

## Smartseille: Allar Eco-District

by Eiffage / 2016-05-27 12:45:48 / France / 13869 / FR



**Address 1 - street** : 7 Rue And MARSEILLE, France

**Gross density** : 148.15 logt/ha

**Population** : 4 000 hab

**Number of jobs** : 2 000 emplois

**Starting year of the project** : 2013

**Delivery year of the project** : 2018



**2.7 ha**



**160 000 000 €**

**Certifications :**



DÉMONSTRATEURS  
INDUSTRIELS POUR LA  
VILLE DURABLE

### ID CARD

**Located in the center of Euromed 2 in Marseille, the Allar demonstrator is an experimental area with an international vocation demonstrator.** It declines the sustainable Mediterranean city objectives pursued by the EcoCité Euroméditerranée in the comprehensive development guide plan designed by the agency François Leclercq associated Sbriglio Jacques Rémy Marciano, TER and SETEC Agency.

Around Eiffage, an ecosystem of partners consisting of major groups, SMEs, start-ups, environmental associations, Clusters, training and research centers, should allow the present wasteland to welcome a new "core village " in High Quality of Life® for the 3000 residents, employees and visitors.

While users are at the heart of the program that promotes functional diversity, generational and social recovery of urban continuity, and as a corollary the attractiveness of the area, is a challenge. In response, the approach by Mediterranean architecture combining quality of use, comfort and bioclimatic plastic materiality with Eduardo Souto de Moura as a leader, to which strong vegetal presence in heart operation actively involved, aims to irrigate the "better live together".

#### The systemic approach to sustainable urban development

The Allar eco-district is the operational demonstrator approach of Phosphore: a systems approach for sustainable urban development, covering all the components of the urban ecosystem (energy, construction, mobility, uses, ecological services) and taking into account both the consequences of climate change and social changes. **The man and the use in the heart of the design**

The Allar eco district is illustrated as the demonstrator of a neighborhood in High Quality of Life®. The overall design and the selected solutions have all been studied in terms of uses. They aim to promote programmatic mix, social and generational, promote social cohesion and support new ways of working and living.

Respect for territorial specificities or the "Urban Engineering". **This is a tailor-made project that resonates with the specific genius of the territory: geographic context / Mediterranean climate, social and economic context of local urban development of the area.**

#### The partner ecosystem to support innovation

The eco-neighborhood Allar is an incubator for innovative solutions and a demonstrator of advanced knowledge from french sustainable city. It brings together a broad partner ecosystem: public authorities (State, Town Hall, urban community, Euromed Development Corporation), large groups (Eiffage, EDF, Orange Business Services, Lafarge), SMEs, innovative Start-ups (Sodetrel, echy, Polypop, Urbagri, Amplify kind, etc.), associations (LPO, Humanity and Biodiversity), etc.

#### The evolving nature of the project registered in an urban area changing

The eco-neighborhood Allar is a pioneer and an evolving project, brought to irrigate the future of sustainable urban development Euroméditerranée area. It will become a future demonstration of French know-how in sustainable city with an international scope.

## Programme

- Housing
- Offices
- Businesses and services
- Public facilities and infrastructure
- Public spaces
- Green spaces

## Project progress

- Delivery phase

## Procedure type

- Urban développement permit
- 

## Key points

- Governance
- Quality of life
- Economic development
- Mobility
- Smart city
- Biodiversity
- Energy /Climate

## Approaches used

- Ecodistrict national label
- Others

## Certifications

- Ecocité
- Industrial demonstrator for the Sustainable City
- Autre

## More info

<http://www.smartseille.fr/index.php>

## Data reliability

Self-declared

## TERRITORY

### Type of territory

Marseille and coastline. Located in a Sensitive Urban Zone, and in contact with the northern districts, the operation is to ensure a balanced urban development by significantly improving residential conditions of people

Registered in the north of Marseille neighborhoods, port back-constrained website and degraded by former industrial rights will be transformed into an area providing centralities functions while approaching the outskirts of the city center (structuring and development of TC, of metropolitan facilities nearby). The ripple effect sought at the metropolitan scale will decline, the urban plan to meet social expectations, training needs and improving the quality of life across the northern coastline.

The Mediterranean dimension, founder of the identity of the project is established by the effective consideration of the physical, social, economic, and cultural climate of the territory which calls for specific and innovative solutions for sustainable development.

### Climate zone

[CsC] Interior Mediterranean - Mild & dry summer.

## KEY FIGURES

### Green areas, roofs included

Green areas, roofs included : 27 600 m<sup>2</sup>

### Office floor area

Office floor area : 27 000 m<sup>2</sup>

### Commercial floor area

Commercial floor area : 5 000 m<sup>2</sup>

### Housing floor area

Housing floor area : 29 000 m<sup>2</sup>

### Number of residential units

Number of residential units : 400

### Number of social housing units

Number of social housing units : 100

### Green spaces /inhabitant

6.9

## GOVERNANCE

### Project holder

Name : Eiffage

Type : Private company

General description :

Eiffage stands out in France and around the world for its exceptionally wide range of skills and technical expertise. The Group's business activities are focused on the construction industry, real estate development, civil engineering, metallic construction, road construction, energy and concessions. Eiffage supplies highly complex, prestigious engineering structures as well as carrying out renovation projects in strict compliance with traditional techniques. Eiffage has often been a trailblazer in tackling the challenges of its time. In a constantly-changing world and facing new challenges in the field of sustainable development, Eiffage stands out as an ecologically and socially responsible partner. Eiffage innovates to build a sustainable future. This is reflected in initiatives such as Phosphore, its prospective research programme on sustainable cities, and Astainable, its digital urban design tool. Through the Eiffage Foundation, the company is committed to supporting non-profit organisations that serve the community. Eiffage is determined to preserve the core values that are in its blood, especially its employee share ownership model, the scale of which is unmatched in Europe for a group of its size. The large number of employees holding shares helps to ensure the Group's independence and cohesion while also safeguarding its future prosperity and driving growth. This culture of constant innovation, commitment and expertise among the Group's 64,000 employees is reflected in the quality of the 100,000 projects carried out every year, all over the world.

## Project management

Description :

The Euroméditerranée Public Establishment (EPAEM) is supported by a project management team to implement the urban definition (Leclercq, Sbriglio, Marciano, Ter).

Eiffage Immobilier is assisted by the planning agency Avenue Babylon for the development of the eco-district, as well as landscaping Jean Mus agency, specializing in Mediterranean gardens, for the landscaping project.

Regarding the architectural design, a dozen teams combining both big names of architecture (E. Souto de Moura - Pritzker Prize 2011), confirmed architects and young Marseille firms working simultaneously in workshops. The launch of a competition for young graduates of the Marseille School of Architecture for one of the lots is also under consideration.

## Project stakeholders

PolyPop

Function : Other

The start-up Polypop specializes in fresh pollution by mycelium. This innovative technique called mycoremediation is unprecedented in Europe, although it has already been proven in the United States experimental. Polypop uses the vegetative part of the fungus to proceed with the remediation of land. The asset of biomimetic approach lies in its innovative nature compared to traditional solutions, but also in the overall environmental benefit obtained. For Allar demonstrator, the mycoremediation allows partially avoid the use of more energy-intensive techniques such as thermal desorption, as well as avoid greenhouse gas emissions related to transportation land in the framework of évacuer. Dans approach "Low cost, easy tech", the aim is also to control costs related to the management of polluted soil at the site's industrial past. The chosen alternative must permit to decommission the materials to reduce processing costs or to reuse the land fill on the site.

[http://www.polypop-industries.com/index.php?option=com\\_alfcontact&view=alfcontact&Itemid=107](http://www.polypop-industries.com/index.php?option=com_alfcontact&view=alfcontact&Itemid=107)

Construction21 company page :



[http://www.polypop-industries.com/index.php?option=com\\_content&view=article&id=6&Itemid=102](http://www.polypop-industries.com/index.php?option=com_content&view=article&id=6&Itemid=102)

Amplify Nature

Function : Environmental consultancy agency

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

Construction21 company page :

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

Urbagri

Function : Other

The startup specializing UrbAgri accompanies Eiffage to integrate urban agriculture in the Allar Eco-District. Its mission is to facilitate the choice and solutions implementation adapted to the Mediterranean context and local quality of life objectives: edible species in landscaping the ground (fruit trees, berry bushes, aromatic, etc.);

[http://www.urbagri.org/form\\_1,fr,7,1.cfm](http://www.urbagri.org/form_1,fr,7,1.cfm)

Construction21 company page :

<http://www.urbagri.org/index.cfm>

Envirobot BDM

Function : Other

Priority is given to Mediterranean bioclimatic architectural design approach in order to: sobriety and energy efficiency, occupant comfort and reduced operating costs. In tune with the climatic conditions of our territory, design issues are more related to the consideration of summer comfort than winter. It is in this sense that the project team is facing the "Green Building Mediterranean" approach putting at the heart of local specificities design process. In addition, the BDM approach pays particular attention to the life cycle analysis of materials, taking account of environmental and health impacts generated by the construction processes or the cost approach global. Envirobat-BDM is an association law 1901 bringing together interprofessional stakeholders from all building trades: mainly project management, and project management companies réalisations. La BDM approach is a real educational tool and accompanying evaluation of the environmental aspects, social and economic bâtiment. De addition, the BDM approach offers monitoring operations recognized in the design phase, implementation phase but also for operation of the facility and thus capitalizes more experience feedback from the 200 projects to date. BDM approach accompanies a change in attitudes and expectations of end users by following the building in operation until two years after delivery.

<http://www.envirobat-med.net/spip.php?page=contact>

[Construction21 company page :](#)

<http://www.envirobat-med.net/qui-sommes-nous>

## SOLUTIONS

- Other

Company :

Company :

Company :

Company :

Company :

## QUALITY OF LIFE

### Quality of life / density

The HQVie® program is defined as a model or set of processes involved in the design, construction and operation of a residential/tertiary building or development layout. It is characterized by the quality of life objective perspective and the health of the inhabitants, the functionality of buildings and infrastructure and the contribution to social and environmental harmony.

The principle HQVie® is to design a project according to five principles:

- Respect engineering planning
- Rational management of flows and mobilities
- Intensification and scalability of uses
- Cohesion, health and well-being
- Risk prevention and resilience

### Net density

148.15

### Social diversity

The 60 000 m<sup>2</sup> included in the program emphasize the uses by promoting mixed use (residential, office, retail, hotel), generational (seniors residence, nursery) and social (public housing, accessing primary and free).

The project objective is to create a new "core village" of over 4000 inhabitants, employees and visitors in line with the spirit of Marseille neighborhoods.

### Social inclusion and safety

Meeting place between workers, neighborhood children, the elderly of the residence, residents of the hotel and residents, smartseille promotes linkages. The common areas, shared gardens, shared services between neighbors generate sharing and conviviality opportunities.

True community, Smartseille brings together people who are sensitive to the challenges of the city of tomorrow but also of the society.

### Ambient air quality and health

Particular attention was paid to acoustic studies on all of the block, taking particular account of the presence of the motorway bridge before it's burying on the future for the North-Coastal ledge project.

Complex computer models allowed to simulate the values heard on the outside terraces depending on their exposure.

[Read Acoustic Record on the Allar Eco-District](#)

## SOLUTIONS

### E-Conciergerie

#### Description :

A neighborhood association concierge will offer residents a range of services to the card, adaptable to the felt needs. At the end of basic services - dry cleaning, postal services, ticketing, up point - will add nomadic services - hairdressing, beauty treatments, massage.

The concierge will also manage the co-working by providing workrooms, shared mobility and shared parking and a flexible multi-purpose space for associative meetings or sports sessions. Finally, it will be a function of social animation - Neighbours Day, gardening workshop, energy coaching to complement the approach of Énergitecture® - to promote environmentally responsible actions and prevent potential conflicts of use.

[Read card E-Conciergerie of Ecoquartier Allar](#)

<http://www.smartseille.fr/e-conciergerie.php>

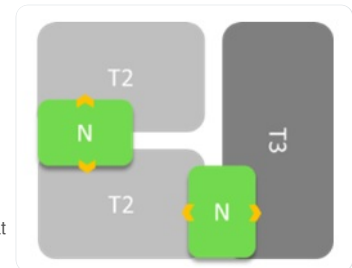
- Proximity services
- Other

### The Nomad Room

#### Description :

Nomadic room between two units is designed to meet the needs of the whole family and adapt to the life course of its occupants: arrival and departure of a child, telecommuting, professional nomadism, home of a relative, desire bi-residence etc. The idea is to integrate a room between two units, attributed to either one or the other. The cornerstone of the concept, the piece also makes possible the development flexibility.

Social housing neighborhood integrate sixteen pieces acquired by the donor to facilitate the transition from T3 to T4 at each level.



#### Company :



7 Place de l'europe 78140 Vélizy-Villacoublay France  
<http://www.eiffage.com/home.html>

<http://www.smartseille.fr/piece-nomade.php#logement>

- Other

#### Company :

## ECONOMIC DEVELOPMENT

### Local development

Launched more than twenty years ago in Marseille, the "Euroméditerranée" project is international, involving the renovation of a 480 hectares in the heart of the city, between the commercial port, the Old Port and the railway station .

Labeled "EcoCité" by the French government, "Euroméditerranée" represents a Mediterranean model of sustainable development with:

- the implementation of renewable and innovative energy systems;
- 

#### % of office area

100

#### % of commercial area

19

## TRANSPORT

### Mobility strategy

Eco-Mobilities development is a gateway to sustainable cities and especially for smartseille. In tune with the demands made by the EcoCité program, the eco-district was designed to encourage modal shift to active transportation solutions, collective or shared. To ensure the quality of the living environment, inner area

will be reserved for pedestrians and cyclists, while a car shared host vehicle infrastructure from roads located outside the district.

The public transport offer that will be deployed in line with the renewal of the whole industry will be enriched by shared mobility systems. Besides serving the bus transit, light rail and metro line 2, a supply of electric vehicles and bicycle sharing system will be offered to users.

#### ON THE SPOT

- Bicycles and electric cars in self-service. - E-Janitor(taxis reservations, carpooling ...).

#### PUBLIC TRANSPORT

- Now: Bus high level of service No 26, The droppings stop 200 meters from smartseille,
- From 2016: metro line 2, bus and intercity buses in exchange pole Captain Gèze 500 m from smartseille,
- 2020: Tram station, rue de Lyon 150 m from smartseille, stop TER Cap Pinède 600m.

#### ROAD ACCESS

- 3 minutes from the A55, 5 minutes from the A7,
- Exit 4 from Lyon, Avignon, Aix-en-Provence,
- Exit 3 from Nice, Toulon, Aubagne.

## SOLUTIONS

#### Shared Parking

##### Description :

In partnership with the company Zenpark and digital solutions brought by an operator of IT, design teams have planned the establishment of a shared parking lot between homes and offices. This solution optimizes the use of day parking and night while limiting the number of places to be provided for the entire neighborhood.

##### Read listing on the Shared Parking of the Allar Eco-District

- Parking management

<http://zenpark.com/>

Company :



 **EIFFAGE**

**EIFFAGE**

7 Place de l'europe 78140 Vélizy-Villacoublay France

<http://www.eiffage.com/home.html>

Company :

## SMART CITY

### Smart City strategy

All smartseille residents will have access to a wifi bouquet, telephone and TV for a few euros. An intranet dedicated to the island will serve as social link between people who want good neighbor services (equipment loan, sharing knowledge, mutual aid ...). The intranet will also be a platform for exchange with the e-janitorial.

Intelligent access control will allow you to welcome your visitors via a tablet in the apartment and if no, your phone will take over!

From your living room, you can track your energy use and manage closest to your needs heating, lighting, hot water ... According to your wishes your apartment will concentrate new technologies connected objects:

- A presence detector will inform you on your phone to a potential problem
- An intranet will facilitate your access to all digital services
- You can place an order for your shopping and be delivered to the janitorial
- Always in touch, the janitorial will communicate information to you (misplaced items, messages, ads ...)
- Real exchange platform, the portal will facilitate the exchange of services between residents
- Including equipment Booking (tools, computers ...) is possible through the janitorial
- Finally a system of video protection connected to a security company ensures your peace of mind through a series of cameras installed in the block!

In Smartseille, the people will know their ranking on the various utilities (water, heating, hot water, ..) compared to all other occupants anonymously. This classification will allow everyone to measure the impact of their behavior on their bill.

To improve the behavior and thus reduce the energy bill, the concierge will offer an energy coaching service (no extra cost).

The energy coaching analyze the consumption of the occupant, interviewing his behavior in order to propose appropriate changes. An update will be made at the request of the occupant in order to measure the impact of the new behavior every day.

[Smartseille: A connected neighborhood](#)



## SOLUTIONS

### EiffyConso

#### Description :

Beyond the monitoring of electricity consumption which will be implemented in accordance with the thermal regulation 2012, EiffyConso tool will go much further in the energy coaching for the benefit of users of Allar demonstrator.

The EiffyConso system is a clean product from Eiffage Construction and dedicated to detailed monitoring of energy consumption items in buildings that allow users from Allar demonstrator to know their energy consumption for each type of use. To do this, devices for measuring temperature and water expenses, gas and electricity will be installed in each dwelling and digital tools for collecting and processing data common to buildings feed the information terminals occupants via the intercom or a website for example. The users will then be able to check their daily consumption, monthly or yearly basis and to set their own goals and exceeded alerts. The resulting reduction in consumption is estimated at 10%.

- Digital services

<http://www.construction21.org/france/products/fr/267/eiffyconso,0.html>

Company :



7 Place de l'Europe 78140 Vélizy-Villacoublay France  
<http://www.eiffage.com/home.html>



## RESOURCES

### Water management

A hot water storage device installed in each building will maintain surpluses in-vacancy, such as air conditioning of offices, to give it back on the peak period. Like the electric smart grid, this termic smart grid will therefore ensure thermal energy balance of the entire demonstrator Allar for a part of the year.

### Soil management

Complete plant by decontaminating with an adapted manner, vegetating the boundaries of land and property and focusing on planting in the ground and porous coatings

## SOLUTIONS

### PolyPop

#### Description :

The start-up Polypop specializes in fresh pollution by mycelium. This innovative technique called mycoremediation is unprecedented in Europe, although it has already been proven in the United States experimental. Polypop uses the vegetative part of the fungus to proceed with the remediation of land. The asset of biomimetic approach lies in its innovative nature compared to traditional solutions, but also in the overall environmental benefit obtained. For Allar demonstrator, the mycoremediation allows partially avoid the use of more energy-intensive techniques such as thermal desorption, as well as avoid greenhouse gas emissions related to transportation land in the framework of évacuer. Dans approach "Low cost, easy tech", the aim is also to control costs related to the management of polluted soil at the site's industrial past. The chosen alternative must permit to decommission the materials to reduce processing costs or to reuse the land fill on the site.

- Soil management

[http://www.polypop-industries.com/index.php?option=com\\_content&view=article&id=6&Itemid=102](http://www.polypop-industries.com/index.php?option=com_content&view=article&id=6&Itemid=102)

Company :



Polypop Industries

## BIODIVERSITY

### Biodiversity and natural areas



Enrich the landscape by using the Mediterranean species locally sourced when it is possible, by multiplying the layers of vegetable and mineral biotope, asking the built habitat and creating a canopy over the entire block.

Develop urban agriculture by creating an urban orchard and building a socio-educational vegetable garden on the terrace of the residence for the elderly and propose the installation of a hydroponic greenhouse

Adopt a favorable management of biodiversity by providing a maintenance "zero phyto", reducing light pollution related to public lighting and feeding as much as possible areas of open ground with runoff

## ENERGY/CLIMATE

### Energy sobriety

The various buildings in smartseille district are connected by a network of pipes for heat exchange between them.

All need air conditioning or heating primarily uses excess heat or cold produced by the neighbors.

The distribution of areas between offices and housing ensures optimum balance. It allows local consumption, avoiding waste. An innovation specifically provided by Eiffage

## SOLUTIONS

### Energitecture®

#### Description :

Smartseille requirements are reduced at source and covered with renewable local resources, with the help of sea water loop. The buildings thus meet the requirements of bioclimatic "Energitecture®" consisting of combining architectural excellence in energy efficiency.

The winds and solar study optimize the configuration of the buildings, notably to limit the effects of vortices related to the prevailing winds and the Mistral, and to limit the impact of solar radiation in summer. The canopy covering the entire area will also impact positively on the microclimate by limiting the effect of urban heat island in the biodiversity profile.

The architecture of the buildings is thought to account for the best energy efficiency

The Mediterranean Green Building label will also validate the building design process, which uses the Mediterranean climate as a lever for thermal performance, to achieve the level Effinergie + for offices and exceed regulatory requirements heat in social housing.

- SmartGrids

<http://www.smartseille.fr/energitecture.php>

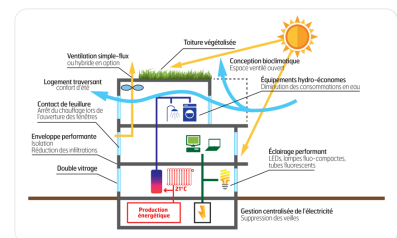
Company :



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<http://www.eiffage.com/home.html>

Company :

Company :



### Energy solidarity

#### Description :

Shared governance project between the developer and the energy provider has integrated the program into balance the buildings that primarily need heat (residential) or cooling (offices).

A hot water storage device installed in each building and will maintain surpluses in-vacancy, such as air conditioning of offices, to restore the peak period. Like the electric smart grid, the smart grid will therefore ensure thermal energy balance of the entire demonstrator Allar for part of the year.

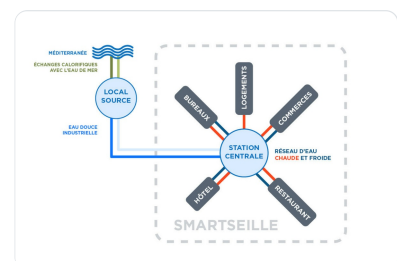
- SmartGrids

<http://www.smartseille.fr/solidarite-energetique.php>

Company :



7 Place de l'Europe 78140 Vélizy-Villacoublay France  
<http://www.eiffage.com/home.html>



## loop Thalassothermique

### Description :

Eiffage and EDF Optimal Solutions took private initiative to design a Saltwater loop bringing to 60% the rate of contribution of renewable energy for heating and refresh the buildings within the Allar demonstrator.

This major innovation is to build a tempered water system that the balancing source is seawater drawn from medium depth off the docks and the temperature is almost constant. The sampling seawater will require the installation of buried pipes to capture and release, as well as the creation of a pumping chamber, without in any way disrupt the activities of the Port of Marseille.

The saltwater loop will serve the heart of Allar demonstrator providing continuously at the foot of each building a constant temperature water. Each building will be connected through its own exchanger to capture heat or cold, and reject its hot or cold surpluses in a parallel loop itself connected to the post from the eco-neighborhood. The demonstrator will exchange its surplus energy to the sea through the main exchanger, while the water of the inner loop to the eco-neighborhood will retain its original temperature.

- Other

<https://www.construction21.org/france/articles/fr/un-nouveau-projet-de-thalassothermie-lance-a-marseille.html>

Company :



**EIFFAGE**

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<http://www.eiffage.com/home.html>

Company :



**EDF**

EDFofficiel

22 Avenue de Wagram 75008 Paris France

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

- Other

Company :



## BUILDINGS

### Buildings

Under the Mediterranean Green Building Label, priority is given to Mediterranean bioclimatic architectural design approach according to the principles of Energitecure®, with the use of local ecological materials selected based on the life cycle analysis, environmental and health impacts generated by the construction processes and the overall cost.

Under the partnership with Eiffage Constructions & Bioresources, several job leads of biobased materials are under consideration to ensure the insulation of buildings Neighborhood rice straw or recycled cotton lavender from the textile industry or even wood fiber.

The choice of a low carbon concrete reduce the share of cement contained in the concrete, and therefore its overall environmental impact. Thus, all the facades of office of the block A will be made with this type of concrete, which for this building a total of 850 m3 of low carbon concrete.

In a perspective-control health risks, 100% of paints and adhesives are eco-labeled and VOC A +.

## Contest

### Building candidate in the category





Grand Prix Ville Durable



Coup de Coeur des Internautes

