Kyoto Design Lab.

The tangible and the intangible of the Machiya House

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THE TANGIBLE AND THE INTANGIBLE OF THE MACHIYA

INTRODUCTION

Introduction
Hielkje Zijlstra

In April 2010 Kazuto Kasahara knocked on the door of our office at the TU Delft for the first time. This was the starting point of a fruitful collaboration between the Kyoto Institute of Technology and the Delft University of Technology. After a period in which Kazuto was appointed as a guest researcher he investigated the way our department (RMIT, the former name of the section Heritage & Architecture) organised research and education on preservation, refurbishment and re-use of heritage in the built environment. He worked out his research on these topics in the Netherlands compared to the current situation in Japan and at the Kyoto Institute of Technology (KIT).

In March 2011 Kazuto went home after a period in which we experienced a Japanese way of thinking in architecture, preservation, and food, and he experienced the Dutch way of living and concern for listed buildings.

In 2012 Kazuto invited two of our staff members (including myself) to participate in the final symposium of his research project to explain our education and research approach. This was the first time for me to experience Japan and for me it was a very impressive experience. After Nara, Osaka, Kyoto and Kobe for me Japan was love on first sight. I very much enjoy the way of life, the respect people have for each other, their kindness, and the imbedded culture in material, craftsmanship and details.

Two years later Kazuto and KIT succeeded in applying for a grant in the Japanese University Program to stimulate International Collaboration: the Kyoto Design Lab. So in April 2015 TUD and KIT signed the contract to collaborate in this program for the next five years. It includes education and research. At first we organised the Kyoto Design Lab. workshop with ten students from TUD and ten students from KIT. In both universities the workshop was part of the MSc education curriculum.

So from 28 November – 6 December 2015 the Heritage & Machiya workshop took place in Kyoto. The Dutch students stayed in a converted machiya hostel and the Ninigi KIT annex was the case study for the design project. After four weeks of previous research in Delft, the TUD students were prepared to kick off. During an intense week five ideas for how a machiya might be reused were worked out and presented. All students contributed, worked together intensively and the communication went smoothly. After this educational experience with on machiya's, Japanese architecture, food and culture the TUD students went home and continued their design in their MSc2 design project.

In January 2016 all students from Kyoto and Delft presented their final results in the Berlage Hall at our faculty. We spent several days together again to discuss and visit some interesting projects and sites in Amsterdam, Rotterdam and The Hague. It was a wonderful experience and exchange of ideas for all of us. The results are reflected in this exhibition and the corresponding publication.

First of all I would like to thank the Kyoto Institute of Technology, the Kyoto Design Lab, and especially President Yoshiro Ono for creating the opportunity for young people to exchange ideas, experience different cultures and make new friends. Secondly I wish to thank Megumi Nagai Gomes who made all the logistical arrangements. I am especially grateful to the teachers Kazuto Kasahara, Kazue Akamatsu, Sara Stroux and Alexander de Ridder. Most of all I would like to thank the students who did such a great job: Namiko Araki, Risa Matsunaga, Nozomi Shimizu, Yuko Susaki, Shun Takada, Hiroki Kobayashi, Takeaki Koike, Mitsuhiro Ohgida, Thomas Sakuma, Yoshiki Hayashi, Jorien Cousijn, Anna Golubovska, Nina van Hoogstraten, Wessel de Jong, Bart Kuipéri, Eline Stubert, Jelmer van Zalingen, Karlijn Scholtens, Maartje Holtslag and Arjan Schooneveld. Without students we cannot teach!

So we are proud to present the students' results in this exhibition, along with some other experiences and research results as well. For me it was a privilege to be part of the collaboration during the preparations and during our stay at the KIT for my research project at the Kyoto Design Lab.

KYOTO DESIGN LAB.

Streetmarket in Kyoto.

The garden of the Ninigi Machiya.

Heritage & Architecture & Kyoto from Western perspectives

Hielkje Zijlstra

Introduction of the KYOTO Design Lab.
Since 2010, we as RMIT (former name of the section Heritage & Architecture) have contact with the Kyoto Institute of Technology (KIT). Kazuto Kasahara was an academic guest researcher for one year at the initiative of Paul Meurs. In 2012 Hielkje Zijlstra and Marie-Thérèse van Thoor contributed to the symposium organized by Kasahara at KIT: “The Present and Future of Preservation of Modern Architecture.” In November 2015 KIT launched the KYOTO Design Lab.: ‘By engaging with and responding to the global problems faced by our world, the KYOTO D-Lab will be a site for social innovation through design and for the exploration of practical design methodologies. D-Lab is the first institute of its kind in Japan to focus on architectural education and research into urban revitalization.’ (http://kyoto-design-lab.tumblr.com)

Heritage & Architecture has been invited to participate in the Kyoto Design Lab. to address the issues of built heritage. From the chair of Heritage & Cultural Value plans were developed for cooperation in the field of education and research. In March 2015 invited by the KIT Paul and Hielkje went to Japan to discuss the options and give lectures about Heritage & Education and Heritage & Strategies. The contract or a five year collaboration between both universities has been signed in April 2015.

Introduction to the KYOTO Design Lab. related education project
The KYOTO Design Lab. starts in the fall semester of the TU Delft academic calendar 2015 - 2016 with a joint education design project: Heritage & Machiya. It is integrated into the regular curriculum of Heritage & Architecture. The MSc2 design project is supervised by two teachers, one with an emphasis on design (Alexander de Ridder) and one with experience in conducting research (Sara Stroux). In MSc2 Heritage & Machiya project is connected to research. An investment is required in research in the first part. A week in Kyoto is planned (28 Nov – 6 Dec) as workshop to start the design. Ten students from the TU Delft have been selected. The students will stay in two Machiya houses during their visit. The case study house is the Machiya annex of the KIT. This Ninigi Machiya at the Sanjo Dori will be studied and redesigned for different new uses. The city block, the city house and de city materials are object for study. Inspiration for this could be the research ‘Living traditions of the street’, by Urabe in A Japanese City and Architecture: Kurasaki, (Process 31, 1996, pp. 14-69). The TUD and KIT students are pooled and work necessarily together on the task in research and design to define their assignment, do research on cultural values, architecture and technology and make a draft design together. At their home universities they work it at in a final design and deliver a research and a reflection report. The location of the education project also guides us for the scope of the KYOTO Design Lab. research project.

Introduction to the KYOTO Design Lab. research project
During 5 years KIT allows Delft researchers to work in Kyoto. We hereby proposed a multidisciplinary and multi-personal approach: the aim is to make a Heritage & Architecture investigation of one urban block of Kyoto, from different Dutch perspective. We distinguish three scales (L / M / S) - where respectively Paul Meurs, Marie-Thérèse van Thoor and Hielkje Zijlstra are the leaders. The location of the research block all research will start from is based on the survey conducted in March 2015 and the location of the Ninigi Machiya. Instead of focusing on the high lights like the 1600 Buddhist temples, 400 Shinto Shrines and 17 Unesco World Heritage sites we chose the block with the Ninigi Machyia as starting point for the research. Those are the original shop-houses in Kyoto. Some more or less original ones are still there, but they rapidly change or disappear. The scope of the Heritage & Architecture field of interest can be found here like the relation of the city to the landscape, layers of history from the city till the house, the architectural impact, social and cultural structures and the development of a single houses in a Japanese city but also the use of materials, climate design and building regulations. So from this block the researcher generates its individual research topics and questions but will always reflect on the overall formulated theme relate questions. Their studies develop in conjunction and incorporated in the joint publication: Kyoto from Western perspectives. Each year two researchers stay one month in Kyoto to work out their research.

The section Heritage & Architecture focuses on the design challenges in built heritage. Heritage is interpreted in a broad sense and is independent of any formal status like monuments as a particular object or ensemble. In all design tasks in an existing context the past will play a more or less important role in the development of a plan. This is the general mission of the section Heritage & Architecture of the Faculty of Architecture and the Built Environment at the Delft University of Technology. For the purpose of this the challenge to research on site at Kyoto in Japan is a unique opportunity. In a completely different culture from what we are used to it creates the possibilities to rebalance the scope of our research practice and it to reflect on every day practice in the Netherlands as well. We will look at built heritage in Kyoto through Western Eyes. We want to find out what are differences between both situations on all scale levels concerning the city, its landscape, the fabric, the blocks and buildings it is made of and the materials and techniques used to erect it and to keep it alive. We want to explore what we have in common as well. So we need to know both situations. Every researcher of this team has his own background and field of expertise. From this background he or she explores the Japanese situation on site and not only from books, movies and information retrieved from websites and other sources.

I (Hielkje Zijlstra) started in December 2015 on the scale level of material and detail: Culture is in the Details, Lidwine continued in February 2016 at the building level and Carola Hein will join in August 2016.

All researchers will reflect on the next overall formulated theme related questions:
- Heritage; what defines the fact that something is heritage or not?
- Transformation; what is original, what is new, are they related or not (fracture surfaces) and so why?
- Scale; what defines the scale, is it about scale jumps or about smooth transitions?
- Use; how important is the use of the built environment over time, does the environment change, is the use itself changing or are other aspects leading or responsible for change of the built environment?
- Culture; where do you recognize your own and where the foreign culture and how do you value it?
- Global exchange; is it possible to define a global identity or is our own cultural perspective always leading in the observation of foreign cultures?

We strive to continually evolve the research agenda, but the focus on these aspects keeps the same over time and for all participating researchers.

TATAMI

Inside the Shōkin-tei, located in the garden of the Katsura Imperial Villa.

A joint of three tatami.

Tatami

Carola Hein

Use of the tatami mat reportedly goes back to the 8th century (the Nara period in Japan) when single mats began to be used as beds, or brought out for a high-ranking person to sit on. Over centuries it became a platform that has hosted all facets of life for generations of Japanese. From palaces to houses, from temples to spaces for martial art, the tatami has served as support element for life. Used as an integrated floor element, it is a multifunctional platform for many daily practices: from sleeping to eating, from leisure to work. A tatami mat is a space to sleep. Rolling out a futon mat turns a room into a bedroom. Bringing out a smaller zabuton cushion to sit on and a folding table makes the same space a dining room.

The presence of tatami in diverse types of buildings and in spaces catering to all classes, made it for a long time a social and cultural unifier. To understand the original function of the tatami in the Edo period (1603-1868), its transformation and slow disappearance from buildings since the Meiji Restoration of 1868 and its current use, this text provides a chronological analysis of tatami practices, from lifestyle to building block.

As a standardized horizontal unit of approximately 1.8 metres by 90 centimetres, the tatami can be assembled into different floor patterns. Its proportions have also shaped the vertical dimension of the building, providing a norm for wall elements, sliding doors (fusuma and shoji). The height and design of the ceiling were adapted to the eyes of a person seated on the floor rather than one sitting on a chair; ceilings are relatively low and often decorated.

The tatami is an integral part of the physical ecology of traditional Japanese buildings, which are raised on posts. The wooden frame permitted air to circulate through the wooden floor structure and the tatami flooring. Composed of natural materials, layers of rice straw and covered with igusa rush, tatamis are adapted to the Japanese climate: cool in summer, warm in winter. Furthermore, in the hot and humid Japanese summers, the rush is said to absorb humidity in the summer and release it in the drier season. The floor system is integrated with openings above the wall elements and sliding doors. Beautifully decorated transom panels (ranma) allowed for air circulation above the sliding doors.

The best example of Japanese tatami culture is Katsura Rikyu, a detached Imperial Villa located in what are today the suburbs of Kyoto. The floor plan of the shoin, the main study building, shows a traditional Japanese layout, with corridors connecting the rooms on the outside. The continuous interior can be separated into single rooms by fusuma sliding doors, creating individual rooms that are indicated by the tatami patterns.

The lifestyle of the Edo period is encapsulated in the four tea houses (originally there were five) that remain on the property of Katsura Rikyu. The most famous among them is the Shokin-tei. Walking through the garden the visitor approaches a small thatched hut. Guests would have come to enjoy a tea ceremony and to admire the gardens while sitting on the tatami floor. The blue and white chequered sliding doors, that could be used to separate the interior into smaller rooms, fascinated European Modernist architects and artists, who used them as inspiration for and confirmation of their functionalist argument. Depending on the season, visitors could move to another of the tea houses, watching the moon, for example, from the hilltop tea house, the Shoka-tei.

The same physical elements noted in Katsura Rikyu are combined in the Imperial Palace, the Gosho (where the tatami are uniquely lined in red), in the Shogunal Palace, the Nijo castle, where the corridors are fitted with springs that would announce an approaching ninja, in Kamakura, where traditional zen temples such as Enkaguji allow for prayer as well as for archery practice, or Miyajima, a Shinto shrine, where the same building elements combine, but where the typical orange colour and the Shinto gate provide identity. The same building elements can also be found in merchant's houses, such as the Yamamoto Residence in Obi, an old castle town on the Southern island of Kyushu.

Katsura Rikyu, the detached Imperial Villa.

Pavilion in the garden of the Katsura Imperial Villa.

The end of the Edo period and the over 200-year long period of Japanese isolation, brought new lifestyles and building materials to Japan. The tatami as the platform for Japanese life survived the extensive political, economic, social and cultural change that came with the arrival of the so-called Black Ships on the shores of Japan in 1854. With modernization in the Meiji period traditional buildings saw new additions, such as pieces of furniture or frosted glass in the shoji sliding doors.

At the start of the Meiji period in 1868, Japanese leaders aimed to “catch up and overcome the West.” New infrastructures and building types emerged in Japan. Buildings for industry, government and corporations, for ministries, offices, department stores, or museums served functions that had not existed in this particular form beforehand. Their style reflected European and American practices. As chairs, tables and cupboards entered the Japanese lifestyle, wooden and stone floors replaced tatamis. To give just one example: traditionally shopkeepers, seated on their tatami floors, would bring out the goods that they thought would match the needs and budget of their clients, a tradition very different from that of a department store, where all the goods are put on display for the client to choose from.

The new lifestyle also influenced domestic housing practices, albeit not as quickly. There, the traditional Japanese lifestyle lasted much longer than in public buildings. During the Meiji period people would build houses that incorporated Western and Japanese life-styles, including spaces for chairs and tables adjoining others fitted with tatami, occasionally having a single table span over two types of sitting facilities.

While Japan was steadily adjusting to the foreign way of life and the structures associated with it, foreigners came to admire the rapidly disappearing traditional structures of Japan, praising them in Orientalist fashion. Europeans discovered Japanese architecture and integrated it as an argument for the modern movement. Katsura’s proportions inspired Mondriaan and Bauhaus photographers, and Horiguchi Sutemi’s Okada house speaks to both Mies van der Rohe’s Pavilion and traditional Japanese architecture.

The disappearing traditional lifestyle also caught the attention of Japanese architects. Nishiyama Uzou, for example, captured the old structures in beautiful drawings, as well as in photography. His representations of traditional houses show floors in the kitchen, and storage areas and tatamis in the living spaces, where users would take off their shoes. While this traditional building inspires a lot of nostalgia, photos by Nishiyama give a sense that tatami living was not always elegant and clean.

In the mid-20th century, after the 1923 earthquake and again following the disaster of World War II, Japanese architects designed new lifestyles. Tatamis no longer provided the foundation for various functions. The need to house a growing population required the construction of high-rise buildings. Small apartments came to host large parts of the urban population. A small dining kitchen (known in Japan as DK) and a limited number of tatami rooms became the standard for many urban dwellers. 2DK, for example, describes an apartment with a dining kitchen and two tatami rooms. Tatami rooms traditionally hosted different functions and contained limited furniture. With modernization came an invasion of objects, such as phones or televisions, that would no longer be stored away and brought out when needed. These objects started to clutter the traditionally empty spaces.

Over a century and a half have passed since Japan introduced Western concepts. Tatamis no longer provide the foundation for everyday life, but they have not disappeared altogether. Many modern flats will at least contain one tatami room. Realtors are still renting out tatami apartments, at least they are featured next to those with a Western style setup. But tatamis need to be looked after. They require users to take off their shoes; they age and they are dented easily when heavy furniture is put on them or moved around.

As a result of lifestyle changes, tatami have become isolated elements for a single room, they are connected to select practices, or they are transformed into movable floor mats rather than integral to the building. Even its composing elements are disassembled and commodified often for touristic purposes: Igusa grass appears as a cover for chairs, on traditional slippers, but also as a table set or a floor cover. There are also plastic versions of the tatami mat that, while practical, lack the smell or tactile quality of traditional tatami. These are used, for example, in martial art studios, where the tatami traditionally belonged, but where natural tatami decay quickly, or in places where traditional materials would not have survived, such as in a hot spring.

The tatami as part of a social, cultural, architectural and environmental system has been lost in the transformation of lifestyles and in the introduction of traditionally non-Japanese practices. This becomes obvious in foreign practices and in connection with spaces of tourism. Tatami-beds of European or American design are wooden structures that hold two mats on which futons can be placed. This creates a permanent piece of furniture on top of the floor, thus defeating the original purpose of the tatami as a multifunctional floor covering, becoming objects in a room that cannot be moved with the changing rhythms of the day.

Apartments rented out on AirBnB are another example. They highlight the discrepancy between foreign perceptions of Japan and the Japanese view of foreigners' needs and desires. Walls decorated with kimonos as wall decorations, tatamis on which Western-style beds are placed, making a multifunctional use impossible, futons rolled out next to a butsudan where the ashes of the deceived family members are kept. Or futons laid out on the wooden floor of a traditional kura, a storage building that hosted grains and family valuables. Such practices are contradictory to the traditionally integrated use and function of tatami.

The loss of traditional practices and lifestyles is also documented in much boutique architecture. A few contemporary architects have continued to include tatami spaces. Tatamis are still present in religious buildings such as Ando Tadao's 1991 Water Temple on Awaji Island. Shigeru Ban's Naked House from 2000 features tatamis as part of the rolling cubicles, detached from the actual floor. The client had asked Ban to design a house that was completely open, where the whole family could communicate while also maintaining some sense of personal ownership. As a result, Ban created tatami-fitted boxes open on two sides that run on wheels. Other designs by contemporary Japanese architects surprisingly don't feature tatami spaces. The NA house by Sou Fujimoto, with its multiple levels and sitting places, uses wood floors instead of tatami.

One might wonder why Japanese still bother to live on tatamis. For one, the high density of Japanese cities may call for a preference for multifunctional spaces. A chair and a table are objects that stand around, but these are not necessary in a tatami setting, whereas sabutons can be folded away. Integrated storage spaces prevent the need to buy a cupboard. Advertisements in Tokyo and throughout Japan also seem to suggest yet another space where tatamis have endured (and are perhaps even coming back). Publicity for leisure spaces, traditional hot spring spas for example, show tatami spaces for sleeping and eating, making traditional lifestyles the counterpart to busy modern Tokyo. The persistence or return of such traditional elements is also reflected in the use of traditional Japanese clothing (yugata) worn by women and men in traditional resort towns, but also on a summer day in one of the big metropolises.

Japanese life is changing, tatamis are no longer the all-round part of daily life, they have retreated into niches, including Western style tatami beds and resorts. But a careful look at their unique multifunctional capacity as a platform for life may allow this unique tradition of multifunctional tatami living to continue. For the time being, there are still a number of tatami makers who know their trade and who can help continue this century-old tradition.

JAPANESE TRADITION
RE-INNOVATED

The aquarel was painted by Gunnar Daan in Tsumago, Japan in 2007 and shows this former post town nicely embedded in its mountainous surroundings. While I was writing this, I received the sad news that Gunnar has passed away at the age of 77.

Craftsman at work.

Japanese tradition re-innovated

Paddy Tomesen

Inspiration is the source of all innovation. When Alexander de Ridder approached me in September 2015 to give a lecture to MSc2 Kyoto studio's students for preparing them for their first encounter with Japan, I knew this experience will plant the seed for endless inspiration.

It was known that the students for MSc2 Kyoto studio were aimed at exploring the level beyond. For this group of students I gave the lecture that took my audience for a journey passing by my various experiences in Japan and on my own projects inspired by Japan.

One of the key messages I dropped during my presentation is that Japan is full of paradoxes which you may not fully understand until you have endured these contrasts in daily life personally. My first visit to Japan was for a student intern ship at an antroposophic focused architecture office (Team Zoo) in 1990. In the first weeks I have longed to assist in some typical modern Japanese design projects. After a period of making scale models of some undefined sketches, I was happy to be allowed to join the "master" (sensei) on an exclusive architectural excursion. In my perception of the MSc2 Kyoto studio excursion the students would be like myself 26 years ago filled with new views of what Japanese "design" is about. This tour showed me "design" by Japanese traditional craftsmen's work that excels in perfection in terms of refined techniques and esthetics. The first sight of a historical temple that is organised in such a modern open structure, is still a revolutionary experience. In my western oriented training I have been taught that abstractness is a period dated from modern history. In Japan I learned that the open modular floor plans were already developed and cherished centuries ago. What apparently seems like a paradox – traditional building being modern organised – is only due to the western paradigm.

The lessons from the Japanese masters tasted for more. After the intern ship I wanted to deepen my knowledge about the role of traditional Japanese architecture in the modern world. What stroke me in this study period at Waseda University in Tokyo I learned the art of balancing the choices for space, construction, material and flexibility to the perfection. The Japanese craftsman is not seen as a failed student that needs to do a lower paid job on the site. Another thing I learned in Japan is the valued status each profession has. Most specific the carpenter is a highly respected craftsman. He possesses the skills to execute his plans with utmost precision that hardly makes any compromises. For the same reason Japanese wood joinery, weaving- and plaster techniques are famous. The crafts as we recognize them now date back to the seventh century and its craftsmanship technique involves complicated, interlocking wooden joints that form bonds without the use of nails, screws or adhesives.

Eventually I worked as an architect at a Japanese office that is famous for its integration of traditional Japanese techniques into modern architecture: Naito architects. The result is that the project may not beat the popular architects in being photogenic, however, amongst experts the Naito projects are reviewed as unique by applying traditional construction concepts in an innovative and considerate way. Using the roof as core element of the building - as opposed to a building which has a focus on the walls - is a typical Japanese concept combined with the open floor plan.

Meanwhile I have also experienced the vibes at the Genba ('the real place' or buildingsite) where the architect – unlike in the Netherlands – is on-site on a daily basis to direct the project together with the craftsmen. At these Genba's I developed my building technology expertise in esthetically integrating traditional and modern architecture. Wood, bamboo and other natural materials have ever since been elements I research and apply in my own projects in the Netherlands inspired by Japan.

Having prepared the students for their Heritage & Machiya workshop in Kyoto, I met them again in December 2015 when we gathered with the students of Kyoto. I could feel the excitement! Both Delft and Kyoto students presented their final works early 2016 while I was acting as the visiting critic. Wonderfull presentations of research and reflections which were well presented by detailed models, colorfull drawings and clear explanations. What was striking was the difference in approach and in the level of elaboration of the projects. Without judging I noted that the Kyoto students in general were very much focussed on detailed restauration of the Machiya house and were very familiar with the rules. On the other hand, the Delft students appeared to have approached the project in which the site was transformed into a very new place but with a Japanese touch. This approach was observed again in my discussion with Kyoto students and the professor when I visited Kyoto Institute of Technology for helding a lecture this summer upon invitation by professor Yukio Tahara and Kazuto Kasahara.

It is a privilege to have an opportunity to inspire Delft students with my Japanese experience for the MSc2 Kyoto studio Design Lab. I realise more and more that in Japan there is unique culture where craftsmen are cherished and where engineers are focused on processes and details. This practice discerns from the typical western urban planning approach which aims for the control of the clarity and the esthetics. What is important to remember is that the authenticity and continuity is not in things or buildings but in the function and program.
Taking Tokyo as an example seen from an urban scale with a helicopter view, seemingly a chaotic, fragmented and kaleidoscopic place with no recognizable structure. How strange it felt to live in the Jingumae district in the city “center” of Tokyo which has the same atmosphere as the village of my childhood. When I walk 8 minutes to Shibuya Station I will be overwhelmed by the experience of an extreme urban place with nine levels of infrastructure, almost 3mln people passing through every day. Yes, 1.000.000.000 people a year! Yet the place is still comfortable, even with small children, as I experienced this summer. While Shibuya Station is not so beautiful or pretty, it works and feels far more comfortable than for example Amsterdam Sloterdijk Station and to be honest better than Amsterdam too. In my opinion this is due to the advanced use of the transport oriented development, resulting in a place that exceeds from a plain railway station into a shopping center annex residential and commercial complex. How is this possible? And most important: what we can we learn from this?

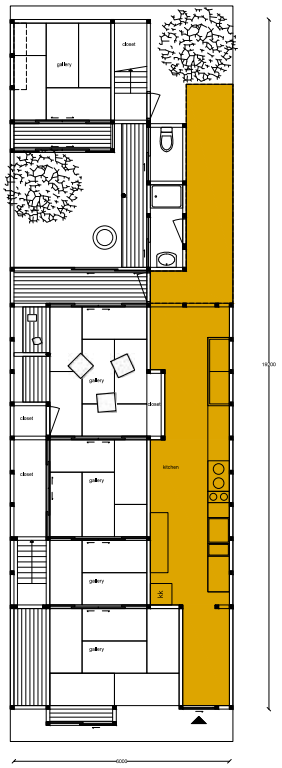
When I travel through Japan I use to stay at small scale Ryokans (Japanese Inns) and temples as these places feel so comfortable. Two years I lived in Tokyo district Sangenjaya in a kind of ‘plastic home’. The climate inside was too hot, too cold, too humid or too dry. Like living in a raincoat! Simply terrible, so I needed an aircon all the time. Later I moved to the Jingumae district in a smart engineered house with enough daylight, direct fresh air and build with healthy materials like wood, Japanese plaster and ceramic tiles. Not even in the humid hot summer an aircon, or what so ever, was needed since the climate was pleasant and felt like a natural skin. It would be an interesting subject to make an in-dept study for the ‘smart and healthy home’ built by traditional craftsmen. The challenge is that the regular ‘plastic homes’ are cheaper since quality takes more budget. Like with food, unhealthy is cheap, and healthy food is more expensive. How can we change this, because we like to eat healthy and tastefull food and live in a healthy and comfortable place and sustainable society?

Re-Innovating traditional craftmanship by using Robotic CNC cutters might be part of the answer. Like the Dike-san (carpenter), developping and making smart buildings by integrating design, engineering and production, the new generation architects can do it the 21st century way. Robotic and CNC cutters can be used to adapt traditional joinery techniques and develop new constructions of lightness, prefabrication together with fast and clean assembling. In the meanwhile taking back control over the high standard quality in terms of safety, durability, comfort and esthetics. In return more freedom - from developers and construction companies – as well as more responsibilty and influence over the final result will be the outcome.

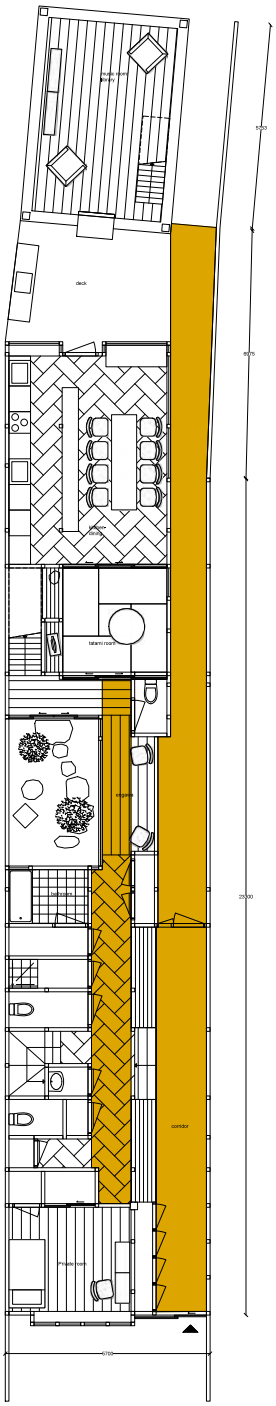
So, let’s start built our own homes. Right now!

TORI-NIWA
REINVENTED

The traditional tori-niwa: Anewal machiya



The doubled tori-niwa: Senryogatsuji machiya



Tori-niwa reinvented

Lidwine Spoormans

Tori-niwa is a great space. It is not inside nor outside, it is a narrow and high space, it has an unfinished cold floor, it is not climatized and it is always messy. You do not sit down in tori-niwa. It is not a room. Nevertheless it is a very nice space to be in. It is a place for meeting, cooking, drinking, smoking and debate. During my residency in a machiya I spend most of my time here and realised that there is no space like that in Dutch dwellings.

As a researcher from TU Delft I stayed in Kyoto for one month to do research at Kyoto Design Lab. During this month I visited many machiya's in search of authentic values and new interpretations of this typology. In the transformation from a traditional machiya layout to a new design dwellers and architects find innovative solutions to cope with the strict structure and functional plan of the machiya. Stairs are introduced on different positions, whereas the original machiya stair was hidden in a closet. The storage (kura) in the back of the plot where the family valuables such as kimonos were kept from fire now turns into a music room or a separate house. The room in the front of the house (mise noma) that was the shop of this merchant's typology now becomes a private art gallery, a coffee corner or a garage. Likewise the tori-niwa is subject to change.

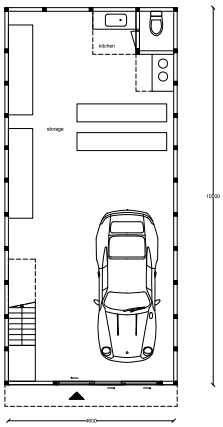
The tori-niwa is a corridor on one side of the house. It runs from front to rear of the plot and allows access to several rooms. It is a zone of practical purpose and contains entrance, kitchen, cupboards, toilet and bath cell and ends in a back yard. The important characteristic is the low earthen or concrete floor, opposed to the raised tatami-floors of the rooms. The difference in floor levels has a functional, a spatial and a social logic. In his book 'The inner harmony of the Japanese house' Atsushi Ueda writes that servants and employees were restricted to the domain of the earthen floor and in ancient Japanese society with its strict social class, they were not permitted to rise above it. How does that relate to the society of today? One of the architects I met who works on machiya redesign states that the tori-niwa is an opportunity in reuse.
"The outside is folded into the house and that is a true quality. Moreover it connects front and back and can give access to every part of the building, which creates possibilities for different programs. We kept the tori-niwa in all three machiya renovations we did."
But an inhabitant of a machiya told me: "The tori-niwa doesn't fit modern lifestyle because it requires an organisational logistical effort. Bringing the food from the kitchen to the reception room, taking shoes out, on and after dinner back again. People prefer the dining-kitchen being easy to use and not separated from each other."

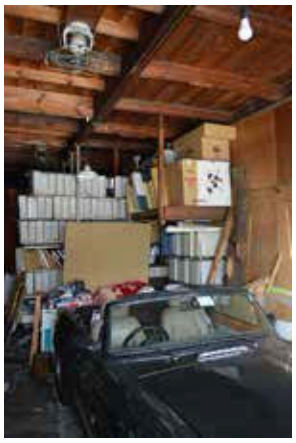
The machiya's I have visited show different options for tori-niwa to adapt to new uses. Architects and users found new interpretations of the spatial, functional and social qualities of this space.

Traditional tori-niwa
The Anewal machiya in the former textile area Ninshijin is 130 years old and originally the business in this machiya was the trade in threads. The current user has been living in the machiya but some years ago he introduced a new model: the ground floor is gallery space, used for exhibitions, meetings and projects. The front room on the upper floor is shared office space; the back part of the upper floor is a guest room for rent. The tori-niwa is traditional in its form and uses. It contains old stoves and big wooden cupboards, a dividing noren (curtain) and a citrus tree. It is used as entrance, kitchen, place to meet, bike storage, laundry space and more storage. The value of this space in the current function is that it unites the different functions and users of the machiya.

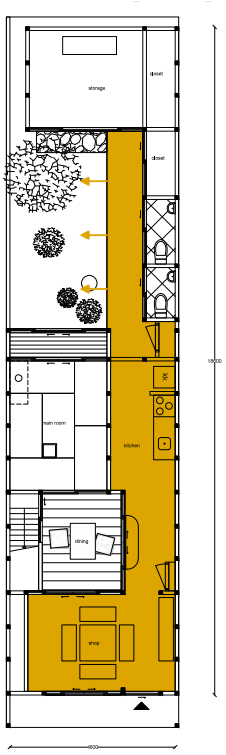
Doubled tori-niwa
The Senryogatsuji machiya is very large and is also built in the Ninshijin textile area during the Meji-period. Three years ago a real estate company transformed the machiya in a shared housing complex and now they rent rooms to young professionals. The plan contains 8 individual rooms, a dining-kitchen, several toilets and bathrooms, a patio garden, a tatami room, a terrace, a music and film room and a vegetable garden. The tori-niwa is a paved corridor that runs to the back yard. It is partly overbuild by the hall on the first floor, which provides a nice view into the tori-niwa. The smart solution in this design is the duplication of the tori-niwa.

The disappeared tori-niwa: Inokuma machiya

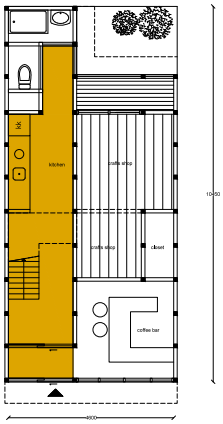




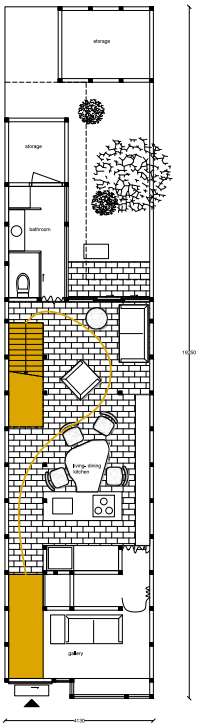
The Tori-niwa opens up: Kamanza Cho-ie

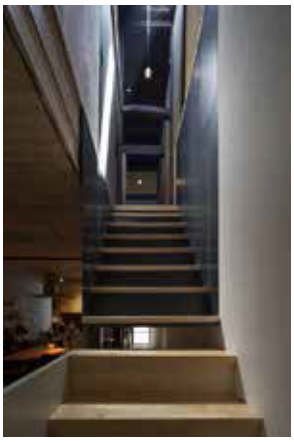


The Dutch model: Higashiyama machiya



The Reversed tori-niwa: Noda machiya





Next to the original one, a new corridor is introduced that links all the rooms and functions of the house. The difference with a traditional layout is the floor level of this corridor. Because it is on the higher ‘tatami-level’ you do not need to change shoes and the corridor becomes a connecting and comfortable part of the house.

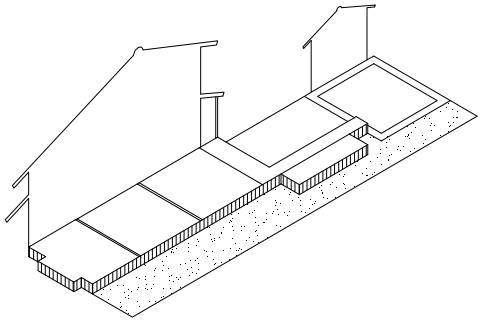
Disappeared tori-niwa
The machiya I visited in Inokuma dori is part of a row of five. The origin of the machiya is unknown, but the former function was factory space for paper boxes. From 1999 it is used as garage and storage on the ground floor and office space on the upper floor. The most important reason for renting this estate is the fact that is cheap.
The tori-niwa has disappeared. Studying the roof construction you can find evidence where it must have been. Today the total ground floor is the concrete low-level zone. The small lifted part of the floor is the landing of the stairs as the place to take off shoes. This transformation is not designed and sacrifice of tori-niwa is not a vision. It is just the practical adaptation of a structure by people running a business.

Tori-niwa opens up
Kamanza Cho-ie has a special history. It was built by the family Onoya, who had a smithy (iron) business for kitchen wear. In 1887 the Onoya couple donated the house to the neighbourhood association, not having offspring. Since then the Kamanza Cho-ie was a neighbourhood house. In 2010 the renovation of the Kamanzo Cho-ie was executed and today it is the office of the Kyomachiya association. An important aim in the renovation was to preserve the public function and improve the gradual entrance from the street to the interior of the machiya.
To create a welcoming entrance for visitors the low level of the tori-niwa is extended. The front room (mise noma) is lowered and becomes more public. Another inventive intervention is the relocation of the toilets from garden side to the wall. Now there is an open view and direct access from the tori-niwa to the patio garden.

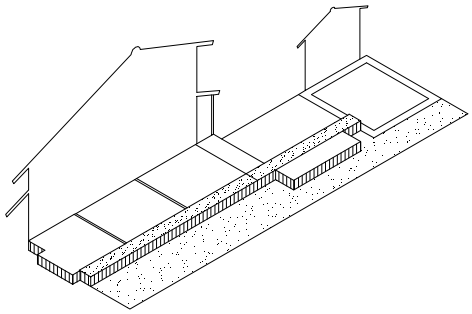
Dutch model
The artist that rents the Higashiyama machiya renovates the house himself. The small machiya is transformed into a coffee corner and a shop on the ground floor and two guestrooms on the upper floor. The tori-niwa in this machiya shows signs of opening up, like Kamanza Cho-ie, because the coffee corner in the former mise noma is connected to the space and level of the entrance. Another interesting element in the tori-niwa is the stair to the first floor. The logistical structure is now very similar to the Dutch rowhouse.

Reversed tori-niwa
The Noda machiya is in an area close to the imperial palace and the court. It is unlikely that it was used as a shop, but the exact history is unknown. Before the current owner of the house moved in a very short lady inhabited the machiya. In the transformation the level of the ground floor was lowered totally because the room height was very low. But unlike Kamamza Cho-ie this does not make the ground floor part of the corridor. By creating a loop in the routing through the house the tori-niwa gets different directions. The traditional route through the corridor is one-dimensional: from front to back. In the Noda machiya however, the experience of the tori-niwa is reversed.

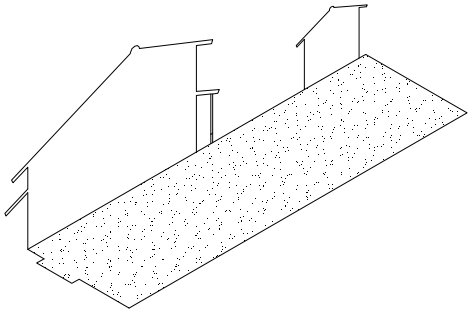
Do these transformations reject the authentic qualities of this special space I liked so much? Yes, to some extent they do. But for many new functions the strict division between the low tori-niwa and the higher tatami-rooms is not maintainable. Especially in the case of a dwelling it is hard to combine the original structure to contemporary preferences, such as a living-dining-kitchen. It seems like the plan needs to open up. However, many new interpretations I have seen do show appreciation of the origin of tori-niwa and reuse its values, mixed with new qualities. And wouldn’t it be a wonderful idea to have one authentic characteristic of the machiya preserved in every transformation. Then the collection of all Kyoto machiya’s holds the essence of this historic merchants townhouse and in the same time contemporary life can go on.



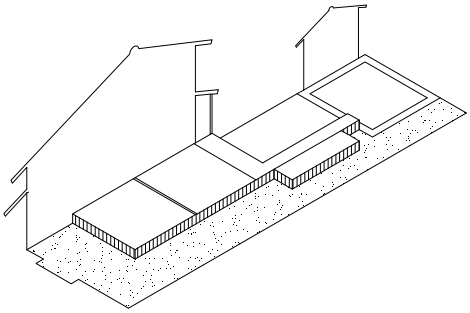
Traditional tori-niwa



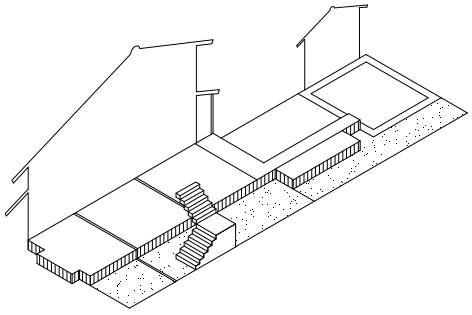
Doubled Tori-niwa



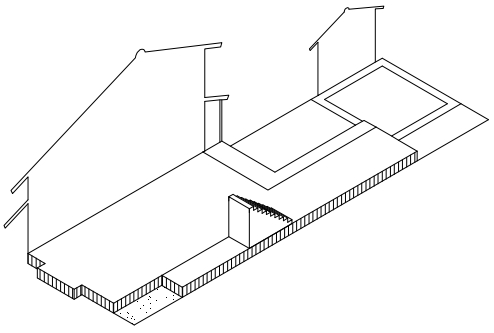
Disappeared tori-niwa



Tori-niwa opens up



Dutch model



Reversed tori-niwa

AUTHENTICITY
CHANGE
CONTINUITY

Entrance machiya as transition zone.

View on the garden.

Authenticity, change and continuity

Alexander de Ridder

If you could make a Grand Tour, then go to Japan. Your senses will be surprised and your appreciation of culture and civilization will be enriched. Visiting Kyoto for one week, meanwhile tutoring Japanese and Dutch students at the workshop at the KIT, I really had the feeling of entering a different world but at the same time the sensation of recognizing similarities: we live in a global village. Comparing and valuing is something we do all the time on many different levels. Is there a lesson to be learned?

I did not expect to encounter in Kyoto a small selection of replicas of Renaissance and Early Modern paintings. Located in a suburb of Kyoto, next to the entrance of the botanical gardens, Tado Ando designed an open air gallery as a Garden of Eden. Isolated from the outside world one can contemplate on pieces of art or experience an explosion of architectural expression. Tado Ando created a promenade d'architecture in the setting of an exquisite collection of copies of European masterpieces of painting. Maybe the exhibition is kitsch, the works of art are not the originals, not painted but reproduced on ceramic plates. But here in Kyoto you can see what not could have been achieved in the Palazzo Vecchio in Florence: masterpieces of Michelangelo and Leonardo being exposed to each other in one architectural scenery. This is the only place where *The Last Judgement* can be seen opposite *The Last Super*, in full size. What is true and what is an illusion? What is authentic and what is untrue?

Being an architect is being involved with spaces and places. And especially the quest for their qualities. Reflected in the breathing of the space, in the movement of the shadow and the sunlight, in the tactility of the materials, in the shelter of the place, in the transition between outside and inside, in the relation between yourself and your surroundings, in the feeling of being somewhere. The Japanese Machiya, a house with a courtyard as a garden, made for tradesman or craftsman is offering such an experience. The principle of the composition and materialization of the Machiya seems very clear and in its elaboration it is very sophisticated. The house and the garden are designed as one entity. They both have their own distinct features, but together they enhance each other. The rational geometry of the house for working and living is complementary to the organic enclosed garden with its irregularity. As if heaven and earth were united. These are words trying to encompass the experience of being there, but de words stay virtual and can never replace the physical experience. The proof of the pudding is in the eating, talking about the narrative of the Machiya with its enclosed garden is different from actually being there.

The world which we are a part of is always in transition, this situation of change is inextricably bound up with our lives and our surroundings, you cannot avoid it. But there are different kinds of changes. Coming into existence, like constructing a new house, or disappearing from the earth, like demolishing a house, is obvious different from changing the characteristics and qualities of a house when adapting the house because of new demands. In this case the urgent question arises what is the essence of the house that you would like to transform, in order to be able to maintain its intrinsic characteristics and qualities? There is something which we call Machiya and it is clear that there is a need to change this Machiya because of new demands and circumstances. Meanwhile we consider it as desirable to pass through this concept of Machiya. The difficult question is what we do recognize as inextricably connected with the essences of the Machiya that we want to continue. There is no formula for solving this dilemma of continuation and change. It needs a sensitive approach in the design process, being flexible and critical, being open minded for change and being aware that essences are valuable to maintain. Who we are and who we want to be is reflected in the quality of our environment.

Preparing the workshop for the MSc2 Kyoto Design Lab. we could not predict how the cooperation between the Dutch and Japanese students would work out. Having different customs, living on different continents and in different cultures we did not know if they would go along well with each other. It was a special moment when the Dutch and the Japanese groups met for the first time. Often in a split of a moment you can have the feeling if something is coming along well or not. Of course first impressions can be very wrong, but in this case the first impression was a good indicator for the whole project. The students were interested and curious in each other, they were asking and listening. It was a great pleasure to observe how things can go well!

Site visit.

Discussions among students in the Ninigi Machiya

PROGRAMS

Yoshida Machiya.

View on the garden of the Yoshida Machiya.

Programs

The subject of study within this project is the Ninigi Machiya, located between two popular shopping districts in the city of Kyoto. The task was to search for design opportunities and technological challenges to award this heritage of Kyoto a new life, being aware of cultural values, history and context. A Machiya is a traditional townhouse, that can be found throughout Japan in different variations. The Machiya in Kyoto are called Kyo-Machiya. Most of the Kyo-Machiya that still exist are from the late 19th or early 20th century. A Machiya has a small front facade with a narrow floor plan. Most Machiya consist of one or two stories. Typical for a Machiya is the combination of a shop or workplace, the mise or omoteya, which is orientated to the street and a residential area, the omoya, which is situated in the back of the house. The roof ridges of the omoteya and omoya run parallel to the street, and there is often a separately roofed connecting room used as the entry, the genkan, in between. A long corridor, the tôri-niwa, runs from the front to the rear end of the plot along one side of the house. In a way it is a inner “street”, as people used to carry goods for the shop and the private house along this corridor. The space between the omoteya and omoya is usually filled with gardens, the niwa, that are lined by a narrow veranda, the engawa, protected by the eaves. The naka-niwa, the ‘middle garden’, behind the omoteya is often particularly small, hardly exceeding the size of one tsubo (3.3 m2) and thus nicknamed tsubo-niwa. Here, one commonly finds bamboo varieties that also grow in little light. The gardens bring light and nature into the house. But they also serve a practical function such as drainage and ventilation; when one garden is watered and the other left dry, a refreshing breeze starts to circulate. To live in a Machiya means to undergo life in a dwelling condition of ambiguity. The borders between the inside and outside, public and private are quite vague. As you move from one space to the other a world of transitions and ambiguous spaces will occur. You are inside and outside at the same moment. *Nina Hoogstraten*

Bart Kuiperi : Ninigi bike shop

Machiya houses are traditional merchant houses used throughout time as a home/shop to sell crafted goods. This tradition of mixed-use was the basic idea behind the concept of my design. The aim was to maintain this mixed-use and find a function that would be serving the direct neighbourhood of the Sanjo-dori, a street with a mix of shops and houses. With the function of a bike shop downstairs and an apartment upstairs the Ninigi machiya is serving the direct neighbourhood and it keeps the basic principle of mixed-use. From the urban analysis it became clear that Kyoto is a bike friendly city and cycling is the main way of transportation for a lot of people in the city, so there is always a demand for bike shops in the city. As an intervention I removed the part of the machiya that was added on in a later stage and added a volume that is roughly the same size to the back of the house making the upstairs apartment bigger and elongating the bike shop. The traditional division of the ground floor in three rooms along the narrow kitchen is maintained even in the open plan floor by splitting it up in different workstations and in the lowering of the floor between the shop and workshop area. The shop is light and has windows all around opening up to the street. The house is aimed inward, as is the tradition with Japanese houses. The apartment on the first floor is located farther from the street and is centred around the back garden. The shop and the apartment have separate entrances making it possible to have a different shop owner and resident. The shops entrance is on the buzzing shopping street. The entrance of the apartment is around the corner in the quiet ally. The façade is inspired by the traditional Japanese woodcraft and the abundant use of vertical lattices that is seen all over the city of Kyoto. In the west façade I tried to incorporate some of the traditional elements of the machiya, like the bench and the canopy, in a modern way working with the lattices. If the shop is closed the façade and the shop window is closed and covered with vertical lattices. If the shop is open, the shop window opens by pulling the lattices down and they fold in to a bench. Other lattices can be pulled up to create the canopy.

Eline Stubert: The Ninigi Machiya as Student Accommodation

In every student city the accommodation of students tends to be a problem. There are a lot of housing possibilities required and the amount of students is increasing. The need of reasonable prized accommodations in combination with quality living is always an issue. A Machiya in Kyoto is known for its beauty, its famous typology and, unfortunately, its lack of comfort in the requirements of today’s society. The Ninigi Machiya is, compared with other Kyo Machiyas,

Kyoto Bakery and coffee Machiya, exterior.

Kyoto Bakery and coffee Machiya, interior.

quite broad in its floorplan and has an entrance in the middle, in stead of the traditional entrance at the side of the front facade. Ninigi can provide a home to 10 students. This amount of students requires a lot of moving space. Which is the main concept of the improvement of the Ninigi loorplan. A new Toriniwa (hallway which connects every space) is introduced in the middle of the floorplan, to connect the middle-entrance of Ninigi with the rest of the floorplan. In this way, every room in the Machiya is accessible by this new Toriniwa. The real entrance is moved to the side, the original entrance becomes a view frame into the house, which shows the different zones the Toriniwa is passing inside the Machiya.

Maartje Holtslag : Machiya Cafe-Work-Garden

The Machiya is a traditional Japanese house from the 19 century. The Ninigi Machiya stands in the traditional city of Japan Kyoto. This existing Machiya is a property of Technical University of Kyoto.It is used as a presentation and exhibition space. Nowadays the Japanese are very concerned with preserving of their heritage. The Machiya is Japan a big issue. The original program of the Machiya is a shop in combination with a living space. In this design the Machiya is transformed into a cafe in combination with flex-working spaces. The qualities of the nigini Machiya are different views to the garden, the zoning of the plans, and the difference in floor height. The most recognizable element of the Machiya in general is the composition of the facade. If you enter the Machiya, you will first get in the cafe. Through the cafe you will come into the garden. Behind the garden you find the flex-places for work. This design has different places to work.. You can work in an traditional Machiya room with tatami mats but there is also the possibility to work in an modern way. All the workplaces have a view to the gardens.

Nina van Hoogstraten: The Kyoto Bike Cafe

Just like in the Netherlands, commuting by bike is a popular way of transportation in Kyoto. This cultural similarity was the incentive to transform the Ninigi Machiya into a bike cafe. The Kyoto Bike Cafe is a combination of a shop, a workshop and a cafe. In the shop, people can purchase the cycling experience in the form of bikes, accessories, clothing, magazines, gadgets, etc. The open workshop makes it possible to assemble new and unique bikes, customising it to peoples own personal preferences. People can also go there for repair, maintenance and service and enjoy the beautiful garden while you wait. The zoning plan of the Kyoto Bike Cafe is based on the prototypical Machiya plan, where the shop is separated from the cafe by a shared zone with a courtyard (the tsubo-niwa). The tatami space, originally the most important space of the Machiya is preserved and used as a cafe where people can enjoy the view into the backyard (the okuniwa). To enter the cafe you have to pass a sequence of spaces. As you move from the street to the back of the house, you transition from a public into a more private sphere. Entering the shop from the street, you will experience an high, open space, as the first floor from the mise is removed. The tsubo-niwa works as a threshold and invitation at the same time. In the back of the Machiya, the first floor of the omoya is partially removed, in order to create a mezzanine. The staircase to the mezzanine is a modern interpretation of the traditional Japanese step chest. The tatami cafe, covered by the mezzanine, has a more intimate character than the other spaces. The workshop is not separated from the shop or the cafe by any means as it is freely visible and accessible. This enhances the bicycle experience the Kyoto Bike Cafe aims to achieve. The street facade of the Kyoto Bike Cafe consists of wooden lattices. On one side of the entrance there is place for bicycle parking. On the other side of the entrance there is a big shopping window, protruding from the facade. The shop window can be opened so that the shop is in direct contact with the street. Because the street facade has a zone where the visitor is protected by a roof, but not inside the shop yet, there is certain transition depth in the street facade. The entrance door is hidden by a traditional noren, a curtain which shows the name of the shop. The noren covers the entrance and functions like a veil does to a human face.

Wessel de Jonge: Maxi Machiya

Nowadays the traditional Machiya is one by one getting replaced by big apartment blocks and other, more lucrative, buildings. This is a threat to Kyoto’s heritage. By making a new volume above the traditional machiya, the cultural significance of this building is multiplied to the new volume, giving it a unique value. This way, the best of both worlds is achieved: maximum use

Example of a re-designed Machiya: Iromonya shop, exterior.

Example of a re-designed Machiya: Iromonya shop, interior.

of space and maximum preservation of heritage. The new studio apartments are modern in appearance, yet echo the traditional dwelling in many ways, from the seamless inside/outside relation to the materials, ceiling height and efficient and flexible use of floorspace. Traditionally, the kitchen was the tallest space in the house, now, this kitchen is stretched vertically to accommodate the elevator. On the ground floor, a shop opens its door, making the interior of the traditional dwelling an experience for all its customers. In here, all identifying aspects of the traditional dwelling are preserved as they were. This new typology brings together traditional and economic needs, turning preservation into a lucrative activity, instead of the charity it currently is in Kyoto.

Karlijn Scholtens: Ninigi Kindergarten

A great quality of the original Machiya house is how it incorporates several functions of living in a beautiful, harmonious structure. To make use of this strength, the new function should have need of the basic living functions as well. To eat, sleep, cook, play, enjoy outdoor space. Combined with a motivation to educate the value of the traditional Machiya to the younger generation, a kindergarten made a lot of sense to me. I felt the scale of the machiya would fit the experience of small children. At such a young age, the environment gives a strong, lasting impression and is vital to a child's development. The tatami rooms could stay as they are, but the kitchen needs an upgrade to become safe and useful. A new stairs is needed as well in terms of safety. Furthermore, the outdoor space is vtial - I removed the newer building part at the fron to make space for a small courtyard. Here kide can arrive with their parents and spend part of their playtime. Their playtime can also be spent in the enclosed garden at the back of the house. I redesigned the garden to make space for a childrens area, by adding a deck that still encloses a version of the orignial garden. The outside shoji are replaced with more weatherproof sliding doors. By opening all sliding doors a continuous play area can be created. This way the new kindergarten can make use of the Machiya'r orignial flexible floor plan.

Arjan Schoneveld: Do it Yourself Bakery

The current machiya is not often used anymore as a building for dwelling and selling. They are turned entirely into shops or cafés. In the Ninigi machiya, a DIY (do it yourself) bakery will be situated, with a corresponding shop. Most importantly, the residential function will be implemented in the repurposing of the Ninigi machiya. The different zones of functions which is typical for the machiya in general, but also the line of sight and routing of the Ninigi machiya in particular have been reinterpreted and reused for the new DIY Bakery. Constructions have been altered and changed in the Ninigi machiya. The most notable change in the original construction is the removal of the height of the Tori-niwa by replacing the curved beams by floor beams. This adds the possibility of a new floor level. New additives are either entirely new (concrete), such as the facility area; or based on the existing structure, such as the added house.

Jelmer van Zalingen: Cultural Information Center

The Design focuses on one of the key elements of the Machiya typology the zoning, this is what I will call the sequence of spaces and exists due to the double function of dwelling en retail of the traditional machiya. This sequence of spaces is visible in The Program, The Zoning, Separation Public Private, Light and dark. The rich historical city of Kyoto needs a representative information-center worthy of the city's cultural heritage. On the other hand Kyoto is a highly modernized city with a modern way of living. Therefore it is equal important that the information center expresses this modern Kyoto. The task is to combine and respect both of those elements into a new design for the Ninigi machiya. Simply said Kyoto is a modern city with a high amount of cultural heritage. A information center that wants to represent the city of Kyoto needs to respect and show the cultural heritage and reflect the modern at the same time.

Jorien Cousijn: Machiya Juku Ninigi

The Japanese Juku is a type of evening school. A key part of the intervention is the creation of a reception hall where the unoriginal building extension is located, but leaving most of the tatami rooms intact. The street facade is redesigned with a beautiful pattern which signifies the modernity of the intervention.

Anna Golubovska: KIT Phd Housing

This machiya is transformed into living-working dwelling for PhD researchers of Kyoto Institute. Inhabitants get the change to experience communal living in refurbished traditional merchant house of Kyoto. The new project is a fusion between old & new. It is visible in the new spatial configuration and materialization. The traditional craftwork that took place in the machiya's shop part is replaced with work of the mind.

Namiko Araki & Risa Matsunaga: Mental Health Clinic

Japanese life style has been changing as society changing. Today, few peoples live in traditional Japanese style houses such as NINIGI. So the spaces in traditional MACHIYA house, NINIGI are special. We pick up next 5 things as the NINIGI' s strong point. -Okunoma; you can see the garden and enjoy seasons/ there is - Tokonoma/ There are Tatami mats -Engawa; faces to garden/ it can be both of inside and outside -Tooriniwa; run through the side of the building/ high celling -Fusuma; connect the rooms each -Garden; feel nature and enjoy the seasonal changing of the reefs. When we are these space, we feel Japanese culture and we can be relax. NINIGI is very important for Japanese who do not spend such as traditional space in our time. So we renovate NINIGI with leaving such as important original points.

Nozomi Shimizu & Yuko Susaki: Ninigi Convenience Store

These days vacant houses are increasing rapidly and especially historical buildings like a Machiya cannot be protected and those are demolished in Japan. Instead of old buildings, many new buildings like a convenience store are built so it is becoming that regional townscape are lost. Now demolishing old buildings on the other hand, people build many new one. So we tried to convert this machiya "Ninigi" into convenience store to solve this contradiction. Important points: Making flat floor to put more goods and be easy to access them but remain the approach (hashiri-niwa) by changing shop space to the garden (ground level) and put the staircase in tori-niwa. Changing the roof of the space between Mise and Omoya more higher and made of glass. Thus, get more light to the store inner. However the customer can recognize original 2 buildings by seeing the different height of roof.

Shun Takada & Hiroki Kobayashi: Tea shop OKU

Today, young Japanese people, especially young lady, often go to café and enjoy drink and MACCYA sweets. However it is rarely hold traditional Japanese tea ceremony. Traditional KYOMACHIYA has "gradation" in public and private areas. We will mix this two sides.-MISE; shop space. -GENKAN; entrance space. -DAIDOKO; kitchin and dining space. -ZASHIKI; living space and space of welcome to guest. Front side is public area, back side pravate area.

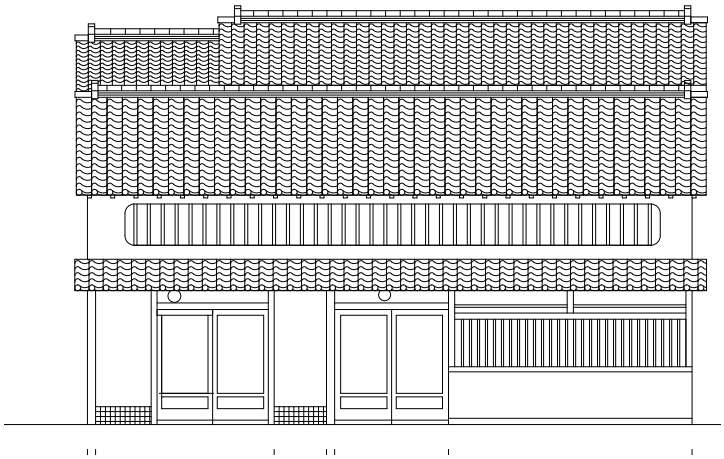
Takeaki Koike & Mitsuhiro Ohgida: Living Room for Neighborhood

I'd like to plan to take advantades of a garden and a corridor. Problem: There are a few tourist and foreigner in this district, because this district is far from sightseeing. And this district is the residential. Solution: the target is neighbor. I'd like to design the building that neighbor can come feel free.

Thomas Sakuma & Yoshiki Hayashi: Ninigi Juku

Problem : Children in Japan does not have the opportunity to see or feel the traditonal architecture. Which weakens the tradition and culture. Solution : By renovating a MACHIYA into a facility for children, they will have a chance to feel the traditonal architecture. Traditionaly JUKU has been a place for children to study. At NINIGI they take lectures and workshops. Improving their knowledge and comunicating with others. A JUKU is not only for children. It could be a place for anybody to learn! The traditional MACHIYA has a complicated movement passes based on the living style of the people. To adjust the MACHIYA to modern use, we attempted to simplify the movement by placing a wood flooring pass in the middle of the floor plan. Which makes a smooth access to every room and increases communication between the people who' re wearing shoes and people who aren' t wearing shoes.

ELEVATIONS



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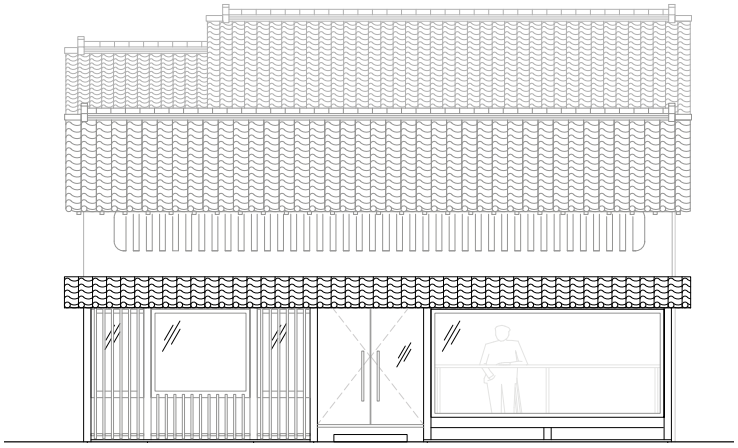
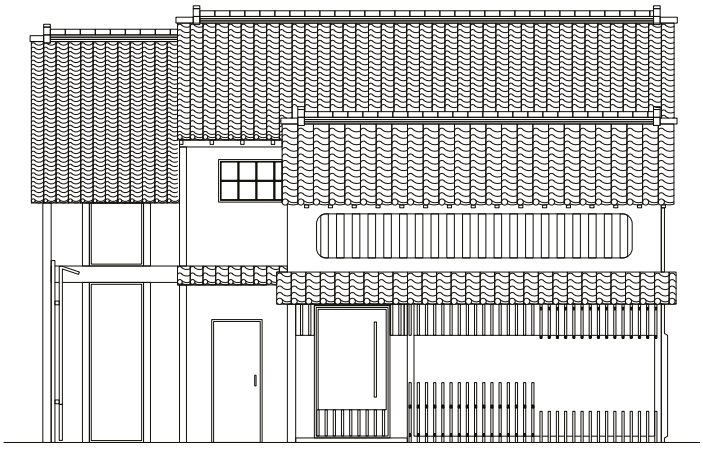


Arjan Schoneveld



Bart Kuiperi

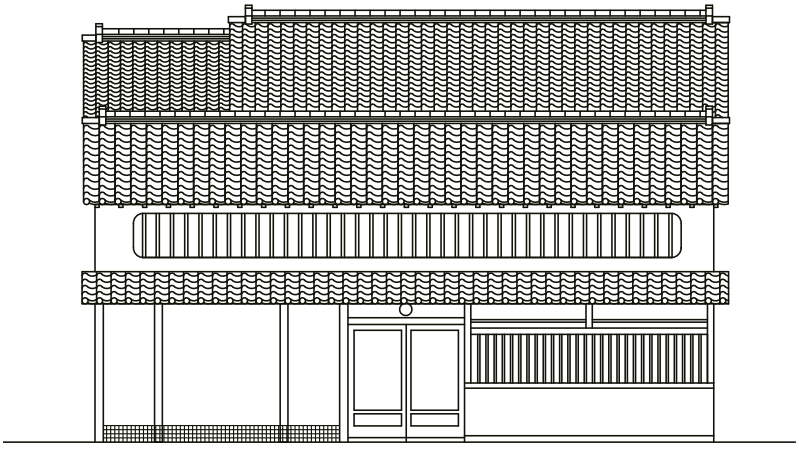
Eline Stubert

Jelmer van Zalingen

Jorien Cousijn

Karlijn Scholtens

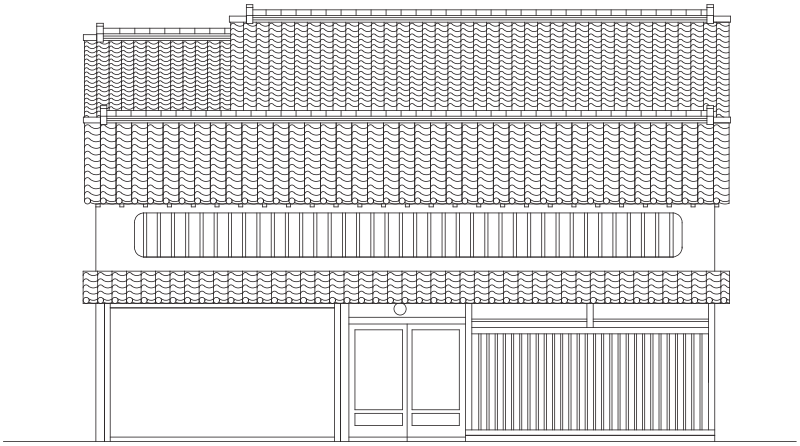
Maartje Holtslag



Namiko Araki & Risa Matsunaga

Wessel de Jonge

Nozomi Shimizu & Yuko Susaki



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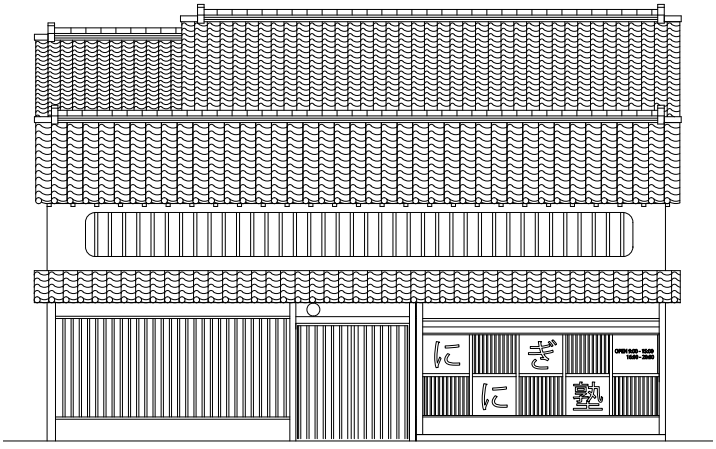
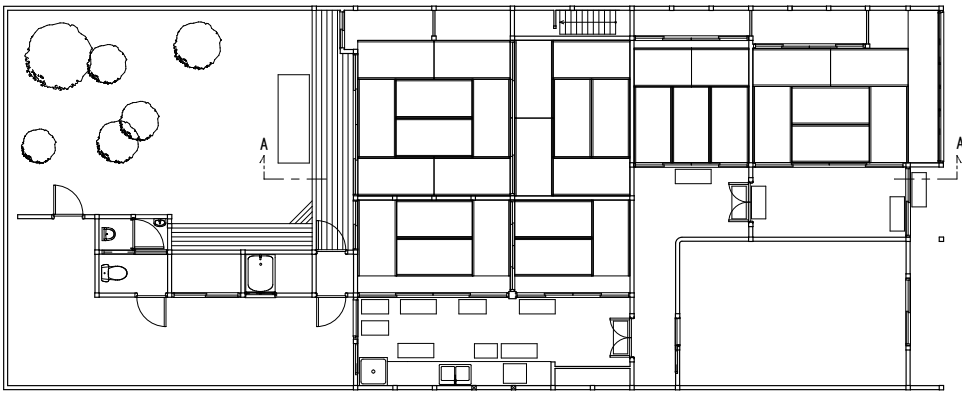


Thomas Sakuma & Yoshiki Hayashi

FLOOR PLANS



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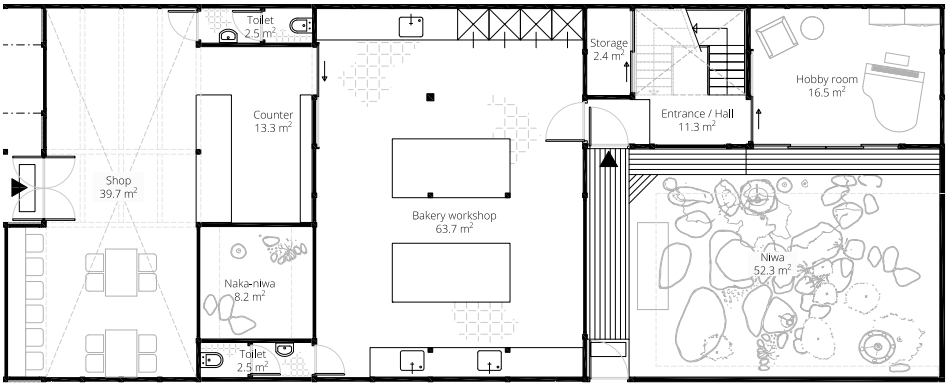
Anna Golubovska



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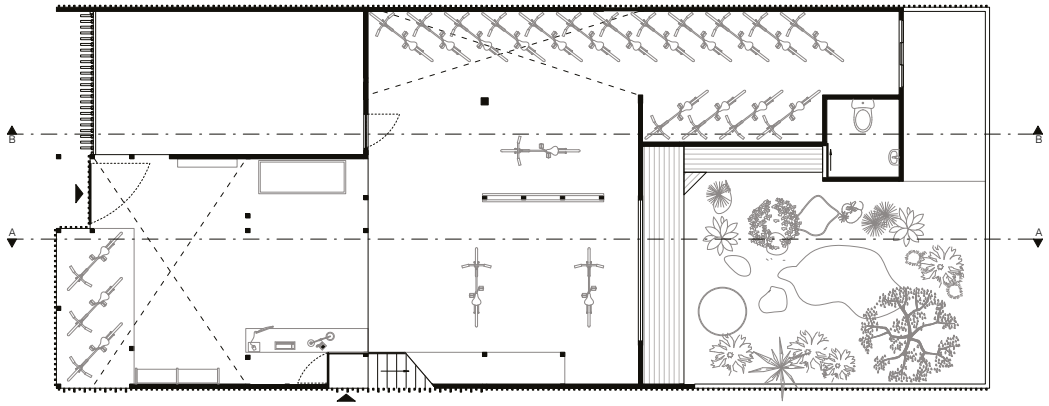

Bart Kuiperi

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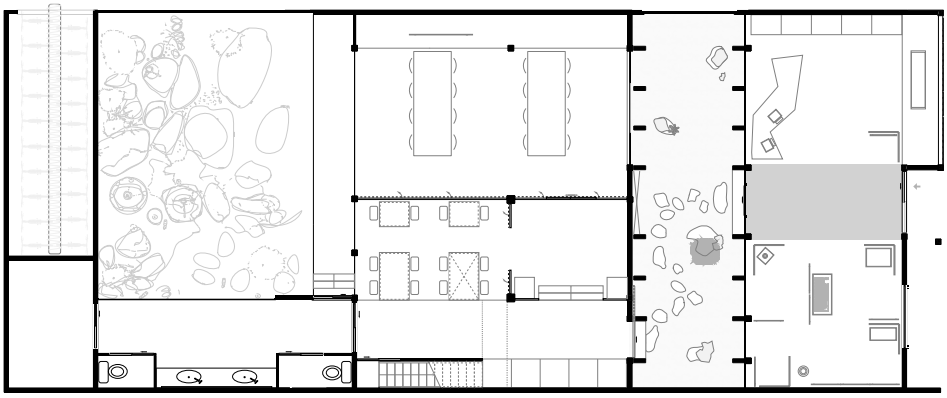
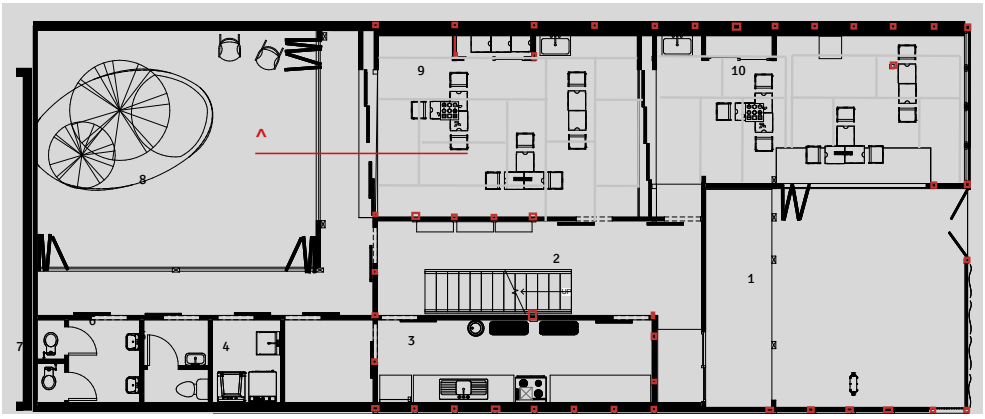


Jelmer van Zalingen

Jorien Cousijn



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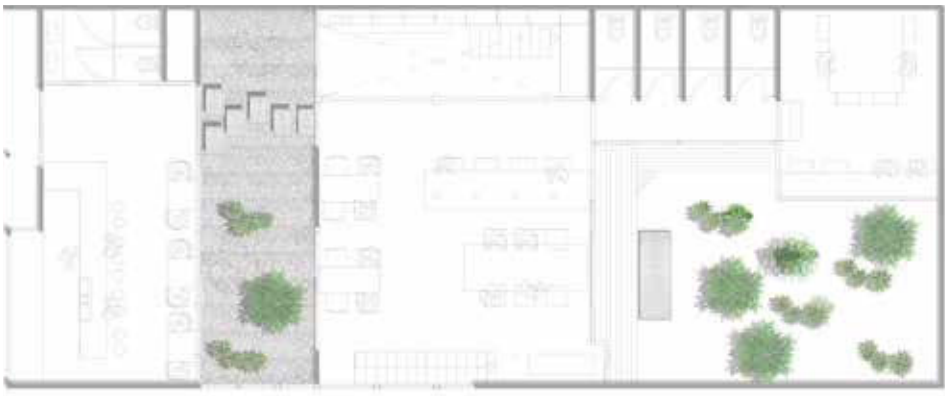

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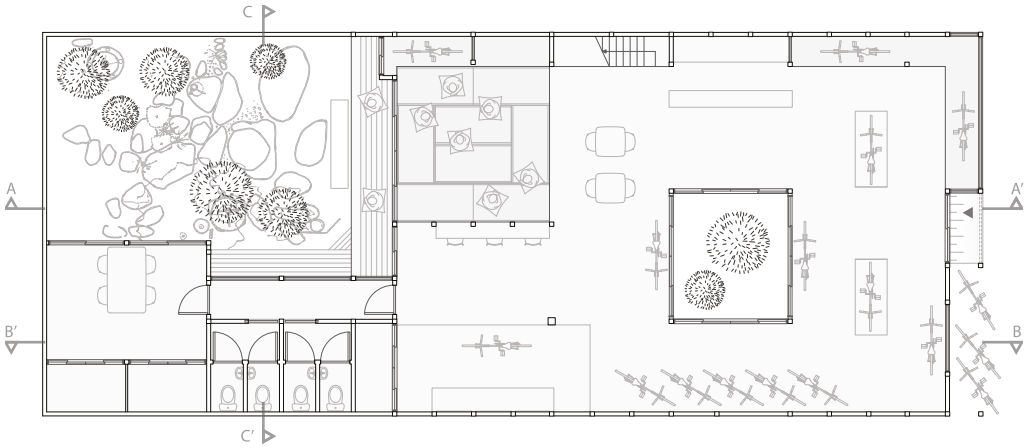
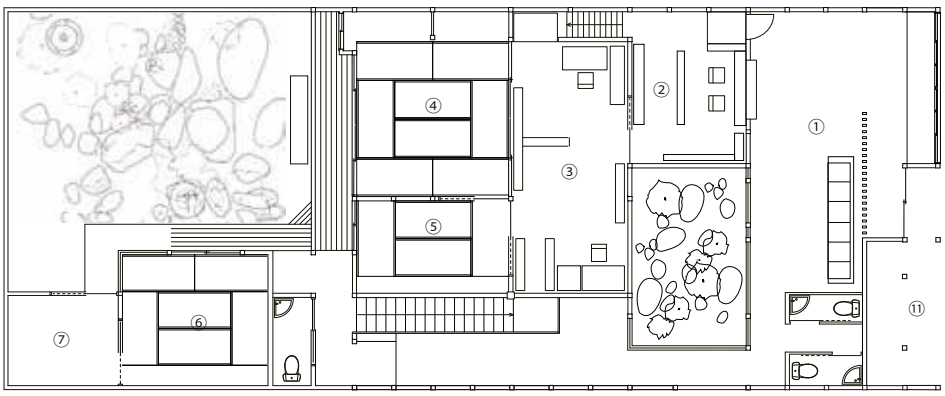
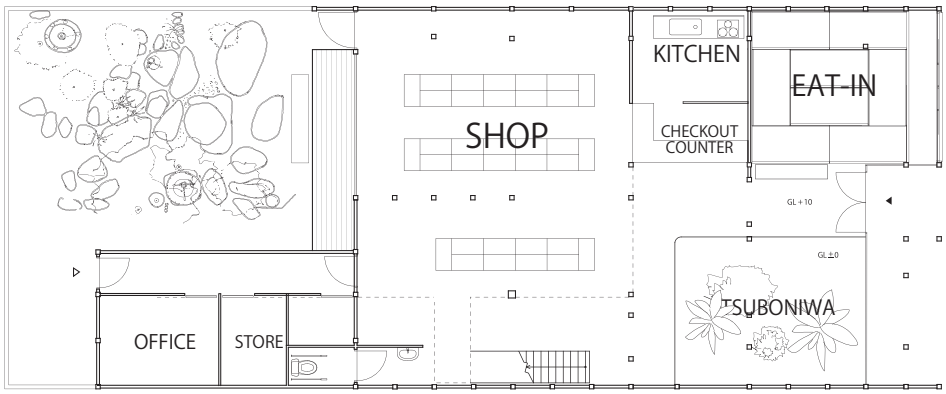


Nina van Hoogstraten

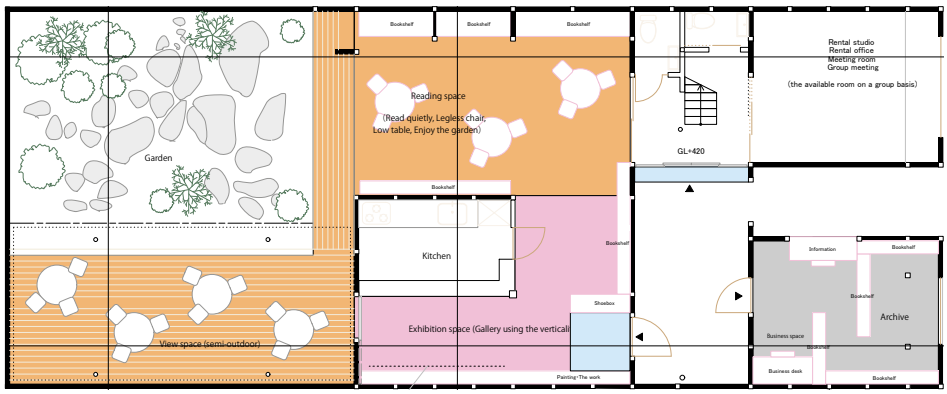
Wessel de Jonge



Namiko Araki & Risa Matsunaga



Nozomi Shimizu & Yuko Susaki



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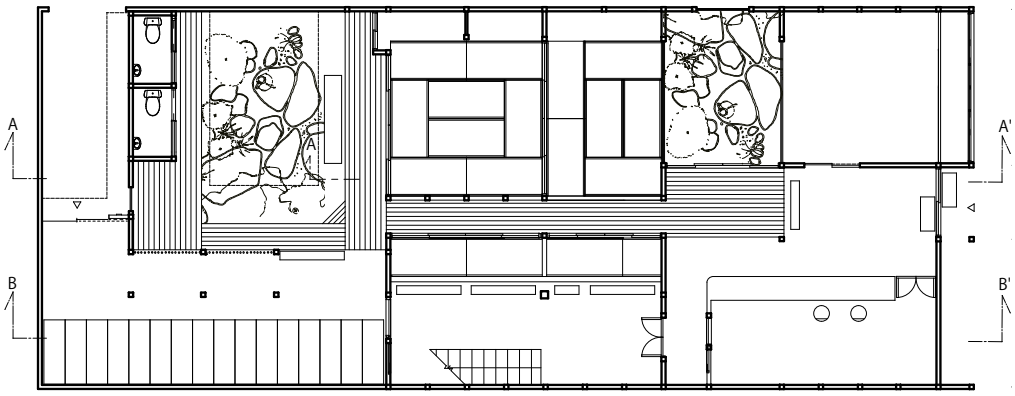
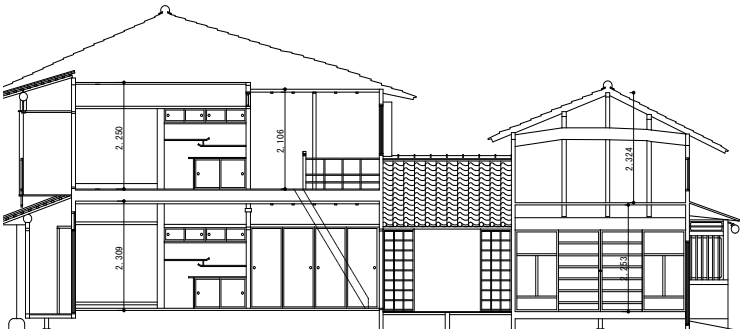


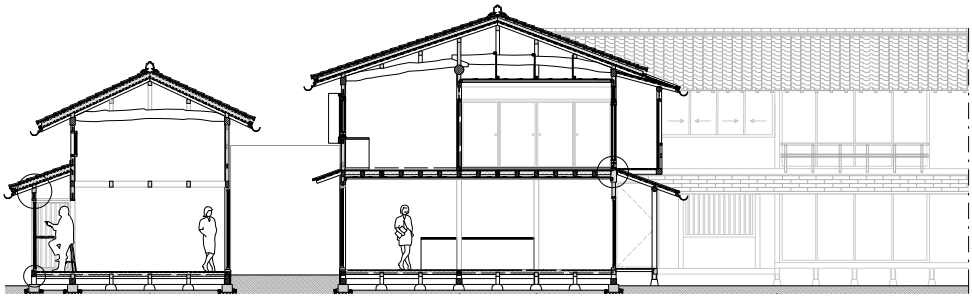
Thomas Sakuma & Yoshiki Hayashi

SECTIONS



Existing

Anna Golubovska



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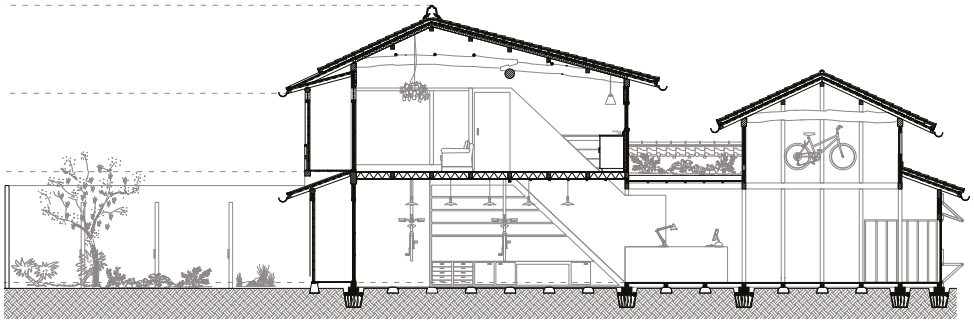
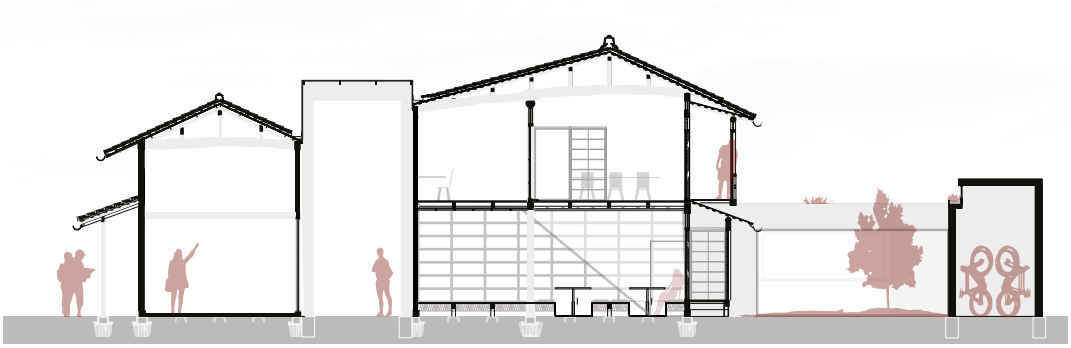


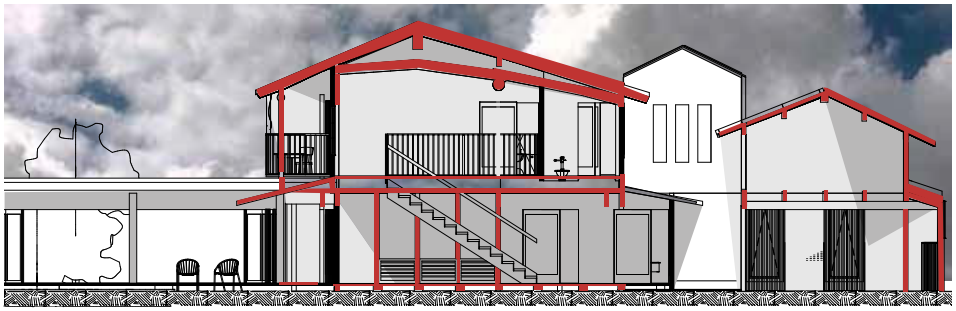
Bart Kuiperi

Eline Stubert



Jelmer van Zalingen

Jorien Cousijn



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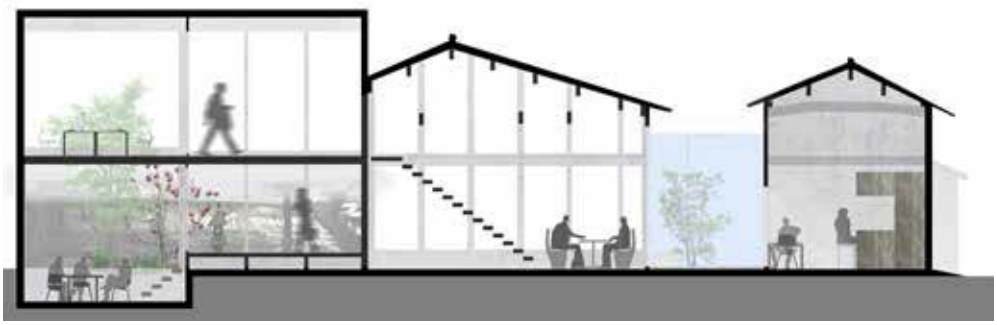

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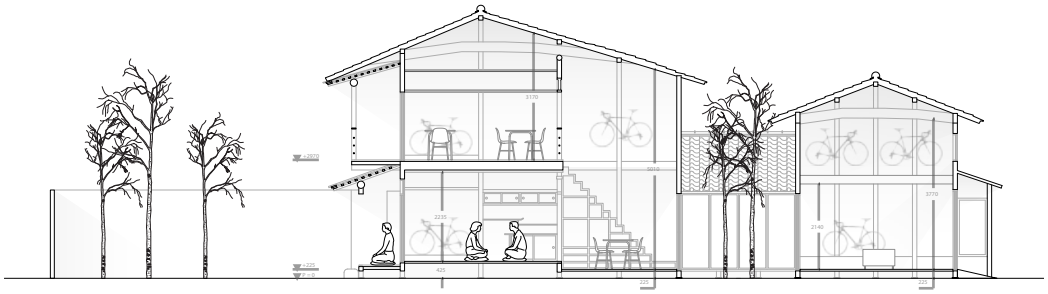

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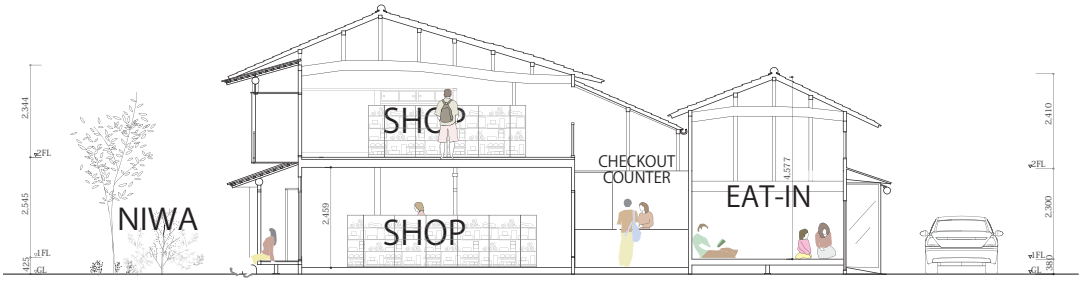

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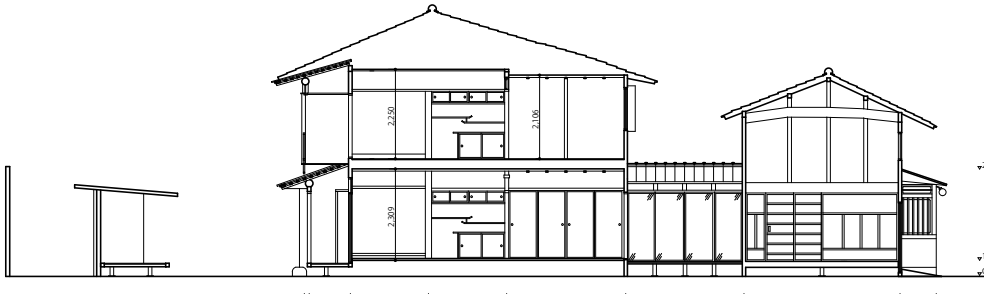


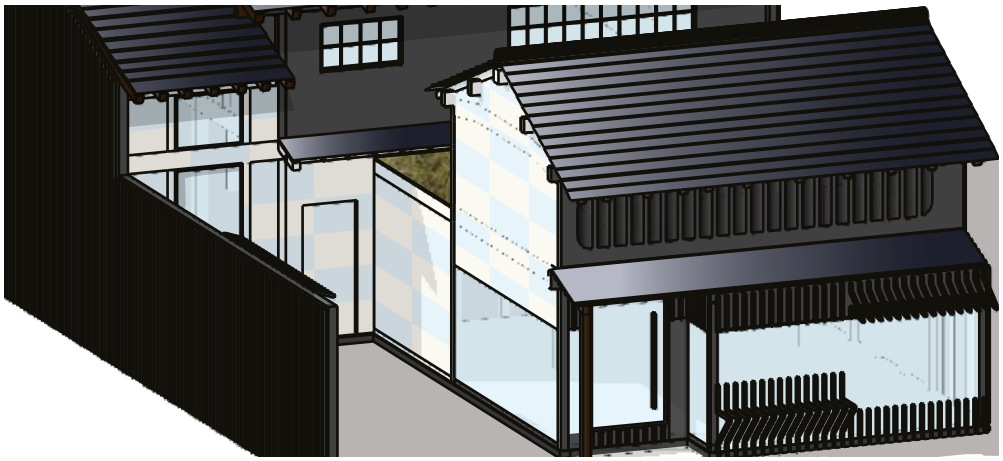
Thomas Sakuma & Yoshiki Hayashi

Wessel de Jonge

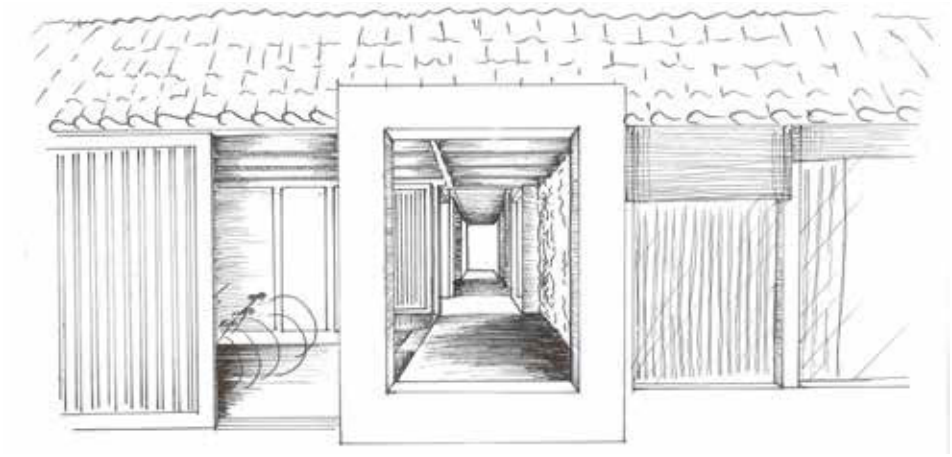
IMPRESSIONS

Anna Golubovska

Arjan Schoneveld



Bart Kuiperi



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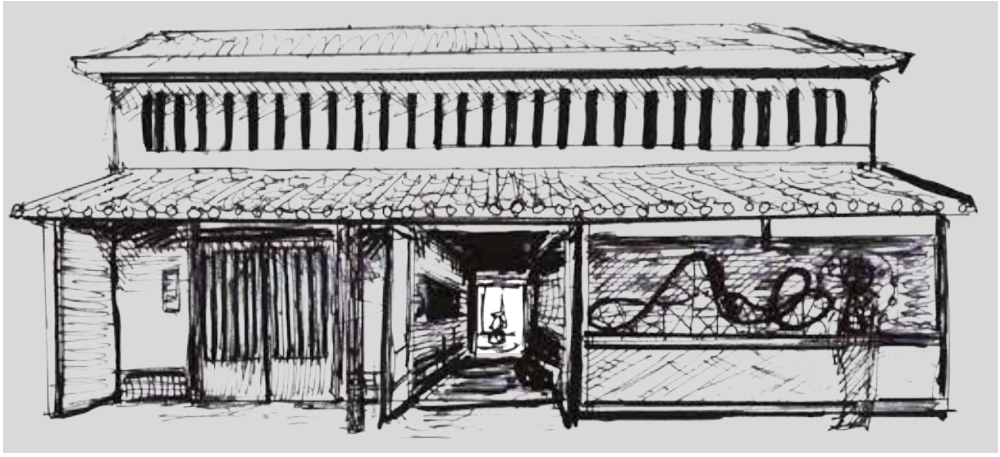

Wessel de Jong

Namiko Araki & Risa Matsunaga

Nozomi Shimizu & Yuko Susaki

Shun Takada & Hiroki Kobayashi

Thomas Sakuma & Yoshiki Hayashi

REFLECTIONS

Comments to KIT - TU Delft Workshop
Kazuto Kasahara

I was very glad to join such a nice and full workshop at Kyoto and Delft in 2015-16. I was surprised that all Dutch people has prominent ability about reading context, creating new design, technical method, drawing, presentation etc. , and that they studied and understood very well about Kyoto in advance.

As a result of this workshop, in the final presentation, there were some different types of conversion and renovation of Machiya houses. I was interesting that I can see the difference between Dutch and Japanese students. The concept, program and design of Dutch students are very clear and strong. The functional program of Japanese students are realistic and those design are delicate.

KIT founded new course in 2015 named Urban Revitalization, Conservation and Restoration Course. Heritage & Architecture course of TU Delft is good model of our course. There are a lot of things to learn from TU Delft. I appreciate Alexander, Sara, Hielkje, all Dutch teachers and students involved with this workshop. I would like to hold the workshop of KIT and TU Delft again someday.

Comments to KIT - TU Delft Workshop
Kazue Akamatsu

I'm convinced that this workshop gave a new viewpoint and different way of thinking to all students. I imagine all students can recognize that the urban context and the way of living in Delft and in Kyoto are extremely different. But we human being is the same and live spending the time laughing or crying in their life. And all we need architecture to live in the urban context. Even if the urban context is different, through the architecture design we architects can communicate and talk a lot, discussing how we will try to make our environment much nicer and future much richer. I hope that all students could experience this kind of discussing each other, Dutch and Japanese. Maybe all could know that this experience was very special.

About the progress and achievement of the program, each student works a lot with passion.
I would like to appreciate with their efforts. I will never forget an impact when I received the booklet that the Delft students made. It was amazing and I'm sure that I will keep it as a treasure in the future.
The skills and the way of presentation by Delft students were sophisticated and powerful. I'm sure that KIT students could learn a lot of thing from this exchange experience. Also I learned a lot of things from this experience because the professors from TU Delft were super.

The way of teaching, designing and directing were very impressive. I asked several times to Japanese students in the program, "Prof. Alexander will ask you "What is a strong point and a weak point of this architecture?". For Japanese students this term became a key to think all the matters.

I really appreciated with the professors of TU Delft to joining this program. Thank you very much, Alexander de Ridder, Sara Stroux and Hielkje Ziljstra. Thank you for all studens, Anna, Arjan, Bart, Eline, Jelmer, Jorien, Karlijn, Maartje, Nina, Wessel.

Student projects as test ground for new functions

Sara Stroux

As teachers we agreed that a crucial part of the design exercise should be the search for a suitable function. In contrast to the architect's daily routine when an existing building has to be adapted to the requirements of a certain function we decided to use the Kyoto Design Lab as a test ground. Acting on the assumption that the original use of a machiya – a home and workplace for a merchant/craftsmen, his entire family and employees – cannot be continued in the future: what are possible future functions in terms of social and economic needs? And which impact have these new functions on the material and immaterial heritage of a machiya?

Since the 'machiya revival' which started in the last decades of the twentieth century the majority of historic machiya architecture was transformed for commercial purposes, mainly restaurants, cafés and shops selling upmarket lifestyle items. Many of them exploiting the historic elements and special atmosphere of the traditional machiya to attract customers, others changed the existing architecture extensively and combined new forms with traditional features. Yet, after studying 'best and worst practices' and analyzing today's context and the past of the NINIGI machiya both students from the TU Delft and the KIT turned down the widespread functions of restaurants or high-end shops. Instead they explored a range of different functions which can be categorized in three topics:

1 *Reinterpreting the original use of a machiya* [Maxi Machiya / NINIGI Bike shop and house / KIT Student Accommodation / Live-work dwelling for KIT PhD researchers / DIY Bakery] The students took the original use of the machiya as starting point for their new program: a building cluster where people used to trade, work and above all to dwell. The challenge was to adapt the building to contemporary ideas of privacy and comfort, find new user groups who are willing to share living space and to respond to new business models. Thus, by striving to continue the original function the floor plans and installations were altered significantly.

2 *Continuing Japanese traditions* [NINIGI JUKU (two projects) / Tea Shop OKU] This second group of functions refers to the fostering of Japanese traditions such as the tea ceremony or Kimono manufacturing which is especially popular in Kyoto these days. Both the 'JUKU' (= additional school about Japanese traditions) and the 'Tea shop annex tea ceremony' use the traditional architecture of the machiya to significantly enrich their program. Naturally, the existing building ensemble is altered least in comparison to all other functions.

3 *New functions responding to shifts in contemporary (global) lifestyles* [Kyoto Bike Café / Kyoto Cultural Information Centre / NINIGI Convenience Store / NINIGI Mental Care Clinic / NINIGI Daycare / Flex working Space / Living Room for the Neighborhood] These functions did not exist when the NINIGI machiya was built in the first half of the twentieth century. They respond to new needs of today's (Japanese) society and - like a daycare center or a flex working space - serve a neighborhood. Therefore they need to be embedded in neighborhoods with a majority of historic buildings, too. In their projects the students studied to which extent key heritage elements of the NINIGI machiya could be kept and how they could become a new role and meaning.

When looking at the student projects we can resume that, indeed, the NINIGI machiya can house a broad range of functions whilst at the same time characteristic elements of the traditional architecture can be kept or reinterpreted. Interesting than whether all projects could actually be realized is the question to which extent the students suggest alterations. From a cross-cultural point of view it is remarkable that the students of the KIT are reluctant to alter the front façade of the NINIGI machiya as it is the only part of the machiya which significantly contributes to the streetscape. In contrast the students from the TU Delft all propose to open up the rather closed front façade in favor for more interaction with the public. Yet, even more interesting are the commonalities. In all the projects a handful of traditional architectural elements recur in the redesign: the garden (niwa) and the adjacent veranda (engawa) due to its beauty, the wooden load-bearing structure due to its flexibility and extraordinary craftsmanship and the overall lay-out of the front and back house with its typical roofscape due to its high recognition value. According to both the KIT and the TU Delft students projects these architectural elements are the most resilient when it comes to change. No matter which function was chosen for the NINIGI machiya.

Kyoto Design Lab. - The Tangible and the Intangible of the Machiya House, A.C. de Ridder (ed.), Delft 2016.

This booklet was published on the occasion of the Kyoto Design Lab. exhibition which took place from 16-11-2016 until 2-12-2016 at the Faculty of Architecture and the Built Environment of TU Delft.

This booklet contains student work by Namiko Araki, Jorien Cousijn, Anna Golubovska, Yoshiki Hayashi, Maartje Holtslag, Nina van Hoogstraten, Wessel de Jong, Hiroki Kobayashi, Takeaki Koike, Bart Kuipéri, Risa Matsunaga, Mitsuhiro Ohgida, Thomas Sakuma, Karlijn Scholtens, Arjan Schooneveld, Nozomi Shimizu, Yuko Susaki, Shun Takada, Eline Stubert, Jelmer van Zalingen.

Staffmembers and guestspeakers involved with this education project: Kazue Akamatsu, Carola Hein, Kazuto Kasahara, Moriko Kira, Alexander de Ridder, Jos Roodbol, Sara Stroux, Paddy Tomesen, Hielkje Zijlstra.

Illustrations on Tori-niwa by Lidwine Spoormans, aquarel Tsumago by Gunnar Daan, other photographs by Hielkje Zijlstra.

Delft University of Technology - Faculty of Architecture and the Built Environment
Department of Architectural Engineering + Technology, Section Heritage & Architecture

Kyoto Institute of Technology - Kyoto Design Lab.

KYOTO Design Lab

TU Delft
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