ECO HOTEL
CONCEPT DESIGN PRESENTATION

Emma Ughetti & Romane Gérodolle - Interdisciplinary Project
INTRODUCTION | SITE

Site plan
ARCHITECTURAL PART | I. A multi-layers building

PROGRAM

- Restaurant & kitchen/ Bar / Coffee
- Common areas
- Reception and lobby
- Rooms
- Storage and offices
- Parking
ARCHITECTURAL PART | I. A multi-layers building

Car parking

Ground floor (reception)
ARCHITECTURAL PART | 1. A multi-layers building

Current floor (rooms)

Top floor (restaurant)
ARCHITECTURAL PART | II. Traditional circulation

Natural lighting

Lateral section
TECHNICAL PART | I. A sustainable operation (energy)

A GEOTHERMAL HEAT PUMP WITH CEILING HEATING & COOLING

THEORETICALLY

IN THE PROJECT
We want to do an Heating/Cooling by the ceiling and we have a concrete structure -->

**Contec concrete core activation (uponor):**
- The inserted pipes utilize the concrete mass to store and exchange thermal energy.
- The Uponor Contec system is cost efficient due to lower investment, maintenance costs and low life cycle cost.
I. A sustainable operation (energy)

**COMBINE WITH PHOTOVOLTAIC GLASS PANNELS**

- Combine with heat pump: fully sustainable
- Orientation: West
- Invisible design: integrated in window (natural light as a conventional architectural glass)
- Material: PV Glass, made of two or more panes of heat treated
- An energy-generating device: capturing the sunlight and transforming it into electricity
- Examples:
II. Structure and materials

Concrete
20 cm

Insulating
12 cm

Brick covering
3 cm
III. The openings

Reference: Vella School extension by Bearth & Deplazes Architects

- Obliques bays: allows to get better the sun’s rays
- Different inclination on the façades: playing with the orientation
I. INNER VIEW OF THE RESTAURANT