Finalists summary

The Index Project

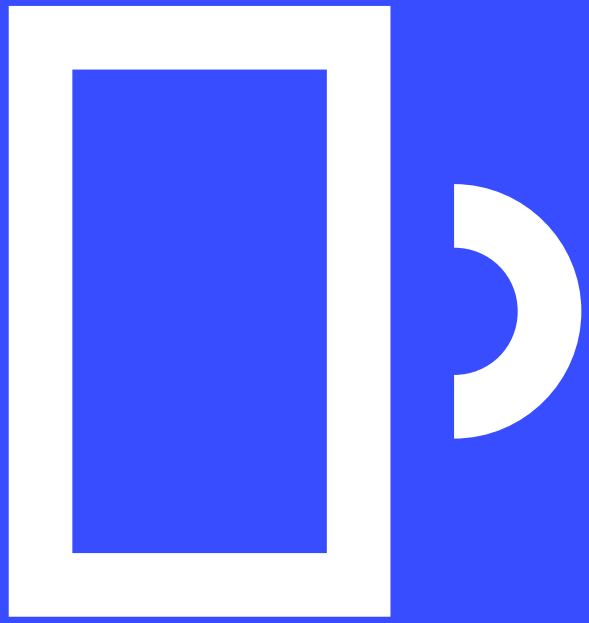
Universidad del Desarrollo
Facultad de Diseño

Diseño Responde

INDEX AWARD + UDD

41 ITEMS

- **05** WORK
- **9** HOME
- **07** BODY
- **14** COMMUNITY
- **06** PLAY & LEARNING



Work

05 items

Polychromatic Polymer

Colombia

Profesional

An alternative to typical construction materials is proposed. Its decomposition can result in a process that helps improve the natural environment. Through the exploration of opacity, texture and colour, the implementation of bioplastics in architecture is sought to generate different living conditions, achieving control of light and chromatic qualities to obtain a piece that is easy to change according to the purpose of the designed space.

Biofish: biodigestor con residuos de pescado

Argentina

Miranda G Mayer

Biofish addresses the double problem of energy poverty and managing fish waste from sustainable fishing, which currently generates sources of infection and fires in wetland areas. The device generates bottled and transportable biogas, adapting to the nomadic character of the fisherman and contributing to the family economy. It allows the user to be independent energetically in cooking and heating. In addition, it generates fertiliser for a personal garden. The biodigester is modular; it has a totaliser and 6 bottles for biogas transport.

ArnesSafe

Chile

Universidad
del Desarrollo

ArnesSafe responds to the national and international problem of risky work: falls at different levels due to the misuse of the safety harness and poor task conditions. This product is designed based on the body's ergonomics, optimising its adjustment to different sizes and access to its adjustment points. In addition, sticky pockets compatible with different specialities were incorporated. It was successfully tested with a manufacturer and certified company in Chile.

Home

9 items

Cespress

Chile

Universidad
del Desarrollo

Cespress adds value to the grass waste we find in every corner of the world. It is formed of solidified grass lodged in the mower deck. The development begins with door-to-door grass collection and undergoes a cleaning process free of impurities. It is subjected to exhaustive experimental tests: (fire retardancy, compression, thermal transmittance, and traction. It can be subjected to tooling and CNC technologies. Its Ornamental mechanical physics properties stand out, accentuating the raw material. It has infinite product lines. There are six recipes developed to date.

ANTU Cocina solar

Chile

Universidad
Diego Portales

Antu is the first high-efficiency solar cooker in the world, made based on a circular economy. Its purpose is to bring solar energy and sustainability closer to all people. We created a product that allows cooking all kinds of food in any place with sun exposure, ranging from 30 minutes for chicken with quinoa in the city of Arica to 120 minutes for lamb with potatoes in Patagonia. This saves between 30 to 70% in money, reduces greenhouse gas emissions to 0, and avoids fires.

Elemental, la evolución del granel

Chile

Universidad
del Desarrollo

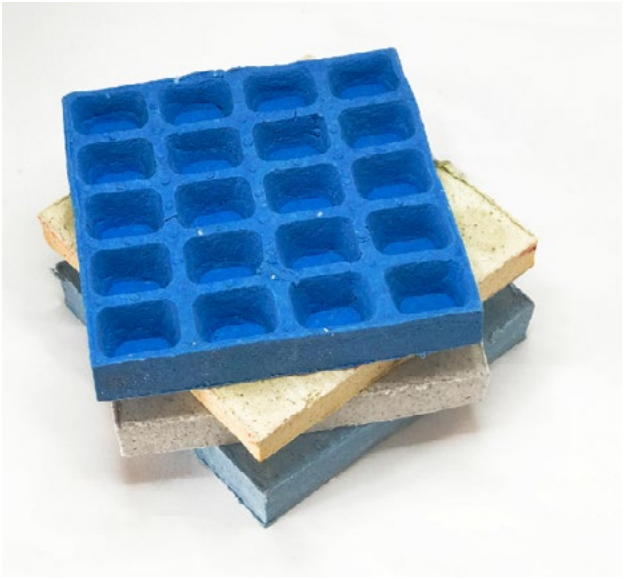
Our current lifestyle has devastated the environment and nature. The hurry and comfort have caused carelessness in food, and our consumption decisions have made us sick, obese and contaminated. Bulk stores have returned as a response to this unconscious consumption, but the change is significant and challenging for most of the population. That is why Elemental facilitates purchasing and preparing healthy, natural, ethical and sustainable foods. Its objective is to evolve the bulk purchase system and link it to the modern rhythm of life.

TAHECA: reacondicionamiento térmico de celulosa

Chile

Universidad
Adolfo Ibáñez

Thermal retrofit is a problem in the context of Chile's energy efficiency challenges. State subsidies present an expense and a gap between its coverage and the needs of many homes. The TAHECA project offers a comprehensive thermal reconditioning solution for homes that do not have minimal insulation mechanisms, based on the manufacture of cellulose fibre insulating panels, which also reduces environmental impact through a system that encourages the recycling of cardboard and paper.

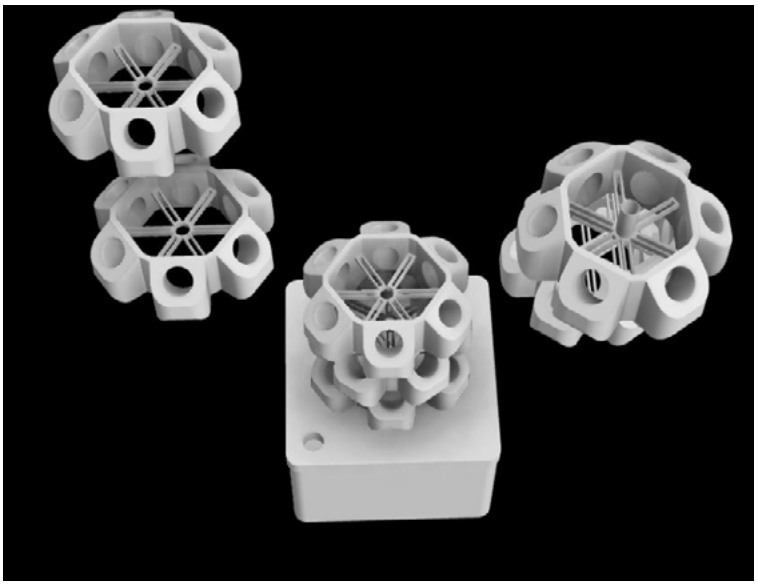


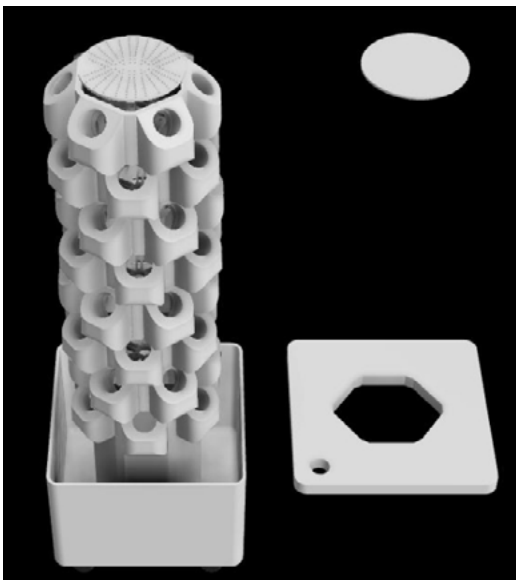
Hydro life

Chile

Universidad
del Desarrollo

One of the biggest problems worldwide is food, due to factors such as lack of water, fertile land, little space, lack of fertilisers, and excess use of pesticides, and preservatives, among others. Many developed countries are beginning to implement hydroponics in crops due to its multiple benefits. Hydrolife is a hydroponics system that measures the nutrients that the plant needs, adapting its quality to make it healthy, of good size and colour. It is also an easy system, with little care and takes up much less space than growing vegetables in soil.



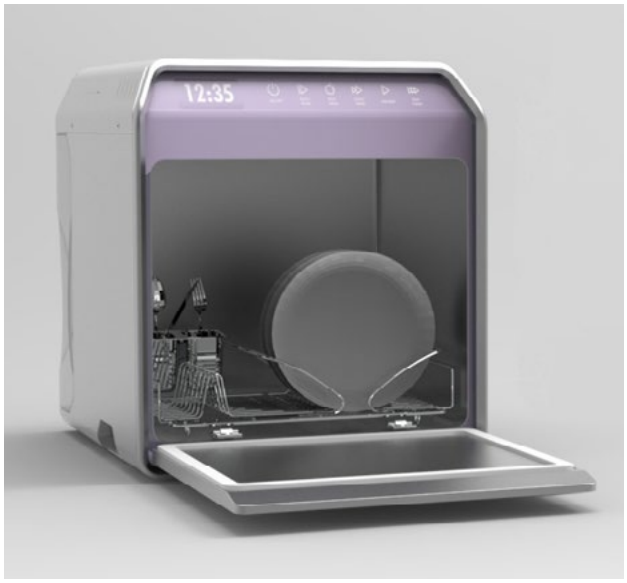


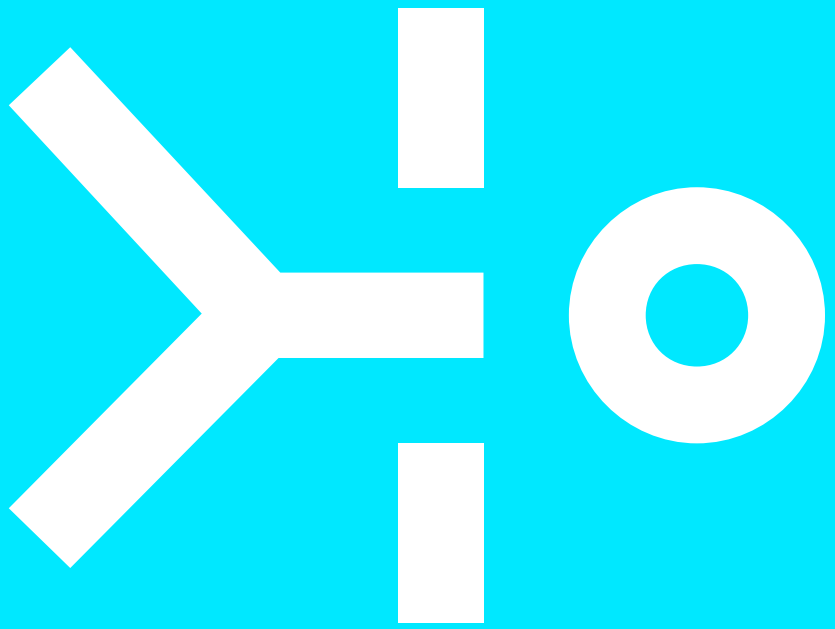
LAVECO

México

Universidad: ITESM

For this project, the team worked hand in hand with the training partner Whirlpool. The aim was to design an improved option for portable dishwashers to bring to any department by 2030. Dishwashers consume up to 50% less water than the traditional way of washing dishes. This is important because in 2021, we experienced a crisis due to drought and water shortages in Nuevo León, Mexico. The design approach of this appliance is eco-friendly, which is why it is made with recyclable materials and is circular, thanks to easy access to its electrical components.





Body

07 items

CARBO

Colombia

David Cabra

Sargassum algae proliferate in Latin America. Sodium alginate can be extracted from them, essential for making the CARBO bio-skin. With the use and processing of this type of algae in conjunction with materials such as activated carbon, affected ecosystems can be helped, and bioplastics can be created to generate new circular and local economies. CARBO focuses on replacing materials with polluting characteristics, such as those derived from petroleum in the fashion industry. CARBO is biodegradable and contributes to carbon capture.

NAMÜn

Chile

Universidad
del Desarrollo

The skin of salmon, a typical Chilean fish, is often discarded. These skins were reused by extracting their collagen, generating a bioplastic that resembles disposable and single-use face masks. But in this case, the product is biodegradable. This material contributes to the skin's healing, regeneration and moisturising. It can be buried in the ground or dissolved in boiling water to water plants later since it still has collagen and ingredients that respect the environment.

Cítri.co

Chile
Universidad del Desarrollo

Cítri.co develops bioplastics based on organic citrus waste: orange and lemon peels, to show its application as a tool for change in the fashion industry. Cítri.co links three disciplines: design, sustainable fashion and experimentation with new materials. The main objective is manufacturing clothing and accessories products in the sustainable fashion and design industry, creating and designing pieces that can be joined through assembly or heat.

period.

México

Universidad
Iberoamericana CDMX

The use of the menstrual cup presents great benefits. However, its use in public places is complex. Period is a device that is easy to use, transport and store, which helps to avoid possible health problems. It is easy to use by following the steps indicated. In this way, it is possible to sanitise the cup quickly.

Piel

Guatemala

Universidad del Valle
de Guatemala

Piel is a ceramic stoneware exfoliator that replaces the bath sponge in the personal hygiene routine. The use is long-lasting and without replacement thanks to the easy cleaning provided by the material due to its low absorption, exfoliating efficiency and cleanliness to the skin. Sizes: facial presentation (11x5 cm) and body (18x8cm). It is incorporated into the bathroom routine and adds to a trend that has increased during the pandemic: self-care. It is highly durable due to its material and has a low environmental impact.

Community

14 items

Agropelo acolchado de ahorro hídricos para plantas

Chile

Matter of Trust Chile

Agropelo is a human hair mulch recovered from a network of more than 250 hairdressers. It maintains soil moisture, reducing direct evaporation by 71% and saving up to 48% of irrigation water. Agropelo prevents the development of weeds, protects the roots from the cold, adds nitrogen, calcium, chloride and sodium to the soil, improves plant growth and increases the quantity and quality of production. This innovation created a product capable of reducing agriculture's water use and regenerating the soil.

MUZ: bioplástico zero-waste a partir del Nopal

Chile

Universidad
Adolfo Ibáñez

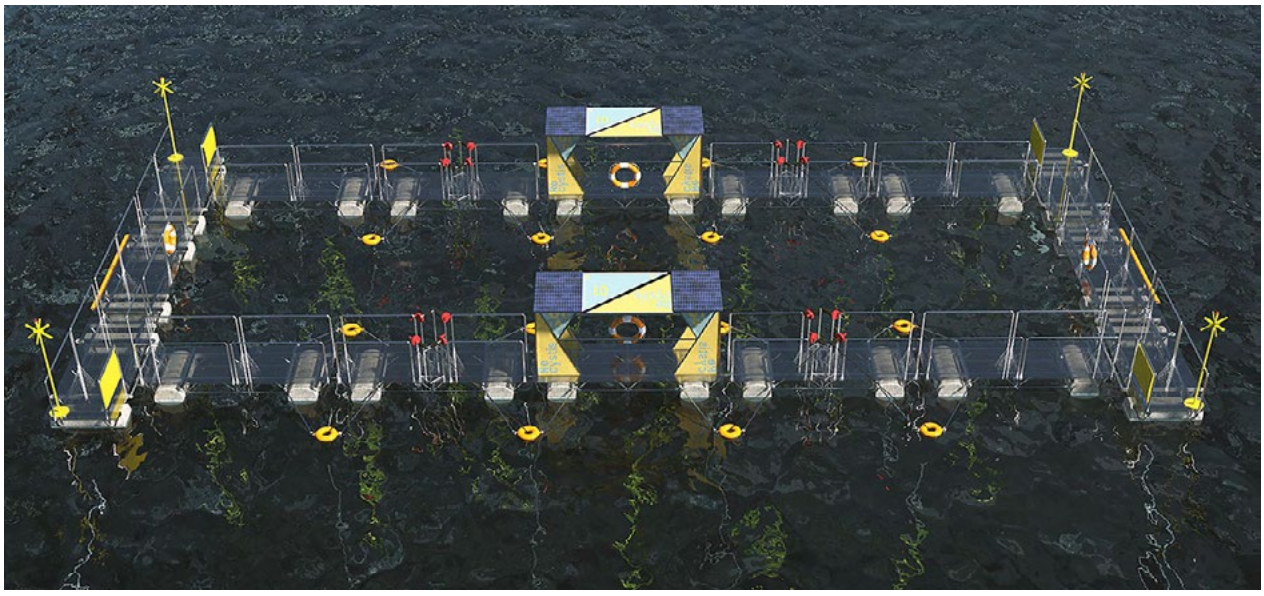
The industrial use of plastic has negatively impacted the environment and people's quality of life, considering the accumulation of garbage. MUZ, is a bioplastic based on a polymer in the Nopal, used to manufacture containers and packaging for dry food products. The project achieved a new zero-waste, biodegradable, water-soluble and edible product. The team conducted an ethnographic study, a chemical and environmental analysis, and a series of experiments to evaluate the potential of this residue compared to others.

RECYSTIS

Chile

Universidad
del Desarrollo

Within the natural sequesters of CO2, there is an alga, the floating Huiro (Macrocystis Pyrifera), which mitigates 7 times more than the same unit of trees, but its forests (huirales) are overexploited due to over-extraction. Its stock needs to be increased for its conservation, affecting coastal communities. Recystis is a floating module that generates an underwater light area to accelerate the reforestation of Macrocystis Pyrifera. It doubles the growth rate and reproduction every week.



LixiLab

Colombia

Profesional

Lixilab is a biodesign project that seeks to bridge the gap between science and the countryside, especially in developing remediation technologies, which have remained in scientific publications and have yet to be applied in real contexts due to scalability challenges. For its development, work was done with peasants from Mochuelo, a village on the outskirts of Bogotá, who assume that the losses of their crops and diseases of their animals are a consequence of the leachate from the nearby landfill that contains heavy metals seeping into water and soil.

Chom

Chile

Pontificia Universidad Católica

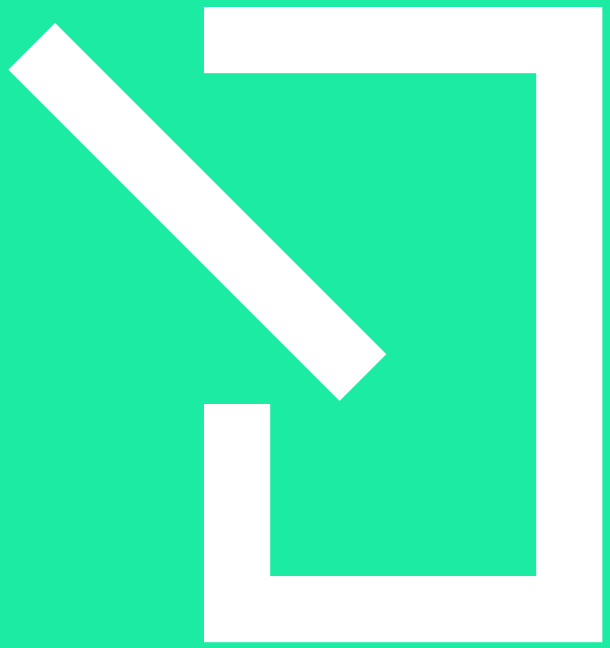
This biomaterial is made from corn stubble with starch and mycelium binders. Allowing the revaluation of biomass from agro-industry. In Chile, 191,651 tons are burned annually. Its main function is to be a remediation tool for overexploited soils through mycoremediation. This translates into a seed tray, avoiding using plastics in agribusiness, which are massively burned. Chom closes the circular economy cycle and generates new opportunities for economic income.

DeLirio

México

Universidad
Iberoamericana CDMX

The design proposal arises from the need to preserve the ecosystem of the Xochimilco lake in Mexico City due to the degradation caused by the Lily. Although it can provide several benefits to the ecosystem, its lack of control causes it to become a pest. DeLirio is a sustainable biomaterial made from Lily collected from the Xochimilco canals. This material is an alternative to single-use plastic. In this case, DeLirio is transformed into biodegradable pots, replacing the traditional plastic pot.



Play & Learning

6 items

Clima, el desafío de diseño más grande...

Argentina

Equipo El Gato y
La Caja y Autores

The climate crisis is a fact, and the eco-social transition cannot be postponed. Understanding it motivated the creation of a book object for a wide audience relevant to the conversation. An interdisciplinary team developed a design framework based on three axes: what is desirable for humanity, what is sustainable for the planet, and what is feasible in each sphere of society (and how to do it). Clima is a complex approach where the different types of knowledge do not compete for dialogue.

“Tactus; Tocando Aprenderás”

Chile

Universidad
del Desarrollo

Sight allows us to observe and learn about various colors, shapes, and patterns. “Tactus” addresses the issue of visual impairment in degrees that make it difficult to perform tasks of daily life, specifically focused on children from 3 to 6 years of age. “Tactus” is based on the importance and need for autonomy and proposes different tools to promote it, specifically in eating. In turn, it supports parents and caregivers as mediators between the visually impaired child and their interaction with the environment.

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