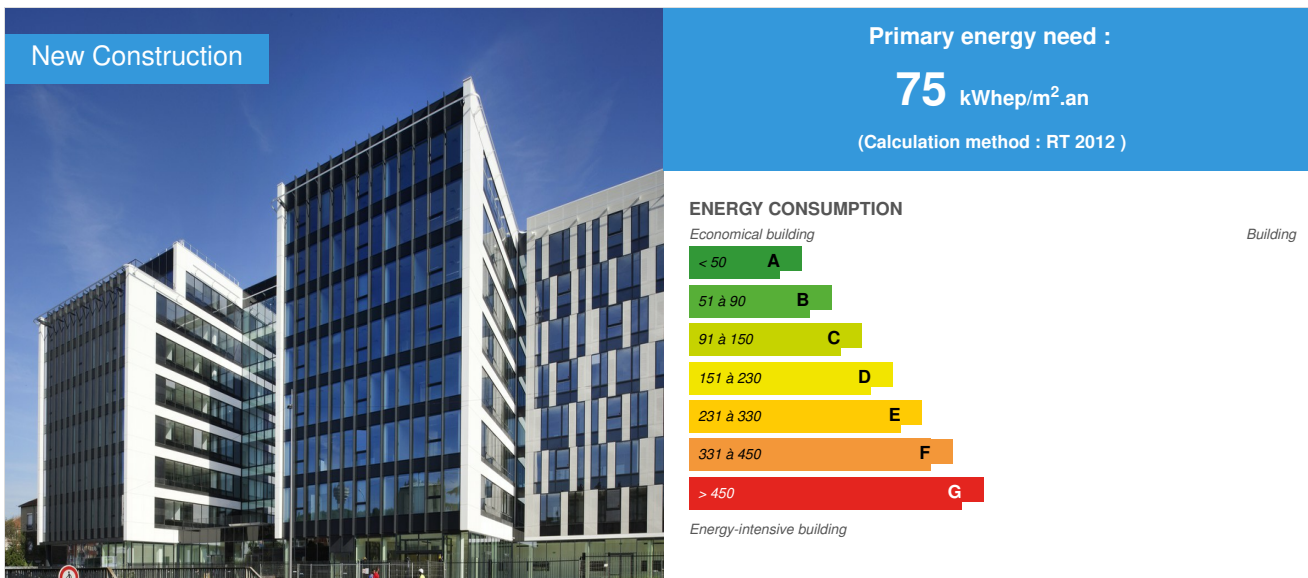


## Luminem

by Amandine Guillaume / 2017-11-01 00:00:00 / France / 8801 / FR



**Building Type** : Office building < 28m  
**Construction Year** : 2017  
**Delivery year** : 2017  
**Address 1 - street** : 19 rue de Paris 93008 BOBIGNY, France  
**Climate zone** : [Cfb] Marine Mild Winter, warm summer, no dry season.

**Net Floor Area** : 18 000 m<sup>2</sup>  
**Construction/refurbishment cost** : 30 780 000 €  
**Cost/m2** : 1710 €/m<sup>2</sup>

**Certifications :**



**breeam**

### General informations

#### Luminem, a building in the heart of the ZAC Ecocité of the Ourcq canal in Bobigny

As part of the territorial development policy implemented throughout Greater Paris, economic dynamism has become a key asset for the growth of the North-East of Paris. The development of this territory, which has undeniable resources, definitely opens the field of possibilities in terms of economic development, attractiveness and growth. BNP Paribas Immobilier and GA Smart Building are co-promoting the SCI Bobigny Ecocité for the development of the island Raymond Queneau on the ZAC Ecocité of the Ourcq canal in Bobigny. This project, designed by the architectural firm François Leclercq, consists of two office buildings, for a total floor area of 32,448m<sup>2</sup>. Luminem & Irrigo are part of this positive logic of reappropriation of this north-eastern Parisian territory by major players in the economy, communities, developers and companies. These buildings are at the heart of an exceptional project to create an "eco-city" on the banks of the Ourcq Canal.

The objective of the Ecocity is to bring out the potential of this territory and create an economically dynamic and value-creating environment. With sustainable development as a guiding principle, the eco-city is destined to become a hub of urban centrality, offering mixed and complementary uses (offices, housing, shops, etc.) aiming at environmental exemplarity.

On the other side of Paris Avenue, a village of 90 shops will open in 2017, in the restored stables of the Horloge district. This outlet is the commercial part of a development comprising 1,200 housing units (townhouses and buildings), whose work begins in 2015. Luminem & Irrigo, the first two office buildings of the Ecocité du Canal de l'Ourcq which , ultimately, will represent on 20 hectares:

- 140,000 m2 of offices
- 7,000 m2 of local shops
- 50,000 m2 of tertiary activities
- 200 housing units
- 8,000 m2 of public facilities
- 20,000 m2 of public spaces.

#### A sustainable construction approach

The Project Management SCI Bobigny Ecocité, represented by BNP Paribas Immobilier and GA Smart Building, has programmed the construction of the property complex on the island Raymond Queneau, on the ZAC Ecocité Canal Ourcq. The will of SCI BOBIGNY ECOCITE is to propose an attractive building in the heart of a particularly dynamic zone in full renewal and presenting remarkable potential of development. This objective requires focusing the project on the relationship of the building with its immediate environment. Particular emphasis is placed on the accessibility and treatment of outdoor spaces. The integration of the building in the urban environment is a priority. In addition, the location of the site, the environment is quite sensitive to nuisance. Therefore, the construction of a low- nuisance construction site also becomes a priority.

To make this building attractive, the SCI BOBIGNY ECOCITE particularly wishes to guarantee a very good management in the operating phase by facilitating the maintenance and the maintenance. The management of energy and thermal comfort are parameters that SCI BOBIGNY ECOCITE wishes to optimize in order to guarantee an economical and efficient building. Emphasis is also placed on the importance of ensuring a level of comfort and quality of indoor spaces for future users. In terms of energy performance, Luminem has a 30% reduction target for energy consumption compared to the 2012 Thermal Regulation criteria. Luminem has been certified NF Tertiary Building - HQE approach, the BREEAM Excellent certification is in progress.

Realized in co-promotion with BNP Paris Real Estate, Luminem was sold to CCMSA (Caisse Centrale Mutual Social Agricultural), which installed its employees in September 2017.

## Sustainable development approach of the project owner

Luminem has been designed to participate in the quality of daily life of their users, so the heart of the site is enhanced by two large private gardens, with a variety of plants to promote biodiversity. The program has been designed to take full advantage of the panorama offered by the banks of the Canal de l'Ourcq. A guarantee of energy performance of Luminem & Irrigo is delivered by the manufacturer. Luminem is part of an environmental approach aimed at developing a sustainable housing complex with high ambitions. Respecting the logic initiated by the development project in terms of reducing the ecological footprint, Luminem was conceived within the framework of an Energy Performance Contract issued by the manufacturer. From the design of buildings to their mode of operation, the site is fully in line with the logic of sustainable development and control of energy expenditure. It allows a 30% reduction in energy consumption compared to the criteria of the 2012 thermal regulation. By promoting eco-construction and eco-management, Luminem is committed to controlling environmental impacts, in line with the philosophy Sustainable Ecocity. This ecological and responsible approach is also a reflection of the values and ethics of the companies that will be established there.

## Architectural description

The architectural ensemble, which combines aluminum, glass and concrete, is articulated around a vast vegetal island composed of two private gardens on more than one hectare of ground. Coming from an alliance of concrete, aluminum and glass panels, François Leclercq's architectural signature is as contemporary as it is aesthetic. The different typologies of air treatment modules, vertical or horizontal, manufactured by Equilab, give facades more architectural diversity.

## See more details about this project

<http://www.ga.fr/newsroom/bnp-paribas-real-estate-et-ga-smart-building-viennent-dinaugurer-luminem-le-nouveau-siege>

### Stakeholders

#### Stakeholders

Function : Contractor

SCI bobigny ecocité

Co-promotion

Function : Contractor

BNP Paribas Immobilier

[https://www.realestate.bnpparibas.fr/bnppre/fr/bnp-paribas-real-estate-france-cfo4\\_8512.html](https://www.realestate.bnpparibas.fr/bnppre/fr/bnp-paribas-real-estate-france-cfo4_8512.html)

Co-promotion

Function : Construction Manager

GA smart building

<http://www.ga.fr/>

Co-promotion

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Function : Assistance to the Contracting Authority

GreenAffair

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

AMO HQE

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Function : Designer

François Leclercq Architectes

agence@francoisleclercq.fr

<http://www.francoisleclercq.fr/>

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Function : Construction company

GA

<http://www.ga.fr/>

General Enterprise

## Energy

### Energy consumption

Primary energy need : 75,00 kWhep/m<sup>2</sup>.an

Primary energy need for standard building : 117,00 kWhep/m<sup>2</sup>.an

Calculation method : RT 2012

### Real final energy consumption

Final Energy : 83,60 kWh<sub>eff</sub>/m<sup>2</sup>.an

### Envelope performance

More information :

Alliance concrete, aluminum, glass panels.

- The concrete facades are insulated from the inside with 120mm of low VOC glass wool.
- The floor noses are treated by a continuity of insulation to remove the thermal bridge.
- Aluminum joinery with triple layer of glass is equipped with integrated blinds.
- The double glazed curtain walls are equipped with interior venetian blinds.
- The blinds are controlled by the GTC.
- The roof is insulated from the outside with polyurethane.

### More information

In terms of energy performance, Luminem has a target of reducing energy consumption by 30% compared to the criteria of the 2012 Thermal Regulation.

## Renewables & systems

### Systems

Heating system :

- Heat pump

Hot water system :

- Individual electric boiler
- Heat pump

#### Cooling system :

- Reversible heat pump

#### Ventilation system :

- Double flow heat exchanger

#### Renewable systems :

- Solar photovoltaic
- Solar Thermal

Renewable energy production : 9,30 %

Installation of photovoltaic panels on 378 m<sup>2</sup>, and thermal solar panels for RIE Hot Water.

## Smart Building

#### BMS :

By its complexity and the great diversity of the speakers, Luminem is a true showcase of GA's know-how. First team to go on the track in September 2015, the GA design office created the digital model of the project in FullBIM. Various elements have subsequently been prefabricated in our factories, such as concrete elements, glazed frames or air handling modules.

GA has created Active Management of Computerized Energy Performance (GAPÉO®). This innovative technology combines the use of high-performance equipment with a Computer-Centrally Controlled Technical Management (CGM), which reduces the operating costs of buildings, thanks to a streamlined use of energy, while ensuring a high level of comfort. 'use. GA has launched MyGapéo®, the first remote individualized energy management system that allows you to control your desktop from a PC, tablet or smartphone and track overall consumption using a statistical tool.

## Environment

### Urban environment

The project is part of the development project of the district between the RN3 and the Ourcq Canal in mixed ZAC including activities and housing: ZAC ECOCITE in BOBIGNY (93). The construction of this block will be made in coherence with the provisions and adjustments envisaged by the Sustainable Development approach committed on the scale of the ZAC, formalized by the environmental prescriptions of the developer Séquano Aménagement. The plot is located in the western part of the ZAC Ecocité-Canal de l'Ourcq, between the limits of Pantin in the West and the future freight port linked to the Syctom project in the East. The island is located in a narrow strip, between avenue and canal, with a width of just under 50 m. The plot represents a total area of 10 756 m<sup>2</sup>. It is an elongated rectangle, oriented East / West. Its largest facades are in the north on the canal and south on the RN3-avenue de Paris. Its flanks are formed in the West by a property line behind which is a building called the "Tôlerie générale", and to the east by the impasse Alphonse MULLER offering a connection between the quays and the Avenue de Paris. The South / West corner of the land is occupied by a small plot, property of the RATP. Accessibility This sector benefits from very good accessibility, by the RN3-avenue de Paris axis, major axis of entry into Paris and by public transport, metro line 5 and the future high-level service bus line on the Avenue. In this project, the implementation of buildings responds, on the one hand, to the specifications of the ZAC, which favors transversal relations between the RN and the canal, and on the other hand to evolutionary functional logics anticipating different ways of using the buildings and finally it takes into account the strong constraint of the metro that crosses the plot diagonally about 8 m under the natural terrain.

## Products

### Product

Gapéo, Active Management of Computer Performance

GA

ga@ga.fr

<http://www.ga.fr/nos-technologies/gapeo>

Product category : Table 'c21\_china.innov\_category' doesn't exist SELECT one.innov\_category AS current,two.innov\_category AS parentFROM innov\_category AS oneINNER JOIN innov\_category AS two ON one.parent\_id = two.idWHERE one.state=1AND one.id = '27'

The Gapéo technical management system, Active Management of Computer Performance, allows to control the comfort and the environmental and energetic performance.



Thanks to Gapéo's centralized technical management system, all equipment designed, built and installed by GA can be controlled from the same point. The control center analyzes the data recorded by the individual devices and sends them instructions. Each space has a level of comfort optimized, according to the wishes and habits of each user. The Gapéo solution also enables the GA Group to commit to a specific energy consumption level with its customers as part of a performance contract.

GAPEO can manage the building according to HQE criteria. A reporting and balance sheet contract for the first year of operation is provided for in the maintenance contract.

## Costs

## Health and comfort

### Indoor Air quality

The air quality was controlled by WESSLING, after a flush-out of 15 days. A tightness check of the networks was carried out for 100% of the installation.

### Comfort

#### Health & comfort :

Favoring the comfort of employees and promoting well-being at work are some of the key words that have shaped the construction of the building. The building is equipped with a corporate restaurant, a cafeteria and also a 300-seat conference area, extended by a terrace with a view of the gardens and the Ourcq canal. Designed to adapt to new forms of work organization, the office trays are spacious and easily adjustable. The spaces benefit from an excellent surface area ratio on the first day, which provides employees with a better quality of life at work. This building privileges the comfort of the CCMSA employees by offering them a unique working environment, with vast, generously glazed, open-to-the-canal office desks, as well as the 2,000 m<sup>2</sup> of green spaces that will connect the two buildings. Luminem also offers a corporate restaurant, a cafeteria, a fitness center and a conference center.

**Measured thermal comfort :** Un thermomètre est installé sur le retour de réseau pour contrôler la température de l'eau.

#### Acoustic comfort :

The technical equipment complies with the standards in force so as to disturb as little as possible the users of the riparian buildings

## Carbon

### GHG emissions

#### Methodology used :

Life cycle analysis

**GHG before use :** 8,30 KgCO<sub>2</sub> /m<sup>2</sup>

## CONTEST

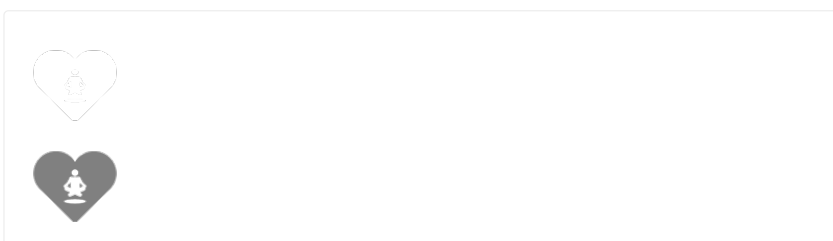
### Reasons for participating in the competition(s)

Designed by Francois Leclercq Architectes Planners and realized by GA Smart Building, Luminem was designed to privilege the comfort of the employees of the CCMSA (Caisse Centrale Mutual Social Agricultural) and promote their well-being at work, offering them a framework single work along the Ourcq Canal in Bobigny.

The 18,000 m<sup>2</sup> office building offers large, highly modular office spaces, designed to adapt to new forms of work organization. The spaces benefit from an excellent surface area ratio on the first day, which provides employees with a better quality of life at work. The search for visual comfort and brightness was central in the design. Luminem offers energizing views of the city's activity and more soothing views of the Ourcq Canal and 2,000 m<sup>2</sup> of green space.

Luminem also offers a 450-seat corporate restaurant, a cafeteria and 300-seat conference space.

### Building candidate in the category



Santé & Confort



Coup de Cœur des Internautes



Prix des Etudiants



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