

2013 Gnanli Landrou did his Master Thesis at EPFL in Lausanne.



He joined the sustainable construction team at ETH Zürich, led by Prof. Dr. Guillaume Habert as PhD candidate.



2014

His research: "Development of Self-Compacting Clays based Concrete", funded by SNSF deals with transfer of self-compacting concrete knowledge and Direct Coagulation Casting (DCC) technologies process into earth as building materials in order to develop a castable earth concrete: an eco-friendly alternative for concrete.



2015

2016

He joined as teaching assistant the Learning event in Ouagadougou - Burkina Faso: "Matériaux de construction et habitat durable dans le contexte sahélien".

He attended the Grounded Materials summer school program at ETH.



2017

Presentation at the "Think earth" exhibition in Zürich. (photo credit: Giulia Celentano)

2018

He finishes his PhD at the chair of Sustainable Construction on the development of self-compacting clay concrete.

Bridge Proof of concept grant awarded.



2019

Start of ETH Pioneer fellowship program.



Dr. Thibault Demoulin join Oxara to lead the product development and the technologies improvement team.

1st cement free concrete demonstrator without reinforcement, also named "Cleancrete": Mixing and casting of 250l of cement free concrete, 1.5 m height and 30 cm thick.



Inno booster grant awarded to further develop the cleancrete product.

They founded "Oxara AG incorporated".

Social development project with: Earth Enable and UN Habitat



2020



Julien Chabanne joins Oxara. He leads the architectural application of Cleancrete®.

2nd Demonstrator: Mixing and casting of 15m³ of Cleancrete®: 3 m height and 25 cm thick walls.



Dr. Francesco Caruso, analytical chemist joins Oxara. He supports us in the formulation of the admixtures, in identifying and securing raw material suppliers. He is also the founder of the Magic of Chemistry: a chemistry show with educational purposes.



Roland Weippert joins Oxara, he leads the Management and the Business development.



Letizia Caderas and Jonathan Ensslin, ETHZ master students in Civil Engineering, joined Oxara in our journey to understand the mechanisms at play in the strength and the shrinkage of earth-based materials.



They co-authored a master thesis entitled: "A Theoretical Study on the Origin and Mitigation Strategies of Shrinkage in Earth-Based Construction Materials".



De Vigier startup award and SEIF awards: a huge financial support that help us in growing the team.



2021

Product optimization, certification and DACH market entry.

Potential implementation projects in Switzerland, Austria and Portugal.

2025

Further admixture development.



2030

Transform the earth building market into sustainable & affordable global housing solution.

FROM RESEARCH TO INDUSTRY: ON THE WAY TO IMPLEMENT POURED EARTH CONCRETE WITHOUT CEMENT

Poured earth concrete is a relatively novel material that combines the properties of earth with the processing advantages of concrete. Its consistency is viscous to liquid, that makes it castable in a formwork; however, its large shrinkage and lower early-age strength compared to rammed earth or adobe are so far, to the best of the authors knowledge, always compensated by the addition of cement. This gives the possibility of removing the formwork earlier and allows the subsequent drying of the material, but comes with an environmental cost that sometimes justifies its appellation of "low quality cement concrete".

On the other hand, new knowledge on the mechanisms of stabilization of clay is emerging. Research undertaken in the chair of Sustainable Construction in ETH Zurich, in Switzerland, demonstrated the usefulness of mineral additives in the stabilization process and its potential application in poured earth concrete. Oxara, a spin-off of ETH Zurich, is now bringing this technology to the market.

OXARA VISION

As a value and purpose-driven company, Oxara aims at enabling access to sustainable and affordable housing. Its strategy is based on three pillars:

Take advantage of the immense excavation waste.

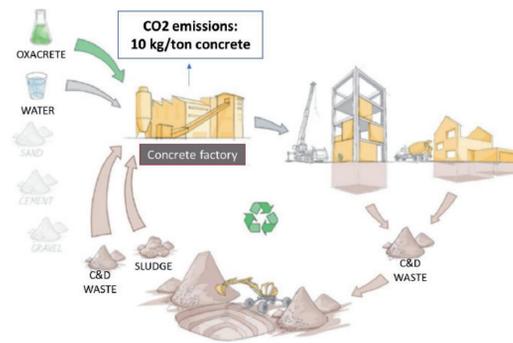
Billion of tons of excavation materials are landfilled every year. Oxara transforms these excavation wastes into valuable resources and produces sustainable building materials via a patented admixture technology.

Develop a future-oriented construction industry and circular economy.

The admixture technology gives earthen material all of the processing advantages of concrete, but at a cost significantly cheaper and 20 times more eco-friendly.

Enable access to affordable housing.

Two billion people lack access to decent and dignified affordable housing. The use of appropriate technology, locally available resources and collaboration with local partners are key to achieving our vision.

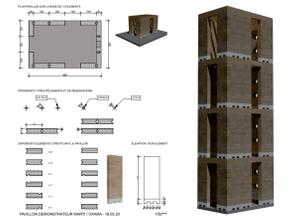
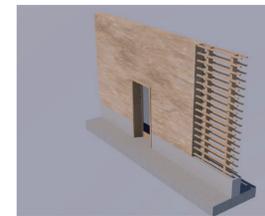
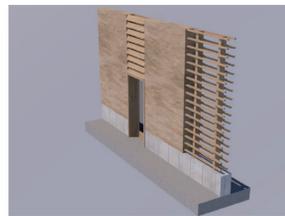
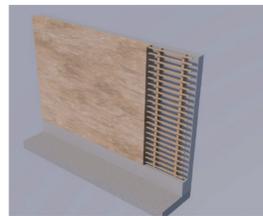


FROM LARGE-SCALE DEMONSTRATORS ...

Exploring architectural design and technical solutions



Exploring architectural design and solutions for different project



... TO MARKET IMPLEMENTATION

Join us on our journey to make cement-free concrete available to everyone!

If you are architect, construction company or stakeholder, we are providing opportunities to test our technology with your excavation material and to define together technical solutions.

To institutions working on certification of earthen products, we are looking to collaborate to define procedures to industrialize earthen construction.

To everyone interested in creating a sustainable future one home at a time, we are looking for impact-driven and creative people.



More about us Follow us on LinkedIn

