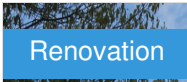



# Headquarters of Groupama Paris Val de Loire

by Annick Worobel / 2017-05-18 17:53:36 / France / 8472 / FR

**Primary energy need :**

56.4 kWhep/m<sup>2</sup>.an

(Calculation method : RT existant)

**ENERGY CONSUMPTION**

Consumption Range (kWh/m <sup>2</sup> .an)	Grade
< 50	A
51 à 90	B
91 à 150	C
151 à 230	D
231 à 330	E
331 à 450	F
> 450	G

*Building* B

*Economical building* (A, B, C) | *Energy-intensive building* (D, E, F, G)

**Building Type** : Office building < 28m  
**Construction Year** : 1970  
**Delivery year** : 2017  
**Address 1 - street** : 89000 AUXERRE, France  
**Climate zone** : [Cfb] Marine Mild Winter, warm summer, no dry season.

---

**Net Floor Area** : 3 579 m<sup>2</sup> SHON RT  
**Construction/refurbishment cost** : 2 565 000 €  
**Cost/m2** : 716.68 €/m<sup>2</sup>

## General information

New image and beautiful "overall" performance for this 70s office building where no heavy work had been done since its construction and which presented such discomforts that it became "unusable".

- Complete recovery of the insulation of the envelope, its airtightness and thermal bridges.
- Development of shared areas on the garden level for training with installation of LED luminaires running on presence and graduation of the luminosity.
- Development of co-working spaces on the ground floor with specific acoustic study. Independent spaces mutualisable with the outside wooden terrace.
- Release of the R + 2 shelf for tenants and / or co-owners with full accessibility of the site and independent management.

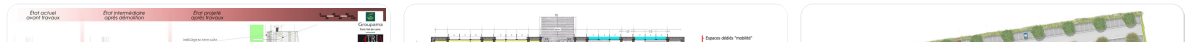
### Sustainable development approach of the project owner

1. Make buildings compliant with current regulations.  Accessibility  Fire  Asbestos
2. Bring these buildings delivered in the 1970s (45 years) to the levels of performance, comfort, ease of operation and operating costs of a new building.  Work on their envelopes and facades, heating solutions and evaluate their costs.
3. Provide working conditions consistent with the activities housed in the building (offices, call center, meeting, shop window ...):  Allow for evolutions.  Make this building attractive.  Make new digital solutions possible.
4. Examine the solutions of pooling of spaces and resources.  Flexibility of use.  Savings.
5. Making these buildings valuable to their heritage.

### Architectural description

New image and beautiful "overall" performance for this 70s office building where no heavy work had been done since its construction and which presented such discomforts that it became "unusable". Complete recovery of the insulation of the envelope, its airtightness and thermal bridges: • Wooden tunnel walls of the existing structure for busy site intervention and encapsulation of asbestos products. Insulation distributed in these 42cm coat walls. • Exterior insulated exterior walls of minimum 20cm, removing all thermal bridges from the existing post / concrete beam structure. • Terracotta shingle finish for resistance, maintenance and the "earth" side for the Cité de l'Agriculture et des services. • Double-breaking aluminum jointed joinery  $U_f = 1,1$  with high-performance double glazing. • Complete renovation of roof terraces with 240mm polyurethane and treatment of acroteres. Then, implementation of "comfort and health" solutions - summer heat - by double-stream ventilation with 2 plants per level and management of bioclimatic facades by solar protection: • Horizontal sunlight breezes on individual management and centralized by sun sensor to avoid summer overheating by wind sensor to wind up the blinds in case of strong wind and hourly programming to secure the building at night. • Vertical and colored vertical sunscreens create masks while animating the facades. Energy performance achieved at the level of a new building: • Factor 5 for consumption on all items, ie 289 to 56.4 kWh / m<sup>2</sup>.an. • Factor 10 for heating consumption, ie 245.8 to 24.9 kWh / m<sup>2</sup>.an. O Decrease by 50% of heating surfaces. Development of shared areas on the garden level for training with installation of LED luminaires running on presence and graduation of the luminosity. Development of co-working spaces on the ground floor with specific acoustic study. Independent spaces mutualisable with the outside wooden terrace. Release of the R + 2 shelf for tenants and / or co-owners with full accessibility of the site and independent management.

## See more details about this project



Stakeholders

### Stakeholders

**Function :** Designer

ATRIA Architectes

Jean-Pierre Bosquet et Annick Worobel; aworobel@atria-archi.com

<http://www.atria-archi.com>

Architect

**Function :** Thermal consultancy agency

Via Positive

Dusan Novakov; contact@viapositive.com

<http://www.viapositive.com>

Study office Thermal, heating and ventilation

**Function :** Contractor

Groupama Paris Val de Loire

Alain Boisfard; aboisfard@groupama-pvl.fr

<https://www.groupama.fr/web/pvl>

Manager Regional Logistics Jobs

**Function :** Manufacturer

Terreal

Lionel GARCIA; lionel.garcia@terreal.com

<http://www.terreal.com/>

Clay Shingles

**Function :** Company

Gebat Construction

Georges Miranda et Sébastien Gomes; accueil@gebat.fr

<http://www.gebat-constructions.fr/>

Outdoor thermal insulation

**Function :** Company

Vaucouleur SARL

Davis Vaucouleur

<http://vaucouleur.sarl.free.fr/>

Timber frame and cladding

## Type of market

Global performance contract

## Energy

### Energy consumption

Primary energy need : 56,40 kWhep/m<sup>2</sup>.an

Primary energy need for standard building : 107,40 kWhep/m<sup>2</sup>.an

Calculation method : RT existant

Breakdown for energy consumption : CEP Heating: 24.9 kWh / m<sup>2</sup>.an CEP cooling: 1.3 kWh / m<sup>2</sup>.an CEP DHW: 3.2 kWh / m<sup>2</sup>.an CEP Lighting: 14.8 kWh / m<sup>2</sup>.an CEP Ventilation: 9.6 kWh / m<sup>2</sup>.an CEP Auxiliaries: 2.6 kWh / m<sup>2</sup>.an CEP Photovoltaic: 0.0 kWh / m<sup>2</sup>.an

Initial consumption : 289,00 kWhep/m<sup>2</sup>.an

### Real final energy consumption

Final Energy : 56,40 kWh/m<sup>2</sup>.an

### Envelope performance

Envelope U-Value : 0,60 W.m<sup>-2</sup>.K<sup>-1</sup>

More information :

Wall R-1 exterior - coated ITE:

260 mm of concrete insulated with 200 mm of PSE Th32

U-value: 0.152 W / m<sup>2</sup>K

Wall RDC to R + 2 terracotta facing - metal sheet:

Wooden tunnel walls of the existing structure for occupied site intervention and encapsulation of asbestos products. Insulation distributed in these 420 mm coat walls.

Exterior walls insulated from the outside by 120 mm of glass wool + 80 mm of rockwool.

U-value: 0.08 W / m<sup>2</sup>K

Wall RDC to R + 2 patio - ITE coated:

200 mm of concrete insulated with 200 mm of PSE Th32

U-value: 0.153 W / m<sup>2</sup>K

Wall RDC to R + 2 patio coated - sheet steel:

Wooden tunnel walls of the existing structure for occupied site intervention and encapsulation of asbestos products. Insulation distributed in these 420 mm coat walls.

Exterior insulated walls of 200 mm PSE Th32.

U-value: 0.069 W / m<sup>2</sup>K

Wall RDC to R + 2 patio - ITE coated:

200 mm of concrete insulated with 200 mm of PSE Th32

U-value: 0.153 W / m<sup>2</sup>K

Roofing:

Existing concrete slab of 200 mm insulated by 2 \* 120 mm of polyurethane, lambda 0,023.

U-value: 0.095 W / m<sup>2</sup>K

Exterior wood furnishings :

Aluminum joinery thermal bridge breaker and double glazing - Schuco AWS75.II

Average Uw: 1.3 W / m<sup>2</sup>K

Ug glazing: 1.0 W / m<sup>2</sup>K

Insert: 0.04 W / mK

Solar factor: G = 46%

Building Compactness Coefficient : 1,17

Indicator : EN 13829 - n50 » (en 1/h-1)

## Renewables & systems

### Systems

#### Heating system :

- Gas boiler
- Water radiator

#### Hot water system :

- Individual electric boiler

#### Cooling system :

- VRV Syst. (Variable refrigerant Volume)

#### Ventilation system :

- Double flow heat exchanger

#### Renewable systems :

- No renewable energy systems

## Smart Building

#### BMS :

Dynamic front

## Environment

### Urban environment

Land plot area : 7 688,00 m<sup>2</sup>

Green space : 1 732,00

Site comprising 3 headquarters built in the years 67 and 70 in the heart of a residential area grouping together individual and collective housing.

## Products

### Product

Zephyr evolution

Terreal

lionel.garcia@terreal.com

<http://www.terreal.com/>

Product category : Gros œuvre / Structure, maçonnerie, façade

The oldest building material in the world, terracotta is obtained by the firing of clay. It is this natural raw material that gives it its strengths.

- Economical and lightweight
- Durable and maintenance-free
- Simple and fast rail mounting
- Simple, long-skinned cladding: up to 150 cm

In total agreement with the site "The City of Agriculture and Services"

---

ASW 75 II

Schüco

Jean-Marc GAUDARD; jmgaudard@schueco.com

<https://www.schueco.com/web2/fr>

Product category : Second œuvre / Menuiseries extérieures

Aluminum joinery thermal bridge breaker and double glazing - Schuco AWS75.II

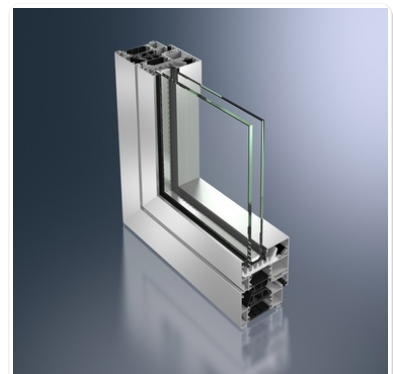
Average Uw: 1.3 W / m<sup>2</sup>K

Ug glazing: 1.0 W / m<sup>2</sup>K

Insert: 0.04 W / mK

Solar factor: G = 46%

Well accepted



## Costs

### Construction and exploitation costs

Cost of studies : 295 000 €

Total cost of the building : 2 565 000 €

### Energy bill

Forecasted energy bill/year : 7 500,00 €

Real energy cost/m<sup>2</sup> : 2.1

Real energy cost/Work station : 50

## Carbon

### GHG emissions

GHG in use : 8,00 KgCO<sub>2</sub>/m<sup>2</sup>/an

Methodology used :

THCex Regulatory Calculation Methodology

## Contest

### Building candidate in the category



Energie & Climats Tempérés



Coup de Cœur des Internautes



