

# 2016 BIM CONTEST PROGRAMME

## 1. Introduction

### 1.a Contest's aim

The 2016 BIM contest aims to promote the use of a Building Information Modeling method amongst architects. Through the use of real BIM objects by leading manufacturers and the expertise of big construction companies and experts. Candidates can learn how to implement BIM into a project and / or enhance their knowledge of BIM and BIM related methods.

### 1.b Objectives

Participants should present a BIM model of an innovative business incubator. At least one product or a texture from each of the sponsoring manufacturers should be integrated into the project and the BIM model.

The project is set, virtually - within the premises of the city of Bobigny on the west bank of the Ourcq canal. The Jury will judge both the architectural quality of the project and the quality of the BIM method used to make it.

### 1.c Product catalogues of partnering manufactures

Every hyperlink gives free access (upon registration) to catalogues of products by sponsoring manufacturers. Contestants must use at least one product per manufacturer and integrate it intelligently into the project design:

**Odysée Lumière Export - Rosa** : <http://www.polantis.com/rosa-odyssee-lumiere>

**Lafarge France** : <http://www.polantis.com/fr/lafarge>

**Reckli** : <http://www.polantis.com/reckli>

**Saint Gobain** (at least one product per brand: One Isover product, one Placo product and one Weber product) :

- **Isover** : <http://www.polantis.com/fr/isover>

- **Placo** : <http://www.polantis.com/fr/placo>

- **Weber** : <http://www.polantis.com/fr/weber>

**AkzoNobel** : <http://www.polantis.com/akzonobel>

**Horizal** : <http://www.polantis.com/horizal>

## 2. Site, Urban issues and constraints

### 2.a Terrain at Bobigny

The site of the BIM contest is located at the premises of the city of Bobigny, a northern suburb of Paris. (You can see the Eiffel tower and the Montmartre hill clearly in the picture above)

The terrain targeted is also known as "MBK" where a "Mobylette" motorcycle plant by that name used to exist. Today it's an industrial wasteland undergoing a cleaning process. You can see a big part of it in Google street view.

The official address of the site is 55, rue de Paris 93000 Bobigny it has a total surface of 18,400 m<sup>2</sup> ( 198,056 ft<sup>2</sup>) situated between the Ourcq canal, the Grande Ceinture railways, the rue de Paris and avenue Jean Jaurès.

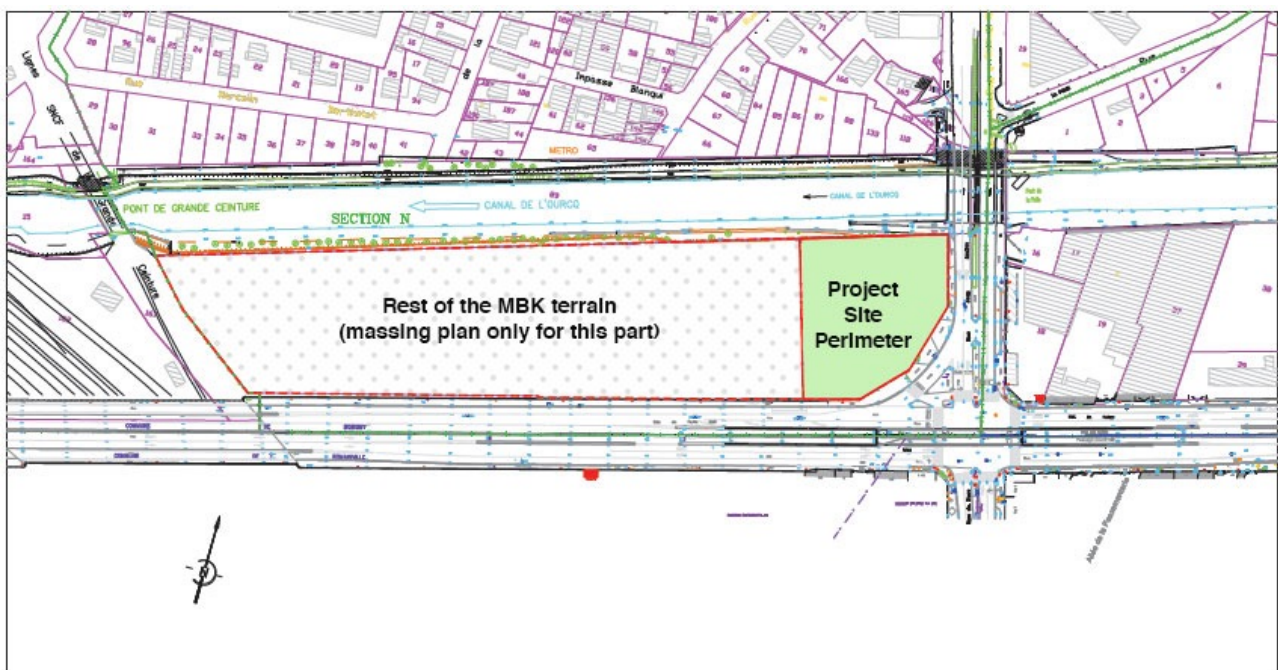
On the eastern slopes, this land lot is situated on the junction of La Folie, a major circulation axis and one of the entrances to the city of Bobigny. On the western side, the terrain will be connected via a pedestrian bridge to La Folie interchange station that is located on the opposite bank of the canal. In 2025 this interchange station will become part of the Parisian Metro line N° 5 and will also host a tramway station of the TEN (Tram Express Nord). An aerial lift connecting lines 5 and 11 of the metro is also supposed to be implemented within the premises of this station. Making it a very important regional traffic hub.

The departmental council of the Seine-Saint-Denis department intends to operate a "clean bus" line by 2020 on the rue de Paris axis and thus requalifies it.

### 2.b Informations relative to the site

Global site perimeter - 21,240 square meters.

Project site perimeter - 3,970 square meters.



Site seen from its West extremity (rue de Paris). Photo credit: Sequano



Aerial view of the site. Image credit: Agence Devilliers & A. / Platform.



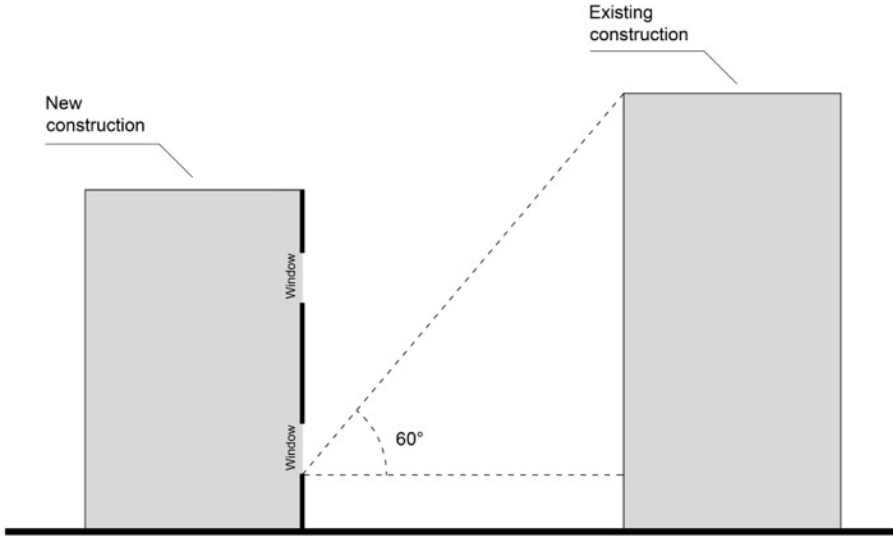
## 2.c Urban rules concerning the site

The project must adhere to the urbanism rules of the city of Bobigny. Thus, the **“PLU”** (**“Plan Local d’Urbanisme”** or **“Local Urbanism Plan”**) must be applied.

Here are the urbanism rules concerning the project’s site:

- **Construction footprint:** No particular rules.
- **Construction hight:** No particular rules.
- Terrain accessibility by public or private roads:  
**Public road open for automobile circulation:** A minimum width of 9 meters.  
**Other roads:** A minimum width of 3 meters.
- **Open spaces:**  
Open spaces must be landscaped except for roads.  
A minimum of 20% of any parcel should be landscaped.  
At least one tall tree needs to be planted for every 100 square meters of landscaped area.  
A minimum of 70% of any roof not covered by technical appliances should be made into a green roof.

**Constructions positioning :**

	Alignment	Retreat from road	Other disposition
longing the rue de Paris	A maximum of 60 % of the façade	A minimum of 1,50 meters  Alignment should be made with a fence to ensure continuity with other neighboring constructions	The façade should include one or several visual or physical openings
Along roads and public roads created on the border with the canal	A maximum of 60 % of the façade		
along roads merging into the rue de Paris	A maximum of 50 % of the façade		-
Along other public roads created	Free alignment or retreat	A minimum of 4 meters	-
In case of limits separating properties			-
One next to the other on the same property	<p>New constructions must be positioned so that at least one window enlightens each main room used for dwelling or working. These windows should be positioned so that a 60° angle formed from their window sill will surpass the top of any existing construction. This also applies to different volumes of the same construction.</p> 		

**Parking allotment for two wheeled vehicles :**

	two wheeled motor vehicle	two wheeled non-motorized vehicle
Apartment	<ul style="list-style-type: none"> <li>- <u>For apartments &lt; 60m2 of flooring</u> : 0,5 place per apartment</li> <li>- <u>For apartments &gt; 60m2 of flooring</u> : 1 place per apartment</li> </ul>	1,5m2 per apartment
Office	<ul style="list-style-type: none"> <li>- <u>Minimum</u> : 1 place per 100m2 of flooring</li> <li>- <u>Maximum</u> : 1 place per 60m2 of flooring</li> </ul>	3m2 per 100m2 of flooring
Workshop, Industry, storage	<ul style="list-style-type: none"> <li>- <u>For constructions &lt; 250m2</u> : 1 place for every 80m2 of flooring.</li> <li>- <u>For constructions &gt; 250m2</u> : 1 place for every 80m2 of flooring up to 250m2 of flooring, then 1 place for every 250m2 of flooring.</li> </ul>	1 place for 10 employees
Commerce	<ul style="list-style-type: none"> <li>- <u>For constructions &lt; 200m2</u> : No obligation</li> <li>- <u>For constructions &lt; 1000m2</u> : No obligation up to 200m2, then 1 place every 50m2 of flooring</li> <li>- <u>For constructions &gt; 1000m2</u> : No obligation up to 200m2, then 1 place every 50m2 of flooring up to 1000m2, then 1 place for every 250m2 of flooring.</li> </ul>	



## 3. Specifications

Contestants are asked to design a building or buildings to host a business space incorporating a start-up incubator with offices and communal areas. The surface to be covered measures 12,000 square meters. Candidates must also put forward a massing plan for the remaining space on site called "MBK terrain".

### 3.a Business incubator

Business incubators are increasingly used to promote economic development. They are designed to give structure to burgeoning businesses and their creators.

The 5 steps to building a business are:

- Birth and development of the initial idea
- Creation of a corporation
- Marketing and stabilisation of the business model
- Growth
- Maturation

Business incubators aim to guide and supervise business creators through these initial stages of business creation and development. They have three main functions:

#### **Accommodation**

Incubators provide entrepreneurs with office space and appropriate facilities.

#### **Guidance**

Incubators grant business creators access to essential services such as technical, legal, management and commercial consulting

#### **Networking**

An entrepreneur working in a business incubator will have daily contact with other likeminded business leaders thus facilitating an invaluable exchange of ideas, experience and contacts. The business incubator at the Ourcq canal should be developed with this in mind.

#### **The Business incubator project comprises three distinct parts**

(A total of 12,000 Square meters)

Administrative areas – 500 m<sup>2</sup>

Office space for rent – 8000 m<sup>2</sup>

Communal areas – 3500 m<sup>2</sup>

#### **Administrative areas**

Space reserved for the incubator's management. Will comprise private facilities which are not accessible to those renting office space. There should be 15 or so offices, meeting rooms, and additional space for storage, photocopying and toilet facilities.

#### **Private rental space**

Areas available to business creators and entrepreneurs. These offices should function autonomously from the rest of the building with no restrictions on when they can be used nor on access to facilities.

The offices should be partitioned so as to facilitate the steps of business development as outlined above. There should be three distinct sections of equal size:

- A “greenhouse” for young start ups still in their infancy and under expert supervision.
- An incubator for companies at the stage of consolidation and which may be signing up clients.
- Flexible office space for mature companies taking advantage of competitive rents.

The offices should be flexible and should be designed with the various needs of potential tenants

The greenhouse should be able to accommodate between 30 and 35 projects. Each is estimated to spend an average of 2 and a half years at the premises. An average 4 employees will work at each. All businesses develop and evolve at a different pace, however, in general, business creators tend to launch projects alone or with one other person but they can end up hiring 10 people.

The incubator should also be able to accommodate around 20 larger businesses which are at the consolidation stage. Such businesses tend to employ around 8 people.

There should also be around 12 offices available at the flexible office space part to mature companies who tend to employ around 15 people.

Each section should comprise between 120 and 180 “office units” An office unit is composed of a single workstation + space around it and other attending uses like storage, circulation etc)

Each office unit should be allocated with a maximum of 20m<sup>2</sup> per person. This can be reduced to correspond with an increase in the number of employees per office-unit-compound but must never fall below 10m<sup>2</sup>. Each office-unit-compound (for example, an office for 4 persons that has a surface of 60m<sup>2</sup>) should dispose of all the infrastructure necessary to allow complete autonomy from other office-unit-compounds. For example, certain office-unit-compounds could have private meeting rooms or server rooms. This excludes access to toilet facilities which will be shared by floor. Each office-unit-compound should enjoy complete security and privacy. Each office should be equipped with the necessary office infrastructure to allow space modularity. Infrastructure installations should allow for the evolution of technology.

Catering, technical and sanitary facilities should be integrated at each level of the incubator.

### 3.b Communal areas

The communal areas comprise of space and facilities available to everyone using the complex. They include a reception area, a cafe/restaurant, a multipurpose room, meeting rooms, photocopying and printing areas, sports facilities.

**The cafe/restaurant** is open to every tenant at the premises and is run by the site manager. Contestants may design the details as they wish taking in to account the need for a kitchen, an office and a place to receive deliveries. The cafe/restaurant should be able to accommodate 200 diners.

**The multi-purpose room** is a multimedia space available to all tenants and is designed to host conferences, demonstrations, banquets, receptions etc. Also managed by the site manager, the auditorium should be able to seat 200 people. It’s possible to arrange for security but that shouldn’t interfere with the multi-purpose nature of the space. A storage area for chairs and tables must not be overlooked.

**Meeting rooms** will be grouped in a common pool situated close to the multi-media room. The rooms should be modulated so they can be flexible and adapt to meetings ranging in size of between 5 to 25 people. The overall capacity of the meeting rooms should be able to host around 100 people.

**A gym** will be equipped with 20 or so machines as well as lockers, toilets and showers.

**General facilities** will include a printing/photocopy room, a network server room, bins

### **3.c Specification of technical space**

A business incubator has the same technical characteristics of any office building. Generous high ceilings are indispensable to allow optimal natural light. The ceilings should be at least 2.70m high. Network distribution can be enabled via the ceiling or via a technical platform. Contestants may use their discretion when it comes to technical solutions.

#### **Parking**

Underground parking must adhere to the fictitious PLU regulations detailed in 2.c.

**Contestants creating a project featuring multiple buildings must make sure all buildings are interconnected.**

### **3.d Exterior open space**

Particular attention should be paid to the layout of the areas on the complex perimeter. Things to take in to consideration include access from the road, pedestrian access, green space, light, practical considerations relevant to the building's use.

### **3.e MBK Site**

Contestants are asked to put forward a massing plan for the rest of the MBK site outside of the area set aside for the business project. This plan should give coherence to the MBK site with a view to future development and should be relevant to the candidate's main proposal. 80% of the site should be allocated to housing, the candidate can decide what to do with the remaining 20%. An internal road should be part of the plan and access from outside must be taken into account.



## 4. Jury Composition

The Jury is composed of architects, notorious BIM experts and industrialists. Jury's composition is as follows:

President of the Jury: **Mr. Bertrand Delcambre** - President of the Plan Transition Numérique dans le Bâtiment (France's organism in charge of BIM reform)

**Mr. Pierre Mit**, President of Mediaconstruct, Committee member of the Plan de transition Numérique dans le Bâtiment

**Mr. Jacques Lévy Bencheton**, associate architect and BIM Manager of Brunet Saunier Architecture practice.

**Mr. Lionel Blancard de Léry**, associate architect-urbanist of l'Atelier B.L.M., President of BIM Prescrire association and Vice-Président of UNSFA

**Mr. André Morlet**, CEO of Odyssee Lumière Export - Rosa

**Mr. Alain Birault**, National prescription director - Lafarge France

**Mr. Éric Lebègue**, chief of the Digital innovation division for construction at the CSTB

**Mr. Itaï Cellier**, Architect, Founder and CEO de Polantis

## 5. Deliverables

### 5.a Full list of required deliverables

Required deliverables are as follows:

- Two A0 panels in .pdf format (maximum)
- One explanatory note (no more than 2,500 characters including space)
- One BIM model in .ifc format
- One .xls BIM database (find matrice here)
- A0 panels

### 5.b Panels

Two horizontal A0 panels depicting the project are required:

**Panel 1** is composed of the following graphic illustrations:

- Block plan (mass plan) of the project and its environment
- Axonometric views representing the project
- Most important plans, façades and sections

**Panel 2** is composed of four rendered images of the project (could be CGI, or collage) at least one of the images should feature the main entrance of the building(s) and/or access from the main road.

All 2D graphic documents should include a metric graphic scale as well as an indication of the north.

Technical characteristics:

- .pdf file format

- Dimensions: Length - 1189mm ; Height - 841mm
- Resolution: 300 dpi
- CMYK color scheme
- On the top left corner - your identification number (in a space no bigger than L: 60mm x H: 40mm)
- On top right corner - Panel number (1 or 2)

You have the liberty to determine the size and features of your page graphical design (placement, font, colors, design etc).

You have to ensure that the panels could be easily printed as those panels will be printed in case you make it to the finals. The jury will be judging your designs using those printed panels and they will be displayed on the trophy ceremony. We strongly advise you perform printing tests before submitting your final version of the project.

### **5.c explanatory note**

You have no more than 2500 characters (space included) to textually describe your project, its innovative character, the BIM method used and your project for the rest of the terrain.

Technical characteristics:

- .pdf file format
- Standard A4 dimensions (297mm X 210mm) horizontal or vertical
- On the top left corner - your identification number (in a space no bigger than L 60mm x H 40mm)

### **5.d BIM model**

Technical characteristics:

- .ifc file format
- Level of development (LOD) - 200

### **5.e BIM database**

Technical characteristics:

- .xls file format set according to the example matrix.
- Level of development (LOD) - 200

It is important to properly fill in this database so that the jury could properly assess and analyse the quality of your model, your building's performances and so that they could get a good grasp of your BIM methodology.

This database ensures that you have fully complied with the contest's program. It also allows anyone querying it to know exactly how much of every material was used and where. This is the essence of built asset management in the BIM era.

## 6. Timetable

- Official launch of the contest and subscription : 9th of December 2015.
- Subscription deadline: 5th of March 2016 - midnight.
- Final project handout: 15th of March 2016 - midnight.
- Pre-selection of the 20 finalists: 16th of March - to the 19th of March 2016 - Midnight.
- Jury deliberation: 30th of March 2016.
- Designation of winners and trophy ceremony: 7th of April 2016 at 18:30.

## 7. Documents at the disposition of contestants

- .xls file - Example Matrix of the required BIM database (see 5.e)
- .dwg file of the terrain and its surroundings with the intervention perimeter marked
- Site photographs
- Contest's terms and conditions

All documents are available to download from the competition's official website ([bimcontest.com](http://bimcontest.com))

## 8. Jury's judgment criteria

Contest's jury will determine whether or not and to which degree:

- The project fulfills the program's demands
- The project is innovating, and responds to the contemporary preoccupations in terms of durability and sustainability.
- The products of all sponsoring manufacturers were well integrated into the project - At least one product per manufacturer.
- The quality of the BIM method employed

## 9. Prizes

The 20 Finalists will each be granted a copy of the French book "BIM & Maquette Numérique" (édition Eyrolles – CSTB) of a market value of 75€

Laureate, 1st prize : **10,000 €** (Ten thousand Euros)

Laureate, 1st prize : **5,000 €** (Five thousand Euros)

Laureate, 1st prize : **2,500 €** (Two thousand five hundred Euros)

Money prizes will be paid to the laureates by cheque or by wire transfer.

## 10. Contact

For any queries or questions regarding this contest, its programme and rules, please contact Miss Manon Roger - Marketing and Communication manager at Polantis SAS By:

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