LATIN AMERICA PRACTICES AND SOFT SKILLS FOR
LAPASSION
■ ■ ■ ■ AN INNOVATION ORIENTED NETWORK

585687-EPP-1-2017-1-PT-EPPKA2-CBHE-JP

OA2.1.2 - Teams' Reports

Developed by TAMK, IFTM, DUOC, PUC, UDELAR,
UTEC, IFMA, and IPP
October 2021

Contents

1. INTRODUCTION

LAPASSION (Latin-America Practices and Soft Skills for an Innovation Oriented Network) is a project from the program Erasmus+ within the line KA2 – Cooperation for innovation and the exchange of good practices – Capacity Building in the field of Higher Education (reference 585687-EPP-1-2017-1-PT-EPPKA2-CBHE-JP). It involves partners from Portugal, Finland, Spain, Brazil, Uruguay and Chile. LAPASSION consortium has as motivation to create a unique solution to address different problems affecting youth in HEI, helping students to obtain a better training in terms of innovation, soft skills, and internationalization. This solution is obtained by LAPASSION MP/I (Multidisciplinary Projects/Internships) for students' teams to help them to co-create, and co-develop projects proposed by enterprises and other organizations, or to accelerate innovative ideas in an international context involving students from several countries.

The aim of LAPASSION is to increase the innovation culture of HEI and the connection with Enterprises/Organizations (E/O) with impact in Employability, and Internationalization. This aim is pursued by implementing multidisciplinary projects/internships(MP/I) for co-creation, co-development and acceleration of innovative ideas, integrated in the educative project of the involved institutions. MP/I will be implemented by means of students' teams involving students with different backgrounds, different graduation levels, and from different countries, and solving challenges posed by E/O.

1.1 Consortium of LAPASSION

LAPASSION is a consortium with 15 partners, including 13 Higher Education Institutions (4 from Europe and 9 from Latin America), 1 Association of Enterprises from Portugal, and 1 Council of the Federal Institutes from Brazil. The list of the partners is the following:

    Polytechnic of Porto (IPP, Portugal)
    Tampere University of Applied Sciences (TAMK, Finland)
    University of Vigo (UVIGO, Spain)
    University of Salamanca (USAL, Spain)
    Federal Institute Riograndense (IFSUL, Brazil)
    Federal Institute of Triângulo Mineiro (IFTM, Brazil)
    Federal Institute of Goiás (IFG, Brazil)
    Federal Institute of Maranhão (IFMA, Brazil)
    Federal Institute of Amazonas (IFAM, Brazil)

University of the Republic of Uruguay (UDELAR, Uruguay)

Technological University of Uruguay (UTEC, Uruguay)

Foundation of Professional Institute (DUOC, Chile)

Catholic University of Chile (PUC, Chile)

Association of Enterprises of Portugal, Commerce and Industry Chamber (AEP, Portugal)

Council of Federal Institutes of Brazil (CONIF, Brazil)

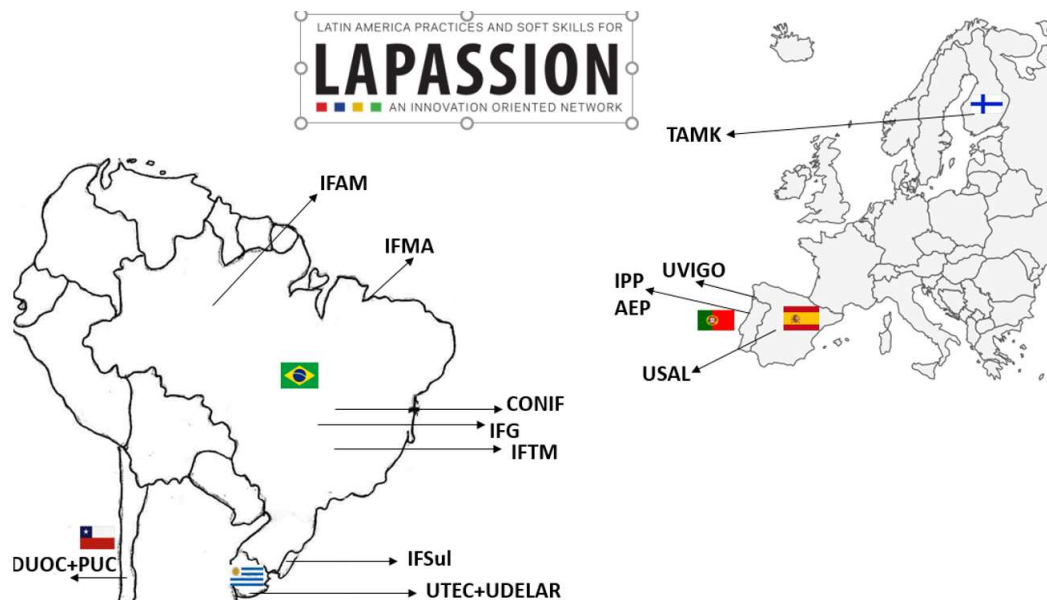IPP is the coordinator institution of the project.

Figure 1 - LAPASSION partners in Latin America and Europe

1.2 Workpackages of LAPASSION

LAPASSION involves the following Workpackages:

WP1 – Preparation and Training for Multidisciplinary Projects/Internships (MP/I)

WP2 – Development of MP/I

WP3 –Quality Planning & Control (QP&C)

WP4 –Communication Plan, Dissemination and Exploitation Strategy

WP5 – Management

The Development of Multidisciplinary Projects/Internships (MP/I) is a very important aspect for the project, and a specific Work package (WP2) has been included for this purpose. One of the important issues is the Teams' Work Planning.

In a period of 10 weeks students needed to concentrate in the development of their

projects/internships. During this period students reported the evolution of the MP/I to a blog, every week. This report describes briefly what has been achieved in each project completely developed in the presential form. Projects developed in online/remote/distance mode will be described in the report OA2.2.2.

2. THE LAPASSION DEVELOPMENT PROJECTS

LAPASSION involved 7 editions (sets) of projects plus several other additional editions (3 in Porto, 4 in Uruguay, and 1 in Brazil), in a total of 15 sets of projects.

The challenges selected by the 7 original editions of LAPASSION were the following:
- Santiago/Chile (April-June 2018): How to improve conditions for Senior Populations?
- Uruguay (March-May 2019): How to improve conditions for children?
- Uberaba/Brazil (March-May 2019): Food for the Future
- São Luís/Brazil (March-May 2019): How to improve the Human Development Index (HDI) of the State of Maranhão?
- Manaus/Brazil (March-May 2020): Socio-Environmental Technologies for the Sustainability of the Amazon
- Goiania/Brazil (March-May 2019): How to contribute to an Inclusive and Sustainable Society?
- Pelotas/Brazil (September-November 2021): Accessibility and Assistive Technologies

In the current report we will focus our attention in the four first editions, since they were completely developed in presential mode. The last 3 editions (Manaus, Goiania, and Pelotas) will be described in report OA2.2.2.

3. THE PRESENTIAL DEVELOPMENT PROJECTS

LAPASSION Multidisciplinary Students' Projects were conceived to be a presential experience, and this was happened during 2018 (Santiago-Chile edition) and 2019 (Uruguay, Uberaba-Brazil, and São Luís – Brazil editions). A total of 21 multidisciplinary students' projects were developed and will be described in this section of the report.

3.1 LAPASSION@Santiago

LAPASSION@Santiago was hold by Pontificia Universidad Católica de Chile (PUC), and Fundación Instituto Profissional Duoc UC (DUOC), both in Chile. The project headquarter was in Campus San Joaquin, in Santiago, where both institutions have their campus in front of each other. The ten weeks of LAPASSION@Santiago was a moment of a great learning for LAPASSION, since it was the first time the practices promoted by LAPASSION were applied in Latin America. With the main challenge of "How to improve the conditions for Senior Populations?" sub-challenges have been launched by different entities like Center for the Studies on natural Disasters (CIGIDEN), Fundación Oportunidad Mayor, Technical Division of the Metropolitan Parks Network (PARQUEMET), and Unidad de Ciudades Inteligentes – Ministerio de Transporte (MTT).

Subchallenge: How to incorporate the elders in the design and execution of prevention programs for the effects disasters of environmental phenomena?
Counterpart: Center for the Studies on natural Disasters (CIGIDEN)
Team members:
Bernardita Gonzalez (Engineering Design, PUC - Chile)
Sara Kauppinen (Business, TAMK - Finland)
Mateo Olivera (Mecatronics, UTEC - Uruguay)
Jorge Michel Vasconcellos (Electronics, IFAM - Brazil)
Sofía Ester Tapia Rodriguez (Graphical Design, DUOC - Chile)
Daniela Rodriguez (Industrial Design, DUOC - Chile)
Daniel Victor Silva Marques (Information Systems, IFMA - Brazil)
Description:
The sub-challenge was "How to incorporate the elders in the design and execution of prevention programs for the effects disasters of environmental phenomena" and the company/organization was Center for the Study of Natural Disasters (CIGIDEN).
The group selected as goal to "take advantage of the people with an active role in neighbourhood community to see the benefits of prevention programmes".
The ideation process involved Reverse Engineering, Brainstorming, Mockup and Sketching and Testing. The solution was the development of an electronic device to detect the safety zone in public spaces for the orientation of the user in an inclusive and reliable way.

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Figure 2 – Team members in a working sesión with lots of ideas and schemes on the whiteboard
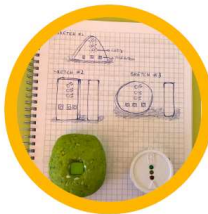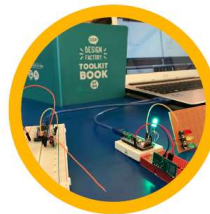
IDEATION PROCESS

Reverse engineering

Brainstorming

Mockup and sketching

Tech testing

Figure 3– Ideation process was very important in LAPASSION@Santiago

COORDENADA SEGURA

Figure 4– Coordeanda Segura, an electronic device to help elderly people to go to safe places

Subchallenge: Enhance networks, communication, and participation in urban communities by elderly people through smart city, and digital oriented technology
Counterpart: Center for the Studies on natural Disasters (CIGIDEN)
Team members:
Antonio Skillicorn (Civil Engineering, University of Texas at Austin – USA in mobility at PUC - Chile)
Juan Pablo Gonzalez (Physiotherapy, PUC - Chile)
Eduardo José Silva Carvalho Vieira (Medical Computing and Instrumentation, IPP - Portugal)
Jaqueline Jardim de Paula (Design, IFSUL-Brazil)
Claudia Perez (Graphical Design, DUOC - Chile)
Julyana Pereira Saraiva (Control & Automation Engineering, IFG-Brazil)
Fabiano Maciel Soares (Civil Engineering, IFMA-Brazil)
Description:
The sub-challenge was "Enhance networks, communication, and participation in urban communities by elderly people through smart city, and digital oriented technology" and the company/organization was Center for the Studies on natural Disasters (CIGIDEN).

Three insights were detected: 1) Younger elderly are adept with smartphones; 2) Elderly prefer to transmit information by word of mouth, not in currently centralized way; and 3) Elderly are very knowledgeable of their local neighbourhoods and more likely to speak about the past than today. The identified opportunity was to take advantage of currently disaggregated historical data within the elderly community to improve elderly engagement in the city. The solution was a platform that allows elderly to upload meaningful historical photos and experiences into geographic pins on an interactive map for the educational and recreational use of other city citizens.

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30 Interviews
15 Articles
3 Workshops

Figure 5– Interviews, articles, and workshops were important to keep insights for identifying the main oportunity
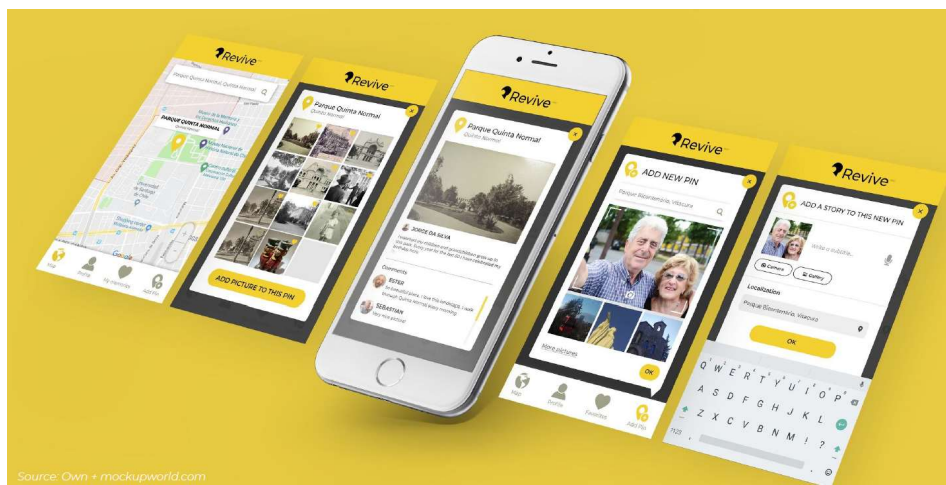
Figure 6– The app where elderly can upload meaningful historical photos and experiences into geographic pins

Figure 7– Team members and coaches

Subchallenge: Understand and propose a system or solution that increases the use of Urban Park Network by the Elderly
Counterpart: Technical Division of the Metropolitan Parks Network (PARQUEMET)
Team members:
Victoria Horn (Agriculture, PUC - Chile)
Joni Ramu (Business, TAMK - Finland)
João Vítor Bernardes (Biological Sciences, IFTM - Brazil)
Camila Casas (Design, UDELAR - Uruguay)
Beatriz Bandeira (Control & Automation Engineering, IFAM - Brazil)
Description:
The sub-challenge was "Understand and propose a system or solution that increases the use of Urban Park Network by the Elderly" and the company/organization was the Technical Division of the Metropolitan Parks Network of Santiago city.

Three insights have been identified: 1) Elders value interactions with younger generations very high; 2) Lack of motivation and security prevents them to visit parks; and 3) Inability to walk long distances prevent them to visit parks.

The team selected as the opportunity to "propose safe and beneficial experience with other generations to change their attitude on going and staying in the Park". The solution involves a service with a bus to four Santiago Parks (Araucano, Bicentenario, La Castrina, and Quinta Normal) where some activities take place (Gardening, Knitting, Reading, and Table Games).
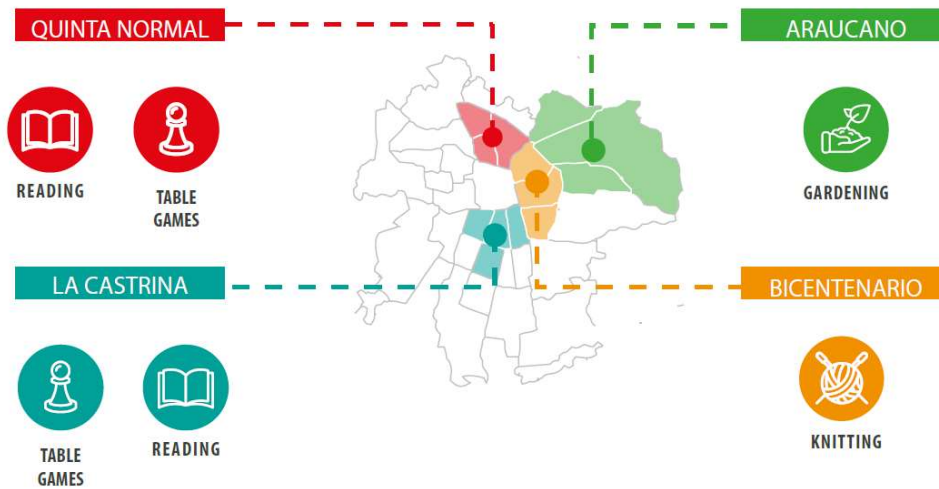
Figure 8– Bus Routes for Santiago Parks

Figure 9– Proposed activities for Santiago Parks

Figure 10– Team members of the subchallenge proposed by PARQUEMET

Subchallenge: Improve older traveller's experience in public transportation for 2040
Counterpart: Unidad de Ciudades Inteligentes – Ministerio de Transporte (MTT)
Team members:
Gonzalo Camps (Business, PUC - Chile)

Edgard Martin Hernandez (Chemical Sciences, USAL - Spain)

Camila Angélica Santos Souza (Agronomics Engineering, IFTM - Brazil)

Camila Natalia Barrientos Bastidas (Graphical Design, DUOC - Chile)

Gabriel Morales (Biomedical Informatics, DUOC - Chile)

Luis Felipe dos Santos Ribeiro (Civil Engineering, IFG - Brazil)

Description:
The sub-chalenge was "To improve older traveller's experience in public transportation for 2040" and the company/organization was Unidad de Ciudades Inteligentes – Ministerio de Transporte.

The main insights identified were: 1) The public transportation is always crowded and expensive; 2) people like to walk; 3) Security is a problem; Elders are worried about health; and 5) infrastructures are still missing. The adopted solution was to improve the walking experience considering the development of elderly population by 2040. Smart shoes were adopted as well as smartwalks app. With the localization capability of th smart shoe and the smartwalk one can report a problem in the walk to the municipality, making easier the solution of that problem.

FIELD RESEARCH

19 INTERVIEWS

OBSERVATION

Figure 11– Interviews and observation for obtaining insights to identify the opportunity

SOLUTION

REPORTERS

Smart insole

Smart shoes

SmartWalk

Municipality

"**Smartwalk** is a digital platform where elders register and follow their walking progress and participate, as reporters, on development of their city in a collaborative way".
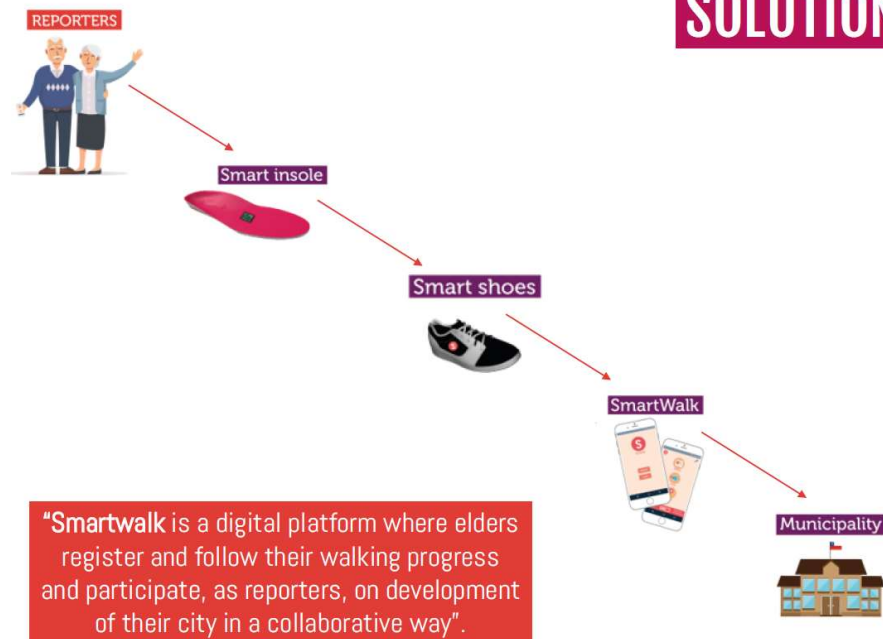
Figure 12– The proposed solution involving technology

Figure 13– Team members of the subchallenge proposed by MTT

Subchallenge: How to prevent elders from feeling isolated and being inactive after retirement due to the loss of work relationships and the increase amount of free time that they have?
Counterpart: Fundación Oportunidad Mayor
Team members:

María Loreto Ruano Riesco (Mathematics/Psicology, USAL-Spain)

Hellen Fuenzalida (Engineering – Design, PUC-Chile)

Gonzalo Origoni (Industrial Design, UDELAR - Uruguay)

Juan Jose Eliezer Lopez (Mechanical Engineering, DUOC - Chile)

Renato Milhomem de Oliveira Filho (Electrical Engineering, IFG - Brazil)

Barbara Aqueveque (Industrial Design, DUOC - Chile)

Ana Rebeca Marques Araujo (Information Systems, IFMA - Brazil)

Description:

The sub-challenge was "How to prevent elders from feeling isolated and being inactive after retirement due to the loss of work relationships and the increase amount of free time that they have?" and the company/organization was Fundacíon Oportunidad Mayor.

The group selected as goal to "create an online service that offers activities to elders, aiming to create in them a habit of social engagement before retirement, so as not to lose their work connections and make new ones". The solution was the creation of a platform that shows activities to elders, aiming to create in them a habit of social engagement before retirement, so as not to lose their work connections and make new ones.
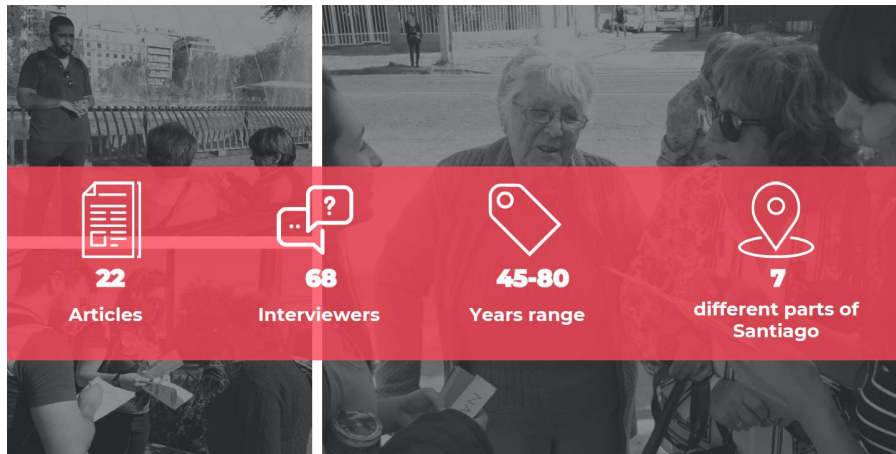
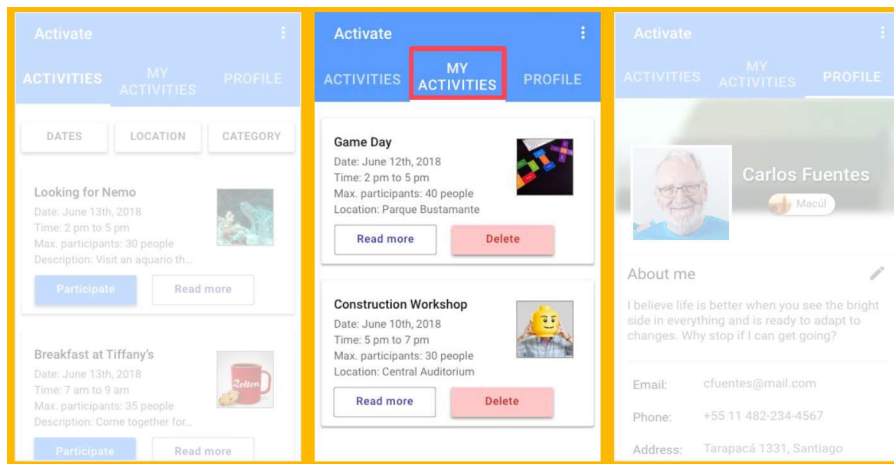*Figure 14– Interviews covering wide ranges of ages and spaces is very important*

Figure 15– The app to guarantee connected elderly people

Figure 16– Team members of the subchallenge proposed by Fundación Oportunidad Mayor to avoid elderly isolation

Subchallenge: Using technology to optimize Longevity

Counterpart: Fundación Oportunidad Mayor

Team members:

Jesus Ponce (Arts&Humanities, PUC - Chile)

Ana Sofía Monteiro Oliveira (Medical Computing and Instrumentation, IPP - Portugal)

Luciano Gezn (Biomedical Engineering, UTEC - Uruguay)

Natáliade Oliveira Martins (Mechanical Engineering, IFSUL - Brazil)

José Tomás Marchant (Industrial Design, DUOC - Chile)

Paola Cortez (Industrial Design, DUOC - Chile)

Levi Monteiro Martins (Information Systems, IFMA-Brazil)

Description:

The sub-challenge was "Using technology to optimize Longevity" and the company/organization was Fundación Oportunidad Mayor.

The team selected as goal to "take advantage of experience of the elderly to re-wire them in the contemporary society, by using collective and participatory practices of technology teaching", having in mind the longevity aspects. The adopted solution was to create a collection of interactive books to introduce smart devices to seniors.

Figure 17 – Interviews, observation and workshops to obtain insights and identify the opportunity

Figure 18 – The prototype of the e-book, a physical book to facilitate interaction with posible final users

Figure 19– Team members of the subchallenge proposed by Fundación Oportunidad Mayor for longevity

3.2 LAPASSION@Uruguay

LAPASSION@Uruguay was hold by Universidad de la República (UDELAR), and Universidad Tecnológica del Uruguay (UTEC), both in Uruguay. The project headquarter was in Montevideo but students had activities in the cities of Durazno and Fray Bentos campus of UTEC, and a kind of hackathon activity in Punta de Leste. With the main challenge of "How to improve the conditions of Children" sub-challenges have been launched for the areas of Education, Health and Entertainment.

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Subchallenge: How to improve the conditions of Children by Health?

Counterpart: UDELAR+UTEC

Team members:

Nair Araújo, Medical Computing and Instrumentation, IPP, Portugal

Nicolas Andrés Riera Ovalle, Civil Engineering, PUC, Chile

Álvaro Briano, Electrical Engineering, UDELAR, Uruguay

Macarena Vázquez Barboza, Psychology, UDELAR, Uruguay

Giorgina Damico, Architecture, UDELAR, Uruguay

Description:

Saki is an excellent project from LAPASSION@Uruguay. Saki is a kitchen utensil and a container that allow children to cut their fruits and take them to school or simply eat it in their free times at home. It was created to help children to be more independent of their parents in the process of preparing fruit. There is also a web site that has different design of presentation that parents, together with their children, can make, turning a simple meal in a memorable experience, because childhood passes fast and every moment is precious, including the meals.

Figure 20– Team members that developed Saki

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Figure 21– Saki, the device that cut fruits

Design healthy snacks

Figure 22– Eating fruits can be a funny activity for children

Subchallenge: How to improve the conditions of Children by Education?
Counterpart: UDELAR+UTEC
Team members:

Ana Lucía Soto Fuentes, Design of Living Spaces, DUOC, Chile

Tomás Almeida de Sousa, Biomedical Engineering, IPP, Portugal

Romina Gaudio, Electrical Engineering, UDELAR, Uruguay

Macarena Bravo Gossi, Industrial Design and Textile, UDELAR, Uruguay

Diego Silva Piedra, Electrical Engineering, UDELAR, Uruguay

Description:

BookQRit is a product/service that uses QR codes, and according to the children interests personalizes the homework exercises from the book. To use it, the child simply must scan the QR code next to the exercise, register herself/himself on BookQRit and pick her/his interests, then, the problem that was "boring" is rewritten on the webpage but according to the child's interests.

BookQRit was developed in LAPASSION@Uruguay, held by UDELAR and UTEC.

Figure 23– Interaction with the final users, children, was important to develop BookQRit

Figure 24– Final presentation of BookQRit during LAPASSION@Uruguay Demo Day

Subchallenge: How to improve the conditions of Children by Education?
Counterpart: UDELAR+UTEC
Team members:
Gabriela Dutra Alves, Chemical Engineering, IFSUL, Brazil

Pamela Conti, Psychology, UDELAR, Uruguay

Natalia Jimenez Lavie, Industrial Design, UDELAR, Uruguay

Ignacio Hounie, Electrical Engineering, UDELAR, Uruguay

Francisco Fabián Neira Segura, Human Resources Administration, DUOC, Chile

Description:
Match-it is a prototype of a game with cards in the UNO style, where children must make associations between words and drawings, colours and numbers. It is a game to fix knowledge in a playful way, where children work other skills such as agility, reasoning, and strategy. It was developed under LAPASSION@Uruguay held by UDELAR and UTEC.

Figure 25– Match-it a cards game for the learning process of Children

Figure 26– Testing Match-it with Children

Figure 27– Match-it team with Children

Subchallenge: How to improve the conditions of Children by Entertainment?
Counterpart: UDELAR+UTEC
Team members:

Alejandra Castro Sa, Social Media, UVIGO, Spain

Verónica Cecilia Rocha Sena, Psychology,UDELAR, Uruguay

Luca Praderio, Landscape Design, UDELAR, Uruguay

Mariana Paredes, Industrial Design – Product; UDELAR, Uruguay

Victoria Belén López Valdés, Civil Engineering, PUC, Chile

Description:

Bondiveo is an app to connect parents and children to be used during travels in the bus. Bondiveo uses the GPS to launch games about the buildings and streets of the city to allow that the attention of children goes to the surrounding environment.
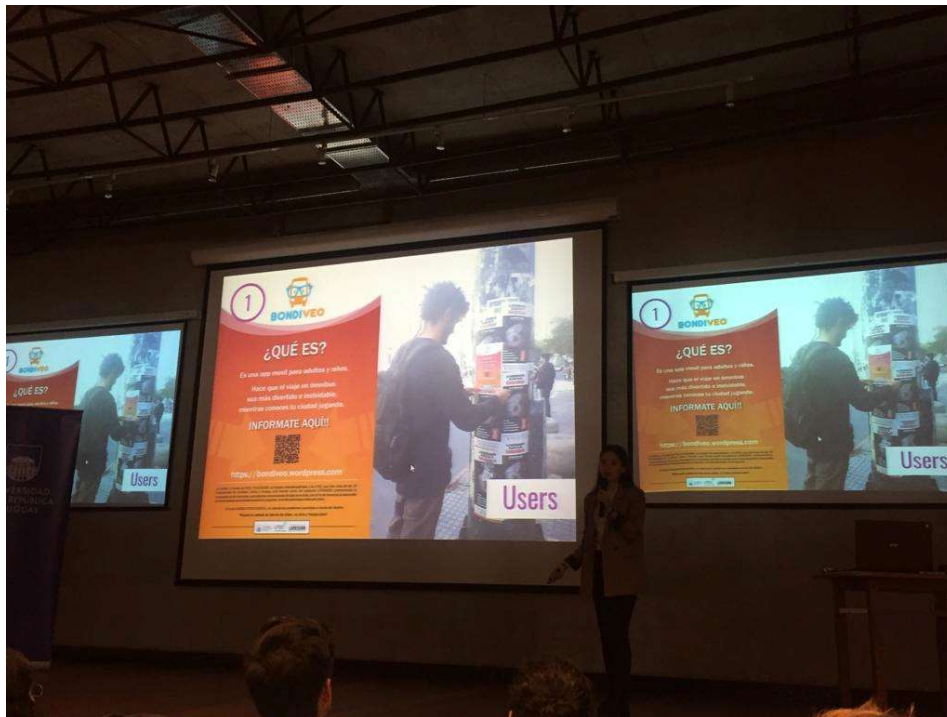
Figure 28– Bondiveo makes fun a bus travel

Subchallenge: How to improve the conditions of Children by Health?
Counterpart: UDELAR+UTEC
Team members:
Rocío Solla Sampedro, Advertising Art Direction, UVIGO, Spain
Sabrina Kelwig Muller, Chemical Engineering, IFSUL, Brazil
Anibal Tacuabe Gonzalez Cavada, Medicine, UDELAR, Uruguay
Jenniffer Novick Frugoni, Industrial Design, UDELAR, Uruguay
Juan Elenter, Electrical Engineering, UDELAR, Uruguay
Description:
The project consists of creating a fun tool for education about healthy eating and collect data about the diet routine of patients (in our case children aged 10-13 years) for medical/nutritional monitoring. For this, it was developed a virtual game called "Guayabito", which has an indigenous person (Charrua) as main character and he or she walks at the scene hunting the food that he or she had consumed during the day. From "food hunting", a database is generated that is stored and only the parents have access. Periodically it is sent to the health system. Only in case of alert (the child stops issuing reports, gain weight, etc), will activate an alarm that reaches the doctor and / or appointment service to anticipate and correct the trend. In addition, the game will have nutritional information on food, so children can learn the importance of eating healthy.

Figure 29– Guayabito, a character in a cards game to a healthy food practice

3.3 LAPASSION@Uberaba

LAPASSION@Uberaba was held by Federal Institute of Triângulo Mineiro (IFTM) in Brazil. With the main challenge of "Food for the Future" four sub-challenges have been proposed by four enterprises (BRF, Bem Brasil, Taquari, and Doces Joaninha).

Subchallenge: What to do with chicken feathers waste?
Counterpart: BRF
Team members:
Karen Aparecida Martins Costa, Zootechnology, IFTM, Brazil
Anna Beatriz Barreto Coelho, Information Systems Analysis and Development, IFTM, Brazil
Sérgio Martins Tavares Júnior, Mathematics, IFTM, Brazil
José Luis Faller Cepeda, Information Technology, UTEC, Uruguay
Gabriel Vieira da Silva Alves, Transportation Engineering, IFG, Brazil
José Mário da Silva Júnior, Computer Engineering, IFTM, Brazil
Description:
BRF is one of the largest food companies in the world, a global company with more than 100,000

employees. With more than 30 brands, among them the giant Sadia and Perdigão, which together started the history of BRF. If you eat products like ham in Brazil, possibly they are from Sadia or Perdigão. Other important brands are Qualy, Paty, Dánica and Perdix, among others.

The sub-challenge consists in the use of chicken feathers, a waste of the factory, in addition to this the company requested that this innovation had a social and environmental impact. During the ten-week period, the team made research and developed a solution according to what was requested by the company, acquiring new knowledge and methodologies during the process.

The team worked in all steps of the project, to be able to develop a prototype and a presentation to a solution, which is a thermo acoustic insulating plate for the construction industry.

Figure 30– Team visit to BRF plant

Figure 31– Team with the BRF sub-challenge interviewed in Brazilian TV

Figure 32– Chicken feathers, how to use it in a sustainable and useful way

Subchallenge: Implementation of the effluent treatment process in potatoes processing
Counterpart: Bem Brasil
Team members:
Anna Luiza Paiva Silva, Food Technology, IFTM, Brazil
Matheus Aparecido Resende Ribeiro, Agronomy Engineering, IFTM, Brazil
Flávio Pinheiro Rodrigues Neves, Marketing Technology, IFTM, Brazil

Aías Santino de Lima, Civil Engineering, IPP, Portugal
Santiago Sánchez Cortázar, Chemical Engineering, USAL, Spain
Thiago Henrique Lopes, Computer Engineering, IFTM, Brazil

Description:

In the LAPASSION@Uberaba Project at Federal Institute of Triângulo Mineiro (IFTM), into the Food for the Future challenge, the PorBraEs students' team worked with Bem Brasil, a company recognized in Latin America for the commercialization of products derived from potato processing. The sub-challenge was to develop an innovation for the implementation of the effluent treatment process, reducing the electrical conductivity of the water for its reuse within the industrial process.

For this solution, the team performed a theoretical levelling for further experimentation of rizofiltration processes, through floating plants, and the implementation of physical-chemical filters, with the objective of removing organic particles and ions to reduce electric conductivity. This is an implementation in the structure already belonging to the company, to treat this effluent, aiming at a low cost of implementation and maintenance, which will result in a high institutional and environmental gain.
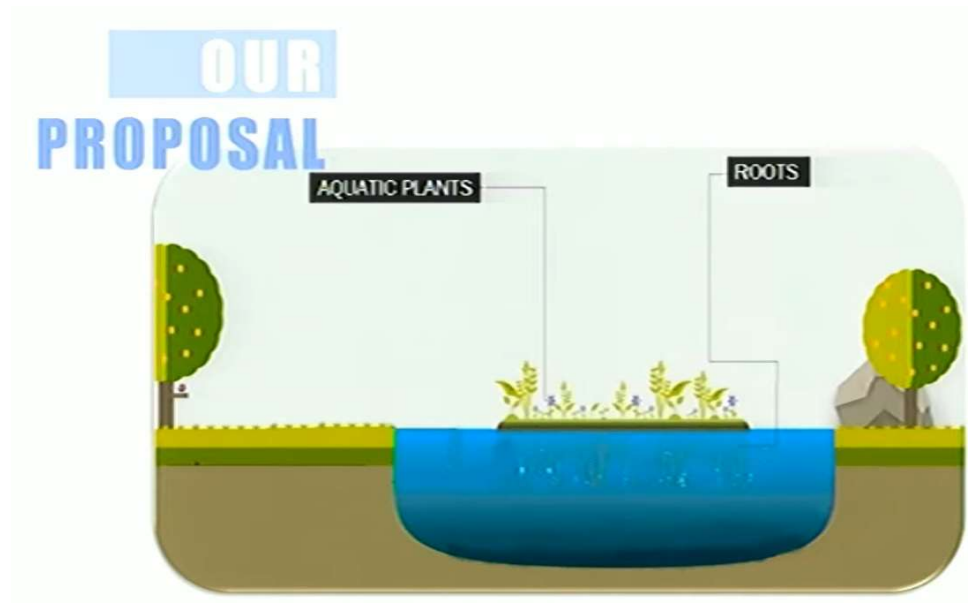

Figure 33– Rizofiltration process

Figure 34– Visit to Bem Brasil, a company dedicated to potato products

Subchallenge: New dairy product
Counterpart: Taquari
Team members:
Erik Kennedy de Carvalho Fonseca, Zootechnology, IFTM, Brazil
Kenia Cristina Graciano de Almeida, Food Technology, IFTM, Brazil
Guilherme Felix Rosa, Computer Engineering, IFTM, Brazil
Lucas Monteiro dos Santos, Electrical Engineering, IFTM, Brazil
Gianfranco Greno Giardello, Mechatronics Engineering, UTEC, Uruguay
Ana Rita Santos Mendes, Biomedical Engineering, IPP, Portugal
Description:
INOAL team received the subchallenge of producing a new dairy product. The company involved was Taquari, a dairy-based company from Santa Juliana city in Minas Gerais, Brazil. The challenge led to a new functional butter enriched with fibre. This butter, named MUNVID, caters the target the young and fit clients. However, after a market analysis INOAL team realized that could go further and move for a second prototype, a packaging for the butter, totally innovative. With PACKTTER it aims to meet the pains of our customers, because a big problem is the hardness of the cold butter, since to be consumed it is necessary to take from the refrigerator so that it can be used.

Figure 35 – LAPASSION Project developed with Taquari being presented in Brazilian Globo TV (MGTV)
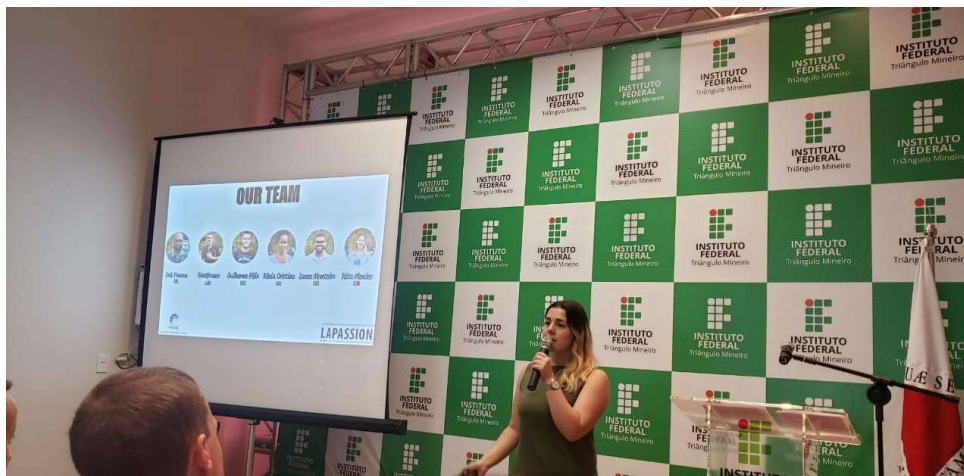

Figure 36 – The pitch of the Demo Day

Subchallenge: How to increment value to the products?
Counterpart: Doces Joaninha
Team members:

Amanda de Ávila Silveira, Food Technology, IFTM, Brazil

Camila Angélica Santos Souza, Agronomy Engineering, IFTM, Brazil

Jaqueline de Sousa Cardim, Agronomy Engineering, IFTM, Brazil

Guilherme Kenji Ferreira Hachimine, Computer Enginering, IFTM, Brazil

Fábio José Almeida Abrantes; Computer Engineering, USAL, Spain

Aline Maria dos Santos Rodrigues, Education, IFG, Brazil

Description:

This project was about the company Doces Joaninha, a company that makes handcrafted sweets in Araxá, Minas Gerais. Their problem is that customers do not valued their products because they find them too expensive compared to the competition. To create a solution the team started by comparing Doces Joaninha's prices with those of the competitors and find that they are all on the same line and in some cases even cheaper. So, the team decided to focus on the brand image and customer experience when going to buy since the company is a company with 50 years of history but with an outdated image and with a confusing product layout for the customer. The proposed brand and image was introduced by Doces Joaninha with success.

Figure 37 –Doces Joaninha store

Figure 38 – The pitch of the Demo Day for Doces Joaninha sub-challenge

3.4 LAPASSION@SãoLuís

LAPASSION@SãoLuís was held by Federal Institute of Maranhão (IFMA) in Brazil. With the main challenge of "How to improve the Human Development Index (HDI) of Maranhão State?" six sub-challenges have been proposed involving 3 Secretariats of the Maranhão State Government (Secretariat of Tourism, Secretariat of Woman, and Secretariat of Human Rights and Popular Participation) and two Municipalities (São Luís and Santo Amaro). Two enterprises gave support to the 6 projects (Apple and BlackSwan).

Subchallenge: How to improve the Human Development Index (HDI) of Maranhão State by means of Tourism in Santo Amaro?
Counterpart: Secretariat of Tourism of Maranhão (SETUR) and Santo Amaro Municipality
Team members:
Sanna Pauliina Tahlo, Entrepreneurship and Team Leadership, TAMK, Finland
Daliana Vieira Marques, Civil Engineering, IPP, Portugal
Bruno Diego Barros Araújo, Electrical Engineering, IFMA, Brazil
Joana Amélia Soares, Civil Engineering, IFMA, Brazil
Antônio Fernando Vasconcelos Braga, Chemistry, IFMA, Brazil
Description:
Rota Amaro is the project developed by BraFinP team and coordinated by Prof. Daniel Lima from the Federal Institute of Maranhão. The sub-challenge was "How to improve the tourism experience for increasing the economic growth of Santo Amaro city, in Maranhão state?". Rota Amaro is an application that connects tourists and locals (residents and entrepreneurs) to facilitate connections and improve the visibility of local routes and culture, using community-based tourism and conservation as a parameter. Santo Amaro is a municipality on the Lençóis Maranhenses border.

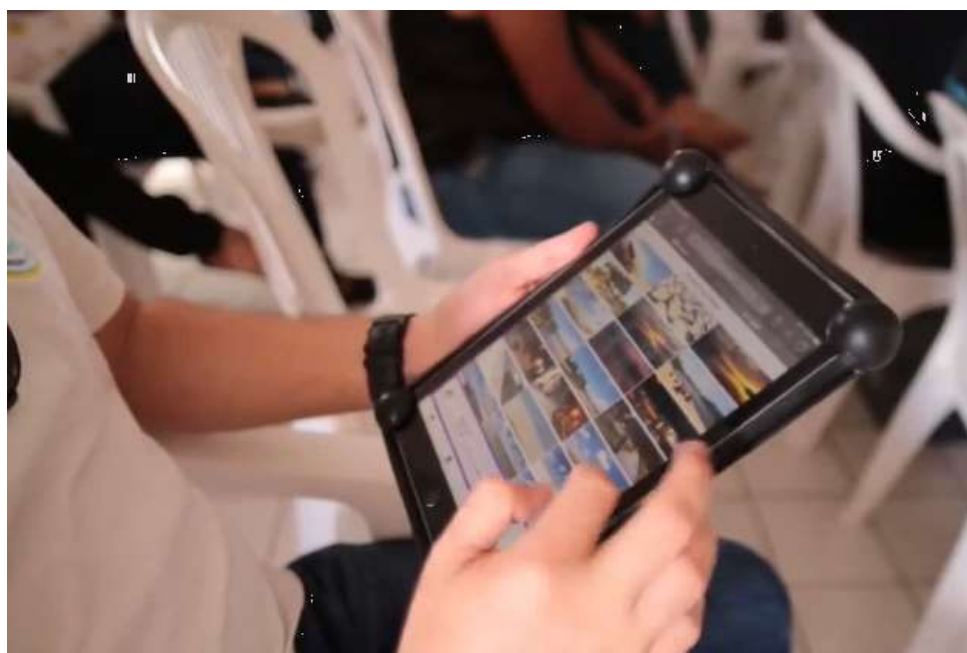*Figure 39 – Team members with coach aftera deliverable*

Figure 40 – The developed software being used

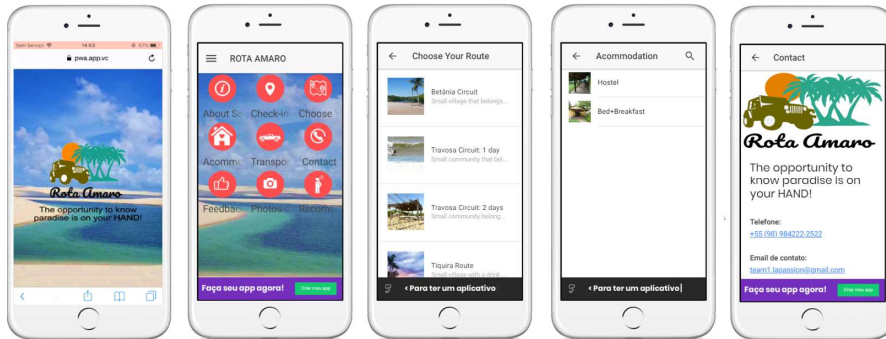*Figure 41 – Views from Rota Amaro app*

Subchallenge: How to improve the Human Development Index (HDI) of Maranhão State by means of Tourism in São Luís?

Counterpart: Secretariat of Tourism of Maranhão (SETUR) and São Luís Municipality

Team members:

Daniel Carlos do Vale Ramos, Informatics Engineering, IPP, Portugal

Mariana Soledad Suarez Yelpo, Industrial Design, UDELAR, Uruguay

Caio Felipe Pinheiro Cantanhede, Electrical Engineering, IFMA, Brazil

Daiane da Silva Moraes, Information Systems, IFMA, Brazil

Francisco Tanilson da Silva, Administration, IFMA, Brazil

Description:

This team had as sub-challenge to improve the tourism experience for increasing economic growth of São Luís. For that they developed an app, Joga&Go, with concepts of gamification to allow ludic, dynamic, personalized and interactive memorable experiences for tourists. Using Joga&Go the tourist has access to notifications, challenges and mini-games, special discounts and badges.

Joga&Go has been selected by the Inova Maranhão Programme to startup preparation. The Programme created by the Maranhão state Government is preparing the project teams for the challenges of the creation of a Startup.

LATIN AMERICA PRACTICES AND SOFT SKILLS FOR

LAPASSION
AN INNOVATION ORIENTED NETWORK

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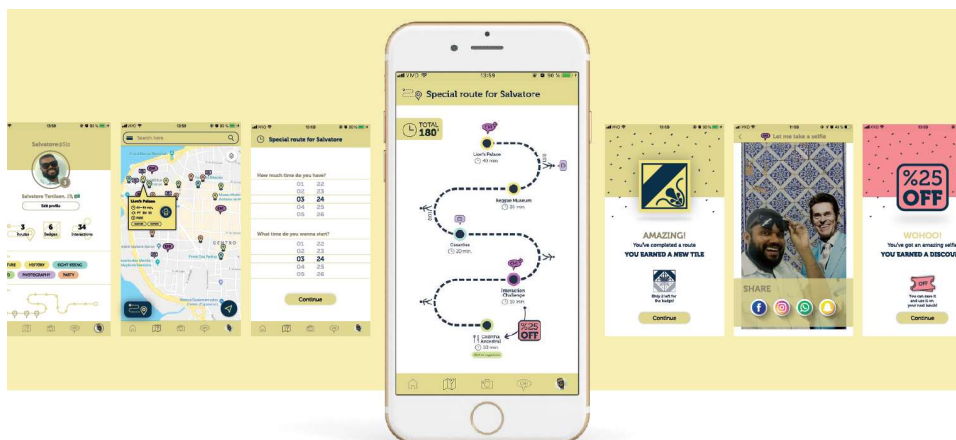*Figure 42 – Interviews with Tourism experts*

Figure 43 – Joga&Go app

Figure 44 – Interview of Joga&Go team member in the Brazilian TV

Subchallenge: How to improve the Human Development Index (HDI) of Maranhão State by better access to basic needs in São Luís?
Counterpart: Secretariat of Human Rights and Popular Participation of Maranhão (SEDIHPOP) and São Luís Municipality
Team members:
Sofia Isabel Saez Antille, Psychology, UDELAR, Uruguay
Carlos Henrique Ferreira do Nascimento, Civil Engineering, IFMA, Brazil
Gabriel Nogueira Berthier da Silva, Information Systems, IFMA, Brazil
Lucas Nascimento Mendonça, Electrical Engineering, IFMA, Brazil
Erika Viana Sena, Professional and Technological Education, IFAM, Brazil
Description:
VejAilha team received the sub-challenge on how to improve the access to basic needs in São Luís, in Maranhão, Brazil. In São Luís some communities suffer from any deprivations, on the other hand, there are NGOs and volunteers' groups working with them. Both are mostly unknown to the rest of the city. VejAilha solution was to develop a digital service, VejAilha, to strength the network between Society, NGOs, and public/private institutions to improve the access to basic needs.
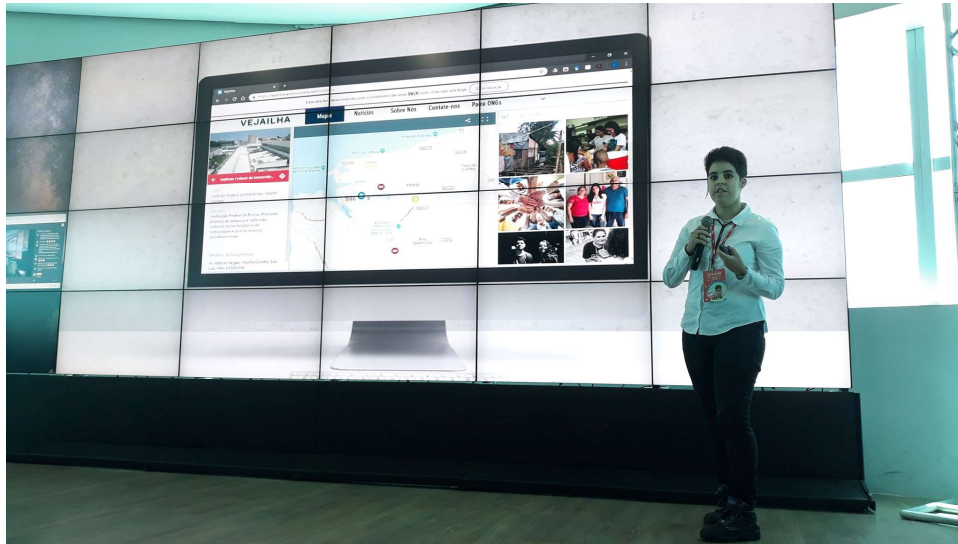
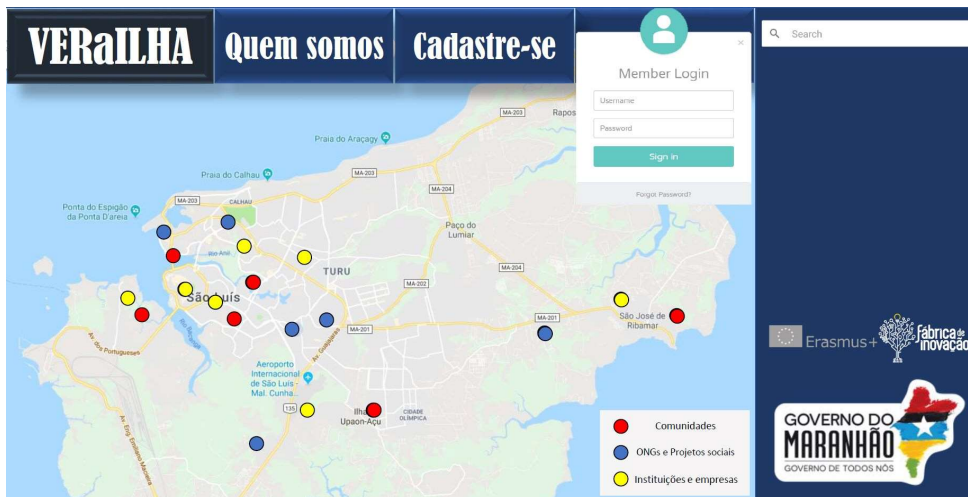*Figure 45 – VejAilha software presented in the Demo Day*

Figure 46 – Detail of VejAilha software

Subchallenge: How to improve the Human Development Index (HDI) of Maranhão State by protecting Woman in risk in São Luís?

Counterpart: Secretariat of Woman of Maranhão (SEMU) and São Luís Municipality

Team members:

Patricia Gómez Otero, Primary Education, UVIGO, Spain

Francisco Borges Carreiro Filho, Information Systems, IFMA, Brazil

Symon do Nascimento Pinto, Civil Engineering, IFMA, Brazil

Ana Karoliny Machado Macedo, Agroecology Technology, IFAM, Brazil

Description:

Chance Mulher is a digital service to help women at risk in São Luís. For that the students' team has created a platform which helps public institutions to manage the process of entrance of capacitated women into the labour market by connecting them with companies, productive groups, and start-ups. For public institutions it allows databases of capacitation courses, qualified women, companies, start-ups, and productive groups. On the other hand, companies have visibility throughout free advertisement and enhance the social responsibility.

Chance Mulher was selected by InovaMaranhão to be prepared to be a startup. InovaMaranhão is a program from the Foundation for Support of Research and Innovation of Maranhão State in Brazil (FAPEMA).

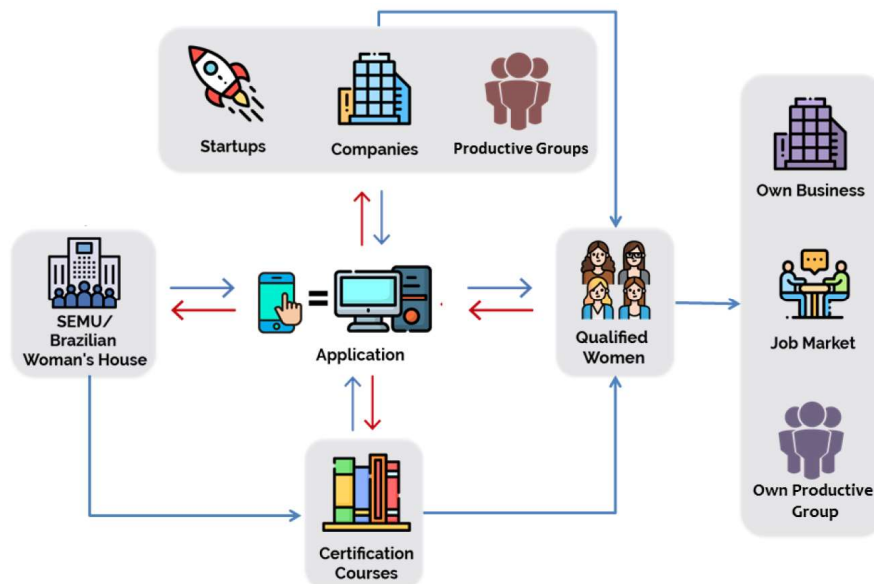*Figure 47 – Chance Mulher team members*

Figure 48 – Chance Mulher scheme

Figure 49 – Chance Mulher and Joga&Go teams selected by InovaMaranhão contest

Subchallenge: How to improve the Human Development Index (HDI) of Maranhão State by protecting Woman in risk in Santo Amaro?
Counterpart: Secretariat of Woman of Maranhão (SEMU) and Santo Amaro Municipality
Team members:
Petteri Kiuru, Entrepreneurship and Team Leadership, TAMK, Finland
Ana Cleide Silva Torres, Information Systems, IFMA, Brazil
Gustavo Espíndola Corrêa, Civil Engineering, IFMA, Brazil
Jhonatas Gutierrez Santos de Jesus, Electrical Engineering, IFMA, Brazil
Evandro Pedro Alves de Mendonça, Mechanical Engineering, IFPE, Brazil

Description:

This team had as sub-challenge to propose a service to help women at risk in Santo Amaro city. The found solution is in the form of a campaign that disseminates information about women's rights making use of local touristic potential through the work developed by Santo Amaro's handcrafters. Besides the products like rings, necklace and natural handcrafts, the created brand involves QR codes and one website.
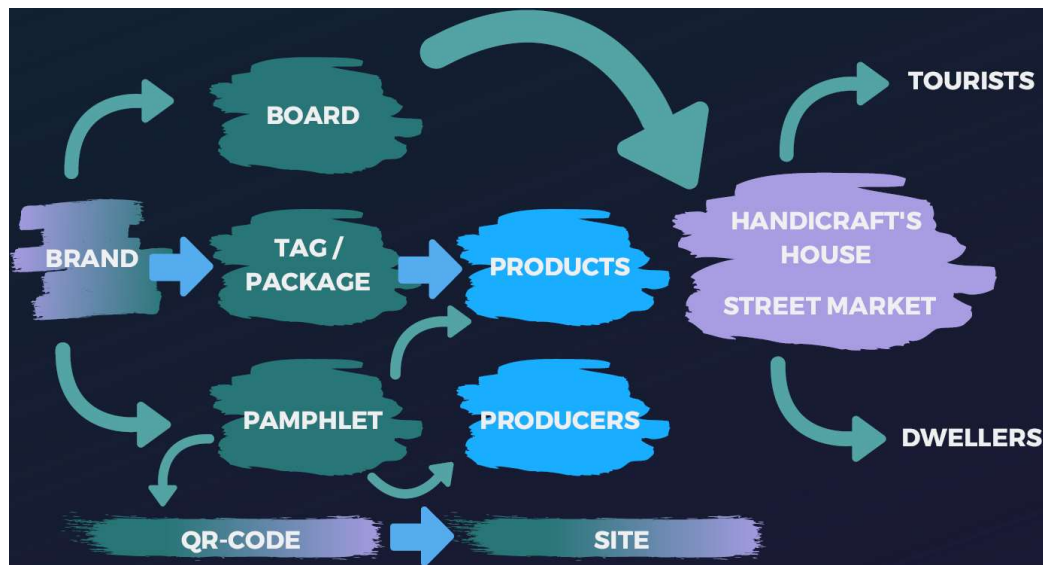

Figure 50 – Scheme for handcrafts to help woman in risk in Santo Amaro

Figure 51 – Handcrafts to help woman in risk in Santo Amaro

Subchallenge: How to improve the Human Development Index (HDI) of Maranhão State by improving the quality of water in Santo Amaro?

Counterpart: Secretariat of Human Rights and Popular Participation of Maranhão (SEDIHPOP) and Santo Amaro Municipality

Team members:

Javier González Penedo, Public Administration and Institutional Leadership, UVIGO, Spain

Kristhyan Davinny Nascimento Santos, Science and Technology of Dairy, IFAL, Brazil

Helida Thays Gomes Soares, Civil Engineering, IFMA, Brazil

Juliane Cutrim Marques, Chemistry, IFMA, Brazil

Gabriel Vitor de Sousa Silva, Information Systems, IFMA, Brazil

Description:

This team received as sub-challenge How to improve potable water quality for people of Santo Amaro. Since 30% of Santo Amaro consists of students our team has decided to act in Schools of Santo Amaro. A recyclable filter was envisaged, and after analysing different alternatives like carbon, wool, bucket, and stone gravel the team decided to choose bamboo for that filter. Bamboo is a natural product from Santo Amaro and has properties against microorganisms. Bamboo filters are in good situation by 12 months.

Figure 52 – Analysing the quality of wáter in Santo Amaro
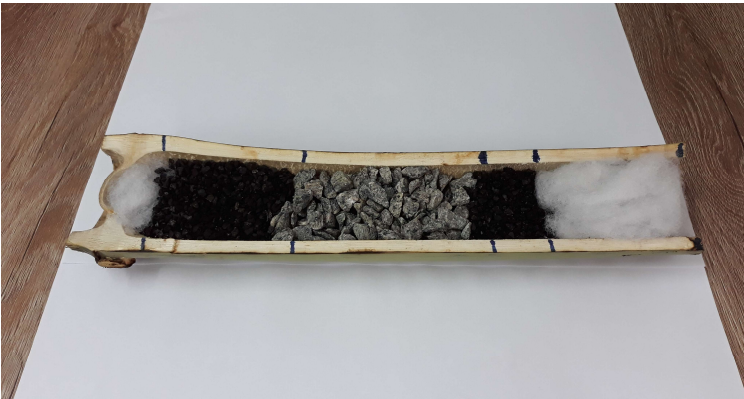
Figure 53 – The bamboo filter proposed by the team as solution for the challenge

4. CONCLUSIONS

During the ten-weeks multidisciplinary students' projects developed completely in presential mode (LAPASSION@Santiago, LAPASSION@Uruguay, LAPASSION@Uberaba, and LAPASSION@SãoLuís) 21 students' teams involving 117 students from 15 different institutions were involved in amazing experiences. LAPASSION involved warming up since students do not know each other, main challenge and sub-challenges proposed by counterparts, enterprises and other organizations. LAPASSION students' projects followed a Design Thinking approach, with interaction with possible final users of the solutions of the teams, observation, workshops, articles reading. All this interactive activity resulted in the identification of insights that were important for the formulation of the opportunity/goal to follow. Then the solution stated to be clearer, and ideation, mockups, prototypes, and implementations appeared. During the development of the projects students reported to blogs, interacted with coaches and counterparts, made several intermediate presentations (usually 4 or 5 deliverables) and finally, in the last week, they made the final pitch and demonstrations of the found solutions suring the Demo Day of the project. This report tries to resume all these fantastic experiences of students moved by the passion for their challenges and projects.