

FAIRE

Within the scope of the call-for-projects FAIRE* run by Pavillon de l'Arsenal, we were selected in April 2017 to develop a think-tank for inventing new methods of hosting biodiversity in the urban environment. Following upon our research experience for the Boulogne school, we wish to develop a system of durable façades that evolve over time and allow the perennial habitation of local fauna and flora without the need for maintenance or technical savoir-faire. This means rethinking our relationship with the building envelope so that it welcomes instead of blocking nature while maintaining its necessary thermal and structural performance.



*FAIRE / First accelerator for urban projects and innovative architecture / Destined for architects engaged in research, whether experienced or not, as well as students and architecture schools. FAIRE aims to accelerate the hatching of new architectural and urban practices by facilitating the realisation of large-scale prototypes for Grand Paris. The use of applied research, new processes, materials and methods of construction are encouraged.

**FAIRE : To make, or to do; to play, to make happen, to come about and to last.

A Team

The research team is composed of members who have each within their own domains tested and carried out methodologies on enhancing biodiversity. Because of this experience, we are already equipped already with a set of tools which allows us today to set the necessary conditions to create a new prototype of urban biodiversity.

ChartierDalix
Architects / designers

Philippe Clergeau
Professor at the Natural History Museum, Paris / Urban Ecology consultant

NatureParif
Regional research unit for nature and biodiversity

Topager
Urban farming enterprise

A first partner:

The company CEMEX, a major producer of cement, aggregates, and concrete has shown particular interest in the project and a close collaboration has been proposed with their Research and Development lab.

The idea to create a first set of prototypes which allow us to envision the particularities and advantages of concrete: manipulability, integration of structural, thermal and vegetal elements, possibility to fabricate hybrid structures, integration of organic and innovative materials.

We have since initiated a first series of studies at the CEMEX Swiss research laboratory.





Experience of the Lab

Our trip to the CEMEX research laboratory in Biel, Switzerland which allowed us to experiment with several types of concrete, integrating pockets of substrate in the concrete casting process and voids to create different accidental spaces and conditions for growth of various flora and fauna within the façade.

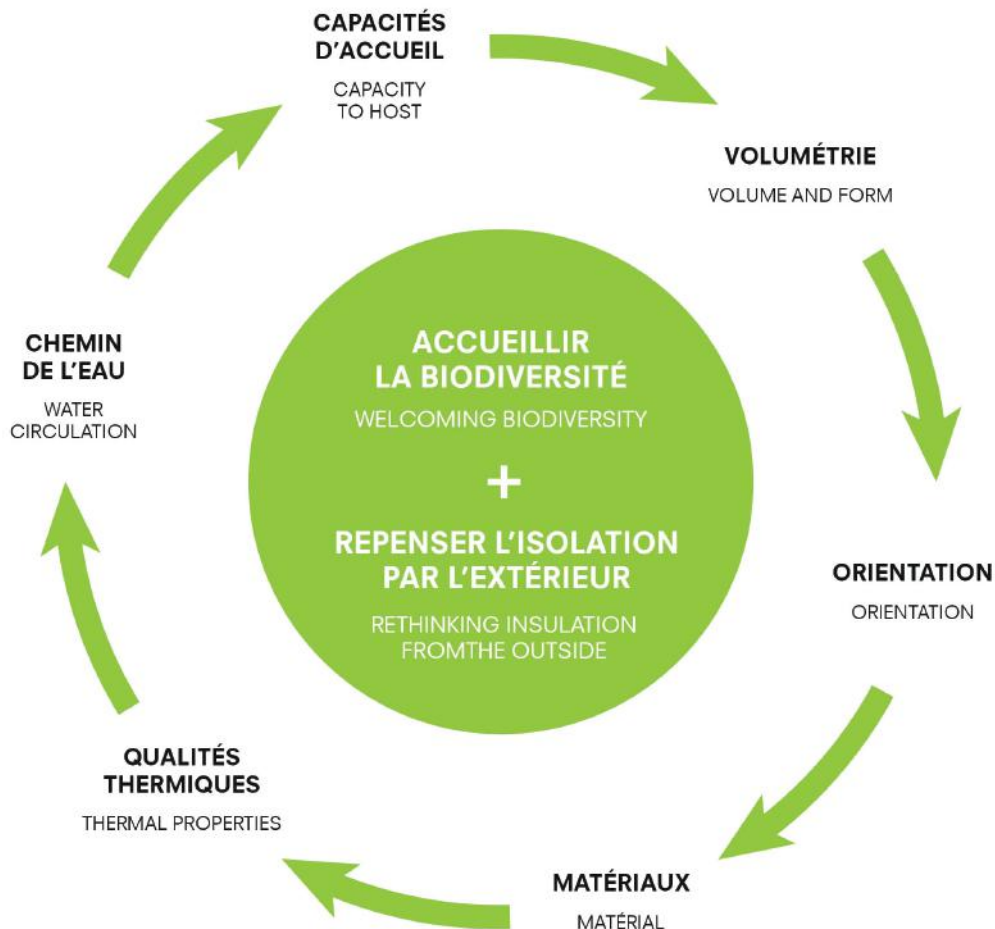
We brought back to Paris the first prototype, fondly named FAIRE. Sliced into two parts, it allows us to follow and observe the germination and evolution of the interconnected vegetal network within these soil balls casted in the concrete.

While we wait...

Before we start the second series of prototypes; we have sown seeds in the FAIRE prototype with the Topager team and we are now observing its evolution.

First observations: the porous concrete used for the exterior layer doesn't allow the water to stay long enough inside the block. With the winter in Paris, the germinated seeds will enter hibernation...

Research diagram: design and material



ACCUEILLIR HOSTING

ASPECT EXTÉRIEUR (DESIGN)
SURFACE D'ACCUEIL

Multiplier les situations d'accueil
(différentes typologies de volumétrie,
accidents et éléments aléatoires)

+ Proposer des scénarios
d'implantation de la biodiversité
(maîtrise des réservations)

= L'esthétique et la composition
Entre maîtrise et aléatoire

EXTERNAL APPEARANCE (DESIGN)
HOST SURFACE

Increasing hosting situations
(different typologies of forms and eventually
accidental and spontaneous situations)

+ Proposing scenarios for
the establishment of the biodiversity
(control of the hollows)

= Aesthetic and composition
Between control and random

NOURRIR FEEDING

COMPOSITION INTÉRIEURE
RECHERCHE D'AUTONOMIE

Le système racinaire puise dans une épaisseur
qui est source de nutriments

Réseau de circulation pour l'eau et le substrat

Capacité de rétention de substrat et d'eau

= Structure en réseau intérieure

INNER COMPOSITION
SEEKING SELF-RELIANCE

The root system draws within the
thickness as a nutrition source

Network for the water circulation and the substrate

Water and substrate holding capacity

= Inner network structure

TENIR / ISOLER STRUCTURE / ISOLATING

EPAISSEUR STRUCTURELLE ET ISOLANTE

STRUCTURAL AND INSULATING THICKNESS

Matériau assurant :
Etanchéité, structure porteuse et isolation

Material ensuring :
Waterproofing, bearing structure and insulation

