

# Alexandre MURER

## Urban Plangineering Student



## PORTFOLIO



**UTCompiègne**

Urban Systems Engineering



**U. of Illinois at Urbana-Champaign**

Department of Urban and Regional Planning

### SKILLS AND PROJECTS

- > GIS Mapping
- > Urban Planning Contest
- > Sustainable Development
- > Public Spaces

- > Built Environment
- > Architectural Modelling
- > Land Use Affectation
- > Research
- > Urban Transportation

# URBAN PLANNING CONTEST

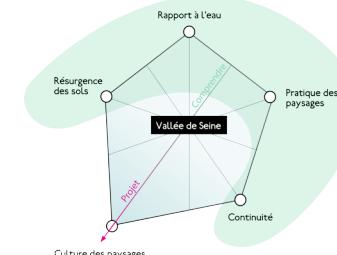
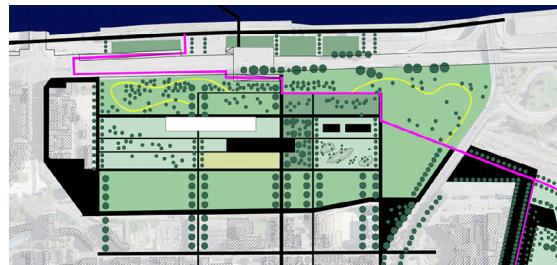
## Urban Design Proposals for the Seine Urban Renewal - From Paris to Le Havre

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### THE CONTEST

I formed the group Seinographie in November 2016 with 8 other students in architecture, landscape design, engineering, urban planning... in order to participate to the urban planning contest ERGAPOLIS. We worked on 3 plots of the 200km long Seine Corridor, between Paris and LeHavre. In May 2017, two juries of scholars and professionals awarded us the annual prize.

Final report available upon request

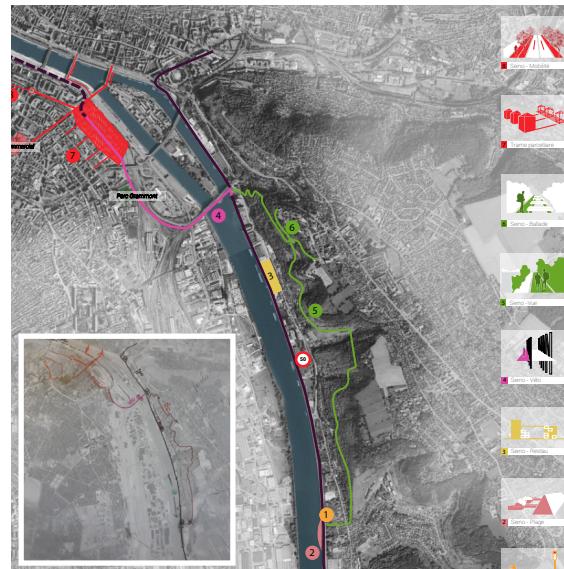


### TRAINING

In parallel of the contest, Ergapolis organized several trainings. I obtained a certification in Sustainable Urban Design by the French Agency for Environment and attended a workshop given by a famous parisian urban planner.

### PROPOSITIONS

In six months, we designed a landscape park to animate a polluted plain and a masterplan for the urban rebound of the Rouen area. Along this teamwork, I undertook various tasks, such as project coordination, land use affectation and design, as well as the innovative layout for the urban renewal of Rouen. I finally built up Seinographie's urban vision with the two other team leaders.



### PUBLICATION

[Read the Article](#)

With two Seinographie members, I wrote an article explaining our philosophy and guidelines for renewing the notion of "city-nature" in the Review Sur-Mesure.

# URBAN PROGRAMMING

Six-month internship at the urban planning agency Ville Ouverte

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## URBAN PROGRAMMING PROJECTS

During my six-month internship at Ville Ouverte, I took part to 3 main projects of the **urban programming** team: the general land-use affectation of a 100-acres business park next to Lille's airport, the pre-study for the urban renewal of Roubaix, and the general urban and landscape framework of the Southern University of Paris.

### 1 MOBILITÉ



#### ENJEUX / CONTEXTE

Offre de mobilité pour les déplacements professionnels/reunions/livraisons(...), hors trajets domicile-travail.

#### TYPE D'OFFRE / DIMENSIONNEMENT

Flotte de véhicules + mobilité décarbonnée. Diversité de la offre : voitures de ville + véhicules utilitaires.

#### dimensionnement : à discuter avec l'équipe

### 2 FORMATION-RÉUNION-ÉVÉNEMENTIEL



#### ENJEUX / CONTEXTE

Mutualisation des besoins en espaces de réunion / réception / formation pour les entreprises du site.

#### TYPE D'OFFRE / DIMENSIONNEMENT

Espaces de réunion/réception avec service traiteur, adossés à une offre de restauration.

Reservable par le grand public en soirée / le week-end.

100-1000 m<sup>2</sup>.

### 3 RESTAURATION



#### ENJEUX / CONTEXTE

5000 salariés sur le site. Offre très insuffisante sur le CRT. Petite offre sur le PA de la Motte et à Lesquin.

#### INARIANT

Miser au maximum sur les circuits (très courts) et les filières biologiques.

Diversité de type de nourritures, gammes, et situations : individuel / en groupe, self-service / service à table, restaurant / traiteur, sur place / à emporter, pause / réunion de travail, dédans / dehors.

#### TYPE D'OFFRE / DIMENSIONNEMENT

> restauration inter-entreprises (y compris offre de restauration à emporter) : 2500-3000 couverts - 2500-3000 m<sup>2</sup>

#### (à finir de rencontrer avec le CRT)

> restauration inter-entreprises à table :

100-150 m<sup>2</sup> par restaurant

> café / bar :

100-150 m<sup>2</sup>

> service traiteur et livraisons : peut être assuré par un restaurant

## OPPORTUNITÉ À DISCUTER :

### UNE DIMENSION AGRICOLE ?

#### ENJEUX / CONTEXTE

Opportunité de circuits très courts pour la restauration vs. valorisation du foncier

#### TYPE DE PROGRAMME / DIMENSIONNEMENT

> Marachage/insertion : 1 à 4 ha

> Serres : production "technologique"

1000 - 5000 m<sup>2</sup>

> Potager sur les toits : 100 - 1000 m<sup>2</sup>

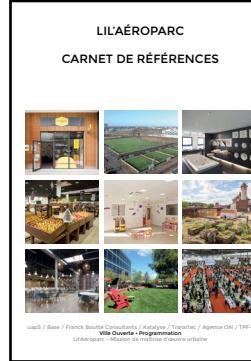
#### UN DATA CENTER ?

#### ENJEUX / CONTEXTE

Stockage des données des entreprises du site, et gestion de l'énergie nécessaire (refroidissement) à l'échelle du site.

#### TYPE DE PROGRAMME / DIMENSIONNEMENT

> références à trouver



## PROGRAMMING TOMORROW'S URBAN PROJECTS

Beside my projects for public organizations, Ville Ouverte committed me an internal study on the emerging market of the calls for innovative urban projects (Réinventer Paris, Inventons la Métropole... the model recently got international with C40's **Reinventing Cities**). This study was based on existing press articles and 15 interviews I conducted with scholars and professionals.

# EXCHANGE PROGRAM AT THE U. OF ILLINOIS

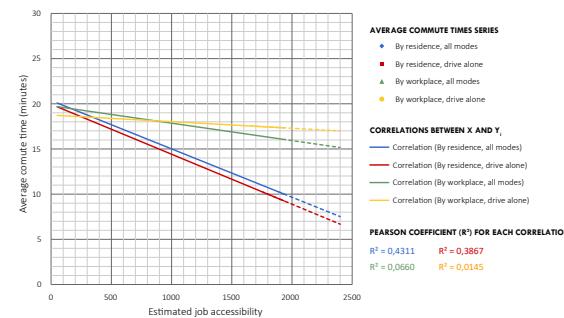
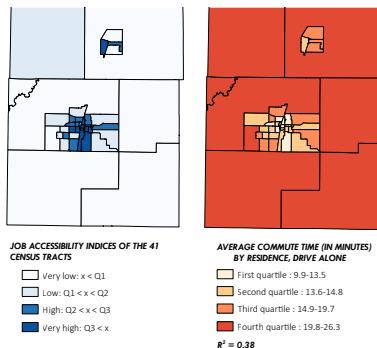
Skills improvement in the American urban context and mindset

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## BRINGING TRANSPORTATION AND LAND USE TOGETHER

Public transit ridership is very low in the United-States. If this issue is often said to be related to transportation policies, urban patterns play a key role in travel behavior. I decided to take a course on the link between transportation habits and land use to contribute to the sustainable planning effort.

Thanks to scholar readings and several essays on datasets I compute by my own on diverse software (Excel, R, QGIS, Illustrator, InDesign), I analyze the interactions between transportation habits and land use development.



## DESIGNING WALKABLE AND BIKABLE CITIES

In the birthplace of auto-centered urban planning, urban design approaches are improving the (re)inclusion of pedestrians and bikers in public spaces.

My course on pedestrian and bicycle planning gives me the keys to develop the infrastructure and policies that may let the urban vitality rebound happen in American cities.



## EXPERIENCING THE US CITY

Beside my courses and urban planning projects, I enjoy my stay in the US to visit several cities. It's important for me to experience the urban design, transportation and policies that are still shaping the American urban landscape. My understanding of these places is strengthened by the Political-Economy course I currently attend on the Modern American City.

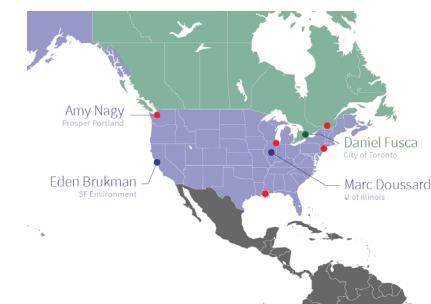


## ECONOMICS FOR PLANNERS

In order to complete my skills in urban planning, I registered for a course on urban economics. Through this field, I gain a better understanding of the business models underlying urban planning and policy issues. I plan to do my research paper on the economics of free-floating systems.

## UNDERSTANDING AMERICA'S SUSTAINABLE PLANNING

In tandem with my activities in the US, I conduct a research on the sustainable urban planning developed in the US. This research is monitored by my home university and benefits from a partnership with another exchange student in Canada.



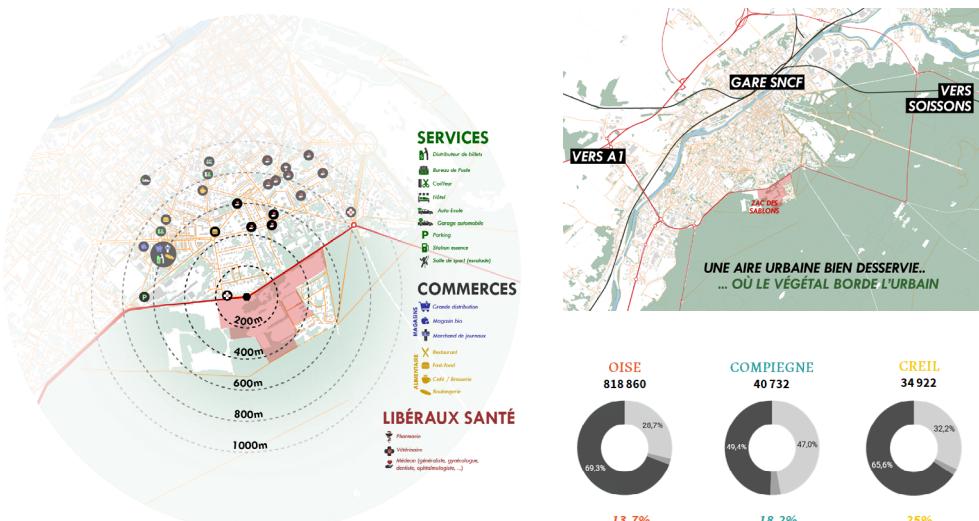
# URBAN PROGRAMMING PROJECT

## Masterplan review for the Sablons area, in Compiègne - France

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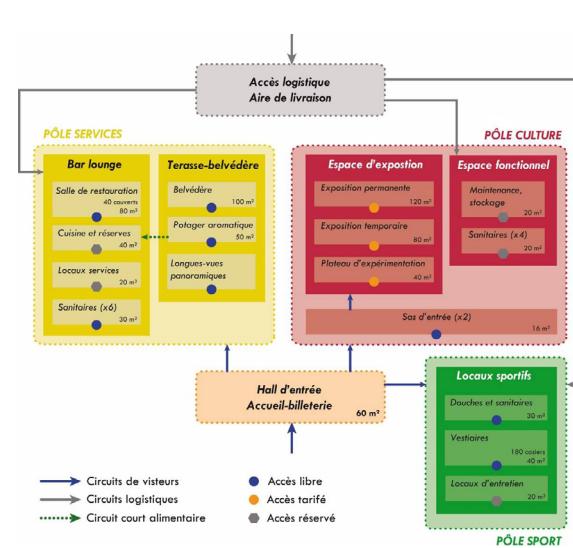
## **EXISTING CONDITIONS**

With four other students, I wrote a comprehensive existing-conditions report of the City of Compiegne. This document compiled data on the socio-demographic profile of the city, its public equipments, retail and shopping areas, physical aspects... I realized all the maps (data collection, GIS computing, Illustrator visualizations) and did the census of public equipments and shops.



## **GENERAL LAND USE PROPOSALS**

The plot was complex because of its location, at the frontier of the urbanized area and the protected natural forest. We presented a so-called “program” (i.e. masterplan) focused on the mix of urban uses (housing, retail development) and forestal recreation (sport activities, landscape pathways). The aim of the plan was to balance urban development and natural areas’ protection.



## **SIZING THE “PROGRAMS”**

In order to detail a specific element of our masterplan, we sized the uses of the iconic object of our “program”: the belvedere. This work enabled us to specify the links between the various uses of the building (observatory, sport changing rooms, restaurant, museum).



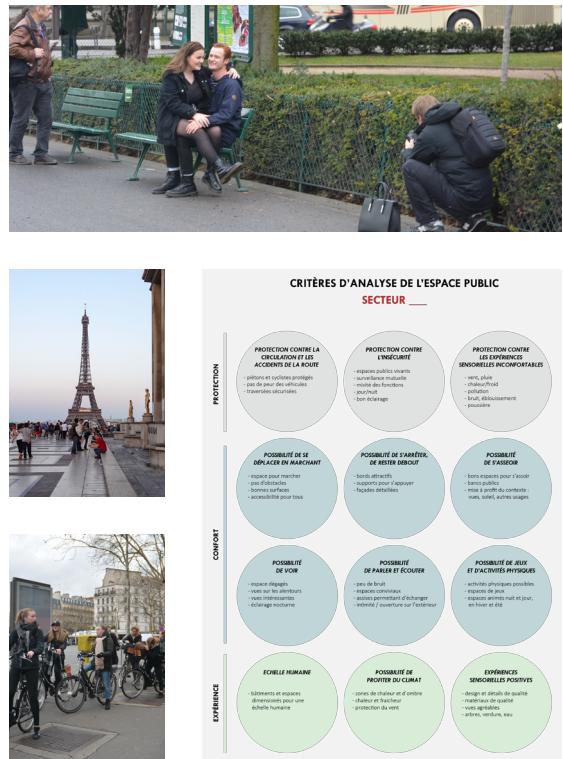
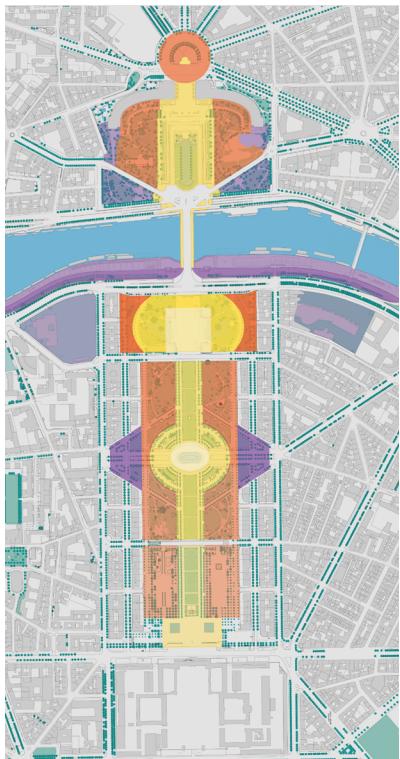
# PUBLIC SPACE DESIGN

Pedestrian experience improvement proposals for the Tour Eiffel area, in Paris

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## UNDERSTANDING THE USES OF ICONIC PUBLIC SPACES

The Eiffel Tower is a world-class touristic site. This exceptional, iconic location is now welcoming a large diversity of touristic and residential uses that are sometimes hard to balance. To understand in what extent the Tour Eiffel area belongs to tourists and Parisians, we wrote an existing-conditions report. This document was based on several field visits and the placemaking method developed by Danish architect Jan Gehl.



## RENEWING PUBLIC SPACE TO ADAPT IT TO EMERGING USES

Our proposals were focused on two spaces: the forecourt of the Eiffel Tower and the riverfront that faces the famous Parisian monument.

On the forecourt, we suggested to value the time that tourists spend in the line by providing cultural and interactive platforms that enable the visitors to learn about the monument while waiting. The project of the riverfront was to animate this strategic space to make it more attractive for residents and tourists, by enhancing pedestrian and bicycle facilities in the area (see below).

Coyo • Despax • Dubois • Loyer • Murer • Salou • Thomas      **utc** UNIVERSITÉ

### CONNECTER LES QUAI : ESPACE RÉCRÉATIF ET DE FLÂNERIE

**ENJEUX**

AXE 1 : Mettre en valeur la Seine en suscitant curiosité et émerveillement.  
AXE 2 : Aménager une promenade végétalisée sur les quais hauts, propices à la cohabitation entre différents usages et utilisateurs.  
AXE 3 : Permettre le cheminement ludique entre quais haut et quais bas.

**OBJECTIFS**

Mettre en scène la Seine par des ouvertures visuelles.  
Ménager une rupture de la linéarité des cheminement piétonniers.  
Proposer une plus grande perméabilité entre les quais hauts et bas.

**PRÉSENTATION DU PROJET**

Afin de redonner vie aux quais hauts actuellement délaissés, sous utilisés, à l'aménagement peu qualitatif, il s'agit de proposer aux touristes une promenade à la hauteur du prestige de la Dame de Fer.

Cette promenade végétalisée permettrait aux touristes et aux riverains de déambuler, isolés de la vie urbaine, baignant et mouvant grâce à la couche végétale entre les quais et l'Avenue du Quai Branly. Différents aménagements viendront ménager des espaces de contemplation de la Seine ainsi que des espaces de repos et de loisir.

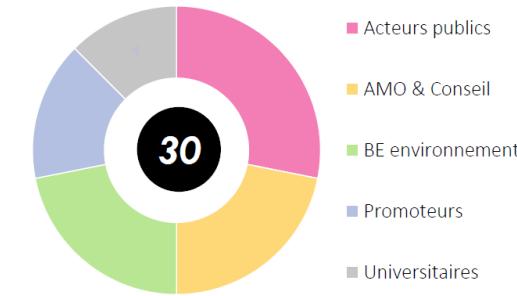
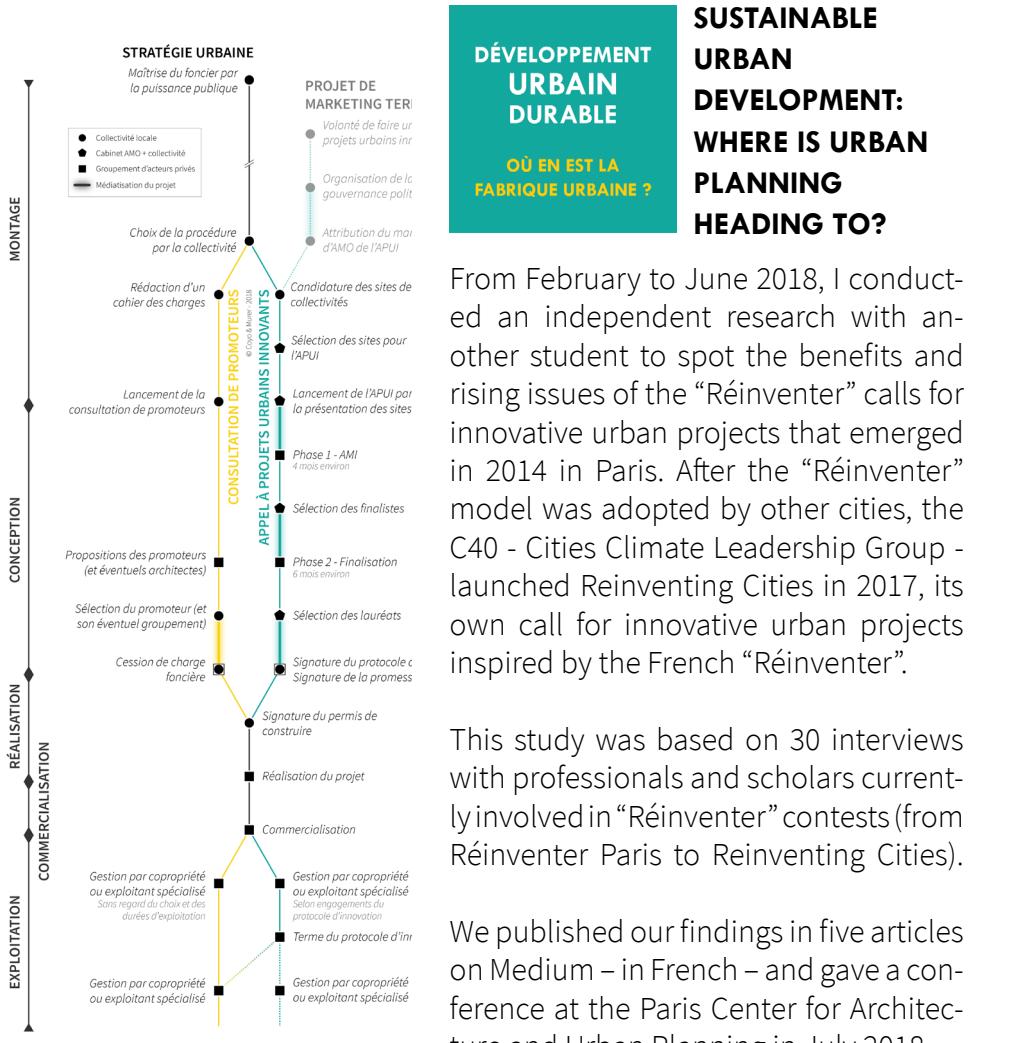
L'interface quais hauts / quais bas est repensée afin d'en faire un "entre-deux" agréable, incitant les usagers à emprunter ces deux niveaux avec envie. C'est essentiellement un espace urbain qui fera cette différence toboggans et gradins-escaliers permettront de relier les deux niveaux plus aisément.

**ANALYSE DE L'ESPACE PUBLIC ACTUEL QUAI HAUT**

# PROFESSIONAL-FOCUSED RESEARCH

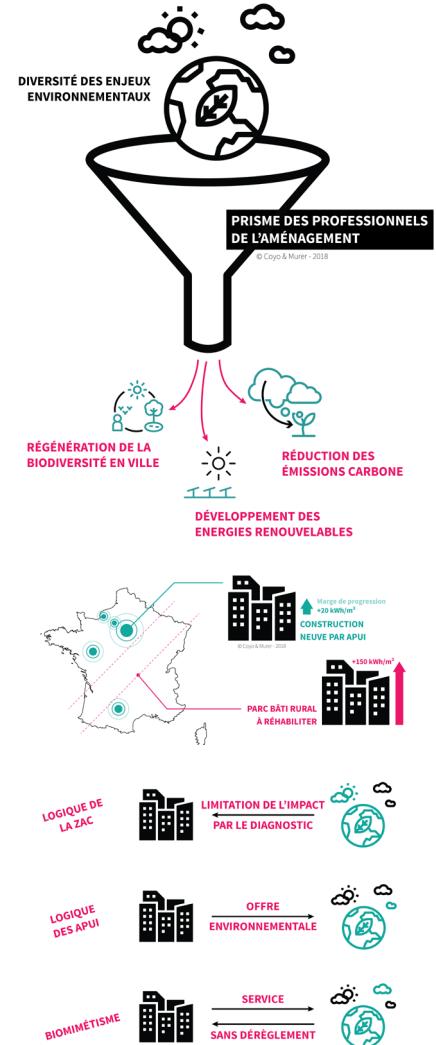
Study of the integration of sustainability goals in the “Réinventer” projects

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**FINDINGS** Read the English Abstract  
In France, calls for innovative urban projects raise as many benefits as they raise questions on the urban future that we all wish for. In this complex transition, we identified three emerging trends that we believe will be established in the incoming years:

- as cities diversify their tools for public consultation and inclusion at all the levels of urban projects, social and economic inequalities increase;
- the purpose of public-private partnerships are shifting from the design of urban projects to the management of public services;
- innovation redefines the way urban...



# ARCHITECTURAL MODELLING

## Design of A. Campo-Baeza's House of the Infinite

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### TECHNICAL DRAWING

With five other students, I drew all the technical pieces required for obtaining a building permit in a French city. The work was done on AutoCAD.

### NUMERICAL MODELLING

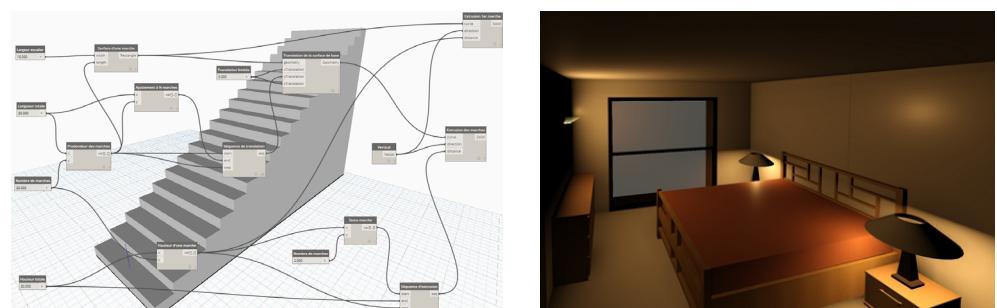
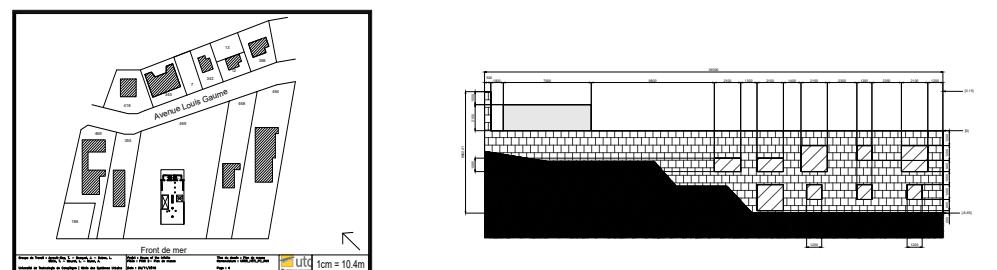
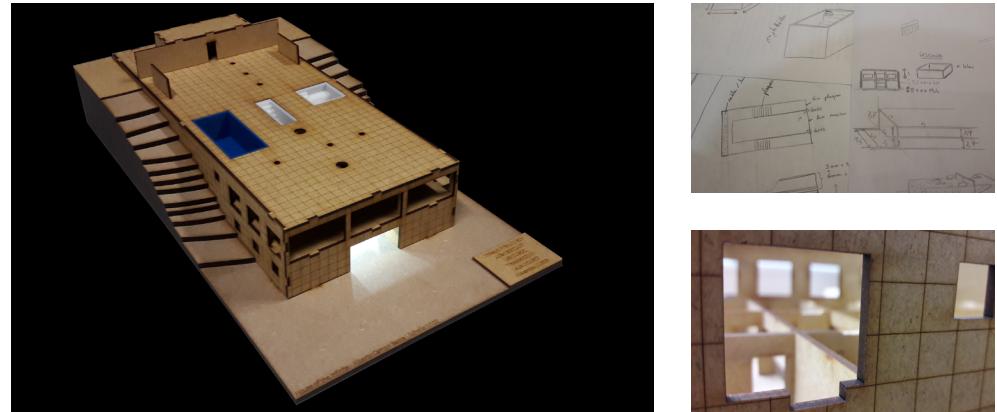
We modelled the whole building and close surroundings on REVIT ARCHITECTURE, and designed realistic deliverables and a virtual visit.

### PHYSICAL MODELLING

I was in charge, with another student, to engineer the whole physical modelling process with 3D-printers and Laser cutters. We drew each of the 32 pieces on AutoCAD, then edited it on ILLUSTRATOR and manufactured them at our school's FabLab. We also implemented a LED light to better the model.

### VISUAL PROGRAMMING

In order to improve the tools we designed our model with, we built-up a REVIT function that enabled us to easily set-up the staircase of the house (see right).



# OTHER WORKS

Comprendre, concevoir, développer l'espace urbain se fait aussi ici

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All the works are available, in French, upon request

## URBAN HEATING ANALYSIS

Assessed the energy demand of a building composed of three-room housing units in an urban environment. Used PLÉIADES-COMFIE software to design energy efficiency proposals.

## SOCIOLOGY OF WORK

Conducted a research paper of sixty pages untitled "From the Construction Yard to the Manufacturing Plant: from a Worker to Another". Designed the paper as a litterature review in order to contribute to a Sociology review.

## PHILOSOPHY OF TECHNIQUES AND SCIENCES CONFERENCES

Attended a series of conferences on the Philosophy of techniques and cognitive sciences. Discovered, between 2015 and 2016, the works of active international researchers.

## ETHICS OF THE CITY

Wrote a twenty pages essay which title was "Humanism and Technicism in Tomorrow's City". Compared the visions of the "smart-city" in order to contribute to the debate over the definition of the future desirable city.

## SCIENCE AND PUBLIC DEBATE

Studied the methods of public consultation and inclusion in major infrastructure projects. Briefed the work to other students and facilitated a student debate over the role of citizens in urban projects.

## VALUE ENGINEERING

Conducted a functional analysis of foodservice sidebar. Designed a dozen of functional charts and reported a benchmark over existing solutions. Proposed three alternative solutions to better users' experience.

## LIGHTNING STUDY

Collaborated with a group of twelve students in order to assess the quality of enlightenment of a UTC's building. Computed datasets in the software HELIODON and delivered a final, group presentation for two PhDs.

## PHILOSOPHY OF WORK

Wrote a research paper on the working conditions in the sector of retail logistic warehouses (used for supermarkets or Amazon's deliveries). Reviewed the recent (2000-2015) litterature over the subject.

## CURIOSITÉS ET MOTIVATIONS

- I self-trained to Q-GIS and still research GIS functions to use in order to design more appealing and relevant maps in my projects;
- Since 2017, I constantly do business intelligence on the "Réinventer" calls for urban innovative projects that are challenging French urban planners;
- In 2018, I monitored the UTC students in their participation to the ERGAPOLIS urban planning contest I won the previous year;
- [My Twitter account](#) is the place I share articles and my own works on #Urban Planning, #FreeFloating, #Reinventer - and learn from other professionals!

# Alexandre MURER

## Urban Plangineering Student

### WHAT'S NEXT ?

After several experiences in public and private sectors, always in planning and design departments, I am looking for my next professional projects in the field of Urban Design or Transportation Planning.

Equipped with diverse analysis and projects management methods, I am looking forward to joining the teams of professionals who design the urban projects and policies that make sense in the ecological transition that our cities are now facing. As I am genuinely convinced that urban planning is a cross-disciplinary field, I am also keen on complex and collaborative projects.

Currently opened to end-of-studies internship offers, I remain available to discuss in view of a future collaboration.

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### CONTACT

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