPSE EI
- TAG
- HB
- NHAM
- ARTE NATURALISTA
- CLOC
- LILO
- TOM
- TOM-CON

THE SYNAPSE TEACHERS NETWORK (RPS)

Founded in mid-2019, the Synapse Teachers Network (RPS) is an entrepreneurial initiative of teachers teaching literacy using the Social Synapse Technology, aimed at promoting quality literacy teaching for all children from a long-term perspective and minimizing the problem of lack of continuity in actions in public policies.

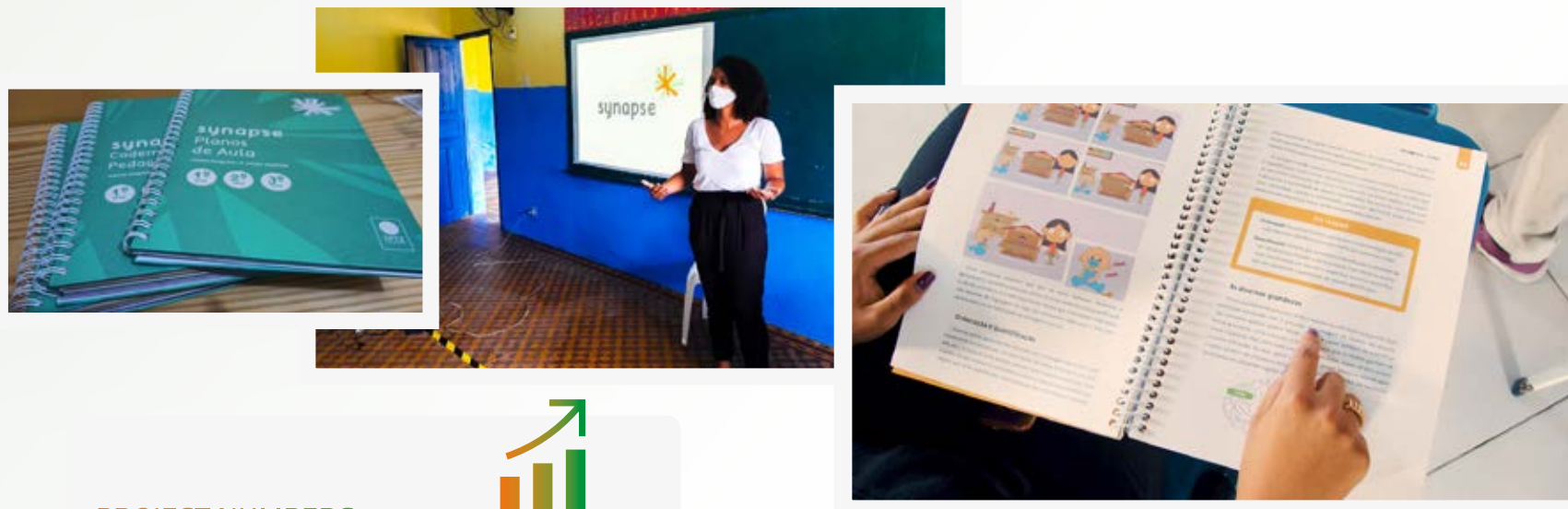
www.rps.org.br



With the aim of being the main national reference in literacy teaching through 2025, the RPS is composed of a group of committed teachers who build, apply, evaluate and continually improve an innovative methodology suited to the reality of education in Brazil.

In a partnership to draw Brazilian society's attention to the cause of literacy and to the efforts of public school teachers, IPTI, the Synapse Network and the Artplan Advertising Agency, in 2020, designed a campaign called "Abaixo Não-Assinado" (Not Undersigned), which is expected to gather new strength as of 2023.

<https://vimeo.com/466006573>



PROJECT NUMBERS



- 2021: 330 teachers and 6,600 students;
- Since the beginning of the Project (2010): 1,705 teachers and 34,100 students

NEXT CHALLENGES

- Consolidation of Synapse Teachers Network (RPS) to allow scale and sustainability from a prospective of long-term autonomy.



synapse

CHILD EDUCATION

The purpose of Synapse Child Social Education Technology (Synapse EI) is to offer quality education for children, with emphasis on the development of the children's cognitive and non-cognitive skills and in complete alignment with the Synapse social technology.

The construction process of this social technology counted on the participation of child education teachers from 6 schools in Santa Luzia do Itanhy and took four years of development, validation and systemization (from 2018 to 2021).

The teaching resources generated in this process are the Teaching and Planning Handbooks, four Pedagogical Support Materials for Child Education - MAPEIs, and the development of a Contact Network for the school community composed of digital magazines and a channel on the YouTube platform.



INTEGRATION WITH OTHER SOCIAL TECHNOLOGIES OF THE HUMAN PROJECT MODEL

- SYNAPSE
- TAG
- HB
- NHAM
- ARTE NATURALISTA
- CLOC
- TOM
- TOM-CON



PROJECT NUMBERS

- In 2021: 58 teachers and 519 students;
- Since the project's start (2018): 58 teachers and 519 students



NEXT CHALLENGES

- Testing the model for scalability, re-applying Synapse EI in schools in other municipal Sergipe schools.



TAG is a computer system developed initially to support school management, focusing on small municipalities that do not yet have computerized systems of information management. Once implemented, the use of TAG by municipalities is free, so the system is currently used in **17 CITIES IN THE STATES OF SERGIPE AND MARANHÃO, WITH OVER 100,000 STUDENTS ON ITS DATABASE.**

TAG allows for more practicality and speed in enrollment, as well as a database of students and teachers, grades, attendance, control of the delivery of the school lunch, lesson plans, management of more efficient delivery of documents, organization of reports, and management of the Bolsa Família, a Brazilian government social welfare program, as well as being integrated with the MEC – Ministry of Education - Education and Census System, EducaCenso. It is a complete tool for schools, and currently the only system recognized by the Education Ministry (MEC) as Educational Technology in school management.



Little by little, the TAG has included Health and Social Assistance functionalities in the municipalities, in the perspective that municipal managers and the local community will soon have access to an integrated platform, with data from the 3 essential areas and directly related to the full development of children and teenagers. In this sense, IPTI has also made efforts to develop a mobile version, to facilitate access and full use of the system.

TAG IN HEALTH AND SOCIAL ASSISTANCE

The TAG Social Technology has been broadening its functions, focusing on integrating health and social assistance data into one database, thus allowing it to link databases and, therefore, to achieve greater efficiency as a support tool for decision-making.

In the health area, we currently use the Hb version of TAG, allowing monitoring of the whole diagnostics campaign in combating iron-deficiency anemia in schools, including the identification of student nutritional problems such as obesity and malnutrition.

In regards to social assistance, the TAG enables computerised management of the Reference Centre for Social Assistance (CRAS), facilitating the management of information of families referred to in the municipality and the appointments carried out daily at the CRAS. In addition to this, modules of computerised management have been developed for the activities of the guardianship council and the Municipal Council of Child and Adolescent Rights - (CMDCA)

INTEGRATION WITH OTHER SOCIAL TECHNOLOGIES OF THE HUMAN PROJECT MODEL

- SYNAPSE
- SYNAPSE EI
- HB
- NHAM
- CLOC
- TOM
- TOM-CON

PROJECT NUMBERS



- In 2021: 10 municipalities; 420 schools, and 30,680 students on the database;
- Since the beginning of this project: 27 municipalities, 618 schools, and over 130,000 students have on the database;

NEXT CHALLENGES

- To develop a new version of the TAG, including complete mobile access;
- To consolidate the scale model, reapplying the TAG in further municipalities and further Brazilian states;
- Perfecting integration between education, health, and social assistance, aimed at total interoperability of data related to the full development of children and adolescents.

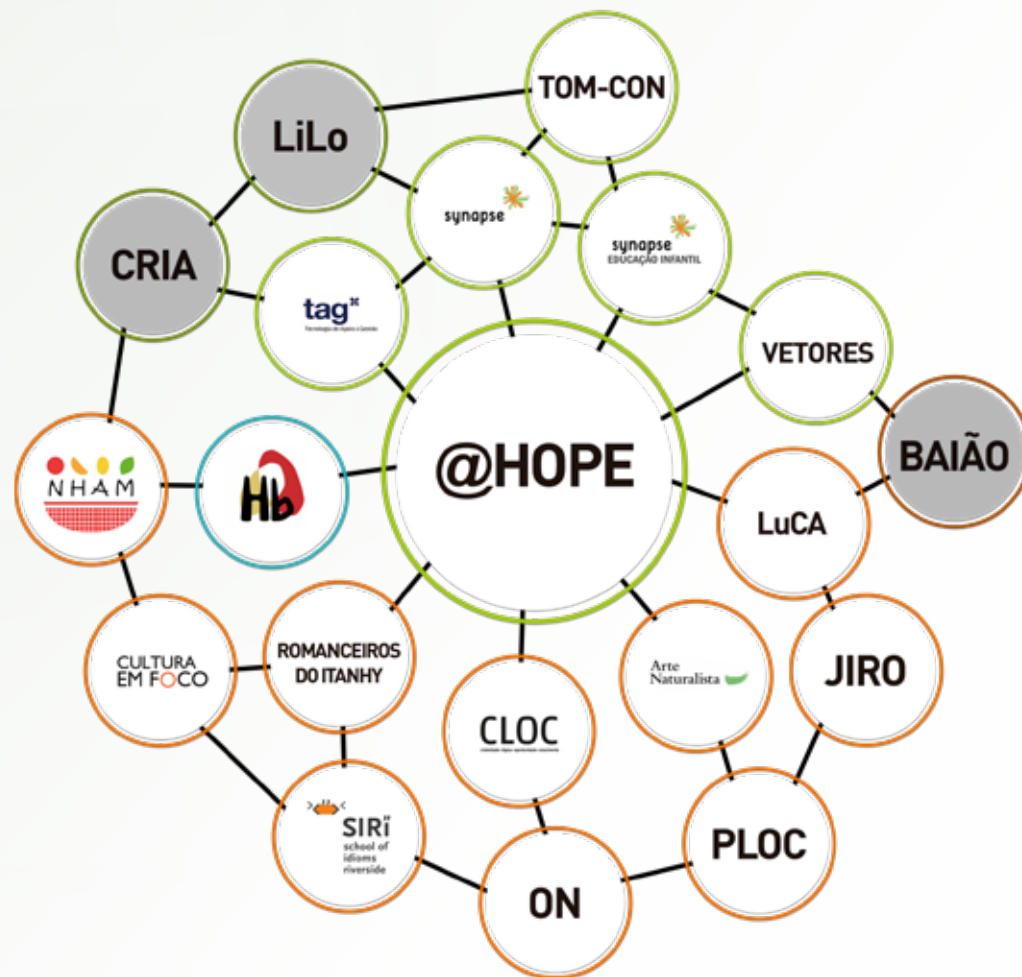
@HOPE

ART & TECHNOLOGY FOR HEIGHTENED OPPORTUNITIES IN PUBLIC EDUCATION

@Hope is a Social Technology aimed at generating a public school model with the pedagogical objective of integrating Social Technologies in Basic Education, entrepreneurial Education, and Health.

For this, we have created an architectural proposal and built a municipal public school in the village of Pedra Furada, which will function as a model for the human development of IPTI, inspiring other schools to follow the same transformational path.

In addition to building a model school, from the architectural and sustainability points of view, @HOPE proposes to prepare and consolidate a pedagogical proposal that prepares new generations for the demands of the 21st century, integrating curricular contents with training in art, technology, and entrepreneurship.



ARCHITECTURAL PROJECT

The architectural project was developed in close partnership with the community related to the school (council, teachers, employees, director, students, and parents) of Pedra Furada village, creating a highly detailed reference document that can be accessed via the link <https://www.ipti.org.br/athope/>

The project won an award from the Instituto dos Arquitetos do Brasil (Brazilian Institute of Architects), São Paulo (IABSP), at the end of 2018, as the best project in the category "Institutional Buildings - non-executed work".



The school was delivered to the community at the end of 2021 and is expected to be operating during the 2022 school year. The classrooms are still not ready, but during the 2022 school year, the spaces foreseen for the library and laboratories will be used as temporary classrooms. Our next goal is to finish the classrooms and equip the laboratories and library so that our School of Dreams can be fully functional.



Arte Naturalista

Naturalist Art is a Social Technology that combines visual arts with, among its various possibilities, entrepreneurship and the appreciation of the local ecosystem. For this, the adolescents that are part of this social technology learn various illustration techniques such as watercolour, pointillism, pencil and pastel. The starting point is the representation of the mangrove, broadening the students' view of this ecosystem and encouraging its recognition as an important and intangible national heritage, as well as an aesthetical reference that ensures the identity and competitiveness of the work undertaken. In addition, it aims to encourage environmental awareness.

The best students act as visual arts teachers in the municipal schools, in such a way that over 1,800 children and adolescents have already benefited from the project over recent years. Naturalist Art has been responsible for the creation of the first business in economic activity in the municipality, "Casa do Cacete" (CDC), focused on fashion and graphic design, among other things.

In 2021, four new classes were initiated in various villages and an exchange process was started with other techniques, with the possibility of broadening the CDC's scope to other products. In order to do this, we have established a partnership with the artist Miro Dantas (@mirodantas), which has led to the inclusion of digital art, using the software Procreate via iPad, and resulted in the Imaginary Beings collection, soon to be launched by the CDC.



INTEGRATION WITH OTHER SOCIAL TECHNOLOGIES OF THE HUMAN PROJECT MODEL

- SYNAPSE
- SYNAPSE EI
- LUCA
- PLOC
- ROMANCEIROS DO ITANHY
- OFICINA DE NEGÓCIOS



CASA DO CACETE - CDC



www.casadocacete.com

casadocacete.br

casadocacete

Casa do Cacete

In 2016, Casa do Cacete, the first startup created with IPTI's Social Technology, was inaugurated in Santa Luzia do Itanhy.

Comprising illustrators trained by the Naturalist Art Project, Casa do Cacete undertakes partnerships with well-known brands such as Morena Rosa, Osklen and Insecta Shoes, and also innovative artistic residences such as the Muralist and Imaginary Beings projects.



PROJECT NUMBERS

- In 2021: 55 students;
- Since the Project began (2012): 1,871 students.



NEXT CHALLENGES

- Focusing on learning Graphic Animation
- Attracting businesses from the animation sector and games for partnerships.



CLOC

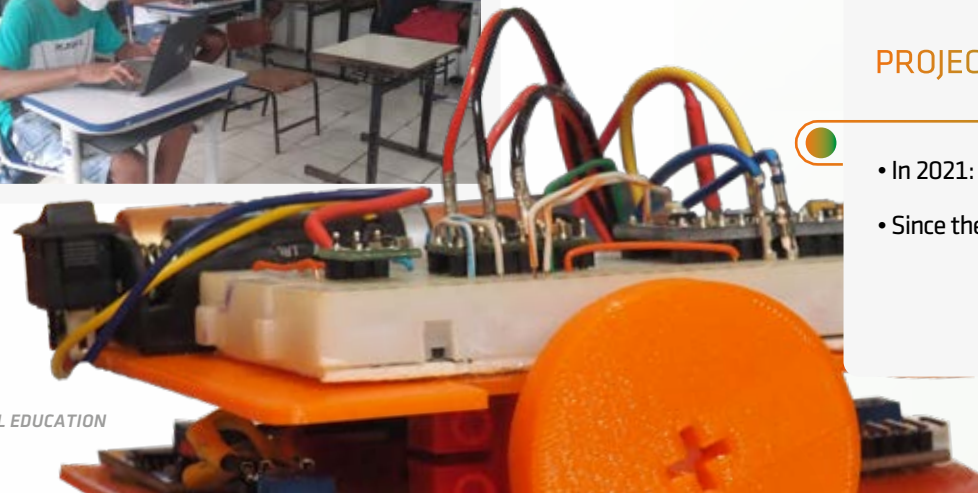
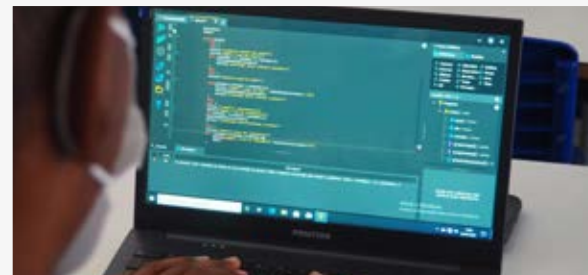
criatividade—lógica—oportunidade—crescimento

The goal of CLOC (Creativity, Logic, Opportunity and Growth) is to select talented adolescents of the community and offer them training in programming and robotics in order to create a local IT hub, as well as contribute to other Social Technologies requiring digitalized systems.

The starting point is structuring a highly qualified programming nucleus and the participatory construction of a methodology enabling this group to act as programming and robotics instructors at local schools, in a sustainable manner, in addition to encouraging new IT businesses.

The Project began in 2013 and, over the years, has provided training in programming and robotics, at various levels of complexity, to over 1,200 children and adolescents from many villages around Santa Luzia do Itanhy. The best students act as a team of re-applicators of knowledge for the younger students, in a model combining scalability, inspiration and empathy.

In 2021 were able to again resume the CLOC activities, after pausing in 2020 due to the Covid-19 pandemic. Over 80 students completed their training at their respective levels; at the same time, more advanced students developed applications for businesses and other technologies, also creating robotic kits to contribute to the Synapse technology, mainly in teaching Basic Mathematics.



CITI²

In 2019, the CITI² (Itanhy Integrated Centre for Information Technology), a startup for teaching programming and robotics and developing computer systems, was founded by students from the first classes of the CLOC and headquartered in Santa Luzia do Itanhy.

The CITI² also became a strategic partner of IPTI in supporting the development of computer systems related to other Social Technologies in the organization, such as the CLIC applications (Vectors project) and JIRO (JIRO project), as well as applications and functions concerning the management of the TAG and NHAM projects.

INTEGRATION WITH OTHER SOCIAL TECHNOLOGIES OF THE HUMAN PROJECT MODEL

- TAG
- NHAM
- HB
- SYNAPSE
- SYNAPSE EI
- TOM-CON
- SIRI
- OFICINA DE NEGÓCIOS



PROJECT NUMBERS

- In 2021: 102 students;
- Since the project's inception (2013): 1,200 students.

<http://citii.com.br>

@citii_



NEXT CHALLENGES

- Setting up the hydraulic floor tiles factory;
- Reapplication of knowledge learned in 2021;
- To concept and implement of a business model for the commercial sales of the products and services created.

LuCA

LIGHTS, CAMERA, ACTION

The LuCA Social Technology is focused on an audio-visual language, teaching students in primary teaching about the production of short films, series and educational projects.

The training of young people in the municipal schools of Santa Luzia do Itanhly is carried out through workshops on filming techniques, using digital cameras and cellphones, the use of capture software, editing techniques, sound and finalisation. The Project also encourages entrepreneurial businesses, so that the technique learnt can be commercialised in a conscious and sellable way.

In 2021, even with the hurdles imposed by the pandemic, reapplication was initiated at the head office in Santa Luzia do Itanhly and the villages of Crasto, Rua da Palha and Cajazeiras, resulting in four short films and a series of video classes on audiovisual usage to help the reapplication class. In October, the Project welcomed the participation of Anderson Craveiro, director of photography, in the production of a short film with a screenplay formulated by the students themselves.

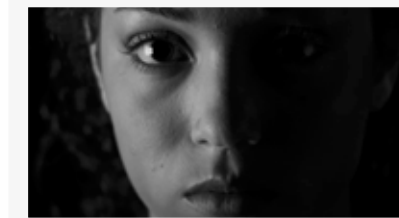
Due to the experience gained and looking for opportunities for work and income, IPTI decided to concentrate efforts in Motion Graphics and, possibly, in 3D animation. As an experiment, in the same year, we created a class of students aged eleven to fourteen who learned about the resources that bring movement to graphic design through animation, mixing concepts from design and cinema.



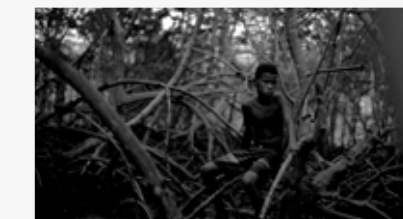
VIXE FILMES

Vixe Filmes is an audiovisual production company created by students at LuCA, currently responsible for the greater part of IPTI videos and for various independent videos for multiple projects, some of which selected for and awarded prizes at festivals.

- Film of the campaign “Abaixo Não-Assinado (not undersigned)” <https://youtu.be/2L1KdkqA6QM>



- Short film “O Repto” <https://vimeo.com/671931739>



INTEGRATION WITH OTHER SOCIAL TECHNOLOGIES OF THE HUMAN PROJECT MODEL

- ARTE NATURALISTA
- NHAM
- HB

Indicated for an award at the international festival in the category “Best sound design”.

Caruaru Film Festival This short film was selected for the international film festival “The Lift Off Sessions”, in the United Kingdom.



PROJECT NUMBERS



- 5 short films, in documentary format, working with themes and people from Santa Luzia do Itanhly
- In 2021: 80 students;
- Since the beginning of the project (2018): 120 students;

NEXT CHALLENGES

- To focus on training in Graphic Animation;
- To attract companies in the sector of animation and games.

PLOC

PLOC is a Social Technology aimed at giving opportunities for young people interested in the mix of sound and art, using sounds of local landscapes as tools to create possibilities for cultural and economic involvement.

The project is carried out using workshops for recording, editing, production and sound composition, and the central objective is for the students to make soundtracks for films, games, among other possible entrepreneurial initiatives. In 2019, we began the reapplication of the methodology in the region, with seven instructors who were students in the project's initial phase.

In the last two years, due to the Covid -19 pandemic, the methodology was reformulated for distance education so that the young people could develop activities in their homes.

However, in 2021 we returned to outside activities and focused on sound capture for the films produced by the LuCA, for a total of five short films, in a new class for reapplication that began in the village of Cajazeiras, benefitting 12 new students.



INTEGRATION WITH OTHER SOCIAL TECHNOLOGIES OF THE HUMAN PROJECT MODEL

- ARTE NATURALISTA
- LUCA
- SIRI
- JIRO



PROJECT NUMBERS

- In 2021: 12 students;
- From the beginning of the project (2015): 57 students.

NEXT CHALLENGES

- Implantation of the sound production studio;
- Incubation of the first business directly derived from the PLOC.

CULTURA EM FOCO

The Social Technology “Culture in Focus” associates contemporary design with artisanal techniques in a cycle of innovation, along with increased competitiveness, to add value to the handcrafted production and preserve traditional Brazilian knowledge.

In the first stage of the project, the focus was on the communities of artisans of Santa Luzia do Itanhy and a further five municipalities in Sergipe and Alagoas. At the end, over 400 products were created and shown at Brazilian and international trade fairs, and some of them can be seen in the digital catalogues.



In 2021, Culture in Focus returned to its activities, this time focused on design and innovation associated with traditional and sustainable construction techniques, and also with a perspective for creating work and income for the communities. More specifically, the project worked with the production of the ecological brick BTC, to produce panels of rammed earth, and with ecological sanitation via Jardim Bananeira. It will shortly include hydraulic tiles and school vegetable plots.

In a second phase, the focus was on the merge of design, Sergipe crafts and tourism. This version of the project was named Origin-SE. Many handcrafted products that restore the identity of the culture and regionality of Sergipe were manufactured, adding potential to the genuine crafts of Sergipe.



INTEGRATION WITH OTHER SOCIAL TECHNOLOGIES OF THE HUMAN PROJECT MODEL

- NHAM
- OFICINA DE NEGÓCIOS
- ARTE NATURALISTA



PROJECT NUMBERS



- Undertaken in four workshops: building, BTC bricks, modernised rammed earth and ecological sanitation;
- In 2021: 42 students;

NEXT CHALLENGES

- Setting up the factory for hydraulic tiles;
- Reapplication of knowledge learnt in 2021;
- To concept and implement a business model for the sales of products and services generated.

ROMANCEIROS DO ITANHY

The Social Technology Romanceiros do Itanhy - Storytellers of Itanhy - seeks to stimulate narrative creativity and an interest in literature among children and adolescents. It does so through storytelling and thematic workshops encouraging the construction of their books.

The project began in 2017 with adolescents from Santa Luzia do Itanh. It promoted, at the end of 2019, an afternoon of autographs for the launching of their first literary production. Seven adolescents had the opportunity, joined by their families and friends, to exhibit their books and celebrate this moment.

In 2021, Romanceiros do Itanhy was launched with kids up to six years old at the children's school Sítio do Pica Pau Amarelo in Santa Luzia do Itanhy. This idea of stimulating kids at an even younger age is beneficial to development, learning, and expression in other stages of life.

The project was led by two adolescents who had been part of the first class of Storytellers of Itanhy and, in turn, helped the children in writing their stories, as the students from Naturalist Art had helped in stimulating creativity in the illustration of children's books.

As a result, 20 books are in their final stages, with their launch set for the first half of 2022.



INTEGRATION WITH OTHER SOCIAL TECHNOLOGIES OF THE HUMAN PROJECT MODEL

- SYNAPSE EI
- ARTE NATURALISTA
- LUCA
- OFICINA DE NEGÓCIOS



PROJECT NUMBERS



- Publication of 20 books;
- In 2021: 40 students;
- Since the beginning of the (2017): 87 students and 27 books published.

NEXT CHALLENGES

- To broaden the age group, stimulating the interest of more children in literature and productions of textual and visual narratives.
- To encourage attendance at the Luminescência library in the village of Crasto, which has a valuable collection of visual arts and children's literature.



ON
OFICINA DE NEGÓCIOS

The Oficina de Negócios – Business Workshop - (ON) is a Social Technology working from the discovery of entrepreneurial and transformational potential in the individual to the consolidation of a business idea, using tools for testing, validation and the final pitch.

The Oficina de Negócios is derived from experience accumulated by the IPTI team with the application of the Think Big methodology, from the Fundação Telefônica Vivo, and the financial education games of the Bank of America of 2019 and 2020. During 2021, we also incorporated the dimension of emotional intelligence into the integrated methodology.

The project's team, including six adolescents from Santa Luzia do Itanhyl, produced the pedagogical resources for reapplication with a process of intense participative building through weekly meetings. At each meeting, new activities were constructed taking into consideration the three pillars of the ON: entrepreneurialism, emotional intelligence and financial education.

The results of this are the primer for reapplication of three financial education games with versions in Portuguese and English, adapted by the students of the SIRi Social Technology, which can be accessed via the link: <https://www.ipti.org.br/projetos/on/>

Parallel to all this, reapplicators from the Business Workshop worked throughout 2021 on the training of micro-entrepreneurs selected by the JIRO Social Technology, with specific classes to be used in the tourism sector.



INTEGRATION WITH OTHER SOCIAL TECHNOLOGIES OF THE HUMAN PROJECT MODEL

- ARTE NATURALISTA
- CLOC
- LUCA
- PLOC
- SIRI
- JIRO
- ROMANCEIROS DO ITANHY
- SYNAPSE



PROJECT NUMBERS



- 16 business pitches;
- 8 ideas chosen for mentorship;
- 6 students participating in preparation of the re-application primer.

NEXT CHALLENGES

- Reapplication in-person of the Primer put together in 2021 for the municipalities of Santa Luzia do Itanhyl (Sergipe) and Fortaleza (Ceara);
- Development of the primer's Level 2, with its structure focussed on the business model.

SIRi

school of idioms riverside

The Social Technology of SIRi (School of Idioms Riverside) is focused on the teaching of English for adolescents and young people in underappreciated communities, especially those further away from large centres, emphasizing imagination and interactivity and using educational games with the daily life of the students as a reference.

Since its beginning in 2018, the SIRi has been systemized and continually updated, whether to make it better suited to the reality of these communities or for the more advanced students to become basic English teachers in the schools of their respective villages.

During Covid-19, we adapted activities for online platforms and focussed on the collaborative process of constructing the Primer for Re-application of the SIRi, which has served as a basis for the English teaching material used in the scalability process. In 2021, still in an online format, the Reapplication Primer was finalized and a new class began with 35 students from various villages around Santa Luzia do Itanhy.

The online format also allowed us to continue the exchange programme with adolescents in New York, volunteers in the project, contributing to the fluency and pronunciation of the advanced students through conversations on a variety of subjects, such as culture, politics and society.

In 2021, the SIRi team expanded its connections with other Social Technologies. In the case of ON, the collaboration took the form of the finalization and translation to English of the educational games in Emotional Intelligence and Financial Education, while the ON team helped the SIRi team in planning the future social business for teaching English. In the case of the JIRO, the SIRi team created and applied an English teaching material especially adapted for small-scale tourism companies.



INTEGRATION WITH OTHER SOCIAL TECHNOLOGIES OF THE HUMAN PROJECT MODEL

- ARTE NATURALISTA
- CLOC
- LUCA
- PLOC
- SIRI
- JIRO

PROJECT NUMBERS

- In 2021: 35 students;
- Since the beginning of the project (2018): 250



NEXT CHALLENGES

- Consolidating the use of the Reapplication Primer with support material in an in-person format;
- Creation of a social business in the area of language teaching, focussed on remote communities with difficult access to digital technologies.

JIRO

Jornadas Integradas por Rotas Originais

Jiro is a Social Technology aimed at discovering, promoting and integrating micro experiential tourism undertakings. The idea is to provide original quality tourism experiences, consisting of areas of natural beauty, traditional cuisine and products that characterise the cultural wealth and carry the history of the communities and regions involved.

The Project began in 2021, covering the towns of Indiaroba, Santa Luzia do Itanhy, Estância and Barra dos Coqueiros, and benefited 24 small businesses (new and pre-existing).

Each micro entrepreneur received training via audiovisual, in lessons in basic English, workshops in narratives and training in entrepreneurship and financial education, through the Social Technologies LuCA, SIRi, storytellers of Itanhy and Business Workshop, respectively.

The first products and services of the JIRO are available via the project's site, the development of which received the support of the students of the CLOC Social Technology.

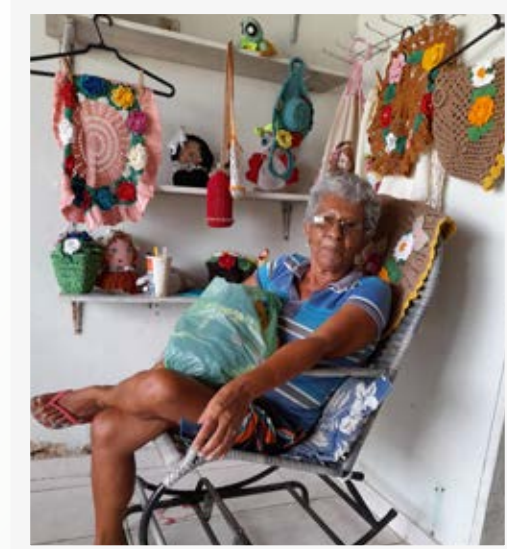
www.jiroturismo.com

We will shortly launch an app to facilitate the access of tourists to all the products and services of the JIRO, including itinerary options, reservations, payment and purchases of associated products.



INTEGRATION WITH OTHER SOCIAL TECHNOLOGIES OF THE HUMAN PROJECT MODEL

- ARTE NATURALISTA
- LUCA
- PLOC
- SIRI
- ROMANCEIROS DO ITANHY



NEXT CHALLENGES

- To finalize the application for presentation and commercialization of services and products;
- To integrate services and products, creating a network between micro businesses and JIRO entrepreneurs.
- Improvement to meal quality, means of accommodation, route planning and local transport, aimed at improving the visitor's holiday experience;
- To reapply the JIRO to other regions of Sergipe and to other states.

PROJECT NUMBERS

- Benefiting 24 small businesses.





Iron-deficiency anaemia is the world's most common nutritional illness. According to figures from the World Health Organization (WHO), it affects 25% of the world's population, with children being one of the most vulnerable groups and consequences associated with low motor and mental performance.

The Hb is a social technology for the diagnosis and treatment of Iron-deficiency anaemia in schools. The technology was created in partnership with technicians from the Santa Luzia do Itanhhy Municipal Departments for Education and Health and is able to reach an effectiveness of an over 80% reduction in cases. In 2013, the Hb won the Banco do Brasil Foundation for Social Technologies prize and has already been replicated in 2 municipalities in the states of Sergipe and Amazonas.



THE IMAGE ILLUSTRATES HOW THIS NEW TEST PLATFORM WILL WORK.



Initially, the Hb used the Agabê hemoglobinometer, developed in Brazil by a business partner (Exa-M), with important characteristics such as low cost, portability, simplicity in operation and robustness. However, in 2018 the company stopped supplying the equipment and we had to search for an alternative.

In a partnership with the São Carlos Institute of Chemistry (IQSC/USP) and the Federal University of Juiz de Fora (UFJF), we are developing a new rapid test platform, based on the μPAD methodology (microfluidic paper-based analytical devices). This technology will cost even less, does not generate residue disposal into the environment and, in addition, we will include the testing of levels of ferritin in the blood, so we can plan and take action in anaemia prevention based on the evidence.



INTEGRATION WITH OTHER SOCIAL TECHNOLOGIES OF THE HUMAN PROJECT MODEL

- NHAM
- TAG
- SYNAPSE
- SYNAPSE EI
- LILO
- CLOC
- TOM

PROJECT NUMBERS



- Municipalities: 3
- States: 2
- Students attended to: 7,800

NEXT CHALLENGES

- To conclude and validate the new platform for rapid testing of the level of haemoglobin ferritin;
- To reduce the problem of re-incidence of iron-deficiency, after treatment.



The NHAM – Nutrition for a Healthy and Appetizing Meals – is a Social Technology focused on promoting nutritional security in schools using data science, placing the school meal providers and the family agriculturists as the main protagonists and integrating the Hb and TAG Social Technologies.

With Hb, we can check all the students in the schools in terms of iron deficiency anaemia and the BMI (Body Mass Index), allowing us to identify students with malnutrition or obesity. This information is kept in the TAG database, which in turn allows us to manage the attendance of the students, the entry and exit of school meal products and information on the students' parents, especially those with a history of diabetes and high blood pressure.

With this information, we can inform the school lunch cooks about how many students are in the school, which groups need a special menu and periodic evaluations can monitor the improvement to the students' nutritional health. At the same time, the NHAM application provides guidance on the substitution of products on the previously prepared menus in the case of absence of some product, ensuring the nutritional value of the meals.

In the case of family farmers, control over the entry and exit of foods allows us to create forecasts for product purchases and, with this, offer guidance on the planning of the planting. In addition to this, the NHAM app manages the delivery and receipt of family farming products in the centre for municipal school meals. In the future, it will allow each farmer to follow the schools' food security so that they supply and also sell their products to end-consumers, increasing their income. NHAM also foresees an app for logistic support to sales and deliveries.



INTEGRATION WITH OTHER SOCIAL TECHNOLOGIES OF THE HUMAN PROJECT MODEL

- HB
- TAG
- SYNAPSE
- SYNAPSE EI
- LILO
- CLOC
- TOM



In 2021, in partnership with the TAG management system, the management of stocks and consumption to avoid waste and help in the planning of planting was added to the system. Also with TAG, we are able to put together a history of the students' illnesses and, this way, contribute to the preparation of more suitable menus.

The application connecting family agricultural producers with the schools was produced with the team specialised in Artificial Intelligence for the development of functions and testing with the users.

In one year of development, the project built a predictive model able to suggest menus and substitutions for more suitable foods based on the control of the schools' stocks, contributing to sending, via TAG, information on the school demand to the farmers' app. This way, they were able to plan their planting to attend to the school's needs.

A fundamental part of the process of constructing the Technology is the participation of the school meal producers, who fulfil an educational role in meals and nutrition. The creation of the link occurred in the pilot schools by undertaking fortnightly meetings and workshops, exchanging experiences and allowing the preparation of adaptable menus.



PROJECT NUMBERS

- Schools: 3
- Lunch box ladies: 5
- Around 500 recipients among students and agriculturists



NEXT CHALLENGES

- To produce a book of SLI (search, learn and improve) lunchbox recipes with the participation of the lunchbox ladies;
- To implement a mechanism for the logistics of delivering the food to the agriculturists;
- Implementing a model for direct sales of the products to end customers, in such a way as to contribute to the income of small-scale agriculturists.

VETORES

TECNOLOGIA DE APOIO AO MONITORAMENTO E VIGILÂNCIA EPIDEMIOLÓGICA

The goal of the Vectors Project is to build a Social Technology that contributes to the control of vectors causing epidemiological sicknesses, with special emphasis on the Aedes Aegypti mosquito, transmitter of Zika, Chikungunya and Dengue. In order to achieve this, it seeks the engagement and mobilisation of the communities to monitor and combat outbreaks in these vectors.

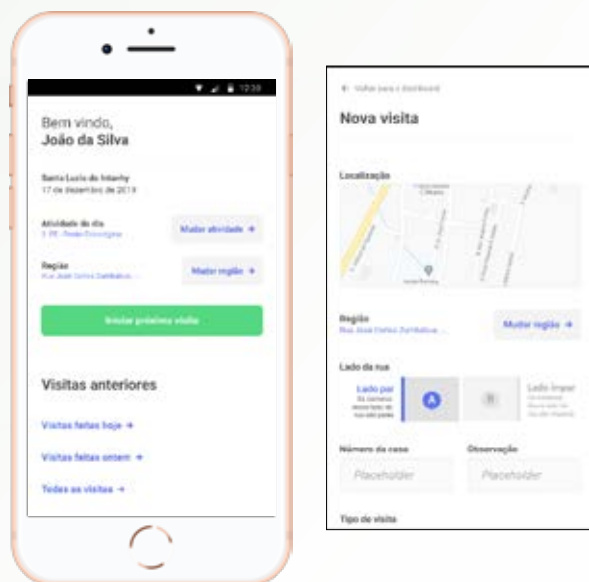
This technology is based on an application for mobile devices that allows the georeferenced registry of these outbreaks and the attitudes of the community members towards these outbreaks, associating strategies for games that stimulate these people's participation. This application is called CLIC and has versions already available in Apple and Google stores.

The application referred to incorporates information related to the conditions necessary for the development and proliferation of these vectors (rainfall data, temperature, type of soil, figures in previous years, among others). In the future, it will incorporate predictive models to alert communities and support public agents in making more effective decisions to minimize or avoid further incidences of the problem.

In 2020, in partnership with health agents from the municipality of de Santa Luzia do Itanh, the Vectors project developed 3 versions of the CLIC for different actors:

CLIC - AGENT FOR ENDEMIC DISEASES

The App substitutes the old paper spreadsheets used in the field for control and accompaniment of home visits. It is also compatible with health management systems, such as SisPNDC and the DataSUS. In 2020, we launched the first test version of the app in the Google Play Store, available as a download for Android devices.



INTEGRATION WITH OTHER SOCIAL TECHNOLOGIES OF THE HUMAN PROJECT MODEL

CLOC

CLIC - COMMUNITY

Developed to promote the cooperation of communities in combating vectors of diseases such as Dengue, Zika, Chikungunya and Schistosomiasis through a game- like experience, based on a system of points and rewards for actions combating the diseases.

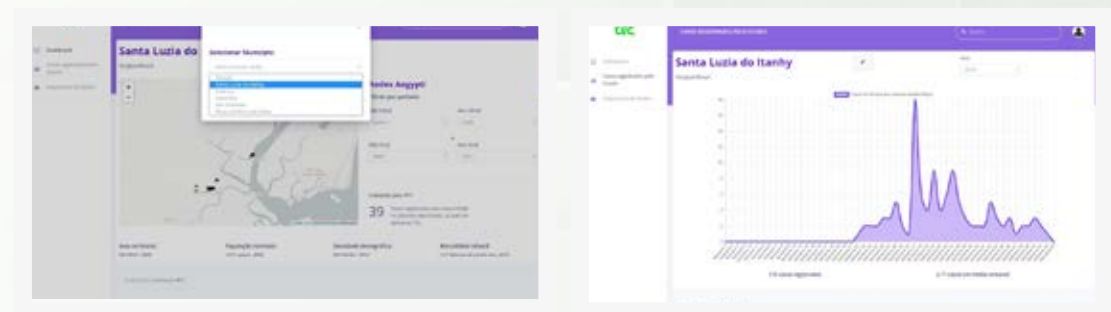
We have put together a multidisciplinary team, composed of software and applications developers, designers, a projects team and representatives from the community of Santa Luzia, to develop a first version of the App, based on a photographic record and georeferencing of the zones liable to have outbreaks and the reproduction of vectors. This version was launched in Google Play Store and Apple Store; throughout the year, the App underwent various cycles of tests with the community.

To help in the dissemination of the CLIC App - Community, we constructed an episode of "The Community Fights Back", from the comic book "Guerra nas Artérias (War in the Arteries)", focused on the vectors of infectious diseases and guidance on how the community can combat and prevent the dissemination of these transmitters. In addition, we formed a partnership with the ArtPlan advertising agency to improve the application's interfaces and to plan strategies for broadening the communities' involvement.



CLIC - DASHBOARD

The CLIC Dashboard is a tool created to help managers in decision making over the most efficient way to combat the infectious disease vectors. The App is integrated with various data sources, such as DataSUS, SisPNDC and also to the data of the App CLIC Community. In the form of an interactive panel, with maps and graphics, this allows the manager to assess trends and zones of potential risk in multiplication of vectors.





ANNUAL EVENT (GLOBAL) OF IPTI 2021

The Annual IPTI Event in 2021 occurred at the Loeb Boathouse in New York on October 4th. It brought together people who believe in our mission, the vision and values set out for human development. The focus of the 2021 event was on the urgency in confronting the problem of the poverty trap and how the model we are building in Santa Luzia do Itanhhy has shown that it is possible to overcome this problem when we mobilize the whole community as protagonists of change, in a long-term perspective, structured on the formation of human capital.



ORNARE



IPTI EVENT IN SÃO PAULO

The 2021 dinner in the city of São Paulo took place on November 8th, and also had as its objective the urgency in cooperating to combat the poverty trap. At this event, we had the opportunity to show in greater detail our model for promoting human development (The Human Project), with a display over two days of the models of some of the main Social Technologies that compose it (Synapse, TAG, CLOC, Business Workshop, NHAM and Vectors). We had the presence of people from the community of Santa Luzia do Itanhy, who play a direct role in these solutions.



biblioteca Luminescência*

The idea to build a library is part of our strategy to promote human development, based on integrated action in art, science and technology. The Luminescence Library is a great stimulus to the arts for the whole community of Santa Luzia do Itanhy, especially for young people and adolescents in the village of Crasto, where it has been set up since 2013.

The library is specialised in the Visual Arts, but also has publications for children, due to being located next to the Sítio do Pica Pau Amarelo infant school. It has a wide-ranging collection of 1,272 books, organised according to the Decimal Universal Classification (CDU), and also uses the Dewey Cutter table of authors. In addition to this collection, other initiatives are being developed aimed at broadening this interest in the arts.

The name Luminescência (Luminescence) is related to the phenomenon of bioluminescence, quite common in the Crasto region, due to the presence of Dinoflagellates (micro-organisms that emit light when agitated) in the coastal areas. This nomenclature is also related to Santa Luzia, the saint who protects the eyes. Just as the referred-to saint protects and enlightens the citizens, the library also has the power to illuminate the lives of those seeking knowledge.



PARTNERS AND SUPPORTERS IN 2021



FMDCA-SLI



ambev



Safr



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

MINISTÉRIO DA
CIÊNCIA, TECNOLOGIA
E INOVAÇÕES



FINANCIAL STATEMENT

Title	Knowledge area	Period of the Contract		Contracted Value	Amount received in 2020	Resource Source	
						Public	Private
PROJETOS							
Legados na Educação do Maranhão	Education	2019	2021	R\$ 131.73,00	R\$ 120.811,96	-	100%
Pense Grande - Formação Empreendedora	Creative Economy and Education	2020	2021	R\$ 200.000,00	-	-	100%
Arte Naturalista - Novas Linguagens	Creative economy	2019	2021	R\$ 220.000,00	R\$ 184.000,00	-	100%
Synapse - Ceará	Education	2018	2020	R\$ 354.724,13	-	-	100%
Convênio 892115/2019	Creative economy	2019	2021	R\$ 500.000,00	-	100%	-
Convênio 898364/2020	Creative Economy and Education	2019	2021	R\$ 510.000,00	-	100%	-
Convênio 898821/2020	Creative Economy and Education	2019	2021	R\$ 1.534.000,00	-	100%	-
Criança Esperança	Education	2020	2021	R\$ 159.040,00	R\$ 114.508,80	-	100%
Educação Infantil - Fase 3	Education	2020	2022	R\$ 280.000,00	-	-	100%
Synapse Laranjeiras	Education	2020	2023	R\$ 3.799.516,88	R\$ 871.964,89	-	100%
LuCA	Creative economy	2020	2020	R\$ 212.000,00	R\$ 52.000,00	-	100%
Luca FBB	Creative economy	2019	2022	R\$ 289.732,36	R\$ 171.772,79	-	100%
Projeto Synapse 20578 - FBB	Education	2020	2023	R\$ 482.513,34	R\$ 99.749,20	-	100%
Segurança Alimentar nas Escolas (SAE)	Health	2020	2020	R\$ 367.200,00	-	-	100%
Cloc - Inteligência Artificial	Creative Economy and Education	2020	2020	R\$ 140.000,00	R\$ 36.000,00	-	100%
Vetores	Health	2020	2021	R\$ 1.019.330,00	-	-	100%
Siri	Education	2020	2022	R\$ 59.200,00	R\$ 59.200,00	-	100%
Cria	Health	2020	2023	R\$ 369.112,00	R\$ 176.843,93	-	100%
Tag no Maranhão	Health	2020	2021	R\$ 64.146,00	R\$ 64.146,00	-	100%
MANAGEMENT CONTRACT							
Management Agreement 01/2021	Pe-D	2021	2026	R\$ 2.993.935,20	R\$ 450.000,00	100%	-
DONATIONS							
	-	2020		-	-	-	-
Individuals and Legal Entities	-	-	-	-	R\$ 699.250,63	-	100%
Assets	-	-	-	-	R\$ 84.455,00	-	100%
SERVICES							
-	-	-	-	-	100%	-	-
AWARD							
-	-	-	-	-	-	-	-

The financial statements for the year ended NONONONONO were audited by Deloitte and are attached on our website - <https://www.ipti.org.br/transparencia/>



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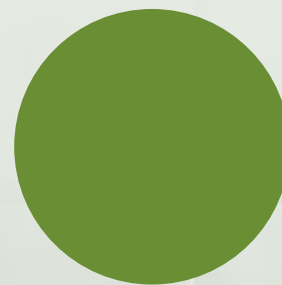
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