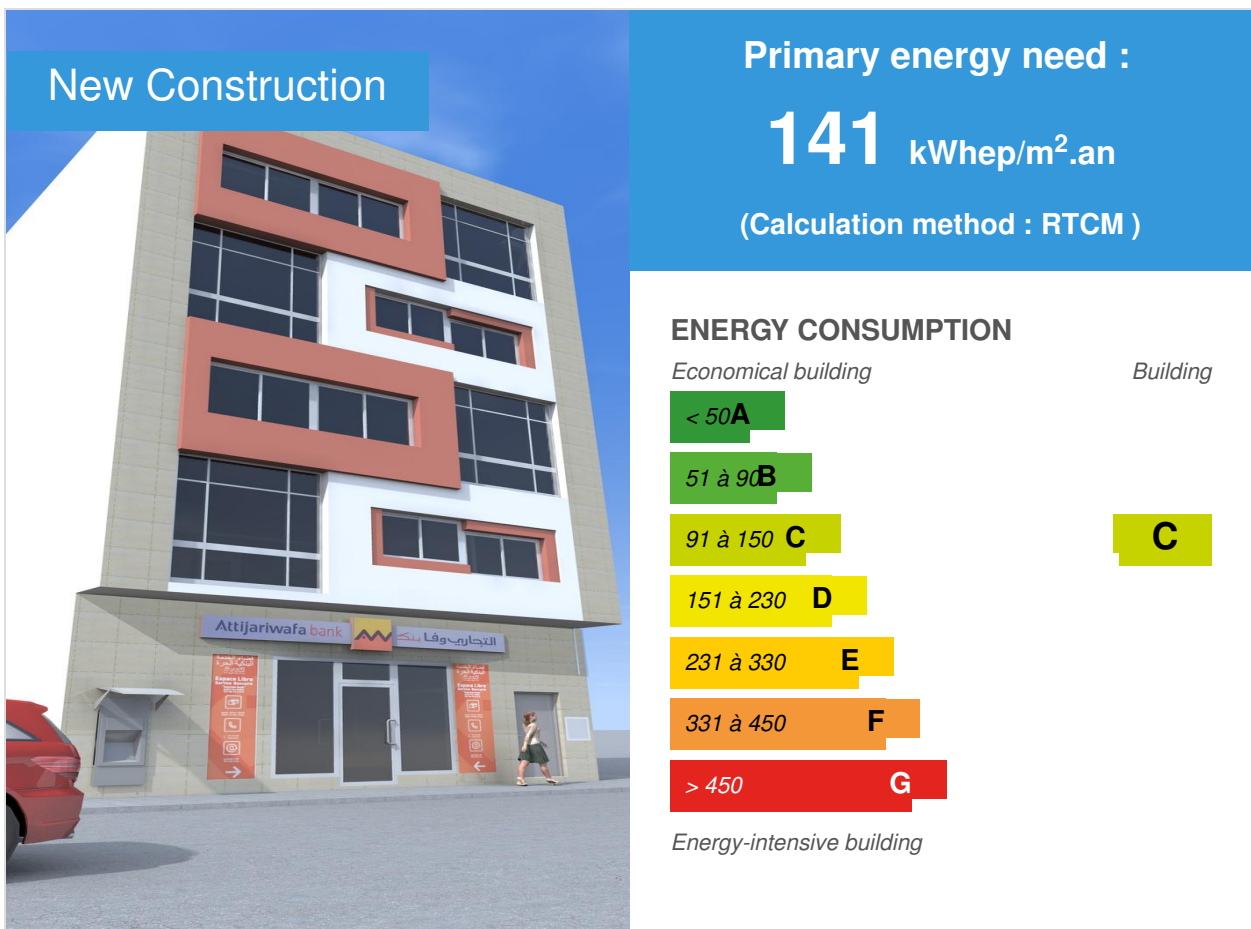


## AttijariWafa Bank Drissia Business Center - Tangier

by Ibtissam GHAZZAR / 2019-06-19 15:34:49 / Maroc / 8092 / FR



**Building Type** : Office building < 28m

**Construction Year** : 2019

**Delivery year** : 2019

**Address 1 - street** : bd Tarik Bnou Zyad, quartier Drissia 90070 TANGER, Maroc

**Climate zone** : [CsC] Interior Mediterranean - Mild & dry summer.

**Net Floor Area** : 528 m<sup>2</sup> SHON RT (fr)

**Construction/refurbishment cost** : 650 000 €

**Cost/m2** : 1231.06 €/m<sup>2</sup>

**Certifications :**



**Proposed by :**



## General information

Being a building built on an environmental approach allowing a low consumption of energy and water, the reduction of atmospheric emissions and waste. This building houses 24 photovoltaic panels on its terraces covering 38% of its final energy needs and 100% of its lighting needs. The choice was also made on a ventilated facade.

## See more details about this project

<https://www.construction21.org/maroc/articles/ma/le-centre-regional-d-attijariwafa-bank-a-tanger-drissia-certifie-hqe-excellent-phase-conception.html>

## Data reliability

Assessor

## Stakeholders

### Contractor

**Name** : ATTIJARIWAFABANK

**Contact** : Soufiane EL BOTI: s.elboti@attijariwafa.com Majda RAIHANI:  
m.raihani@attijariwafa.com

<http://www.attijariwafabank.com>

# Construction Manager

Name : BB Architectes

Contact : Benjelloun Youssef (0661151409)- bb.arch@yahoo.fr

## Stakeholders

Function : Company

BYEROOM

byeroom@gmail.com

<http://WWW.byeroom.com>

Realization of works in accordance with the rules of art and minimizing the production of waste

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Function : Company

Airvent

airvent2007@yahoo.fr

Proposal of eco-friendly and energy efficient air conditioning systems. Ensures the correct installation of systems taking into account the prescribed sealing classes.

## Contracting method

Separate batches

## Owner approach of sustainability

- The Attijariwafa bank group has obtained the accreditation of the Green Climate Fund (GCF) from the United Nations Green Climate Fund (GCF) as a financial intermediary for the implementation of green financing in Africa. the only commercial bank in Africa and the MENA region, and the 7th largest commercial bank in the world to obtain this accreditation with regional coverage. The group stresses that the accreditation marks an important step in the CSR approach and support of the energy transition for Attijariwafa bank and will allow the bank to work in partnership with the Fund to support its public and private clients in their development projects. sustainable development on the African continent, through co-financing or guarantees of large-scale investments with a high impact, which may exceed 250 million US dollars per project.

- With this in mind, the group has set up, among other things, a waste management strategy for all its premises aimed at sorting them at the source and upgrading them by commissioning a sector for the collection and recovery of waste.

## Architectural description

At the level of the facade, the masonry was carried out in double hollow brick partition 9 + 6 holes with incorporation of a thermal insulation of the type of rock wool and this in order to limit the effects of condensation on the outer walls in double partitions. This insulation also has a phonic role and will bring a better comfort to the users of the offices of the building. The facade has been treated with a durable coating in the form of ventilated facade allowing a free flow of air and a containment of water vapor.

The separation of spaces within the building is provided by removable glass partitions which gives the building a great capacity for adaptability and adaptation according to the change of use.

## If you had to do it again?

RAS, since it was an existing building that was demolished and rebuilt in the state of the art considering the energy and environmental aspect

## Energy

### Energy consumption

Primary energy need : 141,00 kWh<sub>ep</sub>/m<sup>2</sup>.an

Primary energy need for standard building : 278,00 kWh<sub>ep</sub>/m<sup>2</sup>.an

Calculation method : RTCM

CEEB : 0.0002

Final Energy : 72,00 kWh<sub>ef</sub>/m<sup>2</sup>.an

Breakdown for energy consumption :

Major consumer stations:

- Lighting: 22,23kWh / m<sup>2</sup>

- HVAC: 26.3 kWh / m<sup>2</sup>

- Other (computer and auxiliary equipment): 32.37 kWh / m<sup>2</sup>

More information :

The photovoltaic panels installed on the roof of the building make it possible to cover the specific consumption of the lighting station and up to more than 30% of the overall consumption of the building.

## Envelope performance

Envelope U-Value :  $1,00 \text{ W.m}^{-2}.\text{K}^{-1}$

More information :

"- The aluminum joinery is executed with double glazing (6/12/6) with profiles with thermal break  $U_g = 1,1 \text{ W / m}^2.\text{K}$ ;  $U_w = 1,6 \text{ W / m}^2.\text{K}$ .

- The roof of the building consists of a solid concrete slab, a thermal insulation made of agglomerated cork of 4cm and a sealing screen vapor barrier and bitumen felt 36s TV. "

## Renewables & systems

### Systems

Heating system :

- Heat pump
- Tape

Hot water system :

- No domestic hot water system

Cooling system :

- Reversible heat pump
- Tape

Ventilation system :

- compensated Air Handling Unit

Renewable systems :

- Solar photovoltaic

Renewable energy production : 38,00 %

The photovoltaic panels have a nominal power of 275Wc.

Solutions enhancing nature free gains :

"- The cladding of the facade is done with a siding made of porcelain stoneware allowing the ventilation of the facade, thus avoiding the overheating of this one and reducing the needs in heating - A powerful glazing makes it possible to reduce the contri

### Smart Building

BMS :

"All the equipment installed is Gtciables (DRV, Photovoltaics, electricity, pump lift, safety equipment, elevator ..).

A GTB installation project is in progress (currently in the study phase), completion forecast for December 2019. "

## Environment

### GHG emissions

GHG in use : 22,00 KgCO<sub>2</sub>/m<sup>2</sup>/an

Methodology used :

Retro-commissioning

### Life Cycle Analysis

Eco-design material :

55% of finishing materials are removable and easy to recycle

80% of the elements of second and structural work have indicators of environmental impact according to the standard EN 15804 / ISO 21930

### Water management

Consumption from water network : 48 088,00 m<sup>3</sup>

Water Consumption/m<sup>2</sup> : 91.08

Water Consumption/Work station : 3699.08

Double control 3 / 6L

Washbasin 0,2 l / s

sink (living space): 0,2 l / s

### Indoor Air quality

The materials and products applied to the project meet the international thresholds for CO<sub>2</sub> emissions inside the premises. 60% of the interior coatings are classified A +.

Gaskets and finishing products have a hygienic character and are anti fungal treated. 80% of products in direct contact with air have emissions of TVOC <1000µg / m<sup>3</sup> and formaldehyde <60µg / m<sup>3</sup>

# Comfort

## Health & comfort :

All offices and coworking spaces have access to daylight and access to outside views.

Air conditioning systems can be individually regulated by the occupants.

## Calculated indoor CO2 concentration :

11 800

**Daylight factor** : le facteur de lumière du jour dépasse 2% dans 80% des locaux occupés régulièrement.

## Products

### Product

Trane - TRV 5G DC Inverter

Trane



<https://www.trane.com/commercial/europe/fr/fr.html>

**Product category** : HVAC, électricité / ventilation, cooling

TVR incorporates all functions necessary for filtration, cooling, heating and ventilation.

The automatic adjustment of the system's energy consumption perfectly adapts the cooling load to the changing needs of all individual areas, thus saving energy.

This system is quiet and has been mounted on an anti-vibratile base to ensure the acoustic comfort of the occupants.

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## Costs

## Construction and exploitation costs

Renewable energy systems cost : 11 500,00 €

Cost of studies : 570 000 €

Total cost of the building : 750 000 €

## Urban environment

The building occupies 100% of the plot and has neither outdoor spaces nor parking. The site is well served by road and public transport and is close to the main points of the city of Tangier (marina, railway station, bus station, cornice ...).

The occupants can travel by public transport, by bike, carpool, something that promotes the modes of travel.

## Land plot area

Land plot area : 99,00 m<sup>2</sup>

## Built-up area

Built-up area : 100,00 %

## Building Environmental Quality

### Building Environmental Quality

- Building flexibility
- works (including waste management)
- comfort (visual, olfactive, thermal)
- waste management (related to activity)
- energy efficiency
- renewable energies
- maintenance
- products and materials



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

Le bâtiment a été conçu dans le cadre d'une démarche environnementale durable, en vue de réduire sa consommation énergétique (par l'implantation de panneaux photovoltaïques), sa consommation en eau (par la mise en place d'équipements sanitaires hydro-économiques), son impact environnemental (par le choix de matériaux et produits éco-responsables) et dans l'optique de créer un intérieur sain et confortable pour les occupants (par l'amélioration des conditions hygrothermiques, la mise en place d'une gestion intégrée des déchets...).

La gestion technique intelligente du bâtiment permettra contrôle, régulation et suivi des indicateurs environnementaux et énergétiques influant sur l'aspect durable et sain de l'espace intérieur du bâtiment.

### Building candidate in the category



Energie & Climats Chauds



Santé & Confort





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