



Architects. Design Studio

Archipel Zéro. Frédéric Denise
Bellastock. Mathilde de Billet, Clara Bergia

Collaborators. Design office

LABO Conseil. Steven Bolzer, Fouad Dhimine,
Frédéric Abrantes
Cesbron. Christian Rabin, Benoît Simonnet,
Arnaud Roussiere

Client

NOVAEDIA. Idiatou Diallo, Mohamed Gnabaly

Consultants

SOCOTEC. Control office, Thomas Peron
VERITAS. Health and Safety Coordinator, Jean-
Claude Dessaint

Contractor. Construction companies

Colas, Dubrac TP, Sylva Métal, Bois2bout, Depuis 1920,
Cesbron-Dalkia Froid Solutions, Rainbow Ecosystem,
Portelec, 3C, S2A, Gaillat, AF Rénovation, Renov
Consulting, Terraterre (Clay brick), Clotures Mantaises,
Malingue, cpi 95, Déco Store

Start and Completion Year

2018 (Competition), 2019 -2020

Gross Area

1 883 m²

Sustainable and healthy materials or systems

Clay brick and wood construction

Photography

Archipel Zéro. Frédéric Denise

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[More information](#)

La Ferme des Possibles. **Agricultural Social Cooperative**

Cooperativa social agrícola

Cooperativa social agrícola

Stains, France, 2020

Archipel Zéro. Frédéric Denise

REPORT. Sustainable and Healthy Architecture

Context

La Ferme des Possibles is an agricultural social enterprise cooperative, launched in 2020 in Stains, north of Paris. It aims to promote a social and solidarity-based economy in a disadvantaged area by training disabled workers and underprivileged youth in future-oriented careers, while developing activities centered around well-being and health food. In line with the cooperative's practices, inspired by permaculture and in harmony with its environment, the building was designed using bioclimatic and low-tech principles, incorporating **bio-based and geo-sourced materials**, as well as locally reused materials. It combines both low-tech and high-tech solutions: natural ventilation, a Trombe wall, straw insulation, and raw earth coating coexist with laboratories and a thermo-fridge-pump system.

The building integrates in its neighborhood by scaling to the large volumes of the adjacent industrial area and the materiality of nearby detached houses, featuring white plaster facades and a terracotta tile roof.

Architectural Description

The architectural concept is based on a simple volume, inspired by a local traditional farmhouse, with transparent facades that expose its materiality—reused materials, wood, earth, and straw.

The ground floor houses logistics and production spaces, including storage, packaging, a laboratory-kitchen, and a cafeteria. The upper floor contains offices, training rooms, and meeting spaces. The layout follows a north-south orientation with a clear functional flow, ensuring a seamless transition from goods reception to finished product distribution, while avoiding cross-contamination between clean and dirty areas. The distribution spaces along the facades serve as unheated buffer zones, benefiting from bioclimatic regulation: solar gains in winter, shading in summer, and natural ventilation.

Materiality and Participation

The building features a wooden structure with glued-laminated timber frames and CLT floors, all made from French forest wood. The insulating facades are made of prefabricated wooden panels filled with compressed straw and coated with raw earth coating on both sides. The glazed facades incorporate reclaimed single-glazed wooden windows sourced from the neighborhood.

The excavated soil was repurposed for the finishing plasters, mixed with cellulose fibers from construction-site cardboard waste, a process I developed for this project. This earth was also mixed with recycled crushed concrete to construct a rammed-earth bar. This work with the site's soil, a nourishing matrix, was carried out through participatory workshops involving future users, neighbors, and volunteers from diverse backgrounds.

The goal was to promote sustainable, replicable practices using local materials, fostering trades of the future.

Low-Tech / High-Tech

The offices and meeting rooms are naturally ventilated through the buffer spaces. A Trombe wall made of reclaimed compressed earth bricks helps heat and cool the restaurant on the south side while preserving the privacy of neighboring homes.

Finally, a thermo-fridge-pump system recovers cooling energy from the kitchen to heat the offices.

Reuse / Adaptability / Reversibility

The building's design prioritizes healthy materials and reversible construction methods, anticipating changes in use and potential future deconstruction. The wooden structure, CLT floors, and straw-filled panels are all assembled using bolted connectors. Reused materials account for 17% of the building mass, and with bio-based and geo-sourced materials, represent over 90% of the total mass (excluding foundations).