## Kallpa bench

Bench for public spaces that takes advantage of raw waste materials such as posts made of Wood Plastic Composite

Kallpa. noun. Quechua language for strenght.

#### Context

In the city of San Juan de Pasto, southern Colombia, there are no recycling programs or policies, making it possible to take advantage of the large amount of plastic waste discarded daily by its citizens. Although there are cooperatives of recyclers, they collect waste to send it to other cities where it is transformed. In the city, there is only one company that recycles plastic materials and produces basic products such as plastic wood posts for enclosures in rural areas.

This project is located within the campus of the University of Nariño, where it is desired to take advantage of the plastic waste produced daily by a community of more than 10,000 people so that this waste is exchanged for plastic wooden posts (wood plastic composite) and thus make benches for open areas across the campus. Each bench uses 5.2 tons of recycled plastic, equivalent to the 7 three-meter-long posts required for its manufacture.

At this time, a campaign has been implemented for the university community to contribute their plastic waste using eco bottles (plastic bottles filled with usable plastic waste).

#### **Creative Solution**

Kallpa is a bench made from plastic waste, taking advantage of basic upcycling conditions in Pasto, a city where there is no advanced technology to transform plastic waste (a characteristic of most latinamerican mid-cities). Most of the time, people do not know how recycled plastic can be used.

Kallpa is a bench that is made from plastic waste in the form of basic plastic wood posts taking advantage of its durability and aesthetics, through a design that is resistant to environmental conditions. In this way, the community can see first-hand the result of their contribution to plastic waste, converted into benches for public spaces.

#### **Social Impact**

Currently, the eco bottle collection campaign has managed to raise awareness in the community of the University of Nariño since the plastic waste collected is already being stored in a container to be delivered to the company that produces plastic wood posts. It is expected that by the end of 2025, plastic material will have

been collected to make around enough benches (more than 100 tons of plastic and other kinds of waste), as a starting point for a campaign in different areas of the city of San Juan de Pasto.

#### Vision for the Future

In the future, this project can be implemented in cities or communities where high technology and advanced processes to take advantage of recycled plastic material (such as large format 3D printing among others) are not available. Instead, empathy and social management within communities are required, which facilitate the collection of plastic waste and other usable waste materials from homes, schools, and small and mid-companies, offering a solution for furnishing public spaces.

# Wood Plastic Composite posts

Reimagining materials, re-using waste and creating a fair, circular economy

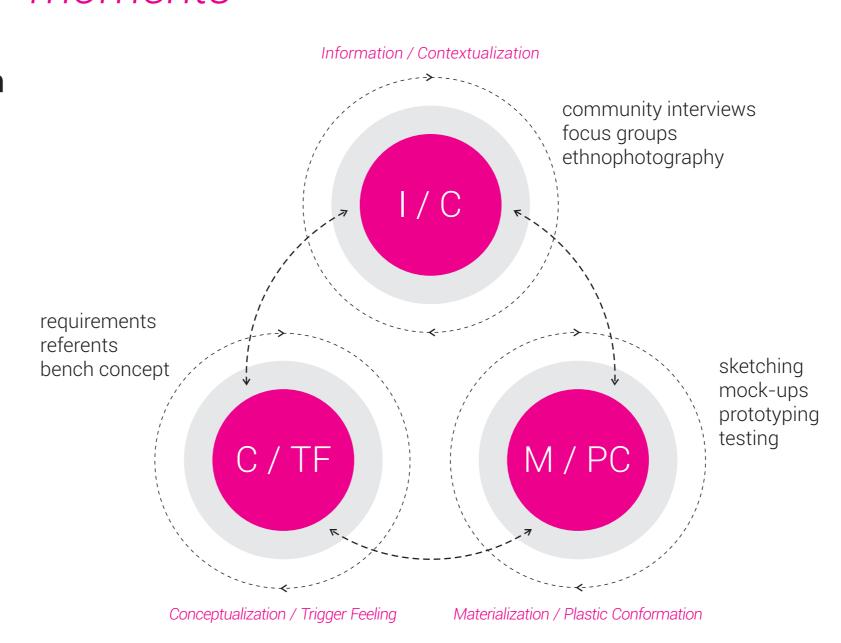
Universidad de Nariño

### Facartes MOB

The main purpose of this project is to develop a proposal for the use of common areas at the University of Nariño through alternative furniture, based on an analysis of the conditions in its School of Arts.



## Research-creation moments



Facartes Mob project is guided by the perspective known as **Research-Creation** (*Investigación Creación*).

Research-Creation is defined as one of the processes for generating new knowledge, feasible within the research environment of creative disciplines. It operates within the political, economic, and social framework of contemporary academic research. In this model, new knowledge is inherently tied to a creation whose plastic (formal/artistic), experiential, and cognitive characteristics exist in an immanent state.

(Ballesteros & Beltrán, 2018, p 35-36)



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