Kevin Hollander

BUILDING INDIVIDUALS

RETHINKING URBAN DESIGN IN LIGHT OF THE DIGITAL TRANSITION

WITHIN AMSTERDAM-ZUID

BUILDING INDIVIDUALS

Master Thesis
Urbanism
Kevin Hollander
advised by
Maurice Harteveld
Birgit Hausleitner
Georg Vrachliotis

2022/2023
Studio | City of the Future

Department of Urbanism
Faculty of Architecture and the Built Environment
Delft University of Technology

PREFACE

This thesis is an explorative thought experiment from the perspective of an Urban Designer.
Within this thesis the question is raised as to how the digital realm affects the physical realm of the city. How has the computer, the internet, the mobile phone and more, affected architecture and urban design? Is there a relation even?

Through the readings of Alvin Toffler I came to the conclusion that the digital transition is not just a technological transition, but a societal one. It has changed the way we think, and continues to do so. It will require from us a different way of designing, building and living in the future city.
Understanding what the digital transition brings to the forefront gives us a different perspective to design the city. While the digital transition is something that affects us all globally, it will be helpful to understand the effects within a certain context as well. This thesis takes place within the context of Amsterdam-Zuid.

In summary, the digital transition affects us all differently, society is individualizing. It will require a design approach and design different from our current top-down approach. Should we consider the digital transition way more in our future design, I believe we will be able to make a city much more inclusive for all sorts of individuals.

CONTENTS

MOTIVATION

We didn't end up going to Mars.
We ended up going into a computer.
- Alex Becker, 20221

Halfway my studies of Urbanism at the faculty of Architecture and the Built Environment at the Technical University of Delft we were suddenly hit with the COVID-19 pandemic. Our society closed down and the few interactions we had were usually done digitally. It was especially during this period that I grew very interested in how both the digital and physical realm might affect each other. While these two worlds seemed at first two separate entities, I realised how so many digital tools actually affected the way we interact with each other in society. During the pandemic you could say I was completely absorbed and fascinated by the digital world. While checking up on previous research about the interplay between the digital and the physical realm, I noticed there was not much modern research regarding this topic, save for a few from the eighties. At the same time I noticed that much of our modern research in urban design is dedicated to sustainability, especially in the ecological sense. Not much seemed to focus more on the societal aspect of sustainability in my opinion. It was also during this period that I read 'The Third Wave' by Alvin Toffler. Alvin Toffler was a futurist from the eighties that predicted so many societal changes that would occur because of the 'digital transition'. It was this work that inspired me to dedicate my thesis towards the mix of the digital and the physical. Toffler gave me a completely new perspective of how so many things in our modern day by day society has been affected by the digital transition. What he also speculated on were issues that we are facing and will face in the future. It was especially these issues that I would wish to tackle from the perspective of an urban designer. It filled me with the question, how can urban design futureproof our society for the citizen of the digital era.

I. THE DIGITAL TRANSITION

Urban design and the digital transition. On first sight it might seem as a rather odd combination. How could the digital realm, something non-physical, have any effect on the field of urban design which is all about the built physical realm and vice versa? This reading serves as a reaction towards the digital transition from the perspective of an urban designer. Before a reaction can be made let us understand the object that we are reacting to. In the case of this reading that would be the digital transition. What is the transition? What is changing?

In the first section we dive back into the past to see what the digital transition is from the perspective of a futurist writer, Alvin Toffler, who made predictions on the changes that will occur in society at the time of writing. Following the past, we look into the present, can Toffler's predictions be observed in our modern society? What other phenomena occur that are related to the digital realm? Finally, the last section shows us that the digital transition is in fact a societal transition, it gives form to three drivers of change that affect our society on a global scale. In essence it changes our way of life and because of that it will also demand a different environment to live in.

Each section has already been divided into the three drivers of change; desynchronisation, delinearisation and multispecilisation. For readability it is useful to already have these three drivers in the backs of your mind while going through this booklet. Do take in mind though, that these drivers were only deduced after reviewing the past, through Toffler, and present, through observations and anecdotal evidence. For the readers who are curious about the drivers of change of the digital transition, I invite them to also take time to read Toffler's readings and think about how digital systems have affected themselves and even could affect them in the future to see if they come to the same drivers as I did within this thesis.

Revisiting Alvin Toffler

Much of the work that follows afterwards in this reading has been heavily inspired by the works of Alvin Toffler. Alvin Toffler was a futurist who wrote much about the impacts of 'now modern' technologies and how they would affect our society on a global scale. What made his works interesting is how they were written around the 70-80s, before smartphones dominated our society and before the major spread of internet. Of all his works, it was especially 'The Third Wave (Toffler, 1982) that inspired me to explore whether the physical realm of urban design is linked with the digital realm.

Toffler describes how our society as a whole is going through waves. The first wave was the transition from our hunter-gatherer society to a society of agriculture and settlement. Afterwards came the second wave, the industrial revolution. People flocked to the cities to work in the industrial realm. The second wave brought with it the dogmas of standardisation, specialisation, concentration, centralisation and maximisation (Toffler, 1982). No doubt it brought many benefits to society as a whole. An example of the benefits of standardisation would, in Dutch context, be the 'Kinderwetje van Van Houten', a law which forbade children up to the age of 12 to work (Archief van het Kabinet des Konings, 1841-1897). Children went to centralized institutes of teaching also known as grade schools, which definitely benefitted their quality of life compared to the past. Now, after the industrial era, comes the third wave. The third wave is the one we are subject to in the present, the digital transition. According to Toffler it shatters all the dogmas we have upheld in the second wave society. Our way of life changes. It allows us to even question basic things such as standardized education for children. Is this still such a good thing in modern society?

What makes the book The Third Wave so interesting is that the dogmas of the second wave can still be observed in our current way of urban design. The design process, while it has changed in the recent years, still often favours a centralised, top down, way of design. City plans often tend to gentrify a neighbourhood, drawing in citizens that are economically beneficial, expulsing the former residents, which can be seen as a negative aspect of maximisation and concentration (Greenspan, 2016). I would argue that urban design tends to lag behind society. If we are able to understand the meaning of the digital transition for society, and therefore the future to a certain degree, we will be able to design our cities in a way that is socially sustainable for the foreseeable future. Ignoring the digital transition will only slow down our inevitable change of society, and require us to make nonstop surgical designs since whatever we might have designed, actually did not fit with the needs of certain individuals.

I would like to highlight a few elements brought forth by Toffler in the 80s. Some which might have very clear examples in our modern day life, whilst some might require a bit of prospecting into the future. In any case, I would love to invite you, the reader, to think about other phenomena in your current life that might be an example of these elements.

Desynchronisation

(1) BLIPCULTURE

"The diversity of offerings has also sharply increased, with different stations appealing to specialized audience segments instead of to the hitherto undifferentiated mass audience."
(Toffler, 1982, p. 176)

The de-massification of the media de-massifies our minds as well. During the Second Wave era the continual pounding of standardized imagery pumped out by the media created what critics called a "mass mind."

Today, instead of masses of people all receiving the same messages, smaller de-massified groups receive and send large amounts of their own imagery to one another ... This, in part, explains why opinions on everything from pop music to politics are becoming less uniform. Consensus shatters.
(Toffler, 1982, p. 181)

Toffler describes here how there will be many different forms and types of media outlets in the future. Just to name some anecdotal examples, you could think of on-demand video services, such as Netflix or Disney+, different types of social networks such as Twitter, Reddit, 4chan and Facebook, or local newspapers each covering different topics. Being able to pick our own media desynchronises us from each other, it will be more difficult to find common ground with even your neighbour, for you might not share anything at all but the street you live in. For the urban designer it raises the question, how can we design common space if there is no common mindset?

I. THE DIGITAL TRANSITION

(2) TELECOMMUTERS

"Corporate and government employers will discover that shifting work into the home—or into local or neighborhood work centers as a halfway measure—can sharply reduce the huge amounts now spent for real estate."
(Toffler, 1982, p. 218)

What Toffler describes here is that rising energy costs of commuting will bring forth people that will decide that their work can be done from home. While the price of commuting certainly can be a deciding factor at the time of writing, it is not the only reason people choose to work from home. In modern times these types of people can be found in varying industries. Again this poses many questions for urban designers; what is the meaning of transport infrastructure? What do people, who work from home, require of their surroundings?

(3) NON-NUCLEAR LIFE-STYLES

Today, a fifth of all households in the United States consists of a person living solo. Nor are all these people losers or loners, forced into the solo life. Many deliberately choose it, at least for a time.
(Toffler, 1982, p. 228)

During the second wave, society had an ideal household composition, at least in the United States, according to Toffler. There was the mother who did the chores at home, the father who worked in the industrial sector and three children who went to school during the day. Having this 'ideal' made it rather easy to design homes. All homes would simply need to accommodate the needs of this specific household form. This is what we can see in many cities across the globe when looking at homes built during the industrial revolution. Industrialisation brought forth the need of much housing, but most of these housing have all been designed for the 'ideal' household, the two parent and three children family. Toffler speculated that this ideal would disappear, and rightly so. Nowadays we see a diversity of household compositions. Society realised there is no such thing as an 'ideal' household. There are people who prefer to live alone, some live together with their friends, some prefer to live with many generations of their family in the same home, there are more types than I could possibly mention. This is again an example of how individualisation and desynchronisation has affected the way we live. We will need many forms of residentials spaces. Again it raises many questions for the architect and urban designer. How can we design such diversity in the city, in a neighbourhood or even in just one building block?

(4) THE ELECTRONIC EXPANDED FAMILY

One can likewise picture the work-at-home family of tomorrow inviting an outsider or two to join it— for example, a colleague from the husband's or wife's firm, or perhaps a customer or supplier engaged in related work, or, for that matter, a neighbor's child who wants to learn the trade. One can foresee the legal incorporation of such a family as a small business under special laws designed to foster the commune-cum-corporation or the cooperative.
(Toffler, 1982, p. 237)

Here again, Toffler expects that household compositions can change at a high pace in a short time frame. If this were to be the case, should our housing designs be as static as they are now, or should we shift towards a more dynamic way of living?

(5) THE END OF NINE-TO-FIVE

The reason is that the Third Wave, as it sweeps in, carries with it a completely different sense of time. If the Second Wave tied life to the tempo of the machine, the Third Wave challenges this mechanical synchronization, alters our most basic social rhythms, and in so doing frees us from the machine.
(Toffler, 1982, p. 263)

Something which might seem very obvious now, but might have seem rather irrational at the time of writing. The pace of the machine does not exist in many of our modern working sectors. People no longer need to work during the same timeframe as others, for this was only a necessity of the assembly worker. It challenges our current built environment. How and when do people move? What happens in the city during the day and night? Where do people work alone and where do people work together?

Delinearisation

(6) THE CAMPAIGN FOR CHILD LABOR

Certain forms of work, indeed, might be specifically designed for youngsters and even integrated with their education. (Anyone who underestimates the capacity of even very young people to understand and cope with sophisticated work has not run into the fourteen- or fifteen-year-old boys who serve, probably illegally, as "salesmen" in California computer stores.
(Toffler, 1982, p. 236)

Another crazy yet fascinating notion made by Toffler. Without returning to industrial era conditions, working in certain forms might actually be stimulating to children and give them a more realistic view on life than what can be taught at school. Everywhere on the globe we can see that children do not develop at the same pace. Some learn faster than others, some learn slower, should we then still have people learn in centralized institutions where the tendency is to have students learn at a specific pace. If we break this dogma and everyone learns at a different pace we can even ask ourselves a fundamental question; at what point does someone stop being a child? As adults we learn many new things while in the working field (which is also actually a phenomena of the digital transition!), can this not be case for children as well then? Again many questions for the urban designer; how and where do we learn in the city? what do learning spaces look like? who are the target groups for learning?

(7) GROWING UP DIFFERENT

To begin with, the child of tomorrow is likely to grow up in a society far less child-centered than our own. The "graying" or aging of the population in all high-technology countries implies greater public attention to the needs of the elderly and a correspondingly reduced focus on the young. Furthermore, as women develop jobs or careers in the exchange economy, the traditional need to channel all their energies into motherhood is diminished.
(Toffler, 1982, p. 399)

The third wave will create a different environment for everyone. The people that will interact with the children of the future will likely be individualised as well, and this forces the learning child to develop along a rather delinear and desynchronized path of life. Unable to purely rely on institutions or other dogmas for guidance, one will more than everneed to be able to guide their own pathway from an early stage of life.

(8) THE NEW WORKER

As the Third Wave cuts across our society, work grows less, not more, repetitive. It becomes less fragmented, with each person doing a somewhat larger, rather than smaller, task. Flextime and self-

I. THE DIGITAL TRANSITION

pacing replace the old need for mass synchronization of behavior. Workers are forced to cope with more frequent changes in their tasks, as well as a blinding succession of personnel transfers, product changes, and reorganizations.
(Toffler, 1982, p. 400)

Our work will change. The power of the specialist will diminish and there will be much more need for people who can adapt to many different circumstances. People who can link different fields of study with each other, people who will be able to quickly shift between expertise. Creativity from the individual will be much more relevant in every sector. The new worker will demand a very dynamic way of working. At the same time we need to ensure that the places we design foster a creative growth within the individual. How can we ensure this when designing public space?

(9) THE CONFIGURATIVE ME

The de-massification of the media today presents a dazzling diversity of role models and life-styles for one to measure oneself against. Moreover, the new media do not feed us fully formed chunks, but broken chips and blips of imagery. Instead of being handed a selection of coherent identities to choose among, we are required to piece one together: a configurative or modular "me." This is far more difficult, and it explains why so many millions are desperately searching for identity.
(Toffler, 1982, p. 405)

As the section of (1) BLIPCULTURE mentioned, we will have many bits and pieces of media interact with our lives at different stages of our life. No individual will process this in the same way, for no person will ever be in contact with the exact same conditions as others anymore. This breaks the linear notion of life, information that changes us might enter our mind during childhood but even during a later stage of our life. Each time creating different pathways of life we might follow. One might compare a person's life to a decision tree which sprouts new branches each time new information enters the brain. Can we as urban designer accommodate such a diverse and everchanging way of life in the city?

Multispecialisation

(10) ENHANCING THE BRAIN

In altering the info-sphere so profoundly, we are destined to transform our own minds as well— the way we think about our problems, the way we synthesize information, the way we anticipate the consequences of our own actions. We are likely to change the role of literacy in our lives. We may even alter our own brain chemistry.
(Toffler, 1982, p. 188)

Having different bits and pieces enter our mind also enables us to synthesize new information very differently from the past. Different people will have different perspectives on the same topic. How can we as urban designers bring people with different views together in public space?

(11) PROSUMER LIFE-STYLES

Thus we are moving toward a future economy in which very large numbers never hold full-time paid jobs, or in which "full- time" is redefined, as it has been in recent years, to mean a shorter and shorter workweek or work year... In the Third Wave context new life-styles based half on production for exchange, half on production for use, become practical.
(Toffler, 1982, p. 292)

Our economy will be different. The industrial era focused on consumption and production, but this line will be blurred after the third wave. We might work to gain experience or knowledge in a certain field, it might be part of a hobby you have. In essence our work will grant us something that facilitates our lifestyle or interest, instead of just being about producing money to live our livelihood.

(12) WHOLISM AND HALFISM

These deep changes in our views of nature, evolution, progress, time, and space begin coming together as we move from a Second Wave culture that emphasized the study of things in isolation from one another to a Third Wave culture that emphasizes contexts, relationships, and wholes.
(Toffler, 1982, p. 318)

The ideal of specialism will make place for holism. It will not be enough to understand specific parts of something anymore. We will understand that everything will take place as part of a greater whole. This shift in mindsight will deeply affect the way we solve our issues and learn.

Back to the 'future'

Now we jump back to the present, or rather 'Toffler's future'. I already made some small remarks on the notions of Toffler in the previous sector as to how some look like in modernity. Now though, we look at a few anecdotal phenomena in the present that are worth mentioning to gain a greater understanding as to what the digital transition entails.

Desynchronisation

(13) DIGITAL NOMADS

An interesting phenomena that takes the element of 'TELECOMMUTERS' mentioned by Toffler to the extreme. These people have completely decoupled from the industrial timeframe. How is this made possible? Their work takes place online and all that is needed to facilitate their work is a laptop for example. They jump from place to place, bringing their work wherever they go. These could be people who work in design, people who work in IT, people who develop online courses, or write blogs. It was especially during the COVID-19 pandemic that this workstyle saw a major explosion (MBO Partners, 2021), as can be seen in Figure 1. The quality of this lifestyle is being able to work wherever you want. It raises questions as to what draws certain nomads and what they expect from their environment.

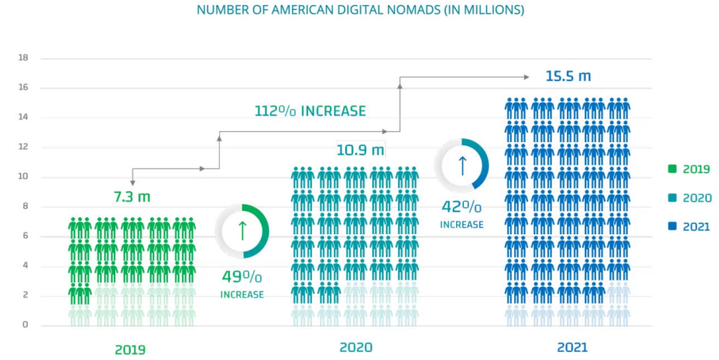


Figure 1: Number of American Digital Nomads (in millions) from MBO Partners

I. THE DIGITAL TRANSITION

(14) ECHO CHAMBERS
A negative aspect of the digital transition is the creation of echo chambers. This is no surprise as individualisation will of course make it more difficult for people to find common ground, especially when talking to a stranger. It gives rise to people who feel like they have been cast out by 'general society', if such a thing even exists anymore, and instead seek like minded individuals online. Once they do they often disregard the opinions of others outside their 'chamber'. It creates bubbles in society where groups of people only interact with like-minded people, hence the term echo chamber (Grimes, 2017). Bubbles of like-minded people where growth of the individual is limited for there is no way of having interaction outside your 'comfortable' surrounding. I believe this is a task that can be solved with urban design, how can we bring people who have different views together?

(15) RISING LONELINESS
An issue that has similar roots to that of the echo chamber, individualisation. The amount of people that perceives loneliness increases by the year in Europe (Ortiz-Ospina & Roser 2020). It varies by country for specific reasons as can be seen in Figure 2. Though it is no wonder, as people are already increasingly individualising, it becomes difficult to find people who share interests for a long period of time. Friendships that came to be because of having a long period interaction through chance with each other diminish. You will often meet people who share a specific interest as you, but great friendships can come from meeting people that are complete polar opposites of yourself. Everyone choosing their own lifestyle will of course mean that you might miss out on especially these random encounters. How can we as urban designers still bring people together despite such different interests?

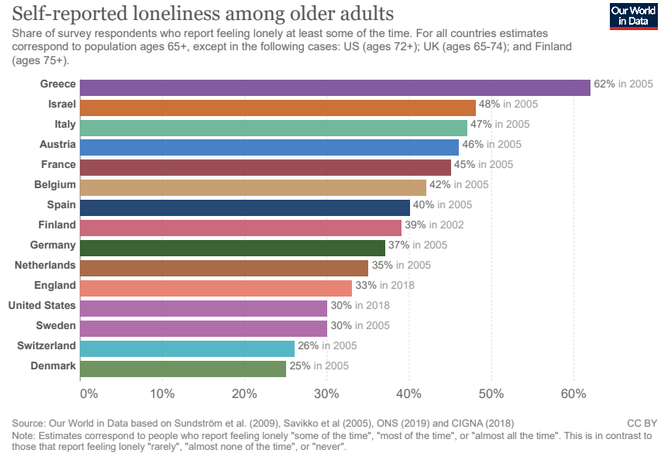


Figure 2: Self-reported loneliness among older adults from Our World in Data

(16) TIMESHIFTING
An interesting phenomena brought forth because of people working together across the globe. I had a first case experience of this in a university course where I was working with people from Australia, while I myself was based in the Netherlands. In any case, it is when people who are working with people from different time zones adjust their working hours to each other. One group might start a bit later, for example, their workday starts at 11 AM, instead of the usual 9 AM. Whereas the group on the other side of the world starts at 8 AM, instead of 9 AM. This concept is dubbed 'timeshifting' (Carmel, 2018). It changes the way our city should work along the time of the day. Will we still have rush hours? Do shops close at 6 PM? If I am a worker who has to bring his child to school at 9 AM while having to work at 8 AM is this still made possible in a different way within the city?

Delinearisation

(17) LIFELONG LEARNING
We are understanding that learning does not end after school. Along our careers we learn and interact in ways that changes the way we do our work, especially when dealing with different individuals. This notion of lifelong learning is already pursued by the United Nations through policy (Elfert, 2015), see Figure 3. It is yet another example of how 'blipculture' has changed our way of learning. Learning becomes an eternal part of our lives that starts when we are born and does not end until we depart from life. We need to understand how people learn, how this can be facilitated in public space, so that people can keep learning wherever the might find themselves in life.

(18) DISAPPEARENCE OF RETIREMENT
A politician should probably not mention this notion, unless he wants to lose all his support. But I believe that the digital transition breaks our linear way of life, together with the phenomena of lifelong learning even the whole concept of retirement might disappear. Our industrial era way of working brought forth many cases where our work did not truly align with our interest. Retirement in this case seemed as a reward after our years of heavy toil where we could finally cast of our shackles of the industrial machine. I believe if we fully embrace the digital transition we can steer towards a more adaptive world where whatever our work might be it aligns more with our interests and ability. If any of these factors change at a certain stage of our life it can easily be adapted by the individual. We will merely change our lifestyle, we might stop doing

Figure 3: United Nations Sustainability Goal from Barcelona Institute of Global Health

I. THE DIGITAL TRANSITION

manual labour when our body demands it, but we could still provide the knowledge we have to others in the form of teaching for example. There already are examples here and there of people who do not truly retire (Laal, 2011).

Multispecialisation

(19) THE SLASHER

Another noticeable phenomena is the rise of the 'slasher' as dubbed by Alboher in her book 'One person multiple careers'. What is so great about actively pursuing one career? Are we not all beings with many different interests and should this not be reflected in our workstyle? A lawyer might at the same time be a painter, a nurse might at the same time be a skilled hacker. They might do these types of works during different times of the week or even only during specific times of the year. But it stems from the fact that we can again pick our interests from everywhere now. The slasher can come into existence because of changing economic circumstance where you are forced into a different field of work to keep up your livelihood, but it can also come from having different interests. Each interest might require different needs of their surrounding which can only be pursued if the built environment facilitates this. A task for the urban designer again to facilitate such a dynamic environment.

(20) INTEGRATED DESIGN
More and more we are seeing that when facing certain problems only being a specialist will not make the cut. A great example in the field of landscape architecture is the 'Ruimte voor de Rivier' project in the Netherlands (Busccher et al., 2017). The major objective was ensuring the rivers could handle peak floods. From a specialist perspective, raising the dikes would have been sufficient. This was done in the past in the Netherlands but always came with great disagreement from the locals. With a project like this we are talking about places where people live, it is not just about the dike, it is about designing the surroundings of people, designing specific areas, each with different needs. That is what Ruimte voor de Rivier did. Not just approaching it from a technical aspect, but also from a landscape aspect, a social aspect, truly integrating different fields into one project.

Figure 4: RUIMTE VOOR DE RIVIER booklet picture by NAi boekenverkopers

(21) SELF INSERT
This very thesis you could even say is a synthesis of me having both interest in the field of urban design and a fascination with everything digital. Showing that through the digital transition of me being able to pick and grab information from anywhere led me to develop this particular research.

Three drivers of change

While the digital transition might sound like a very technical transition, which it in no doubt is, it also brings forth a social transition. It changes the way we think, the way we interact with each other, the way we are able to learn. In short it enables a different way of living. A way of living, that contradictory to hearing the words 'digital transition', is actually more humane for all of us. From all the past reading and observed present phenomena I believe we can create three major drivers that society as a whole will be subject to sooner or later. As you may have already noticed, these three drivers are; desynchronisation, delinearisation and multispecialisation. I will briefly explain all of them here and why they are relevant to design.

Desynchronisation

Society as a whole will individualise, which means that people desynchronise from each other. Things should be designed on the needs of individuals, instead of the needs of presumed target groups. Our current way of building still factors in a heavy degree of synchronisation. We work in an office, learning is done in school and plans have to go through certain bureaucratic phases before they are even approved. What will desynchronisation entail for urban designers? It means uncertainty, variety, diversity, designing beyond temporality, bottom up, space-specific design. How will people use public space? What even creates a public space?

Delinearisation

As crude as it may sound, much of society, until today, still follows a very linear way of life. We are born, we learn to a certain age, we work, we retire, and then we die. But even this linear way of life will shatter in the city of the future. Our life becomes an eternal learning journey, we might retire for a year in the middle of our lives only to go back to working full time a year later. The city will demand a dynamic way of changing space to facilitate such a non-linear way of life of every individual.

Multispecialisation

Perhaps an interesting moment many readers can identify with was whenever one would have family visits as a child, and during a certain part of the visit one would always receive the question 'what do you want to become in the future?' As innocent as this question may seem, it contains a dogma in it. The assumption that in the end you would become 'one thing' or rather in a more modern term, 'a specialist'. In the Renaissance we had the ideal of da Vinci, 'the homo universalis'. People who understood everything and anything. We discovered that such an ideal was near impossible for must humans. There simply is too much knowledge for a person to understand in one lifetime. Through the separation of labour in the industrial era a new ideal was formed, that of the specialist. A person who excels very much in a specific field of research. While having a great understanding of something specific is a great asset, we now learn that being able to relate this expertise to another field is what makes it so useful.

I. THE DIGITAL TRANSITION

Therefore I believe that in the digital era we will find great use of people who are actually split between 'the homo universalis' on one end and 'the specialist' on the other. People who specifically understand certain fields but are able to link these with each other, but also with people outside their fields of study. Knowledge can be found in the weirdest of combinations, music and therapy might for example have a very interesting combination. It creates new fields of study, some which have uncertain needs of the city. This again gives us uncertainty and also demand for a dynamic city, but it also demands of urban designers to design spaces where different fields of study are able to interact with each other and make it possible to shape space to their liking.

Conclusion

It is my hope now that you, the reader, have an understanding of how the digital transition reshapes our society in the form of three social drivers. These three drivers changes us as individuals, and as we all change as individuals it will bring forth the need for a very different city compared to the past. In the next chapter the drivers will give shape to certain core patterns in the style of Christopher Alexander and through that form the basis of the design of the city of the future. But before all that let us take an overall look at how this research is constructed.

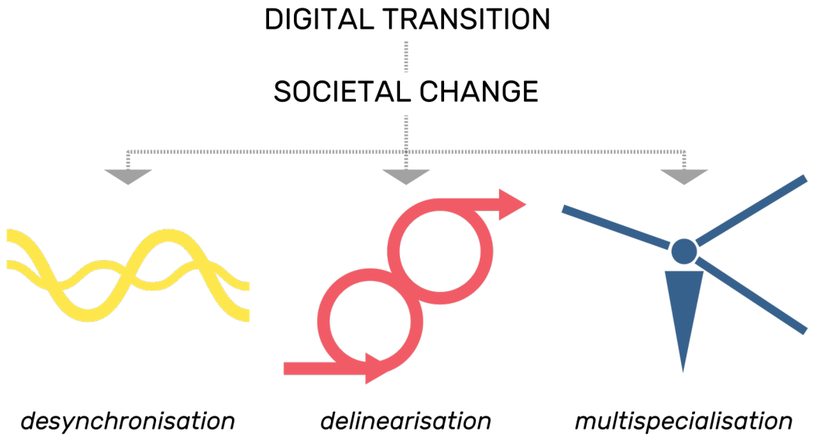


Figure 5: three societal drivers of the digital transition

interlude. THE FRAMEWORK

In the previous chapter we discussed how the digital transition is a societal transition. It changes the human psyche. We are able to work, learn and live differently from the past. The digital transition gave shape to three drivers that will change our society over time. It is an inevitable transition. There is no way in which we can undo all the effects the digital transition has done so far. The question for urban designers and architects is how we can accommodate for this transition. From Toffler's perspective we could say; how can we transition our second wave city into the third wave city.
In this interlude we will go over the framework that structured this research. First, we start off with the problem statement, how the current city can be seen as a machine, or rather an assembly belt in which individuals go through. How this 'assembly belt city' causes issues that come to rise if we keep designing such a city. Second, we head towards the research questions that help us to approach this problem through research and design. At the same time I offer an hypothesis to our research questions. In the third and final section I discuss the methodology that we will use to approach our research questions.

Problem statement

From the previous chapter we understood that our society is changing. Though from the perspective of an urban designer, I would argue that in the practical field not much has changed in the recent years that properly addressed the societal changes we discussed. Our design process still follows a rather centralised and top-down approach, there might be a designer here and there that follows a more bottom-up approach but it is not the standard, at least in the Dutch context. We can as an example look at the regional visions of three municipalities within the Netherlands. In this case the visions of Amsterdam, Rotterdam and Utrecht. What I notice in all these documents is that the municipality, a centralised organisation, still wants to play a major role in decision-making and design of the built environment. They all contain 'ideal' visions for certain parts of their cities. This often leads to wishing to draw certain target groups towards these parts, or municipality-led gentrification. What they all lack, in my opinion, is a vision of how the municipality will allow existing and future individuals to modify the current built environment (Gemeente Amsterdam; Gemeente Rotterdam; Gemeente Utrecht, 2021). In the greater Dutch context, the cabinet of Rutte IV now wishes for more control for the national government when it comes to the building of housing in The Netherlands (Rijksoverheid, 2023). My fear is that this will only lead to more 'second wave' housing in The Netherlands, based on quantity not quality. These 'second wave policies' are translated in the way our built environment comes into existence. When cycling from home I still see standardized building blocks being built with no leeway for the future individual resident to partake in the design, save for the choice of furniture.

So, the general problem is that while our society undergoes changes because of the digital transition, this has not necessarily led to changes in the built environment. In essence, the city up and until today functions as an assembly line. We, as individuals, are guided along this line, forcing us into a rather synchronised, linear and specialised way of life. Of course, we could always 'hop onto other assembly lines'. Meaning other urban conditions in a different city, should we have the means to do so. Though, this just forces us into a different way of life, and not

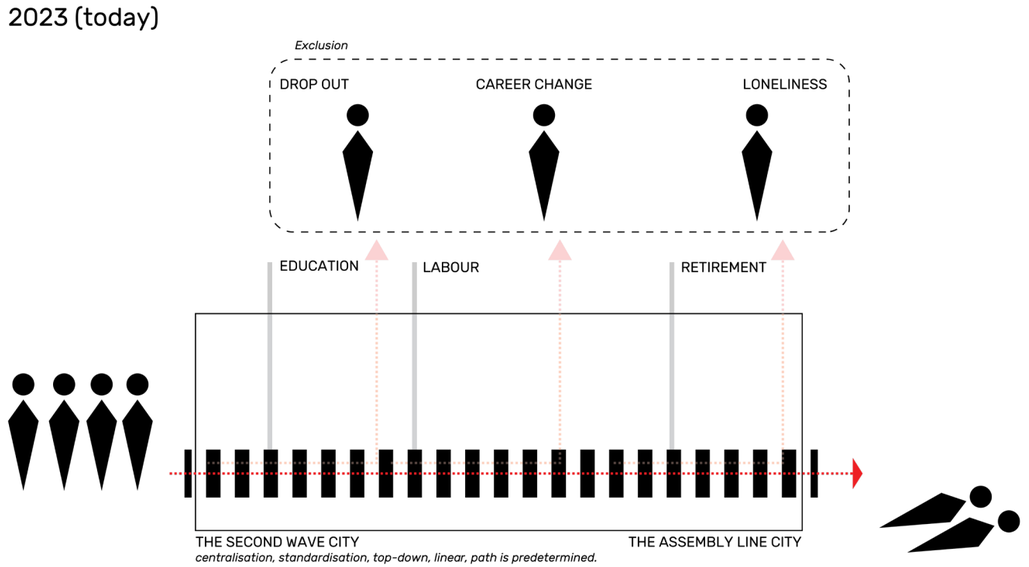


Figure 6 : The second wave city / assembly line city today by author

interlude. THE FRAMEWORK

everyone has the means to do so. In essence, our built environment does not allow the individual to play a major role in, and thus it does not allow the expression of the individual self. I believe this to be a major cause of many social issues such as; social exclusion, because of not fitting along 'the assembly line' of their city, polarisation, because of people interacting less with people with different views in public space; and loneliness, again because of people choosing to live in their own bubbles. Should we continue to ignore the digital transition our societal issues will only increase.

Research question

Based on the previous parts the main question that this research will answer is:
What sort of changes does the digital transition demand of the design and design process within urban design?
To answer this question a set of sub-research question have been formed:

a. What is the role of individuals in the new design process of urban design?
b. What is the role of the local context in the new design process of urban design?
c. How can individuals design together?
d. What is the role of the urban designer or architect in the process?
These sub questions will be answered through both research and design.

Hypothesis
My hypothesis for the sub questions is that; first of all, individuals will play the most important role in the design of future urban environments. As our society individualises it will become difficult for architects and urban designers to make 'the right design' without consulting, in some way, the individuals that will eventually live here. At the same time these individuals will have delinearised, meaning the way they will live will become unpredictable, and it will be near impossible to design a space for people, unless the individual user is able to play a major role in the way the design is used, even after construction. Second, the local context will play a role in that it shapes and draws specific individuals, giving a slight insight on what types of people might be drawn to this space, at the same time this is only possible for the immediate future, over time all sorts of individuals might have modified this context. Third, to design together we need a type of language that makes urban design and architecture accessible to everyone, the ideal life of an individual needs to be translated into physical implications and at the same time this has to be easy to communicate with other people. Fourth, the role of the urban designer will steer much more towards process guiding, to design the proper city it will much more be about being able to align and create space that aligns the interest of different individuals.
Based on these findings I would argue it steers the urban design process much more towards a bottom-up way of design. The design itself will be much more dynamic in the sense that it will never truly be complete, it will always undergo changes required by individuals that change over time and at the same time by individuals that become drawn to this design for whatever reason. It forces us to let go of linearity in the design process, we will have to accept that whatever we shape is only something that exists for a short while before it gets modified by others again.

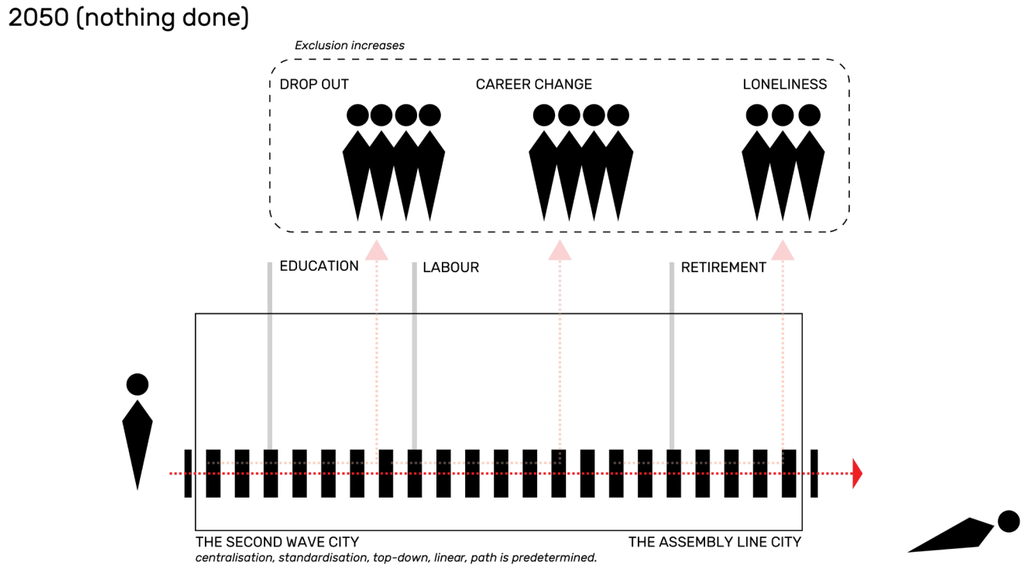


Figure 7 : The second wave city / assembly line city in the future by author

interlude. THE FRAMEWORK

Methodology

This sections includes and explains all chosen methods to answer the questions in the previous sections.

Defining the digital transition

First of all, before even the methodology was explained we defined what exactly the digital transition was. It was a social transition. For the definition two methods were used to reach an answer; literature review and observations with anecdotal evidence.

Literature review

For the literature review we mostly based ourselves on the readings of Alvin Toffler, as for what his expectations were from the digital influence upon society. It provides a broad perspective of everything that could possibly be affected by the digital transition and shows that it is such an wide-encompassing transition that all disciplinary fields, including urban design and architecture will be affected by it in some way.

Observation with anecdotal evidence

While not properly scientific these observations play an interesting way of understanding the digital transition. The observations, while having the literary works of Toffler and others in mind gave an interesting perspective into how modern lifestyles and phenomena stem from the digital transition opening up new possibilities.

Three drivers

The literally review and observations eventually gave rise to three drivers of change that drive the rest of the research. In this specific research we decided to move forward with pattern language, and thus these three drivers gave shape to core patterns that play a role in every individual's pattern set.

Role of the individual

Second, based on the individualising society, we wish to understand the role of individuals within the design process and on the design. For this we chose two different methods; persona-based storytelling and pattern language.

Persona-based storytelling

This method allows us to give shape to very different kinds of people that might have come into existence due to the changes that the digital transition allows us. As our society is still partly living in a 'second wave' we will need to speculate a bit as to what ideal lifestyles might be, and creating stories using personas is the ideal way to do this. These personas could in some way be part of our lives in that they share a similar lifestyle to us. This method allows us to break free from basing ourselves on contemporary individuals and allows us to think about what might be preferred in the city of the future.

Pattern language

An interesting design approach proposed Christopher Alexander. In essence I would argue it extracts the design process from the mind of the designer and puts it onto paper, or rather screen. It follows a structure of hypothesis with spatial implications. It allows everyone to create their own patterns and thus also allows people to communicate with each other about space. This is perfect for our research. The storyboards created used storytelling basically contain patterns in how our personas wish to use space. We use pattern language to give physical shape to our three drivers of the digital transition, shaping the core patterns that can be found in the pattern book. Eventually these core patterns are 'coloured' by our personas giving shape to their own individual patterns. At the same time these design patterns have certain urban conditions that are required for them to come to fruition, making context in the city an important element.

Pattern field

Once we have our patterns we are able to create a pattern field that encompasses all the individuals we wish to design for. This is basically our design brief for the immediate future. The pattern field shows which patterns are more individual oriented and which are more public oriented, which have most of their conditions already fulfilled and which might need extra effort to design for.

Role of the context

Third, is context relevant when designing the city while including the digital transition? We will place our research within an existing urban location and see in what way the digital transition affects this location. For our research we chose Amsterdam-Zuid, therefore we need to understand Amsterdam-Zuid. To do this we go through several ways of analysing the city; spatial analysis and social-spatial analysis.

Spatial analysis

To understand the city in its basic sense we go through several spatial analysis that help us understand how the city works from the perspective of an urban planner. In essence we break apart the city in direct observable elements.

Social-spatial analysis

At the same time the digital transition places a social dimension upon the city which might not be directly visible through observation- or dissection of the city in only spatial elements. We go through three drivers of the digital transition, define them in a measurable way and map them.

Urban conditions

As mentioned earlier in the section pattern language, the patterns have certain urban conditions required to fulfil them. The spatial and social analysis gives us understanding as to where these urban conditions are happening within the city. It shows us that the digital transition demands a greater understanding of the local context, but from the perspective of the individual.

Design

Finally, we head into the design, here we shape methods to design for individuals and allow individuals to modify the design over time; gridding public space, design through time

Gridding public space

We divide space into a grid. The pattern field will eventually fill this grid.

Design through time

We observe the design at different intervals in the future. It shows us how design loses its temporal aspect when designing the city of the future.

interlude. THE FRAMEWORK

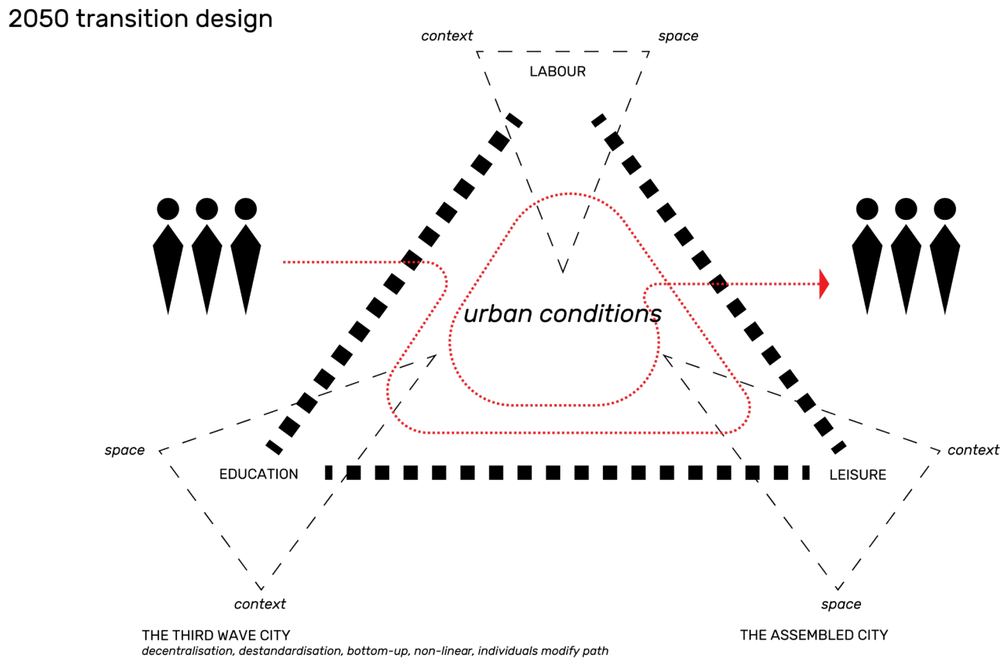


Figure 8: Transition design; the third wave city / assembled city in the future by author

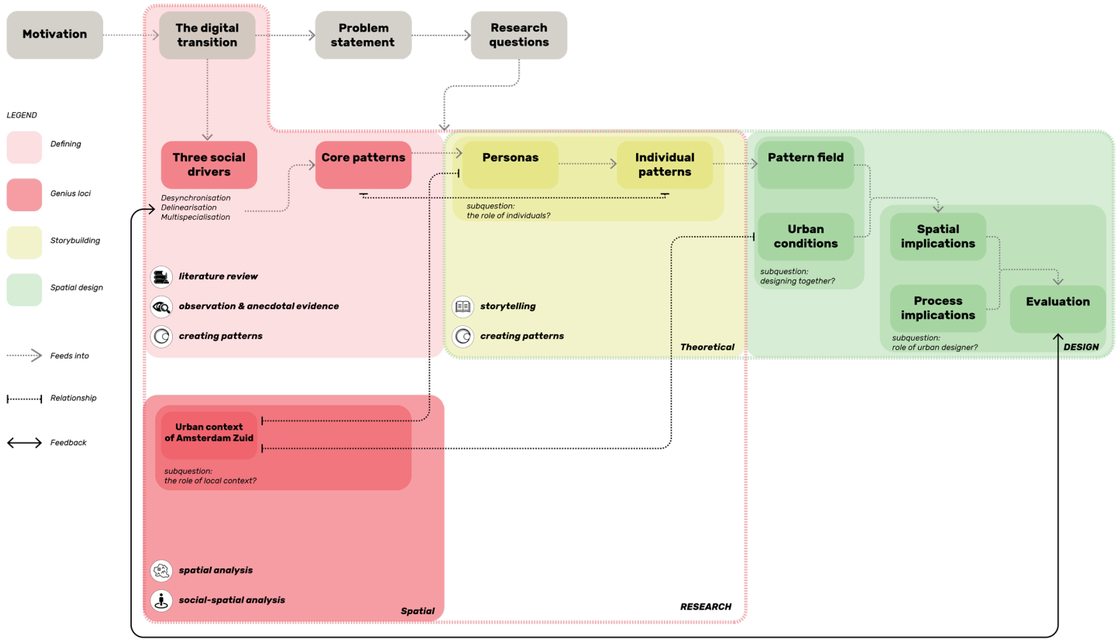


Figure 9: Methodological framework by author

II. CORE PATTERNS

In this chapter the core patterns of the digital transition are presented. They were constructed using the three societal drivers of the digital transition. To examine the patterns separately I invite the reader to go through the Pattern Booklet included in the appendix.
The core patterns are rather abstract. Each individual will eventually give shape to these patterns in their own preferred form. But what these patterns ensure is that while everyone diversifies, the core changes that the digital transition requires of us will not be lost. They ensure our design will be future proof. These patterns are subdivided in three categories, the categories are the very same drivers of society that we presented in chapter I.

DESYNCHRONISATION
These core patterns show our changing needs due to individualisation, it shows the necessity of diverse types of spaces and also the ability of space to be remoulded by everyone.

DELINEARISATION
These core patterns show our changing needs due to our new way of living through time. Learning will happen throughout our live. These patterns show how our future designs will need a timeless element tied to them.

MULTISPECIALISATION
These core patterns show the need for change in space due to people becoming something in-between a generalist and specialist. Working environments will overlap between different fields making it possible to develop new fields of knowledge.

III. AMSTERDAM-ZUID

In the following chapter we go over a few analysis that might prove useful for our design, and for understanding of how far our area has adapted to the digital transition. In theory we could apply our findings of the digital transition all over the globe. It is a societal transition. It is difficult to find a society on earth that has not been influenced at all by the internet. But, for this research we will place ourselves in Amsterdam in the Netherlands, to be specific in Amsterdam-Zuid. The choice for this location is based on two findings. First of all, the Netherlands ranks among the highest in the EU in regards to digital skills (CBS, 2020). I argue that the more exposed a society is towards everything 'digital', the more urgent it will be to change the city to fit the individuals of 'the third wave'. As for why specifically Amsterdam-Zuid. Amsterdam-Zuid has changed a lot in the recent years. Especially the Zuidas neighbourhood has been in focus of the municipality. According to the 'Visie Zuidas 2016' about 3.4 million square meter will have to be built by 2030, consisting of residence, office space and basic amenities (Gemeente Amsterdam, 2016). A lot of these developments are already happening. It will be interesting to observe whether these rather new developments are fit for 'the third wave' citizen or if the municipality is still building based on the dogmas of 'the second wave' citizen.

The first section will consist of a few analysis separate from our drivers of the digital transition. They are there to help understand the local situation and how Amsterdam came into existence. While they might not seem directly related to the digital transition they do play a role in the eventual design. The second sections shifts more towards social-spatial elements. Where do certain age groups find themselves in the city? What kind of spaces do people work and learn in? Finally we combine our previous analysis to say something about how the drivers of society, so desynchronisation, delinearisation and multispecialisation, are able, or rather not able, to manifest themselves in the city of Amsterdam-Zuid.

Basics

First of all we start we the basic analysis.

Building type / time period

Here on the map to the right we see how the timeline (following pages) of Amsterdam-Zuid / Amstelveen affected the built environment. We see the oldest parts of our area being developed in both the north region, Amsterdam, and south, Amstelveen. They slowly grew towards each other colliding in the transport node of the Zuid-as, where now most of the modern architecture is housed.

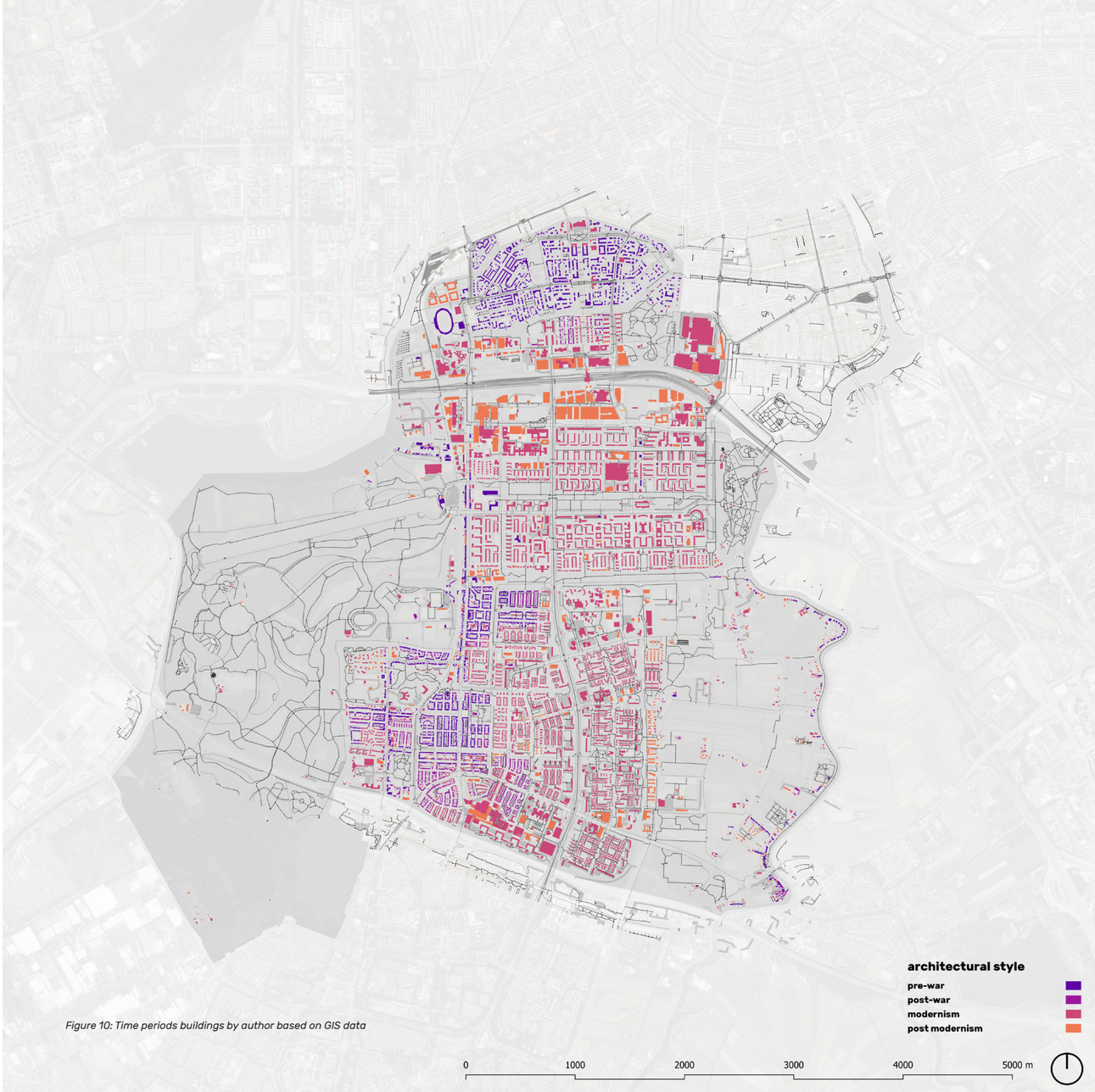


Figure 10: Time periods buildings by author based on GIS data

III. AMSTERDAM-ZUID

History

Until 1927 most of what is now Amsterdam-Zuid was polder land, save for the Nederlandsch Sportpark, a sportspark on the outskirts of then Amsterdam. Hendrik Petrus Berlage, an architect and urban designer, already proposed in 1907 an expansion plan for Amsterdam, Plan-Zuid. It was not until 1920 that this plan slowly came into existence in what we would now call Amsterdam-Zuid. The plan was highlighted by long building blocks intersected by broad axes for the car. After the Second World War we saw a huge explosion of suburbanisation in the Netherlands. While Amsterdam expanded so did the neighbouring city of Amstelveen, Amsterdam-Zuid and Amstelveen slowly grew towards each other. After the explosion of suburbanisation we mainly see infrastructural changes in our regions, shifting the major infrastructural roads more outwards of the city centre of Amsterdam towards Amsterdam-Zuid. At this stage it created a strong border between what was then Amsterdam-Zuid and the municipality of Amstelveen. In modernity we see the emphasis of Amsterdam-Zuid as the financial cluster of Amsterdam. Development takes place in the form of transit-oriented development, the north-south line of Amsterdam-Zuid would connect the Zuid-as more with Amsterdam and Amstelveen, and at the same time the Zuid-as was connected with Schiphol, the main airport of the Netherlands by rail and road. Allocating most resources in the development of this new node.

Figure 11: Development of Amsterdam-Zuid over time by author from Topotijdreis

III. AMSTERDAM-ZUID

Water
A short GIS-analysis of the water network within the region. The greater region consists of canals, affecting the larger water structures.

Figure 12: Water system of the greater Amsterdam region by author from GIS-data

Green
A short GIS-analysis of the green spaces in Amsterdam-Zuid. Consists of large park in the west, countryside in the east, and minor parks in the built environment in the centre.

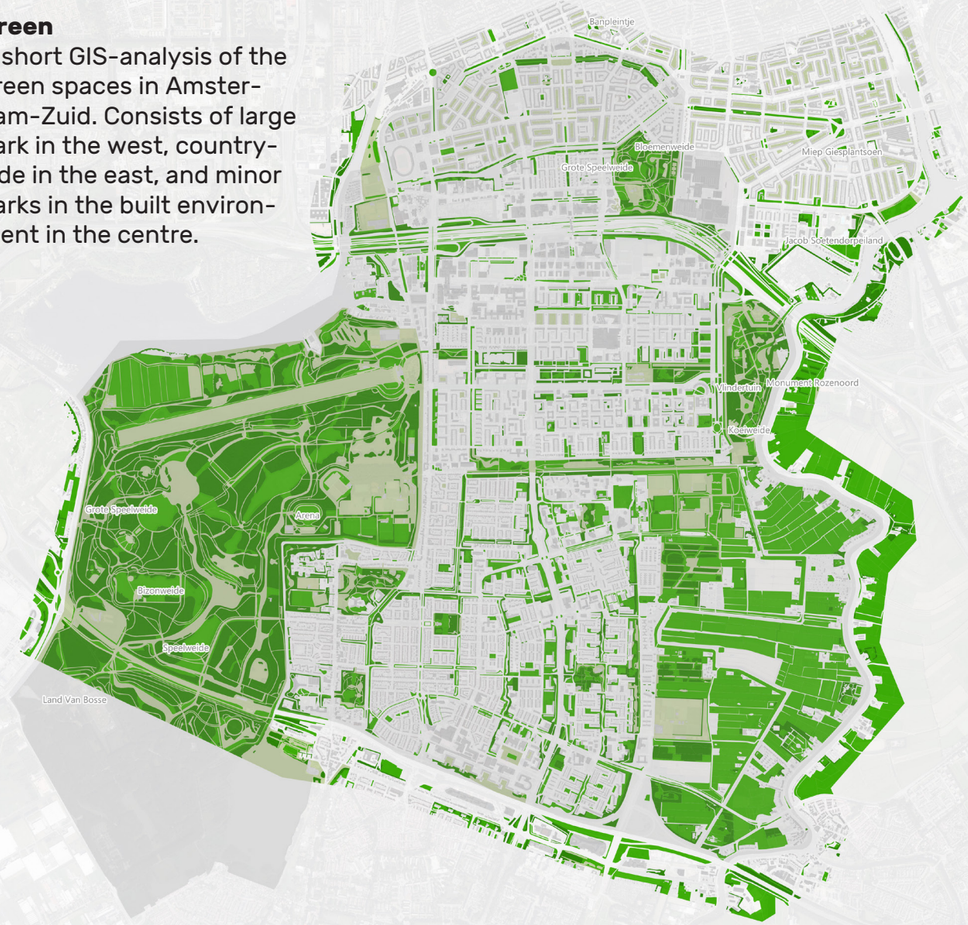


Figure 13: Green structures of Amsterdam-Zuid by author from GIS-data

III. AMSTERDAM-ZUID

Infrastructure
A short GIS-analysis of the infrastructure of Amsterdam-Zuid.

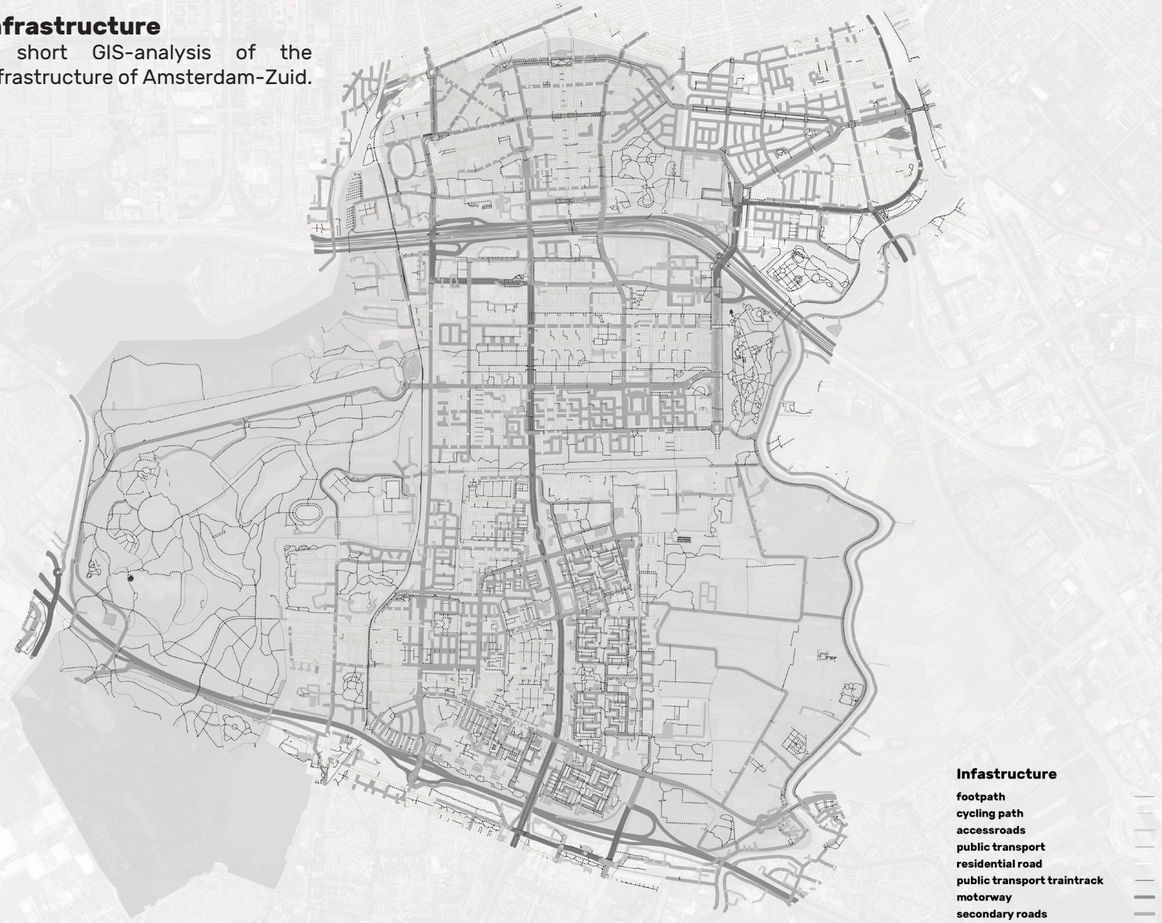


Figure 14: Infrastructure of Amsterdam Zuid by author from GIS-data

Programming
Programming of Amsterdam-Zuid.

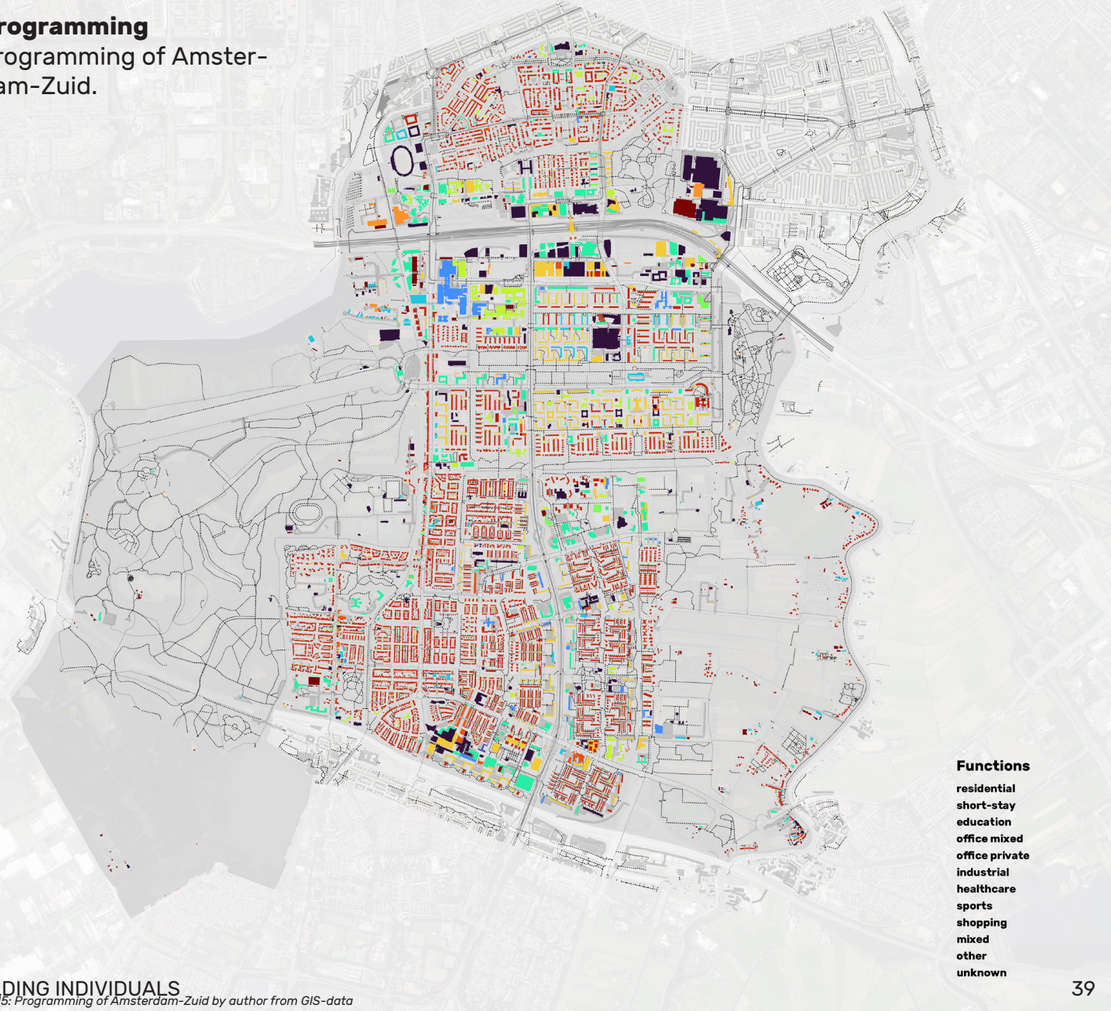


Figure 15: Programming of Amsterdam-Zuid by author from GIS-data

III. AMSTERDAM-ZUID

Public space
Publicly accessible space. What these spaces look like is on the next two pages.

Figure 16: Public space of Amsterdam Zuid by author from GIS-data

III. AMSTERDAM-ZUID











Figure 17: Ambiance of public space in Amsterdam Zuid by author based on own pictures & google street

III. AMSTERDAM-ZUID

Social-spatial
In the second section we dive into the social spatial analysis.

Age groups location
In this analysis we see the concentration of age groups in the course of a day. These range from age; 0 to 15, 15 to 25, 25 to 45, 45 to 65 and 65 plus. What we notice is that there is a certain cluster-ing of age groups in certain areas of the city.

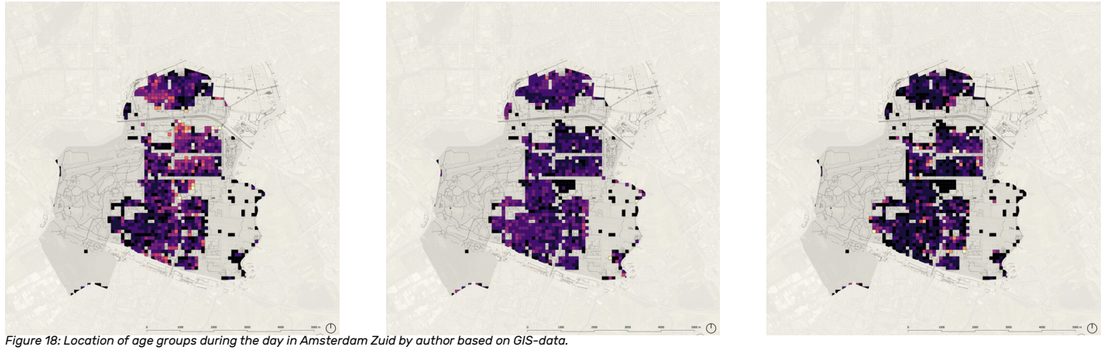
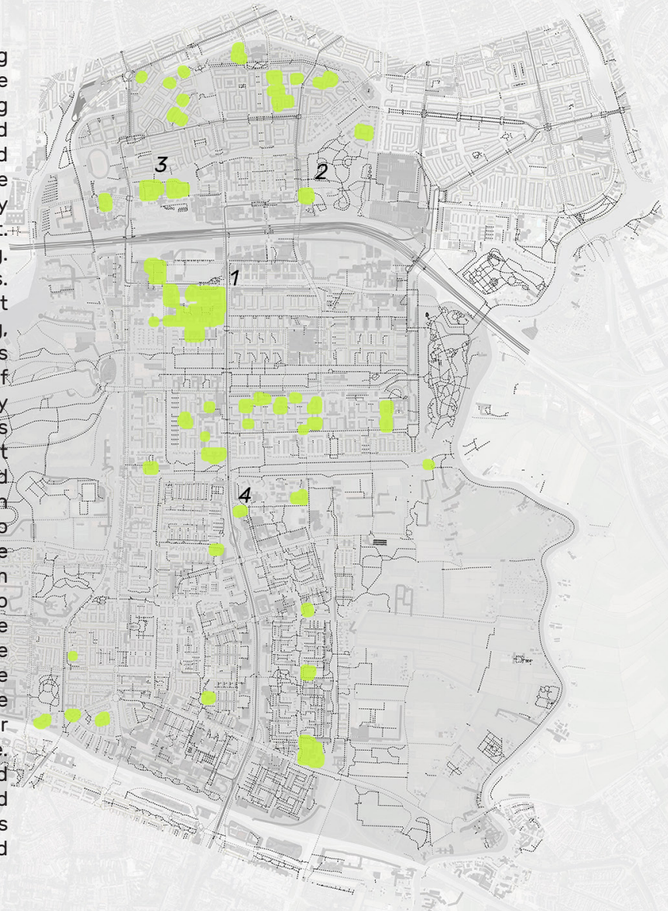


Figure 18: Location of age groups during the day in Amsterdam Zuid by author based on GIS-data.

III. AMSTERDAM-ZUID

Learning spaces

Here we observe the learning spaces of Amsterdam, from the analysis I argue that most learning spaces still adhere to the second wave dogma. Where the educated are sheltered off from society. While they might be able to learn, they do this in a closed environment. These are closed forms of learning. The building has an inward focus. Outsiders usually do not know what is happening inside the building, save for the fact that it hosts education if they see the name of the school on the building. They are also often placed in locations where spaces of working are not in vicinity, separating learning and working from each other. Though that is not to say that there are no forms of third wave learning. These are characterised by an open form of learning, people are able to interact with individuals outside their learning 'bubble' due to the characteristics of the space. At the same time students modify space to their needs and this is visible for by-passers. Open and adaptable. Though these only are observed in the context of Amsterdam-Zuid with the Vrije Universiteit campus and within the Gerrit Rietveld Academy.



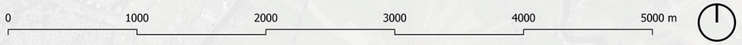


Figure 19: Learning spaces and their ambiance by author.

THIRD WAVE LEARNING SPACE
individual shape space
adaptation / collage-like

1. Vrije Universiteit Amsterdam Campus

SECOND WAVE LEARNING SPACE
space shapes individuals
standardisation / hierarchy

2. St. Nicolaaslyceum

3. Gerrit Rietveld Academie

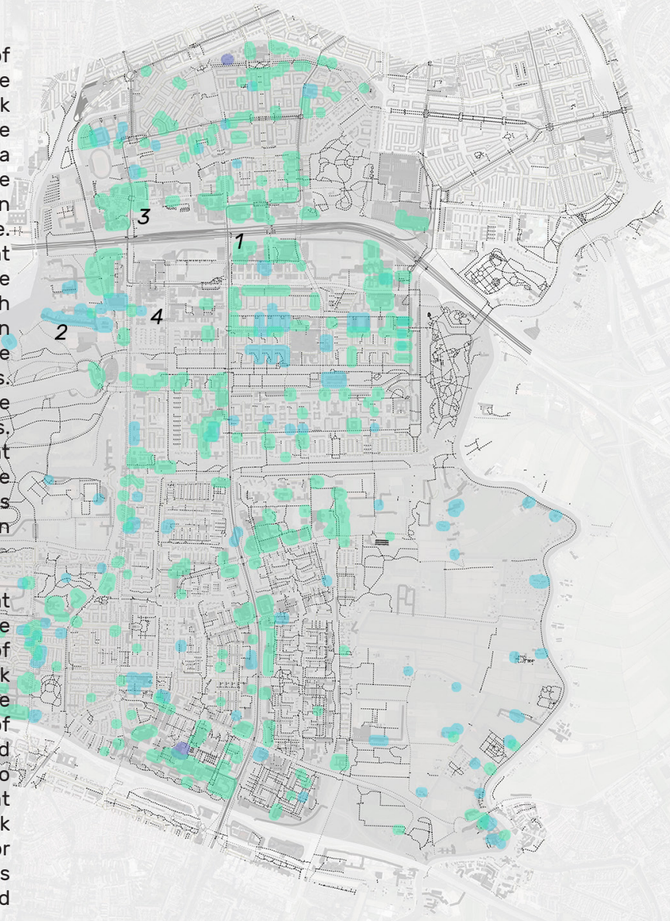
4. Praktijkcollege De Atlant

III. AMSTERDAM-ZUID

Working spaces

Here we observe the spaces of working. For this analysis we separate working into office work and manufacturing work. For office work there are actually quite a lot of spaces in the city where people of all sorts of branches can work together in the same space. This allows people from different disciplines to dive into the bubble of other disciplines. The issue with these spaces is that they often have a paywall limiting the sphere of people able to use these spaces. There are also of course private offices owned by companies. While the office worker might work in these offices they limit the interaction of these individuals with people outside of their own bubble.

For manufacturing I observe that there is much that can be done to improve the quality of life of people in manufacturing work in Amsterdam-Zuid. There are no shared makerspaces in all of Amsterdam-Zuid. These would host public tools for people to manufacture, the same way that for the office worker is able to work in shared spaces for his work. For the manufacturer these spaces are, as of now, privatized and secluded from the city.



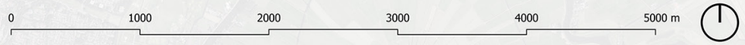


Figure 20: Working spaces and their ambiance by author.

OFFICE SPACE

1. Symphony Offices
public
paywall / own bubble

3. EDGE Workspaces - Olympic
public
paywall

MANAFACTURING SPACE

2. Stevenswatersport - Scheepselektro

secluded / private

4. Zenith Automobielbedrijf B.V.

secluded / private

III. AMSTERDAM-ZUID

Minervalaan

Gerrit Rietveld Academie

Conclusion
In this last part we go over our drivers of society and how they are not able to manifest themselves in the city. First of all desynchronisation.

Synchronised city
People are desynchronising from each other, therefore we need desynchronised space. Places where people can modify their environment. While there is public space in Amsterdam-Zuid, many of these spaces are not adaptable by the public. In essence the space forces you to synchronise to its usage. The map here shows the few places in Amsterdam-Zuid where people are able to modify space. The individualisation of the people is able to manifest itself into space. I believe we need more of these spaces if we wish to allow society to desynchronise more.

Uilenstede

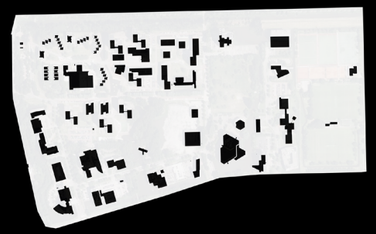


Figure 21: Desynchronised public space and their ambiance by author.

Majority

Space determines individuals

Minority

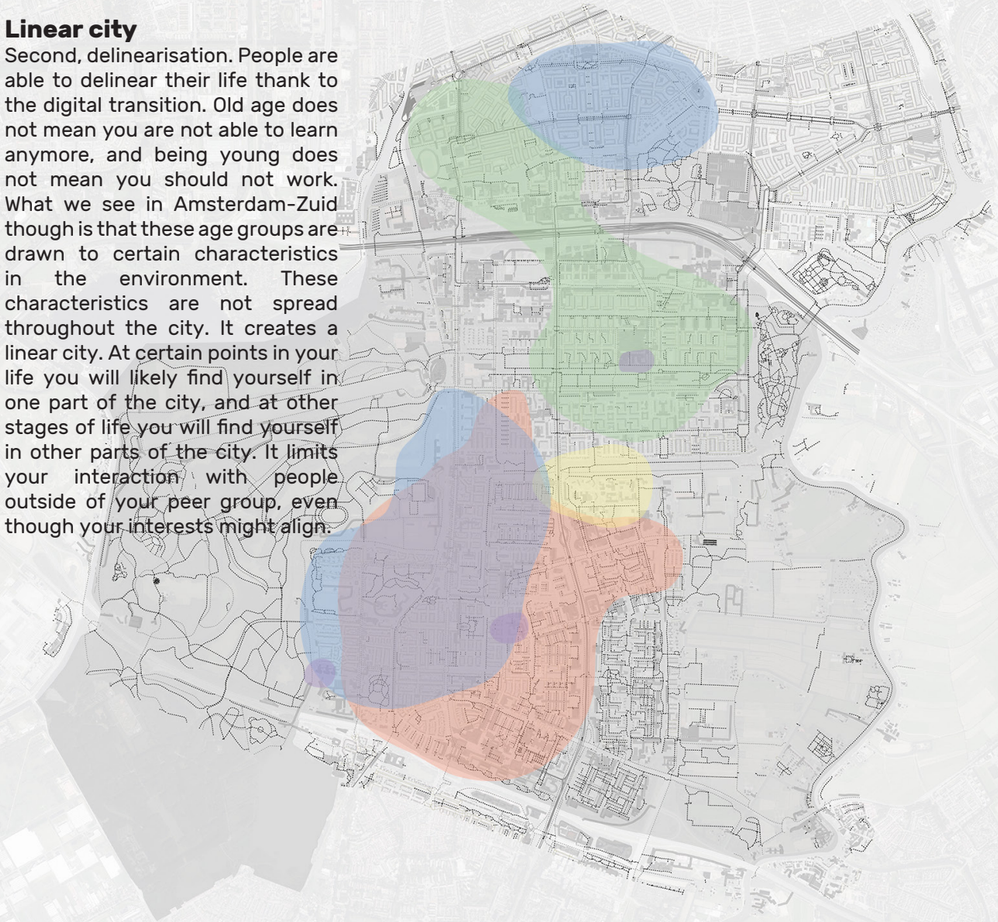
Individuals determine space

age 0 - 15 | age 15 - 25 | age 25 - 45 | age 45 - 65 | age 65+

III. AMSTERDAM-ZUID

Linear city

Second, delinearisation. People are able to delinear their life thank to the digital transition. Old age does not mean you are not able to learn anymore, and being young does not mean you should not work. What we see in Amsterdam-Zuid though is that these age groups are drawn to certain characteristics in the environment. These characteristics are not spread throughout the city. It creates a linear city. At certain points in your life you will likely find yourself in one part of the city, and at other stages of life you will find yourself in other parts of the city. It limits your interaction with people outside of your peer group, even though your interests might align.



0 1000 2000 3000 4000 5000 m

safety
play
quiet

affordable
sharing

hectic
density

quiet
private space

ground floor

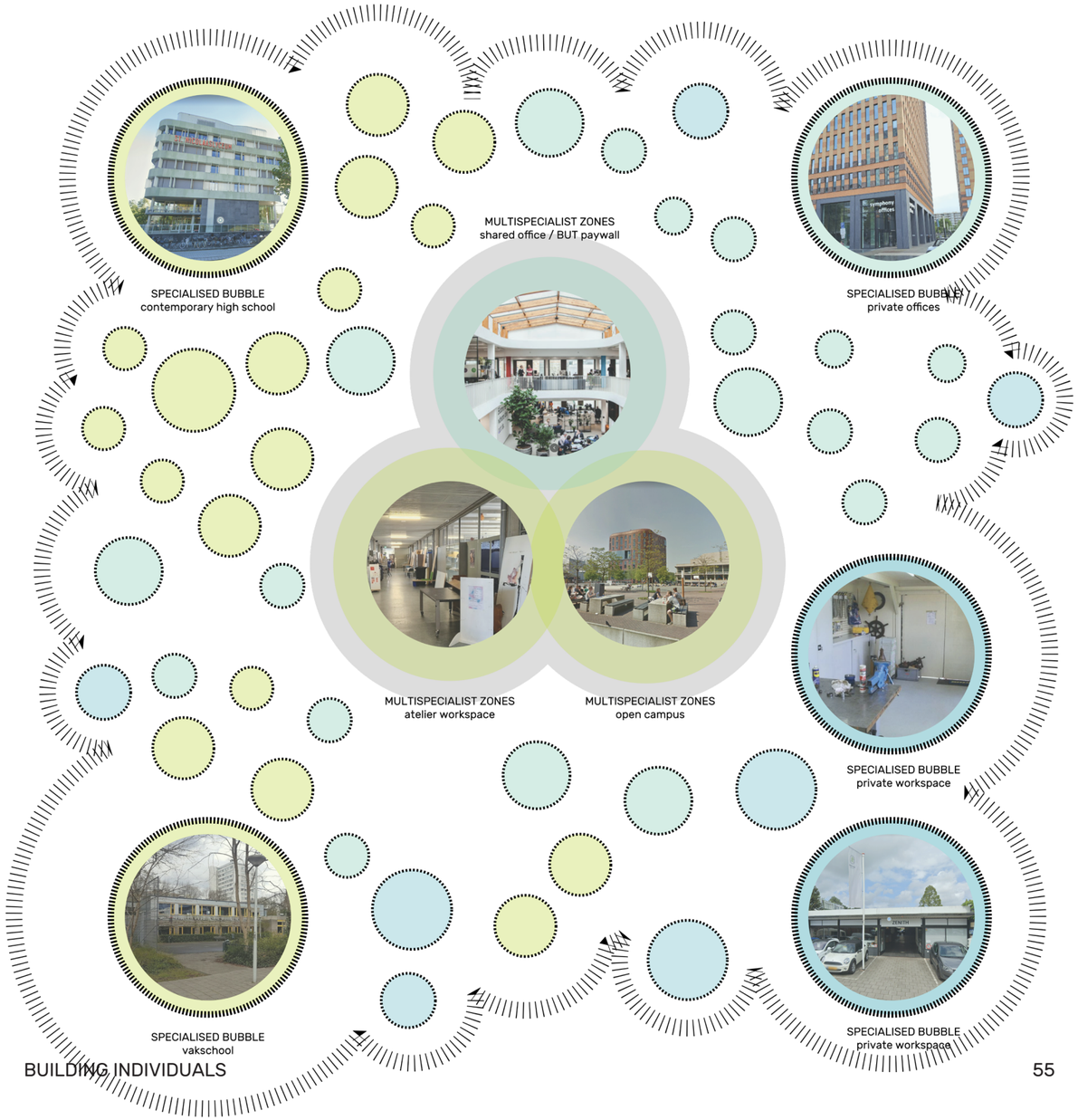
Figure 21: The linear city and their ambiance by author.

III. AMSTERDAM-ZUID

Specialist city

Third, multispecilisation. Thanks to the digital transition people are able to become multispecialists. The existing knowledge they posses can come into interaction with people outside of their expertise and create new forms of knowledge. Though to do so people need to be able to interact with each other in public space. There are a few places that make this possible, such as the shared office, and the Gerrit Rietveld academy, these spaces collide bubbles. Though most of these are paywalled, or targeted towards a specific group. And the majority of educational and working space still exist in seclusion of each other. They limit the possibility of people to become multispecialist.

Figure 22: The specalised city and their ambiance by author.



IV. INDIVIDUAL TALES

As discussed in chapter I our society is individualising, this poses a new issue we must address in the design of the city of the future. Design is for groups of individuals, not for target groups with the same desires. Individuals that will come to our city can change in ways none of us could have expected. They could pose different needs of their urban environment depending on how their life has shaped them. To futureproof the city of the future, is to allow individuals shape their urban environment as part of the design process.

In chapter II we gave shape to core patterns of the digital transition that play an essential role in the public space of our future cities. What is important about these patterns is that an individual can each give different ways of expression to them. All individuals have different desires. Moving from place to place might mean a shared bike for one individual, but could also be the bus for another. Once we understand how an individual wishes to express his activities during a timeframe we can shape them into a storyboard.

How the whole process works from moving from core patterns to individual storyboards can be seen in Figure 23 The core patterns had certain urban conditions tied to them. Once an individual 'colors' a core pattern with their desires it could pose new necessary urban conditions for them to work.

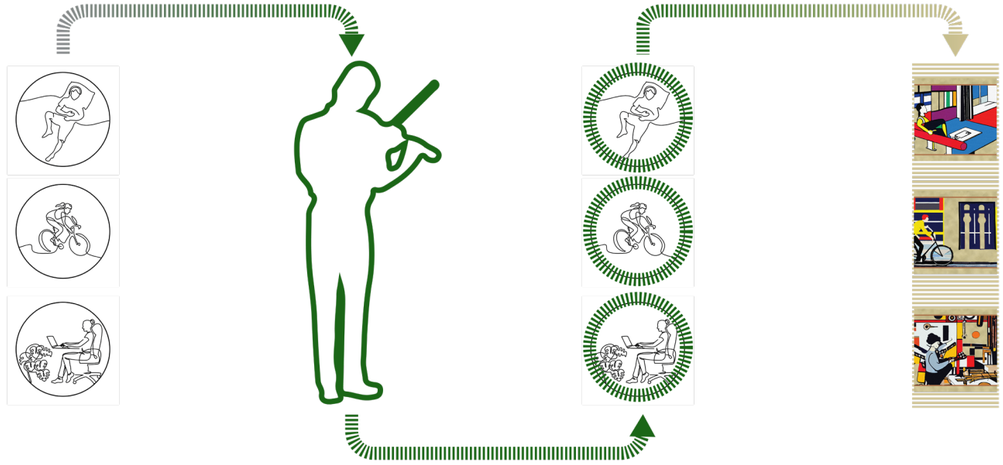


Figure 23: From core patterns to individual patterns by author.

In this chapter we will go over how individual stories play a role in the city of the future. How individuals have desires that shape how the public space should be designed. To do this, I will share the storyboards of a batch of individuals that will play a role in the design of a specific part of Amsterdam-Zuid. While they might seem random in this chapter, chapter V will make it clearer why these specific individuals were drawn to the design location. What makes design using storyboards interesting in the city of the future is that there is no need to understand an individual his or her complete life to design for them, due to multispecialisation and delinearisation. We merely need to design for the part that the individual will associate with this specific area. Whatever an individual does here as a multispecialist, is not necessarily something he or she does all the time of his life. Perhaps the to-be-designed area is only relevant to the individual on a Monday, while the other days they spend his or her time doing something else in a different area. Each storyboard will show a section of a person's life, making it at the same time also easier to relate with the person. We might observe how an individual expresses his activities in space is actually similar to how we wish to do a certain activity as well and relate to them. Eventually, having sets of individuals, we can overlap their activities or rather their specific patterns and determine what the commons are within the area. What are the places that will serve a multitude of people and which area are perhaps more tied to specific individuals.

IV. INDIVIDUAL TALES

Figure 24: Imagery made with stable diffusion AI (huggingface.co) and editted by author.

Richard the Creative

Richard is a creative person, as part of his life he designs and produces handmade guitars. He has a portfolio online which shows the different designs he has made so far. This has always been more of a hobby for Richard. He works four days of the week at an office. One day he always reserves for something else. When there is demand for a custom designed guitar he dedicates this day to that. At this specific stage of his life he has found an interested client in the area of Amsterdam Zuid.

Richard lives outside the city, but on this specific day he finds himself inside an apartment near the area. It is a tiny house, it only has a bed and shower, but it is all he needs. It is close to his working space for his hobby and all other facilities he needs can be found in the area.

(3) live however you want

added urban conditions
- *kitchen in the area*
- *living room in the area*

Richard lives outside the city, but on this specific day he finds himself inside an apartment near the area. It is a tiny house, it only has a bed and shower, but it is all he needs. It is close to his working space for his hobby and all other facilities he needs can be found in the area.

(3) live however you want
(4) all individuals eat
(9) the fireside chat

added urban conditions
- *high density of tiny housing*

After breakfast Richard decides to head to his working space. For this he prefers to use a shared bicycle. Richard finds it healthy, and actually faster than grabbing the shared car with all the traffic jams.

(5) move however you want

added urban conditions
- *high density of tiny housing*
- *cycle infrastructure*

After parking his bike, he heads to the storage area. Richard ordered the materials he needed the day before . This area serves both as an storage area for materials, but also as an space where delivery drivers can drop off the material for people to work with.

(2) work wherever you want
(7) the new cloud workspace
(10 exploring the unknown

added urban conditions
- *creative industry in area*

After collecting his materials Richard heads towards his working space. He can already hear other people at work, there are people creating other instruments, but he also see a few creating what seems to be furniture.

(2) work wherever you want
(7) the new cloud workspace
(10) exploring the unknown
(11) a new synthesis

added urban conditions
- *creative industry in area*

IV. INDIVIDUAL TALES

Richard has actually already been working on this guitar for a while, and it was actually today he wished to discuss his prototype with his client. He meets his client and the client gives him a few minor pointers on what she wishes to have changed.

(2) work wherever you want

added urban conditions
- *easy access*

Richard orders a few minor components that he needs based on the discussion. These will be delivered to the storage area the next time he comes by to work on the final touches of the guitar.

(2) work wherever you want

added urban conditions
- *internet connectivity*

He leaves his prototype in a display cabinet, where passer-by's can admire his work and contact him if they ever are in need of his services.

(6) the public display cabinet

added urban conditions
- *slow traffic flow*
- *no noise*

It has been a long productive day for Richard, before heading home he heads to the local cafeteria. A ghost kitchen delivers his food here and he eats with others before heading home.

(4) all individuals eat
(9) the fireside chat

added urban conditions
- *not too much noise*

Richard grabs a shared bicycle for his way back home.

(5) move however you want

added urban conditions
- *high density of tiny housing*
- *cycle infrastructure*

IV. INDIVIDUAL TALES

Before heading back home Richard feels the need to release his remaining energy. He heads to the gym. Since Richard is only here for one day of the week, he does not have an active subscription. Instead this gym offers a pay per visit deal.

(4) all individuals eat

added urban conditions
- *high density of tiny housing*
- *visibility*

After working out, Richard has had enough for the day and heads home. Where his journey might lead towards tomorrow will be a mystery to us, but it will not be relevant for this area.

(3) live however you want

added urban conditions
- *kitchen in the area*
- *living room in the area*

Mona the Resourceful

Mona is both a musician and a physician. She picked up psychology after high school. Eventually she synthesised something that mixes both her interest in music and her interest in psychology. These two fields have led her to become a freelancer that offers music therapy. Mona lives outside the city, but always has therapy sessions inside the city of Amsterdam-Zuid. Here she has therapy sessions with two or three clients at the same time.

Mona actually lives outside of Amsterdam-Zuid. She enjoys the quietness of the countryside she lives in, but most of her clients are from the city. To make it easier for her clients she always meets them in the city itself. How she lives outside of the city might be interesting when designing on a larger scale, but for today we will leave it out of our scope.

What matters is that Mona will need the car to access the area. For this she always uses a rental self driving car. a rental self driving car.

(5) move however you want

added urban conditions
- *commuters outside the city*

IV. INDIVIDUAL TALES

Once at the location she waits for her clients inside the lobby. Mona notices the vast array of people that are meeting here.

Her clients find her and they head towards the studio where Mona plays her own original tracks while discussing the effects of them with her clients.

(2) work wherever you want
(9) the fireside chat

added urban conditions
- *easy access*
- visibility

(2) work wherever you want
(9) the fireside chat

added urban conditions
- *no loud surroundings*

It is still early in the day when the session ends. Mona decides to have a quick bite in the area while observing the other people here.

Mona feels her work might be useful to others as well, so she is writing a blog about her findings. She heads to the library where she documents her findings of the day on her laptop, she decides to review it later at home before publishing it online.

(4) all individuals eat
(9) the fireside chat

added urban conditions

(2) work wherever you want

added urban conditions

IV. INDIVIDUAL TALES

Mona's part in this area has finished for today. She heads back to the shared cars and proceeds to move back towards home.

Once outside the city she finishes her day doing things beyond the scope of the specific designed area.

(5) move however you want

added urban conditions

- *commuters outside the city*

Lisa the Curious

Lisa is a young person. She lives with her family. Due to, to us unknown circumstances, Lisa has at an young age developed a keen interest in making music. To be specific digital music. She is not sure what she wants to do in the future, but for now she want to keep learning and make her own music. Her parents are often away from home. While her parents trust her to be safe while alone at home, Lisa prefers to spend her days away from home. Sometimes to interact with her peers, sometimes simply to find a nice quiet place to work on her music from.

Lisa wakes up in her room. She lives with her family in a row house in Amsterdam-Zuid.

(3) live however you want

added urban conditions

Mornings are always together with her father and mother, but along the day each individual goes their own way before meeting again later during the day.

(3) live however you want
(4) all individuals eat
(9) the fireside chat

added urban conditions

IV. INDIVIDUAL TALES

Lisa walks to the day-care where she will be staying. Lisa always loves to take this route. It is always a surprise to see what kind of works have been displayed here. One specific display always catches her attention, she hopes to one day muster the courage to ask the owner for a mentorship.

(2) work wherever you want
(6) the public display cabinet

added urban conditions
- *easy access*
- *visibility*

At the day-care Lisa spends the first half of her day working on a small project with her friends. They are planning a trip to an expo about digital music in the area, at the same time they have been allowed to display their own works at this expo. Now they're finishing up the details before they hand in their work.

(8) child labour
(11) a new synthesis

added urban conditions
- *easy access*

Her friends head home early, but before that, they decide to have lunch together in the cafeteria.

(4) all individuals eat
(9) the fireside chat

added urban conditions
- *easy access for delivery*

The rest of the day Lisa decides to work on her computer composing her own songs. She notices the studio is available and decides to use one so she is not disturbed by her surroundings. At the same time the studio offers her better quality audio compared to what her little laptop can offer.

(2) work wherever you want

added urban conditions
- *no noise*

IV. INDIVIDUAL TALES

Lisa's mother is done with her own work and since their schedules align, she decides to pick up Lisa from the area with her car.

While everyone in Lisa's family spent their day differently, now they all come together again and talk about what they did during the day during dinner.

It has been a fun day for Lisa and now she returns to bed, for tomorrow will bring her perhaps a very different tale to tell.

(5) move however you want

(3) live however you want
(4) all individuals eat
(9) the fireside chat

(3) live however you want

added urban conditions
- *slow traffic zone*

added urban conditions

added urban conditions

David the Nomad

David travels around the world. He is able to experience different cultures, eat all sorts of food. In the winter he is able to reside in warmer areas, and in the summer he can live in places that are much cooler. Has David retired early to make this all possible? No, he simply does work that is not tied to a specific location. He is both a graphic designer and a front-end developer. All that is technically required to allow David to work is a place that allows him to connect his laptop. David has never been to the Netherlands before, but his travels today have brought him to Amsterdam-Zuid.

David found a small studio with no kitchen in the area. He wishes to experience the culture of Amsterdam-Zuid and therefore plans to have as much interaction with the locals as possible, and also to dine outside if possible.

Before starting the day David heads to the local cafe for some breakfast. He takes his time to enjoy his grilled cheese sandwich while observing people moving from and towards different places in the city.

(3) live however you want

(3) live however you want
(4) all individuals eat
(9) the fireside chat

added urban conditions

added urban conditions
- *high density of tiny housing*

IV. INDIVIDUAL TALES

Finishing his breakfast David, heads back towards his studio to work privately on a project he has been busy with for a while.

(2) work wherever you want

added urban conditions

After a while David feels a bit drained while working in solitude. To refresh his mind he decides he has to work with other people in vicinity for a while. Close to him is a public working space that allows him to plug and play with his laptop. He decides to walk there.

(5) move however you want

added urban conditions
- *easy access*
- *walkable city*

On his way he decides to get some food and drinks to go, he will eat at the working space.

(3) live however you want

added urban conditions
- *high density of tiny housing*

The rest of his day he works at the shared working space. He meets all sorts of people who have in common that they can do part of their work online and therefore are not tied to a specific area.

(2) work wherever you want
(7) the new cloud workspace
(10) exploring the unknown
(11) a new synthesis

added urban conditions
- *visibility*
- *near high volume of traffic*

When the day is almost at its end David checks his phone to see what kind of local cuisine there is available. He orders some in and has it delivered to the place he is working. Together with a person he met while working he decides to have dinner together.

(4) all individuals eat
(9) the fireside chat

added urban conditions
- *visibility*
- *near high volume of traffic*

IV. INDIVIDUAL TALES

After eating and saying his farewells, he heads home in the same manner as in the morning.

David decides to take a moment to relax in his studio. Taking a moment to listen to a podcast he has been excited about.

After relaxing for a while David decides to head into the city of Amsterdam to explore some of the nightlife, it was in fact with the person he met while working.

(5) move however you want

added urban conditions
- *easy access*
- *walkable city*

(3) live however you want

added urban conditions

(12) shaping the unexplored

added urban conditions
- *internet connectivity*

Eventually David returns home and his tale for the day ends here.

(3) live however you want

added urban conditions

IV. INDIVIDUAL TALES

Pattern field

Now that we have a set of lifestyle patterns of people we can overlay them with each other as can be seen in the Figure to the right. Certain patterns overlap between individuals, or some patterns share some similarity that might be combined into a singular space. These are the patterns that are most likely to become institutionalised over time. They function as the most probable spaces where individuals, with different interests, will have interaction with each other. They ensure that people in our society, while growing individualised, still have the possibility to interact with people outside of their own individual bubble. In essence they are the commons of our society. It is the design of these spaces, where patterns intertwine, that require most thought by the architect or urban designer. They serve many individuals, but to do so they also require a harmonious design that each individual will feel comfortable in. They require a strategic location so that the urban conditions are available. At the same time they should remain public to ensure new individuals will feel welcomed into this space.

We now have the individuals that will incubate our area in the beginning. They each gave character to the core patterns of the digital transition. In the next chapter we will show how each of their stories, with their patterns sets, can be given a place within the city of the future. This will change the design, yet as the future unfolds it also changes the individual and draws in new individuals.

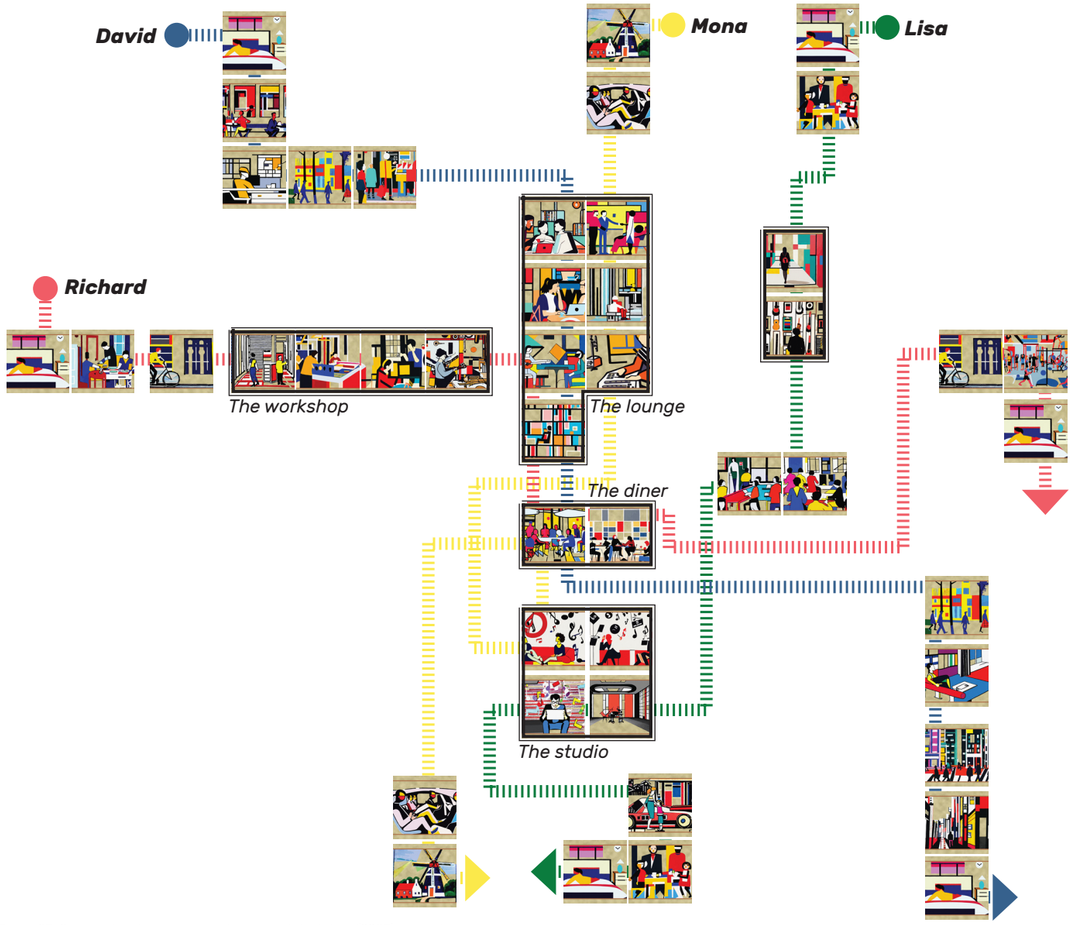


Figure 25: Constructing the commons of the city of the future (2023), by author.

V. BUILDING INDIVIDUALS

Now that we have the individuals that will make up the start of our area, we come to the question of how we can design for them. In the following chapter, we first observe how people and their lifestyle patterns require certain urban conditions. How these urban conditions draw people to certain areas within the city. Second, we give shape to a grid that allows individuals to design together in public space. At the same time we discuss the necessity and the requirements of the grid in future city design. In the third section, we will have a design of the place at the stage of incubation. We will observe how the space changes over a ten year timeframe due to; new individuals joining the design, participating individuals changing themselves and therefore the design, and individuals leaving the design and thus again requiring change of the design. Eventually we close off with a review of what exactly happened in these ten years, what this means for future urban designers, and what exactly their role will be.

Urban conditions

What you might have noticed while gazing at the core patterns and patterns of the individual stories, is that each of these patterns have urban conditions they require. The patterns are unlikely to come to fruition unless these conditions are met in the designated area. Of course, in a technical sense the patterns can be built anywhere in or outside the city. With enough effort we could create better urban conditions in a new or existing neighbourhood. This would require tremendous costs and pushing power. The design of the city of the future is a story of individuals though. These individuals are rarely united in the beginning and lack the power to push for such a major design intervention. This is exactly where understanding the urban conditions within the city gives strength to the individual. On one hand it gives the designer insight on where certain conditions are already met. Where it is likely that the design will 'sprout' without much pushing power from the individuals that require it. After all, most of the conditions are already present and do not require major changes of the surroundings. On the other hand it gives the designer a guideline on where to design for certain activities. If the urban conditions are already available, where do we place certain programming to maintain or strengthen these conditions?

In chapter II we gave shape to core patterns of the digital transition, these patterns had their own urban conditions. The individuals in chapter IV adapted the patterns to their own lifestyles, adding to the existing conditions, their own conditions they require to live their story to its potential. Adding everything together we have the following urban conditions.

Core patterns

- visibility / translated to corner buildings
- next to a high degree of slow traffic volume
- different forms of transport in the vicinity
- basic amenities in the vicinity
- high density of short stay

Specific individuals

- programming related to the music industry in the vicinity
- programming related to learning in the vicinity in the vicinity
- no noise disturbance

Let us look at how each of these conditions are available in a district of Amsterdam-Zuid. This gives us the set of maps that we can see in Figures X to X. Eventually we layer the maps on top of each other as seen in Figure.... While there is no perfect area where all conditions are met for all individuals, there are certain parts where a good set of conditions are met. The area that colour darkest are the areas where many urban conditions are met. For our set of individuals we could offer them a place for their activities in the areas within Figure.... For our design lets decide to place our individuals, partly, in the location to the south.

V. BUILDING INDIVIDUALS

PRIMARY

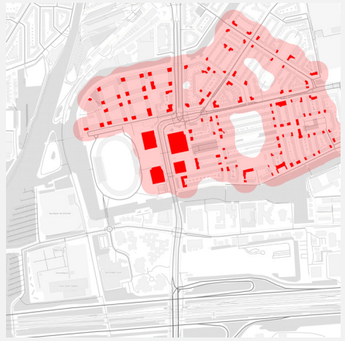


Figure 26: urban conditions | visibility in the Stadionbuurt based on corner buildings, by author.

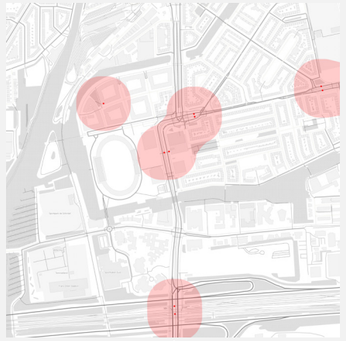


Figure 27: urban conditions | different forms of transport in the Stadionbuurt based on shared car locations, tram stops and bus stops, by author.

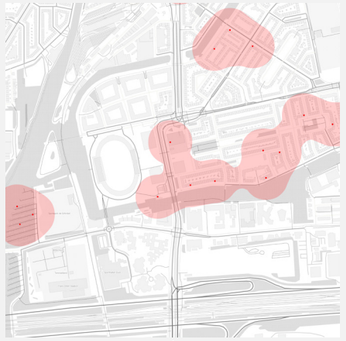


Figure 28: urban conditions | short stay the Stadionbuurt based on AirBNB locations, by author.

Figure 29: urban conditions | high degree of movement in the Stadionbuurt based on STRAVA jogger movement, by author.

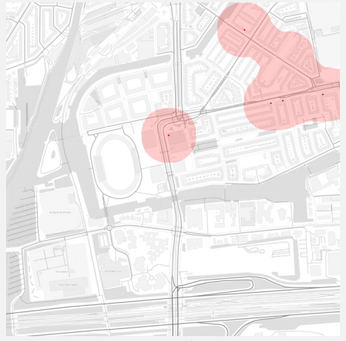


Figure 30: urban conditions | basic amenities in the Stadionbuurt based on supermarket locations, by author.

INDIVIDUAL

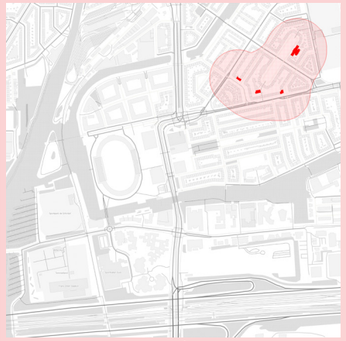


Figure 31: urban conditions | context of music in the Stadionbuurt based on musical schools and musical shops, by author.

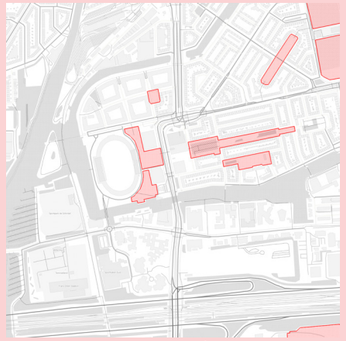


Figure 32: urban conditions | free space in the Stadionbuurt, by author.

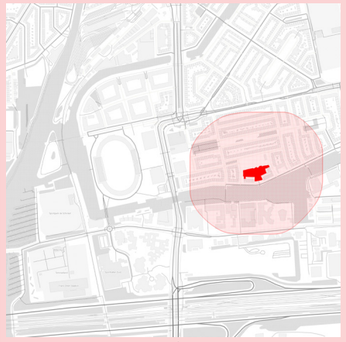


Figure 33: urban conditions | educational context in the Stadionbuurt based on schools, by author.

NEGATIVE

Figure 34: urban conditions | noise pollution in the Stadionbuurt based on bending rails and intersections, by author.

V. BUILDING INDIVIDUALS

Figure 35: layering all urban conditions in the Stadionbuurt, by author.

Figure 36: suitable sites for the selection of individuals in the Stadionbuurt, by author.

V. BUILDING INDIVIDUALS

Forming a grid

Now we want to create an environment where individuals are able to give shape to their lifestyles in coexistence with each other.

Past examples and lessons

In the past there have been examples where free space is left to the people within them without any constraints. An example of such a case is Drop City in the 70s, as can be seen in Figure 37. It was eventually abandoned in 1979. Land that was "forever free and open to all people". It functioned as a small hippie commune. It worked in the beginning due to having a small number of people that could easily align their needs with each other. Eventually the community grew in an uncontrolled way, individuals did not anymore care bout the needs of the others. Tensions and conflicts arose. There was no mainframe or set of rules that allowed for coexistence in such a large community.

There have also been examples of places where people can reshape space within certain constraints. One such case is the PREVI Experimental Housing project in 1969. While this project focused on housing, I think many lessons can be learned and applied to our case.

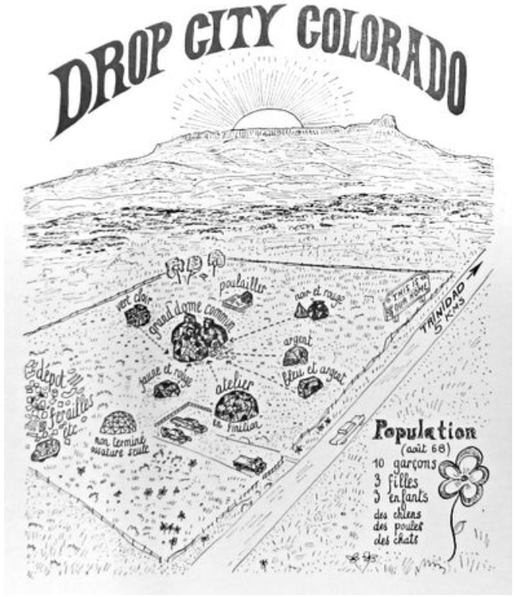


Figure 37: Sketch of Drop City Colorado, by unknown from https://boot-boyz.biz/products/drop-city-domes

The PREVI project is an example of a self-constructed city.
The project had many different architects design housing. Each of these homes followed a certain shape, depending on the architect, as shown in Figure 39, yet all of them also allowed for modification and growth over time as can be seen in Figure 40. The housing changed based on changing family compositions, changing careers and other aspects. In essence, the architects offered the future the residents a mainframe in which they could change the space to their needs. Can we bring such a concept to urban design?

Figure 38: Picture of a dome within Drop City, photo from https://www.citiesthatwork.com/blog/2013/08/sustainable-communities-of-the-past-and-present.

V. BUILDING INDIVIDUALS

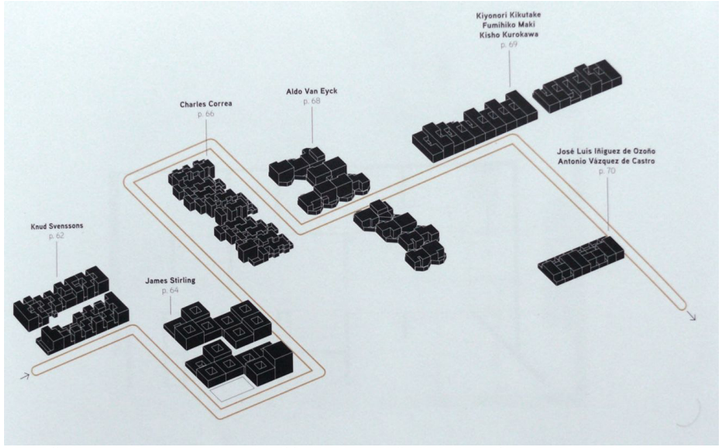


Figure 39: House modifications over time within PREVI, by Fernando García Huidobro, Diego Torres Torriti, Nicolás Tugas from https://core.ac.uk/download/pdf/41789305.pdf

Figure 40: Different standard houses within PREVI by different Architects, by Architectuul from https://architectuul.com/architecture/previ

Grid of public space

To make things more sustainable, I would suggest creating the grid from waste material in local context. Though for this research, the waste material of Amsterdam-Zuid has not been properly documented. Therefore, as unstainable as it is, let us work with new building materials from a local hardware store. In this case the Gamma which is approximately one kilometre from our designated area.

The Gamma offers wooden beams in multitudes of three meters. Assuming these constraints, let us design a wooden six by six grid within our area as can be seen in Figure ... Within this grid we can place the patterns of our individuals.

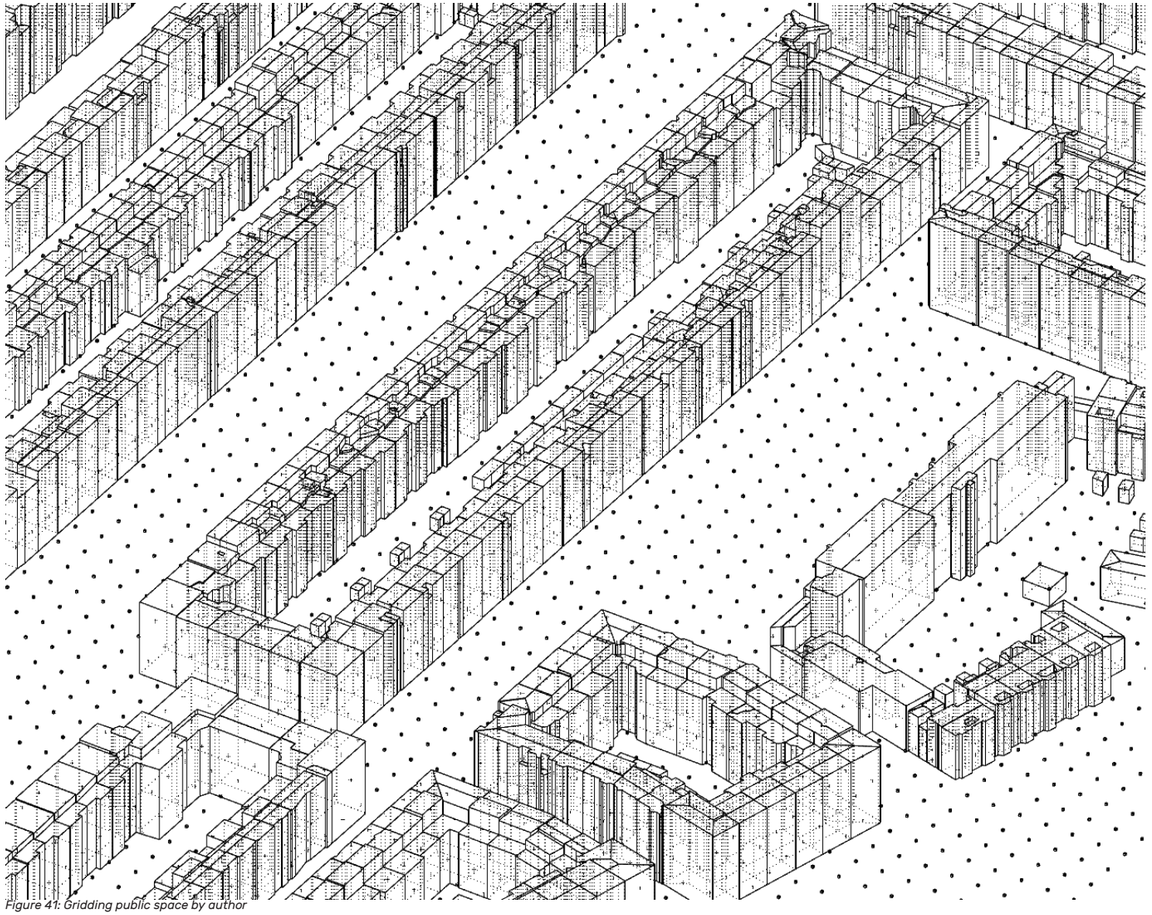


Figure 41: Gridding public space by author

V. BUILDING INDIVIDUALS

Incubation

We could have many different compositions that would satisfy the requirements of our individuals. In our design we configure our space as can be seen in Figure XX. The pattern field we shaped in chapter IV had certain patterns that overlapped well with each other and created certain common spaces. For our space we place these patterns in the centre of the area. Within the outskirts we place the more individual patterns. The public display cabinets function as tendrils along the most likely places of movement growing from the centre outwards.

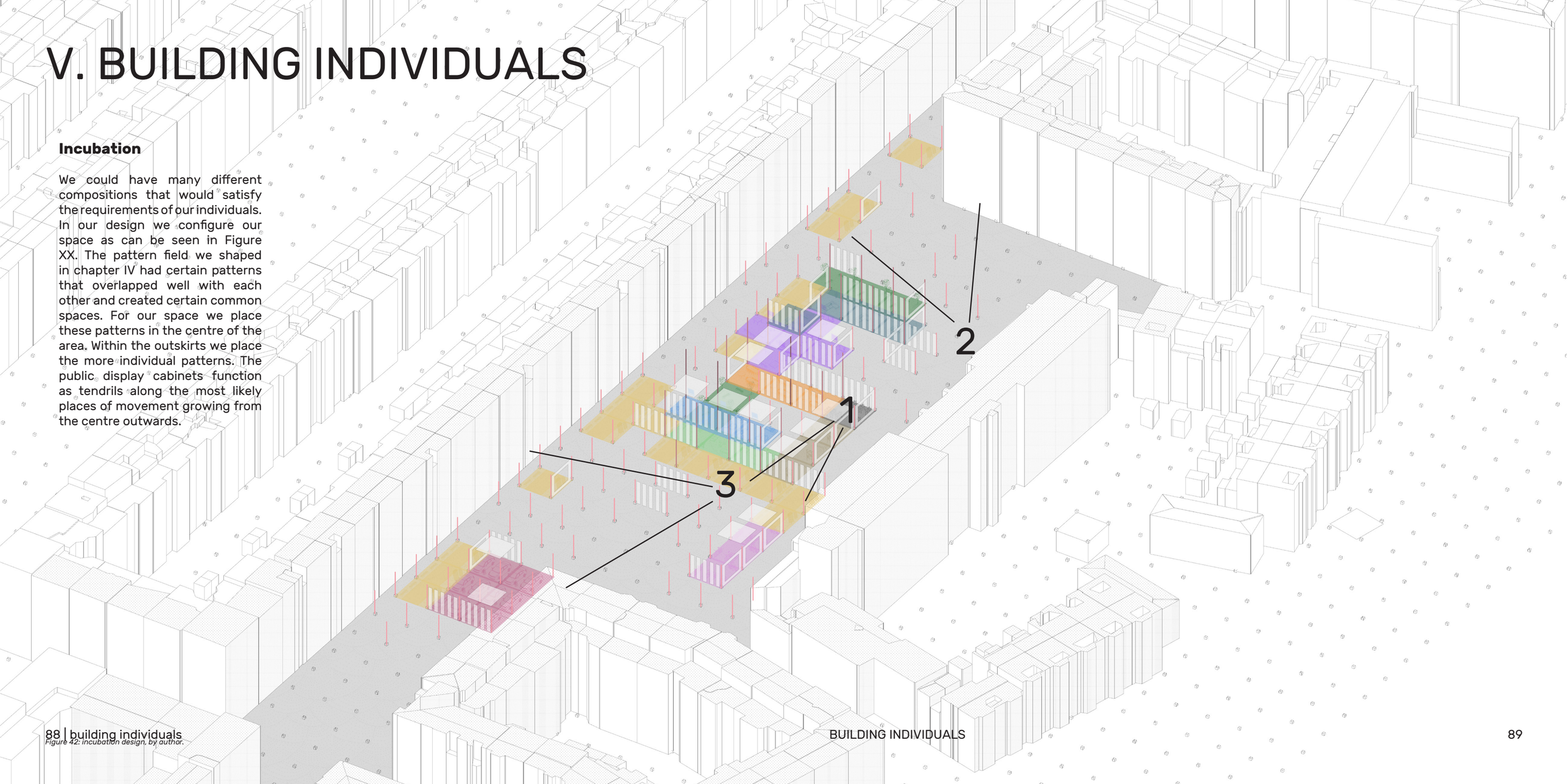


Figure 42: Incubation design, by author.

V. BUILDING INDIVIDUALS

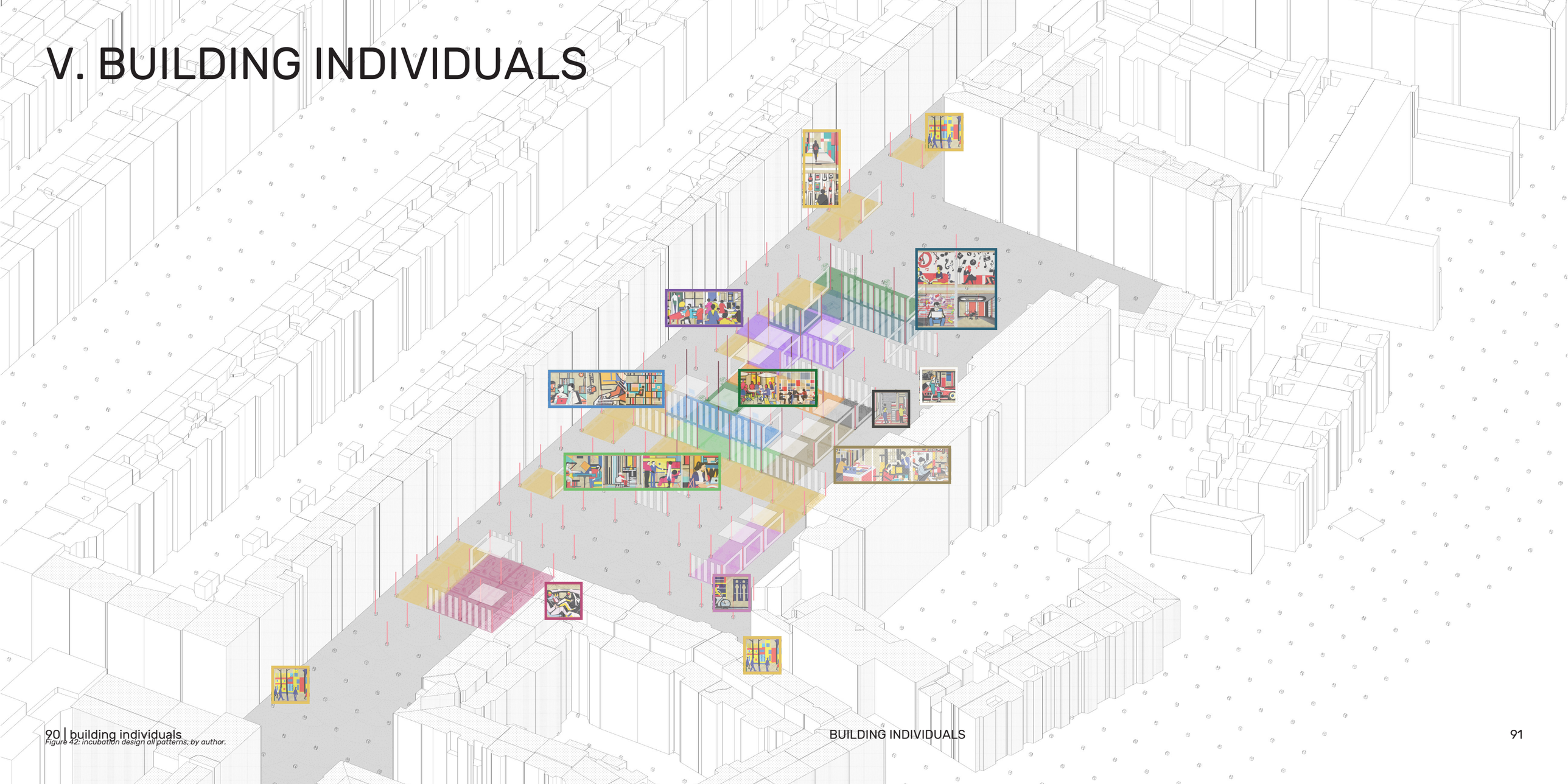


Figure 42: incubation design all patterns, by author.

V. BUILDING INDIVIDUALS

V. BUILDING INDIVIDUALS

V. BUILDING INDIVIDUALS

V. BUILDING INDIVIDUALS

Are we now done with the design? Perhaps if we stuck to the dogmas of the industrial era where we assumed a linear progression of life. Now, understanding the digital transition, understanding the role and place of individuals, it becomes apparent that no design will ever be finished. Let us now time skip our area into the future.

Transtemporal design

Urban design will in essence follow the perpetual cycle that can be seen in Figure XX. Individuals are drawn by a certain context within the city, in our case the music cluster and educational cluster. In turn these individuals will modify the space to suit their tastes in relation to the context, as was visible in the previous section. Now that the space has changed the context will change too. Certain individuals will interact with each other in these newly formed spaces, these new spaces might draw new individuals to the area that were 'undesigned' for to the area. Basically, the urban conditions that we observed at the beginning will have changed, and thus provide a different context for potential new individuals.

In the following part we will go through the design during a timeframe of ten years. Through a process that will simultaneously happen all across the city, though it will happen at a desynchronised pace. Other areas might find themselves in the incubator stage while others will already be in a later stage.

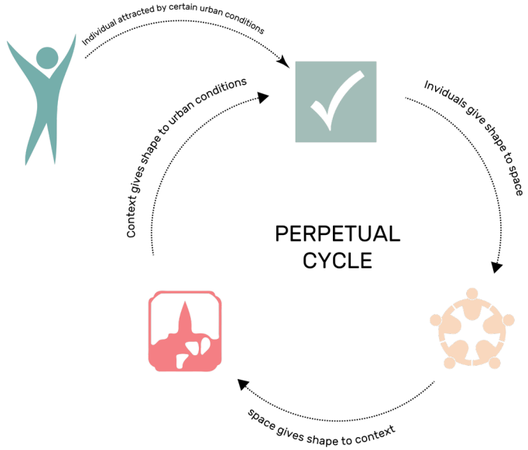


Figure 43: perpetual design, by author.

V. BUILDING INDIVIDUALS

Clustering

In the previous section we basically incubated our area for our individuals. From this snapshot of the incubation phase we head one season into the future, so approximately 3 months later. Our previous personas changed space. Hence, they also changed the urban conditions. Based on our previous individuals, the following new urban conditions appeared and also old ones changed;

- 1) new shared workspace in the neighbourhood
- 2) new shared makerspace in the neighbourhood
- 3) new music-therapeutic cluster in the neighbourhood
- 4) slow movement flow shifted more towards this area

meaning new individuals;

- 1) other digital nomads become attracted to this area
- 2) other craftsmen wish to use the workspace offered here
- 3) people that wish to start a culinary business see this as an attractive area
- 4) people interested the music-therapy field for whatever reason come to this area

Let us take urban condition two for example. A new shared makerspace in the neighbourhood, see Figure XX. This new urban condition is great for Alex the Crafter. Alex is a student from the neighbouring school. We do not need to completely go through Alex his story to understand what is happening, but essentially Alex brings patterns to this area, see Figure XX.

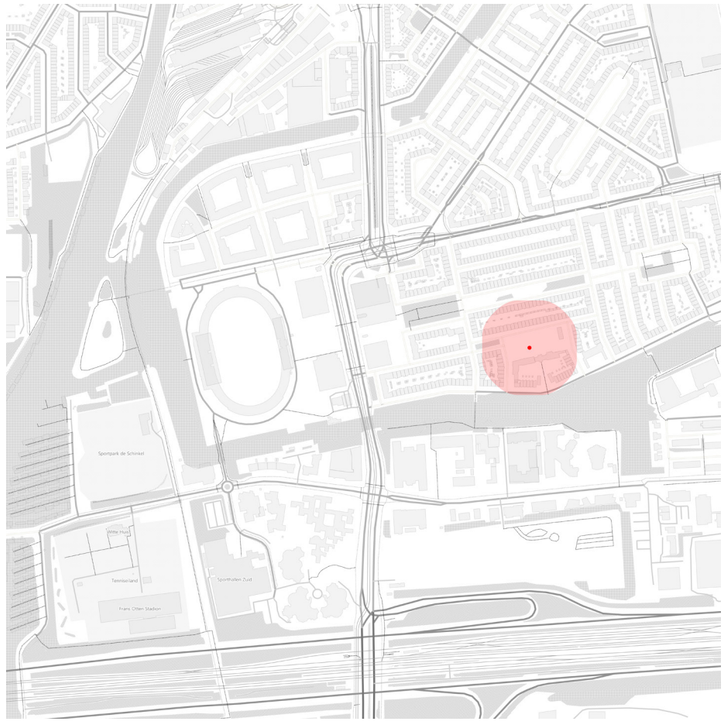
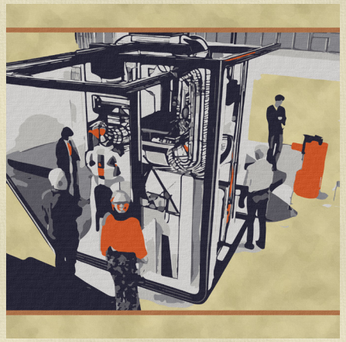


Figure 44: New urban condition of having a public makerspace in the area, by author.

Alex the Crafter

Alex goes to school in the area. He likes to make his own furniture. He has made some small stuff in his home before using the tools he bought, but Alex really wants to make bigger objects and this is near impossible with what Alex has right now. One day he noticed the music makerspace in the area. While not perfect, he noticed that most of the tools could be used in a way to craft furniture. But with some minor changes the space could even evolve into a place perfect for Alex.



Alex usually works with small hand tools, but for a few things a 3D-printer would be perfect for the job. The current users also saw great benefits to having such a large 3D printer in the vicinity and together they decided to get one.

(2) work wherever you want
(7) the new cloud workspace
(10) exploring the unknown
(11) a new synthesis

added urban conditions
- *workspace in the area*
- *material shop in the area*

V. BUILDING INDIVIDUALS

Our new urban conditions gives opportunity for new individuals to establish themselves here, bringing with them new patterns and thereby changing space once again. Now a season later, the grid has expanded itself into the neighbouring housing. It transformed a few homes into short stay studios, we get a square where food stands can set up their business during certain times of the day and one house transforms into a food-to-go business, and the school reshapes its own workshop to connect it with the existing one outside of school and make it more public. At the same time some space expanded to facilitate more people and might have shifted place.

In our impression we see the makespace dedicated to musicmakers has changed. Now accomodating Alex and other types of makers.

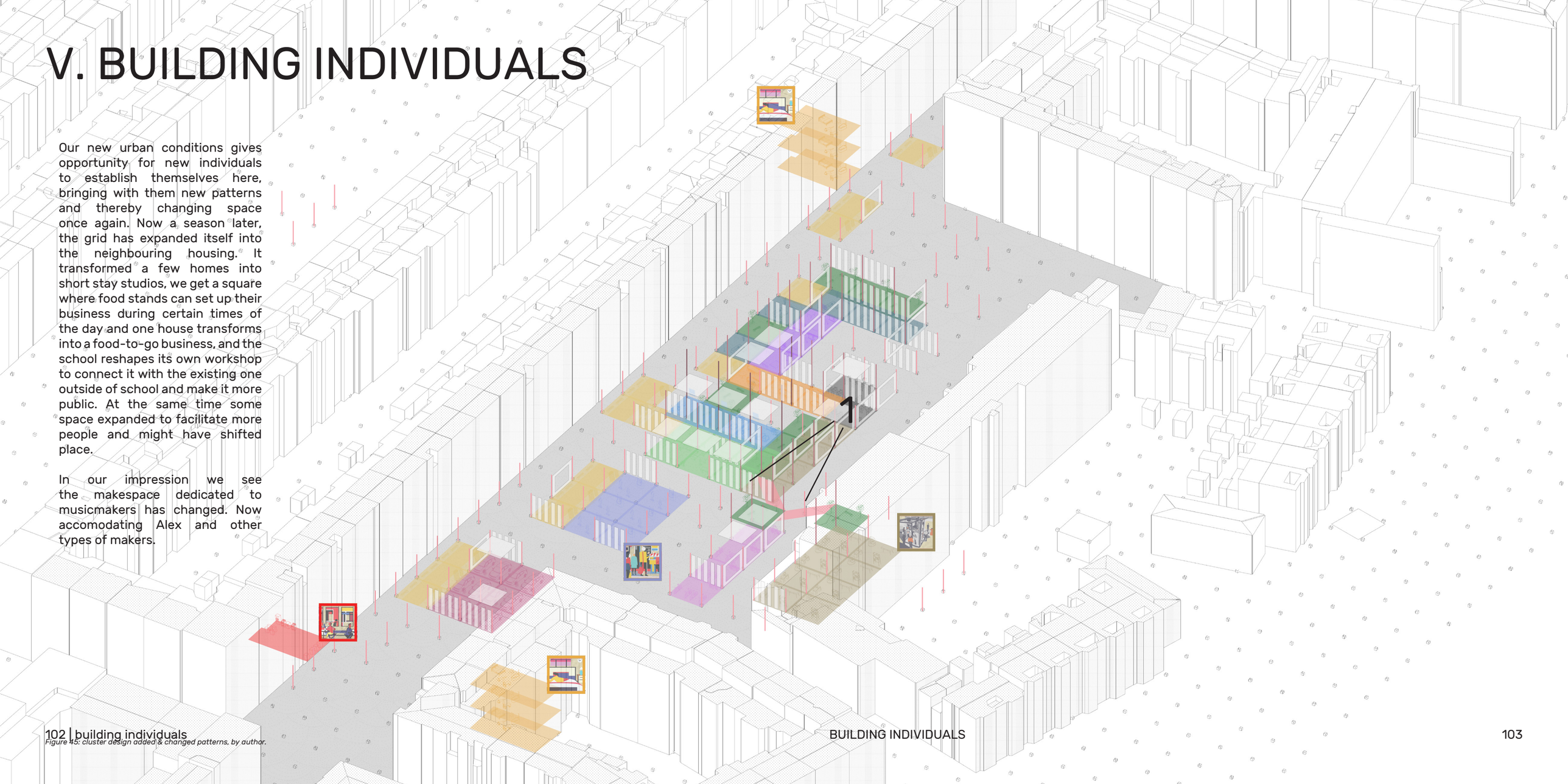


Figure 45: cluster design added & changed patterns, by author.

V. BUILDING INDIVIDUALS

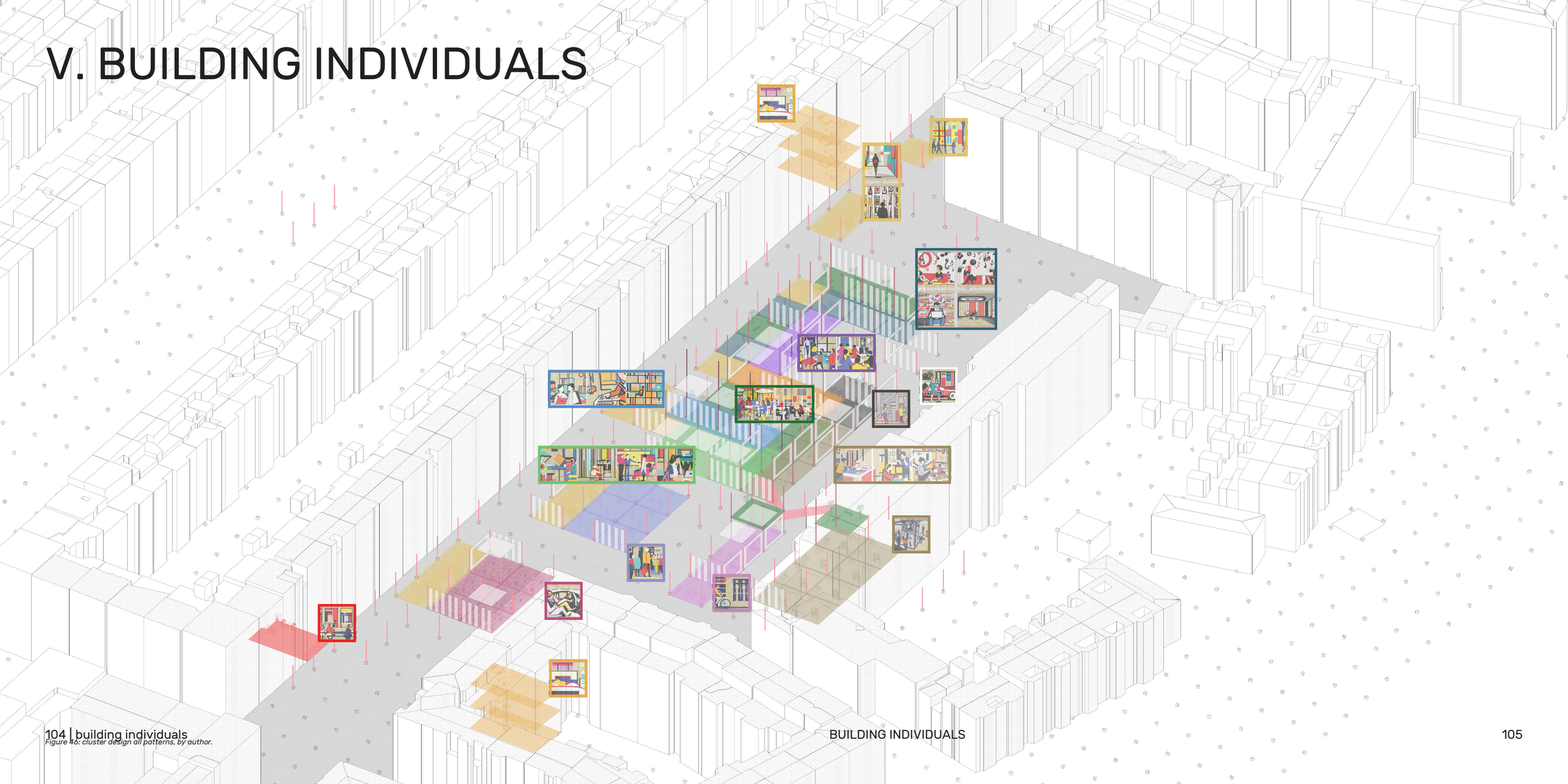


Figure 46: cluster design all patterns, by author.

V. BUILDING INDIVIDUALS

V. BUILDING INDIVIDUALS

Institutionalising

A year from the beginning we dive into the institutional phase. Our area has changed again. Here we see how the grid merely functioned as a framework to co-design with. There will be certain patterns that become saturated with people along the day, while others fluctuate through time, as can be seen in Figure XX. These saturated patterns institutionalise, they will have the same types of users for the foreseeable future. Aligning the interest of these pattern sets is free from the previously created grid, leading to building shapes more interesting for the existing context. At the same time other things have happened in the area. Urban conditions changed once again;

- 1) people per square meter increased
- 2) makerspace institutionalises expanding its reach
- 3) music-therapeutical cluster expands
- 4) more movement to this area

meaning;

- 1) more individuals wish for a place to workout & for informal dining and relaxation spaces
- 2) individuals interested in reuse of material for fabrication open up a shop here
- 3) more people interested in music-therapy house themselves here & adapt the surrounding homes to their needs
- 4) groups of individuals decide a passage needs to be created that leads to the institute

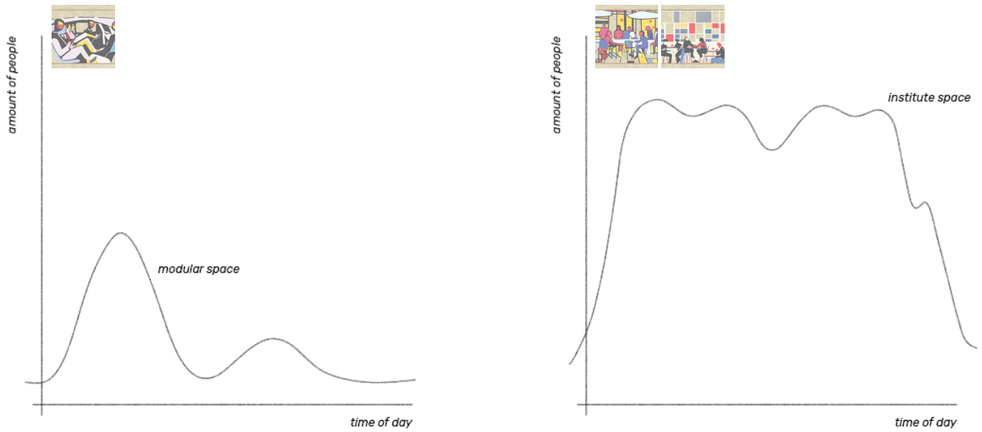


Figure 47: institutionalising of space, by author.

Mona the Resourceful

Several now existing urban conditions have made Mona reconsider where she is currently living. Up and until today she always commuted to this area, but now she actually moves to this area and decides to integrate her life even more with the area, transforming part of this area into THE music-therapeutical cluster of Amsterdam-Zuid with other people. What she essentially did was transform her own pattern set, see figure XX, and in turn used this to reshape space.

FORMER

Mona used to commute from a village to this area using the shared car.

(5) move however you want

added urban conditions

- *commuters outside the city*

NOW

The urban conditions of this environment made her move here now and she is able to move to her workspace by foot.

(5) move however you want

added urban conditions

- *easy access*
- *walkable city*

V. BUILDING INDIVIDUALS

A year later we see the makerspace, lounge, and shared workspace institutionalise into a building shape free from the grid internally; we see adaptation of local housing in form of reprogramming for a gym; demolishing old buildings to create a football square; the music therapy space grows into the existing housing allowing practitioners to easily access their workspace; shared kitchens and living rooms come into place in existing corner buildings and other strategic locations to accommodate all the short stay residents; and a larger corner building has turned into a home depot that specialises in reuse of materials for the makerspace.

In our impression we see how a part of the area has transformed into what seems to be a mix between music and healthcare. Mona placed herself in the existing housing and connected it with the public grid.

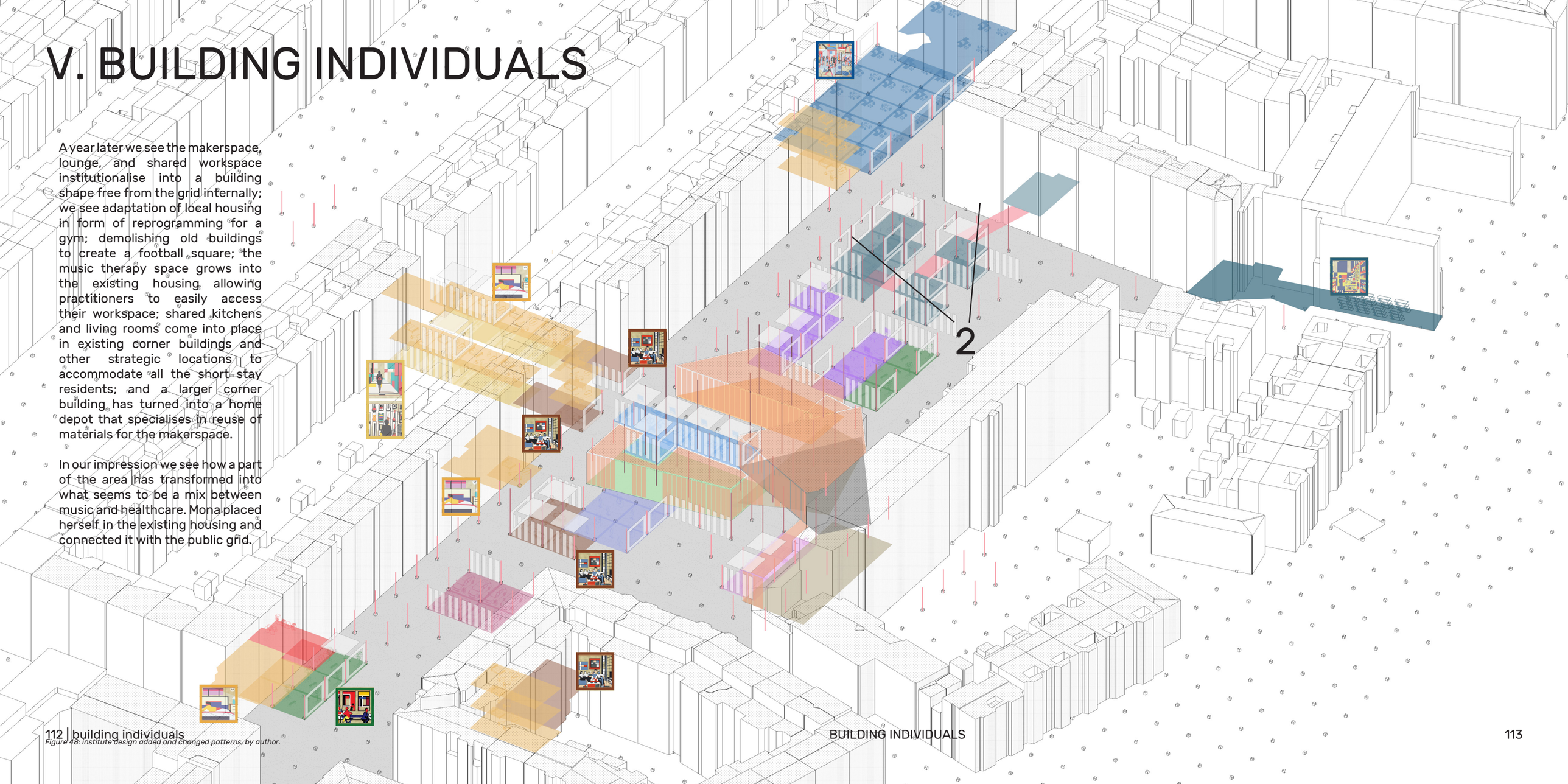


Figure 48: Institute design added and changed patterns, by author.

V. BUILDING INDIVIDUALS

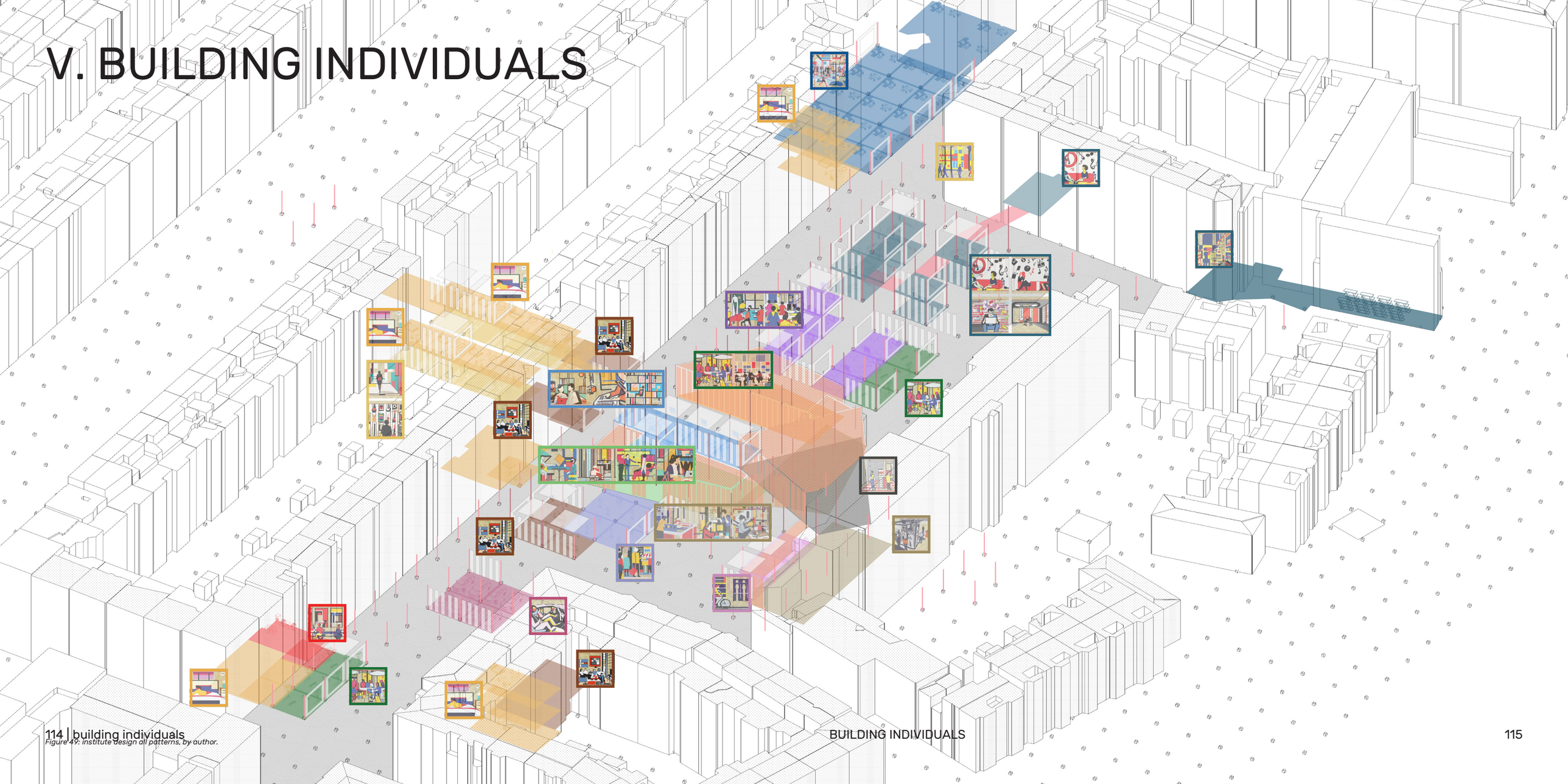
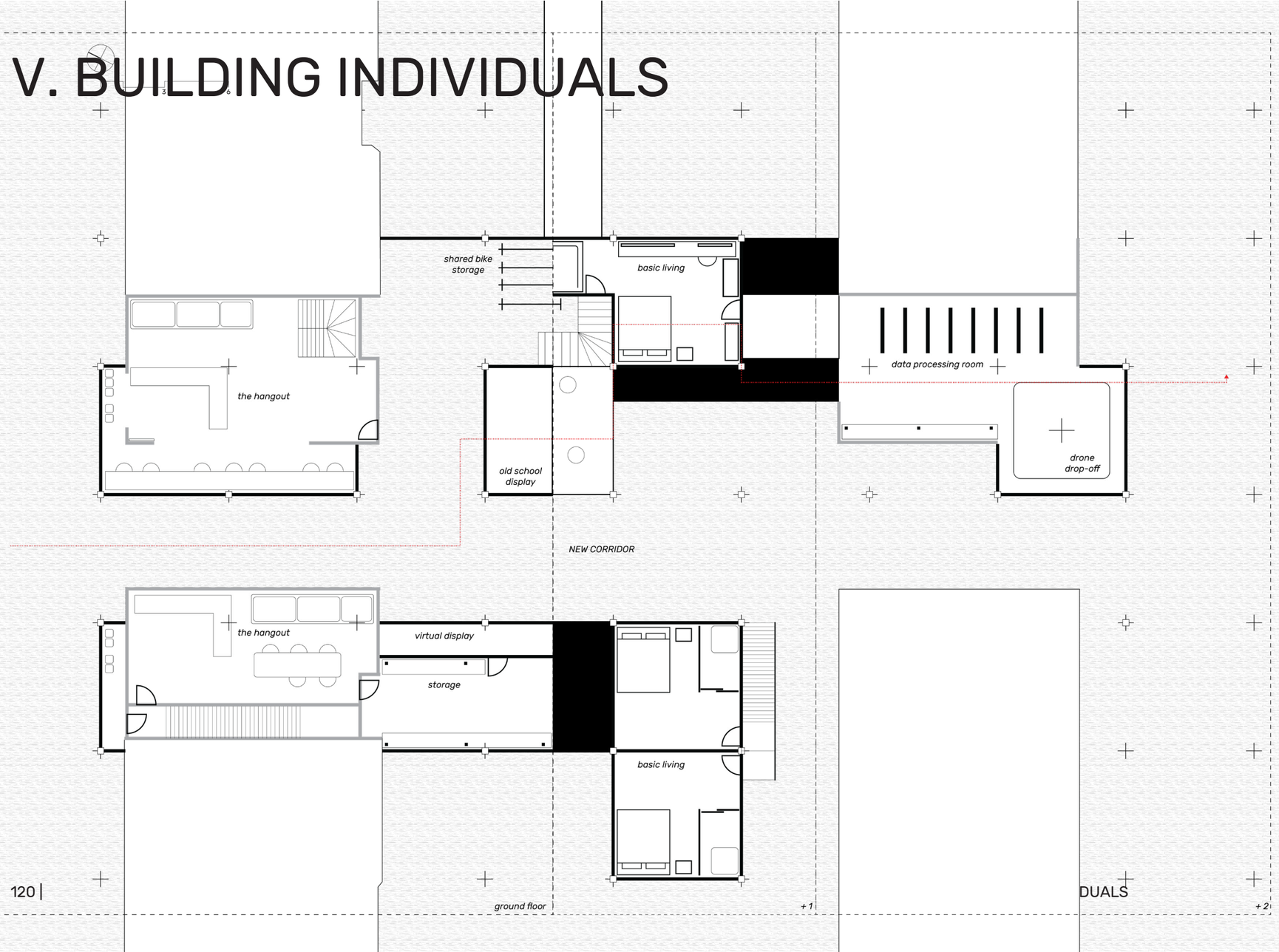


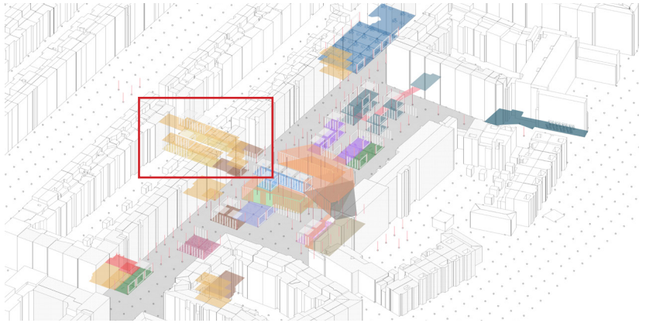
Figure 49: institute design all patterns, by author.

V. BUILDING INDIVIDUALS

V. BUILDING INDIVIDUALS

V. BUILDING INDIVIDUALS



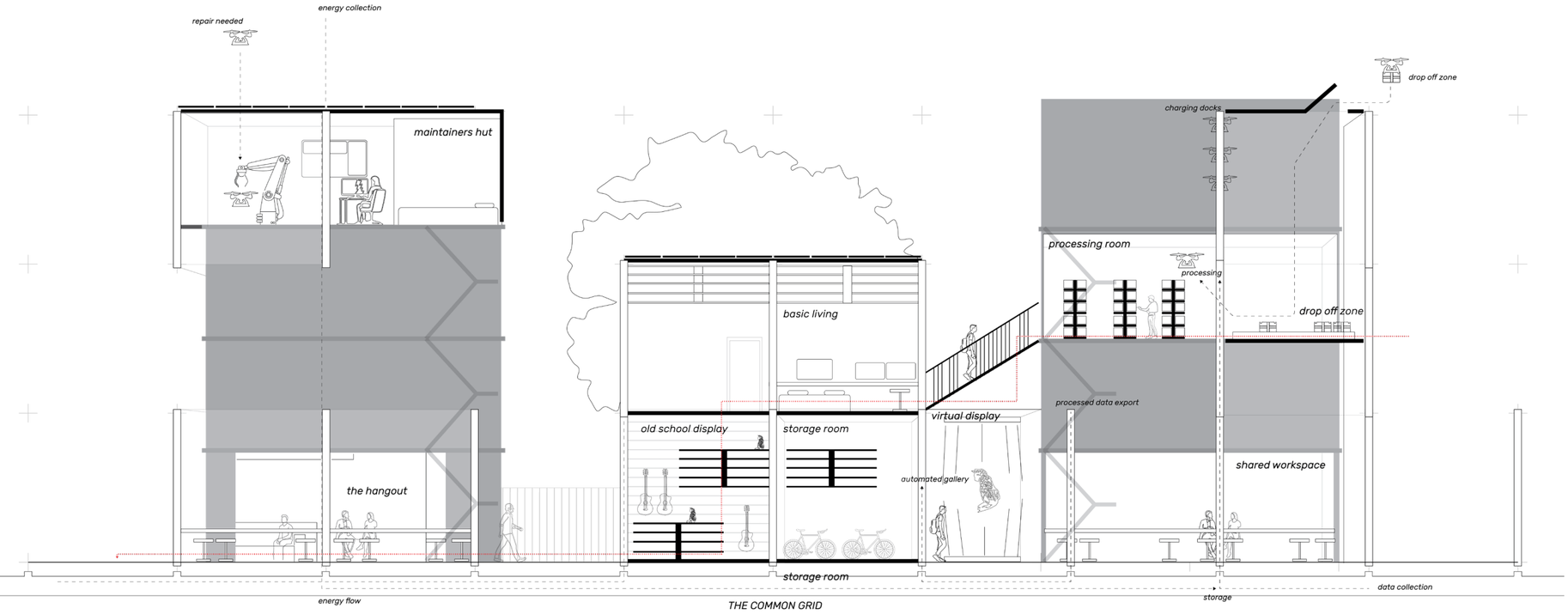


zooming in

Here we zoom in on the corridor in our area that is created over time. Here both the new and old built environment collide with each other. It shows the requirements of the proposed grid and how the design requires from the designer (in combination with the residents) to place spaces with common patterns in strategic locations.

The corridor opens a new entry point to our designed area. But for this corridor to work it needs a certain degree of urban liveability. Over time the new corner buildings have shaped into the common “hangouts” in which people who make use of basic living spaces are able to come together to use the shared kitchen and living room. The basic units functions as a place merely for sleep and refreshment. Activities beyond that can be spent in public space. These basic units are preferably on a level above the ground floor, as the plinth is dedicated to public life and these basic units will likely be empty during the day when their users are outside somewhere. Two levels above we see a data processing room that absorbs all sorts of data from beyond and facilitates this for this region. More on this in the section.

V. BUILDING INDIVIDUALS



In the section we can see certain activities that come to be due the transformation over time. There's a processing room and drop off zone for packages. There's also the hangout in which people come together. We see here various common goods / spaces. Assuming that these come from individual initiatives instead of private companies. These 'decentralized' public spaces will need maintenance in the area as well. It brings forth the 'maintainers hut' in which someone ensures that the common goods run smoothly. We see also the functions that the grid provides. It enables codesign in physical sense through a common dimension and it enables individual interaction with the digital realm, through an accessible power- and data-grid. Data from elsewhere comes to this place, perhaps it is processed through an AI that can create an interesting 3D video from someone that creates something in a workplace. Eventually this video is holographically projected in the virtual display.

requirements of the grid

In all the imagery so far, we can see that the grid functions as a space to design together with each other. At the same time it can be seen as infrastructure upon which individuals can build. This creates certain requirements that the grid must fulfill and has to be invested in, to truly make it a grid that individuals can adapt.
The grid functions as a physical, data and power grid. To allow people to make changes within the grid, the pillars will need a plug-and-play element tied to them. Electronic devices, such as the virtual display needs to both gets its information and power from somewhere. Assuming that these are individual led initiatives. Then the grid, or rather the pillars that 'grow' everywhere need to be tied to the data and power infrastructure of the city. If the grid does not fulfill this requirements, we are limited to physical spaces that do not affect the greater digital realm. In a way this would be a manifestation of the internet into public space. It is a common good upon which everyone is able to build.

V. BUILDING INDIVIDUALS

Decay

Now from the start we head a decade into the future. Ten years since incubation, what has changed? Ten years is a long period, especially in the digital era. Let us take three changes and see how they affect our area. First, our society is struck by a recession. Second, artificial intelligence takes over our music industry. A large share of our music will be artificially synthesized and in turn people have become less interested in the making of instruments. Third, Mona's group who established such a major sector of music therapy within this region was invited by the Amsterdam Academical Medical Centre to work in their area instead, extracting all individuals related to the music therapy context within our area, see Figure 50. Not only do we see changing urban conditions due to individuals, but also changing urban conditions due to circumstances beyond our control;

1. certain types of housing become unaffordable
2. fresh food is more expensive
3. music-therapy sector disappeared
4. less movement in the area

meaning;

1. short stay housing becomes temporary residence until the economic situation improves
2. space is dedicated to grow local produce
3. no individuals with patterns related to music-therapy in this area anymore
4. catering industry moves away

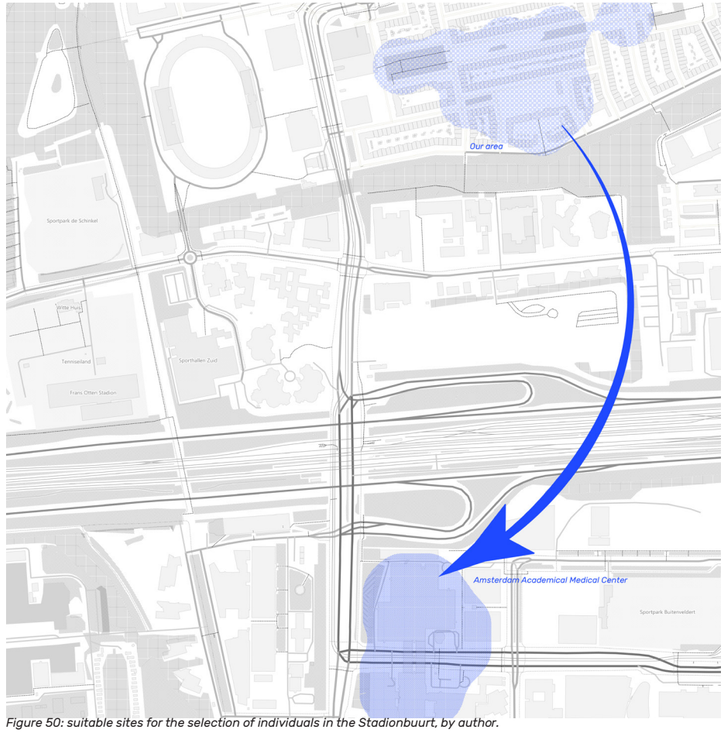


Figure 50: suitable sites for the selection of individuals in the Stadionbuurt, by author.

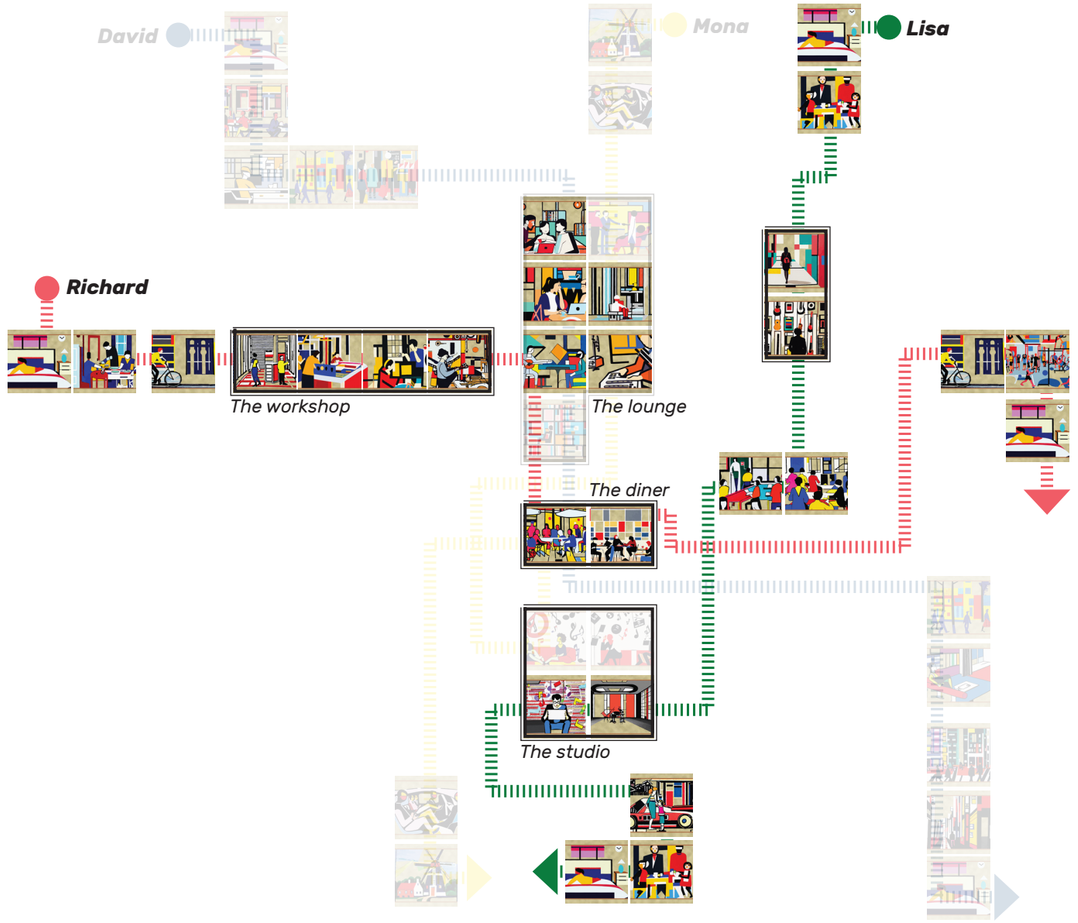


Figure 51: Individuals leaving space, extracting patterns (2023), by author.

V. BUILDING INDIVIDUALS

Ten years later most of the economic activity has shifted elsewhere in the city. The studios once used by the therapeutical cluster have changed into tiny housing. These together with the former short stay housing actually offer people, who are in a difficult economic situation due to the recession, to still find housing within the city. The institute will have less traffic than in the past, but it still acts as a workspace for some people and as a neighbourhood centre for others. In due time it will return to either the former grid or help form a new grid. Eventually this free space will allow our cycle to start anew from incubation. The people laid off from their former job will need to be creative to cope with changing urban conditions, but that is exactly what this space, with its modularity, will make possible.

In our impression we see how the changing contexts has changed space. People go back to base necessities. They will need to be creative to cope in a recession, but this space with its changability allows exactly that. Stimulate creativity to reshape their own space.

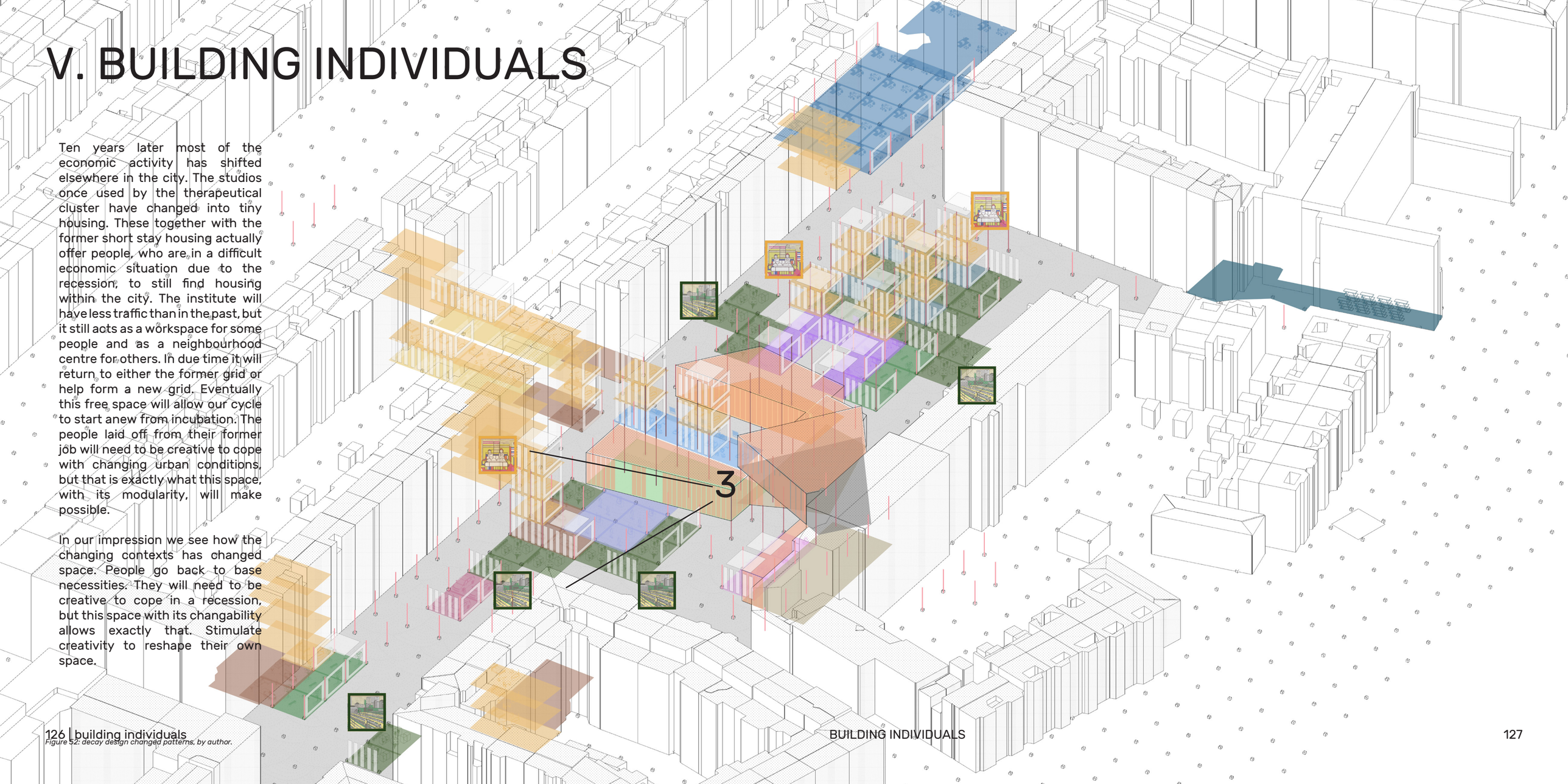


Figure 52: decay design changed patterns, by author.

V. BUILDING INDIVIDUALS

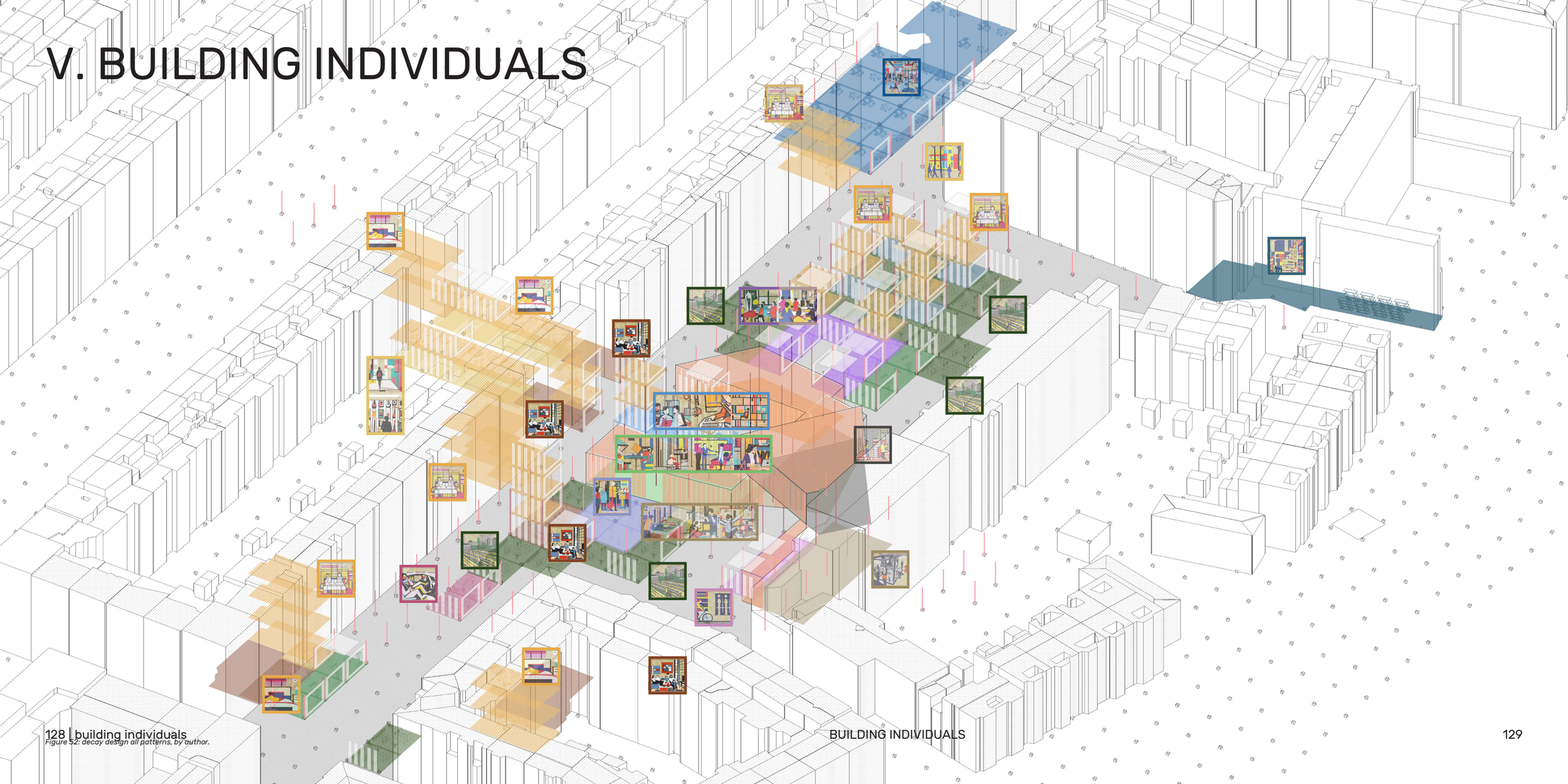


Figure 52: decay design all patterns, by author.

V. BUILDING INDIVIDUALS

V. BUILDING INDIVIDUALS

V. BUILDING INDIVIDUALS

Review

Let us review what happened to this area and why this is relevant to the field of urban design. While the design itself is up to personal preference of the reader, the important aspect of this design is the methodology.

Design beyond time

We gave individuals a leading role in the design of public space in the city. Time played a major role in the design process. First, we saw how the area was incubated for individuals that approached the urban designer or architect using their individual patterns. Second, after incubation we headed into the clusterisation phase. New individuals were drawn into the context that was created by the original incubators and these new and existing individuals cluster based on what kind of space they use. Third, eventually the space 'institutionalised' based on constant use by groups of individuals. A space facilitates a specific set of patterns, and it is unlikely that the space where these patterns are active will change in a short time frame. Finally, the area entered a stage of decay because of changing circumstances outside of our control. Patterns disappear, but this is not the end of life of the design. Eventually we start anew in the incubation phase, society might have different interests at this point. It is exactly these sort of spaces where these new interests can develop themselves again. Our design transcended time. It is no more a linear process where we as designer can say that we are 'done' at a certain stage.

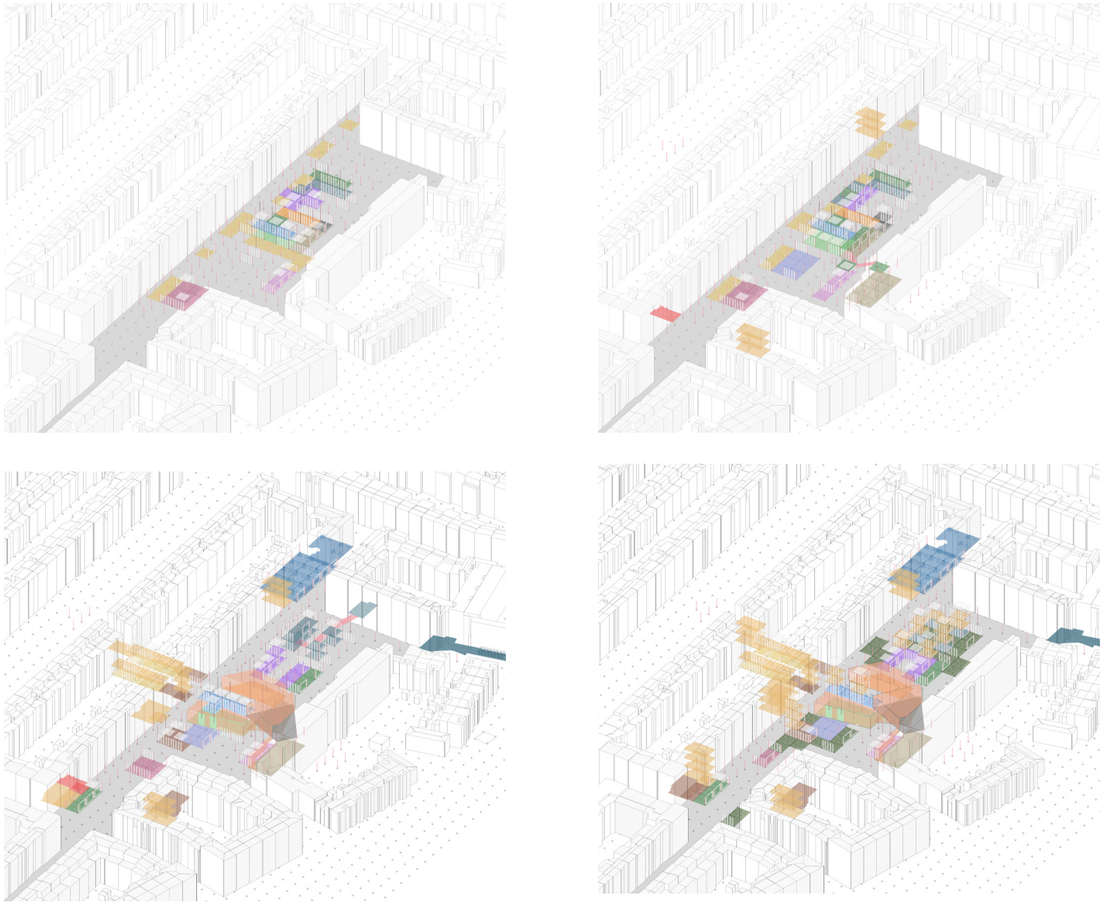


Figure 53: transtemporal design for the digital transition, showing incubation, clustering, institutionalizin and decay, by author.

V. BUILDING INDIVIDUALS

Design beyond borders
While we only designed a specific part of the city for a set of individuals. We can also imagine that a different place or different individuals could have changed the design in a completely different way. This at the same time would lead to very different design. Different individuals might have gathered and thus a different pattern set would've been created. Different places of the city could've undergone this way of design at the same time and the individuals of these areas might have interacted with each other. It is impossible to know exactly what might happen, especially on a long enough timeframe when working with individuals.

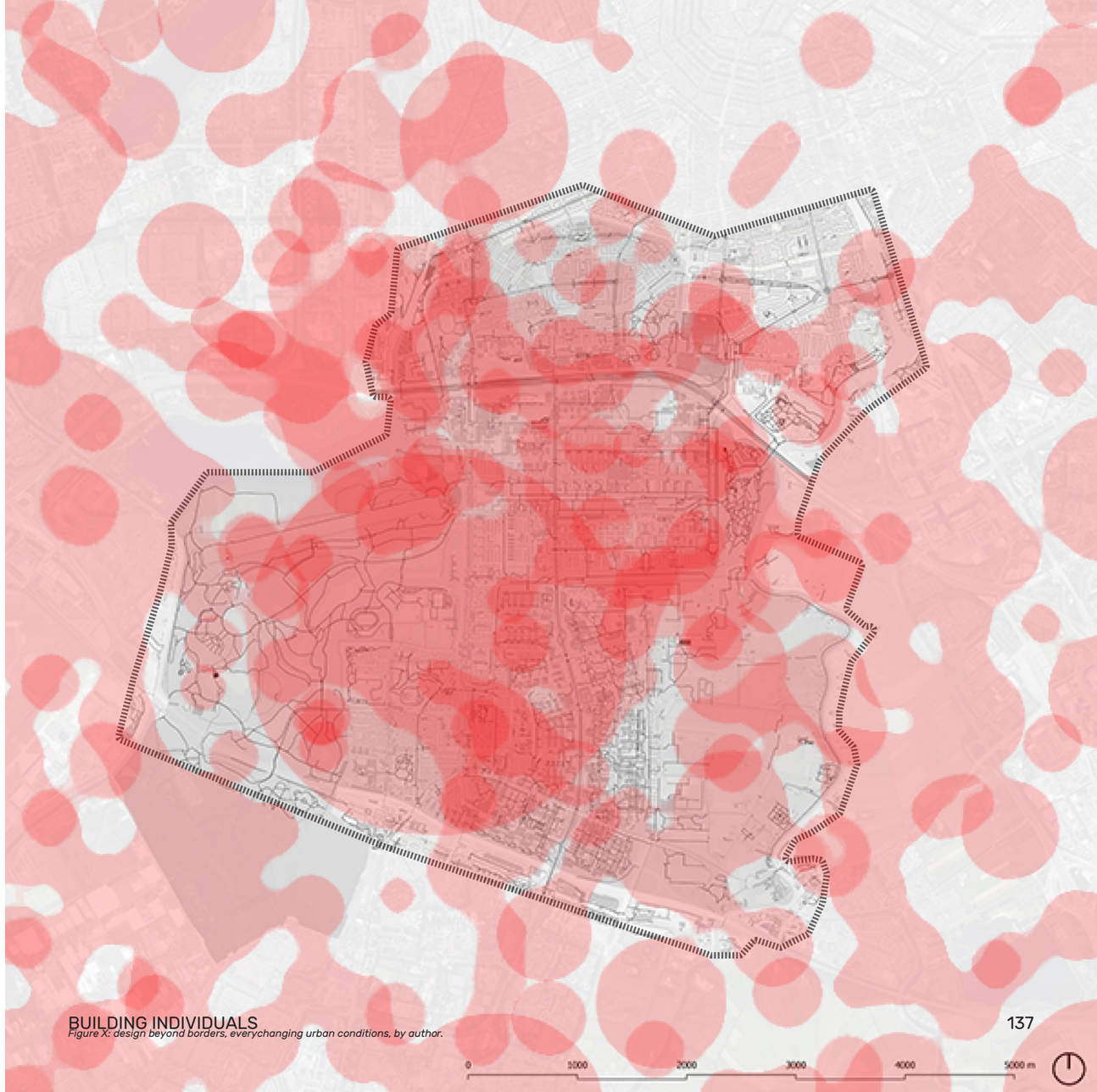


Figure X: design beyond borders, everychanging urban conditions, by author.

V. BUILDING INDIVIDUALS

What sort of changes did the digital transition demand of the design and design process within urban design? Our original research question. Let us revisit our sub questions to answer our main question.

Conclusion

First of all, what is the role of individuals in the new design process of urban design?

Individuals, the users, played the leading role in the design. Each and every one of them had their own story to tell of how they preferred to live their life. What they did was bring patterns to the table. Patterns upon which the designer is able to determine what are the commons and what are the private aspects for our area. The individuals joined the area, changed the area, changed themselves and perhaps eventually leave the area. Overall, they make the design process a non-linear process. They added a timeless element to the area upon which the designer must always remember that the space and context can change over time.

Second question, what was the role of the local context in the design process of urban design?

The local context gives shape to two aspects in the design. First it determined what sort of materials and dimensions we are able to use for our grid. Second it gave insight in which places of the city, developments are most likely to take place (should people be able to directly affect their built environment). At the same time, the context did not provide a one-sided aspect into the design. It was constantly reshaped by the individuals that changed space to their needs.

Third question, how can individuals design together?

To do this we used pattern language to shape the stories of people into a physical language. No matter in what sort of odd way you like to live, if you are able to translate this in a pattern you can use it communicate with others. People have certain preferences, there is no right or wrong in this matter. Though it is important to understand which pattern is wanted, and which are merely out of necessity. When you do have the set of wanted patterns, what then can be done is make a composition out of it that fills the needs of its users. Conflicting patterns can be resolved, overlapping patterns can be combined, together leading to a codeveloped design.

Fourth question, what was my role as urban designer in this process?

I, as the urban designer, did not enter the project with specific design ideals, save for the core patterns. But even these are eventually 'coloured' by the people themselves. My role was that of a process guider. In essence the individuals came to me with their set of patterns of how they wished to live. What I did was translate this into finding a place where these patterns are most likely to thrive. I gave shape to a composition that might facilitate the individuals that came to me in the first place. At the same time I acknowledged that this change in the city would over time attract and change other individuals. It was my role to anticipate on all sorts of people that might enter this area, and ensure that this space would always remain a public area that can be remoulded by its current, and future users.

What sort of changes did the digital transition demand of the design and design process within urban design?

Over the course of this project I fulfilled certain functions. First of all, I speculated as a futurist on what sort of people might place themselves in this area. On one hand this was speculation, but it was not baseless speculation. It stemmed from the existing urban contexts within the city, which then lead to speculation to all sorts of individuals that might wish to link themselves with this existing context. Secondly, once the individuals were gathered, we explored their pattern sets. Combining all their patterns together gave us certain pattern fields, which we then used to make a possible composition of space. What is important here is to create a composition in which all individuals are able to thrive. Last and perhaps most important, we were a process guider. I as the designer did not have a specific design in mind, you could argue that there never was an end product. What was important was that these stages of incubation, clusterisation, institutionalising and decay, could proceed smoothly. Ensuring that the individuals could change space over time, making sure that potential conflicts are resolved, and ensuring that the design remains future proof through the usage of the core patterns. This in contrast from our modern way of design where we work on a project to project base. Modern projects are in my view a design for a specific stage. We make an area ready for incubation or perhaps we design an institute. What we do here is design for specific static target groups. Which gives us this view that once the place has become physical then we are done since the target group is a group that will never change. But this is exactly what we can not do anymore because of the digital transition. Our way of designing has to change. To make public space for people we have to approach everything from the individual. The future urbanist has to proceed the design in a different way.

The digital transition demands us to approach the design and design process from a timeless perspective. We have to acknowledge that each space is different to each person. What might be horrendous for one person might be beautiful for the other. Gone are the days where can design for target groups. Designing for target groups is designing for exclusion. To properly facilitate this way of thought, individual people need to play a larger role in the design process and they need to be able to communicate with each other. I chose pattern language, but perhaps there are other and better ways of communicating with each other. It requires the designer to relinquish his role as the main figurehead in design, instead doing this together with its users. For the design itself we have to let go of the dogma of 'final design'. There is no such thing as a final design. People change, the users change, if the design does not incorporate this aspect in any way, it is from the perspective of this research not a humane design. Each place that a designer works with is embedded into him or her for the rest of his life. They should understand the place, live in the place, understand how the pattern field of the area works and how future changes might affect this pattern field. Thus giving shape to the never-ending design and coordinate this process together with its other users.
The digital transition demands the future urban designer to be:

- a futurist
- a process guider
- a spatial composer

REFLECTION

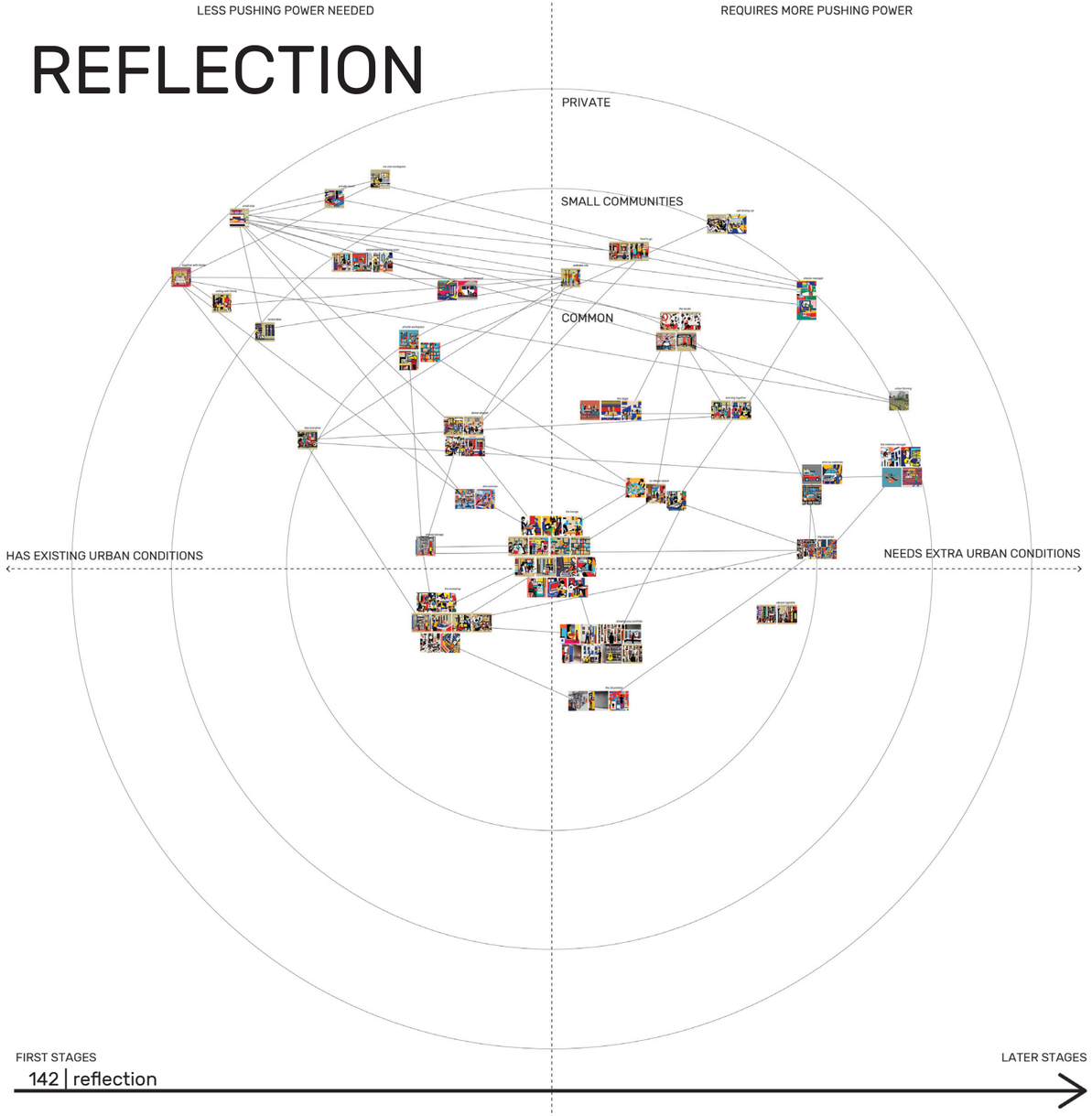
Under the track of Urbanism, the project was done in the cross domain studio City of the Future. The studio approaches urban design and architecture from an integrated viewpoint. How do different disciplines manifest themselves together in the design of space? At first I thought this studio would be a great fit. My topic would seemingly deal with urbanism, architecture and certain fields related to the digital realm, such as information technology, robotics, big data, et cetera. Though as a I researched my topic more and more, I actually steered away from research into specific other disciplines. The digital transition was a societal change. Of course, an integrated approach to design is important in the city of the future when dealing with everchanging individuals. But there was an overarching theme that has to make us reconsider everything about design that we do up and until today. While the studio was a great learning experiences for me because I met some students with similar topics to mine, what I noticed was that their projects tended to steer towards a specific design whereas mine steered more towards a design method/ approach, or rather, a different way of thinking. It was about rethinking the way urban designers approached any future design. I was looking for a method in which we can incorporate the needs of the individual, individuals that over time might change. Looking back at the results of my project, perhaps my project would have fitted better in the studio Explore Lab. Explore Lab focuses more on a obsessive interest, in my case the digital transition, and leads to theoretical and design research. Though I was unaware of this studio when I picked my graduation studio. Still this project fits in the track of overall track of urbanism, for it places into the discussion the whole contemporary approach of architects and urban designers.

Research & approach

Most students are able to synthesize a design using their findings that they discovered over the course of their research period. Certain research would lead to this or that design element. Though this way of design is completely incompatible with my findings on how we should approach future design. While these designs might work for a certain period of time, what they do is assume certain 'static' individuals. Most would call them target groups. People that are not likely to change over time, and thus do not have the need to change their environment. For me this leaves the user in a state of not being able to grow as a person. It does not feel ethical from my perspective. My research affected my design in that I tried to include an element of the butterfly effect into whatever I designed. One minor change, such as one different individual in my design could lead to a completely different design over time. I would spend weeks coming up with certain compositions, of how things could/ might/may be. But there was never a definitive answer, much to the dismay of my mentors, I would always speak in could haves, might haves or may haves. I was looking for a way to express this different way of thinking in design, but even up and until today I'm not sure if I have conveyed this message. So, research about the digital transition heavily affected my 'design'. First of all, I found it at first more difficult than ever to come up with a specific design. I spent ages spinning back and forth between the design and research. This at the same time gave answers to my research questions. While it was speculative design, it showed that something had to change in the design approach to accommodate the needs of future citizens.

Looking back at how I approached the design from the perspective of the individual was for me an interesting approach, but not without its issues. The value of pattern language was tremendous. I believe this offers a perfect way for different individuals to compose space together. Though there are things that I could have changed if I had more time for the project. The storytelling method to design gave me a method to shape quirky and unique individuals with their own pattern set. This brought in a certain element of futurist design into my design. Though at the same time these individuals were rather speculative. I created their story based from my own perspective, so these stories are far from complete. At the same time I limited the stories to people of 'The Third Wave' people that already are completely desynchronised, delinearised and multispecialised. It would have been interesting to mix both the speculative stories with stories of real people inside the design area. This would have given me two benefits. First of all, the speculative personas made it difficult for me to really go into detail with the design. I was never entirely sure what these people exactly needed save for the first things that came into my mind when thinking of these people. This mixed with the aspect of the butterfly effect that I mentioned earlier, made the design part of my project rather challenging because of the fuzziness I had to deal with. Talking with existing residents would have given shape to stories and patterns that are much more detailed. Second, integrating existing residents is important because the project is a transition design. It would have added an element of realism to my design, but perhaps this is separate from this project which serves more as a theoretical design and discussion to the overall approach of urban designers.

REFLECTION



REVISITING THE PATTERNS

Based on the results from the design I would alter the way I use the patterns the next time when I proceed towards a design.

A few patterns that are not introduced in the thesis are added here to show what I learned upon reflection.

I created two dimensions in which we can place the patterns.

First of all there is an axis of the degree of available urban conditions. As we learned, the patterns have all certain urban conditions they need to come to fruition, some have these conditions already in the area while some might need a bit more effort and change to the location to enable them. This gives us a time dimension in which we can understand which patterns will likely first come into existence. The patterns on the left require the least pushing power to create the space for the individuals, whereas the patterns on the right, even though they might be needed/ wanted will require more effort to adapt the city to these patterns. Though what we see is that all these patterns are linked with each other. Patterns enable each other. They give a dimension of time that the designer can work with. Whereas some patterns on the right might seem difficult or near impossible to facilitate in the city at first. What we can do is enable that patterns on the left, which eventually create suitable urban conditions for the patterns on the right. This is especially helpful in these bottom-up scenarios of design by individuals who often lack the pushing power to reshape larger urban conditions.

The second axis is the dimension of individual – public. Individuals their patterns can cluster at certain points. They share a common environment in which they function, and thus the space can be used by multiple people. It is these places that require most coordination by the urban designer. I think if you place most focus on these common and small community spaces, then you can leave the outer circle (private spaces) more to the individual (of course, while ensuring that there actually is space where they can adapt). This helps the designer to understand which parts of the designed space will likely institutionalize and create a leading context in the larger area. It helps the designer think about what sort of individuals might get attracted to this space in later stages and thus think about what sort of spaces might be needed in the future.

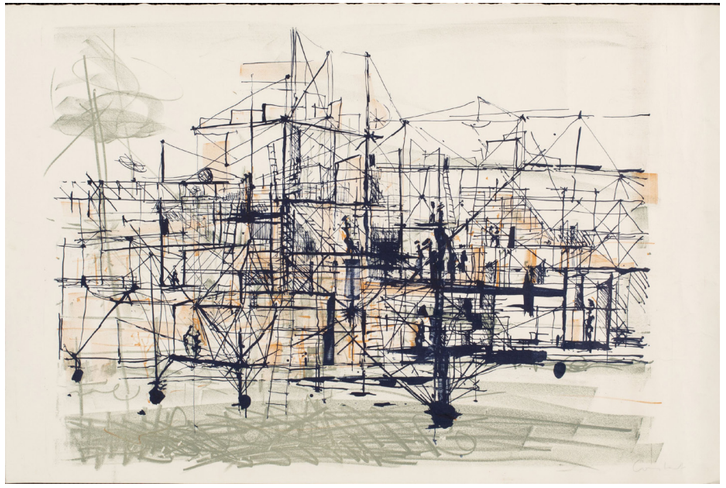
REFLECTION

Value of the project

I argue that this project plays a role in social sustainability from both an academical and societal point of view. From an academical point of view, it challenges the status quo of urbanism. It opens the discussion of how we have to rethink design in light of the changing human psyche because of the digital transition. Right now urbanism tends to focus on environmental sustainability, but we are forgetting the whole social aspect of how our society is changing at the same time. The discussion of the digital transition saw a boom in the eighties, but it completely slowed down until the COVID-19 pandemic. Should we ignore these changes, then we would continuously have to adapt our city because it does not fit the needs of people. My hope is that this thesis opens up more dialogue regarding the changing 'digital' society, the challenges this society provides, but also the benefits and possibilities that we as humans will see from this when adapting our built environment to this 'new' society.

From a societal point of view I believe this project plays an ethical and sustainable role. I tried as much as possible to have individuals play a leading role in the design. I never envisioned the design as a final product, but as a state that will eventually pass and be adapted by others again. Overall it was the process that mattered. What I did was that I changed the role of the designer. I as urban designer did not approach this area with a specific view of how it should be, rather I envisioned the possibilities it might bring when certain individuals play a larger role in this area. It removes the leading role of centralised organisation such as the municipality, it diminishes the role of the urban designer and architect who might have his own views of what 'right' public space is, all of this is mostly placed in the hands of the users of the space. Instead of designing for 'ideal' users, we design for actual real users.

My hope is that when looking at the overall thesis, it is not the eventual design that will stick in people their minds, but the approach that was used to lead to this design. That is the message I wish to convey to whoever read this project. Using this method I believe you can apply my findings anywhere on the globe. Where when designing a space for people, you start with individuals who give shape to the core patterns of the digital transition. Having these people you look for space for them in an area and help them through the process of developing space for them in a co-design method. You as designer play a role in overseeing this area for the rest of your life. Making changes based on the needs of individuals joining, changing and leaving the area, free from your own subjective views of what 'proper' urban design is.



Constant Nieuwenhuys, New Babylon, 1961, litho. Collectie Het Nieuwe Instituut, archief Academie van Bouwkunst (ABAM). Copyrigh Pictoright.

In New Babylon there is no free time, because all time is active there. New Babylon is a passionate appeal to the untapped and often unconscious creativity that lies dormant in all people.

- Constant Nieuwenhuys, reaction to a letter, from https://work-body-leisure.hetnieuweinstituut.nl/nl/constant-nieuwenhuys

Conclusion

In this project I learned how urbanism over time has steered away from the needs of the individual. As weird as it might sound it is actually the digital era that allows us to make our cities more humane. To do this we have to change our design approach into a method that incorporates the individuals more. Pattern language is a great tool to have both existing individuals and future to-be individuals give shape to their ideal environment. It allows them to come to develop their own patterns, filled with their own subjective views, allows them to discuss them with each other, and eventually to co-design with them. It changed my own perspective on the role of the urban designer. What we eventually do is in my view sort of resemblant to a piece of art by Constant Nieuwenhuys. We as urban designers help people create a common structure, but it is eventually the people that decide how this structure is filled in.

With this project I tried to achieve a similiar goal as to what Nieuwenhuys had in mind when developing his works of art.

Instead of a city that forces humans into a certain way of thought, a certain way of behaviour. I tried to achieve a way of design in which the city is a story of individuals building and giving shape to their own lifes. Where public space and our way of living is not determined by what the machines of industry requires of us, but it is developed from our each individually different inner interests.

SOURCES

Alboher, M. (2007). One person multiple careers. PT Mizan Publika.

Archief van het Kabinet des Konings, (1841-1897). from https://www.nationaalarchief.nl/

Baran, P., & Greenberger, M. (1967). Urban node in the information network. RAND CORP SANTA MONICA CA.

Busscher, T., Verweij, S., Van den Brink, M., Edelenbos, J., Bouwman, R., & Van den Broek, J. (2017). Het organiseren van ruimtelijke kwaliteit: Inzichten uit Ruimte voor de Rivier. Groningen, the Netherlands: Rijksuniversiteit Groningen.

Carmel, E., & Alberto Espinosa, J. (2018). Timeshifting—The Mother of All Solutions for Time Zone Differences. In WORLD SCIENTIFIC REFERENCE ON INNOVATION: II Engineering Globalization Reshoring and Nearshoring: Management and Policy Issues (pp. 99-109).

Centraal Bureau Statistiek, (2020). The Netherlands ranks among the EU top in digital skills from https://www.cbs.nl/en-gb/news/2020/07/the-netherlands-ranks-among-the-eu-top-in-digital-skills

Elfert, M. (2015). UNESCO, the Faure report, the Delors report, and the political utopia of lifelong learning. European Journal of Education, 50(1), 88-100.

Flaxman, S., Goel, S., & Rao, J. M. (2016). Filter bubbles, echo chambers, and online news consumption. Public opinion quarterly, 80(S1), 298-320.

García-Huidobro, F., Torriti, D. T., & Tugas, N. (2008). ¡ El tiempo construye!: el Proyecto Experimental de Vivienda (PREVI) de Lima: génesis y desenlace. Gustavo Gili.

Gemeente Amsterdam, (2016). Visie Zuidas 2016 from https://openresearch.amsterdam/nl/page/74910/visie-zuidas-2016
Gemeente Amsterdam. (2021). Omgevingsvisie Amsterdam 2050.

Gemeente Rotterdam. (2021). De Veranderstad.

Gemeente Utrecht. (2021). Utrecht dichtbij: de tien-minutenstad. Ruimtelijke Strategie Utrecht 2040

Greenspan, E. (2016). Top-down, bottom-up Urban Design. The New Yorker.

Grimes, D. R. (2017). Echo chambers are dangerous–we must try to break free of our online bubbles. The Guardian, 4.

Hearle, E. F. (1963). Information systems for urban planning. RAND CORP SANTA MONICA CA. From https://apps.dtic.mil/sti/pdfs/AD0409939.pdf

Laal, M. (2011). Lifelong learning: What does it mean?. Procedia-Social and Behavioral Sciences, 28, 470-474.

MBO Partners. (2021). The digital nomad search continues: Research brief. https://info.mbopartners.com/rs/mbo/images/MBO_Partners_2021_Digital_Nomad_Research_Brief.pdf

Ortiz-Ospina, E., & Roser, M. (2020). Loneliness and social connections. Our World in Data.

Rijksoverheid. (2023). Wet versterking regie volkshuisvesting from https://www.internetconsultatie.nl/regievolkshuisvesting/b1#sectie-waarkuntuopreageren

Sadler, S. (2006). Drop City Revisited. Journal of Architectural Education, 59(3), 5-14.

Toffler, A. (1982). Alvin Toffler's The Third Wave. Veen Uitgevers.
Toffler, A. (1984). Future shock. Bantam.
Toffler, A. (2022). Powershift: Knowledge, wealth, and Power at the Edge of the 21st Century. Bantam.