ObservIST Observatório de Boas Práticas do IST

Formulário para submissão de prática. *Application form*

Depois de preenchido, por favor grave este formulário e envie para observist@tecnico.ulisboa.pt para firmar a submissão da Prática. Ser-lhe-á enviado um e-mail de confirmação da receção. *After filling the form please save it and send it to observist@tecnico.ulisboa.pt. You will receive a confirmation e-mail.*

*Obrigatório | Mandatory

Dados do proponente *Applicants identification*

Nome *Name**

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Prática Proposta *Proposed Practice*

Designação da Prática *Practice name**

Social Innovation Lab - SILAB

Sítio da Internet da Prática *Practice internet site*

http://silab.tecnico.ulisboa.pt/

Seleção da Área Temática *Subject Areas Selection*

Identificação da área temática em que se insere a Prática, de acordo com o Plano Estratégico do IST *Identification of the subject area in which the Practice is inserted, according to the IST Strategic Plan* *

- (●) Educação Superior *Higher Education*
- ( ) Investigação, Desenvolvimento e Inovação *Research, Development and Innovation*
- ( ) *Transferência* de Tecnologia *Technoclogy Transfer*
- ( ) Funcionamento Multipolar *Multipolar Functioning*
- ( ) Internacionalização *Internationalisation*
- ( ) Comunicação *Communication*
- ( ) Capital Humano *Human Capital*
- ( ) Infraestruturas *Infrastructure*
- ( ) Processos e Qualidade *Processes and Quality*
- ( ) Tecnologias de Informação *Information Technologies*
- ( ) Financiamento *Funding*
- ( ) Outra *Other* _____

Implementação da Prática (2000 caracteres)

Practice Implementation (2000 characters)

Descrição da implementação da prática: ações, calendarização e recursos aplicados

Description of the implementation of the practice: actions, schedules and resources applied *

The Social Innovation Lab (SILAB) at IST was created to address current gaps in the educational system by focusing mainly on frugal innovation (do more with less) and social impact, aiming to solve problems experienced by vulnerable communities in the world. The SILAB involves makers, researchers and students from different backgrounds who develop their projects under supervision of professors and specialists and it encompasses: (i) a new educational model integrating an economic and human dimension of technology; (ii) a mobility program where students develop in-site solutions that potentiate the well-being of local communities; (iii) an international network of partners, and (iv) a physical laboratory where different stakeholders can interact and generate products that meet the needs of base-of-the-pyramid communities.

The planned activities involve (i) a summer school @ IST in partnership with Parul University, where Indian Students will come to IST to be part in lectures, teamwork, seminars, cultural activities and visits to organizations involved in social innovation/responsibility; (ii) a hackathon with national and international participants, focused on creating socially innovative solutions to worldwide problems; (iii) a competition for construction of recycled 3D printers, stimulating critical awareness to recycling and circular economy, while developing soft skills and motivating participants to causes and projects with social impact, (iv) a fundraising campaign for the Xavier Green School in India, aimed at selling drawings from indian students in order to reconstruct and refurbish the school ' s computer lab, and (iv) a fundraising for the Zoya Rana Foundation, aimed at selling artwork made by Indian arts students who dream of advancing their careers. This foundation aims at supporting arts students and demistifying the prejudice against organ donation that is present in various (particularly religious) communities in India.

Resultados Alcançados (3000 caracteres)

Results Achieved (3000 characters)

Descrição dos resultados obtidos em relação aos objetivos previstos, incluindo as alterações introduzidas durante a execução da prática. É valorizada a apresentação de dados qualitativos e quantitativos que demonstrem o cumprimento dos objetivos

Description of results obtained vis-à-vis the objectives envisaged, including changes brought in during practice implementation. The presentation of qualitative and quantitaive data that shows objective compliance is appreciated. *

The SILAB has been implementing the new educational model, throughout the past three years, through the development of socially innovative projects in curricular courses.

In the Industrial Engineering and Environment course, students have been assessed solely through a semester-long project, consisting of improving senior mobility. All together, 22 projects have been presented. One of these is DETU, a platform that helps senior mobility in public transportation, which won the Impact Category award on Grace Academy - an world-wide annual prize for students that present the best projects on Corporate Social Responsibility. Additionally, to validate the DETU platform, the SILAB invited a group of senior citizens to not only test the prototype but also visit the IST – Alameda campus, namely the Civil Engineering Museum and the Institute for Systems and Robotics at IST. The success of the event demonstrated the importance of integrating the community with univerisities and students by promoting an interchange of information and experience that is beneficial for society. Other projects involved bracelets that give information of traffic lights through sensors, in order to give them more time to cross streets or a service that provides monthly physical exercises that seniors can do at home to keep fit.

On the other hand, in the Technology Based Entrepreneurship course, students from different nationalities and backgrounds (Industrial Engineering and Management, Electronics Engineering, Computer Science and Engineering) were involved also in a semester-long project but addressing the topic “ Social Innovation: Developing goods/services to address the needs of vulnerable individuals and communities in the world ”. Students tackled challenges coming from different regions in India. Throughout the process students had the chance to learn about a completely different context, benefit from external mentoring from five different Indian universities, and develop solutions for real complex problems within specific communities with the potential of generating social impact. Students were involved in the E.Awards event at IST and one team won an honorable award (500€. This team developed E-MITRA, an app for illiterate farmers that facilitates the participation in public supporting schemes. At the end of the semester, students were given the opportunity to travel to India to attend a Summer School and to implement, hands-on, what they had been working on. This accomplishment served as validation of the SILAB model and good practice to be replicated, namely the involvement of students in challenges with social impact over a semester (or more) and the mobility of students to validate and implement these concepts in loco. Additionally, these types of projects enhance, among other things, soft skills, learning-by-doing, project-based learning, networking at an international level and real social impact through interventions with vulnerable people and communities.

Avaliação e Monitorização (2500 caracteres)

Evaluation nad Monitoring (2500 characters)

Descrição do processo de avaliação e monitorização da prática e propostas de melhoria identificadas e introduzidas *Description of the process of evaluation and monitoring of the practice and improvement proposals identified and introduced* *

The SILAB operational model encompasses evaluation and monitoring processes and activities. There is an internal evaluation and follow-up process, developed continuously by SILAB's stakelholders (teachers, students, researchers, companies, NGOs) and also an external validation by end-users involved in the various projects and external entities (acting as observers, not directly involved in the projects). Accordingly, the SILAB circulates all the information on the outputs among its network and schedules follow up meetings every 2 month swith internal partners and every 4 months with external partners. KPIs include: the number of projects undertaken, number of events organized, number of student mobility programmes occurred, number of new partners, number of members involved in each project, number of individuals / communities served. More than the frequency and quantitative appraisal of all these activities, there is considerable effort in evaluating their social impact (from a more qualitative standpoint). The SILAB organizes an annual meeting with all partners to present and discuss the KPIs and to discuss current and future strategies.

Carácter Inovador e Transferibilidade (2500 caracteres)

Inovativ Character and Transferability (2500 characters)

Descrição dos aspetos inovadores da prática em termos internos (no IST) e externos (ensino superior), bem como dos elementos que possam ser replicados num contexto diferente e eventuais recomendações a ter em conta num exercício de benchmarking

Description of innovative aspects internally (at IST) and externally (higher education), as well as aspects that may be replicated in a different context and any recommendations to be taken into account in any benchmarking exercise. *

Engineering Schools have been enabling students to develop the skills needed to identify technology-based business opportunities and implement them within new and established organizations. Many of these technologies bring new ideas that meet social needs, create social relationships and form new collaborations – social innovations. However, these specific social challenges are still not being explicitly included at the core of many engineering courses curricula and, in general, on educational strategies at engineering schools globally.

The SILAB discusses the importance of Higher Education Institutions (HEI) connecting engineering with social impact; and uses SILAB as an innovative case-study to show how it can be done. The SILAB is a pilot for a new educational model that can be successfully implemented by other HEI. The innovative character of SILAB is the fact that it constitutes an integrating model of several activities that already exist in several universities in the world, but which are traditionally separatel, namely: (i) in the classroom (Curricular Units - CU) ; (ii) outside the classroom (in the laboratory, at IST events); and (iii) outside the university and the country (in fieldwork and interaction with local and international partners). This integrating model implicitly observes several dimensions: CUs, IST, and HEI (the way in which engineering can be taught), which can boost strong international networks at an individual and institutional level (as it is already occurring with the SILAB).

In terms of transferability, one of the objectives is to serve as a pilot and source of good practices for establishing a network of SI Labs at both national and international level. The creation of more labs can function as a decentralized network and become a world-wide grid of students, professors, universities, companies, and social enterprises promoting solutions towards the well-being of the population in the world. This goal requires that one keeps a mindset of “ looking from the outside in ” to guarantee systematization of the processes being implemented in order to validate and improve the model (which is what the SILAB has been doing). With regard of sustainability, SILAB has institutional support from IST, as well as from other national and international partners (Universities, companies, NGOs), moreover it relies on a frugal philosophy, which grants all the resources needed to fulfill the project's mission and vision in the long run.

Divulgação da Prática *Practice Publication*

Autorizo a divulgação da Prática na página do ObservIST *I authorize the Practice publication in ObservIST website* *

- (●) Pública (acessível fora da Comunidade IST) *Public ((accessible outside the IST Community)*
- ( ) Restrita (acessível apenas à Comunidade IST) *Restricted (accessible only to the IST Community)*

Muito obrigado. *Thank you.*

Critérios de elegibilidade

A sistematização e avaliação das propostas de Boas Práticas será feita por um painel de avaliadores que validará projetos/experiências com base nos seguintes critérios:

- **Solução de problema/melhoria de processo**: relevância da iniciativa/experiência para um processo de melhora contínua;
- **Resultados obtidos**: eficácia relativamente aos objetivos esperados, eficiência em relação aos recursos empregues, eficácia em relação à contribuição para a solução do problema ou para a melhoria de um processo existente.
- **Carácter inovador**: repercussão da boa prática na aprendizagem sobre novas formas e novos estilos de trabalho na própria instituição.
- **Sustentabilidade**: possibilidade de manutenção da boa prática no interior da instituição.
- **Replicabilidade**: potencial de transferência do processo, ou parte dele (princípios, ferramentas, metodologias, etc…), para outros serviços, após um exercício de flexibilidade e adaptabilidade dentro do universo IST.