# Individual internship report

5th year

# Formation of the Tokyo Bay Area and Community Design

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# Acknowledgements

I would like to express my gratitude to Professor Hideaki Shimura for welcoming me to his laboratory, guiding me throughout this research project and enabling me to learn more about the importance of communities in urban planning. I also want to thank Momo Nakashima and Guo Xiaowen for their support when I couldn't find information in Japanese and for accompanying me in fieldwork and during meetings. I want to thank the members of the laboratory for their warm welcome and efforts to include me and talk to me in English. I would like to finish by thanking Laura Verdelli who accepted to be my internship coordinator for this internship.

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# Introduction

I did a university exchange programme at Shibaura Institute of Technology (SIT) in Japan during my fourth year of university. This exchange made me want to learn more about city planning in this country, since the city structure of Tokyo is very different from the one I know in France: there are no unused spaces, it is really dense, and there is a mix of urban functions. Sadly, those questions were not answered through the classes I attended, which is why I applied to the research programme at SIT. This programme was also an opportunity to discover another way of working and to gain a different research experience from those I had at Polytech.

The aims of my placement were to research and analyse the urban development of Tokyo Bay, in particular Tsukishima, Tsukudajima and Toyosu, focusing on communities and cultures, and then to propose possible improvements for the future urban development of Tokyo Bay.

During my internship, my tasks were to carry out a litterature review study on the urban planning and history of Tokyo Bay, then to carry out field research in order to collect data on the main characteristics and community life in each district, and to analyse the data collected in order to draw up urban development proposals that respected the historical and community context of the areas studied. I also worked on formatting my findings to make them accessible to the public. Besides, I met regularly with Professor Hideaki Shimura to discuss my findings and refine my approach to the research.

Thanks to this program, I could develop my writing and analysis skills which are my weaknesses. Moreover, living and studying in a country where I don’t speak the language improved my adaptation skills as well as my open-mindedness.

I hope that this research experience abroad and the internship I completed at a land surveyor company in my fourth year of studies will open me a few doors to work for a consultancy in urbanism with international projects or to work abroad in the future.

# 1. Presentation of the host structure

I joined the Research Exchange Program (Laboratory Internship Program) in Shibaura Institute of Technology for a period of nineteen weeks from Monday 26th of February to Friday 12th of July 2024. I completed this internship in the Regional Design Laboratory led by the professor Hideaki Shimura which is a part of the school of architecture.

## 1.1. Shibaura Institute of Technology

Shibaura Institute of Technology (SIT) is a private university in Japan, specialised on engineering, technology, and innovation (*Academic Guide ／Shibaura Institute of Technology*, s. d.). SIT has established a bilateral agreement with the University of Tours for exchange students who want to join the Sandwich Exchange Program or the Research Exchange Program in SIT. SIT boasts two campuses: one in Omiya, located in Saitama, north of Tokyo, and another in Toyosu, situated in the Tokyo Bay Area. The School of Architecture is housed in the Toyosu campus.

*Figure 1: SIT's Toyosu campus (Elsa MELEDO, 2024)*

The Research Exchange Program allows students to deepen their knowledge on a subject under the supervision of a professor by joining a laboratory. To apply for this program, I had to select up to three laboratories offering a place to international students (only one architecture and urban planning laboratory was available on the list) and I could also select up to three laboratories (even if they were not available in writing). I applied in August and got accepted in the Regional Design Laboratory in October 2023.

## 1.2. Regional Design Laboratory

The Regional Design Laboratory focus on how to improve the town development and the building architecture that will contribute to the local communities, by highlighting local resources and history. I was interested in this laboratory because the issues studied are also problems faced by many French towns. Moreover, the idea of completing multiple fieldwork and meeting residents and specialists seduced me and convinced me to apply for this laboratory.

The students join the laboratory when they start their fourth year – which is their las year of bachelor – to have a first experience of research. They work for their first semester consisted of discovering the Bay Area and learning about its history and main features for, then, guiding boat cruises during the Toyosu Waterfront Festival partly organised by the laboratory that happened in 6th and 7th of July. For the second semester, the fourth-year students will start working individually on a more precise subject (mostly around the Tokyo Bay Area). The fourth-year students are also responsible for the cleanliness and organisation of the laboratory: they sort and empty the trash bags, they answer the laboratory's calls, they boil water, water the plants, … Every day, one of the height fourth-year student is on duty from ten o'clock to seventeen o'clock. During their work, they receive assistance from first-year master students.

The laboratory has five first-year master students. They work in smaller groups on a project (last year one group worked on a shopping street in an old neighbourhood of Tokyo and created a renovation plan for a flower shop) and they also must write one article alone on the subject they want. Some of the students also assist the professor during his classes and workshops as a part-time job. If they need, they can receive help from the second-year master students. The six second-year master students work individually on their own research the whole year that they choose. Momo and Breena (her Chinese name is Guo) assisted me in my research when I needed help. The laboratory also has a secretary who

comes every Monday afternoon (she helps with all the administrative tasks). In total, the laboratory has twenty students (including me), plus the professor (see Figure 2).


*Figure 2: The students of the Regional Design Laboratory and the professor in the middle (Regional Design Laboratory, 2024)*

Hideaki Shimura is an architect and has been a professor in the Department of Architecture at SIT since 2003. He has carried out studies on community planning, citizen participation in urban development and the revitalisation of local towns. He has published numerous works on Tokyo Bay, in particular on Tsukishima and Tsukudajima. One of the distinctive features of his research is that he was born in Tsukishima and still lives there, making him a member of the Tsukishima community. His advice on my work on Tsukishima and Tsukudajima felt even more relevant.

## 2. Presentation of the mission

My mission during this research program was to learn more about the Tokyo Bay Area and the community design. I worked alone in autonomy on the Tokyo Bay Area, with a focus on three areas: Tsukishima, Tsukudajima and Toyosu (areas that I will present later in this report). My goal at the end of the program was to understand the dynamics of the Tokyo Bay Area, and the different communities and cultures present, to then, make some proposals on how to improve the urban development in the Bay Area. I hope my propositions inspired the professor Shimura who is a member of a group of experts in architecture and urbanism who are thinking about how to improve the urban planning in Tokyo and more broadly speaking in Japan.

# 3. Presentation of the course of the mission

I started my internship with an orientation day where I visited the campus of Toyosu (which I only went to two times in my previous stay), and I met the professor Hideaki Shimura for the first time. This meeting enabled me to discover my future work environment (students didn't start school yet so no one except the teacher was there).

Overall, my assignment was divided into four phases: firstly, learning the history of Tokyo, then carrying out fieldwork in the Bay Area, analysing and structuring the data, creating diagnosis and finally, looking for proposals to improve urban planning in the Bay Area (see Figure 3).

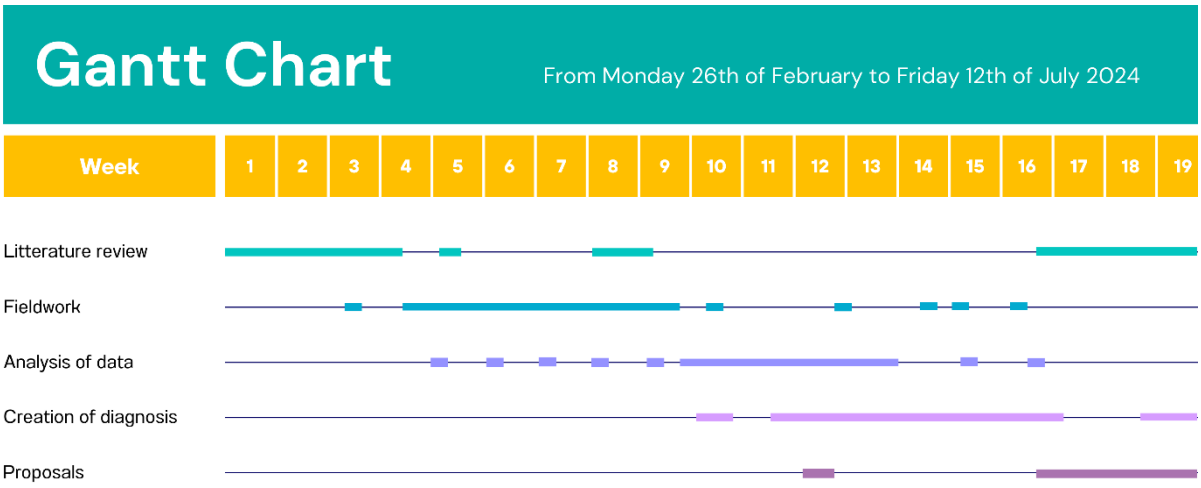



*Figure 3: Gantt chart (Elsa MELEDO, 2024, on Canva)*

For the schedule of the deliverables, we agreed that I should have completed the fieldwork for the beginning of May and then present to him my outcomes of the fieldwork in mid-May. I also chose to set the date for my presentation in front of the laboratory at the beginning of July so I would have the last week to make the last changes from the feedback. I also sent all my deliverables to the teacher at the end of the program.

## 3.1. Project follow-up through weekly meetings

I had a meeting with the professor every week for around one hour, where I presented him my findings for the week and asked him questions about what I found surprising. During those meetings the professor gave me some advice and precisions. If I missed some important elements, he told me so I could search on it for the following week. He also used those moments to teach me about the history and the main features of the Tokyo Bay Area, mostly in the beginning of my litterature review.

At the beginning of the internship, I had some difficulties to understand the teacher (Japanese people pronounce some words differently and learn American English so sometimes I didn't understand). I think he had way more information to share and critics to say on my work, but he was limited because of the language barrier. However, I believe that my understanding, and the one of the professor, went better throughout my stay.

I decided to conduct all the work I have done in English, I took notes for my litterature review and wrote my impressions from the fieldwork in English so if the professor wanted to see it, he would understand everything.

## 3.2. Litterature review on Tokyo and its history

When I joined the laboratory, my knowledge about Tokyo and especially the Tokyo Bay Area was almost non-existent. I knew that the capital city in Japan was first Kyoto (which means *capital of the West*) before moving to Tokyo (which means the *capital of the East*). And I also knew that the Tokyo Bay Area was built on artificial islands.

First, I searched for scientific articles about the history of Tokyo and of the Tokyo Bay Area in English, but I didn't find that many results or the article was not available (or free to read with my student accounts) so I also searched in French (but with notes taken in English. I may have used the wrong keywords, which explains why I found few articles on the subject in English. I didn't search in Japanese since my level in this language is low. During this phase of my internship, I didn't really know what I was searching for, I didn't know what information would be useful or not, so I decided to search on a variety of subjects that could impact the city planning in Tokyo. I searched for information on tourism and its impact on economy on urban regulations in Japan (that piece of information was difficult to find), on cultural heritage regulations, on community planning… Despite the articles and books being interesting, I think it is normal, but I felt like I wasted a lot of time to search for information that I couldn't find or that I didn't use.

I then researched the image people had of the Bay Area through newspaper articles. As I was looking for articles written in English, most of the results came from tourism websites. So, I tried to diversify my sources, with real estate websites and Japanese media with articles in English, to get a better idea of the Japanese image of Tokyo Bay. I also had some preconceived ideas about the Tokyo Bay area, which were like the image people had of the Bay area, which is: modern, innovative and recent islands with no history.

In the course of my research on the Tokyo Bay Area, I focused more on the community and cultures of the area. I discovered that I was interested in more local information such as newspaper articles or interviews with local people. I couldn't access those articles by searching in English so I started to search in Japanese, either by asking my Japanese friend if he could find articles about communities or more specific information on an area, or by using translating applications (I used *DeepL* to search on internet and then *Google Lens* to translate the article). This method took time, but I think it worked quite well (at least the results had sense).

After spending around three to four weeks on deepening my knowledge on the Tokyo Bay Area I started to conduct fieldwork in the Tokyo Bay Area.

## 3.3. Fieldwork in the Tokyo Bay Area

The phase of fieldwork lasted around five weeks, with some fieldwork occasionally conducted later (see Figure 3), my goal was to finish the fieldwork phase by the end of April to be able to start the analysis and the deliverables in May.

I was surprised when the teacher told me that I could start fieldwork during my third week of Internship. Even if I already spent a few weeks on research work (done mostly on Tokyo and not on each area), I still felt unfamiliar with the study areas, and I was concerned about missing some important elements of places. In France, during the workshops in which I took part with the I.T.I. (international territorial engineering) option, I first devoted a lot of time to initial search, where I carried out a benchmark to study how cities on an international scale deal with the object of study. Work in the field is only carried out once a solid base of knowledge on the subject has been acquired, and it doesn't last that long (around two to three weeks).

### 3.2.1. Methodology of fieldwork

Before starting the fieldwork, I had to precise the study area since the Tokyo Bay Area is huge (see Figure 4), it has an area of 1 380 km² (東京湾, 2011). Of course, I decided from the beginning to limit the study area at the Tokyo prefecture with the areas of Toyosu, Tsukishima and Tsukudajima being the central points of my study. However, the area was still large and needed to be reduced. My criteria to precise the study area were accessibility and interest, depending on if I found information on the area during the initial search. I wanted to be able to access this area either by walking from the Toyosu campus of SIT or by taking the train. I also discussed with the professor to define the perimeter of the study area.


*Figure 4: The Tokyo Bay Area (researchgate.net, 2018)*

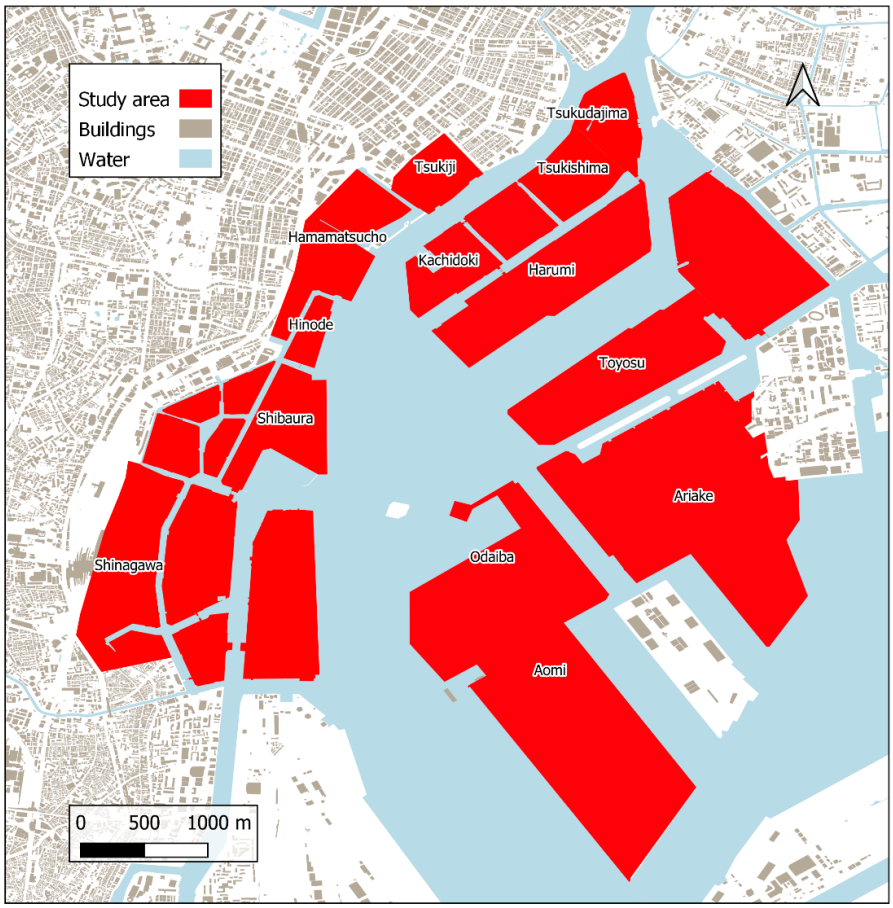



*Figure 5: The study area of the Tokyo Bay Area (Elsa MELEDO, 2024, with OpenStreetMap data on QGIS)*

Once the area for the fieldwork was chosen (see Figure 5), I set the goals of the fieldwork. because I couldn't use Japanese to interact with the locals, so I did observation work and I travelled all around the area multiple times to immerse myself in the city's activity and life. Thanks to the fieldwork, I wanted to verify people's opinion on the Tokyo Bay Area.

I spent an average of three hours on location in one area every time, where I walked as much as possible in the streets and took notes and pictures. I first planned to sketch a bit, but it was cold outside, I was slow at drawing, and I didn't like what I produced so I quickly gave up and only took pictures. I went to each area at least three times but the areas I visited the most were Toyosu, Tsukishima and Tsukudajima. When I went back to an area, I changed the days and the time of the fieldwork to try to capture a diversity of daily-life interactions. For some areas, changing the time and the day didn't change anything but for some like the outer market of Tsukiji, those details mattered a lot (see Figure 6). yet, the month of March was still cold, so it wasn't the best moment to conduct fieldwork and observe people's interactions in the streets.


*Figure 6: Tsukiji outer market (a saturday afternoon and a saturday morning) (Elsa MELEDO, 2024)*

### 3.2.2. The difficulties of fieldwork

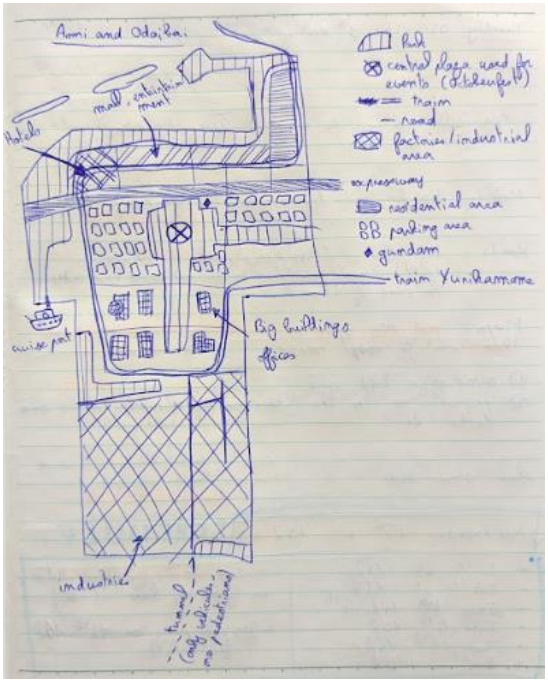



*Figure 7: The main urban functions of Aomi and Odaiba (Elsa MELEDO, 2024)*

I encountered some difficulties during this phase of my work. First, I wasn't sure what to look for, because at first, I didn't know much about the areas concerned. As the study area was vast, I also didn't know what scale to look at (whether I should collect information on every street or stop at the block level), or what information would be useful. I decided to take notes on the elements that surprised me, that I liked or didn't like, and I also observed the different urban functions (see Figure 7). I took notes on my own feelings too, as I wasn't really able to interact with the passers-by.

Not being able to speak and interact with people was another main difficulty that I faced throughout the project, especially when I tried to learn more about the community and culture of each area. The moments where I could interact with the locals were limited to the fieldwork I carried out with the professor, the other laboratory students or my Japanese friends. After the fieldwork phase, I had to start the analysis of the data and then, formatted it.

## 3.4. The data analysis and creation of diagnosis

Regularly, during the fieldwork phase, I started to analyse the new data, however, the main phase of analysis and layout of the data lasted around six to seven weeks (see Figure 3). Those phases were difficult for me and took a long time to be completed.

### 3.4.1. Data analysis

Through the analysis phase, I first tried to understand what the most important points of each area are: I looked at their specificities, the landmarks present, the culture and the community of the areas. I also compared the results of my fieldwork with the global opinion of people over the different areas of The Tokyo Bay. I did a SWOT analysis (see Figure 8) for each area so I could use the results to elaborate proposals to improve the city planning over the Tokyo Bay Area.

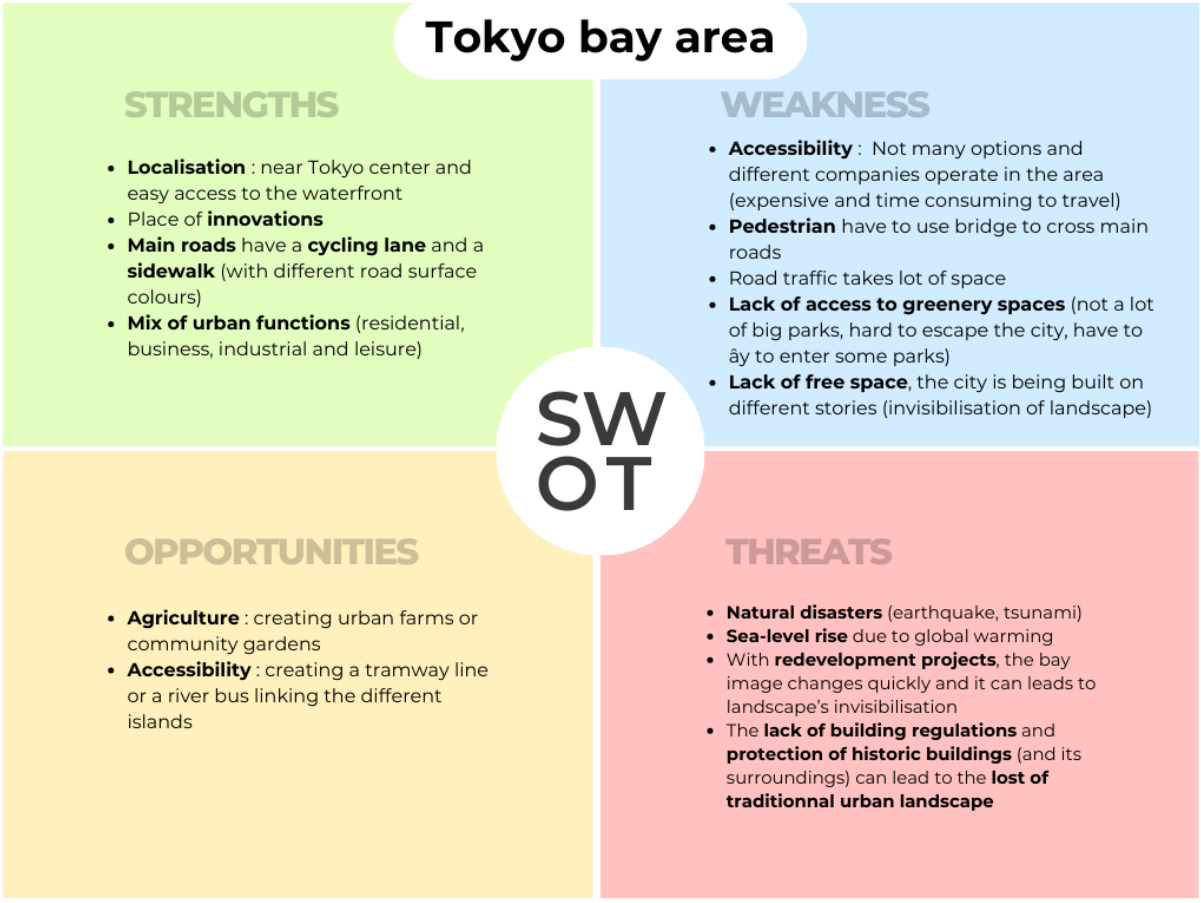



*Figure 8: SWOT analysis of the Tokyo Bay Area (Elsa MELEDO, 2024)*

During the analysis I discovered that I didn't have enough data on the culture and community with the fieldwork only, so I also searched for articles on internet. I found some newspaper and blog articles written in Japanese, most of the English results shown tourist articles or anime characters, using Japanese was the only solution to find more about local information.

The main difficulty for me when analysing the outcomes of the fieldwork was to develop about the community and the culture of the areas since they are not countable, I wasn't confident enough in my own observations on the areas: I thought that my observations may have been wrong and that my feelings over the areas may have been very different from the feelings of a Japanese person. After sorting and analysing the data, I started to put it together.

### 3.4.2. Laying out the data to create diagnsosis

During the analysis phase, I started to lay out the fieldwork results to create a slideshow (see Figure 9.) I think making this slideshow helped me organizing the data and my ideas for the analyse. I also used it as a base for the posters I made.

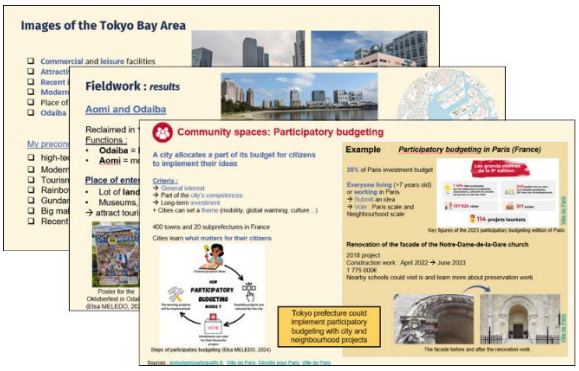



*Figure 9: Some slides of the slideshow (Elsa MELEDO, 2024)*

I could choose the kind of deliverable I had to send to the teacher at the end of the program, so I chose to make posters. I think posters are an excellent way of linking visual and written information, which is what I needed to highlight the results of my fieldwork. The main disadvantage of making a poster was that every time I changed something or improved it, it took a long time to reorganise the posters.

I think this step of the research really helped me to sort information and to verify my understanding of the different areas. Following this, I then started to work on the proposals.

## 3.5. The proposals for the future of the Tokyo Bay area

Before actually searching for ideas to implement in the neighbourhoods to improve the city planning, I looked at the SWOT analysis to find the main points of the Tokyo Bay Area. I came out with three main approaches that could be improved in the Bay Area:

- Preservation of the historical neighbourhoods,
- Improvement of community spaces,
- Development and transmission of the cultures.

Then I tried to answer some questions I had asked myself in order to build a solid base from which to develop ideas for proposals, such as “Why keeping old areas ? And How to protect them from redevelopment?” and “How to keep/increase the sense of community ?”. Some ideas emerged from the responses (see Figure 10). I selected the ideas that seemed more interesting for the chosen approaches and feasible. I searched for two ideas for each approach, bearing in mind that most ideas can be included in different approaches. Since most of the ideas came from my past experiences in projects or have been implement in cities I know, I Later, searched for examples in France for each idea. Thanks to those examples, I looked at how to implement them in Tokyo, and especially in the Tokyo Bay Area.


*Figure 10: An aborted proposal for the Olympic culture of Harumi (Elsa MELEDO, 2024)*

It seems to me that this phase of the project was the easiest because I knew quite clearly in which direction my work was going to go. It was also an enjoyable working phase where I was able to express my creativity and come up with ideas of my own. However, I only spent three weeks on the proposals (see Figure 3) where I: researched ideas, found examples, thought about how to implement them in the Tokyo Bay area and worked on the formatting. Now that I've finished the programme, I realise that I didn't develop the proposals as much as I would have liked. I would have appreciated to have had more time to research how, in practice, to implement the ideas in the Tokyo Bay area, such as the stakeholders to be involved or the resources needed (financial, material, human, etc.). I think my knowledge of how urban and architectural institutions and regulations work in Japan is limited, which is why I have, in part, not developed this section.

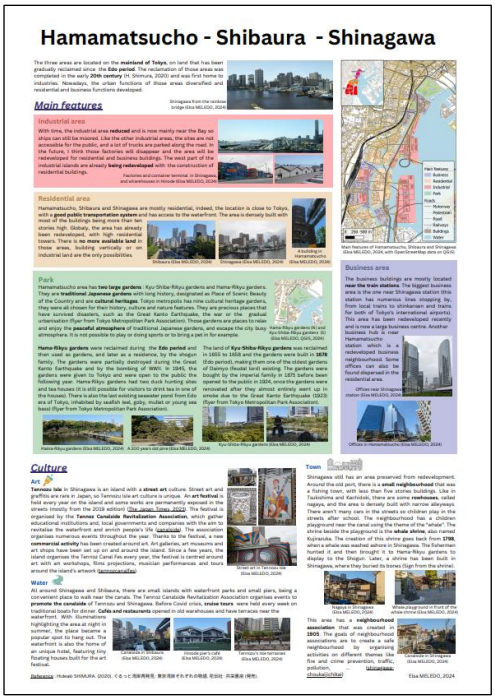
In conclusion, my mission at SIT was both challenging and rewarding. This research exercise seemed to me to be a mix between a workshop like the ones I participated in with the I.T.I. option for the organisation and the different steps of the project, and a thesis work where I have a research subject research and study in autonomy on it, with weekly meetings. The different phases—from the litterature review about Tokyo's history to doing fieldwork, analysing data, and making proposals for urban development—helped me get deeply involved in the Tokyo Bay Area. The weekly meetings with Professor Hideaki Shimura were helpful, giving me good advice and helping me find information I couldn’t access due to language barriers. The fieldwork and data analysis, though tough, were important to understanding the area's community and urban issues. Making posters for my findings and proposals enabled me to organise my thoughts and to present my work clearly. I hope my proposals can inspire the professor in his research about machizukuri (citizen participation in urban planning). Now that I've outlined the different stages and the difficulties I encountered during this internship, I'm going to present the content of my deliverables.

# 4. The content of the deliverables

This section presents the content of the key documents produced during my internship at SIT. I produced three kinds of documents: a PowerPoint slideshow, posters and a report detailing the proposals. The slideshow was used as a support for my final presentation, it summarises the scope of my work, covering the methodology, the main results of fieldwork and the proposals. Additionally, I created posters that visually represent the outcomes of the fieldwork, highlighting the main features, community aspects, and cultural elements of each study area of the Tokyo Bay. Lastly, I wrote a report providing a detailed explanation of my proposals for improving city planning in the Tokyo Bay Area. It includes an example for each idea and a hypothesis of implementation in the Tokyo Bay Area. The documents play an essential role in presenting all the results of my research and fieldwork. However, I will not present more in depth the slideshow since it presents the main points of the posters and proposals.

## 4.1. The posters presenting

Through the posters, I tried to convey my understanding of the Tokyo Bay Area, gathering the outcomes of the fieldwork and the results of the litterature review. I decided to make one poster for each region I visited (except for the districts on the mainland, which were grouped together in one poster), plus one for the whole of the Tokyo Bay, so I made ten (see Figure 11).



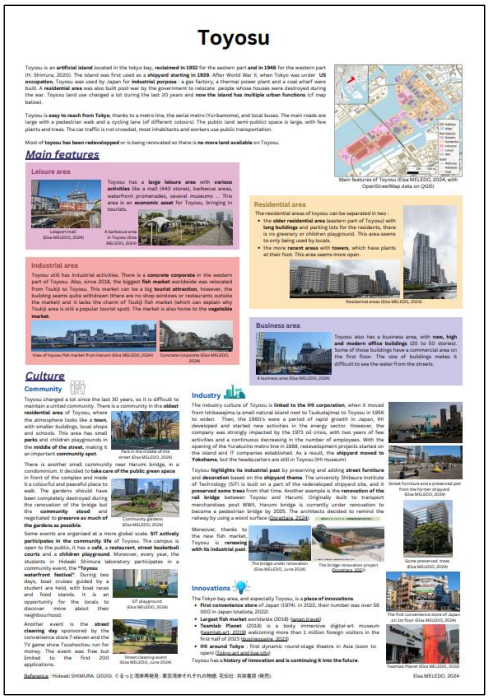




*Figure 11: The posters presenting the areas of Toyosu and Hamamatsucho-Shibaura-Shinagawa (Elsa MELEDO, 2024)*

I made the posters using the A2 format, so I can't include them in the report. In this section I will present the posters of the main study area, knowing that I modified them to fit in the A4 format, but the entirety of the posters is available in the attached documents. What surprise me when creating the posters is that the professor asked me to put as much information as possible when in France, I would try to limit the information shown on it to not overwrite and loose the aesthetic side of the poster. I can understand his request since I didn't write a report to detail the posters. I will now present each visited area of the Tokyo Bay Area.

### 4.1.1. Presentation of the Tokyo Bay Area

Tokyo Bay Area is located at the estuary of Sumida River, the centre of Tokyo, on land that has been continuously reclaimed since the Edo Period (1603-1868). At the end of Edo period, 210 hectares had been reclaimed (*Plans de la ville d'Edo*, s. d.). The Tokyo Bay Area includes the islands in the estuary but also the coastline of Tokyo. The reclamation of the area is still ongoing. A lot of islands were reclaimed during the 1930s -1940s, when Japan was planning to hold the World's fair and the Olympics in 1940 (Hideaki SHIMURA, 2020). Most of the islands are built on landfill sites and temporary enabled Tokyo to overcome the lack of available land. Thanks to land reclamation, the government doesn't face the problem of dealing with inhabitants' opposition to projects.

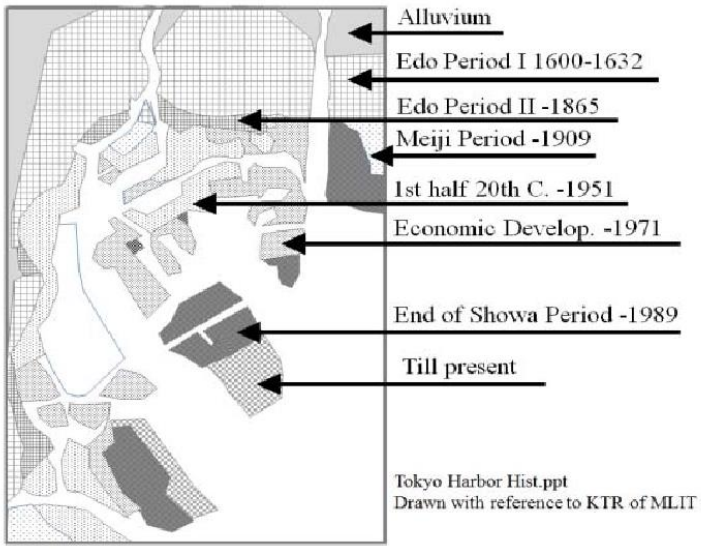



*Figure 12: History of land reclamation in the Tokyo Bay Area (researchgate.net, 2015)*

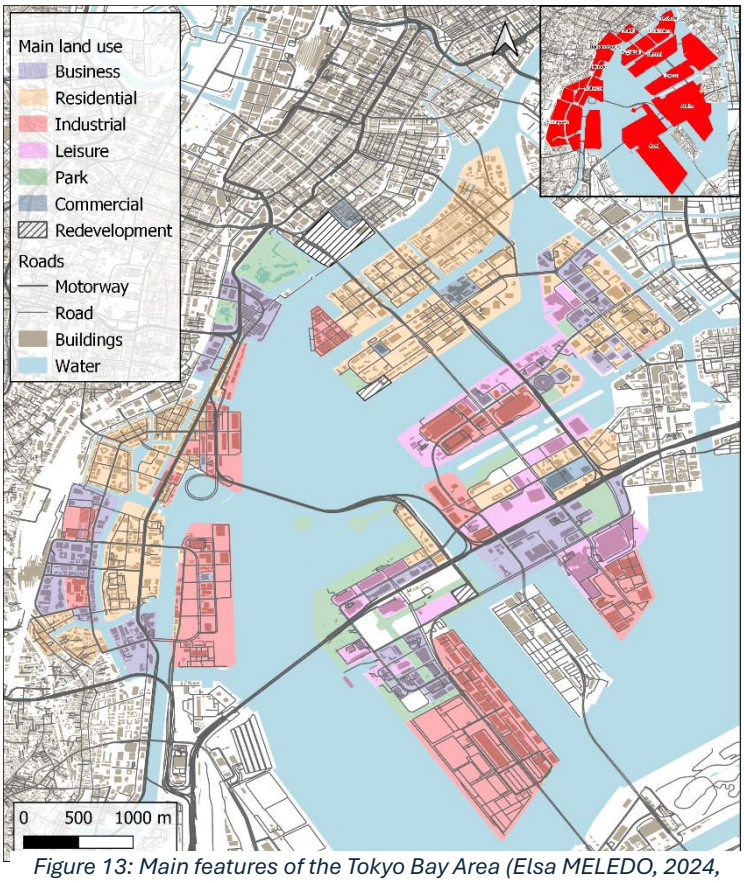



*Figure 13: Main features of the Tokyo Bay Area (Elsa MELEDO, 2024, with OpenStreetMap data on QGIS)*

Tokyo government is turning the bay area into the face of the city. This area is the first place tourists see of Tokyo when they arrive in Japan: Haneda airport is located on a reclaimed island in the bay area and Odaiba (Aomi) has a new cruise terminal. Odaiba is the entertainment island of Tokyo, with lots of landmarks, so this is why people think of Odaiba when they talk about the bay area. However, the bay area is not only about entertainment, innovation and modernity.

### *The Tokyo Bay Area has multiple urban functions…*

Most of the Tokyo Bay Area has first been used for industries. The Tokyo Bay Area location in the bay and the numerous canals made it convenient for ship transportation. However, With the development of the local train system, the location became attractive for redevelopment companies. Then, daily life facilities were built to meet people's needs. That's why nowadays the Tokyo Bay Area has a mix of urban functions: business, residential, industrial, commercial and leisure. Some areas are specialised in some functions: the oldest islands are residential (Tsukudajima, Tsukishima, and Kachidoki), Ariake and Aomi are entertainment islands.

### *… With a complex transportation system, …*

Despite their location in the centre of Tokyo, it is quite difficult to navigate between islands. Commuting between islands can take time since using different lines and buses may be needed. Moreover, the high number of railway companies operating in the area (5 companies for 8 lines) (see Figure 14), makes travelling expensive. Also, the bay area is home to large roads and motorways, however, due to the lack of space in Tokyo, a lot of roads and railways overlap each other. The metro and some motorways are using in the basement, when other highways and railways are built on the second level, hiding the landscape.


*Figure 14: The railway lines crossing the Tokyo Bay Area (Elsa MELEDO, 2024, with OpenStreetMaps data on QGIS)*

### *… in the middle of urban redevelopment …*

Most of the bay area has already been redeveloped, the area needed to be able to host the 2020 Olympic Games. Some areas are relatively still untouched like the industrial areas in the South-West of the bay (Ariake, Aomi, Shinagawa, ...) or the residential areas of Tsukishima and Kachidoki. The newly redeveloped areas are home to business or residential towers. The area is gradually losing its urban landscape to adopt a more modern one. Those tall buildings are also hiding the view over the bay which leads to the invisibilisation of the landscape (see Figure 15).

*Figure 15: Redevelopment project in Tsukishima (+50 stories building) and in Harumi (Elsa MELEDO, 2024)*

The government of Tokyo is supporting those redevelopment projects by deregulating urban and architectural laws. This choice allows Tokyo to keep developing even if there is no more available land. This policy also raises the question of the need for these projects. The Japanese population is decreasing (Statistics Bureau of Japan, 2023), and the construction of new towers is likely to lead to an increase in the number of vacant flats. Another problem is if historical buildings are not protected, the heritage of the 20th century may disappear in the Tokyo Bay Area. This loss of landmarks can lead to the loss of the sense of community which is essential for the well-being of people.

| Pros | Cons |
|---|---|
| Respect the earthquake building regulations | Hiding light to other buildings |
| Less land consuming | Hiding and destroying the landscape |
| Daily-life facilities are developed afterwards | |

*Figure 16: The pros and cons of redevelopment projects (Elsa MELEDO, 2024)*

### *… and facing multiple natural disasters.*

The Tokyo Bay Area, because of its location, is facing multiple risks. First, buildings need to be resistant to earthquakes, but the old high densely built areas with wooden houses, like in Tsukudajima and Tsukishima, have a high risk of fire breaking. Another major risk is floodings, since most of the Tokyo Bay Area is only two to five metres above sea-level (see Figure 17). Various events can lead to floodings: tsunami, typhoons, strong rains, ... In the future, the impact of global warming will lead to the sea-level rise and the increase of frequency and intensity of natural disasters.


*Figure 17: A sign showing the level above sea level in Toyosu (Elsa MELEDO, 2024)*

### *The Tokyo Bay Area is a place of innovation …*

Tokyo Bay Area is a place of innovation. Since the early days of the bay area, the place has been innovative and Tokyo plans to continue it. First, with the creation of a fishermen village on Tsukudajima, then the creation of IHI shipyard, the power plants in Toyosu, the Miraikan museum in Odaiba (see Figure 18)... All areas have innovations telling the history of the Tokyo Bay Area.

*Figure 18: Miraikan: the national museum of emerging science and innovation in Odaiba (Elsa MELEDO, 2024)*

### *… that supported the development of Tokyo.*

Thanks to its innovations, the Tokyo Bay Area has always supported the development of Tokyo. First, by providing the energy and materials needed to modernise Tokyo. Then, by providing land, indeed, the bombing of WWII destroyed a lot of houses, a public housing city was created in Toyosu. Nowadays, the area keeps supporting the development of Tokyo and the government plans to make this area the future of the city (see Figure 19).

*Figure 19: The eSG projetc plans to build a future-proof city (tokyo.lg.jp, 2024)*

I will now take a closer look at the main study areas in the Tokyo Bay Area.

## 4.1.2. The natural island of Tsukudajima

Tsukudajima is a small natural island (see Figure 20), first used as a fishermen village during Edo period (1603-1868) in 1644. The island was given as a gift to fishermen from Osaka by Ieyasu Tokugawa, the first shogun (military leader that ruled over Japan) of Edo period. The island then developed its economy and became a fish trader village during modern era (Hideaki SHIMURA, 2020). It is now a residential area (see Figure 21).

*Figure 20: View of Tsukudajima in 1846 (sakura-work-ssapo.com, 2019)*

*Figure 21: View of Tsukudajima with Tsukuda's residential towers in the back (Elsa MELEDO, 2024)*

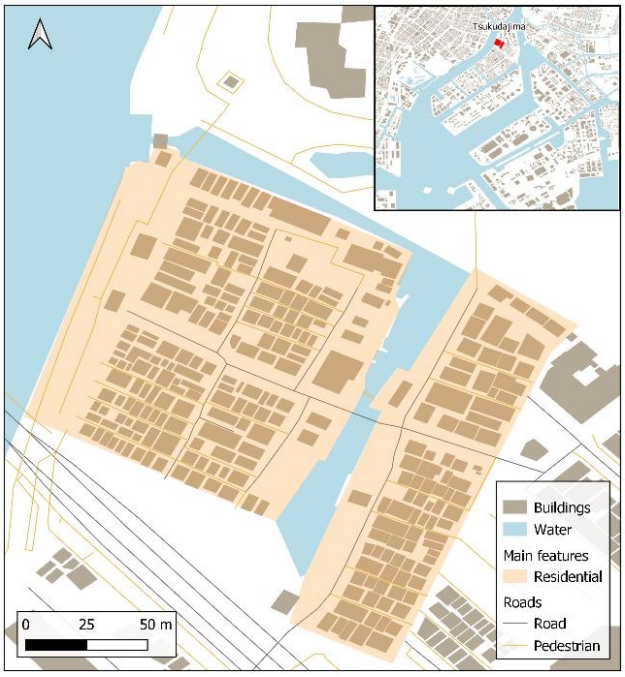



*Figure 23: Main features of Tsukudajima (Elsa MELEDO, 2024, with OpenStreetMap data on QGIS)*

### *Tsukudajima is an old residential area…*

Tsukudajima is an old, densely built residential area (see Figure 23). It has narrow streets with tight private alleyways (not large enough for a car to pass). Most of the houses have two to three stories (see Figure 22).

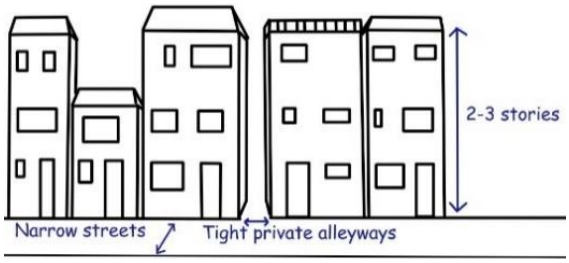



*Figure 22: The street structure of Tsukudajima (Elsa MELEDO, 2024)*

Old wooden houses can still be found in this area, like the former Iida House built in 1920 (see Figure 24) which was a fish dealer house. There are also a few local shops hold by residents and a shrine. The former Iida house is

*Figure 24: Former Iida house (Elsa MELEDO, 2024)*

a two-floor house built above the ground to avoid floodings. This house is a testament to the last century, built for both residential and commercial purposes. That's why a water pump and underground tanks can be found in the room facing the street on the ground floor. The store front still bears the names of the fish trading companies and of the owner of the house, on wooden signs. The house has seven tatami rooms, and their features show the wealth of the owner. The tearoom has glass work (see Figure 25) on its window from the Taisho era (nowadays it's a forgotten savoir-faire). There are on top of the doors, a small decorated "window" called *ranma* (see Figure 26), and some of the doors are also decorated. And a wood beam in its natural shape is used in one of the rooms (X. GUO et al., 2024).

*Figure 25: Taisho glass work (Elsa MELEDO, 2024)*

*Figure 26: A ranma (Elsa MELEDO, 2024)*

### *… that protected its village culture…*

This area has a village culture. The island is walkable, and safe since there are almost no cars. The residents know and talk to each other which nurtures their sense of community. The island is home to Tsukudajima machizukuri school, where residents can meet, talk and take decisions about how they think the future of Tsukudajima, how to protect historic buildings and the culture of the place. There is also a small park with a playground where people can meet and enjoy the landscape over the canal. Tsukudajima has public baths (onsen) where the elderly like to meet and chat.

Another point contributing to the community in Tsukudajima is the bon dancing festival held every year in July (*Tsukudajima Bon Dancing-Composition | Invitation to Bon Dancing*, 2017). Bon dancing is a Japanese folk art with 500 years of history. The dance performed in Tsukudajima is called the *Nembutu* dancing and was created by Tsukudajima's fishermen during Edo period. The festivities bring together the whole community (children and adults dance) throughout the evening (see Figure 27).

*Figure 27: Bon dancing is held every 13th to 15th of July (Elsa MELEDO, 2024)*

During my fieldwork, I found the people of Tsukishima very welcoming and keen to maintain good, solid relations with their neighbours. They are curious people who want to pass on their history and that of Tsukudajima. There is even a window display that is showing the history of the island and old pictures from the Tsukuda-Sumiyoshi shrine festival.

Tsukudajima is also home to a food speciality: the *tsukudani* (see Figure 28). It is meat or seafood cooked in soy sauce and mirin (Japanese sweet rice wine) that originate during Edo period. Nowadays, there are still four tsukudani shops on the island,

*Figure 28: The shop Ten'yasu sells tsukudani (Elsa MELEDO, 2024)*

each with a long history. The oldest shop (and the most famous) is Ten'yasu, founded in 1837. The shop makes tsukudani with the same recipe since its creation (over than 187 years) (*Tenyasu*, s. d.). The shop is also a traditional building, of more than 100 years old, the shop sign is written from right to left, which is rare nowadays. Like for Iida house, the shop is built on top of stones to avoid floodings. Another tsukudani shop was founded in 1859 and its current owner is the 15th generation of the family that runs the shop (*Marukyu-tsukudani*, s. d.). The local shops in Tsukudajima have been handed down from generation to generation, showing that the island still has an old village feel.

The island's landscape is an economic asset for the city, bringing tourists to the area. The island is also a popular drama TV shooting spot thanks to its red bridge (see Figure 29) and red Torii (traditional gate at the entrance of a shrine). This shrine organises events and festival all year long such as *Nagoshi no Harae* (summer purification festival) where people pass through a straw ring in a special order to get purified and have good health.

*Figure 29: The bridge at the entrance of Tsukudajima (Elsa MELEDO, 2024)*

***… and stay connected to water.***

Water is an essential part in Tsukudajima culture and community by bringing people together. The island still has a fishermen association, there is a mall pier (see Figure 30) and a waterfront promenade. The area also has the Tsukuda-Sumiyoshi shrine festival every three years where traditionally people transported a *mikoshi* (portable shrine) in water, now it is transported on a boat.

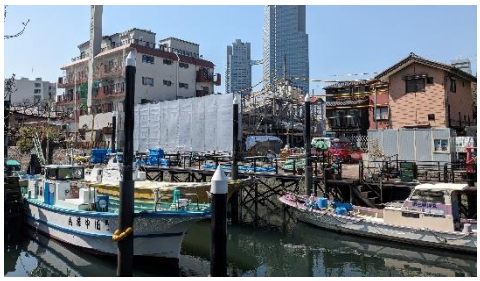


*Figure 30: Tsukudajima's pier (Elsa MELEDO, 2024)*

Beside Tsukudajima, there is Tsukishima which is now connected to Tsukudajima.

### 4.1.3. Tsukishima, a 20th century town

Tsukishima was reclaimed in 1892. The island was built with sediments scooped up from Sumida River, because since Edo period, the depth of the river has decreased, making it difficult for boat to navigate (H. Shimura, 2020). The island first had shipyards and iron factory. It is now a residential area (see Figure 31). Because the island didn't burn during the Great Kanto earthquake, it still has an old street structure from the early 20th century. Thanks to its atmosphere and famous *monja-yaki* street, Tsukishima is an attractive area, even for foreigner tourists.

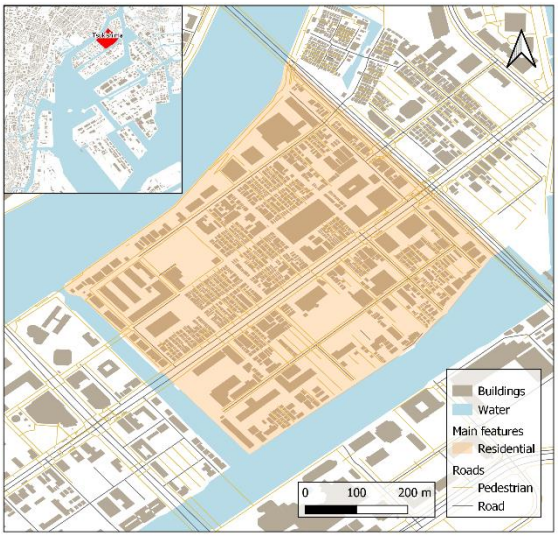



*Figure 31: Main features of Tsukishima (Elsa MELEDO, 2024, with OpenStreetMap data on QGIS)*

***Tsukishima is a 20th century residential area…***

Tsukishima is a densely built residential area. The historical area has mostly narrow streets and tight private alleyways (not large enough for a car to pass), the structure is the same as the one of Edo period(*Lovetsukishima*, s. d.). The neighbourhood has a grid pattern of main blocs of 120m long, cut in half by a 5,4m street. Then, each side is divided in six sections of around 50m, separated by alleyways

of 1.8 to 2.7m. Each alley had around 24 rowhouses facing it on both sides (see Figure 32). Those wooden rowhouses (see Figure 33), called *nagaya* in Japanese, were tight (3,64x6,37m), with two floors, for a total surface of 44m² (*月島 | 月島長屋学校 Tsukishima-Nagaya-School*, s. d.).

*Figure 33: Renovated rowhouses in Tsukishima (Elsa MELEDO, 2024)*

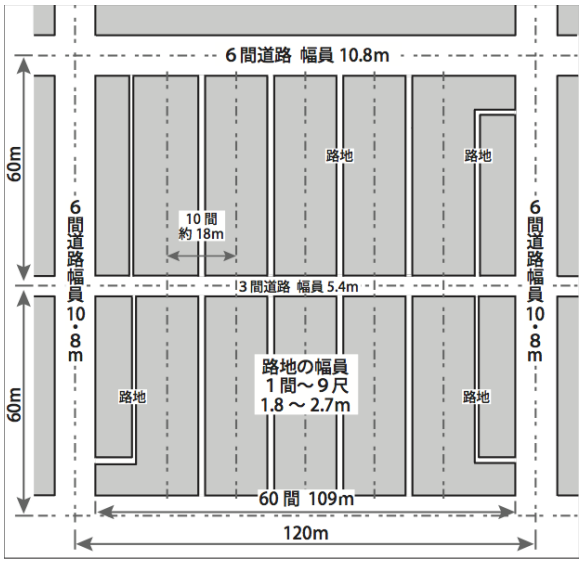



*Figure 32: The street structure of Tsukishima (Tsukishima-Nagaya-School)*

The residents don't have gardens, so they put potted plants in front of their house which brings greenery to an area that is sorely lacking it (see Figure 34). Since the alleyways are private, there is no problem putting plants in front of the houses. The parcel boundaries are represented with metallic signs on the ground.

*Figure 34: Potted plants in front of a nagaya (Elsa MELEDO, 2024)*

Nowadays, those nagaya are either renovated (like in the Figure 33) or destroyed to be redeveloped. The new house is built set back from the alley, to enlarge it. Tsukishima has already been redeveloped. The buildings near the main roads and the canalsides are more modern and taller (around 10 stories). The historic part of the area is also facing redevelopment pressure with a few more than fifty stories' buildings under construction. The main problems of those tall buildings are the facts they use a lot of floor space (destroying the grid patterns), hide lights for the smaller buildings and they don't integrate in the landscape.

Some nagaya are also renovated and transformed into cafés and restaurants. It permits to protect and preserve traditional houses and making them accessible for the public. Those shops bring an activity to the neighbourhood (still peaceful since the shops are small) and integrate into the area's landscape and culture.

### *… with a town culture, …*

This area has a town culture from the 20th century. It is a place of slow lifestyle and traditions, with quiet streets. The monja-yaki street has a working-class atmosphere with lot of izakaya (Japanese bars) - or izakaya like - restaurants. The neighbourhood has a unique bar, so small that it only has a tiny kitchen, the customers sit outside, in the alley (see Figure 35). This place is popular for the community of Tsukishima. Moreover, the monja-yaki is originally a working-class meal: it is an Okonomiyaki batter with added water, making it a cheap meal (around 10 yen - 6 cents of euro). Workers from Tsukudajima (fishermen village) and from Tsukiji (fish market) used to meet in Tsukishima (Maruyama, 2018).

*Figure 35: An izakaya with no seats inside (Elsa MELEDO, 2024)*

The monjas are not the only popular feature of the shopping street famous for its monja restaurants. That street has a popular melon pan shop (a soft and sweet Japanese bread). It still has an independent bookshop (which is rare nowadays in Tokyo). On the first and second floor of a redeveloped building can be found a small shrine and public baths (onsen). The public baths are an important community space for the elderly who like meeting each other and chat while enjoying the baths.

The area still has elements from the 20th century, contributing to the old town atmosphere, such as the arcades in the monja-yaki street or the oldest police box in Tokyo, built in 1926. The police box (see Figure 36) would have been demolished when it stopped its functions in 2007 but the community stood to protect it and it's now a community safety centre (*月島 | 月島長屋学校Tsukishima-Nagaya-School*, s. d.). Those elements became landmarks of Tsukishima's landscape, attracting tourists and bringing back memories for residents.

*Figure 36: The police box built in 1926 (Elsa MELEDO, 2024)*

The alleyways are a place for residents to meet and maintain their relationships with their neighbours. Indeed, they can meet in the morning when they clean their doorstep or when they water plants (*Lovetsukishima*, s. d.). I think a symbol of Tsukishima's culture is Bonchan a giant tortoise living in the neighbourhood (see Figure 37).

*Figure 37: Bonchan the tortoise (Elsa MELEDO, 2024)*

The community is united to protect Tsukishima's landscape and culture against redevelopment projects and wants to hand it over to the next generation. To do so, a community magazine has been launched in 2021. One way to protect the historical buildings in Tsukishima has been by renovated old houses and turn them into shops and cafés. Those places transmit the atmosphere and culture of Tsukishima. The community wants to share its history with outsiders, to do so it created a map showing the important landmarks of the area (in Japanese and in English).

### *… famous for its Monja-yaki.*

Tsukishima is famous for its monja-yaki street (see Figure 39). The street was originally a shopping street but now it almost exclusively has monja-yaki (see Figure 38) restaurants with more than 60 of those restaurants. This street is always busy and is popular for locals and tourists (foreigners and Japanese). The street is even closed to cars at certain times of the week, making this area easily walkable. A monja-yaki association was created, gathering most of the restaurants. The association has an information centre which is also used as a community place, promoting local economy and community by selling the local magazine,  and holding events like lotteries.

*Figure 38: Monja-yaki (Elsa MELEDO, 2024)*

I will now present Toyosu, another area of the Tokyo Bay Area which was essential for Tokyo's development.

*Figure 39: The Monja-yaki street (Elsa MELEDO, 2024)*

### 4.1.4. Toyosu: the island of innovations

Toyosu is an artificial island located in the Tokyo Bay, reclaimed in 1932 for the eastern part and in 1948 for the western part (H. Shimura, 2020). The island was first used as a shipyard starting in 1939. After World War II, when Tokyo was under US occupation, Toyosu was used by Japan for industrial purpose: a gas factory, a thermal power plant and a coal wharf were built. A residential area was also built post-war by the government to relocate people whose houses were destroyed during the war. Toyosu land use changed a lot during the last 20 years and now the island has multiple urban functions (see Figure 40). Toyosu is easy to reach from Tokyo, thanks to a metro line, the aerial metro (Yurikamome), and local buses. The main roads are large with a pedestrian walk and a cycling lane (of different colours). The public (and semi-public) space is large, with few plants and trees. The car traffic is not crowded, most inhabitants and workers use public transportation. Most of Toyosu has been redeveloped or is being renovated so there is no more land available on Toyosu.

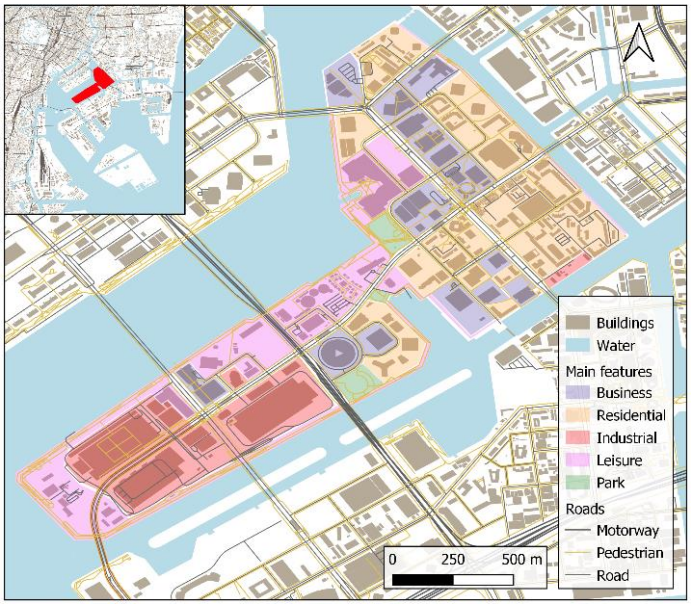



*Figure 40: Main features of Toyosu (Elsa MELEDO, 2024, with OpenStreetMap data on QGIS)*

**Toyosu has multiple urban functions…**

Toyosu has a large leisure area with various activities like a mall (440 stores), barbecue areas, waterfront promenades, several museums ... This area is an economic asset for Toyosu, bringing in tourists.

Toyosu still has industrial activities. There is a concrete corporate in the western part of Toyosu. Also, since 2018, the biggest fish market worldwide was relocated from Tsukiji to Toyosu (see Figure 41). This market can be a big tourist attraction; however, the building seems quite withdrawn (there are no shop windows or restaurants outside the market) and it lacks the charm of Tsukiji fish market (which can explain why Tsukiji area is still a popular tourist spot). The market is also home to the vegetable market.

*Figure 41:View of Toyosu fish market from Harumi (Elsa MELEDO, 2024)*

The residential areas of Toyosu can be separated in two:

- the older residential area (eastern part of Toyosu) with long buildings and parking lots for the residents, there is no greenery or children playground. This area seems to only being used by locals.
- the more recent areas with towers, which have plants at their foot. This area seems more open.

*Figure 42: A business area in Toyosu (Elsa MELEDO, 2024)*

Toyosu also has a business area (see Figure 42), with new, high and modern office buildings (20 to 50 stories). Some of those buildings have a commercial area on the first floor. The size of buildings makes it difficult to see the water from the streets.

### … with active communities…

Toyosu changed a lot since the last 30 years, so it is difficult to maintain a united community. There is a community in the oldest residential area of Toyosu, where the atmosphere looks like a town, with smaller buildings, local shops and schools. This area has small parks and children's playgrounds in the middle of the street, making it an important community spot.

*Figure 43: A children playground in the middle of the street (Elsa MELEDO, 2024)*

There is another small community near Harumi bridge, in a condominium. It decided to take care of the public green space in front of the complex and made it a colourful and peaceful place to walk (see Figure 44). The gardens should have been completely destroyed during the renovation of the bridge, but the community stood and negotiated to preserve as much of the gardens as possible.

*Figure 44: Community gardens (Elsa MELEDO, 2024)*

Some events are organised at a more global scale. SIT actively participates in the community life of Toyosu. The campus is open to the public, it has a café, a restaurant, street basketball courts and a children playground. Moreover, every year, the students in Hideaki Shimura laboratory participates in a community event, the "Toyosu waterfront festival". For two days, boat cruises guided by a student are held (see Figure 45), with boat races and food stands. It is an opportunity for the locals to discover more about their neighbourhood.

*Figure 45: A laboratory student guiding a cruise (Elsa MELEDO, 2024)*

Another event is the street cleaning day sponsored by the convenience store 7-eleven and the TV game show *Toushochou run for money*. The event was free but limited to the first 200 applications.

### … and a culture of industry…

The industry culture of Toyosu is linked to the IHI corporation, when it moved from Ishikawajima (a small natural island next to Tsukudajima) to Toyosu in 1956 to widen. Then, the 1960's were a period of rapid growth in Japan, IHI developed and started new activities in the energy sector. However, the company was strongly impacted by the 1973 oil crisis, with two years of few activities and a continuous decreasing in the number of employees. With the opening of the Yurakucho metro line in 1988, redevelopment projects started on the island and IT companies established. As a result, the shipyard moved to Yokohama, but the headquarters are still in Toyosu (IHI museum). Toyosu highlights its industrial past by preserving and adding street furniture and decoration based on the shipyard


*Figure 46: Preserved elements from the former IHI shipyard (Elsa MELEDO, 2024)*

*Figure 47: Harumi bridge renovation project (hatenablog.com, 2021)*

theme (see Figure 46). The university Shibaura Institute of Technology (SIT) is built on a part of the redeveloped shipyard site, and it preserved some trees from that time. Another example is the renovation of the rail bridge between Toyosu and Harumi (see Figure 47**Erreur ! Source du renvoi introuvable.**). Originally built to transport merchandises post WWII, Harumi bridge is currently under renovation to become a pedestrian bridge by 2025. The architects decided to remind the railway by using a wood surface (Hatenablog, 2024).

Moreover, thanks to the new fish market, Toyosu is renewing with its industrial past.

**… and innovations.**

The Tokyo Bay Area, and especially Toyosu, is a place of innovations.

- First convenience store of Japan (1974). In 2022, their number was over 56 000 in Japan (*Number of Convenience Stores in Japan 2022*, s. d.)
- Largest fish market worldwide (2018) (s. d.)
- Teamlab Planet (2018) is a body immersive digital-art museum (*TeamLab Planets TOKYO*, 2019) welcoming more than 1 million foreign visitors in the first half of 2023 (Businesswire, 2023)
- IHI around Tokyo : first dynamic round-stage theatre in Asia (soon to open) (*IHI STAGE AROUND TOKYO | TOKYO ART & LIVE CITY*, s. d.)

Toyosu has a history of innovation and is continuing it into the future.

In conclusion, the Tokyo Bay Area has always been, and will continue to be, a place of innovation. Thanks to the results of fieldwork and state-of-the-art analysis, I created posters for each area, showcasing the region's diversity. The Tokyo Bay Area combines old and modern elements, with a history that spans from the Edo period to the 21st century. It also features multiple urban functions, including residential, business, commercial, leisure, and industrial areas. The Tokyo Bay Area is very attractive, it can be seen through the strong pressure from redevelopment companies. This can be explained by its proximity to central Tokyo, the necessity for renovations to meet earthquake requirements, and the government support through the deregulation of urban and architectural laws. Thanks to its innovations, the Tokyo Bay Area supports the development of Tokyo and of Japan, it is its destiny. I then searched for ideas on how to improve the city development of the Tokyo Bay Area. I focused on three themes that appeared to be essential during my work: preservation, community space and culture.

## 4.2. Proposals: Future of the Tokyo Bay Area

After spending a long time on doing research and fieldwork on the Tokyo Bay Area, I thought of how to improve the city through urbanism. I focused on three areas that emerged from the fieldwork and the litterature review as being essential for the future of the Bay Area: preservation, community spaces and culture. Since I am a French student, I searched for actions carried out in France and adapted them to the Tokyo Bay Area.

### 4.2.1. Preservation of historical landscapes

Tokyo doesn’t have a historical landscape like it is the case with Kyoto. The Great Kanto earthquake in 1923 and then the WWII bombings destroyed most of the city. Moreover, the urban policies of Tokyo for the past years are to deregulate leading to the construction of large-scale redevelopment projects (with residential towers of more than fifty stories in two to three stories houses neighbourhoods). In order to protect the landscape, it is urgent to take measures now.

#### *4.2.1.1. Setting up a protection perimeter around historical monuments*

*T*okyo preserve historical buildings under the Law for the Protection of Cultural Properties but this law doesn't protect modern and industrial heritage or culture in life-style (such as the tea ceremony or the flower arrangement) *(Kakiuchi, 2014)* nor protects the surroundings of historical buildings. This can lead to the construction of new buildings right beside historical monuments, hiding them like for the recent Azabudai Hills tower (completed in 2023, 325 meters high) built 500 meters far from the Tokyo tower (333 meters high) (see *Figure 48*). I think architecture can be a testimony of the past, this is why I believe it is important for Tokyo to protect its few historical neighbourhoods left.

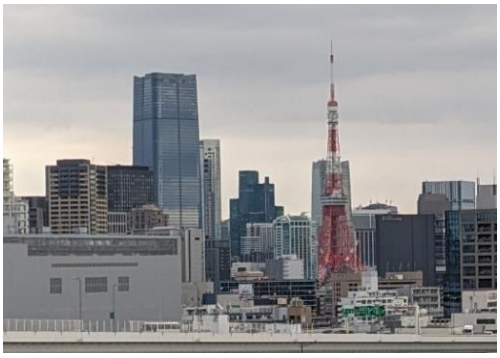


*Figure 48: Azabudai Hills on left and the Tokyo tower on right (Elsa MELEDO, 2024)*

My proposal is to set up a protection perimeter around historical monuments to protect the landscape associated with the historical property. In this perimeter, the architecture regulations would be stricter to respect a uniformity with the historic monument. Experts in architecture and urbanism, specialised in heritage, would decide of the outlines of the perimeter and any work planned in this perimeter on a building should require their authorisation. The purpose of this perimeter is to highlight historical monuments, by ensuring the uniformity of urban shapes (limiting the size of the buildings, the colours, the materials, …).

In France, this perimeter already exists since the law of 31st December 1913.

**The outskirts of historical monuments**

Buildings which form a coherent whole with a historic monument, or which are likely to contribute to its conservation or enhancement, are protected as part of the outskirts. There are two possibilities for the limits of the perimeter: it can be a delimited perimeter: chosen by concertation, and if there is none, all the buildings in the field of view of the monument in less than 500m from it are included. Any work carried out in the perimeter is subject to any prior authorisation from a national organism of architectural conservators (*Les abords des monuments historiques*, s. d.).

The limits of each perimeter can be found in the local urban masterplan of each city (if they have a historical monument). The local urban masterplans are accessible for everyone. For example, the city of Saint-Gondon (France) has a "prieuré" which is a remaining building of a former monastery, dating from 15th-16th century (see Figure 49) and it is a listed historical monument. The delimited perimeter has been defined by architects specialised in heritage in tandem with the city (see Figure 50) and it applies to three historical monuments including the prieuré.

*Figure 49: The prieuré of Saint-Gondon (France) (Tourisme Loiret)*

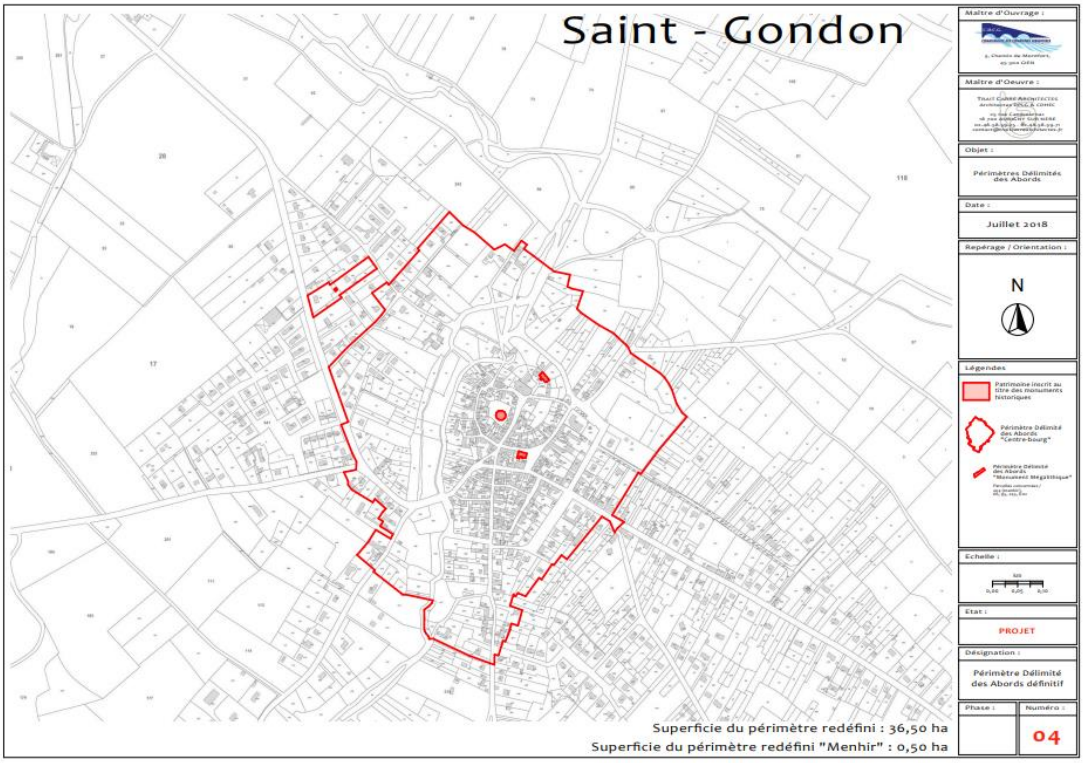



*Figure 50: The delimited perimeter around historical monuments in Saint-Gondon (France) (legiennois.fr)*

Some more specific urban regulations have been implemented (*Le Plan Local d'Urbanisme Intercommunal (PLUi)*, s. d.):

- To favour the existing wooded spaces,
- To favour fences with characteristics specific to the surroundings, using old-style masonry or transparent fences,
- To limit isolated constructions that would interfere with the landscape,
- The urban shapes, facades, materials and technics used must be harmonious and matching with the actual urban fabric.

The following two pictures show the same street but the first one (see Figure 52) is inside the perimeter when the other one (see Figure 51) is outside it.

*Figure 52: A neighbourhood inside the delimited perimeter (Google Maps)*

*Figure 51: A neighbourhood outside the perimeter (Google Maps)*

I think Tokyo could implement this system on its territory. In the Tokyo Bay Area, the concerned areas could be the old port of Shinagawa, Tsukishima and Tsukudajima since they have buildings over 100 years old (see Figure 55 and Figure 54).

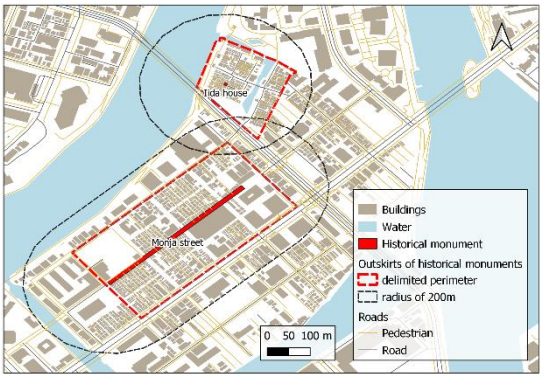



*Figure 55: The delimited perimeter in Tsukishima and Tsukudajima (Elsa MELEDO, 2024, with OpenStreetMap data on QGIS)*

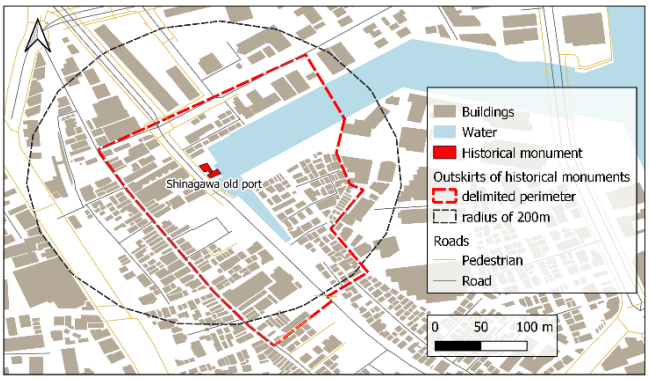



*Figure 54: The delimited perimeter in Shinagawa (Elsa MELEDO, 2024, with OpenStreetMap data on QGIS)*

The delimited perimeter in Tsukishima could be centred around the former Iida house (a building built in 1924) and include the whole island (see Figure 53). The perimeter in Tsukishima could be centred around the Monja street and includes the blocks having the Edo era structure (see Figure 56).

*Figure 53: Iida house and Tsukudajima (Elsa MELEDO, 2024)*

*Figure 56: The Monja street and the historical area of Tsukishima (Elsa MELEDO, 2024)*

The delimited perimeter in Shinagawa could be centred around the old port. It could include the blocs of houses beside it and sharing a uniformity of urban shapes (see Figure 57).

*Figure 57: The old port of Shinagawa and its surroundings (Elsa MELEDO, 2024)*

The regulations implemented should be specific to each area and choose in tandem with heritage architects, the city and local community organisations. The regulations could define the colour range, the materials and the urban shapes (like limiting the size of the buildings, new buildings should respect the architectural styles and have the same step back from the road) authorised. In my opinion, preserving the few old neighbourhoods of Tokyo could be an asset for the city by becoming attractive areas for tourists who want to discover the history of Tokyo since it uses the Edo era culture as soft power.

### *4.2.2.2. Renovation and development control*

Another way to preserve the landscape would be to renovate old buildings and implement more development control over the Tokyo Bay Area. Choosing to renovate over reconstruction has benefits since it keeps the actual landscape (it maintains the urban shape and the architectural style of the building) and it also saves resources. However, for some works, renovating can be more expensive. That is why my proposal would be that the city could give a tax incentive or contribute to the renovation work to help owners to renovate their old house. Some criteria should be chosen by the city in tandem with architect conservators such as the minimum construction date of the eligible buildings, the location concerned, the kind of work that would be eligible and the amount of tax incentive each owner could receive.

For example, there is a French city named Gien that wanted to renovate the facades of the buildings (see Figure 58) in the city-centre (Derais, 2023), which are post-WWII reconstruction heritage, to protect and highlight them. Since those buildings are private, the city cannot choose to renovate them so they have issued a decree stipulating that the owner had six months to start the renovation work otherwise they would be fined 3750€ (around 600 000¥). If the owners have respected the style guide created by architectural conservators, the city would have helped them by paying up to 40% of the renovation price (with the price limit sets to 10 000€ (around 1 600 000¥)).


*Figure 58: The city-centre facades of Gien (larep.fr, 2023)*

I think that cities could introduce such incentives to help maintain the old districts of Tsukishima, Tsukudajima, Tsukiji and Shinagawa. Helping owners to renovate their house in a neighbourhood with few architectural and urban regulations may not be the most effective, this is why Tokyo should put more development control. Reinforcing those regulations, like limiting the size of buildings, would have multiple benefits. It would help preserve the landscape and resources (this point is open to debate, but some studies show that tall building consume more energy (Lorriaux, 2023). I also believe that limiting the size of the buildings would limit the number of accommodations available on the market which would limit the number of vacant units. Indeed, the population of Japan and of Tokyo is decreasing, so adding more accommodations on the market could have a bad impact on the market. Moreover, the attraction power of Tokyo is so strong that some cities in the countryside are willing to pay people for them to go leave Tokyo, so if people have more difficulties to find an accommodation in Tokyo, they may look at other cities in Japan.

The city of Paris chooses to limit the size of the buildings at 37 metres high . Indeed, Paris is the second densest city in the world, denser it would be detrimental to people's quality of life and well-being. Another reason is the fact that people are against the construction of tall buildings.

In conclusion, I think preserving old neighbourhoods in Tokyo could make those areas attractive for tourism and create an economy based on it as well as maintaining strong local cultures and communities.

## 4.2.2. Creation and Improvement of community spaces

Nowadays, the local population is more and more included in the process of city planning. In Japan, this concept is called *machizukuri* which describes the actions and decisions implemented in the city by the residents and for the residents to improve the life in their neighbourhood. In this part, I will introduce two ideas that could participate in the promotion of *machizukuri* in Japan.

### *4.2.2.1 The Councils of Architecture, Urbanism and Environment (CAUE)*

Following the implementation of the French law on architecture of 3rd January 1977, was created the Councils of Architecture, Urbanism and Environment (CAUE). A CAUE is a non-profit organisation created on the initiative of the local governments (subprefecture scale). In France, there are currently 92 CAUE for 101 subprefectures (called *départements*). Those participate to the coordination of the different actors involved in space production and management. Each CAUE has experts of urbanism, architecture and the environment, but other jobs can be found such as sociologists, historians or communication managers. CAUEs have various missions which includes informing, advising and training and they can work with every kind of organisation: local governments, private and public organisations, private individuals, experts of architecture and urbanism or even schools (see Figure 59). They also work on projects form the parcel to large territories.

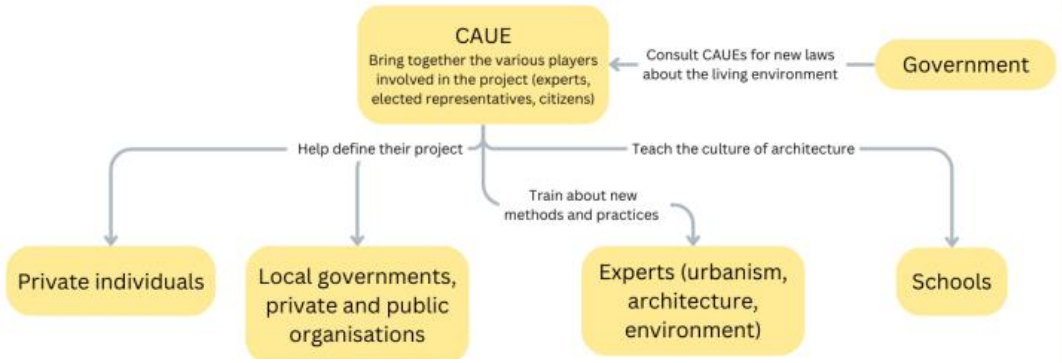



*Figure 59: The missions of CAUEs (Elsa MELEDO, 2024 with fncaue.com data)*

One specificity of CAUEs is that they don't receive payment from their customers other than operating costs, they are financed through taxes and membership fees (see Figure 60). For example, a lot of CAUEs assist schools to remove asphalt from their school yards. They help the school to define their project, to find a prime contractor, to involve the children in the process and to communicate with the public. One CAUE helped a school to transform their unused patio into a relaxing garden that children could use. The CAUE provided help to two classes in the creation of workshops to collect students' ideas and wishes. The students created models of the patio to spatialised their ideas. Then, they built urban furniture and decorations with recycled materials to transform the patio in a welcoming and relaxing space to read and gardening. CAUEs participate actively to the creation of community spaces, involving all actors and users. I think the Tokyo Bay Area could create its own CAUE, that could promote citizen participation and concertation in projects. Other solutions are implemented to promote citizen participation in urbanism like participatory budgeting.

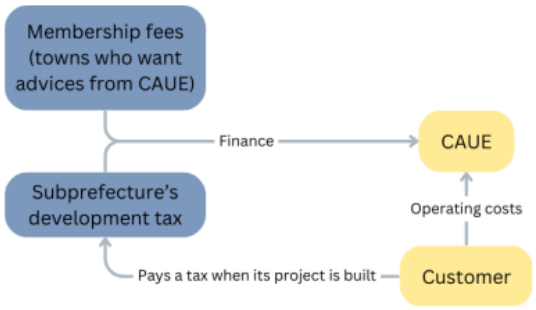



*Figure 60: Source of founding of CAUEs (Elsa MELEDO, 2024, with fncaue.com and economie.gouv.fr data)*

#### *4.2.2.1. Putting residents at the heart of the decision-making thanks to participatory budgeting*

Participatory budgeting was initiated in Brazil in the 1980s, with the first city to implement it being Porto Alegre in 1989 (*Budget Participatif 2023*, 2023). The process of participatory budgeting allows citizens to be actors in city-making. A city implementing participatory budgeting allocates a part of its budget for its citizens to bring their ideas to life, and it is done every one or two years. The ideas have to respect some criteria: they must be of general interest, be part of the city's range of competences, and represent a long-term investment.

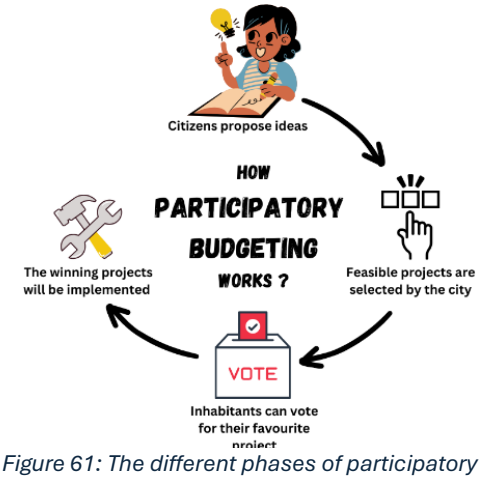



*Figure 61: The different phases of participatory budgeting (Elsa MELEDO, 2024)*

The cities can also set a theme for the ideas such as mobility, global warming or culture. The process of participatory can be divided into four phases (see Figure 61). First, citizens propose their ideas to the city using a form on paper or on a website. The city will, then, study the feasibility of the ideas (if they respect the criteria above and the budget needed to implement them is estimated). The feasible ideas pass to vote phase where citizen elect their favourite projects. Finally, the winning projects will be implemented in the city in the future. Participatory encourages citizen participation and involvement in the creation and management of public space and it permits the cities to know more about what matters for their citizens (and so what to prioritise) (Paris, s. d.).

In France, 400 cities and towns, and 20 subprefectures implemented participatory budgeting, and this number grows every year. The city of Paris chooses to allocate 25% of its investment budget for participatory budgeting. Every person over the age of seven living or working in Paris can submit an idea and vote for the projects. Since Paris is a large city, people can vote for the projects that will be implemented at the global scale of Paris and for the projects that will be implemented at the neighbourhood scale. In 2023, 114 projects out of the 1 494 were selected to be implemented in the near future (*Budget Participatif 2023*, 2023). One of the winning projects of the 2018 edition was about the renovation of the facade of the Notre-Dame-de-la-Gare church. The construction work was conducted between Aprill 2022 and June 2023 for a price of 1 775 000€. The renovation work involved the local schools by allowing classes to visit the work site and learn more about preservation jobs.

In my opinion, Tokyo could implement participatory budgeting with projects on a global scale and on a neighbourhood scale, like what is done in Paris. Participatory budgeting could also be a tool for citizens to preserve and develop their neighbourhood culture and history.

### 4.2.3. Developing each area culture

For a community to stay together, it must share common values. I believe that the development of local cultures can help communities to be stronger and strengthen relationships between its members.

#### *4.2.3.1. Spread the culture of innovation through urban agriculture*

Urban agriculture exists in Tokyo, it can be found easily in suburb areas, however, urban agriculture is not developed in dense areas, and I didn't see it during my fieldwork around the Bay Area. That is why I think implementing urban agriculture in the Tokyo Bay Area would be innovative. Moreover, it would add a new urban function that the area is lacking and strengthen the culture of innovation in the Bay Area.

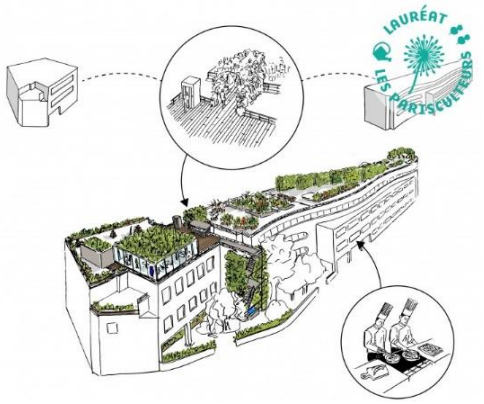


*Figure 62: One project of urban farm by Cueillette urbaine (cueilletteurbaine.com)*

Urban agriculture is more and more developed in France and especially in Paris. A company named *Cueillette urbaine* helps other companies create urban farms and community gardens on the roofs of the buildings (*Cueillette Urbaine*, s. d.) (see Figure 62). *Cueillette urbaine* uses three different methods: aquaponics, potted plants and tower gardens that can be combined together to produce vegetables, fruits, herbs and fish.

For the crop management, the employees of the offices in the building where the crops are taking care of them. The production can be shared between the employees or sold to nearby restaurants or supermarkets. Every six months, a workshop is organised by Cueillette urbaine in the gardens to renew the crops and monitor the gardens (Paris, 2020). These workshops have social benefits since they participate in teamwork building.

I think the roof of the Toyosu fish market would be the perfect spot in the Tokyo Bay Area to implement an urban farm. Indeed, the roof is accessible for the public and it is green (it has grass and some bushes). For the crop management, the employees of the market, the local community and/or schools could take care of them. Then, the production could be sold in a market shop or in the market's restaurants, the earnings would help pay for the maintenance fees and crop management. Implementing urban agriculture would have various benefits: social benefits by creating community spaces, environmental benefits since there would be no transportation impact between the crops and the place of consumption, and educational benefits by teaching about seasonal products and the process involved in growing plants. The Toyosu fish market, with an urban farm on its roof (see Figure 63), could become

an important place for the community, unifying all generations. Other events can also bring the community together like festivals.


*Figure 63: Creating an urban farm on Toyosu fish market's roof (Elsa MELEDO, 2024)*

#### *4.2.3.2. Strengthen the culture of each area thanks to festivals*

Organising festivals celebrating local cultures can also strengthen the community by highlighting and transmitting culture and history. It is also a way to support local economy and increase tourism.

For example, the Interceltic Festival of Lorient (France) is held every year in August for ten days since 1971 and promotes the Celtic culture. It is the largest Celtic gathering worldwide and the largest urban festival in France. This event spread the Celtic culture to almost 950 000 visitors in 2023 (festival interceltique, s. d.) through music, dancing, conferences, shops (selling local and traditional products) and other performances. Each year, the festival highlights one Celtic nation and about 1.4 million of people watch the great parade (each nation parades, showcasing their traditional music, costumes and dances) on the French television (see Figure 64). The Interceltic Festival of Lorient is now a major event celebrating the traditional culture of the region that gather locals, foreigner delegations, and tourists (French tourists as well as foreigners).

*Figure 64: The great parade (Elsa MELEDO, 2023)*

Some areas already organise some events such as bon odori festivals (in Kachidoki and Tsukudajima) or the Toyosu Waterfront Festival organised by the Toyosu Canal Renaissance association (see Figure 65). Its members are from local shops, companies (including IHI), SIT and residents of Toyosu. The festival was held the 6th and 7th of July and visitors (mostly families with young children) could learn more about the history and culture of Toyosu, buy local products, and entertain themselves with boat races, boat cruises, games for children, … There were also stalls promoting community places and events such as gardening, kindergarten, boats and other water sports.

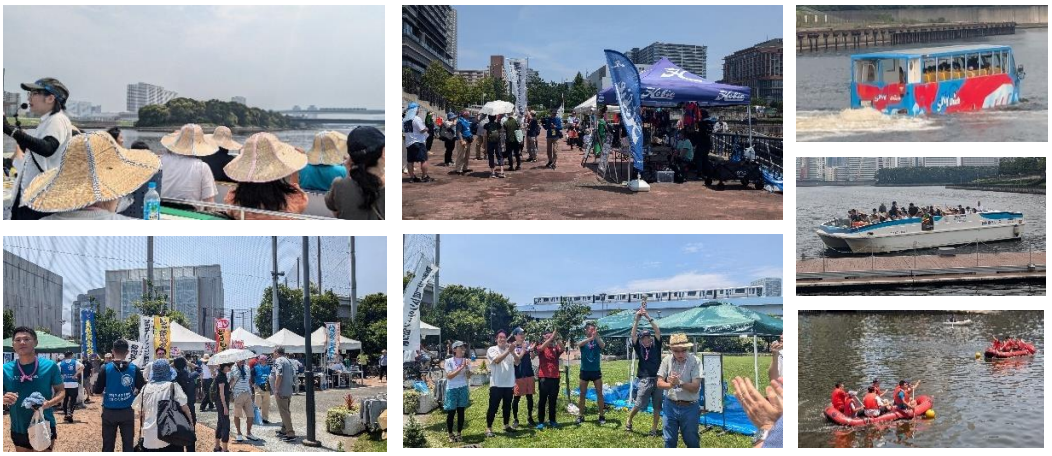


*Figure 65: The Toyosu Waterfront Festival (Elsa MELEDO, 2024)*

A boat race was organised where each area of Toyosu had a team (plus one team for the companies and one for the commercial association of Toyosu) (see Figure 66).

*Figure 66: The boat race results (Elsa MELEDO, 2024)*

The Tokyo Bay Area could increase the number of festivals held in its neighbourhoods, for example, Ariake could organise a sport event; Shinagawa, a whale festival to celebrate its history; and Harumi, a festival highlighting its goal of carbon free city with an Environment/DIY/eco-friendly festival. As with Toyosu, festivals can deepen an area culture and tighten its members relationships.

In conclusion, the Bay of Tokyo is made up of areas with a rich history, dating mainly from the 20th century, and diverse cultures. Through the posters, I tried to convey the richness of the Tokyo Bay Area in a visual and engaging way. And thanks to the report explaining the proposals, I wanted to show that each idea is feasible and has already been implemented in other cities in France. The Tokyo Bay Area has the potential to preserve and develop the communities that inhabit it, not only by preserving historic districts, but also by creating meeting places for the various players involved in land-use planning, giving residents the opportunity to take an active role in the area and organising local cultural events. Of course, to do so, the political commitment of the cities is essential to support and encourage community events and the preservation of historical buildings. This internship has been a valuable experience, that I will detail more in the feedback.

# 5. The feedback

Completing my internship at Shibaura Institute of Technology, made me face different challenges. The first difficulty was to overcome language barrier. Japanese pronunciation and the use of American English sometimes led to misunderstandings during some interactions with the professor Shimura. However, as the internship progressed, my understanding improved, and communicating became smoother, allowing for deeper and more effective exchanges of ideas and feedback.

The weekly meetings with the professor Shimura were precious. They gave me the opportunity to present my findings, ask questions and receive critical advice and guidance. These sessions not only guided my research, but also deepened my understanding of the history and urban dynamics of the Tokyo Bay area thanks to the professor explanations. I appreciated his expertise, especially given his personal connection to the areas of Tsukishima and Tsukudajima, which enriched the relevance of his feedback on my work.

One of the main challenges was conducting research in a country whose language I don't understand. I began my research in English, then in French, but I soon realised the importance of Japanese sources for a full understanding of local contexts. This led me to use translation tools and sometimes to ask Japanese friends for help, which took time but proved effective in accessing more detailed information. In addition, the subject of my litterature review was not at all precise, so I had the impression that my initial lack of orientation led me to a broad search for information that did not correspond to the turn of my research later. However, this phase was crucial for acquiring a fundamental understanding of Tokyo's urban planning and history, enriched by the fieldwork.

I was surprised by the differences in methodology between the experiments carried out in France and Japan. In France, I used the fieldwork mainly to verify hypotheses, whereas in Japan, the fieldwork was

also conducted to learn about the bay area and improve the litterature review. As I couldn't do enough interviews due to language barrier, the fieldwork allowed me to exercise my sense of observation and question everything I saw, which improved my analytical skills.

The creation of the posters and the report enabled me to convey my conclusions and proposals in both visual and textual form. I sought to highlight the feasibility of my ideas by referring to successful projects in French cities, in the hope of inspiring similar developments in Tokyo (to be adapted to the local context, of course). The process of developing the proposals was particularly enjoyable, as it allowed me to express my creativity. Although I would have liked to have had more time to develop the possible steps for implementing these ideas in the Japanese context, this internship has greatly improved my research skills and given me a new perspective on urban planning in a different culture.

It also made me realise just how time-consuming all the stages (and even small changes) are, highlighting the complexity and rigour required for urban planning. This experience has highlighted the importance of patience and meticulous work.

In addition, I developed my soft skills, including adapting to a new culture and working environment, and interpreting body language when there were some language barriers. This was particularly important when I or the person I was communicating with had a limited command of English. My English skills also improved, particularly in terms of comprehension, vocabulary and oral expression.

Overall, my internship at ITS combined academic research with proposal development, giving me skills and knowledge that I will use in my future career. The focus on different communities made me more aware of their importance in urban development (an aspect that is perhaps less developed at Polytech or at least approached in a different way). It was an enriching learning experience that strengthened my research and analysis skills, improved my adaptability and broadened my understanding of urban planning in a different cultural context. I am grateful for the opportunity and hope that my work can contribute to ongoing discussions on urban development in Tokyo.

# Conclusion

My internship at the Shibaura Institute of Technology (SIT) was a valuable experience that deepened my understanding of urban planning in Japan, particularly in the Tokyo Bay area. Throughout my nineteen-week programme, I immersed myself in the history, culture and dynamics of Tokyo Bay communities, particularly those of Tsukishima, Tsukudajima and Toyosu. By carrying out fieldwork, analysing data and proposing improvements to urban development, I gained invaluable knowledge about these rapidly evolving districts.

The Tokyo Bay area is an interesting case study of the mix of traditional and modern neighbourhoods and cultures, where many innovations support Tokyo's development. My research has highlighted the importance of preserving historic landscapes for local communities while continuing urban development in the Bay Area. This balance is essential for preserving cultural heritage and improving the quality of life for residents. This research also revealed the importance of involving all the players of urban development to implement a successful project.

One of the most significant challenges I faced was navigating the language barrier, which limited my ability to gather information and interact with locals. However, this obstacle also served as a valuable lesson in adaptability and patience. With the support of my coworkers and the use of translation tools, I was able to overcome these challenges and obtain the necessary data for my analysis.

The weekly meetings with Professor Shimura were essential to guide my research and deepening my understanding of the Tokyo Bay Area thanks to his feedback and his knowledge over the study area.

Additionally, the fieldwork gave me the opportunity to immerse myself in the daily life of the Tokyo Bay Area, providing a practical perspective that enriched my research.

This placement enabled me to improve my writing and analytical skills, which are areas I wanted to develop. What's more, living in Japan, a country with a different urban development strategy to France, and studying in a different working environment broadened my vision of urban development and my open-mindedness. This experience enabled me to acquire a more global vision of urban planning and to work on my ability to adapt to a new environment which will be an asset for my future job as an engineer.

I am grateful for the opportunity and hope that my research and proposals will be useful to Professor Shimura as he discusses with other experts how to improve urban development in Tokyo.

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# Formation of the Tokyo Bay Area and Community Design

Elsa Mélédo
2023-2024

## Résumé :

My internship at Shibaura Institute of Technology (SIT) focused on urban development in the Tokyo Bay Area. Over nineteen weeks, I realised a state of the art, conducted fieldwork and data analysis over the Bay, focusing on Tsukishima, Tsukudajima, and Toyosu. I overcame the language barrier difficulty, and produced results on the main features, communities and culture of the study area under the guidance of the professor Shimura. I produced posters presenting the different areas of Tokyo Bay, as well as a report in which I detailed proposals for the future urban development of the Tokyo Bay area based on three themes: preservation of old neighbourhoods, community space and culture. This internship enabled me to broaden my knowledge of community involvement in urban planning and improve my ability to adapt to a new working environment.

## Summary:

Mon stage à Shibaura Institute of Technology (SIT) portait sur l'aménagement territorial dans la région de la baie de Tokyo. Pendant dix-neuf semaines, j'ai réalisé un état de l'art, effectué un travail de terrain et une analyse des données recueillies dans la baie, en me concentrant sur les quartiers de Tsukishima, Tsukudajima et Toyosu. J'ai surmonté la barrière de la langue et produit des résultats sur les principales caractéristiques, les communautés et la culture des zones étudiées, sous la direction du professeur Shimura. J'ai réalisé des affiches présentant les différentes zones de la baie de Tokyo, ainsi qu'un rapport dans lequel j'ai détaillé des propositions pour le futur développement urbain de la de la baie de Tokyo sur la base de trois thèmes : la préservation des quartiers historiques, la valorisation des espaces communautaires et des différentes cultures. Ce stage m'a permis d'approfondir mes connaissances sur l'engagement communautaire dans la planification urbaine et d'améliorer ma capacité à m'adapter à un nouvel environnement de travail.

Key words : Tokyo, Community, Culture, Machizukuri, Research

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