

SENAI Core of Sustainable Solutions

1. Short description of the action/programme/initiative/network;

The SENAI Core of Sustainable Solutions is a center of information dissemination and environmental technologies to the community and companies. Based on the initiative of developing environmentally friendly, economically viable and socially just actions, the Core of Sustainable Solutions aims to bring new concepts and information about environmentally friendly attitudes, with an auditorium for events and an office where consultants will advise companies with the best latest environmentally correct technologies.

The objective of the Core is to disseminate the technology of WoodFrame Construction System, promote the exchange of information and technical materials, training and development by conducting technical events, lectures, seminars, exhibitions on sustainable building, dissemination and demonstration of solutions and technological innovations with practices focused on energy efficiency and thermal and acoustic insulation.

The construction of the SENAI Core of Sustainable Solutions was performed from the materialisation of the concept of sustainable construction, using WoodFrame technology, a construction method generates environmental benefits significantly reducing construction waste and CO2 emissions. Although this technology is in use in other countries, is unprecedented in Brazil, has been adapted to fit the regulations, climate and Brazilian culture. Besides the environmental benefits, the technology has major advantages like reduced time of construction, thermal-acoustic system of high efficiency and low power consumption.

2. Description of the context in which the projects/programmes were undertaken;

The SENAI Core of Sustainable Solutions was conceived as a space in which the approach to innovative solutions on low-energy buildings will be conducted. The Core will serve as a showroom and laboratory structure for sustainable building and living, where will be held accompanied visits and technical workshops, and also will install a service for the dissemination of new technologies.

The idea for the Core came from a project elaborated by the principal business partner, Tecverde, to popularize a dry construction system, with unique technology in the country. In this context, a work tropicalization of this technology was carried out, and about 90% of the materials are manufactured in the country. From this national production, the vast majority is manufactured within the state of Paraná, which houses the Core.

3. Main partners and their roles;

Tecverde – Responsible for project design and the idea for the Core;

Madeplast – Manufacturer of environmentally friendly decking (wood plastic composite);

Forplas – Ladder manufacturer;

Placlux – Manufacturer of cement slabs;

Ecotelhados – Supplier of green roofs (grass);

4. Contribution of your project

Being the first space to promote sustainable lifestyle, development and popularization of environmentally beneficial practices, the SENAI Core of Sustainable Solutions is also innovative in addressing a social dilemma existent in Brazil, the construction of wooden houses.

The conventional method of construction used for the construction of wooden houses lacks technologies to ensure safety and strength, and is more easily subject to decay and fire. Accordingly, national and regional policies of growth and urban development allocate funds only for the construction of masonry buildings.

The proposal presented by the Core offers a cheaper solution, safe and environmentally correct for this dilemma. The architectural project designed the Core with the use of WoodFrame technology provides the best use of natural light and air, includes the use of solar panels for power generation, makes use of paints that inhibit the spread of fire, and also has a green roof, which is made of grass, for better thermal comfort.

The most critical phase for developing the core was the approval of the technology, since the policy discouraged the use of wood as a main material for constructions. However, the certifications were obtained and it was possible to break the paradigm that the houses constructed in masonry are safer.

In the long term, it is expected that the dissemination and popularization of knowledge and technology internalized by the core will be a source of generation of economies of natural and financial resources.

5. Upscaling of project results

The Core started with the construction of its own space, a center that gathers the best environmentally friendly and sustainable technologies. In this sense, the intent of the core is to be the example that it is possible to apply the techniques and concepts nationwide.

The actions to expanding the activities of the core are internalized in the project with the construction of an auditorium for lectures and events, and an office for consultancy in environmental technologies. The main goal is to share the information and technologies on environmental sustainability to the entire business community.

ANNEX

Construction - SENAI Core of Sustainable Solutions

