

名古屋大学大学院環境学研究科都市環境学専攻建築学コース  
パリ・ヴァル・ドゥ・セーヌ国立高等建築学校  
天津大学建築学院

2017 年度 国際建築・都市設計ワークショップ@パリ

## 「Smart House」

大学院環境学研究科都市環境学専攻建築学コースは、2017 年 9 月 18 日(月)から 22 日(金)までの 5 日間、フランスのパリ・ヴァル・ドゥ・セーヌ国立高等建築学校(ENSAPVS)を主会場として、ENSA-PVS、天津大学と合同で、「Smart House」をテーマに、観光地としても有名なモンマルトルの丘の急斜面地の狭小地に、今日的な都市生活と敷地特性を読み込んだ住宅を提案する建築・都市設計ワークショップ(以下、WS)を開催しました。今回は ENSAPVS の大学院生・学部生約 60 名と天津大学の学生 7 名、そして名古屋大学大学院建築学コース博士課程前期課程 1 年の小島悠暉、片岡裕貴、小倉畑昂祐、竹内翔平、楊秋晗、李僑の 6 名が参加し、3 大学の学生は 12 の混成グループに分かれて本課題に取り組みました。WS の指導は、Boris Weliachew 教授、Marco Tabet 教授(以上 ENSAPVS)、鄭穎副教授(天津大学)、小松尚准教授(名古屋大学)が行いました。

本 WS は、異なるバックグラウンドを持つ学生同士が英語で対話し協働し、提案する貴重な機会を提供するものです。この取り組みは、2009 年 4 月以降、両大学の間で締結された学術交流協定に基づき実施されています。毎年 4 月に名大で、9 月にパリで WS を行っており、ENSA-PVS での WS は今回が 8 回目(名大での WS を含めると 16 回目)になります。

今回はまず「Smart House」という抽象的な課題の解釈と掘り下げを行い、それに基づいて建築的、都市的提案を考案していくことになるため、名大から参加した 6 名は、8 月から本課題についての検討や参考事例の収集など事前学習を行って WS に臨みました。

WS は、まず 1 日目は本課題の説明とともに本課第に関連するショート・レクチャーが行われました。次に、20m×28m の一敷地を 4 分割した短冊状の敷地(5m×28m)が各グループに割り当てられ、学生はグループで与えられた敷地及び周辺の調査に出向き、課題の読み取りや提案のポイントについて議論と共有、そしてデザイン検討を開始しました。2 日目以降はグループ作業を行い、3 日目には中間発表会、5 日目の夕方には成果発表会とフェアウェル・パーティを開催しました。

最終日の成果発表会では、各グループの調査・提案が図面(A0 版 2 枚)と模型(1/20)によって発表されました。本ワークショップの担当教員だけでなく ENSA-PVS の関係者が多数参加し、意見交換と講評が行われました。今回の評価ポイントとしては、①「Smart House」という課題をどう理解し、掘り下げ、建築的提案に展開できているか、②これからの住宅として魅力的かつ適切な空間が設計されているか、③それが適切かつ魅力的に図面や模型で表現できているか、といった点から成績(20 点満点で採点)が付与されました。5 日間という短い時間ではありますが、特に①と②について優れた提案が高い評価を得ましたが、名大院生がメンバーの一員であったグループの提案に対しては全般的に高い評価が与えられました。

なお、本ワークショップに参加する学生の派遣は、独立行政法人日本学生支援機構の平成 27 年度海外留学支援制度（協定派遣）採択プログラムとして実施し、教員の派遣等は環境学研究科研究科長裁量経費の支援を受けました。

本パンフレットでは、名古屋大学大学院生がメンバーだったグループの作品を紹介します。



課題説明とショート・レクチャーと現地調査（1日目）



グループ作業（2日目）



グループ作業（2日目）



中間発表会（3日目）

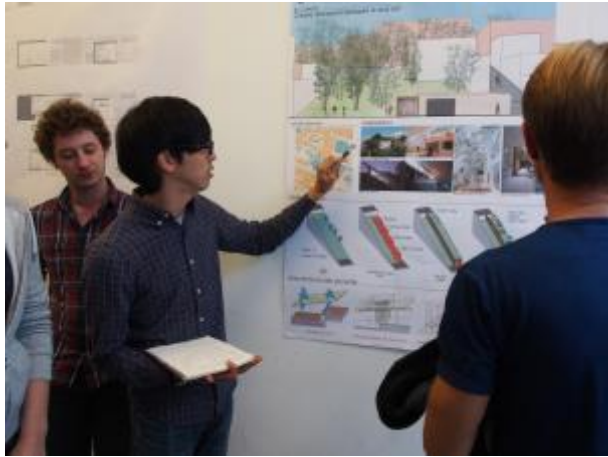


グループ作業（4日目）



成果発表会（5日目）





成果発表会（5日目）



成績発表と講評（5日目）



参加者集合写真（5日目）



# 20<sup>th</sup> International Workshop of Architecture France - Japan - China

From September 18th to 24th 2017

Host university: **École Nationale Supérieure d'Architecture Paris Val de Seine (ENSAPVS)**

(3, quai Panhard et Levassor, 75013 Paris)

Responsible Professors: Boris WELIACHEW and Marco TABET

Teaching staff from "Atelier Tabet": Pierre TISSERAND, Jean-Baptiste GUILLAUME, Serge RODRIGUES  
Philippe MAILLOLS, Sabine MOSCATI, Adrien DURRMEYER, Julien BROUSSART

Participating universities: **University of Nagoya, Nagoya, Japan**

Professor: Hisashi KOMATSU

**University of Tianjin, Tianjin, China**

Professor: Ying ZHENG

On the theme:

## "Smart house" Maison intelligente

Programme:

### **Monday 18th September:**

- 9 :00 Reception of the foreign delegations at the Atelier
- 10 :00 Workshop subject introduction
- 10:30 Students' team's settlement
- 11:00 Building site visit

#### *Evening conferences:*

- 16:00 Montmartre (Adrien Durrmeyer)
- 16:30 Sustainable Development Approach (Boris Weliachew)
- 17:00 Paris' climat (Sabine Moscati)
- 17:30 Wood building (Julien Broussart)
- 18:00 Today's architectural tendencies (Ying Zheng or Hisashi Komatsu)
- 18:30 Residential experiments (Ying Zheng or Hisashi Komatsu)
- Break*
- 19:00 « **Welcome Party** » at the restaurant Fil'O Fromage (12 rue Neuve Tolbiac, Paris 13) [23€ drinks included]

... (continuous intensive work)

### **Wednesday 20th September:**

- 15 :00 : Middle term presentation

... (continuous intensive work)

### **Friday 22d September:**

- 15:00~18:00 : Public Final Presentation of the projects
- 18:00~18:15 : Display of all projects and models in the main Hall of the ENSAPVS for the **Workshops 2017 EXPO**
- 18:15~19 :00 : Judges deliberations
- 20:00~... : « **Sayonara Party** » at the Atelier

**NB:** notice that depending on the day, the ENSAPVS should be open from 8:00 to 21:00 or 23:00

# 1. The Subject : Smart house (Maison intelligente)

House theme is a must for all architects. For some Architects, houses were their very first step to a dazzling international career that became prototypes of a new personal approach, a kind of revelation in which conformity prevailed.

- The «prairie houses» : Robie House and Fallingwater house of Frank Lloyd Wright
- The «maisons blanches» and the villa Savoye of Le Corbusier (1921-1931)
- The Barcelona Pavillon and the Farnsworth house of Mies van der Rohe
- The teachers' houses from the Bauhaus to Dessau (Walter Gropius)

In contemporary architecture, it is easy to draw up a list of examples that renew and prolong the founding role of the House in the architect's approach.

- The Family House Butantã , in Sao Paulo, of Paulo Mendes da Rocha
- The Family House, in Santa Monica, Ca, of Franck Ghery
- The Row house in Osaka, of Tadao Ando
- The House, in Ligorneto, (Tessin Switzerland) of Mario Botta
- The Houses N, NA or H of Sou Fujimoto

This list could be much longer. Each of these achievements has been a marker in its time and founded a fruitful approach. House is a modest object at a project scale, that could become audacious when it upsets philosophical and architectural foundations of the "inhabited". As such, it challenges conventional expectations, placing the subject into direct relation to its own expectations. The subject resumes its prerogatives, it is him who defines, and that is why his house becomes an ideal architectural prototype with the ability to influence all other architectural objects. The house has a variable and mobile metaphysical heart. It reveals itself reflection and challenges its limits.

Each of these projects has introduced a new paradigm that is built around an emerging subject that has moved architectural approach in its time :

- The American spirit of the pioneer and his relationship with Nature (F. L. Wright)
- The « new » man and the living machine (Le Corbusier)
- L'homme moderne qui agit sur l'espace phénoménologique (W. Gropius)
- Modern man who acts on the phenomenological space (Mies van der Rohe)
- Space as distance to be traveled and formativity (R. Koolhaas)
- The subject as an absolute and its relation to space, material and light (T. Ando, Paulo

Mendes da Rocha, Luigi Snozzi)

- The postmodern subject between tradition and modernism (M. Botta)
- The concept as an absolute (S. Fujimoto)
- The deconstruction of rationalism and free form (F. Ghery)

Each of these references was the result of a desire, a personal and singular conviction, unpredictable but questionable. Who could have foreseen they would become "school" references for generations of architects throughout the World?

Somme architects have managed to share an architectural concept that goes against "family" conventions with singular family. Starting from very different situations, for their personal laboratories, they knew how to mix inhabitants of a house with their own profound beliefs. It is not uncommon that "first" project is the private and

personal home of the architect himself. It is no coincidence that some exemplary houses were considered uninhabitable by their first owners and, paradoxically, these houses were immediately recognized by architects as something new!

"La Maison Intelligente" - Smart house – of this year's workshop is based on the idea of reducing material surface of the subject and increasing metaphysical one. Our aim is to put you in a position that asserts the architectural principles that are dear to your heart. On the other hand, the small size of the project will allow you to fulfill your desires. In this workshop, the cross-pollination of cultural references from your three countries would be a great stimulus for the emergence of new concepts and innovative proposals.

"maison intelligente" - Smart house?

It is a common terminology that basically designates connected objects capable of acting with a degree of autonomy in relation to users. The connected object suggests actions, awakens desires, acts in a certain way by itself. It does not merely obey demands, but anticipates them. It not only provides information, but also the way forward. It is intelligent, it has an algorithm and a database that allow it to choose, either decide or obey a choice. It is a fact that intelligent objects are part of our environment. But, should we approach the house from a single and logical form of intelligence? Furthermore technological?

You are asked to consider the house and its intelligence, on other criteria than technological ones. Your project could not be summarized in a catalog of home automation where we push buttons or vocalize demands expecting that our home-robot does everything for us.

Your smart house would be designed to reflect what you consider to be intelligent. In the way of living and especially in the way of living intelligently. You will make choices that will put you at the center of a project that will obey your own desires, your commitments, your culture and your way of wanting to live without concessions.

You won't be the objects, but the architects of your house project.

## **2. The workshop: work process**

### **1. Building site address : 5, Place du Calvaire, 75018 Paris**

Your Building land is located in Montmartre, historical site located on the highest hill of Paris. Formerly a hilltop village on the outskirts of Paris. Artists have made of it a great place of creation and bohemianism in Paris. From the top of this building land, the view of Paris is magnificent. No doubt it is a privilege to be able to live here.

The building site has a façade on the Place du Calvaire (21.23m long) and another, below, on the Rue Gabrielle (20.00m long). The average gradient is about 13.5m (see the plan).

The plot, of around 550m<sup>2</sup> (flat), will be divided into 4 distinct smaller plots, of about 140m<sup>2</sup> each and an average width of 5m. These smaller plots will be allocated to students' teams by a random draw.

### **2. Working method:**

The teams are asked to approach the subject « smart house » thoroughly, bringing together architectural concepts that respond at first to the proposed problem. Ideas on "smart" – intelligent should be clarified and then associated



with the architecture of a family home unit. This duality aims to bring together two fantasized objects through an interesting thought. How to define the intelligence of a house?

The references, ideas and concepts that will fill the space, such as flexibility, sustainability, connectivity, technology, aesthetics, sociology, etc., will become a basis for each team's design and concept of a smart house. Once agreed on a clear and shared concept, the project will be developed while ensuring coherence of the conceptual approach from one end to the other.

At the end of the project work, each team will define/identify which kind of family might live well in the proposed house.

This method is opposite to the one you usually use to work on, where you first define the choice of the family to initiate the project. This inversion – architectural choice first – will have a definite influence on your architectural design. You first have to answer the question: "From your view point, what is a "smart house"?"

Consider pushing up the design of your house in architectural terms!

The answer to "What kind of family could live in this house?" will be the last point of your work. All types of family are acceptable: classical families, recomposed families, a family welcoming young people who live in the house too, a young family, and so on. The choices are open, only the model of family organization should be a today's model.

### **3. Sustainable Development**

Another important point of your project : it should follow a sustainable development approach. This will be considered in a global way (material, implementation) and it should respect Paris City's energy saving policies.

- Designs of façades and building envelope that are energy efficient – even capable of producing energy.
- Use of specific ventilation and heating systems to ensure thermal comfort, in Summer and in Winter.

The use of wood is desirable : bearing walls made of solid wood, as well as poles, beams, floors, panels... But wood can also be used only as cladding on a steel or reinforced concrete structure.

In principle, your project should stay in a range of 150 to 200m<sup>2</sup> maximum.

### **4. Team organization:**

Japanese, Chinese and French students, enrolled in Master 1st and 2nd year programs, will be dispatched into 10 teams (to be confirmed depending on the number of students) with a maximum of 7 students per team.

Students from the Atelier Tabet, enrolled in License programs, will be dispatched among the team additionally. And 2 students in each team will be in charge of the site model.

### **5. Urban rules to consider:**

#### **a. Shared walls and lateral openings:**

- The building land division will reveal shared walls at the edge of the houses projects
- Openings with views on neighboring properties are prohibited in France
- Light-catching openings only are allowed up to 1.80m
- Shared courtyard are possible and negotiable between teams

b. The house will be built at the upper part of the site and with a sidewalk alignment overlooking the Place du Calvaire. Recessing and small garden, should be closed by fences or by aesthetic devices on urban alignment.

c. The number of floors facing the Place du Calvaire should be of a ground floor + 2 floors, with a roof of an accessible terrace. And the number of floors facing the garden down the site is not defined.

d. More than half of the building plot should stay landscaped and unbuilt. Today, this plot is an enclosed garden where hives are installed. It is a green and very quiet place.

e. Car : if necessary, a garage could be located on Rue Gabrielle. Attention: This façade should be also carefully considered and designed.

f. Garden, trees, bushes, paths... are also part of the project.

## **6. Validation of the architectural approach :**

- A fertile and interesting Smart House concept
- A good insertion of the project in the context of Montmartre, and the Place du Calvaire in particular
- The programming and the constructive approach
- The graphic and oral presentation of the project

## **7. Rendering elements:**

- 1:20 scale model of the Smart House
- 1:200 scale model of the entire site common to all the teams

On 1 or 2 A0 panels vertically oriented

- Diagrams, explanatory ideograms or sketches of the concept
- 1:50 scale plans, sections and facades
- 1:20 scale detailed elements

## **Date of rendering:**

Friday 22<sup>d</sup> September at 16:00

Room: *not decided yet*

Display of all A0 panels and models in the main hall of the ENSAPVS right after the final presentations

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EXTRAIT DU PLAN CADASTRAL

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Section : BN  
Feuille : 000 BN 01

Échelle d'origine : 1/500  
Échelle d'édition : 1/500

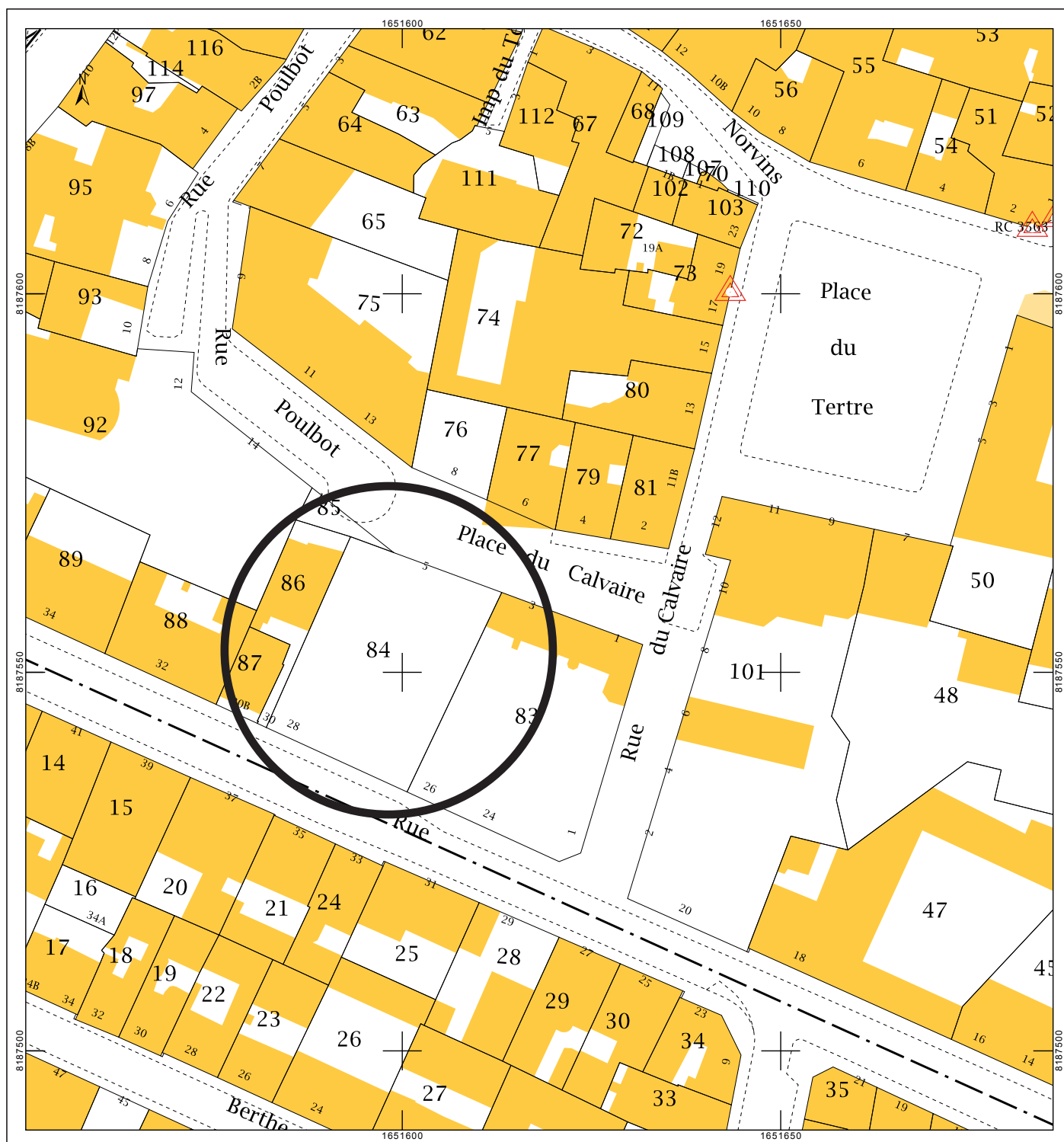
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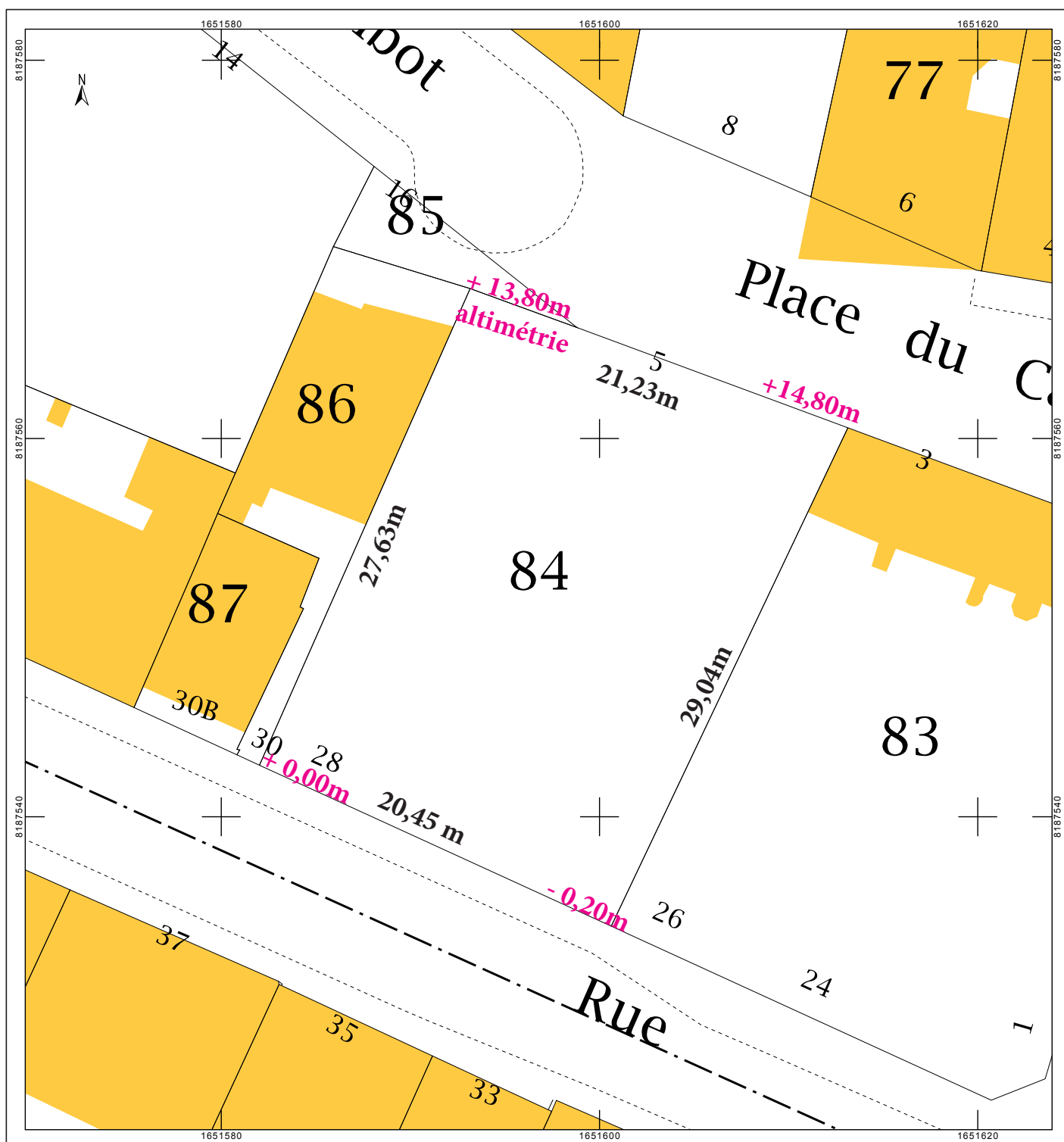
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BOUTERAA Sara  
SERCKI Antoine  
APPAS Cleo  
LEE Jasmina

KOJIMA Yuki  
ANNEVARDINE Tajouline  
LEVEQUE Hugo

# SMART HOUSE

## —Continuity and Unity



our definition of a smart house is a house that can create the chance communication and enhance the unity, people will never feel lonely in this house they can all the time feel the presence of his/her partners.

According to this, the eye contact is a very important element, we propose a continuous and fluent space to respond to our conception: a «no wall» house. The special slope offers different levels inside the house which allows us to divide the different spaces and change the atmosphere gradually.

The «long bridge» inside the house becomes the heart of the space, even if the site is very narrow we can still keep the eye contact with all the other public spaces in the house.



PERFECT INTEGRATION IN NATURE

Int / not actually taking in the natural elements (geometry, water) inside the house organizes them that follows the contour lines of the project base (let / let by creating large windows (long windows) integration of garden roofs at terraces

Ecology and Energy Management

\*\*Installation of solar and photovoltaic panels at roof level to make the house independent energy equipment

MIXED TIMBER STRUCTURE (lightweight, fluid and flexible)

Center elements (composite wooden beam post)

Clear glass cover



CONCEPT OF HOUSE



RECONSTRUCTION OF TERRACE



HOUSE IN THE NATURAL ENVIRONMENT



CONCEPT OF HOUSE

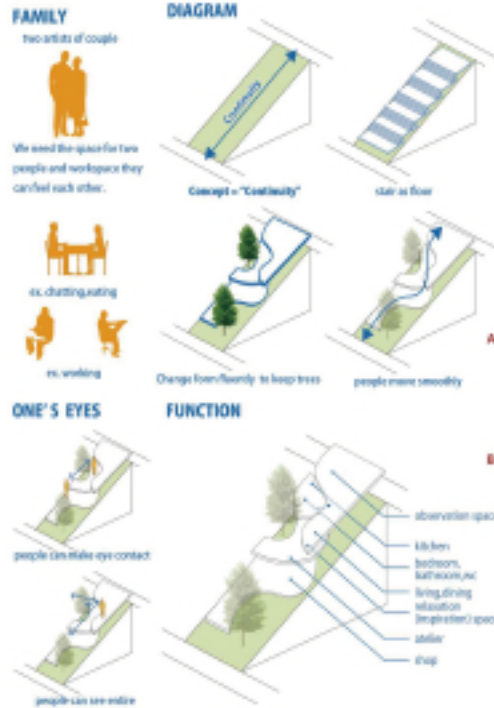


RECONSTRUCTION OF TERRACE

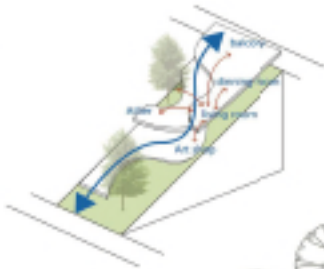


HOUSE IN THE NATURAL ENVIRONMENT

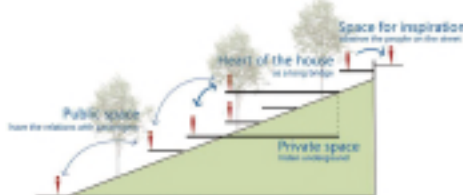
### Diagrams of our conception



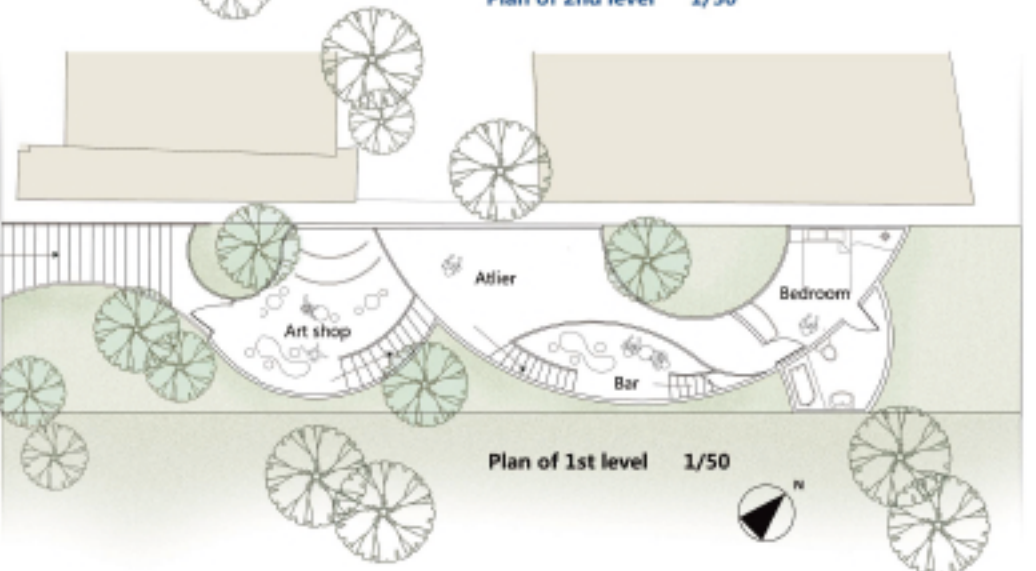
### FUNCTION ANALYSIS



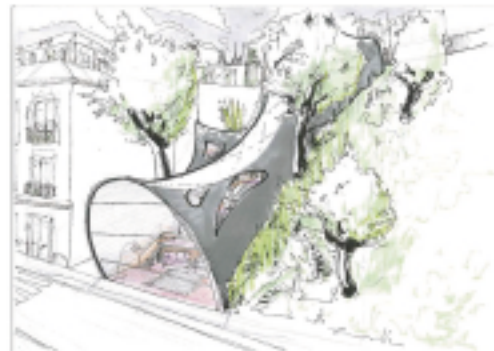
### SECTION ANALYSIS



Plan of 2nd level 1/50



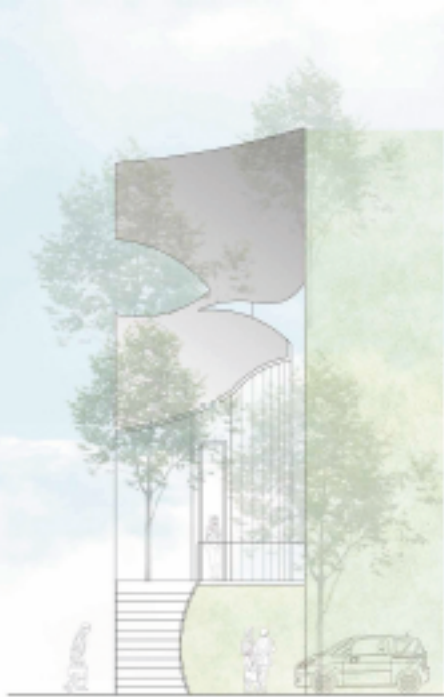
Plan of 1st level 1/50



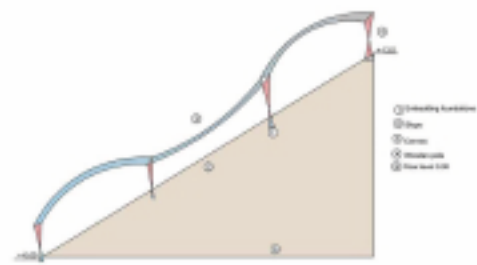


# SMART HOUSE

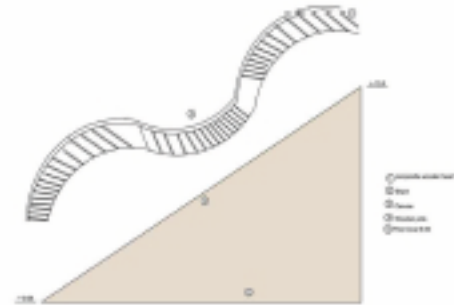
—Continuity  
and Unity



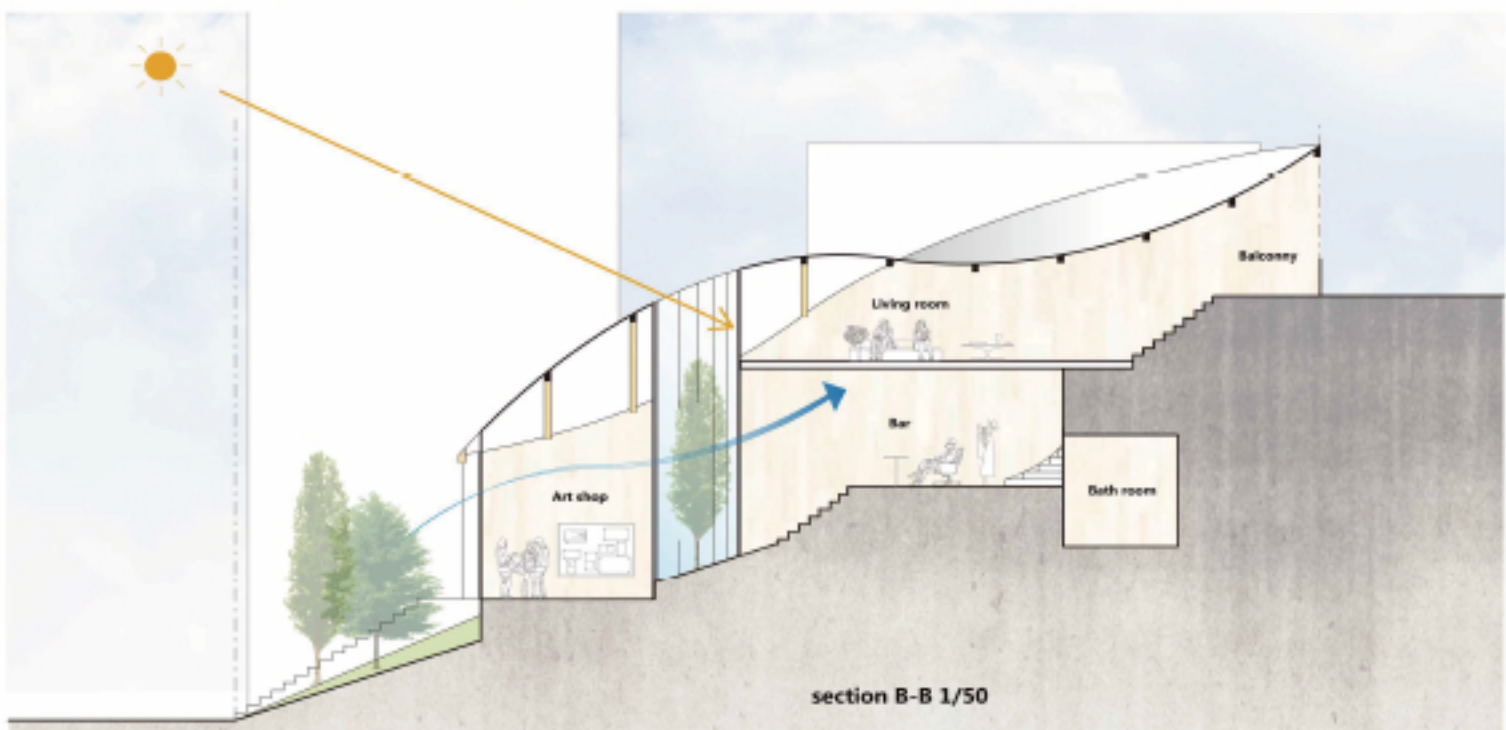
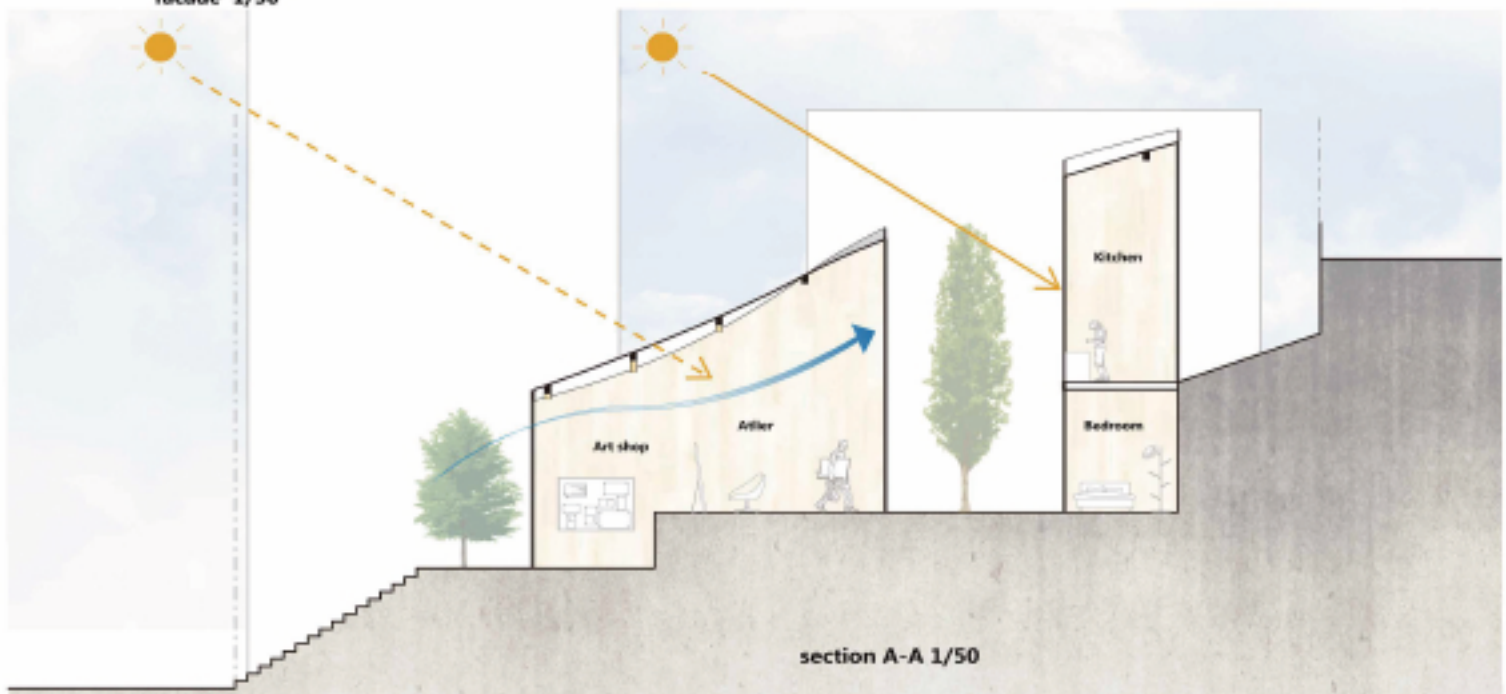
facade 1/50



level section diagram



level section diagram

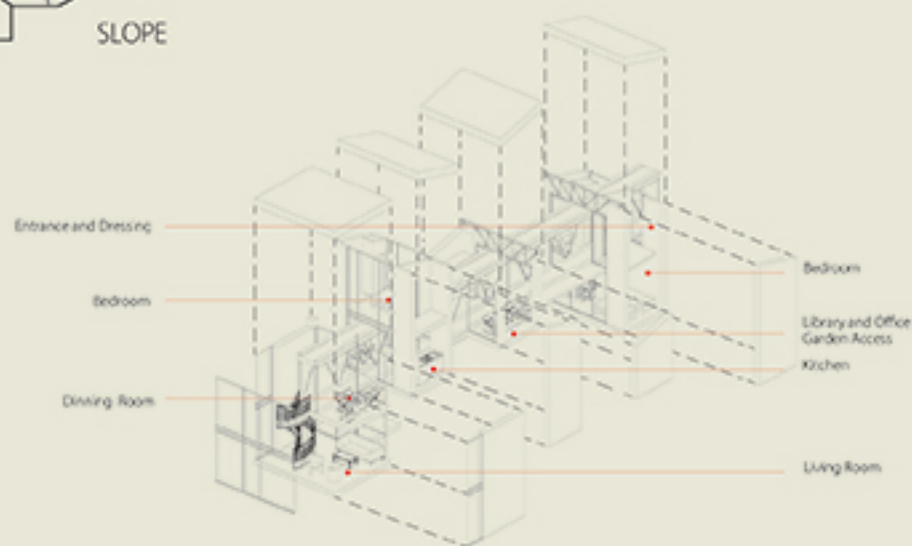
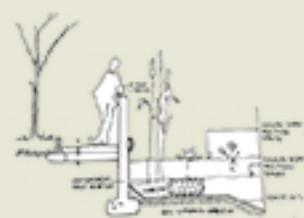
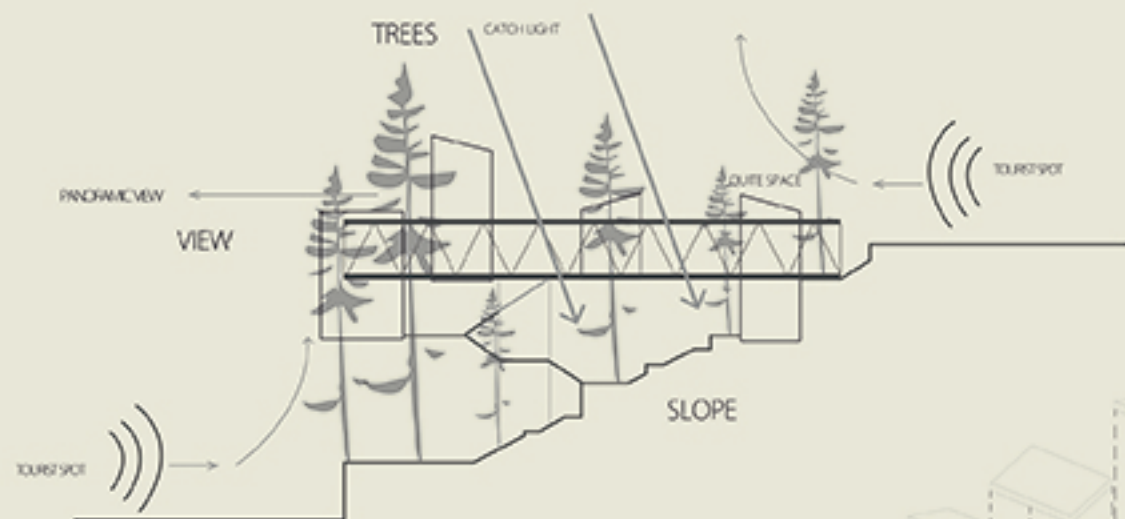




# 住居 EN SUSPENSION



Ariane BLANC - L1 / Graft SONNEN - L1  
 Candice LHERBÉ - L2 / Mathilde BOTTIER - L2  
 Sébastien ZATSIAN - L3  
 Hock KATAOKA - M1  
 Eva NOGIER - M2 / Solène DUPLESSIS - M2







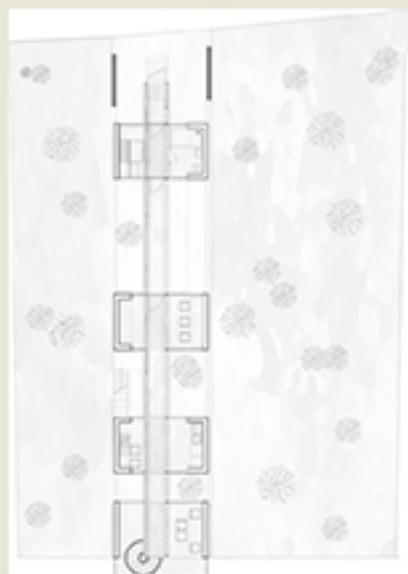
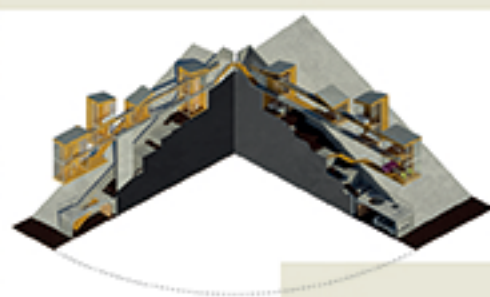
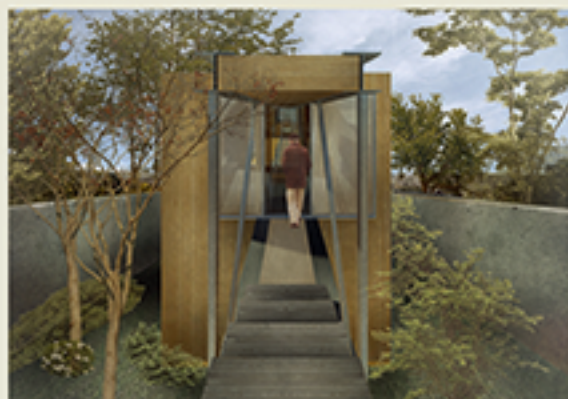
PLOT IN MONTMARTRE



SECTION ON THE BEAM  
E1:100



PLAN - LEVEL ROOFTOP  
E1:100



PLAN - LEVEL BEAM  
E1:100



PLAN - LEVEL TERRACE  
E1:100



PLAN - LEVEL STREET  
E1:100

Prise BLANC - L1 / OUB BENHOU - L1  
Ondice LIGNE - L2 / MARIAN SOTTELLI - L2  
Sébastien ZARFAN - L3  
Mika USACKA - L3  
LAWRENCE - L4 / SOTTELLI OUTDOOR - L4

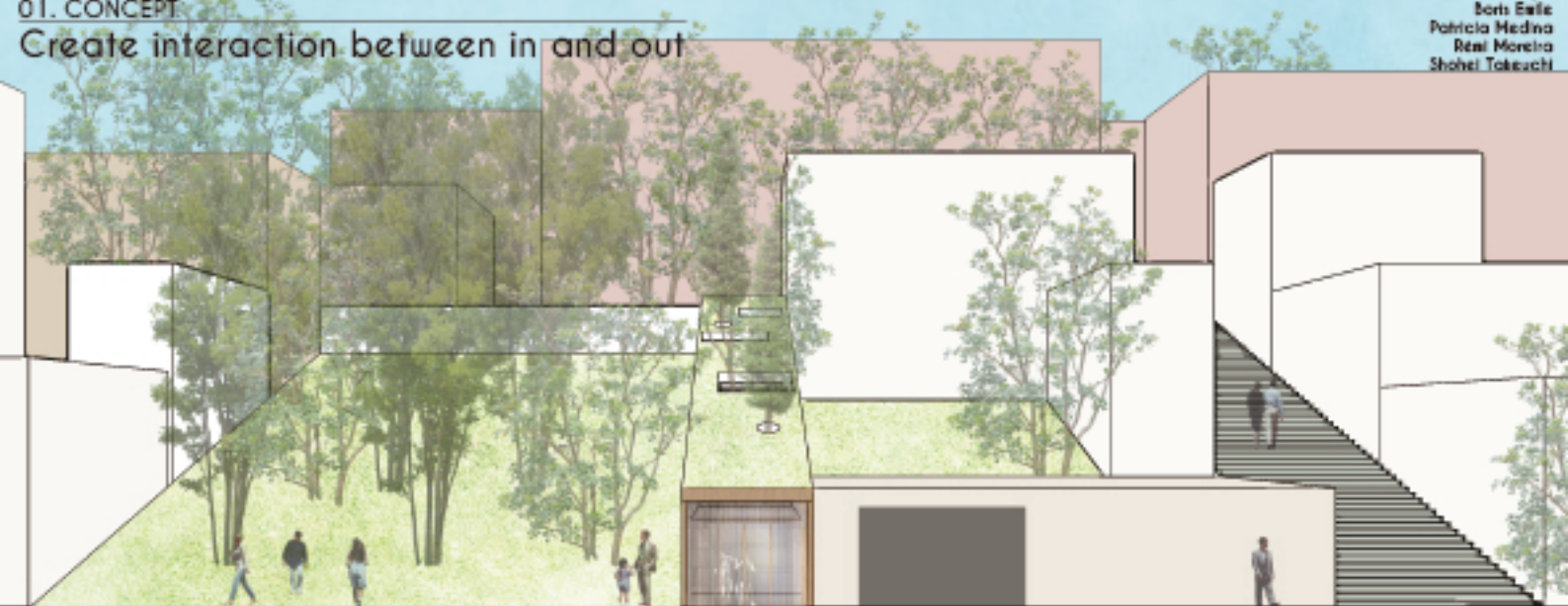


# Live with nature

Group 4  
Adèle Devillers  
Alice Collin  
Anna Catglio  
Boris Ewle  
Patricia Medina  
Reza Moreira  
Shohei Takeuchi

## 01. CONCEPT

Create interaction between in and out



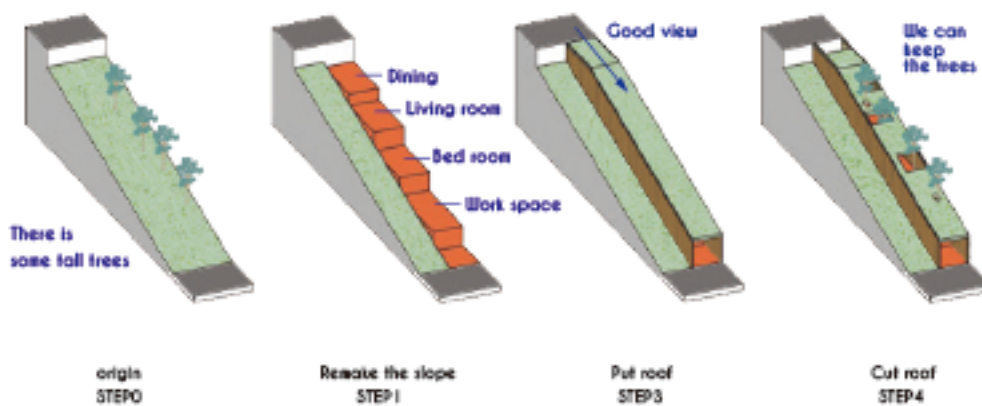
## 02. SITE ANALYSIS



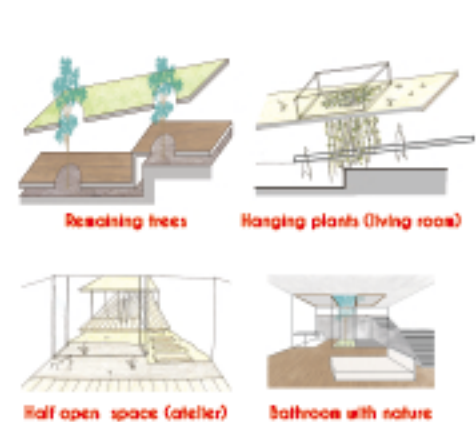
## 03. REFERENCES



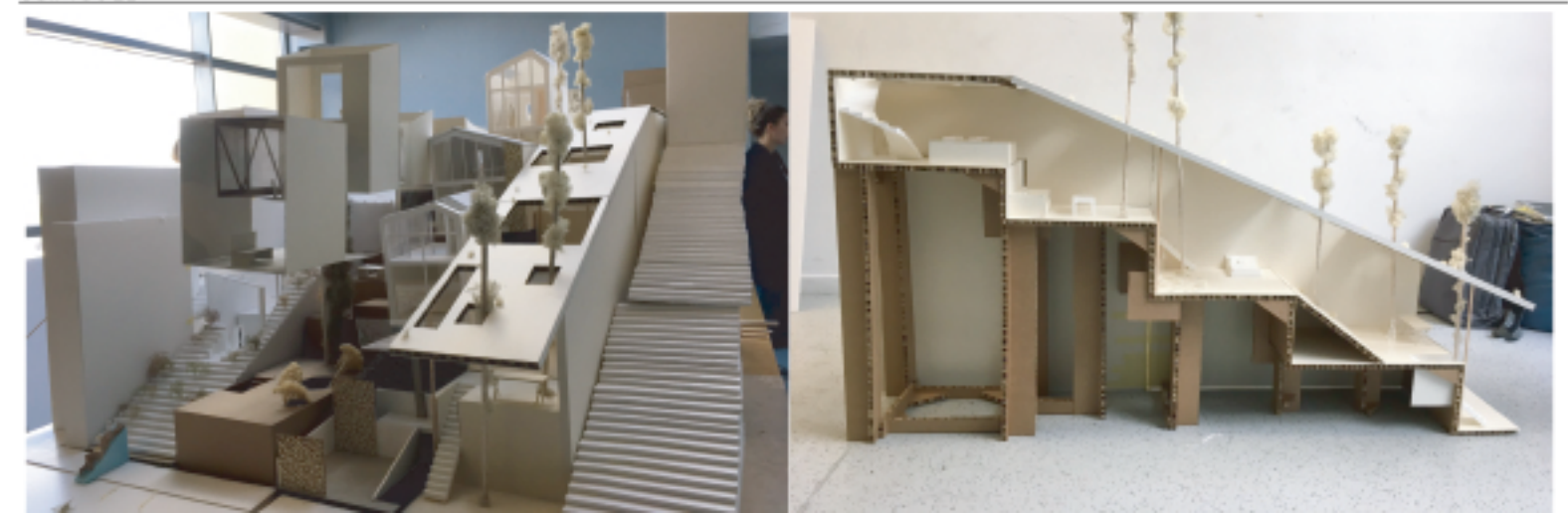
## 04. DESIGN PROCESS



## 05. The OPTION OF LIVING WITH NATURE



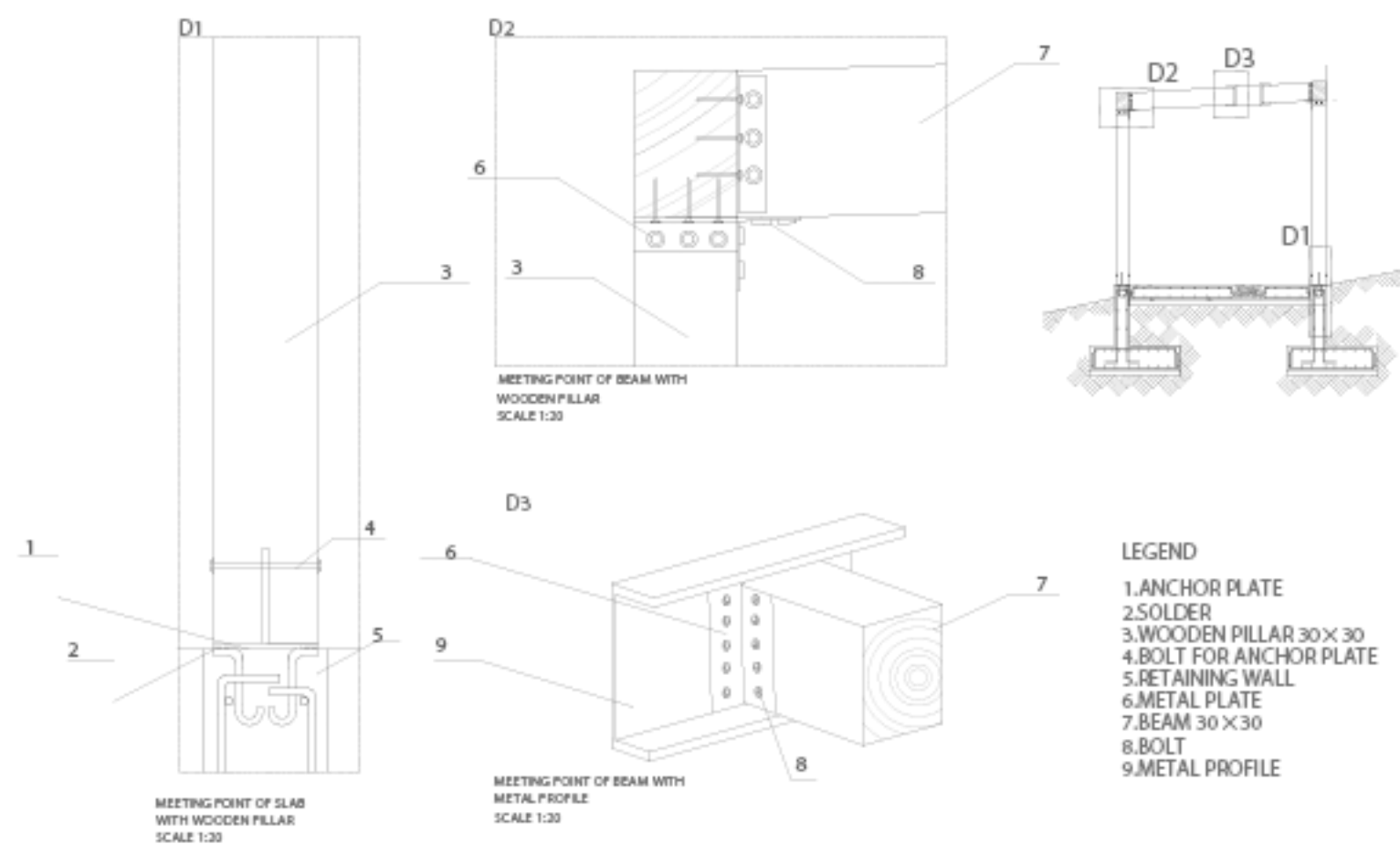
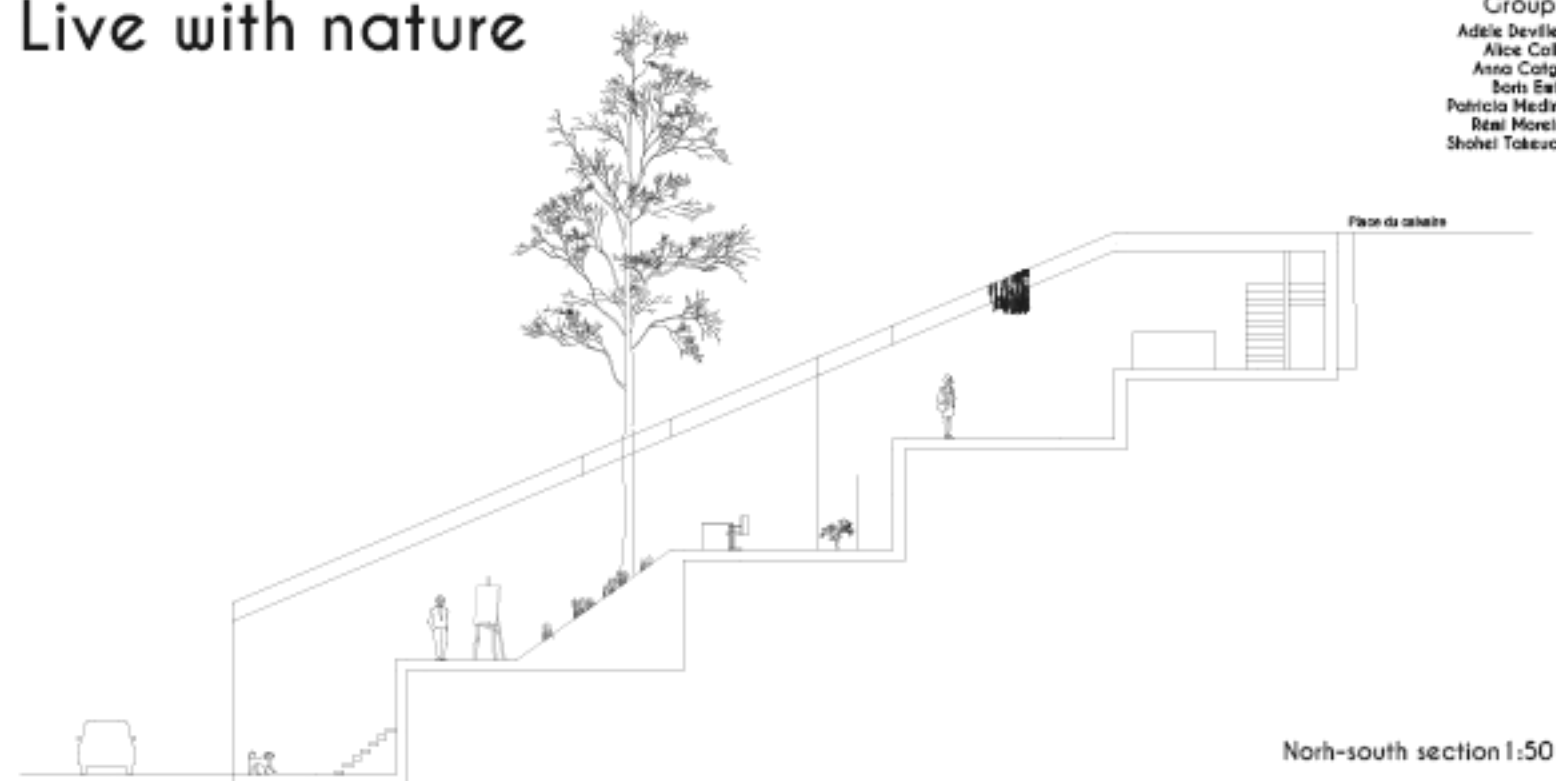
## 06. MODEL





# Live with nature

Group 4  
 Adèle Devillers  
 Alice Collin  
 Anna Catigiu  
 Boris Eille  
 Patricia Medina  
 Reni Moreira  
 Shohei Takeuchi



# SMART SHARE

## ANALYSIS



Residential/Cafe Area  
Park/Museum Area



Site plan 1:500



### Group 3

Kosuke Ogurahata/Baptiste Boulan  
Ghita Cherradi/Julien Metais  
Laura Vien/Marion Carvalho  
Penelope Barret

## CONCEPT



## BACK GROUND

18th district of Paris



- Sacre Coeur (Basilique du Sacre-Coeur)
- ▲ Dali Museum (Espace Dali)
- the building of the project

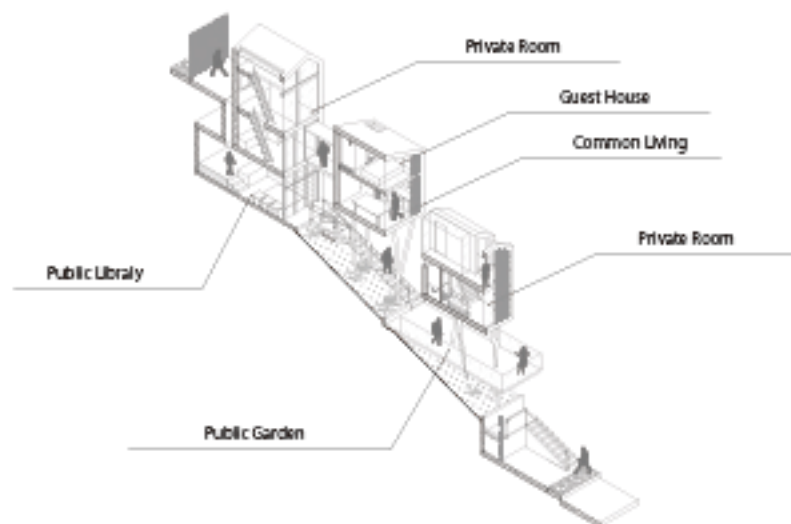
## URBAN CONTEXT

Located in Montmartre, a historical site of Paris, the building land is on the highest hill of Paris so the plot is on a sloping land. The hill is on the main tourist space of the capital: from building site, the inhabitants can go to the Basilica of the Sacre Coeur or the Dali Museum, by the Place du Calvaire, and below the access to the south leads to Rue Gabrielle.

Tourism in expansion  
Public spaces nearby







Plan GL+14000 S=1:100



Plan GL+11000 S=1:100



Plan GL+8000 S=1:100



Masterplan S=1:50



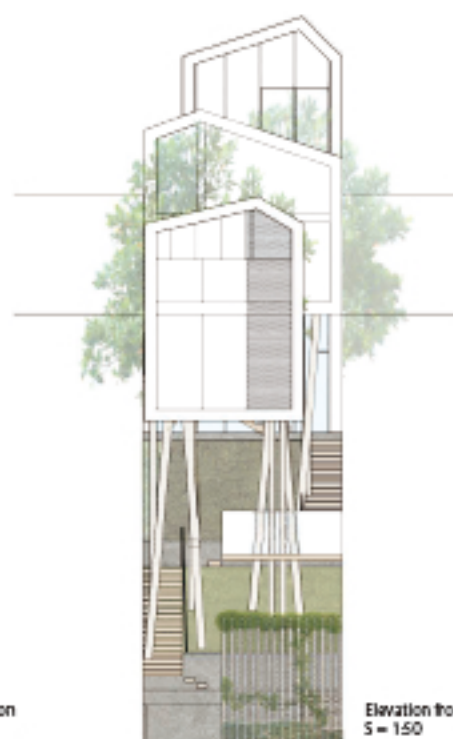
A-A' section  
S=1:50



B-B' section  
S=1:50



C-C' section  
S=1:50

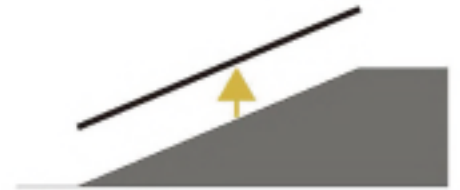


Elevation from South  
S=1:50

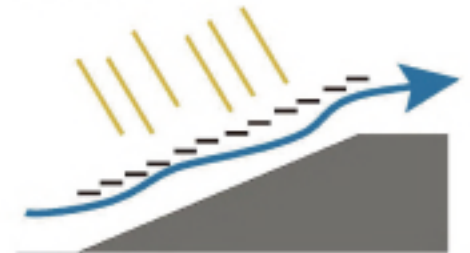


# HOUSE S

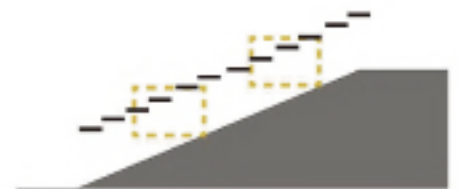
Smart House on Slope



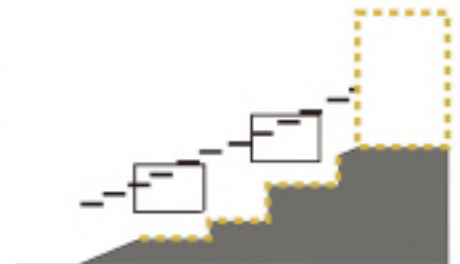
Lift the slope



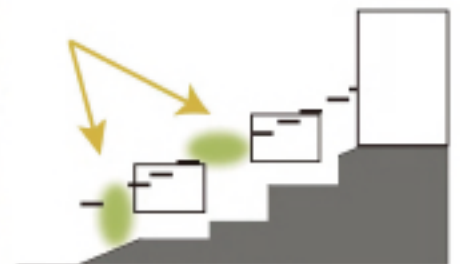
Make it stairs



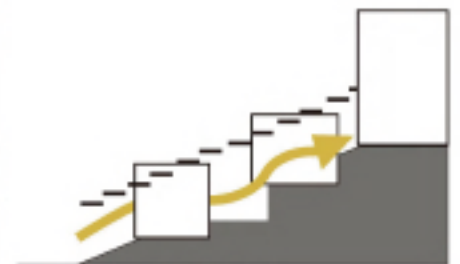
Drop bedroom on slope



Dig for common space



Graden in front of bedroom



Creat dynamic in house



Elevation phase de l'ouvrage



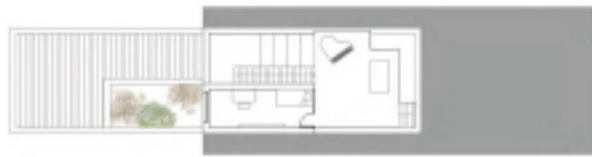
Plan 1



Plan 4



Elevation rue générale



Plan 2



Plan 5

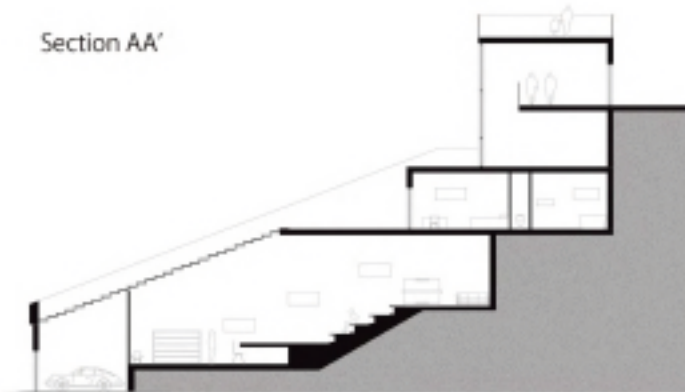


Plan 3



Plan 6

Section AA'



Section BB'



## Sustainable Development

- Using soil as construction material



- Transparent solar panel

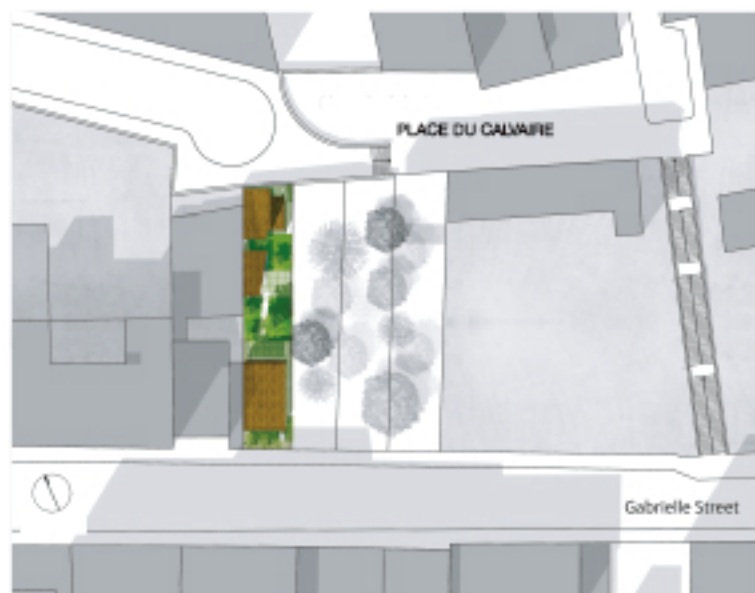


Team 6 : Simon lee, Pierre Pousset, Berthine Grandcolas, Josua Saulle, Matisse Duchet, Timothe Sasmayoux, Nadja Salifou, Anna Raulin



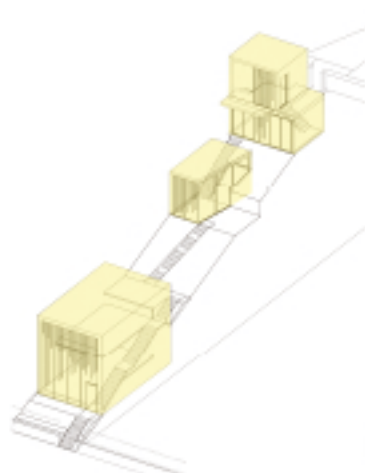
# A HOUSE IN TRANSITION

- SMART HOUSE -

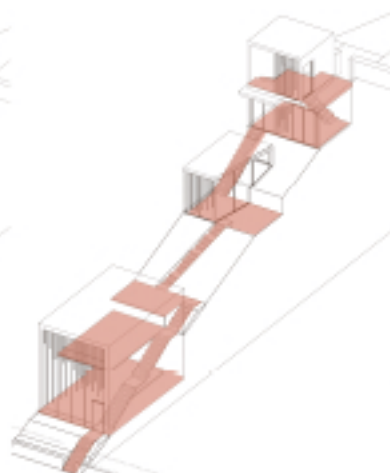


MASSER PLAN - 1:200e

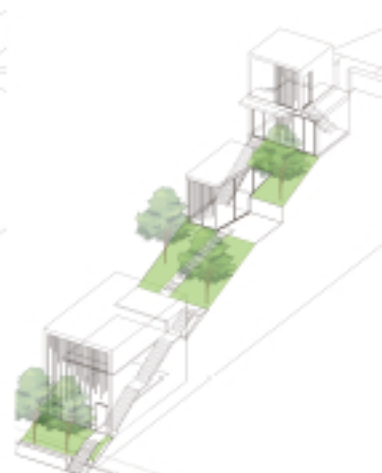
## COMPOSITION



VOLUMES



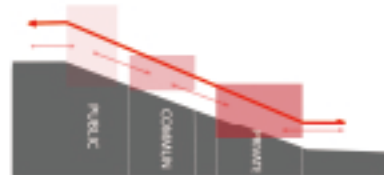
PATH



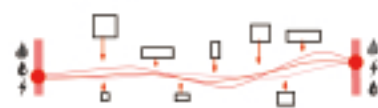
GREEN SPACES



## CONCEPTS



TRANSITION



PLUGGING TECHNIC



LINK WITH NATURE



FACADE - 1:50e



WORKSHOP INTERNATIONAL - SEPTEMBRE 2017 ENSAPVS - Nagoya University - Tianjin University

Clément BIOJON | Victor COLOMBIER | Jean-Marc JUSTON | Jeanne Lhotte | Sarah-Louise N'DIAYE-BODIN | Anne- Sophie PERNY | Lucas POUIDAL | Qiuhan YANG



# A HOUSE IN TRANSITION

- SMART HOUSE -



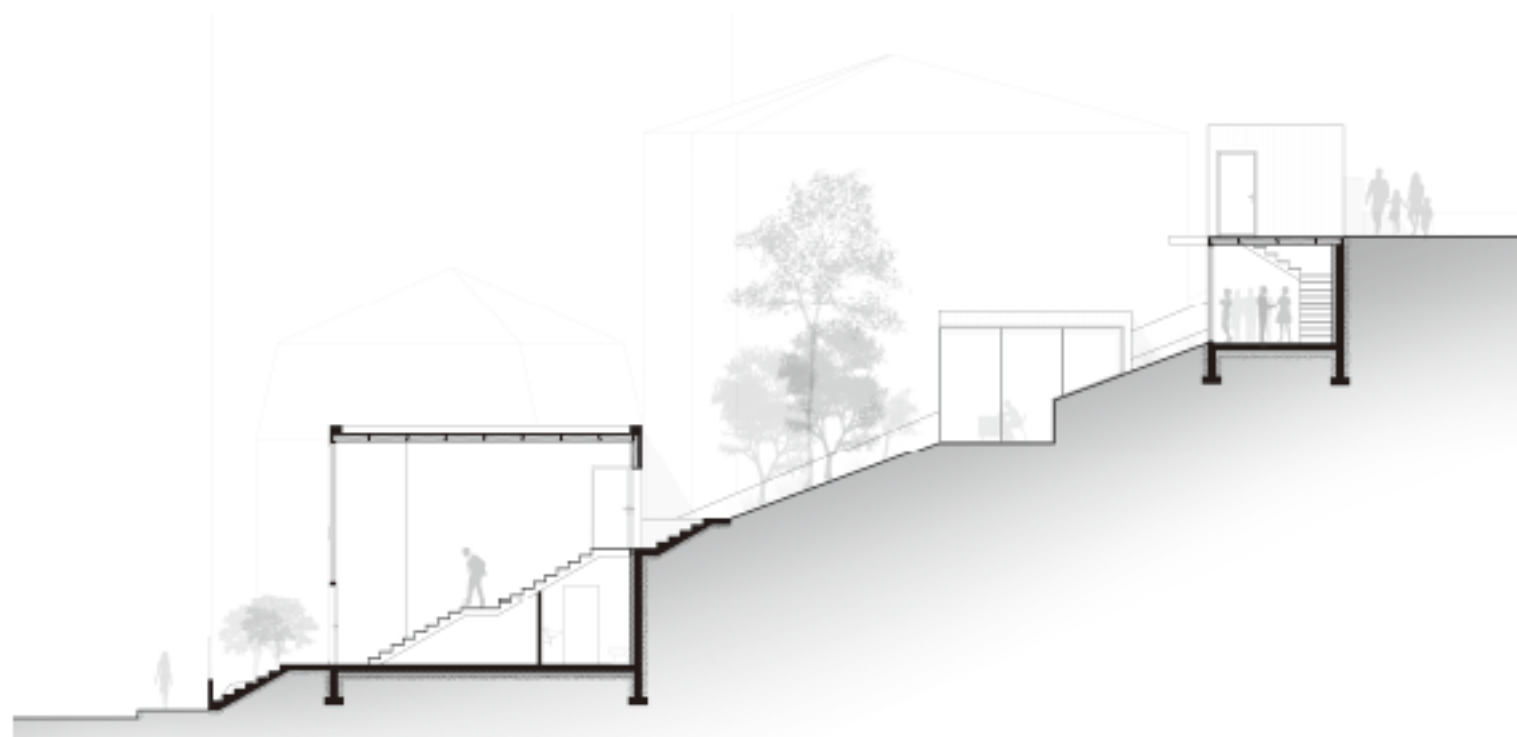
GALLERY'S SECOND FLOOR  
1:50e

GALLERY'S FIRST FLOOR  
1:50e

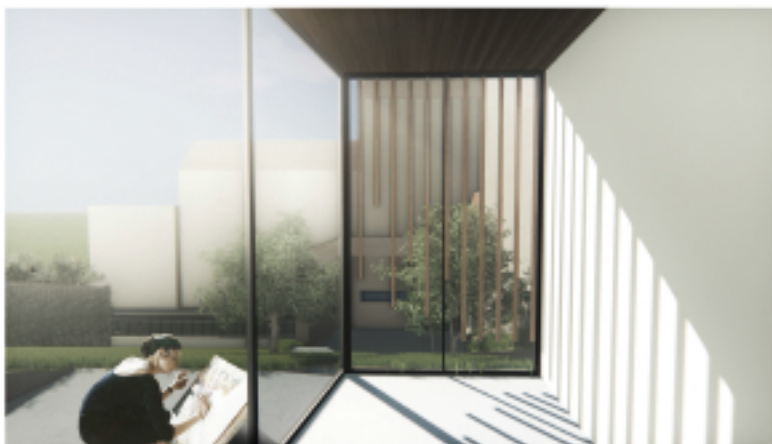
WORKSHOP PLAN  
1:50e

HOUSE'S SECOND FLOOR  
1:50e

HOUSE'S FIRST FLOOR  
1:50e



SECTION - 1:50e



WORKSHOP INTERNATIONAL - SEPTEMBRE 2017 ENSAPVS - Nagoya University - Tianjin University

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