THE LIBERATION OF THE KITCHEN

Alejandra Calderón

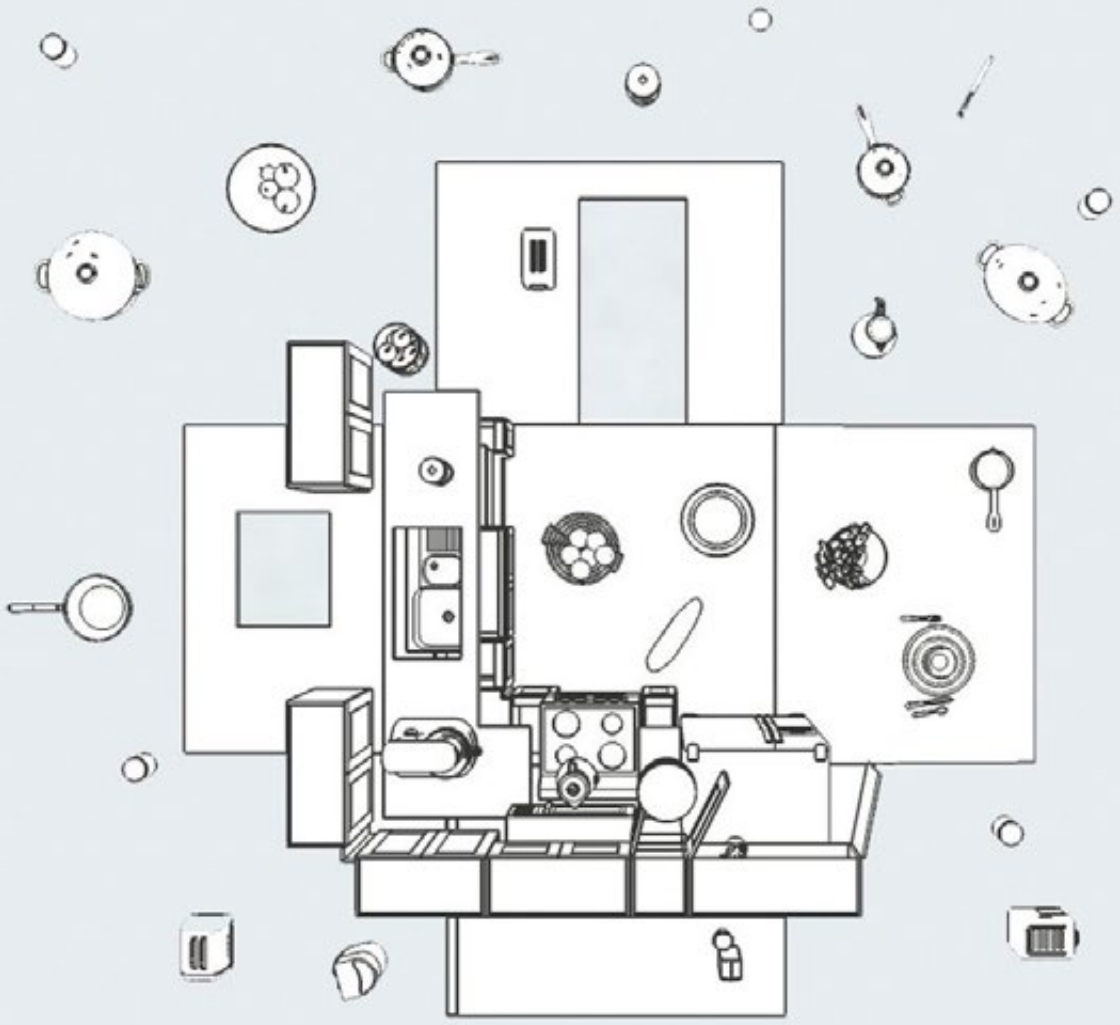
Graduation Thesis Project

Master of Interior Architecture
and Retail Design 2015-2017

Piet Zwart Institute
Willem de Kooning Academy

Rotterdam University

Rotterdam, The Netherlands



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Written Thesis Tutors:
Füsun Türetken & Max Bruinsma

Design Tutor:
Marta Roy Torrecilla

Piet Zwart Institute
Willem de Kooning Academy -
Rotterdam University

Rotterdam, The Netherlands

To my parents

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“Even in a time of diminished confidence in architectures ability to face up to society’s challenges, we still sit at tables, sleep in beds, rest on sofas, cook in kitchens, wash in bathrooms, just as we have done for centuries. Aren’t we still dependent on the same essential functions of architecture that every epoch has grappled with? Has anything really changed?”

Joseph Grima

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01 INTRODUCTION

Due to advances in technology, our built environment is rapidly changing, however the way our houses are designed haven´t changed much in the past decades. Most domestic spaces are still divided in a similar layout in order to provide rooms for specific activities: sleeping, cooking, taking a bath, etc. Within this layout, the spaces have encounter different transformations adaptive to our changing lifestyles: the bed is used now as a working space, the dining table has become where things get repaired, where thesis are done and so on.

As I explored further the topic, I got more interested in the kitchen, since its a space that not only represents a specific activity in the house, but also for their socio-cultural meaning given by society within different contexts. The kitchen has gone through a process of changes to accommodate to social transformations. However, it has not changed much of its spatial premises since the 1950s. With the triumph of the built-in cabinets and the predominant infrastructure that defines it, the kitchen offers very little possibilities to become a flexible space in the house.

This project aims to challenge the traditional layout of the house and to question on how we inhabit domestic spaces, when patterns of life are changing so fast. By questioning the traditional arrangement of the fitted kitchen and proposing a new model, new forms of experiencing the domestic space can emerge that adapt to the lifestyle of its users.

The following pages will take you on a journey of history, socio-political factors and personal stories of this emblematic space and an opportunity to imagine new possibilities of inhabitation.

02 THE KITCHEN IN THE DOMESTIC SPACE: FROM THE BACK ROOM TO THE “HEART” OF THE HOUSE

Cooking and food preparation have always occupied a space in the dwelling history. The kitchen has evolved during the last century from a place of simple functionality to the so called “center of the home”. It is important to acknowledge how this space has always reacted to social transformations to be able to understand how the kitchen should adapt and respond to the social transformations of today. This study will focus on the lifestyle of the western world from the 19 century to the present, since it was back then when pre-modern living spaces were replaced with rooms with specific functions in the home. (Rolshoven,2005)

In the 19th century the upper-class kitchen was located in the remotest part of the house and was dedicated only to food preparation; meals were then transported to the dining room where the family congregated to eat as a shared experience. The food preparation process was hidden from diners and so was the cleaning; dirty plates were quickly brought back to the kitchen, a place considered dirty and with bad odors. The kitchen was either a detached room or it was located in the basement.

It was considered a secondary component of the house. These type of kitchens were furnished, but not fitted. They contained free-standing and movable cabinets in which work surfaces and storage elements were commonly sepa rate units. There was little intention in mak ing the space attractive or comfortable since it was mostly occupied by servants. An enormous breakthrough in the development of the kitchen was when plumbing and natural gas were introduced in the late 19 century giving shape to new furniture and appliances such as the sink and the gas stove.

At the same period of time, the working class apartments generally included two rooms. The kitchen was located in the entry area and was used as a multipurpose space. People would eat, work, wash and even sleep on this space due to the heat that the stove provided. This lifestyle brought a lot of diseases, since usually hygiene and cleaning was not a priority. Cooking was at the center of everyday domestic life, but it had to fit into the schedules of the factory. (Corrodi, 2006) Women at that time started facing the double burden of working for an income and the work provided by the domestic space.

At the end of the century, the upper middle class was also affected by the economic situation, and it became necessary to manage the house work without a maid. It became a necessity to economize housework and it became the base for the attempts on rationalization that happened in the later century and therefore contributed to transforming the layout of the kitchen.

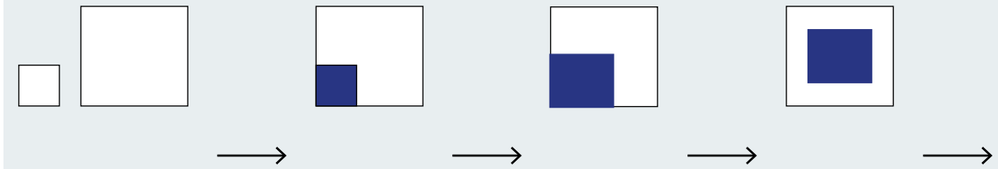


Figure 1: Evolution of the kitchen within the domestic space. If it began as the back room of the house, then moved to the center, what is the next step?

SOCIO-POLITICAL CONTEXT

01

Large US agricultural exports. Cast iron stoves became available in the 1850's. Early starts of the revolution of industrial food processing. Factory line production methods start progressing. The Gilded Age was an era of rapid economic growth in USA. First apartment buildings. Second industrial revolution.

1860 - 1910

The kitchen was generally the least interesting place in a house. Kitchen began to be coinceived not as a servant run domain confined to a basement or annex but as a space central to daily life and social encounters. It became a necessity to economize housework. Working families in the city lived in crowded studio-aparments.

Figure 2: Socio-political and cultural aspects around the world from 1860 to 1910.

ICONIC MOMENTS

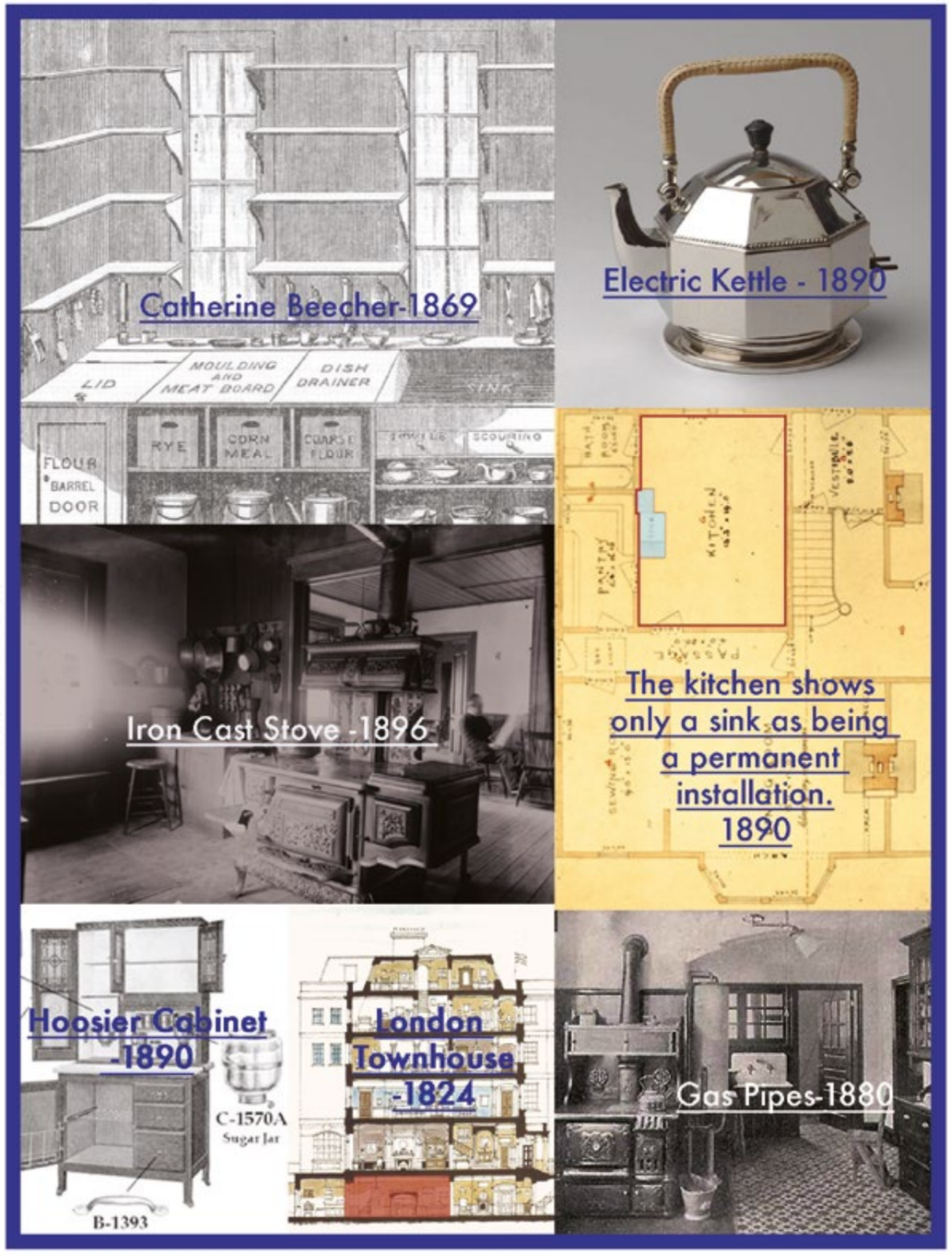


Figure 3: A collection of images reflect how the kitchen reacted to the context from 1860 to 1910. Highlights include the introduction of the first electric elements in the kitchen and the progress in technology.

After World War I, the economic and social systems went through deep transformations and architects were faced with the challenge to consider these new circumstances in their designs. The focus became the working class. The typical bourgeois lifestyle became outmoded and a new approach seemed necessary. As stated by Corrodi (2015) women began making a public issue the need for a "liberation from the housework".

The rationalization became the goal and a new reorganization of the floor plan in the kitchen became one specific aim. Architects were influenced by the Taylorist methods applied in the work spaces of United States. Following this movement, Catherine Beecher, an American social worker, designed in 1869 an ideal kitchen based on functional units. She reorganized the cooking process into: storage, preparation and cleaning and her design followed this sequence. (see Fig 4)

Dwelling at that time was seen as a serial of specific activities such as sleeping, eating, cooking and washing and therefore the layout of the domestic space followed this principle by providing rooms with one specific function.

A few decades later, Christine Frederick in 1913 wrote "The New Housekeeping: Efficiency Studies in Home Management" where she addressed issues of household rationalization. In her studies, bodily movements and circulation patterns were analyzed to create new principles for household design. (Corrodi, 2015)

Her book influenced several architects, who then applied ideas on rationalization efforts in the domestic space and therefore these spaces really corresponded to the lifestyle of the inhabitants in that period. (see Fig 5)

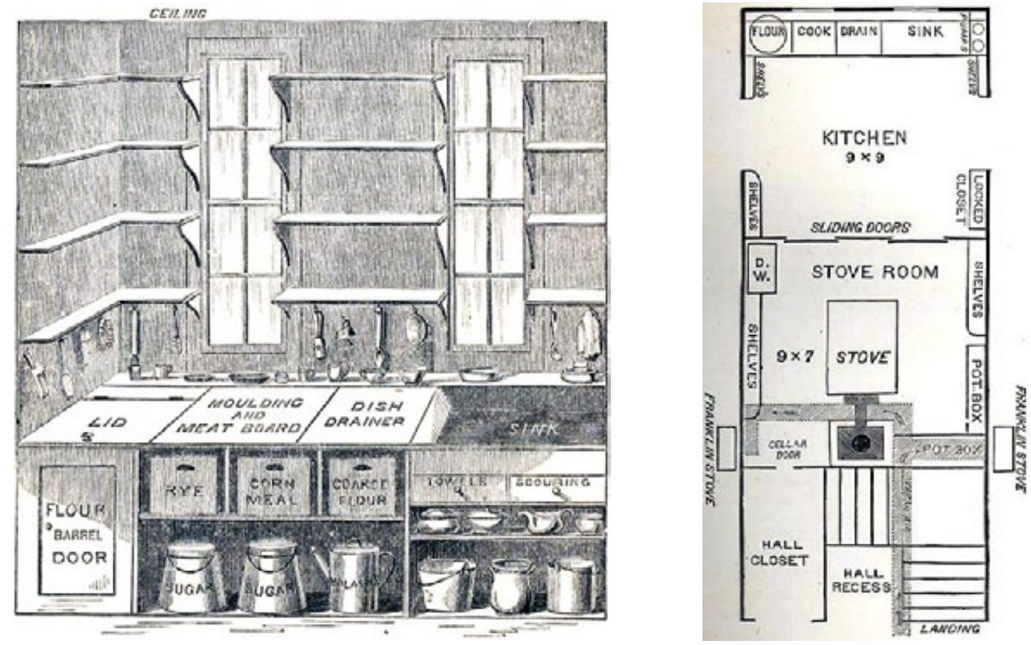


Figure 4: The beginning of the fitted kitchen by Catherine Beecher, in which every element corresponded to the consumer behavior of 1869. (Beecher,1869)

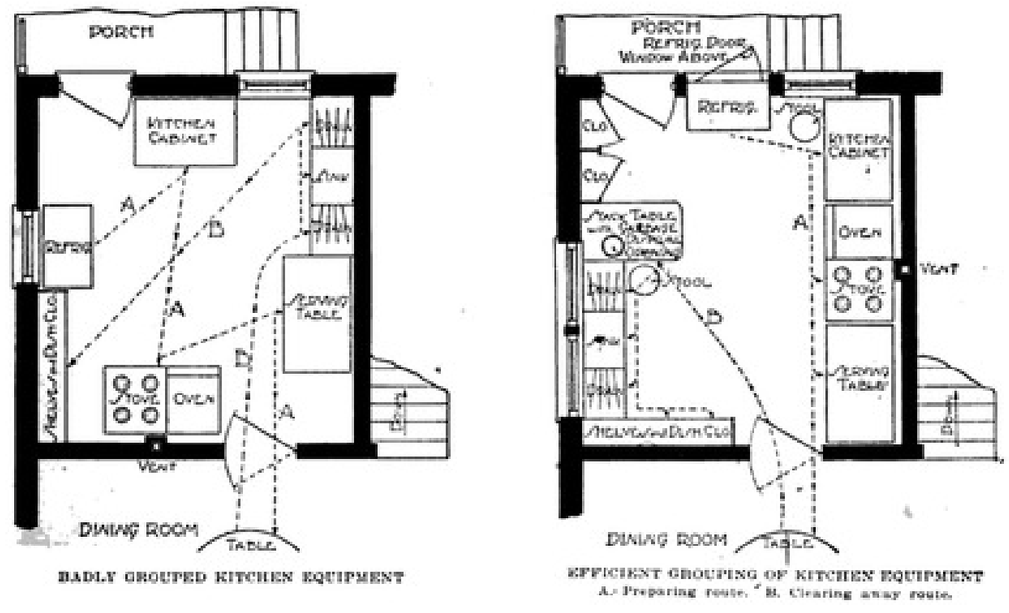


Figure 5: Inefficient and efficient kitchen layouts were diagrammed by home economist Christine Frederick in 1913. Her findings were followed by builders making new standards for the following years. (Frederick, 1919)

Frederick´s studies inspired the Austrian architect Margarete "Grete" Schütte-Lihotzky. Schütte-Lihotzky used to work with Adolf Loos in Vienna were they shared an interest in optimizing strategies for rationalization of the domestic space. She was convinced that "women's struggle for economic independence and personal development meant that the rationalization of housework was an absolute necessity." (Moma,2010)

In 1926, Schütte-Lihotzky received a very important commission: she was hired to design the kitchen for a new housing development in Frankfurt, Germany that aimed to assist the housing shortage after World War I. What seemed like a not so extraordinary task, led to a revolution in the history of the domestic space. In her design, every element was analyzed in order to minimize unnecessary steps that could save time and provide comfort as a separated space.

The Frankfurt Kitchen was a direct reflection of Christine Frederick studies and even though this design was not the first fitted kitchen, it gained great popularity as it was mass produced to satisfy a demand of 10,000 new housing units. It became a symbol of the principles of a scientific approach to the domestic workspace. (Briganti & Mezei, 2012) After this model, it became a regular notion that a kitchen should be fixed and stuck to the wall.

In the following years, new ideas regarding the design of the kitchen started to appear. There was a strong debate whether it was better to design a functional working kitchen with minimal floor space or multifunctional live-in kitchen for the working class. The working kitchen aimed for hygiene and functionality. In contrast, the live-in kitchen argued that by implementing a need-oriented space, a superior form of dwelling could occur. (Corrodi, 2006) Adolf Loos was a supporter for the live-in kitchen option, arguing that it would have benefits for the housewife since she could be more integrated in the other activities that occurred in the house while she was cooking. Eventually other models emerged such as "The Munich Kitchen" with a square plan and a permeation of the living room into the kitchen by a glass wall division. After this model, the Live-in kitchen gradually succeed in the market.

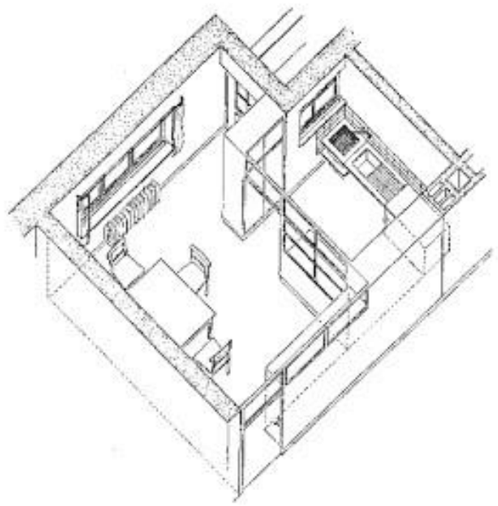


Figure 6: The "Munich Kitchen" designed by Erna Meyer in 1928 was the first approach to the merge of different domestic spaces (Meyer,1928).

Figure 7: The Frankfurt Kitchen became the model of the prevalent fitted kitchen of today. (Schütte-Lihotzky,1926)in 1913. Her findings were followed by builders making new standards for the following years. (Frederick, 1919)

SOCIO-POLITICAL CONTEXT

02

The modern usage of the term "middle class". Mass production. World War I - Housing shortage - Construction of affordable housing. 1917 Russian Revolution. Taylorism. The focus became the working class. The typical bourgeois lifestyle became outmoded and a new approach seemed necessary. Electricity. Reduction of domestic labor.

1910 - 1940

Ergonomics. Rationalization. Functionality. The beginning of the fitted kitchen. Experimentation of the live-in kitchen.

Figure 8: Socio-political and cultural aspects around the world from 1910 to 1940.

ICONIC MOMENTS

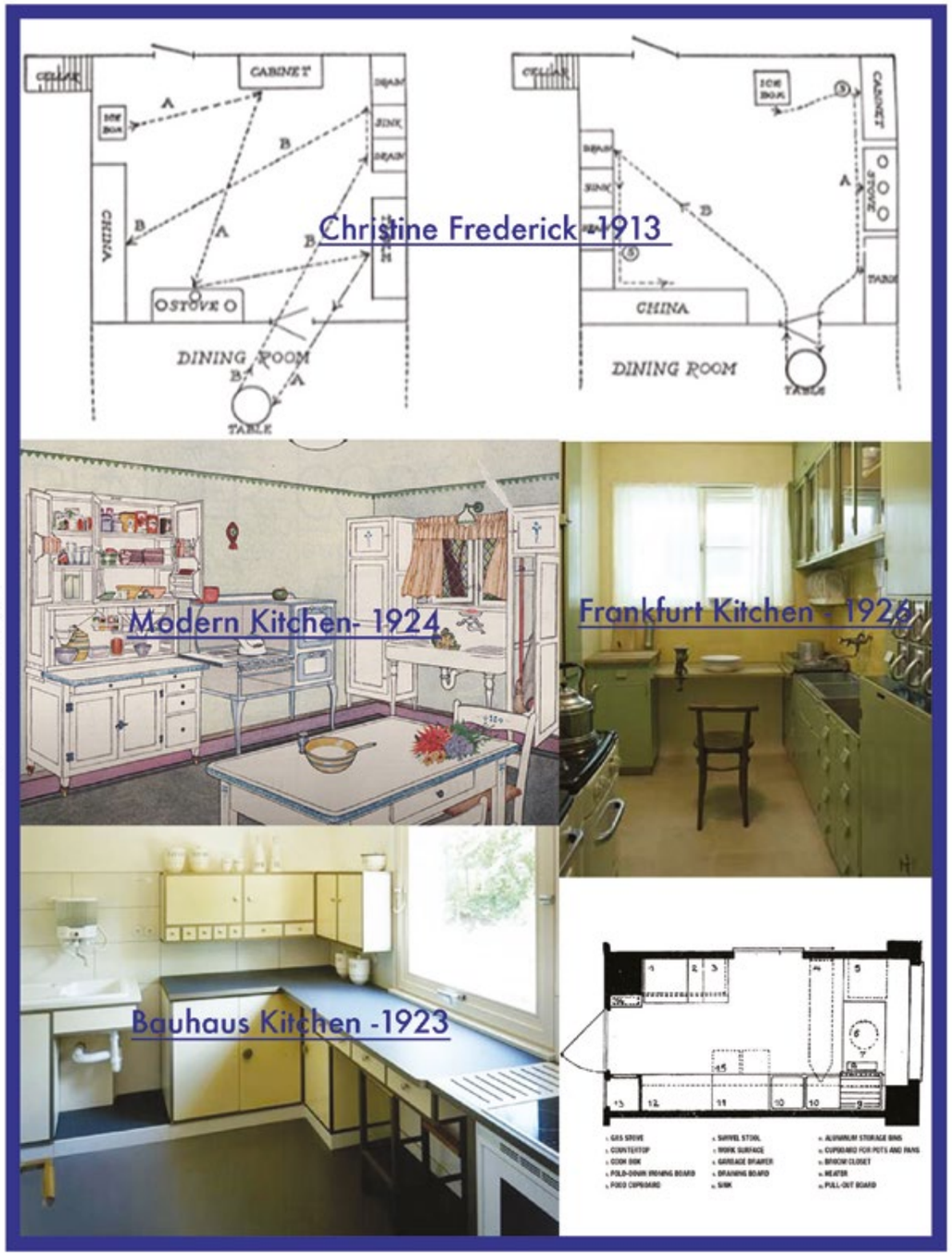


Figure 9: A collection of images reflect how the kitchen responded to the context from 1910 to 1940. Highlights include the introduction of Taylorism in the domestic sphere and the different attempts of rationalization.

After World War II, the economic boom allowed the society to increase the living space per capita. The live-in kitchen and the new models didn´t correspond to rationalization anymore, but on individual preferences. The fitted kitchen presented progress, but somehow became the standard image of how a kitchen should be designed.

As noted by Barbara Miller (2010) during the war, several American companies such as General Electric, Westinghouse and Motorola were major producers of defense weapons. But after it was over, these companies directed their production towards domestic appliances. Economic forces transformed "from missiles to washing machines" (Colomina, 2007)

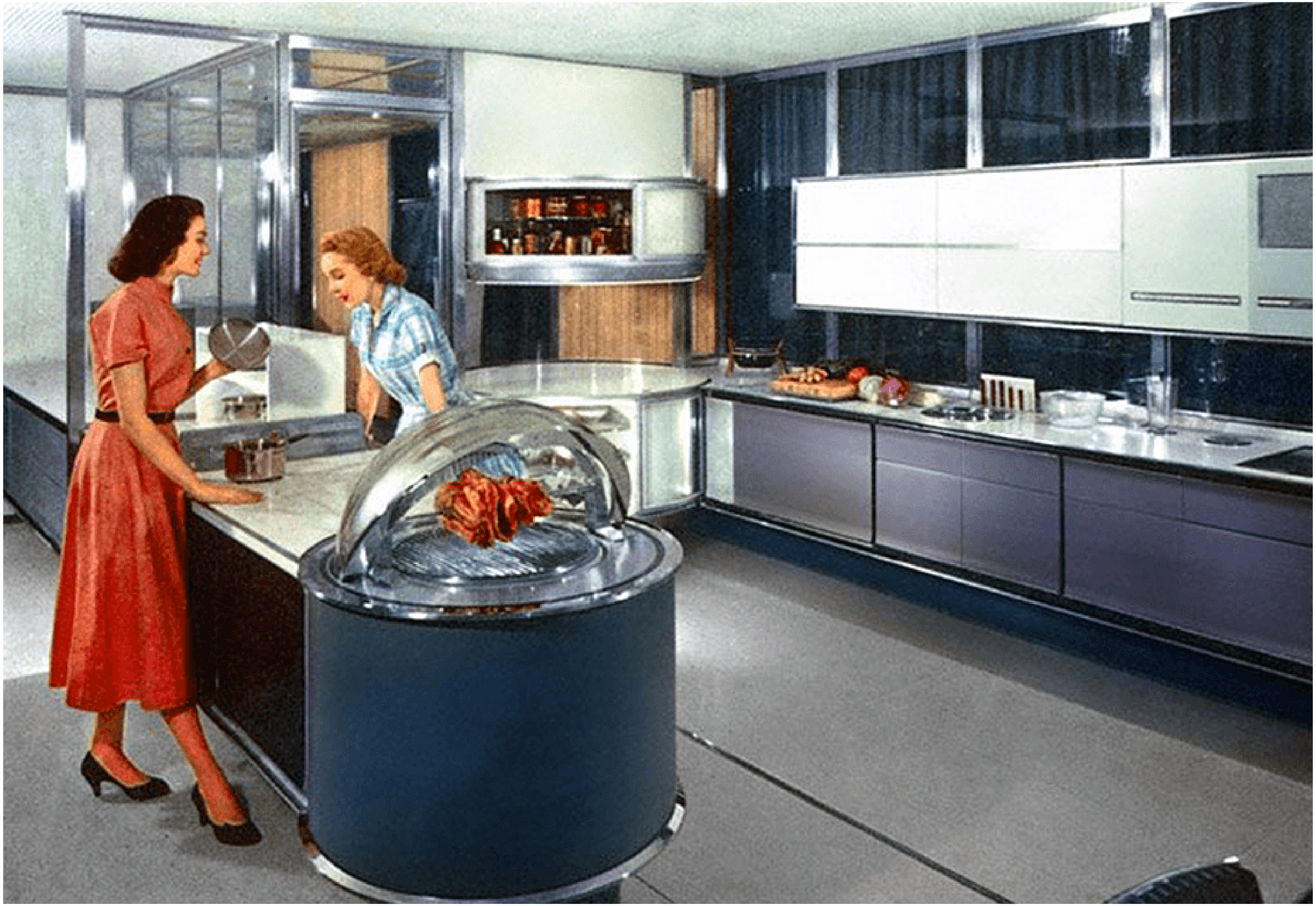
As appliances were being mass produced, another revolution in the kitchen habits was taking place: "Pre-cooked, ready mixed, canned and frozen foods started to appear in the market, and therefore induced radical transformations in meal preparation, cooking habits and grocery buying patterns." (Adams & Toromanoff. 2016. p.2)

Many electrical appliances were unnecessarily developed and marketed with the promise of easing the housewife's chores beyond imagination. (Kürüm, 2009) The consumer culture in the United States was fed by endless advertisements promoting the ideal lifestyle and targeted to create the illusion that with their acquirement, housewives would finally have spare time.

Furthermore, these appliances required more money to buy and operate, which eventually forced housewives to find a job outside, doubling her burden (Hayden, 1981). The marketing strategies not only depicted an unlikely real lifestyle, but they were an active force behind the stereotype that the kitchen was a female domain. Beatriz Colomina (2007) underlines that these endlessly repeated images of a picture-perfect domestic environment were also created to mask Cold War anxieties.

Figure 10: Hotpoint appliances are advertised in 1968 as "the liberation" of housewives from Christmas housework and "allows" them more time for gift shopping. (Hotpoint,1968)

Figure 11: Futuristic ideas of the Kitchen started to appear in the 50s. With a press of a button, a birthday cake would be baked in minutes. However, even in this fantastic utopic scenario, the woman was still the protagonist and it somehow depicted the same experience, just made more efficient and fast. (Frigidaire, 1956)



SOCIO-POLITICAL CONTEXT

03

World War II. Domesticity as a goal. Rapid suburbanization. Media depicted the ideal American family. Awakening. Optimism & hope for a better future. Uncertainty. United States´economy experienced a “boom” and rapidly came to dominate the world market in consumer goods. Cold War. Capitalism. Consumer culture emerged. Housewife ideals.

1940 - 1970

Ideas of the Kitchen of Tomorrow. In the mid 50s, 63 hours per week were put into domestic chores in Germany and 49 in America. Freezers. Appliances become streamlined, with rounded edges and chrome finishes. Appearance of Formica. Food industry revolution.

Figure 12: Socio-political and cultural aspects around the world from 1940 to 1970.

ICONIC MOMENTS

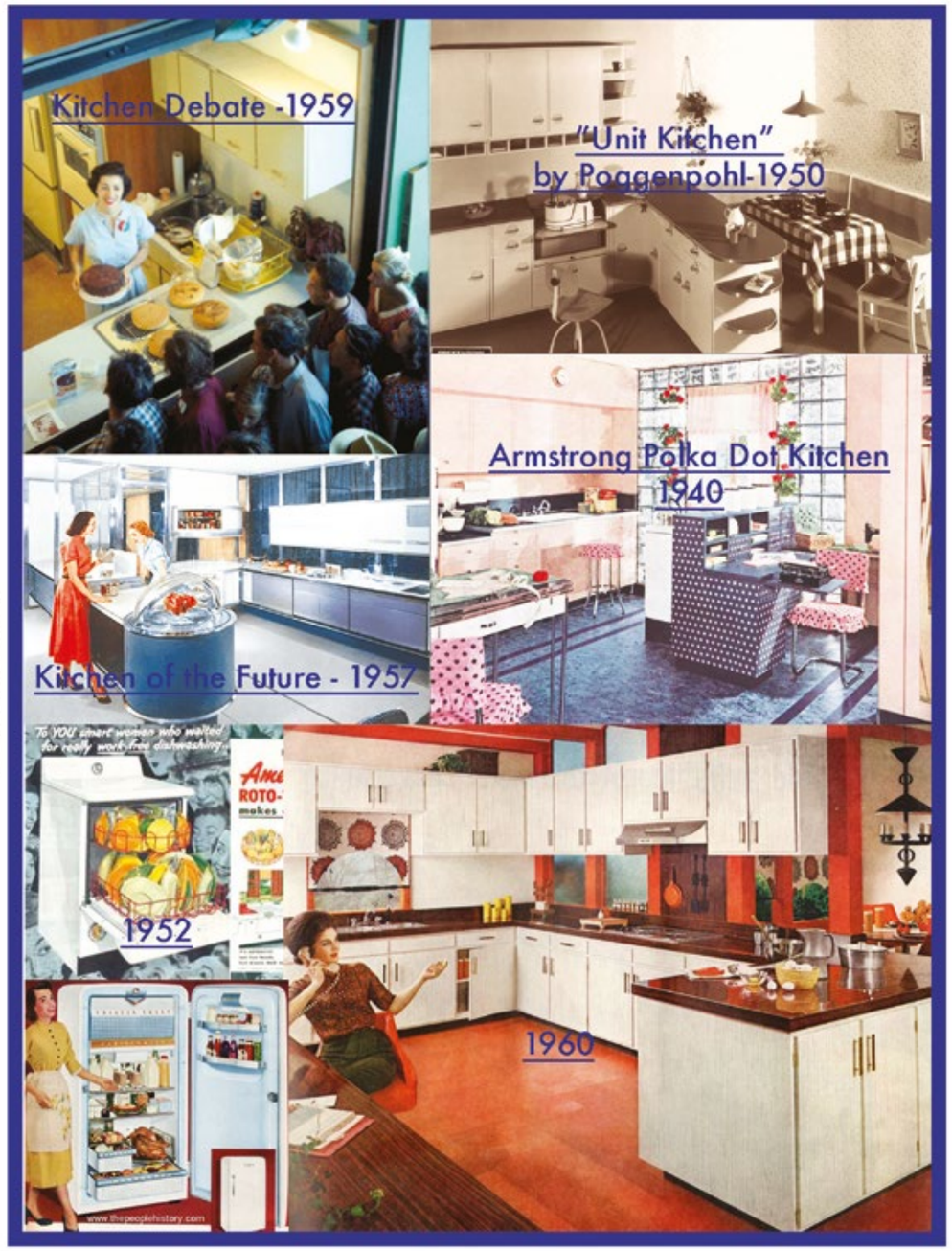


Figure 13: A collection of images reflect how the kitchen responded to the context from 1940 to 1970. Post war years transformed technological innovations from the war into domestic appliances later advertised as the idealized domestic life.

Kitchen renovations became more and more common as a reflection of the innovations in materials and technology. Electrical appliances became more affordable, since they were mass produced. When the 70s arrived, refrigerators and freezers had successfully conquered the household. This specific appliance had a strong impact on the domestic lifestyle and consumption practices, since grocery shopping journeys could be reduced considering food was able to remain fresh for a longer period of time. It also made possible to eliminate seasonal availability of food and therefore generated new habits and rituals on the diet of consumers. Traditional methods for food conservation started to disappear and packaged food began to be more common on every kitchen. The traditional "family meal" was no longer the rule, since it became really easy to grab a frozen packaged dinner and have an individual meal on anytime. As Spechtenhauser (2016, p.55) pointed out: "The responsibility for one´s own nutrition was passed on, and cooking degenerated into following the preparatory instructions on the package."

The fitted kitchen with modern appliances had such a positive connotation that it became a "domestic goal" to achieve it. The bigger the better. Standard measurements started to appear to give space to all the new appliances in the market. These new "guidelines" became the rule, and therefore there was a loss of freedom to arrange, shift and replace furniture at will. (Sonderegger,2006) Since kitchens were mass produced, they left very little room for flexibility or individualization to respond the needs of the residents. (Spechtenhauser. 2016. p.57)

The socio-political events in the 70s brought an awakening period that was characterized by political awareness, economic liberty of the woman and other progressive values. Experimental ideas were being put into practice in different disciplines and the domestic space was not an exception. In response to the traditional rigid layout of the house, new radical ideas were presented that adopted principles of mobility, flexibility and personalization. It was until the mid 70s that the traditional fitted kitchen was challenged with projects such as "Spazio Vivo" by Virgilio Forchiassin in 1963. (See Fig 14) or the different proposals presented at MoMA's groundbreaking 1972 exhibition, Italy: The New Domestic Landscape which presented a series of experimental domestic "environments".

Figure 14: The Spazio Vivo kitchen design by Italian designer Virgilio Forchiassin presented a huge cultural impact in 1969 since it challenged the traditional kitchen to an adaptable living lifestyle. It was highly controversial due it was seen as a "threat" to the conventional Italian family kitchen. (MoMA,2010)

One of the most innovative was presented by Ettore Sottsass Jr. (see Fig. 15) Lang, Molinari and Wasiuta (2013) described his project as:

> A set of identical plastic modules fitted to specific domestic functions (kitchen stove, book storage, water closet, audio amplifiers, etc.). These cabinet-sized modules, mounted on wheels, could be arranged and rearranged in any number of configurations. Sottsass' intention was to destabilize and decompose the conventional arrangements of domesticity by inciting entirely new patterns of spatial distribution and social relationships.

Even though most of these projects remained as experiments and were not put into practice, cooking and the traditional domestic layout was finally reevaluated and invited designers to imagine alternative worlds of inhabitation. Until this point in history, the domestic kitchen was always seen as a private realm. However, this notion began to shift with a new trend that started to gain popularity: cooking as a spectacle. Home cooking, rather than being just a domestic task, began to be perceived as a pleasant activity for leisure. One of the forces behind this notion was the media and the beginning of cooking shows. The American revolutionary Julia Child made her screen debut in 1963, becoming the first celebrity chef with her own TV show and set a precedent for perceiving cooking as entertainment, as a spectacle and an art. Other pioneers that challenged the perception of what was known as "an ordinary domestic activity", include the restaurant "FOOD" founded by artist Matta-Clark in 1971, which presented cooking as a performative art piece.

Despite all of these innovative approaches and experimental ideas, domestic space design continued to follow the trend of the live-in fitted kitchen. Kitchen furniture was increasingly unified, compacted, and pushed to the wall. (Sonderegger 2006. p.97) During the 80s it was almost a norm that the kitchen should be incorporated in the living and dining space. The innovations on this period include "the kitchen island" and more high tech appliances. During the 90s, the space became more personalized, and householders put effort in trying to make it more cozy and comfortable. Cooking shows continued to gain popularity. An incremental number of TV reality shows, literature and entire television channels were given over to the preparation of food, where the kitchen functioned as a stage.

During the last decades, the transformation of the kitchen is linked to the advances in technology and improvement of finishes and materials. Sonderegger (2006. p.95) argues that today's kitchen has become "a showpiece and a status symbol" that also works as a place of encounter. In the present, homeowners face an endless list of finishes, materials and designer appliances to achieve the perfect high-quality kitchen. When searching on Google the current and contemporary trends of this space, most of the results show manufactures, suppliers and designers offering versatile solutions of creative storage spaces, extendable drawers and non-scratchable countertops. (see fig. 19 & 20)

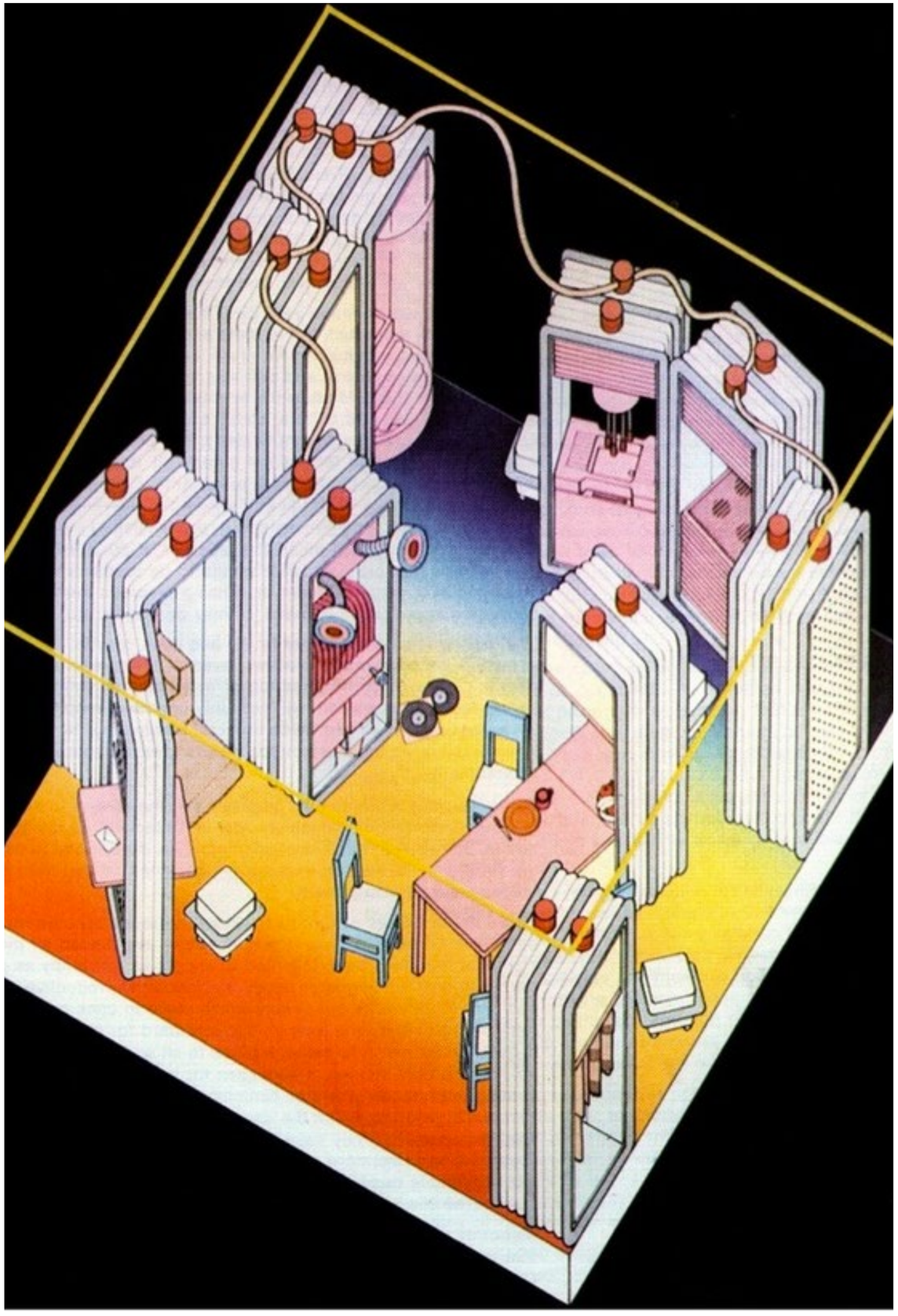


Figure 15: Ettore Sottsass Jr, provocative Environment from the exhibition "The New Domestic Landscape", Museum of Modern Art (MOMA), 1972 which eliminated the rigid structure of a home and offered flexibility and personalization of temporary spaces. (Sottsass, 1972)

SOCIO-POLITICAL CONTEXT

04

New experimental ideas and hypothesis. Feminist movement. The Feminine Mystique by Betty Friedan. Political awareness and economic liberty of women. New Domestic Landscape 1972. Advances in technology. In 1991 the World Wide Web became publicly available. Julia Child.

1970 - 2000

Food preparation as an spectacle. The Microwave. The kitchen incorporated in the living and dining space. In the 1980s the perfection of the extractor hood allowed the triumph of the open layout. Cooking not as an obligatory task, but an enjoyable and communicative activity. Adjustable and interchangeable structures.

Figure 16: Socio-political and cultural aspects around the world from 1970 to 2000.

ICONIC MOMENTS

Figure 17: A collection of images reflect how the kitchen responded to the context from 1970 to 2000. Highlights include the experimental designs of the 70s, the introduction of the kitchen island typology and the rise of the cooking shows culture.

The kitchen has assumed a “trophy” status within the house, but in contrast to all of the other rooms “it is not a freely definable living space, but is closely linked to the building services and entire mains network” (Kesselring, 2006. p.113) Even with all technological progress and changes presented in history it is still dependent of certain elements that as described by Kirsten Algera (2017) creates an invisible city under our kitchen. As Oldenziel & Zachmann (2009, p.16) put it:

> Electrical grids, gas networks, water systems and the food chain all come together in the floor plans that connect kitchen to housing, streets, cities and infrastructures. The Kitchen is thus simultaneously the sum total of artifacts, an integrated ensemble of standardized parts, a node in several large technological system and a spatial arrangement.

On speculations on the future of the kitchen, most opinions point towards the smart kitchen. (see Fig. 17 &18) Fridges that will let us know what food we need to buy, automatic knives and calorie counting ovens. The smart kitchen dream has been around for decades, but it´s still not a prevalent reality in 2017. Electrolux design director Thomas Johansson (2014) predicts:

> “Hyperconnection will define our relationship with the kitchen by the year 2050. Better data, he says, will be delivered by smart apps using increasingly sophisticated learning algorithms”

Fig.18: The block kitchen is defined as one of the most recent development, typically found in open kitchens. Despite its innovations, it is still a fitted built in space with little opportunity to be flexible or become something else. (Wikipedia, 2015)

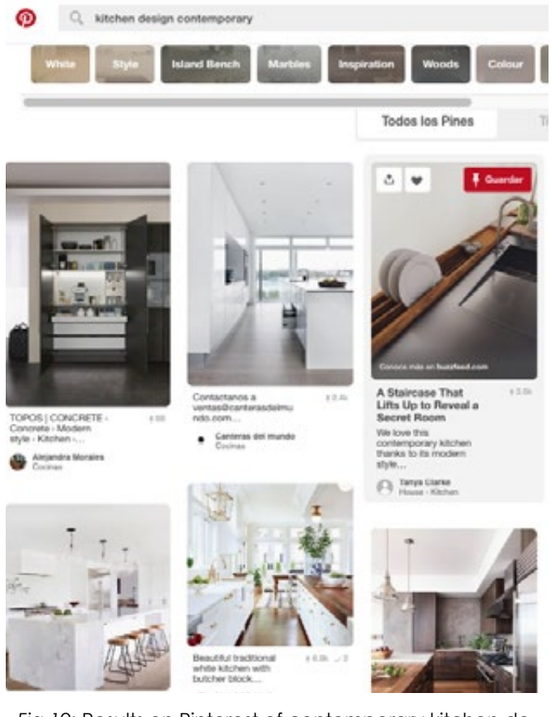


Fig.19: Results on Pinterest of contemporary kitchen design include minimalist cabinetry, easy open drawers and high-end finishes.

Fig.20: The Smart Kitchen of the future speculations include an Interactive cooktop that show recipes and calories of the meals being cooked. (Whirlpool 2014)

Fig.21: The Internet of things kitchen by Ikea is described as a “thoughtful, considerate friend, making life easier, cleaner, sustainable and enjoyable.” (IKEA,2010)

SOCIO-POLITICAL CONTEXT

05

Advances in technology. Laptop culture. The smartphone. Google. WIFI. Bloggers and Entrepreneurs. Iron Chef. Millenials. Single households. Shared Economy. Digital Nomads. Social media. Healthy lifestyles as goals. Life on the go.

2000 - 2017

Kitchen islands. Surface textures. High-tech appliances. Kitchen became "a showpiece and a status symbol". For millenials cooking at home is an infrequent leisure time activity. Take away food culture. Sensory comforts come in mind. Kitchen design is based on standarization and classical solutions.

Figure 22: Socio-political and cultural aspects around the world from 2000 to 2017.

ICONIC MOMENTS

Figure 23: A collection of images showcasing the introduction of interconnected elements in the kitchen reflect the changes in the society. advances in technology and the introduction of new eating habits.

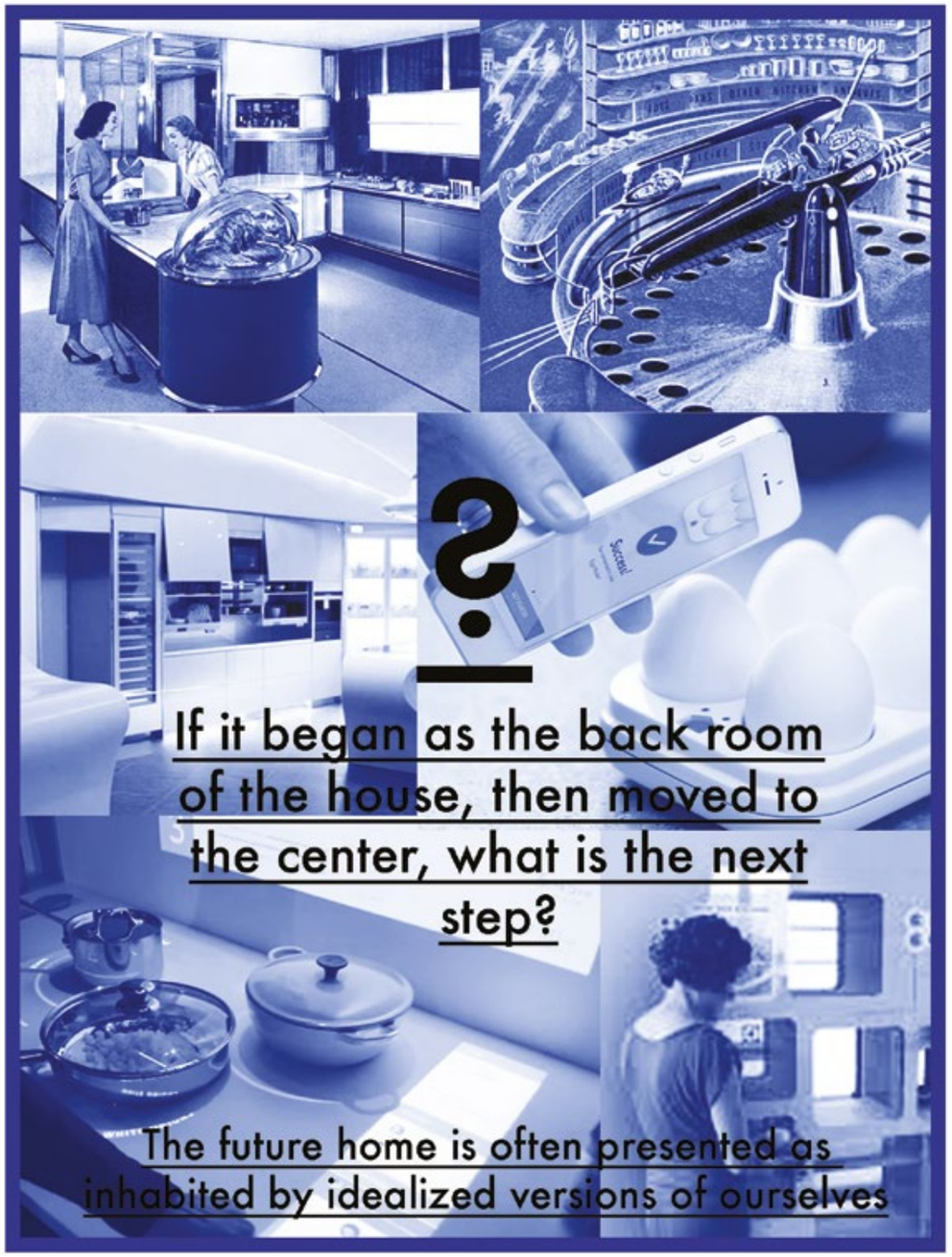


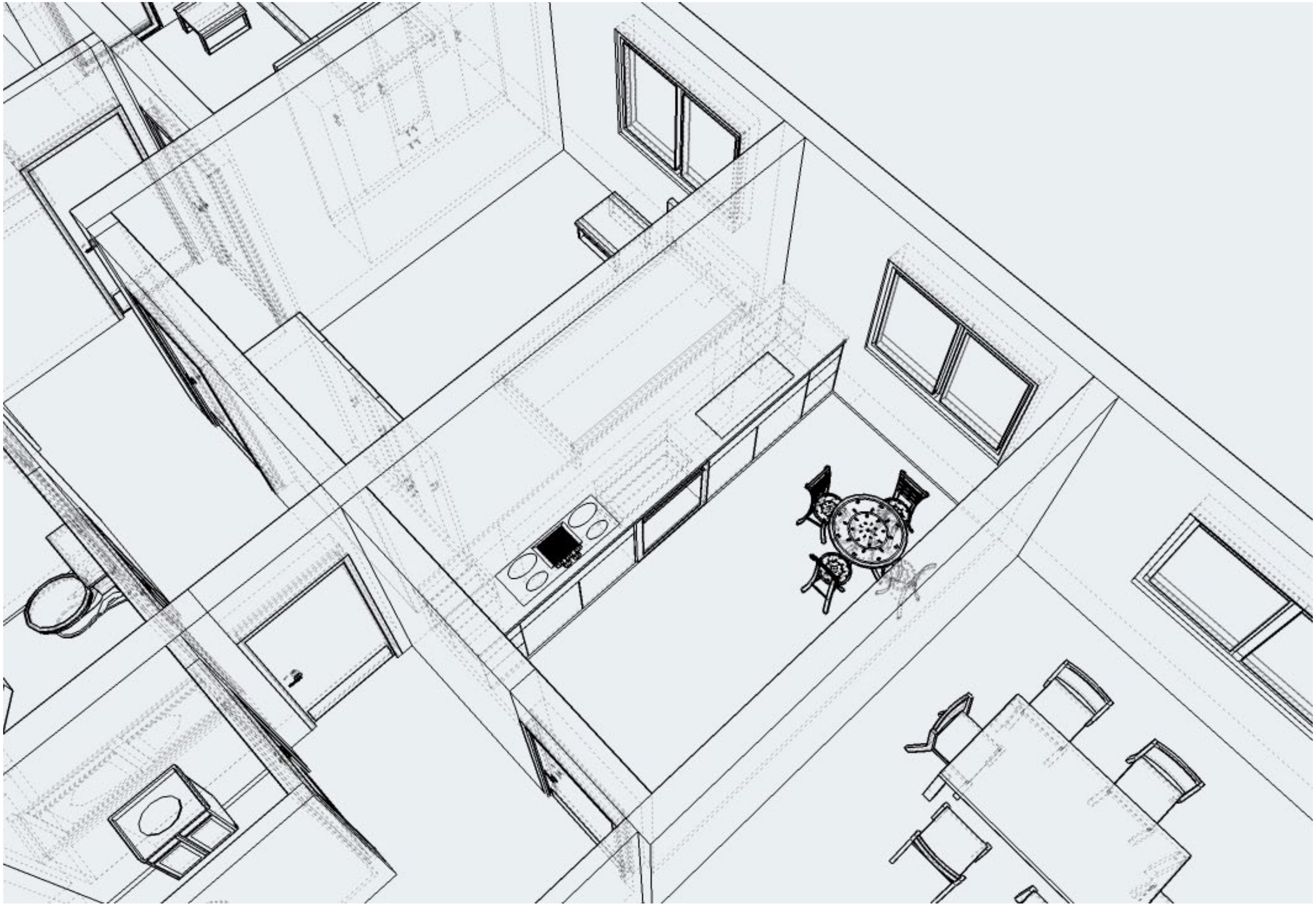
Figure 24: What is the next step for kitchens in the domestic space?

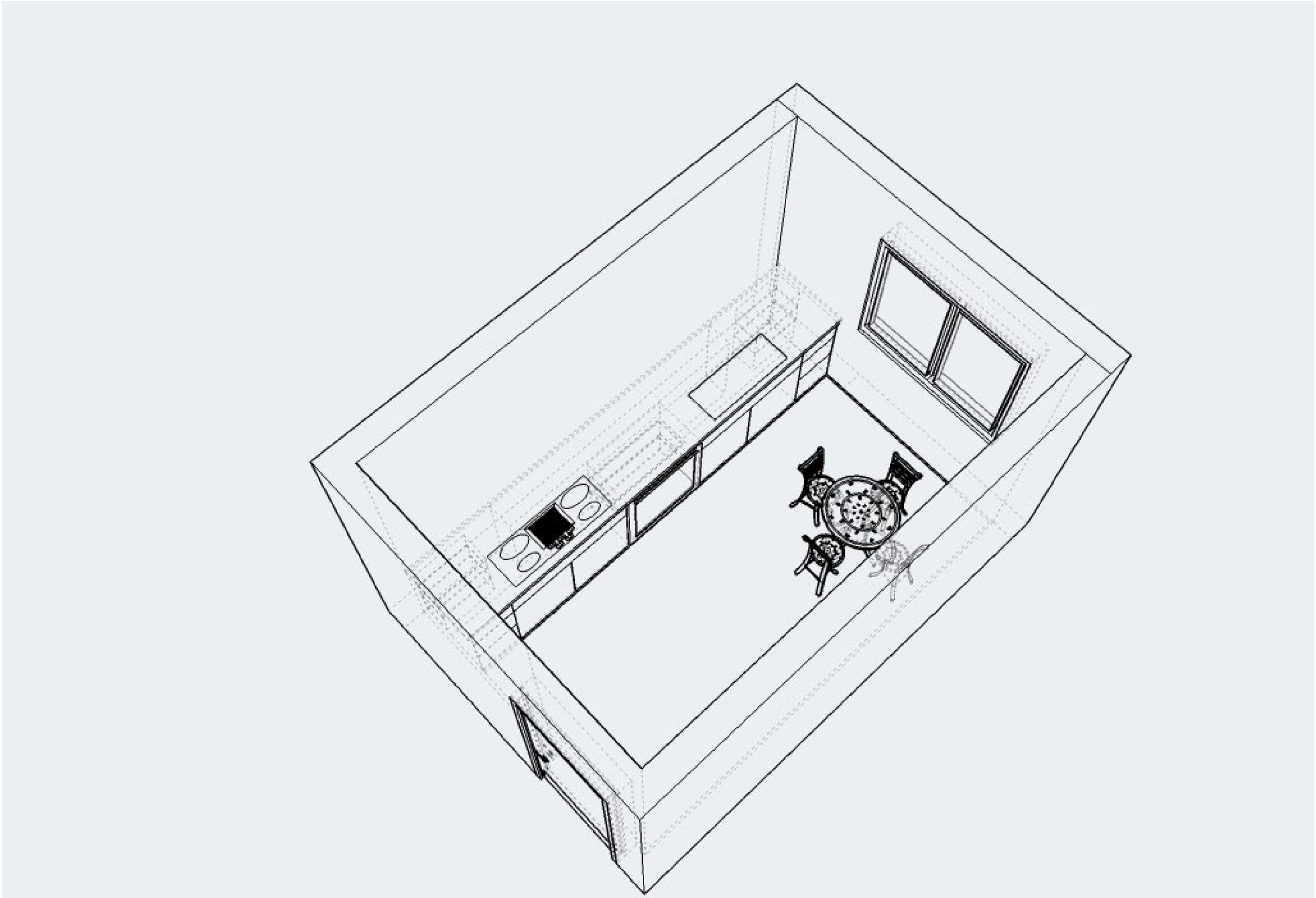
The kitchen has been located and dislocated throughout centuries over dichotomies such as slave/freeman, servant/master, man/woman, front/back, upstairs/downstairs, inside/outside, etc. (Kürum.2009. p.18)

The speculative scenarios of the future of this space show more efficient appliances and interconnectivity with our phones and the rest of our house. However, it is somehow the same experience fixed to one specific space. The IKEA kitchen of the future (see Fig.18) presents a very similar layout that the one we have seen for decades, except that in this scenario our fridge will send us text messages to buy more carrots.

Could the kitchen become something else offering different forms of life in the domestic space? Could it become a different experience that sets it free from a specific area of the house?

If so many efforts and studies were made to liberate the woman from the kitchen, could the kitchen be liberated from the domestic space itself?





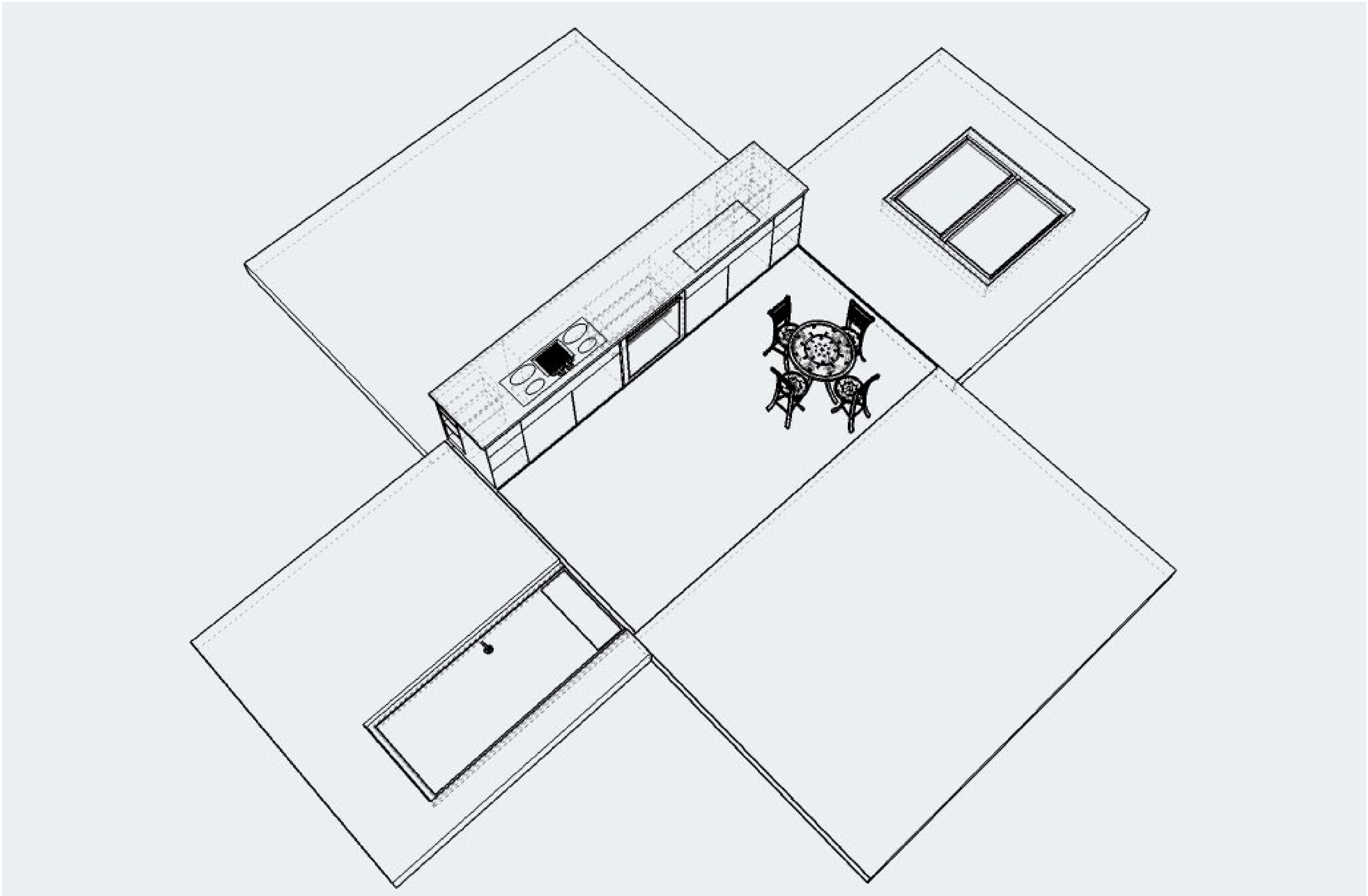


Figure 25: The Liberation of the Kitchen from the domestic space.

03 SHIFTS IN THE DOMESTIC USE OF SPACE

Domestic, coming from the Latin source "domesticus" suggests belonging to home, house or household. Domestic spaces are now being occupied by a new generation with constant changing patterns of life that signify a change in its use. As concluded by Aureli and Tattara (2015):

The current domestic landscape is characterized by an increasing gap between, on the one hand, temporary dwellers, young students, freelance workers, and single parents producing new forms of cohabiting, and on the other hand, the reassuring and often celebrated clichés of traditional family life.

From now on I will focus this project on the first group to which I currently belong: single temporary dwellers, who even if they share an apartment, have isolated domestic experiences. One of the main questions to address is: How the configuration of the home of the present adapts to their current domestic rituals and social relationships? As Foucalt (1986) stated: "We are in an age of the simultaneous, of juxtaposition, the near the far, the side by side and the scattered". The layout of the domestic space has not changed much its spatial premises in the last century. It still consists of specific rooms with each containing a strong functional identity. However, the meaning and how new generations occupy these spaces have had changes that adapt to their lifestyles, challenging the monofunctional model. The bedroom has become the office (see Fig.26), the dining table is not exclusive for meals (see Fig.27) and the living room has acquired sleeping qualities. Inhabitants adapt to the built environment, instead of being the other way around.

Fig 26: Hugh Heffner used his bedroom as his working space. (Playboy Enterprises, 1966)

Fig 27: "The Kitchen Table Stories" by Carrie Mae Weems expresses much more than dining activities in the table; revealing to us her relationships with lovers, children and friends. (Weems,1990)

In the project “The Conceivable House” by Koen Deprez there is an interesting approach towards the conventional layout of the domestic space. Deprez eliminated the traditional names of each room. The bedroom for instance, doesn´t take its common name, but its called Hôtel-Dieu.

With this simple action, he fostered flexibility in the use of the space. Most spaces of the house offered this flexibility: It was possible to sleep in the living room or to work in the bedroom. However, cooking was an activity that could be performed in only one place: the kitchen.

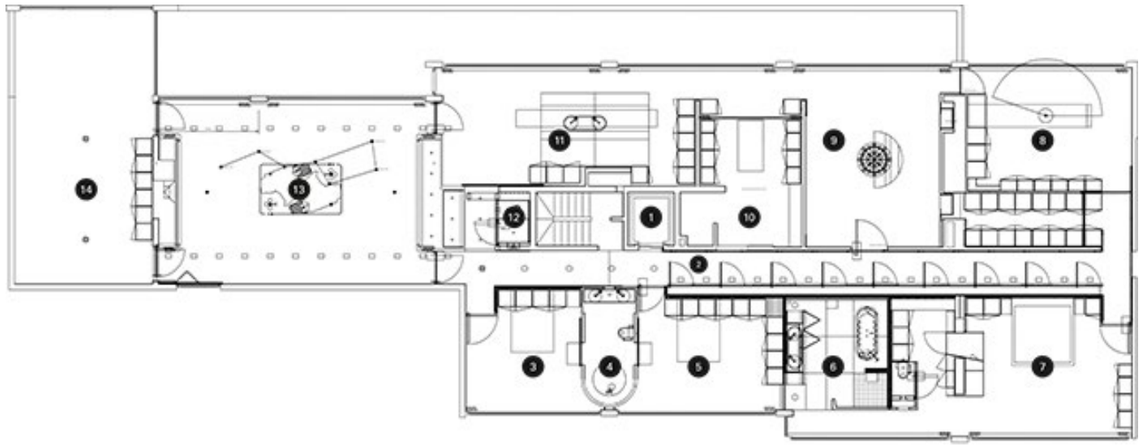
Why does this activity have to be restricted to one specific space, when the square meters of the house offer other possibilities?

In the movie “Julie & Julia” Julie Powell complains that her kitchen is too small and doesn´t allow her to cook properly. But if you take a look on the other parts of her apartment, it seems like the space is wider and with more daylight.

Fig 29: Julie Powell´s kitchen from the movie “Julie & Julia” (2009)

Why do we limit the cooking experience to one area when it could merge with other spaces of the house? It has been the norm that the preparation of meals has to be concentrated in the space the kitchen occupies. (see Fig. 26) Within this space, cooking can be divided into a series of different activities that require different elements, surfaces and areas. (see Fig. 30)

What if these could be re-distributed in the other rooms of the house? The juxtaposition of conditions that this possibility offers could create alternative lifestyles adaptable to the preference of its inhabitants and even present the possibility to not be limited to the private domestic sphere. (see Fig. 32)



1. Elevator
2. Hall of Analogies
3. Room for Gilgamesj
4. The army is advancing!
5. Room for Baron Von Münchhausen
6. Prudence
7. Hôtel-Dieu
8. Paris by night
9. The office of Conceivable, only on Saturday
10. Storeroom
11. Marcel
12. Cabinet de réflexion
13. The Big red Ballroom
14. Antichambre

Fig 28: The Conceivable House by Koen Deprez. (Deprez,2009)

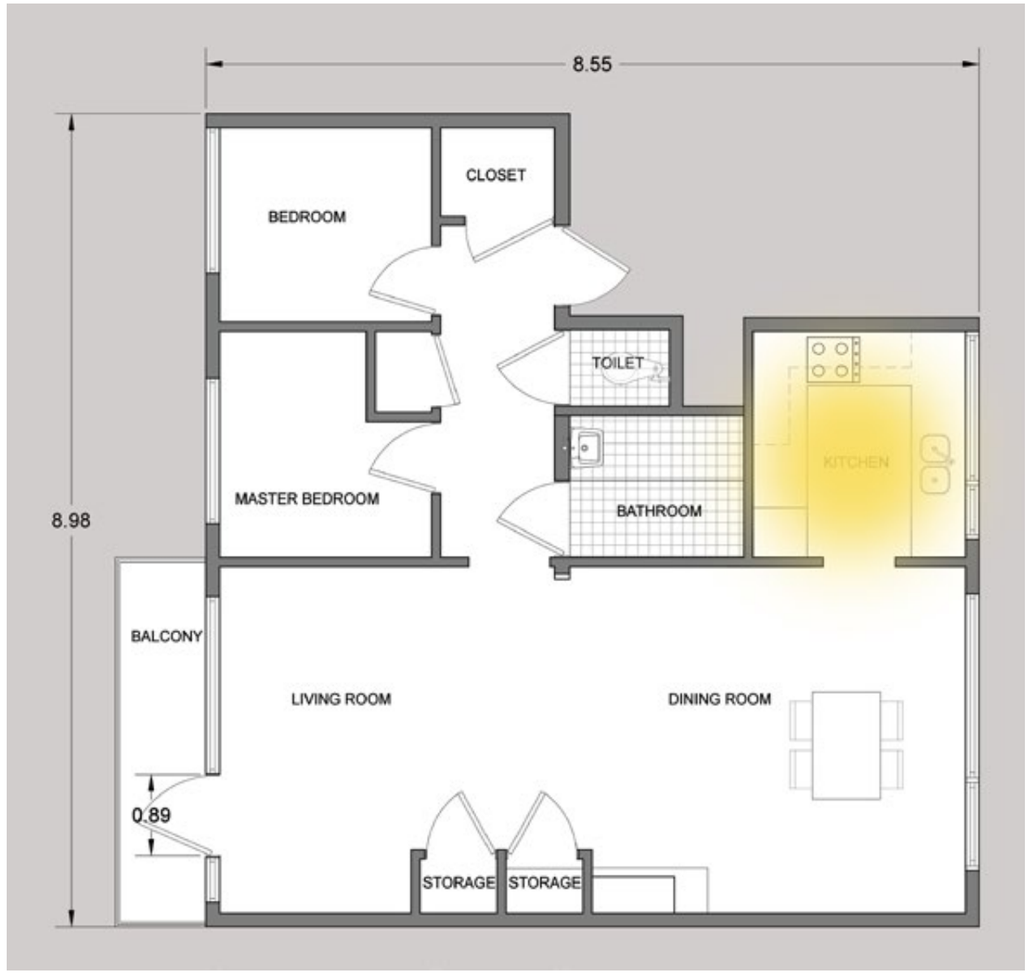


Fig 30: Layout of my domestic space where the kitchen is a concentrated space.

Fig 31: Different activities that take place within the kitchen.

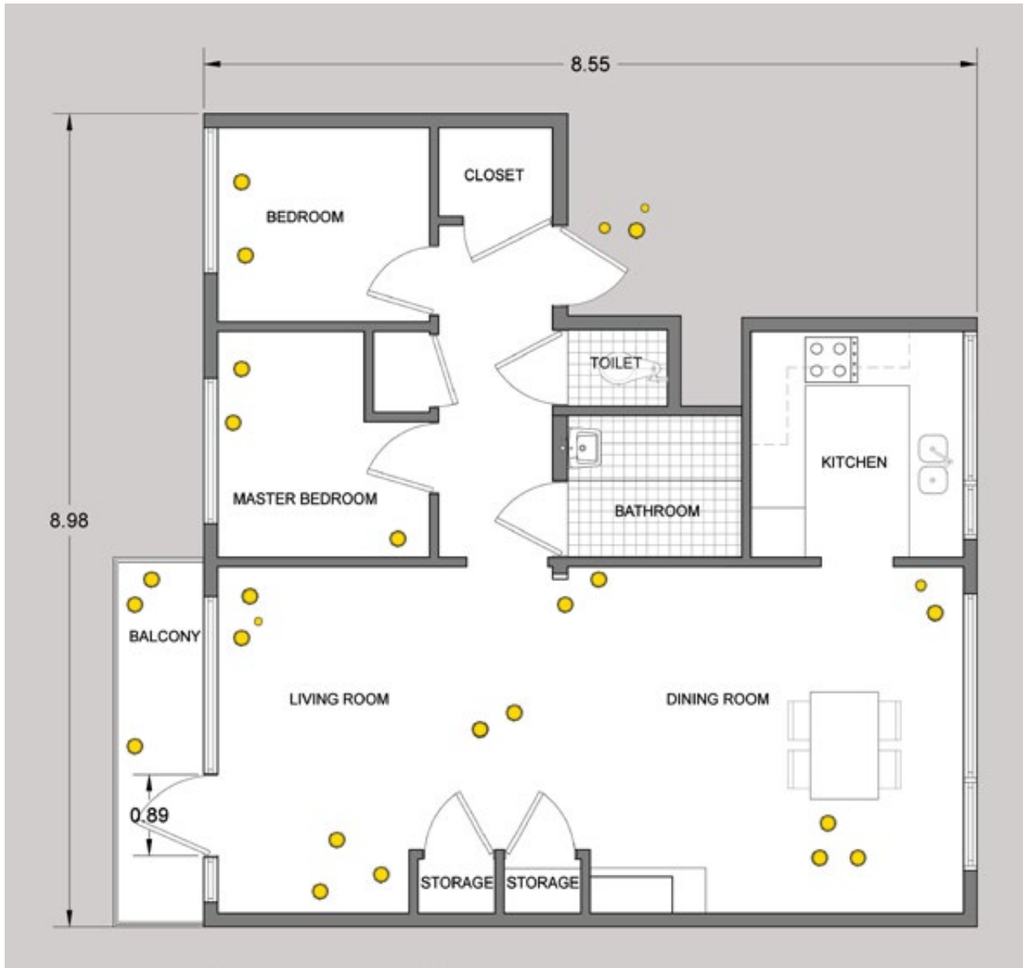


Fig 32: The liberation of the kitchen. Proposal of the redistribution of kitchen activities in other domestic spaces rather than the kitchen.

By decontextualizing cooking from the kitchen as we know it, a lot of "What if" scenes could take place such as:

- **What if like to cook outside?**
- **What if want to watch TV as I cook?**
- **What if I want to storage my food as soon as I get home?**
- **What if I want to cook with my neighbor?**
- **What if I want to cook with a view?**
- **What if I want to cook breakfast next to my bed?**

This idea was somehow already explored in the 60s when Hotpoint company launched an advertisement of a new portable dishwasher not contextualized inside a brand new kitchen (like most advertisements did) but being placed in front of a window with a pleasant view. (see Fig.33) Aside from the context, its important to highlight other aspects of this commercial considering the crucial role advertisements play in today's society. As author Anika Hashem (2016) remarks "besides helping businesses sell products, advertisements often reflect the general beliefs of their time period." In the same way that most propaganda in that time publicized the kitchen as a female domain, this specific example takes it to the extreme not only sending the sexist message to young girls that their future is to take care of the house chores, but also by unnecessarily showing a blindfolded 10-year-old girl in short pants.

In order to propose a new design opportunity, it is important to acknowledge the kitchen not as a whole, but as separated layers of activities and elements that complete different functions. At the same time, its important to analyze current living, cooking and eating habits of temporary dwellers who as defined by Kähler (2006): "fleeing the specter of unemployment, must move from one city to the next, or at least from apartment to apartment".

According to Kesselring (2006, p.103) When designing new houses in the present, investors, developers, and decorators are more conservative. Measurable values, cost and usage ratios, experience, durability, and rate of return are considerations that have priority. Buildings are constructed for anonymous users; the decision makers will not live in those apartments.

Fig 33: Controversial Hotpoint advertisement of a new dishwasher decontextualized from the kitchen area. (Hotpoint,1966)

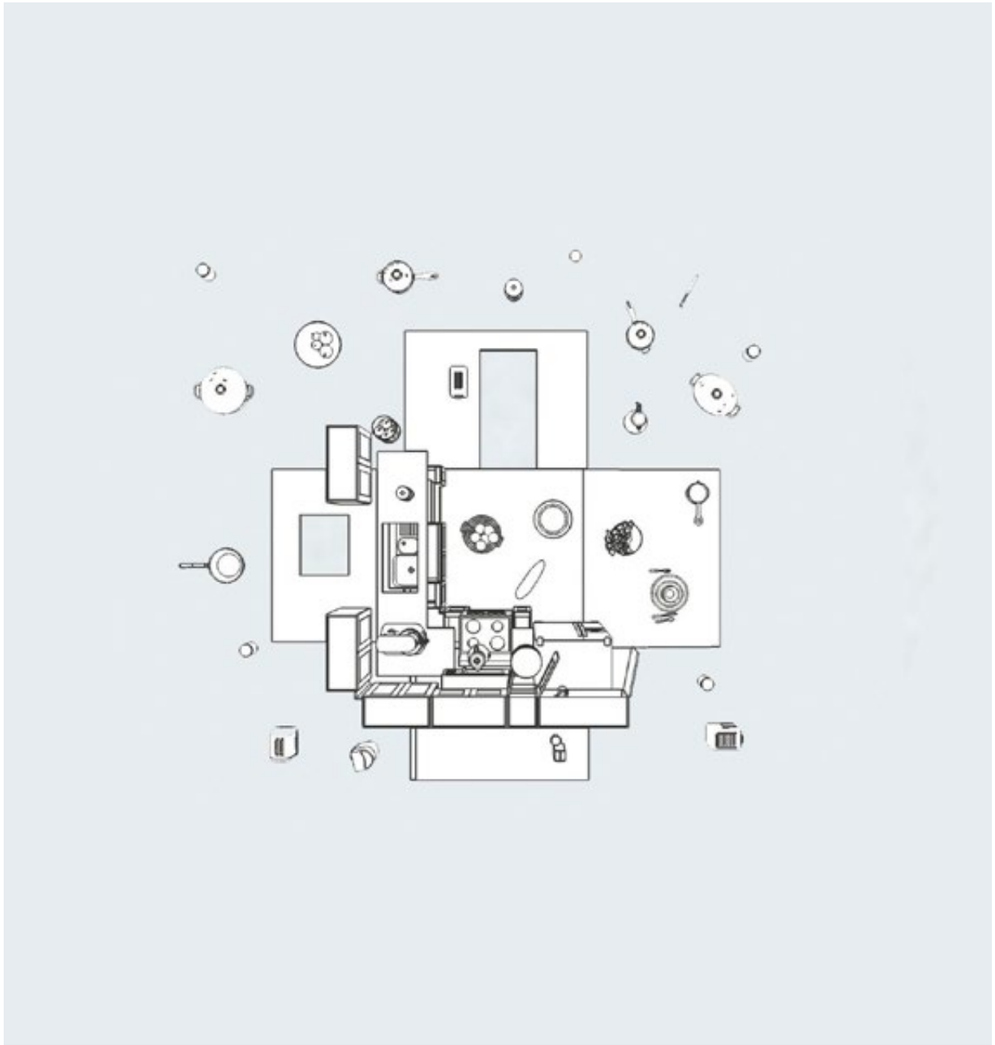


Fig 34: Unfolded kitchen showcasing it not as an enclosed space in 4 walls, but as series of different layers of surfaces, elements and objects.

0.3.1 KITCHEN TENDENCIES OF TODAY

How is this space used today? Kitchen faces paradoxical situations: it is still depicted as "the heart of the house" while in reality, cooking is statistically becoming less common. While cooking is a Zen for some people is a complete burden for others.

Another interesting paradox defined by Ferdman (2015) is that as people are cooking less and less, they are more committed to watch people cook more and more. With changing lifestyles, the convenience trend is quickly rising.

Different studies show that consumers are spending less time planning and preparing meals since there are so many options to replace cooking: eating out, delivery services, startups that send chefs home, 24 hour supermarkets with ready to eat meals, etc.

Cooking can now be performed by opening a pre-washed salad plastic bag and mixing it with pre-chopped vegetables. A survey conducted by Waitrose Food and Green & Black, an organic chocolate company, found that 58% of U.K. consumers spend no more than 30 minutes cooking dinner each night (Datamonitor 2006). For a certain group of people, cooking at home is seen as a chore, and meal preparation is considered very time consuming.

Eating alone at non-fixed mealtimes is becoming more common, as a result of changed eating habits, attitudes toward cooking, and busy lifestyles (Ahlgren 2005) In The New Yorker cover "Comfort Food" artist Ivan Brunetti´s illustration makes a comment in the relationship a lot of people are having with their kitchens today. He comments:

> "I got a bread-maker, two different kinds of waffle-makers, a food processor, at least two blenders, a mixing set, a coffee grinder, lots of pots and pans, a nice wok, a huge stockpot, and probably even more stuff, but I seldom cook, and rarely use any of them. It's partly because my wife and I both work—we're exhausted at the end of the day—but mainly it's because I am the one who dreams of a hot and elaborate meal. . . . So, most of the time, we end up ordering or going out."

What is a universal truth is that we all need to eat at some point. Domestic activities like cooking or eating are global; however, the ways these activities are carried out vary infinitely. Talking about the kitchen can become a "cultural battlefield" as defined by Swedish ethnologist Löfgren (1983).

A survey by Kitchensurfing on 2015 showed that home cooked dinners were not frequent in New Yorker´s stressed and busy lives. They would eat out or order food an average of 3.4 times per week. When they do eat home, new habits according to our technological era came to light such as 55% watch TV during meals, while 15% check/ post on social media. One interesting fact is that 10% of men store shoes in the oven, while only 3% of women do. This practice is highly linked to the space shortage in most New York small apartments, but also to the "takeout culture that has made cooking at home practically obsolete for some people" (Swerdloff,2010) This substantiates that some people are living on kitchens that were not designed to their current lifestyles.

Fig 35: Ivan Brunetti's "Comfort Food" cover shows a man surrounded by appliances, but eating take out food. (The New Yorker,2015)

Fig 36: "Well, I work in the restaurant industry, so I eat every meal out," says Musacchio, a 26-year-old New Yorker who in need of more storage space, uses her fridge as shoe rack. (Von Holden, 2010)

Fig 37: Central character Carrie Bradshaw from HBO "Sex and the City" depicts a real-life scenario of how New Yorkers seldom cook at home. ("Sex and the City",2000)

It is relevant to inquire in some historical references which have already challenged the traditional private domestic fitted kitchen based on the social behavior on their period of time. Some models of housing have even presented domestic spaces without a kitchen. The apartment hotel buildings in New York City in the beginning of the 20 century, offered cooking and eating as a collective service, along with other shared amenities such as dining rooms, centralized vacuum systems, nurseries, shared maids, and more. (Puigjaner,2016) These buildings were intended for the middle class and offered these alternative of living in order to increase comfort and eliminate the hassle of house chores. Anna Puigjaner (2016) in her project "Kitchenless City: Architectural Systems for Social Welfare" points out the contemporary relevance of studying these typology of housing, since there are many advantages that could be adapted to our current domestic lives.

She invites us to image a new way of living in which the kitchen is not in the private domestic sphere, but as a collective experience to decrease housing labor, waste and energy consumption. She argues domestic comfort is built and designed, and therefore we can grow accustomed to new proposals for domestic life. Examples of the kitchenless life include American actress and singer, Ethel Merman who as described by the journalist William R. Greer (1986)

> "had the kitchens removed from two of her apartments, in the Park Lane and the Berkshire Hotels, because with room service she never used them. But she did buy a toaster-oven to heat what one biographer, Bob Thomas, said was her favorite dish, chicken frankfurters".

This scenario makes resemblance to the commonly known "mini bar" we can find today inside closets or placed in corners of rooms in hotels; were a small fridge, a coffee maker and a water kettle allows the preparation of meals. This typology is defined by Puigjaner (2017) as the kitchenette. Kitchenettes appeared in apartments and hotels in the beginning of the 20th century, giving the opportunity to cook outside the main kitchen during any time of the day. The kitchenette offered an alternative based on a few minimal elements. However, its intention was not to offer saving time in labor, but to offer alternatives in domesticity. They were placed in locations without ventilation or extraction and could be found in corners and inside drawers. The implementation of this type of furniture allowed the multiplication of functions in spaces. (Puigjaner,2017) Just as the well known sofa-bed today transforms living rooms into bedrooms.

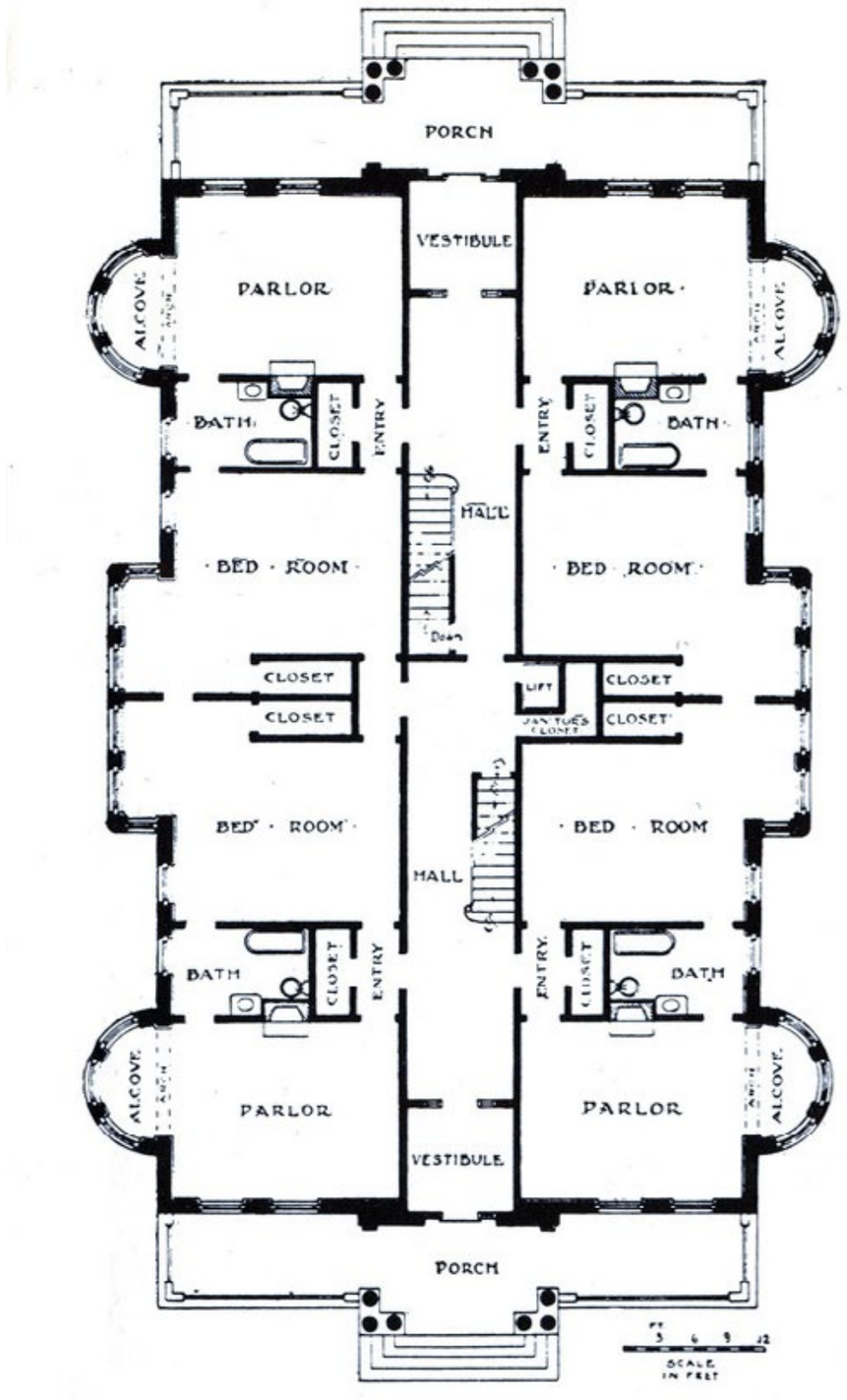


Fig 38: Plan of a kitchenless apartment house In New York. (Peck, 1990)

Other examples of untraditional kitchen arrangements include the project "Crate House" (1990) by artist and architect Allan Wexler designed for the exhibition "Home Rooms" of UMCA, which attempt to make a comment on "the interdependent relationship between features of settings and features of people who use them" (UMCA,1991) In his project, Wexler accommodated four functions of living (kitchen, bedroom, living room and bathroom) in individual plywood crates inside a nuclear 8-foot square room which functions as "the house".

Each crate contains the essential elements to perform this activity. Any time one function is desired, the crate is pulled in the main cube and therefore, the entire domestic space either becomes a bedroom, a bathroom, a living room or a kitchen. Wexler (1990) affirms this project "exists purely as a "structure for reflection", to meditate on the relationship between a person and the space he or she occupies".

Fig.39: The Kitchen Crate, containing what Wexler thought were the essential elements to perform this activity. However, there is no information how he got to condense the elements of the kitchen to this result. (Wexler,1990)

Fig. 40: The Crate House Project presented alternative solutions to domesticity based on the preferences of their inhabitants. Nevertheless, it remained as an art piece and was never considered a real proposal. (Wexler,1990)

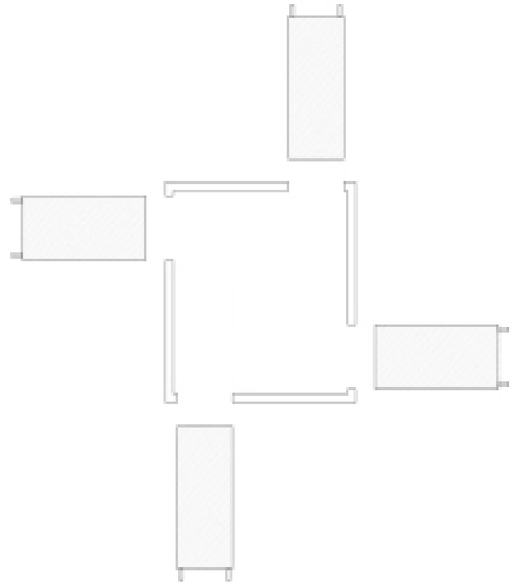


Fig. 41: Diagram showing the mechanism of Crate House, in which only one activity can happen at a time, eliminating coexistence of different functionalities. (Grimstad, 2013)

Kitchen Planning Today by Brigitte Kesselring

1. The Kitchen is a central part of the entire home concept and has to be considered during the development of the floor plan.
As a rule this is one of the architect´s responsibilities

2. The kitchen is not an arrangement that can be placed freely or at will, but part of a building´s services and firmly linked to the entire installation network (water, electricity, gas, ventilation, etc.)
The architect and building planner are responsible for placement and the type of connections. The connections themselves are subject to their own norms, in some cases, also official regulations.

3. The Kitchen consists of furniture elements and appliances there combined or assembled and, therefore, their dimensions have to correspond. As a rule, they are industrially manufactured. This is the responsibility of the Kitchen engineers (furniture) and appliance manufacturers, as well as associations, other higher institutions, and legislators. The technical detail planning is as a rule carried out by the kitchen technician.

4. The kitchen is individual, its basic composition is defined in detail by the developers. The architect or interior architect, the kitchen sales staff, appliance sales staff, the kitchen planner and/or the kitchen technician, and often combinations thereof, are responsible for this.

5. The central function of the kitchen is cooking. Cooking is a craft, a culture, it can be a hobby or a profession, a necessary evil or a daily ritual, a lonely procedure or social event. The users and planners are responsible for anchoring these in the kitchen plan.

6. The kitchen is a multi-functional room, is a work place, home, and living space at once, and this for either many or one person. The relative importance of the kitchen is influenced by individualism, family, family size, society, and culture. The kitchen is used in daily life by the user. The requirements are constructed by the developer.

Fig. 42: Traditional kitchen planning standards, such as the ones given by Brigitte Kesselring need to be reevaluated according to our current style of living.

04 DESIGN PROPOSAL

How to design for a never ending evolution of trends and lifestyles? Since kitchen stories present so many paradoxical and different scenarios, I decided to use my experience in the kitchen as a case study to present the lifestyle students and young professionals are presently facing.

I am currently an international student in my mid 20s living in Rotterdam, The Netherlands. I share a 60 m2 apartment with a young Spanish dentist who works full time. When I make use of the kitchen, I do it to cook a meal for myself. My cooking habits can be described as practical, since I have to confess I have not developed a cooking passion, as other people have. Still I can argue that I manage to cook delicious and nutritious meals, since that doesn't mean I do not have healthy habits. My kitchen diary on a typical day would look something like this:

- Breakfast: Oatmeal with fruits. Instant coffee.
- Lunch: Taken in the cafeteria of my school.
- Snack: A mandarin or portion of fruit.
- Dinner: Vegetables, quinoa and an easy to prepare chicken or fish recipe I usually find on the Instagram account "Tasty" (which currently has 85 million followers on Facebook).

My roommate habits are somehow the same: our fridge is full of pre-ready salads, already chopped vegetables and pre-cut chicken filets.

We belong to a group of young and middle-age students and professionals, that can be defined as "young urbanites", who either share apartments or belong to the rising single-occupancy statistics. In our apartment, the kitchen is not the "heart of the home" as is usually depicted on the media. The heart of MY home is my bedroom, where I have my personal pictures and its decorated with postcards from my friends and art posters. It is in this space where I usually spend most of my time and eat most of my meals. Growing up in Guatemala City, I would habitually share meals with my family. In the present, I have less structured domestic rituals, in which eating and cooking as a shared activity does not match my daily life. As I describe this lifestyle to others, a lot of people were able to identify themselves with it, while others gave me a worried look.

When I began living on this apartment, I did not make any changes to the kitchen. It already included different appliances and making an investment in personalizing it didn't seem to be worth it. Most likely, I will not be spending more than 4 years in this city. As I look at my kitchen aesthetics, I would guess it was designed in the 60s. If compared to Germany in the mid-fifties, it was estimated that a housewife would spend 63 hours per week on kitchen chores. Just on observation, I would dare to guess I spend less that the half of that time.

Fig.43: Inside our fridge. The two top shelves belong to my roommate, and the two lower ones belong to myself.

0.4.1 METHODOLOGY

To be able to have more accurate data, I installed a Kinect scanner and a VVVV program to study the time and activities done in my kitchen during four days. Historically, time and motion studies were part of a long tradition of using empirical data to make places and people more efficient. Just as Beecher and Frederick did. However, they were intended to make cooking more efficient for the housewife. With my studies, I did not intend to "liberate" myself from the house chore that cooking implies, but to understand how the space is being used to offer a different experience within the different areas of my domestic space. I like to think of myself as a modern Bülow-Hübe, who in 1969, with motion studies did a rigorous, passionate and careful understanding of women's movements in the kitchens of Montreal. Like myself, she described herself as a researcher-designer, but not a cook. She points out how not being the typical cook, actually gave her critical distance with respect to kitchen design.

We live in a new era were data is shaping not only the economy, but has a direct influence in designers and architects. Just as Space Caviar (2014) stated: "The quantification of the home, the reduction of the symbolic dimension of inhabiting to manageable numbers, is giving shape to new forms of housing, to the material dimension of living."

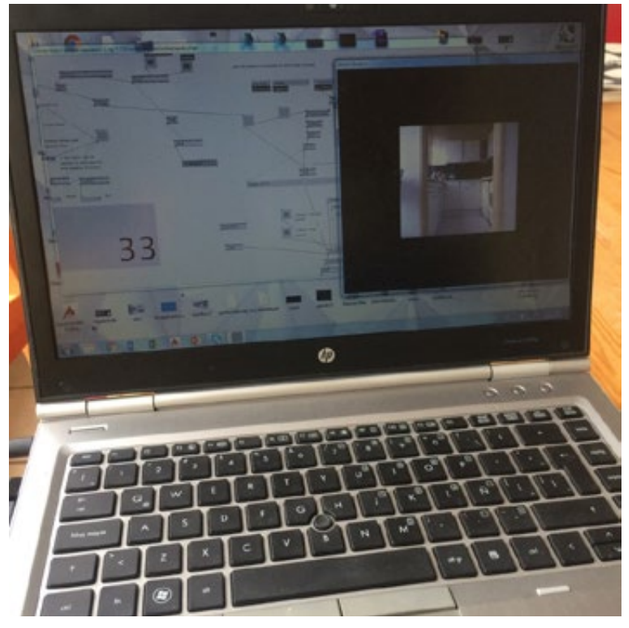


Fig.44: With Microsoft's Kinect depth-sensing camera and a code written in VVVV it was possible to obtain data using the kitchen as a physical interface and the human presence in the space as the input.

Fig.45: The Kinect sensor was able to detect anytime there was human presence inside the kitchen. The VVVV code would track the time in hours, minutes and seconds and would take a screenshot of the activity that was taking place.

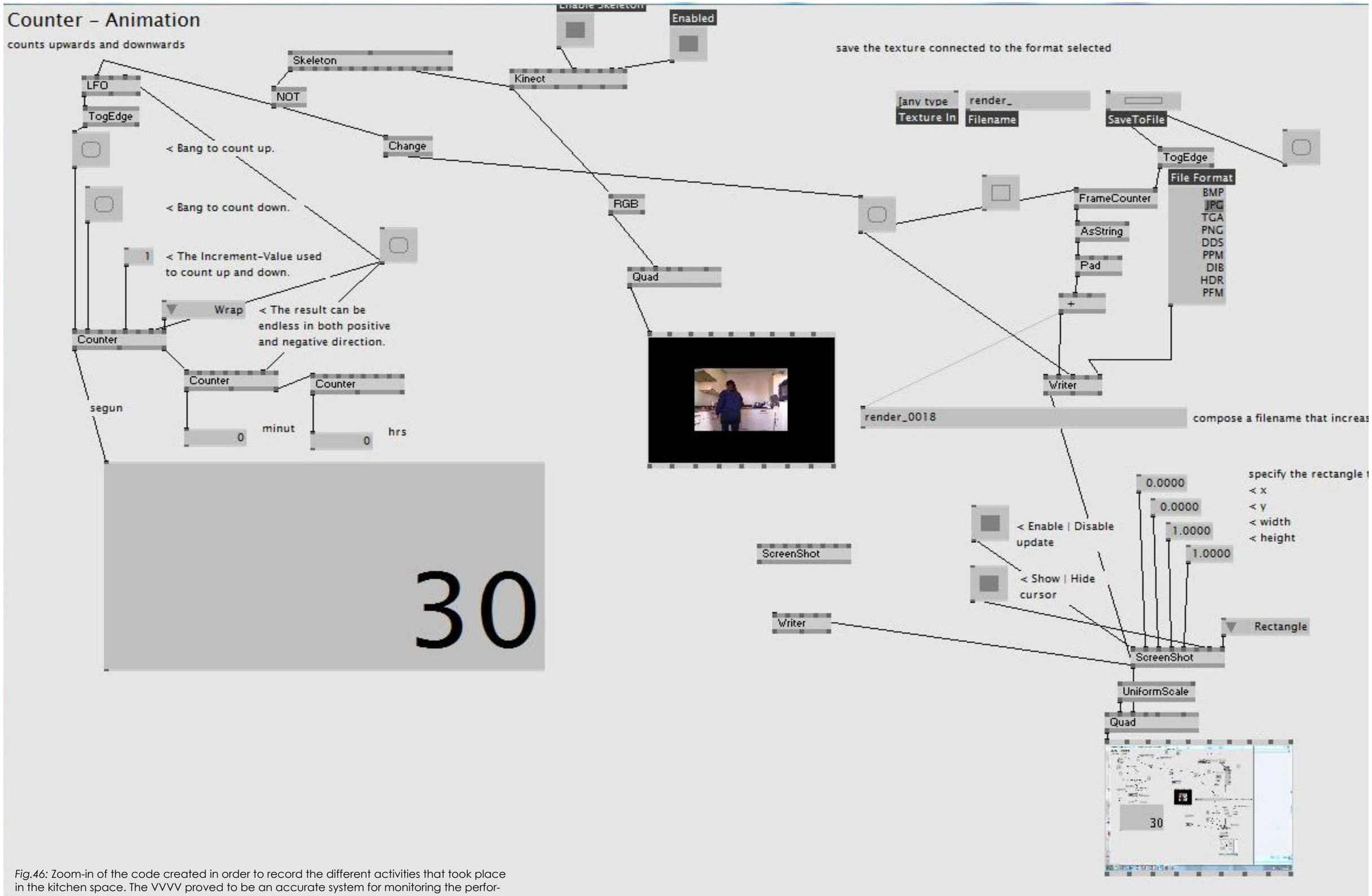


Fig.46: Zoom-in of the code created in order to record the different activities that took place in the kitchen space. The VVVV proved to be an accurate system for monitoring the performance of daily life activities inside the kitchen. The data obtained allowed a deeper analysis of how the space is used in terms of time.

Fig. 47: These are some samples of twhe Screenshots allow a better understanding on how the space is used on terms of time and activities. The Kinect could detect every movement even

0.4.2 Case Study: William Boothlaan, Rotterdam.

The following case study shows the results of the Kinect and VVVV experiments that took place in my kitchen in order to gain parameters for a new design that enables the liberation of the kitchen.

From 17/02/2017 to 20/02/2017 my roommate and I made use of the space for 1:17 minutes. This is approximately 2.33 hours per week which contrasts highly with the 63 hours that were taking place where the standards of kitchen design were stablished. According to the Kinect data, the use of the space was not used to its fullest as it will be described in the following pages

Fig. 48: The kitchen has an area of 5.87 m2.

Fig. 49: The kitchen presents fitted cabinets, and the basic appliances: a fridge with freezer, a mini oven, a four burner gas stove, and a double sink.

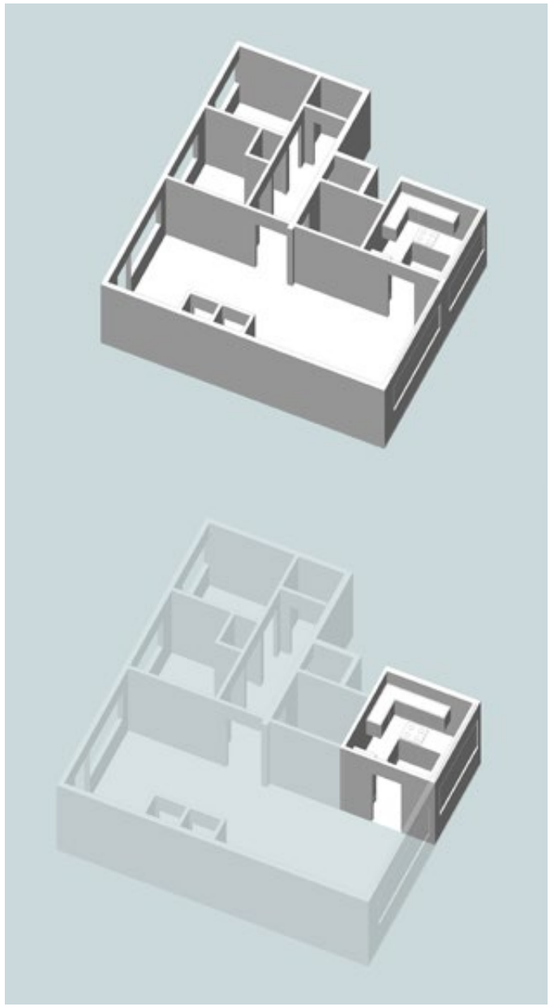


Fig. 50: The relationship between the kitchen and the other spaces of my domestic sphere.

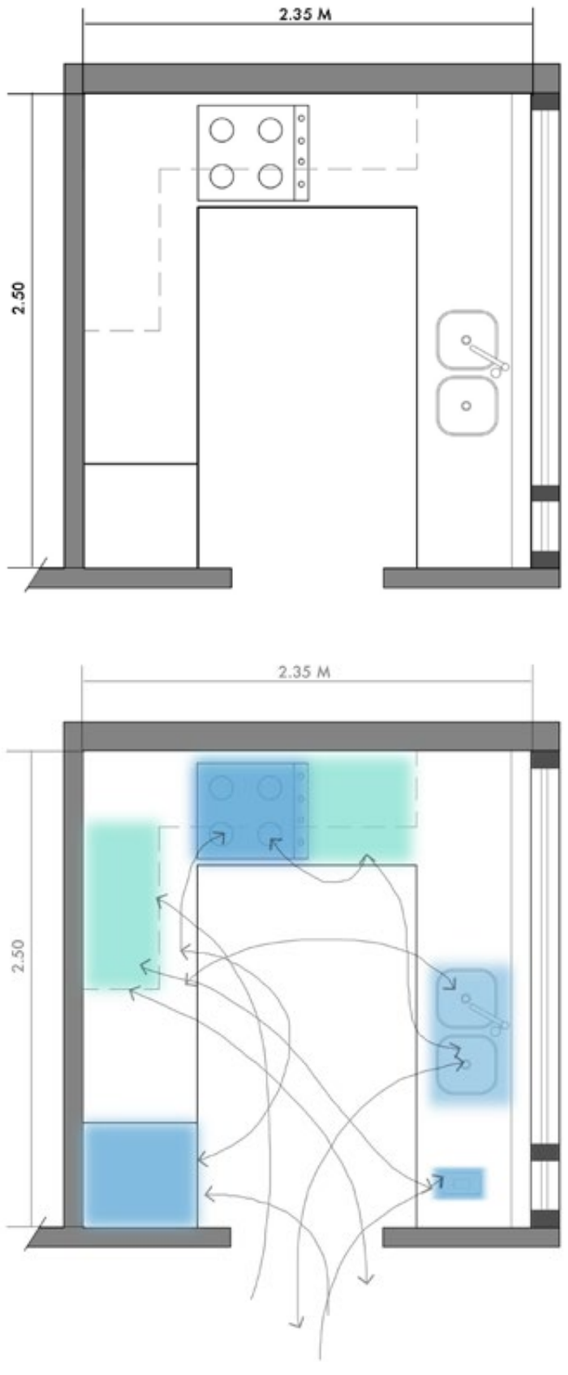
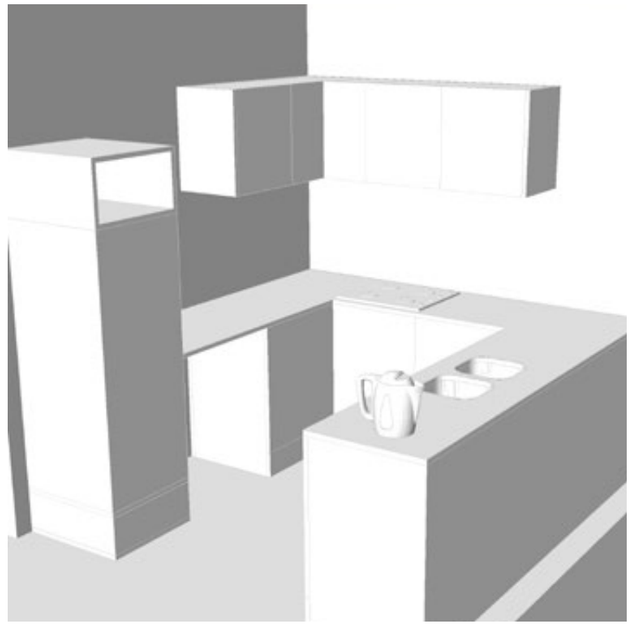


Fig. 51: Just as Frederick´s studies in 1913, the results allow to study the motions inside the space. The space is divided by colors: blue-appliances, green-storage space & light blue-preparation areas. The trajectories don´t follow the typical "kitchen triangle, but other routes. While some are dependent of others, some act individually.



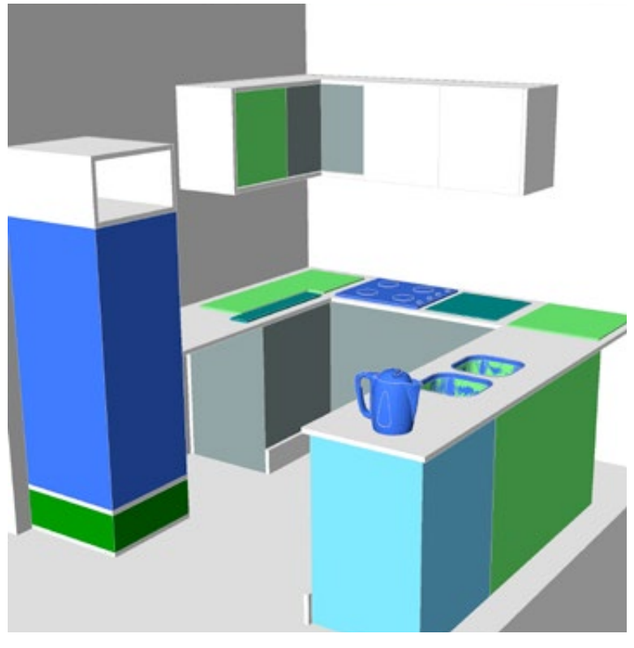
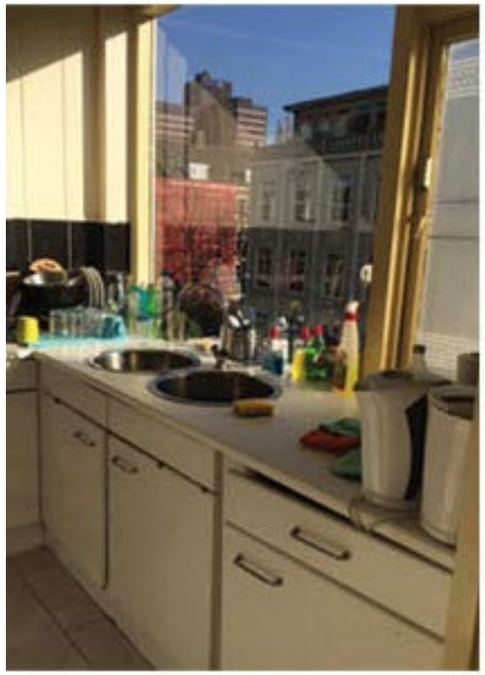


Fig. 52: In the same color distribution of Figure 44, the highlighted areas show the different functionalities within the kitchen space in a 3d visualization that allows to visualize areas and volumes.
Light blue belongs to garbage space



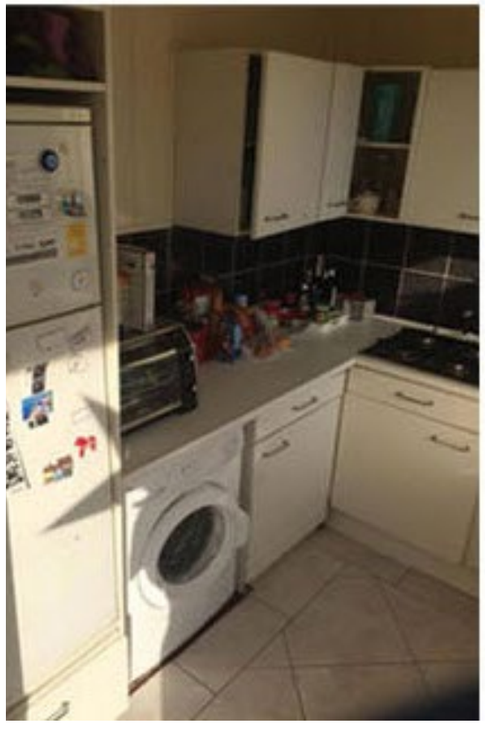


Fig. 53: Different perspectives of my kitchen. wwThe highlighted areas in blue show the surfaces that are being used according to the data analysis. These can be subdivided in preparation, garbage, appliances and storage space.

With the collection of data from the Kinect and VVVV it was possible to analize the total area in use for the **preparation of meals**.

The preparation area in total includes 2.19 m2. However, as the light blue shapes shows, only 0.30 m2 are really being part of my cooking rituals, which leaves 1.89 m2 of space with no use. The third diagram represents the relationship between the uses of the preparation area, in which the blue surface represents 86.30 % of the superfluous space.

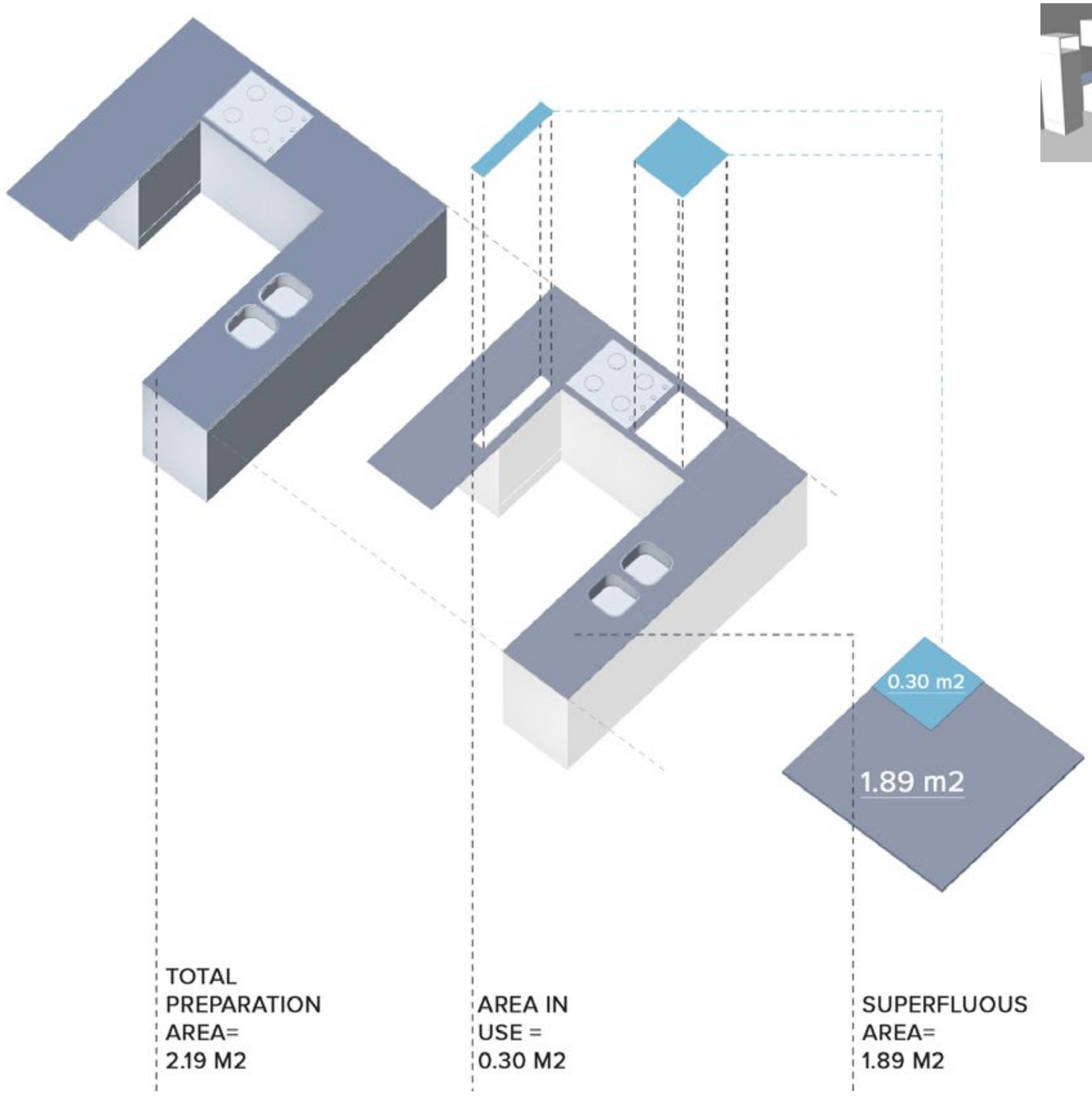


Fig. 54: Preparation space data analysis.

With the collection of data from the Kinect and VVVV it was possible to analize the total area in use for **appliances and garbage space.**

The garbage space is located below the preparation area and it occupies 0.35 m2, and a volume of 0.31 m3, however this space can be reduced to 50% not only for its use, but also by cleaning it up twice a week instead of just one. The diagram focuses on the main appliances used in the kitchen, which are: a fridge, a 4 burner gas stove, and a sink with two units. The data collected shows that the sink can be reduced to one unit, and the gas stove can be reduced to two burners. The size of the fridge can also be reduced, since it depends with how many times a week it is supplied by groceries.

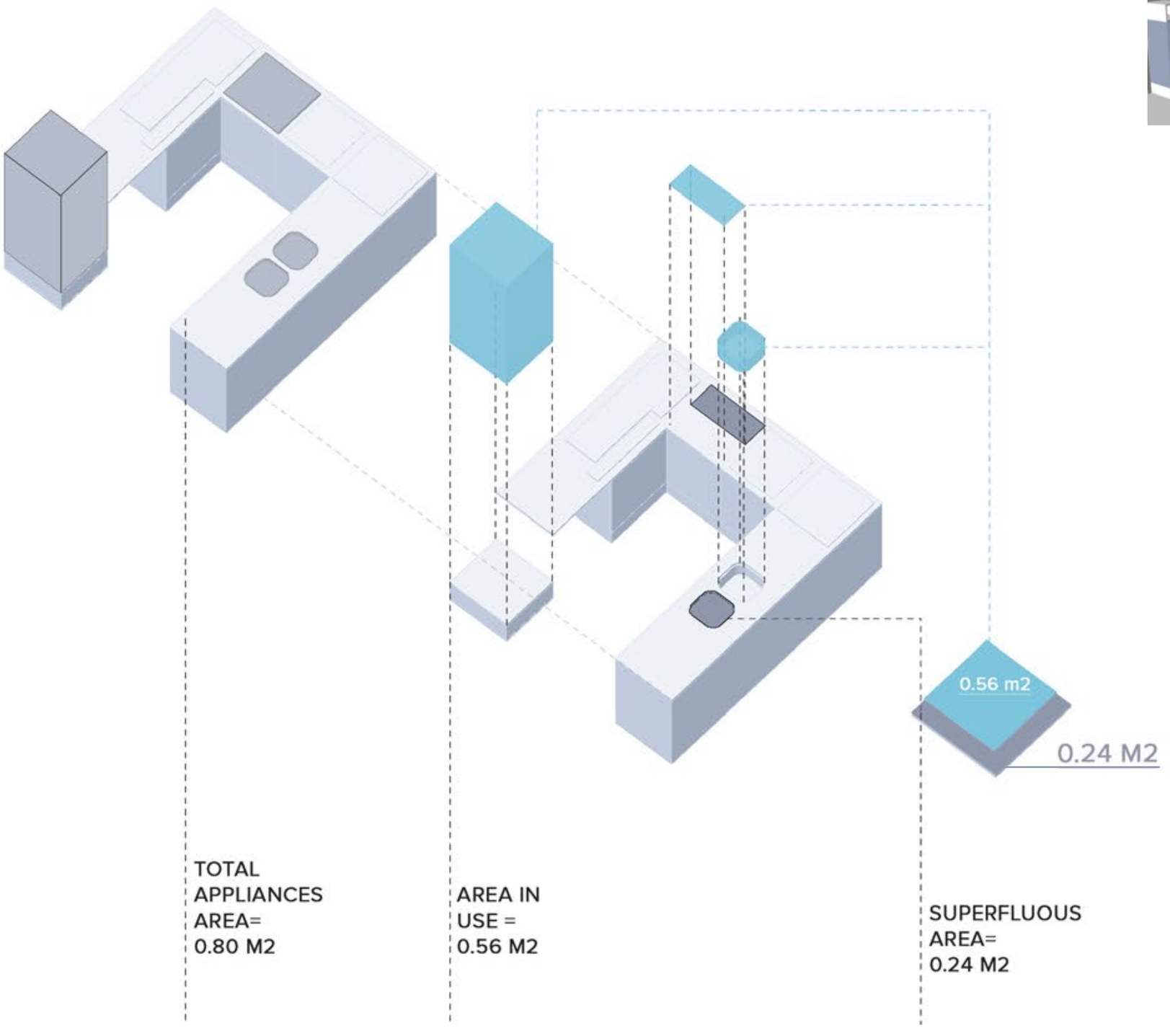


Fig. 55: Space used by appliances data analysis.

With the collection of data from the Kinect and VVVV it was possible to analize the total area in use for the **storage space.**

Storage space represents the biggest percentage in the area of the kitchen with 3.83 m2. However, only 1.81 m2 are being used which means that 52.74% of the space is superfluous. The Storage space besides being analyzed in terms of the area it occupies, is relevant to acknowledge the volume it signifies. According to the Kinect experiments, from 2.36 m3, only 0.90 m3 are being used. This means 61.44% of the space is not necessary according to its use.

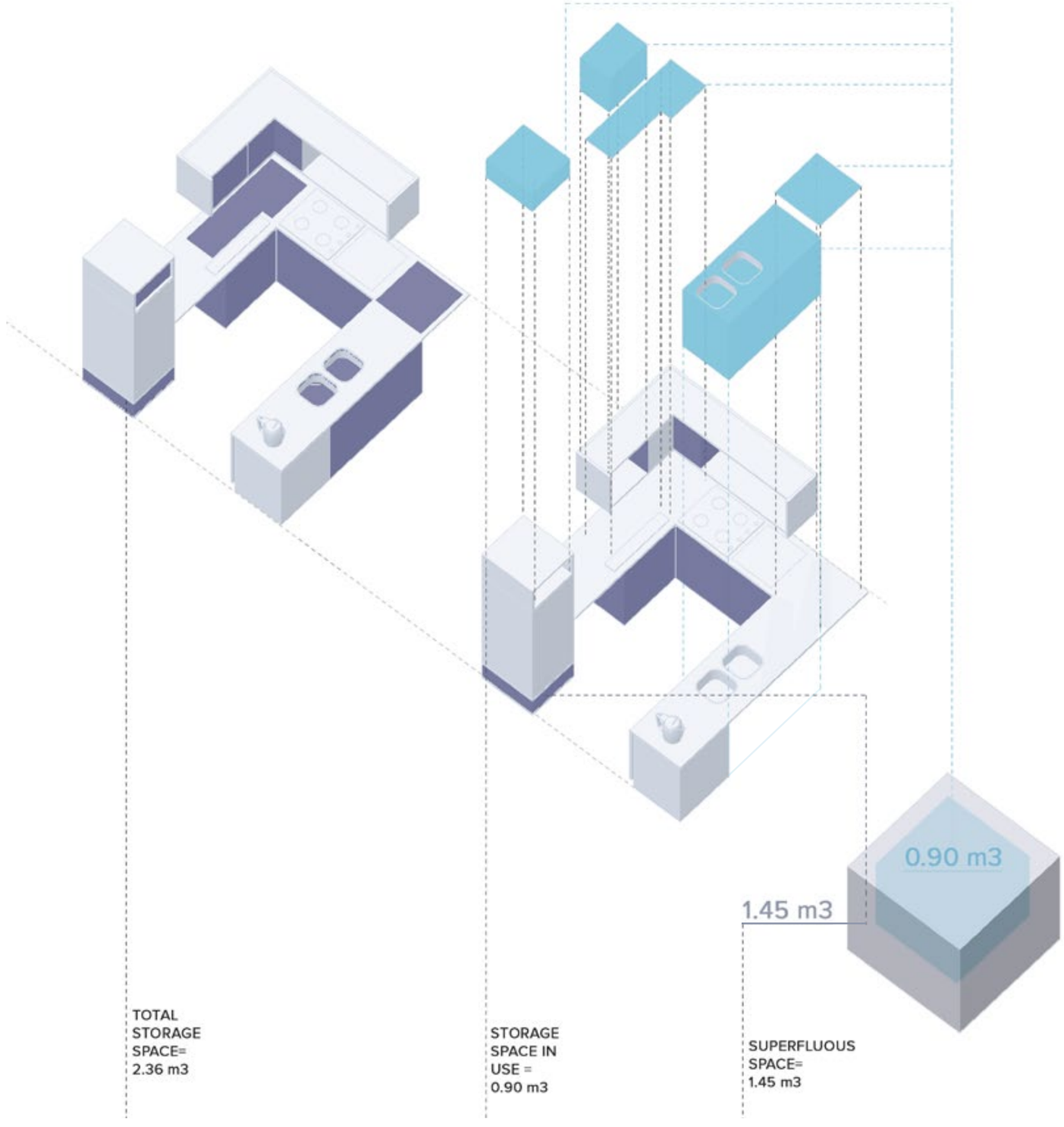


Fig. 56: Storage space data analysis.

The result of the data not only creates new parameters for a more accurate design, but also makes us reflect on how many unused square meters the kitchen is enclosing. The sum of all the used space (2.85 m2) only represents the 65.97% of the total of the kitchen surfaces. 34.03% which corresponds to 4.32 m2, is space that actually is not being used.

Fig.57: From a total of 7.17 m2 in kitchen surfaces, only 2.85 are being used.

With this data, a new model occupying less surface space can be proposed. One that is not fitted in the space, but that allows to be used in different sites Not with primarily intention to gain more space, but to gain more possibilities of experiences within the domestic space. It would not only satisfy real necessities, but also allow more flexibility in how cooking is known and perceived. Advances in technology now offer possibilities to make a transition to the static to a more flexible and movable architecture. One that allows the liberation of the kitchen from the ground and walls. New meanings that adapt to this lifestyle would emerge, and the presumptions of what a kitchen is and how it should look like would be challenged, allowing new domestic experiences. If the kitchen is liberated, what would happen to the empty space? Perhaps the resident is an artist, who could benefit with a new studio or as the case may be, the resident needs an extra bedroom. With the rise of the sharing economy the sense of ownership is shifting towards a different way of collaborative consumption where under-utilized assets are reintroduced with a new value. Perhaps a solution is to introduce this space to the trending economy, and re imagine all the different uses 5.87 m2 could have.

The liberation of the kitchen could respond to actual diverse necessities residents have. The traditional expectations of what a house and a kitchen looks like are no longer the rule. If the kitchen can be liberated, so can the notion of domesticity.

Form follows____?
Form follows lifestyle

Fig. 58: Based on a study of prices of AIRBNB and WEWORK in the area, the new space shows possibilities to be transformed into a profitable asset, with a return of around extra €360 per month.

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