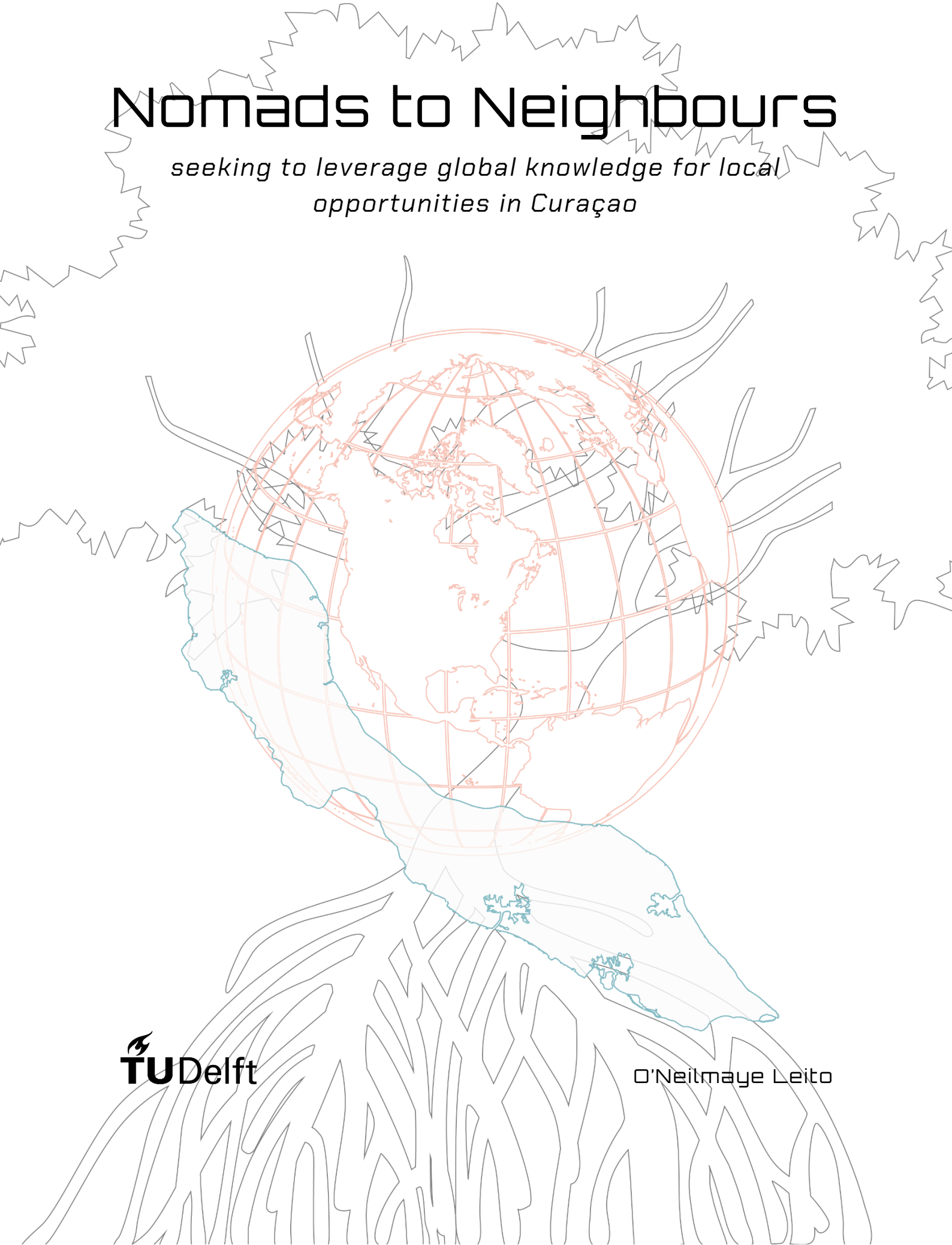
Nomads to Neighbours

seeking to leverage global knowledge for local opportunities in Curaçao



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Nomads to Neighbours

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Cover image:
Mangrove tree as symbol for the tree of knowledge comprising both global and local knowledge.
Its complex root system is a symbol for all the different types of knowledge available to us, both formal and informal, that only together form a strong foundation for the tree to thrive. The visibility of the roots symbolises that each type of knowledge is as valuable and as necessary as the other. Finally, mangrove trees grow in the intertidal zone, meaning they act as interface between sea and land; this is symbolic for the act of sharing knowledge as mediator for bridging cultural differences.

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BK Bouwkunde

Acknowledgements

I wish to extend much appreciation and gratitude to my first mentor, Víctor, whose insightful input, guidance, and quiet enthusiasm were of great value during this journey. I also want to heartily thank Georg, my second mentor, for his critical thinking, positive attitude, and belief in the project. I am especially grateful to my partner Otto for his continuous encouragement and support, and for bravely being my sounding board for topics that were completely foreign to him. Last but not least, I am very thankful to my (remote) family and friends for their invaluable contribution: Jasmin & Karl, Gilly-Ann, Moraima, and Joshua who generously acted as my feet on the ground in Curaçao when I needed more pictures taken, and a special mention to Qurchen whose phone sustained injuries in the pursuit of the perfect image; Karien, Arto, Moudienne, Sue-Tayna, and Cristo who generously shared their experiential knowledge of work and life in Curaçao in conversations with me; Joshua, Chirlyda, Moraima, Jasmin, Gilly-Ann, Luthgarda, Idhayly, Etty, Tiffany, Dayenne, Sidjornia, Farrely, Aaron, Phabynne, Earny, Jurandy, Melwin, Jemelien, and Miron for taking the time to answer in one or in many written words what Curaçao means to them. It truly takes a village.

Masha danki!

Glossary

Campus

By tradition, campus refers to the land on which college or university buildings are located and usually includes “libraries, lecture halls, residence halls, student centres or dining halls, and park-like settings” (https://en.wikipedia.org/wiki/Campus). Nowadays, a collection of buildings belonging to one institution including the plot area on which they are located can also be referred to as a campus , such as a corporate campus or a hospital campus (https://www.merriam-webster.com/dictionary/campus).

Digital nomadism

An information technology (IT)-enabled global phenomenon of mobile professionals who constantly move to different locations as a lifestyle choice, while working remotely for their clients or employers (Schlagwein, 2018). The first predictions of the occurrence of this lifestyle date back to the 1960s by, among others, the science fiction writer Arthur C. Clarke (who specifically predicted remote work from Bali) and the Canadian philosopher Marshall McLuhan (Razavi, 2022; Schlagwein, 2018).

Geo-arbitrage

A neologism, short for geographic arbitrage, coined by Timothy Ferriss in 2007 in his book ‘The 4-Hour Workweek’. The term arbitrage is originally a concept used in finance to refer to the action where one seeks to profit from differences in the prices of (equivalent) assets in different markets through the simultaneous purchase and sale of said assets (https://www.merriam-webster.com/dictionary/arbitrage). Geo-arbitrage thus refers to the practice of seeking financial benefits by earning (high) wages in one location while living in a different location that has a lower cost of living.

Glocal place

A portmanteau of global and local, glocal means “reflecting or characterized by both local and global considerations” (https://en.oxforddictionaries.com/definition/glocal).
This term is an adjective of ‘glocalization’, a notion that refers to the interconnectedness of the global and local levels: glocal places are shaped, and local identities are created by globalised contacts as well as by local circumstances (https://www.britannica.com/topic/glocalization).

Workplace flexibility

Specifically, workplace flexibility from the worker’s perspective refers to the agency of the individual worker to make choices with regards to where, when, and for how long they will perform work-related tasks (Hill et al., 2008). The underlying assumption is that with greater flexibility, workers are best able to balance their work and non-work life thereby resulting in a more motivated and productive worker. A popular type of workplace flexibility is remote work.

Abstract

Since 2020, when remote working became standard practice worldwide during the COVID-19 pandemic, several countries, including the Caribbean Island Curaçao, have introduced remote working visas targeting digital nomads to boost their local economy. As a result, the phenomenon of digital nomadism has seen a rapid increase in the last few years. Digital nomads are mobile professionals who use digital technologies and leverage workplace flexibility to perform their work remotely, while travelling on a (semi-) permanent basis living a nomadic life. Two years after the introduction of these visas, local communities of popular digital nomad destinations are protesting the negative consequences in the socio-spatial context resulting from the unrestricted access given to digital nomads. Since the economy of Curaçao is partly dependent on tourism, this thesis aims to investigate what spatial interventions in Curaçao can facilitate mutually beneficial co-existence between digital nomads and local communities beyond the potential economic benefits.

Henri Lefebvre's spatial triad theory was used to systematically investigate the social, economic, and spatial practices of digital nomads in juxtaposition with the social and material infrastructures of Curaçao. The analysis followed the structure of the model for planetary-scale computation The Stack by Benjamin Bratton. The results include an overview of the full spectrum of spatial externalities of digital nomadism as well as an evaluation of the affordances of the island's infrastructures to support a multiplicity of mobilities. Furthermore, the juxtaposition uncovered 'pursuit of knowledge' as common ground between digital nomad and settled communities. The material expression of this common ground was then imagined as a civil (knowledge) campus. The civil campus as a concept is a vision for the conscious and active involvement of all citizens and visitors to adaptively shape social spaces together based on shared values of collaboration, purpose, and a mindset of continuous learning. As a material place, the civil campus is an inclusive and porous knowledge-focused hub. It is formed through bottom-up adaptive processes that serve both the locals and the digital nomads, thereby enabling local communities to benefit from knowledge exchange with this global community. The public library acts as central knowledge node and meeting place, and spatial interventions in the public realm on the micro (furniture), mezzo (architecture), and macro (neighbourhood) level activate and support social interaction and active knowledge exchange between digital nomads and settled locals.

Keywords:
Digital nomad, knowledge sharing, civil campus, public library, Scharloo

Apstrakto

For di 2020, na momentu ku trahando for di kas a bira komun mundialmente durante e pandemia di COVID-19, diferente pais, inkluso e pais karibense Kòrsou, a introdusí 'remote working visas' enfoká riba nomadanan digital ku e meta pa stimulá nan ekonomia lokal. Konsekuentemente, e fenómeno di nomadismo digital a krese rápidamente durante e último añanan. Nomadanan digital ta profeshonalnan ambulante ku ta hasi uso di teknologia digital i fleksibilidat di lugá di trabou pa laborá djaleu pa nan klientenan o dunadó di trabou, miéntras ku nan ta biaha riba un base semi-permanente bibando un bida nomádiko. Dos aña despues di e introdukshon di e visanan aki, komunidatnan lokal bibando na destinashonnan ku ta popular serka e nomadanan digital ta protestando e konsekuenshanan negativo den e konteksto sosio-espasial ku ta e resultado di akseso sin límite otorgá na e nomadanan digital. Komo ku e ekonomia di Kòrsou ta dependé parsialmente di turismo, e tésis aki tin komo meta pa investigá kua intervenshonnan espasial na Kòrsou por fasilitá kombibensia mútuamente benefisioso entre nomadanan digital i komunidatnan lokal ku ta bai mas aleu ku e posibel benefisionan ekonómiko.
E teoria di trinidat espasial di Henri Lefebvre a wòrdu usá pa sistemátikamente investigá e práktikanan sosial, ekonómiko i espasial di e nomadanan digital en komparashon ku e infrastruktura sosial i material di Kòrsou. E análisis a sosode segun e estrukutura di e modèl di komputerisashon na eskala planetario The Stack di Benjamin Bratton. E resultadonan ta inkluí un sinópsis di e spektro kompletu di konsekuenshanan espasial kousá dor di nomadanan digital plùs un evaluashon di e posibilidatnan ku e infrastrukturanan di Kòrsou ta ofresé pa karga un multiplisidat di mobilidatnan. Ademas, e komparashon a revelá "aspirashon pa konosementu" komo e base komun entre komunidatnan nomádiko i sedentario. E materialisashon di e base komun aki a wòrdu visualisá den forma di un kèmpùs sivil di konosementu. E kèmpùs sivil komo konsepto ta un vishon pa e partisipashon intenshonal i aktivo di tur siudadano i bushitante pa huntu duna forma na un manera adaptivo na espasionan sosial a base di e balornan kolaborashon, 'purpose', i un mentalidat di siñamentu kontinuo. Komo un lugá material, e kèmpùs sivil ta un lokalidat sentral inklusivo i poroso enfoká riba atkirí konosementu. E ta wòrdu formá dor di prosesonan adaptivo 'bottom-up' ku ta na benefisio di tantu e hendenan lokal komo e nomadanan digital, i asina ta hasi posibel ku e komunidatnan lokal ta saka benefisio for di interkambio di konosementu ku e komunidat global aki. Biblioteka públiko ta fungi komo un punto sentral di konosementu i sitio di enkuentro, i intervenshonnan espasial den e área públiko riba e nivelnan mikro (mobilario), mezzo (arkitektura), i makro (bario) ta aktivá i sostené interakshon sosial i interkambio aktivo di konosementu entre e nomadanan digital i hendenan lokal.

Palabranan klave:
Nomada digital, kompartí konosementu, kèmpùs sivil, biblioteka públiko, Skalo

Content

Introduction

According to Hermann & Paris (2020), a Google.com search on “digital nomads” (plural) in September 2020 generated 5,700,000 generic results, up from 1,300,000 generic results in January 2019, which is a consequence of the widespread acceptance of remote working during the COVID-19 pandemic. The same Google search in January 2023 generated 16,300,000 results, and “digital nomad” (singular) generated 40,200,000 results, which indicates a continued interest in the digital nomad lifestyle. While most researchers view digital nomadism as a phenomenon mainly relevant for the labour and travel markets, it touches upon and amplifies many of the global socio-spatial challenges we are currently grappling with, such as housing crisis, climate crisis, social inequalities, and rising cost of living. This chapter therefore provides an introduction into why digital nomadism must be studied from the perspective of its spatial consequences. Additionally, Curaçao, the chosen location for the design project, is briefly introduced.

image (01). A digital nomadic adventure. Comic written and drawn by Giang Cao; edited (and sometimes co-written) by Matthew Harris

Motivation

Going into this final year of my urbanism studies, I wished to seize on the opportunity of an independent graduation trajectory to develop a project that would be relevant for the communities in my country of birth Curaçao. While looking into the challenges that small islands such as Curaçao tend to deal with, I came across the phenomenon of digital nomadism. I learned that the government of Curaçao had launched a digital nomad visa program in 2021 and that other countries have also done so spurred by the increased remote working practices due to the recent pandemic.

What quickly attracted me to this topic was the apparent newness of the phenomenon (I had never heard of it and neither had my friends or my university contacts), which was in stark contrast to the high number of online articles, blogs, and online groups that were dedicated to digital nomadism. Furthermore, I noticed that most of these sources focussed exclusively on the perspective of the individual wanting to embark on the digital nomad journey, implying that this personal choice may not have much impact on the places visited beyond potential economic benefits for the host countries. This did not seem logical to me, and I became very interested in exploring the social and spatial impacts of this phenomenon from the perspective of the host communities. And indeed, I discovered from some initial targeted online searches that tensions between digital nomads and locals were emerging.

There are many possibilities for how to look at digital nomadism and its spatial implications: from “a change in work habit” perspective and thus a change in work landscapes, from “a change in lifestyle” perspective and thus a change in living patterns and conditions, from “the impact of tourism” perspective and thus a change in leisure landscape, or all the above. Another approach is either going the route of designing a ‘digital nomad haven’ (with digital nomads as main characters and the local community in the side-kick role) or designing interventions aimed solely at protecting the local community from the problems that this phenomenon may bring with it.

However, looking at digital nomads and settled people as two mutually exclusive and opposing entities oversimplifies the complex realities of our globalizing world. Digital technology, the main enabler of digital nomadism, is becoming more and more enmeshed in our lives and it provides freedom of choice and movement to most of its users. Those who are struggling in the ‘rat race’ may well decide to try their luck at a nomadic life, inspired by personal nomad stories of others. Locals can become nomads and vice versa, while part-time nomadism is becoming possible for many people.

With the many global challenges currently facing us, we must let go of the ‘us vs. them’ mindset and focus on cooperation and mutual benefits, both on the global level and on the local scale. In this project I intend to explore how such mutual benefits can be realised on the local level between digital nomads and settled locals, and what spatial conditions can facilitate this cooperation. My wish is to provide a guide and a motivation that will inspire local citizens, entrepreneurs, government officials, business owners, and visiting digital nomads to look beyond economic benefits and to actively seek out opportunities for interaction, collaboration, and knowledge sharing.

Background

The first account of a digital nomad was in a magazine article on Steve K. Roberts, initially referred to as the 'high-tech nomad' (image 02). Roberts changed his career trajectory in 1983 from a tech writer to a freelance writer by affixing some of the first digital technology available back then on his bicycle, a laptop coupled to solar panels, to travel around the United States. In 1997, Makimoto and Manners officially coined the term 'digital nomad' (image 03). Now, in 2023, this thesis is one of the latest to research and document on digital nomadism, a phenomenon 40 years in the making.

Over the years more people started living a life on the road using digital technology to do their work, garnering the interest of journalists who either were excited about this trend or were categorically against it (image 04). Then in 2020, social distancing became the norm and remote working a standard practice (image 05). With global travel coming to an almost complete standstill, traditional tourism was basically non-existent. Many countries that were in large part dependent on tourism started paying attention to this group of travellers to boost their economy. These travellers were already accustomed to working remotely and being relatively adaptable to their surroundings, and more importantly, have a higher capital to spend on everyday needs. As a result, the first digital nomad visa was launched by Barbados on June 30, 2020 (Visit Barbados, n.d.), followed by Estonia on August 1, 2020 (Brown, 2020).

At first glance, digital nomadism is a very intangible and seemingly inconspicuous practice. The only things that a digital nomad must possess are a passport, a laptop, a source of income from a digital online job, a travel case with some clothes and toiletries, and a very strong desire to wander. For everything else they make use of global internet access, just like every typical 21st century Western citizen, they earn their money with online remote work jobs, just like a typical stay-at-home freelancer, and they take advantage of low-cost travel, just like your typical tourist.

Delving a bit deeper we find that, in research articles, digital nomads are sometimes viewed as 'the ideal type' of knowledge work (Wang et al., 2020), whilst their nomadic tendencies are seen as part of a countercultural movement (Korpela, 2020). Above all, digital nomadism is considered to be a personal lifestyle choice that includes nomadic practices (Chevtaeva & Denizci-Guillet, 2021; Green, 2020; Mancinelli, 2020; Thompson, 2019), similar to the 19th century bohemians, the hippie movement in the US, and the new age travellers in the UK, with the addition of a work focus that resulted in comparisons with freelancers, business travellers, and working expats (Cook, 2020; Hannonen, 2020).

With all these different layers attached to the idea of the digital nomad, it is not surprising that the theoretical conceptualisation of the digital nomad in emerging literature is showing quite a fragmented picture. Digital nomads are blurring the traditionally distinct areas of work, home, and leisure travel as well as the use of digital technology for work *or* for pleasure (Hannonen, 2020; Müller, 2016). Using input from empirical studies from different academic fields, Hannonen (2020) proposes to define digital nomads as "highly mobile professionals, whose work is location independent. Thus, they work while traveling on (semi)permanent basis and vice versa, forming a new mobile lifestyle" (p. 346).

image (02). 1983: the 'first' digital nomad. Photo from https://microship.com/high-tech-nomad/

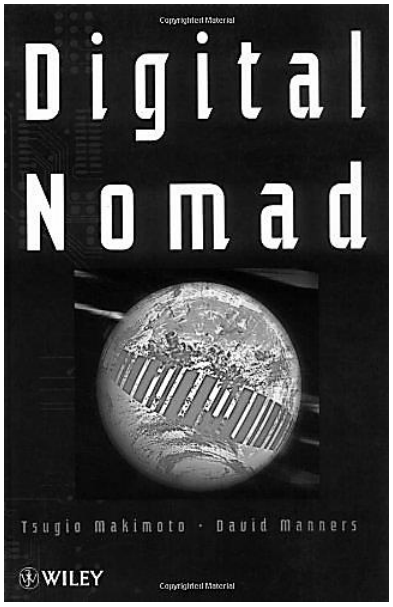


image (03). 1997: birth of the term 'digital nomad'. Photo: book cover

image (04). 2018: not everybody is fan. Screenshot of online article by The Guardian

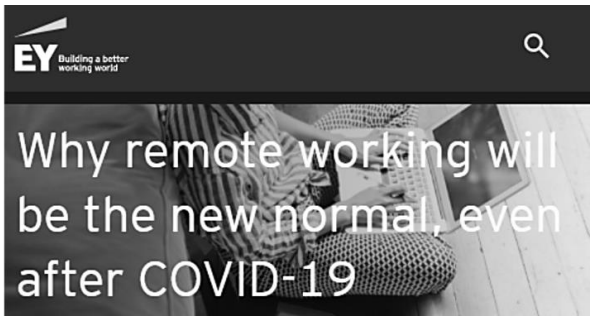


image (05). 2020: the global remote working experiment. Screenshots of online articles by Forbes and EY Belgium

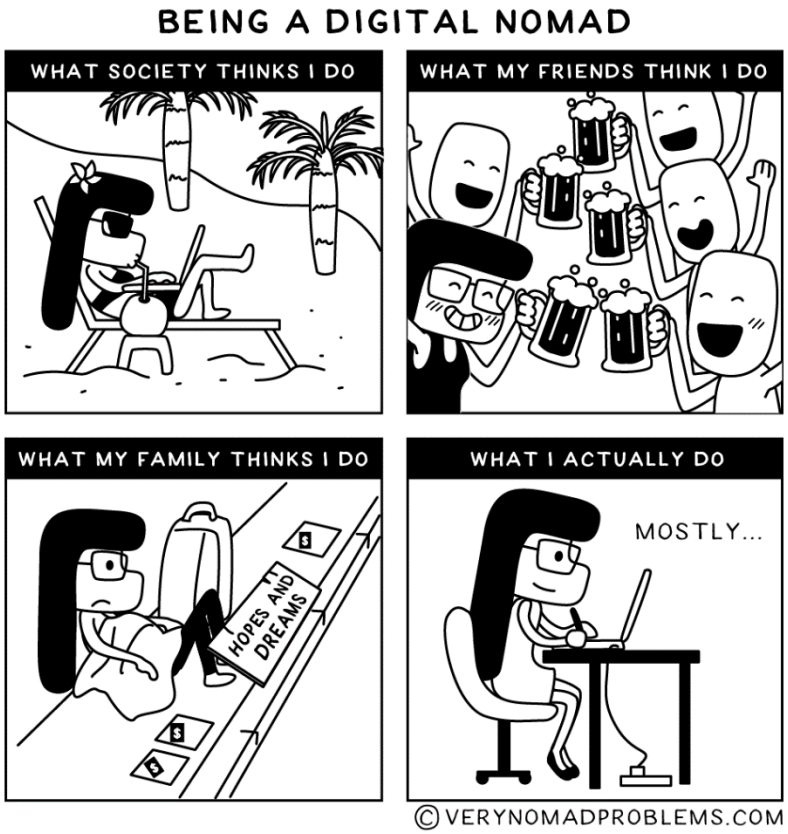


image (06). Work is central to being a digital nomad. Comic written and drawn by Giang Cao; edited (and sometimes co-written) by Matthew Harris

Inherent in this definition is that the work aspect and the nomadic practice are of equal importance to the identity of the digital nomad (Prester et al., 2019). A person travelling while using digital technology to execute and document the journey but who does not perform professional activities is not a digital nomad (Hannonen, 2020). Moreover, their location-independence is not a result of their work. The 'urge to travel' is a key characteristic of the digital nomad coupled with, on the one hand, the means to do so, in this case access to digital technology and online remote work, and, on the other hand, the ability and freedom to follow through (Makimoto & Manners, 1997, p. 17). This is also what distinguishes the digital nomad from the remote worker who works from their fixed home-base (Hannonen, 2020). Furthermore, this definition does not specify that digital nomads must be self-employed, rather the choice to travel is a personal one and the travel locations are based on personal preferences and not dictated by their work. The COVID-19 pandemic has further opened the doors to a digital nomadic life for the employee who does not want to quit their stable job, but who does not necessarily need to be in the office to perform their work (MBO Partners, 2020, p. 3). This is also what differentiates the digital nomad from the business traveller, who are required by their employers to travel for their work. Reichenberger (2018) and Thompson (2019) further highlight in their research studies, based on interviews with numerous digital nomads, that most digital nomads' travel patterns, while differing in frequency and in length, are mainly transnational.

Yet, the definition proposed by Hannonen (2020) omits to explicitly mention a key aspect of the phenomenon, which is that they produce and share/sell their work using digital technologies, hence the name 'digital' nomad. In addition, while the label location-independent, meaning being unbound to a specific location, refers to the fact that the digital nomad does not need to be in physical proximity to their clients, employers, or colleagues to perform their work, Nash et al. (2021) correctly point out that the label is a fundamental mis-categorisation. Digital nomads are highly dependent on finding appropriate physical environments to use their technologies and to perform their work productively (Nash et al., 2021; Endrissat & Leclercq-Vandelannoitte, 2021). In other words, the term 'location-independent' minimizes and obscures the spatial dependencies of this phenomenon, which may undoubtedly be partly to blame for why research on the spatial externalities of digital nomadism for the local communities has been largely overlooked in social sciences. Therefore, I propose a refinement in the definition of the digital nomad:

mobility and work are in equal measure part of the identity formation

using digital technologies to perform work is a prerequisite

The digital nomad is a mobile professional who uses digital technologies and leverages workplace flexibility to perform their work remotely, while choosing to travel on (semi-) permanent basis living a nomadic life.

place, meaning spatial conditions, is of great importance for performing work activities effectively

frequent travel is a personal choice and not dictated by external factors

Problem field

While some regard digital nomadism as a passing trend, others foresee a global increase of digital nomads in the coming decade with a yet unconfirmed forecast of 1 billion nomads, mostly from wealthy Western countries, by 2035 (levels.io, 2015). If the latter is proven correct, this is a phenomenon that will have definite societal as well as spatial impacts for the host communities. Already governments, excited about the promise of economic boost in the short term, are actively seeking to attract digital nomads with special visas.

Per the last check in December 2022, efforts were also underway to develop an internet country open to anyone who wanted to opt out of the traditional nation-state system and join a digital citizenship system that includes a passport, in exchange for either a flat fee or % of income (Plumia, n.d.-a). Since then, the Plumia website has been updated with a change in focus. They are now developing a Nomad Border Pass, a one-stop visa that would allow entry to multiple participating countries for up to 90 days of remote work per visit (Plumia, n.d.-b). Digital nomads are thus actively advocating for official recognition and political changes on a global level through this project, which is sponsored by SafetyWing, a global health insurance company geared towards nomads and remote workers.

Furthermore, with advancements in virtual and augmented realities it will be possible to do many more types of work remotely, like it already is with training and supervising medical surgeries (Kay, 2021). If physical proximity is no longer a necessity, why should everyone live in the city or country where their work is based? Throughout history there were always groups pursuing a nomadic existence, from prehistoric and still existing hunter-gatherers, both on land and of the sea, to the mobile practices of merchants and finally, the digital nomads. The need to wander, to seek adventure and new experiences, is thus an innate human characteristic. There is potentially a large group of people, including those with kids, with the desire for a mobile life or hoping for better living situations just awaiting the means to join the bandwagon.

Unfortunately, currently all narrative surrounding the relationship between digital nomads and the countries visited is centred around potential economic benefits with virtually no mention of the social and spatial impact that their practices will have on local communities. The digital nomads for their part are lured by visions of a global buffet of experiences and cheaper living waiting for them to choose from, attracting many who may not be suited for the lifestyle.

In the past decades, overtourism has already caused many cities to become gentrified and overrun with visitors leaving little room for locals, Venice and Barcelona being prime European examples. Only looking at the potential capital influx from these long-stay visitors provides a skewed picture of the realities of digital nomadism, as the cultural, material, and environmental implications are largely overlooked.

Research aim

This thesis seeks to understand the spatial implications of digital nomadism by looking beyond its promise of economic contribution to local economies. To do so, a systematic multiscale and multidimensional analysis is carried out into the social, economic, and spatial practices of the digital nomad to deduce the related material manifestations in place.

Following this, the implications for the local context of Curaçao are explored with the aim to formulate context-specific design interventions conducive to shaping a renewed purpose of place that can enable multiple social relations to co-exist, to evolve, and to adapt to future social, ecological, and technological changes.

Therefore, the main research question guiding this thesis is:

What spatial interventions can facilitate mutually beneficial co-existence in the socio-spatial context between digital nomads and local communities in Curaçao?

Structure

Following this introductory chapter, the following chapter discusses the analytical framework that guides the analysis and design process. The third chapter outlines the findings from the problem analysis into the practices of digital nomadism. The fourth chapter contains the findings from the location analysis in Curaçao. Then, the fifth chapter introduces the proposed design interventions. The thesis is then concluded in the sixth chapter, and the final chapter contains the reflection on the research and design process.

Atlantic Ocean

Suriname

Barbados

Guyana

Puerto Rico

Caribbean Sea

Venezuela

Bonaire

Dominican Republic

Aruba

Haiti

Cuba

Colombia

Jamaica

Project location

While the problem analysis will be focused on the digital nomads and their spatial practices, the design explorations will be done in the context of the island Curaçao.

Curaçao is a small island nation and a constituent country in the Kingdom of the Netherlands with a total area of 444 km^2 located in the southern part of the Caribbean Sea, about 65km north of the Venezuelan coast. Curaçao had an estimated population of 148.925 on January 1, 2023 (CBS, n.d.-a), of which approximately 85–90% is living in the only city on the island, Willemstad. Curaçao observes Atlantic Time (UTC -4:00).

The island has three official languages, namely Papiamentu, Dutch, and English, with Spanish spoken or at least understood by a large part of the inhabitants due to its proximity to and trade with Venezuela.

Spain was the first European country to colonize the island in 1499, followed by the Dutch in 1634, with a brief stint by the British in the early 1800s, after which the Dutch got their hold over the island back in 1815. This tumultuous past, the island's role as the centre of the Atlantic slave trade for the Dutch West India Company since 1662, and the job opportunities created when the oil refinery was set up by Shell around 1915 means that the island has always had a lot of different nationalities and ethnicities coming and going. Nowadays Curaçao still has a very diverse population.

Curaçao's role during the slave trade era has also resulted in the formation of the creole language Papiamentu as unifying language among the different enslaved people from African descent as well as with the Sephardic Jews that fled to Curaçao from Spain and Portugal.

In 2022, the island is still recovering from the effects of the COVID-19 pandemic. While the economy is currently not primarily dependent on tourism, this sector still plays an important role in the job market for local people. The government of Curaçao launched its remote workers visa program, @HOME in Curaçao, in February 2021 which allows remote workers from any nationality to apply for a stay of 6 months on the island, renewable once for another 6 months under the same application (Government of Curaçao, n.d.). Remote workers are not allowed to work for or be employed by any local businesses and they are exempt from paying income tax on any income incurred during their stay on the island (Rosa, 2022). If the program is deemed a success, the government is intended to extend the program by collaborating with, for example, international parties that want to invest in co-living places on the island for digital nomads (Rosa, 2022).

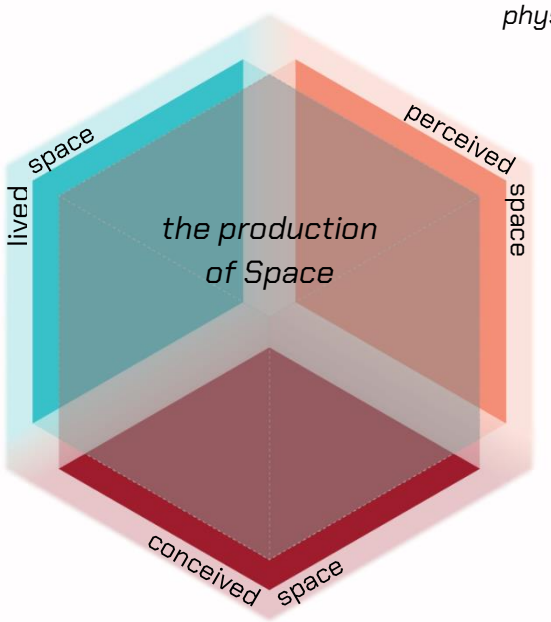
◀ map (01). Country of Curaçao consisting of the islands Curaçao and Klein Curaçao

Analytical framework

To be able to determine (the degree of) the spatial impact of digital nomadism, it is necessary to understand how the digital nomads' practices are enabled by as well as how they relate to the social and spatial contexts in which they operate. This chapter outlines the analytical framework that will guide the explorative analysis to achieve this understanding. It is divided in three parts, namely the theoretical framework, the conceptual framework, and the methodological framework. The first part discusses the general theories and models that form the foundation for and the framing of what is space, its connection to place, and the (alternative) lens through which place can be studied. The second part deals with the main concepts that delineate the multiscale relationship between digital nomadism and place. The third and final part concludes the theoretical and conceptual discussion with an overview of the research questions, and the methods that will be used to retrieve and visualize the data to answer the questions.

representational space: embodied experience, imaginations, symbols: space of meaning,

spatial practice: routes, routines, network, patterns; space of physical movement and



representations of space: maps, models, plans, designs; space of mental abstractions, traditionally

diagram (01). Lefebvre's spatial triad

Theoretical framework

The production of Space

One of the foremost western authorities in urban theory is the late French philosopher Henri Lefebvre through his seminal work *The Production of Space* (Lefebvre, 1991). According to Lefebvre (1991), space is a complex social construct that can be conceptualised through three interconnected dimensions, i.e., the spatial triad: spatial practice (perceived space), representations of space (conceived space), and representational space (lived space) (p. 33) (diagram 01). Lefebvre (1991) argued that space is not a thing or an object, which would imply a finite or finished form with limited boundaries (p. 87), nor is it a superstructure that pre-exist that which occupies it (p. 85). Rather, space is to be understood by the notion that it is produced, and it is characterised by the set of relations between the subjects and objects that are producing the space. Specifically, space is produced by the dynamic interrelations in all three dimensions: "space … is at once conceived, perceived, and directly lived" (Lefebvre, 1991, p. 356).

To 'produce' space implies an endeavour that is continuous, for space is both the outcome of past actions and what enables new actions to occur (Lefebvre, 1991, p. 73). In other words, the production of a space provides the opportunities and the conditions for new spaces to be produced as well as for new modes of production to emerge. This continuous and ever-changing state of affairs also implies the potential for conflict between the production of a space through one set of relations and the space produced by other relations, resulting in phenomena such as transnational gentrification. Furthermore, new modes of production of space using digital technologies have resulted in new types of physical spaces as well as digital ones, oftentimes supplanting previously produced spaces. Technology mediates existing relations and produces new ones in a way that continuously alters our perceived, conceived, and lived spaces. The production of space thus increasingly becomes an extremely complex and entangled system.

Lefebvre did not prescribe a fixed methodology for studying the production of space. This would be counterintuitive to the notion that the modes of productions of space can always change. The means to analyse the production of space are thus dependent on the prevailing relations and modes of production of the space being analysed. The lack of a fixed set of analytical methods is both a strong point and a challenge for the researcher; it gives ample room for interpretation, appropriation, and adaptation to context-specific subjects and variables. But this process is not without its troubles (Schmid, 2014). One undisputed interpretation and translation of the theory to empirical analysis with corresponding methodology is therefore not possible.

lived spaces (representational space)

perceived spaces (spatial practices)

conceived spaces (representations of space)

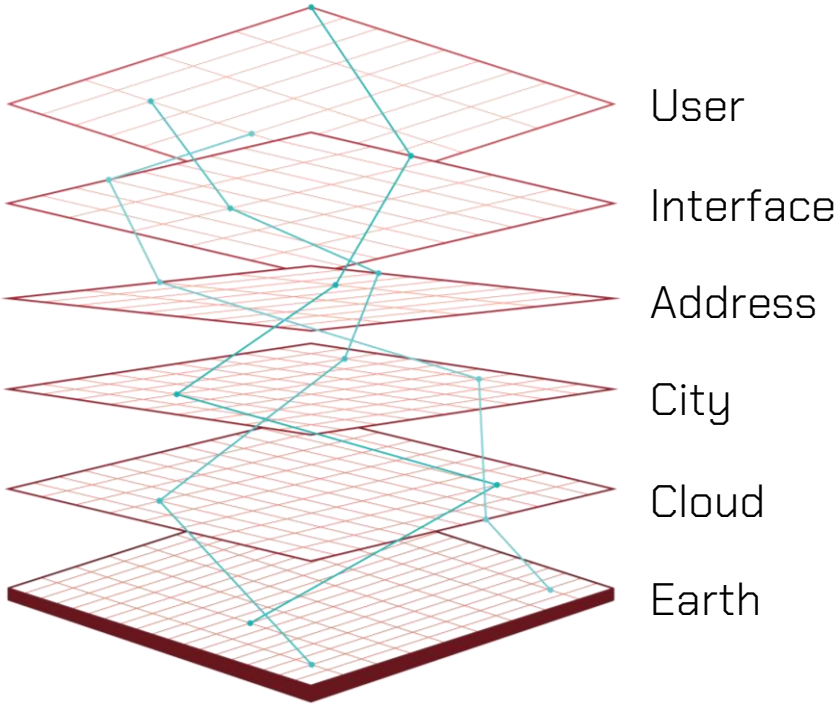


diagram (02). Bratton's The Stack. Graphic design by Metahaven, adapted by Leito

Lefebvre (1991) argued that "every society … produces a space, its own space" (p. 31). An attempt to understand the space(s) produced by the practices of digital nomadism therefore demands translation of the spatial triad theory to a model that explicitly ties the physical and virtual elements of digital infrastructure with the existing built fabric and everyday life.

The conceptual model presented in *The Stack: On Software and Sovereignty* (Bratton, 2016), simply named 'The Stack', could be regarded as such a model. In addition to a tool for analysing the accidental megastructure of planetary computation with its resultant reconfiguration of power structures, The Stack purports to be a design brief for a new political geography. Yet this model also lacks a methodology and practical instruments that can be applied in empirical work.

Notwithstanding, in its most basic and most useful sense, The Stack offers a conceptualisation of the various physical and digital systems of planetary-scale computation in the form of six layers, namely User, Interface, Address, City, Cloud, and Earth. These layers are simultaneously distinguishable from each other through their distinctive processes and activities, and interdependent in the sense that actions in one layer always impact and are impacted by events in other layers. The model of the Stack is related to the spatial triad theory in the following manner (diagram 02):

- The layers of The Stack can be used to distinguish between, and thus to map, the components involved in the megastructure of planetary computation; these maps are the representations of the spaces produced, in other words the conceived spaces.
- Each layer has its own unique (design) logic and consists of objects, subjects, rules, and processes that belong only to that layer; this would correspond to the spatial practices acted out in the layers, i.e., the perceived spaces.
- Finally, interaction between users (positioned in the top layer) is initiated by a user activating the six layers to establish a direct digital connection with another user. These paths taken up and down the layers of The Stack transmit the information that travels through them via specific images and symbols that have meaning to the users involved in the connection; this refers to the dimension of the representational spaces, also known as the lived spaces.

The totality of the model shows the interdependent and entangled nature of all the components and processes in these layers in the production, the use, and the governance of information. Through this model the global impact of any local action and vice versa is made apparent, disillusioning us from the idea that any action of ours, however small, won't have global consequences. As Bratton (2016) states: "even relatively mundane consumer electronics … (aka "phones") contain dozens of different minerals and metals sourced from every continent … and now billions of Earthlings everywhere carry little bits of Africa around with them in their pockets" (p. 82). This statement echoes Lefebvre's position that "dissociation and separation … are fatal … because they keep the moments and elements of social practice away from one another" (Lefebvre, 1991, p. 366), which has as a consequence, among others, the deepening of socio-spatial injustices by obscuring the interconnectivity/relational aspects of our social practices.

The Stack thus offers a useful model that can act as a basic structure for analysing the multi-dimensional and multiscale nature of the spatial impact of digital nomadism.

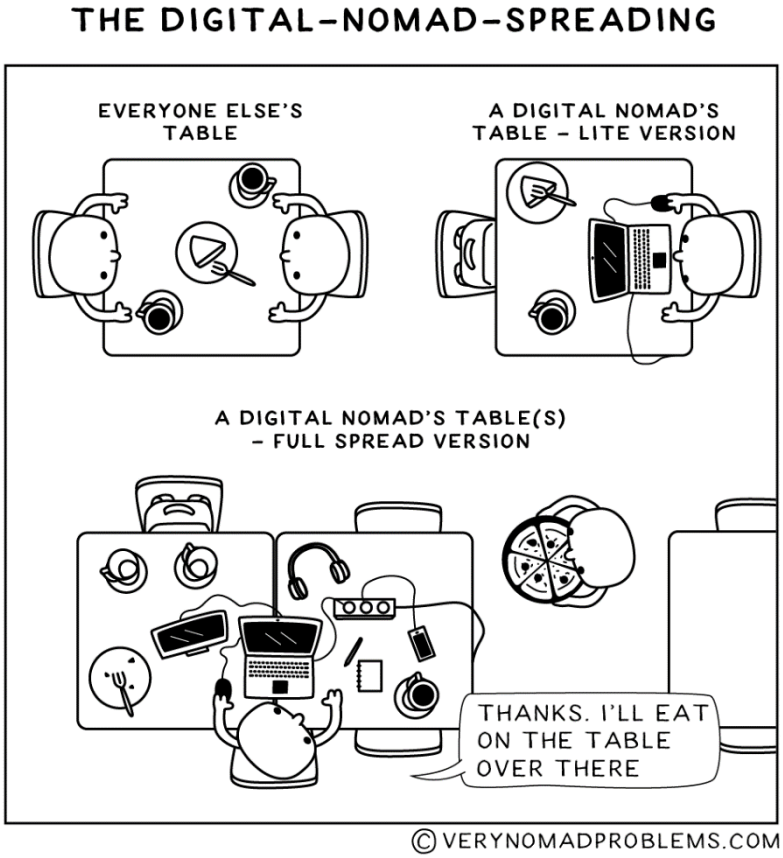


image (07). Space for working, eating, and drinking. Comic written and drawn by Giang Cao; edited (and sometimes co-written) by Matthew Harris

Space in the context of Digital Nomadism

The digital nomad is part of a heterogeneous social group that extensively make use of digital technologies to manage virtually every aspect of their life (Prester et al., 2019, p. 2; Nash et al., 2018), from where they will sleep and eat to how they will do their work and with whom they will socialise. The digital nomad is at once dependent on the digital spaces produced by others to find their way around in new locations and the maker of digital spaces for others through their actions and attention in the form of views and likes. Furthermore, their nomadic way of life produces brief yet deeply impactful relations with other people and the physical places they (temporarily) stay at.

In general, four overarching types of activities could be distinguished in the modern human life:

- work
- sleep and solitude
- eat and drink
- relaxing and socialising

For a long time now in Western capitalist societies conceived space has dominated lived and perceived spaces, prescribing functional and fixed distinctions to space for the abovementioned types of activities. Digital nomads on the other hand seem to go against this custom by mixing and blending their produced spaces according to their preferred spatial practices, which is in turn informed by their preferred lived spaces. Consequently, their produced spaces intermingle with each other much more than that of a settled person. For example, relaxation and socialising happen in the same physical domain as work, such as in cafés and co-working locations, and in the same physical domain as sleep and solitude, i.e., a studio apartment where the dining table is also the work desk or a co-living location (Cook, 2020, pp. 372-374). This has given them the label of counterculture, yet they follow a natural order of things according to Lefebvre, as he states:

> Before - long before - the advent of the Logos, in the chiaroscuro realm of primitive life, lived experience already possessed its internal rationality; this experience was *producing* long before *thought* space, and spatial thought, began *reproducing* the projection, explosion, image and orientation of the body. (Lefebvre, 1991, p. 174)

It is noteworthy though that the main reason why digital nomads were able to exert such impact through their prioritisation of lived space over conceived space is because they are (unwittingly?) acting with the dominant capitalist mode of production as their third key mode of production, a mode of production that is characteristic of the society whose restrictions they want to shake off (Mancinelli, 2020; Mancinelli, 2018, p. 314). Establishments in the localities they frequent cater to them because of the capital most of them bring, which is oftentimes more than the local population is able to expend due to their lower income.

The creation of Time

One key characteristic of the digital nomad is their pursuit of freedom of choice in how they structure their daily work routines to enable flexibility in their non-work activities. This makes the element of time, specifically how the digital nomad relate to and schedule their time, an important aspect of their routines. Consequently, examining the concept of time explicitly instead of as implicit in the concept of space is very relevant for this thesis.

Lefebvre (1991) succeeded in creating a theory about the fundamental nature of space. Such a unitary theory does not exist about the concept of time. However, one cannot discuss the production of space without reflecting on the concept of time, i.e., "the temporal process which gives rise to, which produces, the spatial dimension" (Lefebvre, 1991, p. 130). In *A Brief History of the Philosophy of Time*, Bardon (2013) establishes that it is generally accepted that time has something to do with change. However, a change of what exactly has long been and still is under debate. In the absence of a theory about the nature of time, it becomes important to delineate how the concept of time will be used in this thesis. Lefebvre's (1991) view of time as a concept distinguishable but inseparable from space (p. 175) provides an opportunity to use his theory of the genesis of space to conceptualize a hypothetical genesis of time.

The genesis of time

To produce space is a process that results in a change from an initial non-existence of space to a state of existence, or a change from one state of affairs to another state of affairs. I theorize that the *awareness* of a change *of* the space being produced, i.e., a change in the set of relations that characterizes the space, is what we have named 'time'. Thus, the production of space creates time, or in other words the creation of time is the inevitable side effect of producing space. Why not speak of the production of time instead? That is because to make time 'exist' does not require effort or work. Its 'existence' is instantaneous. Furthermore, to produce time would imply an awareness of a change in the state of affairs of time, an awareness that we have named time, which would result in circular thinking. Our understanding of time is thus facilitated by our understanding of space, time being the label for our awareness of the change *of* a space. Similarly, our understanding of the production of space can only happen with the understanding of the existence of a time element. Therefore, time cannot be viewed as separate from or subservient to space. A causal or sequential relation between space and time is also incorrect as this would imply that space is what creates or precedes time. Rather, it is that which produces space that is simultaneously creating time[1]. Space and time are thus two interlinked and equally important constructs that help us give shape to our (human) experiences. Bardon (2013) concludes in a similar vein that "time is just the form in which we experience events, rather than a real bounded or unbounded container for events" (p. 158).

[1] This would mean that the concept of 'existence', or the question of who or what was first in being aware of a change, is what seems to precede space and time. It is however outside of the scope of this thesis to explore a theory of what the nature of existence is.

The previous discussion on the genesis of time in relation to the genesis of space provides the foundation upon which I can now extend the spatial triad by analogy onto a hypothetical 'temporal triad'. A temporal triad theory will facilitate discussion on how the (subjective) experiences of time are changing due to the use of digital technologies and spurred by practices such as digital nomadism.

The temporal triad

The temporal triad is the hypothetical counterpart of the spatial triad and can similarly be conceptualised through three interconnected dimensions: (1) time practice, (2) representations of time or conceived time, and (3) representational time or lived time. The time created through these three dimensions is characterised by the time structures of the related spatial relations.

(1) 'Time practice': Contrary to space, time cannot be directly perceived; there are no senses that can be directly linked to a perception of time. Nevertheless, time can still be defined as a social construct: "time is known and actualised in space, becoming a social reality by virtue of a spatial practice." (Lefebvre, 1991, p. 219). Talking about 'perceived time' would be nonsense, but the idea of a 'practice of time' would point to the realm of rhythms and routines. The acting out of spatial practices creates time practices, and the prioritisation of spatial practices creates a use value for time. This use value can, for lack of a better word, be perceived differently based on prevalent social relations and modes of production of space. Time can be measured objectively through representations of time and is given subjective meaning, for example, as to the appropriateness of certain times for certain social relations, i.e., *when* does a relation take place. The practice of time then becomes of great importance when members in society regard its use value differently (when lived time clashes with conceived time), as this can indicate potential areas of conflicts in the spaces produced.

(2) 'Representations of time', or conceived time, are the codes of time that a society uses as a means of ordering or addressing. These include rational codes of time, such as business hours, breakfast time, lunch time and dinner time, calendar month and calendar year. The rational conceptions of time that can be measured by clocks and assigned to specific hours of the day have led to the notion of efficient use of time in service of the capitalist mode of production. As a result, the use value of time has been reduced to an exchange value. Representations of time are also visualised in representations of space, for example, through architectural drawings showing only clear summer days. In the case of the digital nomads, a change in time encoding from fixed business hours to flexible work hours allows for different time practices and a different experience of lived time.

(3) 'Representational time', or lived time, is the time experienced through memories, stories, and imagination. Notions such as 'being in the flow' are also in the domain of lived time. Lived time is intimately connected to lived spaces: "representational space is alive: it … embraces the loci of passion, of action and of lived situations, and thus immediately implies time" (Lefebvre, 1991, p. 42). Lived time is what we refer to by the saying 'being transported back in time' when, for example, we are listening to a piece of music or smelling a certain perfume. This lived time in turn becomes a source for time practices when we try to relive these moments by the continued listening to the music or buying flowers that remind us of that perfume.

image (08). Time practices of the digital nomad. Comic written and drawn by Giang Cao; edited (and sometimes co-written) by Matthew Harris

Time in the context of Digital Nomadism

It will not come as a surprise that in the life of the digital nomad lived time also supersedes societal conceived times, resulting in differences in time practices between a digital nomad and a settled person. The notion of time, specifically the freedom to determine when activities are performed rather than having to adhere to externally imposed time structures, is central to the life of the digital nomad (Cook, 2020, pp. 360-361; Prester et al., 2019, pp. 5-6; Reichenberger, 2018, pp. 371-372). They are purposely engaging in time-independent jobs, such as software developer, online marketing (copywriter), and blogging (Nomad List, n.d.), while living a mobile life. With their time practices, conceived time for the digital nomad is simply a distinction between work and non-work hours, irrespective of what the clock or calendar says.

Ironically, their nomadic life requires some of them to eventually make heavy use of time management practices and digital apps to cope with their frequent changes in localities and in the time zones in which they reside, especially if they have regular meetings with clients in different time zones (Cook, 2020). Routines, the realm of time and spatial practices, is an important grounding tool in a life that is consistently changing physical locations (Prester et al., 2019, p. 7; Mancinelli, 2018, p. 316).

The materialisation of Place

"Social practice presupposes the use of the body" (Lefebvre, 1991, p. 40) and following the premise that a body is a priori a material thing, social practice must have a material expression. Let's consider the social practice of work. When we talk about the 'space of work', we are talking about the abstract notion of work that includes the routines, mindset, objects, and relations to other people. It is the generic image that includes all notions from Lefebvre's spatial triad. When we refer to the 'place of work' the first images that form are of a physical place where work is done, either at a desk, in an office, on a field, or in a plane depending on who is doing the imagining. Place thus localizes the notions of space. Furthermore, implicit in each image of the 'place of work' is a sense of a time when the work is done. Place is thus the material expression of both space and time. Place is where spatial and time practices are physically acted out, that which representations of space and of time refer to in their codes, and what is translated to imaginations and symbols in representational space and representational time.

image (09). Digital nomads' perception of home. Comic written and drawn by Giang Cao; edited (and sometimes co-written) by Matthew Harris

Given that place is the material expression of space, it is where interventions can occur (Merrifield, 1993). The production of space is an abstract and fluid process, continuously changing, and thus difficult to grasp. Place on the other hand is tangible and this tangibility affords us some levers that may be used to influence social practices that materialize in ways that are not to the benefit of all parties involved. Specifically, interventions are done on the level of the material characteristics of a place to realize the appropriate circumstances for the spaces that we want to produce. This goes both for the places at the smaller scales, such as building, street, neighbourhood, and city, and for the places of global systems that form a network at the larger scales of countries, continents, and planet. Here the model of The Stack, from its assertion of being a design brief, can also be used as basic structure to determine in which layers which design interventions may be required.

Place in the context of Digital Nomadism

Oldenburg (1989) conceptualised the notion of the 'third place' to refer to social public places that juxtapose the 'first place', i.e., the place of home, and the 'second place', i.e., the workplace. In essence, third places are the places in the public realm that facilitate face-to-face social interactions and chance encounters with a diverse group of people (Steelcase, 2015). At the basis of this conceptualisation lies a Cartesian worldview that separates space and places into discreet units based on a reductionist view of the world, something that Lefebvre (1991) strongly rejected (p. 14). In recent decades, the growing knowledge economy in Western societies have led to the emergence of new social environments that blur the strict separation between first, second, and third places (Morisson, 2017). Morisson (2017) argues for a new addition to the categorisation of places in the form of a 'fourth place', which is the place that "combines elements of the first, second, and third place, making it a place in itself … the place for the knowledge economy". Unfortunately, the author's positioning of the 'fourth place' both as a separate category and as *the* place of a distinct economic system underscores the idea of separation instead of the blurred boundaries the author claims to promote.

Nevertheless, the premise of the 'fourth place' as a place that can support a plurality of social relations can be viewed as a critique on our societies' fixation with conceiving mainly monofunctional and unadaptable places. A critique that is echoed in the practices of digital nomads, in which they have appropriated conventional third places and use them as workplaces (Lee et al., 2019), for whom first and second places were always combined (Lee et al., 2019), and who have redefined the notion of home as being mobile and flexible (Lee et al., 2019; Mancinelli, 2018).

Lefebvre (1991)

The production of Space

Space = (social) relations

Bratton (2016)▲∇

The Stack, as a model of space

The Stack = space of planetary-scale computation, which is a key mode of production of digital nomadism

Bratton (2016)▲∇
Morrison (2017)

Place, mapped via The Stack

Place = material expression of produced spaces and related time structures, in this case by digital nomadism using planetary-scale computation as modelled by The Stack

impacts *affordances*

Sheller & Urry (2006) ■

Mobilities of relations and things

Mobilities = methodological lens that views place as consisting of both sedentary and nomadic social relations and as containing both static and mobile things

▲ generic theory
∇ topic-specific theory
■ methodology

diagram (03). Theoretical framework

The Mobilities lens

The previously discussed theories of space, time, and place do not include a set of methods for analysing the material expressions of space and time in place. Yet, what stands out from the discussion of these concepts is that space and time have one thing in common, namely change. As you may recall, the production of space (being a process) is characterised by changes in relations, and the awareness of this change is what I have argued to be what we call time. Places then either support these changes in relations or inhibit said changes. When considering the spatial practices of digital nomadism, this notion of change can be equated to movement. Then, taking movement as the basis for analysing places leads to the methodology connected to the mobilities paradigm as elaborated by Mimi Sheller and John Urry (2006). The mobilities paradigm is concerned with the movement of people, images, information, money, and objects (Sheller & Urry, 2016, p. 11).

Sheller and Urry (2006) argue that the mobilities lens provides an overarching view that transcends the dichotomy between sedentism and nomadism (p. 214) by including both under the mobilities umbrella. By doing so, they also question the tension that is inherent in binary notions to designate one action as 'normal' and the other as 'abnormal'. Sheller and Urry (2006, p. 211) assert that the mobilities paradigm sees contexts as places that consist of both sedentary and nomadic social practices. For example, instant digital communication as a kind of high mobility of information needs practices of localised low mobilities to sustain it, in this case undersea fibre-optic cables and large data centres. Similarly, low mobility contexts, such as local shops, need high(er) mobility practices to continue to exist, in this example a high number of foot traffic to increase chances of sale. Any one place thus sustains a multiplicity of mobilities, meaning many types of movements of different elements in different frequencies.

The mobilities paradigm then questions how that context itself is (or can be) mobilised through changing levels of mobilities (Sheller & Urry, 2006, p. 211). Place itself is thus also subject to change. I imagine the concept of mobilities as a gradient from high to low mobility in the form of a dial, with the ends of the spectrum connected to each other through the idea of zero mobility. Zero mobility refers to a state of death. Too much of one thing is never good. Thus, both extreme low mobility and extreme high mobility can lead to a state of death. This also goes for places, whether they are buildings or neighbourhoods, nature-based or human-built. When places cannot adapt their materiality to changes in relations that happen within a short time period or across time periods, they 'die' as social contexts, i.e., become abandoned, get demolished, or have an atrophying effect in some form on the people or social relations occupying the place. This does not mean that death should be avoided at all costs, rather death (as an integral part of life that it is) should support the birth of something new. In most societies, death has its own material expression when it concerns people or things in the form of cemeteries respectively landfills.

Switching to a mobilities lens for analysing places thus allows for understanding, on the on hand, how low and high mobility of relations and things impact these places, and, on the other hand, what affordances do those places have to support low and high mobilities of relations and things. Furthermore, the mobilities lens facilitate capturing the interdependence between nomadic and sedentary social practices specifically by not embracing them as separate or as ideals (Sheller & Urry, 2006). Rather, it views both nomadic and sedentary social practices as the results of practices of power and relations, sometimes with positive impacts such as cooperation and empowerment, and at other times with negative ones such as separation and exclusion (Sheller & Urry, 2006).

Digital Nomadism

People
Images
Information
Money
Objects

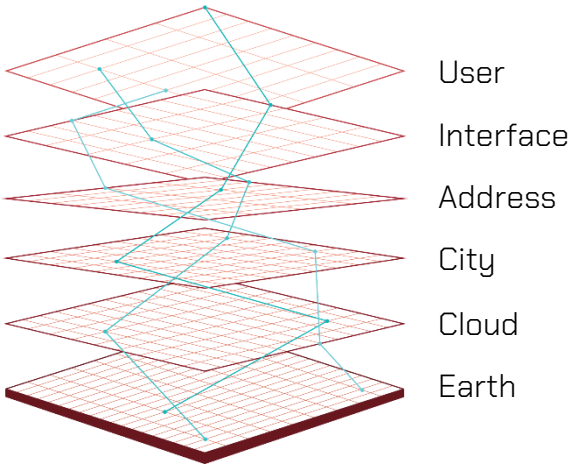
Multiplicity of Mobilities

Social relations

Global systems

Place

Local context



Impacts

Mobilised contexts

Affordances

Glocal places

diagram (04). Conceptual framework

Conceptual framework

From the understanding that produced spaces with their related time structures are the product and result of relations entered into, comes the acknowledgement that the places of global systems and places in the local context are not just made up of static objects and things. Rather, they are characterised by a multiplicity of changing social relations and movements of people, images, information, money, and objects, that have in turn made static objects and things to support those mobilities. The power structures between those entering into the social relations then determines in whose favour those objects and things function. Relations, however, are difficult to grasp as they are abstract and fluid. The material aspects of spatial and time practices on the other hand can be captured with our senses, and the type of spaces produced can then be deduced. This deduction of course can only be an interpretation. All analyses in this thesis therefore must be comprehended as being the product of a necessary evil: unfortunate but unavoidable reductionist representations that attempt to capture the complexity of the social relations involved, while acknowledging that any "representations of space [made as] the basis for the study of 'life' ... reduces lived experience" (Lefebvre, 1991, p. 230).

The practice of digital nomadism has been brought about by several technological, economic, societal, and political conditions, such as the ubiquity of digital technologies, favourable foreign exchange rates, globalisation, social power inequalities, and neo-liberalism. Digital nomadism produces and creates its own distinct spaces and related time structures alongside that of others. These spaces are characterised by a multiplicity of mobilities that have different material expressions in place and these material expressions are multidimensional and multiscale as the layered approach of The Stack shows.

The sedentary (and capitalist) perspective of our societies has created conflict between nomadic practices and settled localities in a way that make it oftentimes difficult to reach mutual understanding and cooperation. Rather than viewing sedentism and nomadism as opposing forces, there is a need to form an integrated view of a reality in which both sedentary and nomadic practices have always co-existed, albeit in a contested way. This would transform the tension between the two to some sort of alliance. The desired result is conscious mobilisation of contexts by developing affordances for mutual benefits while simultaneously minimising negative externalities.

The design challenge for this thesis is therefore to explore what spatial interventions will allow for contexts to be mobilised by both global and local forces resulting in glocal places.

image (10). How to identify a digital nomad. Comic written and drawn by Giang Cao; edited (and sometimes co-written) by Matthew Harris

Methodological framework

Research questions

What spatial interventions can facilitate mutually beneficial co-existence in the socio-spatial context between digital nomads and local communities in Curaçao?

1. What are the spatial consequences of the social, economic, and digital practices of digital nomadism & how do these spatial practices support or hinder co-existence with local communities?

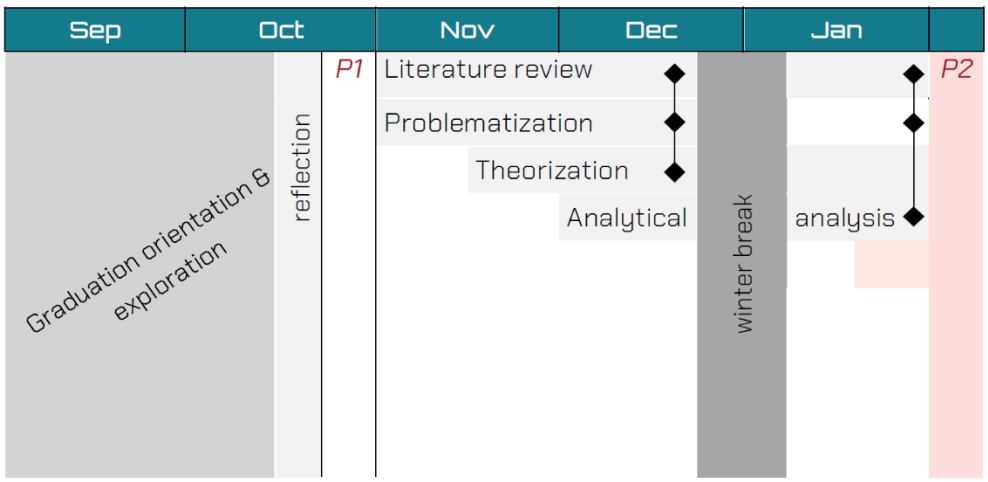
2. What are the affordances of the existing built environments of Curaçao for coping with the spatial practices of digital nomadism?

3. In what ways can digital nomadism have a mutually beneficial impact on the socio-spatial context of Curaçao?

Methods, Expected outcomes, and Timeline

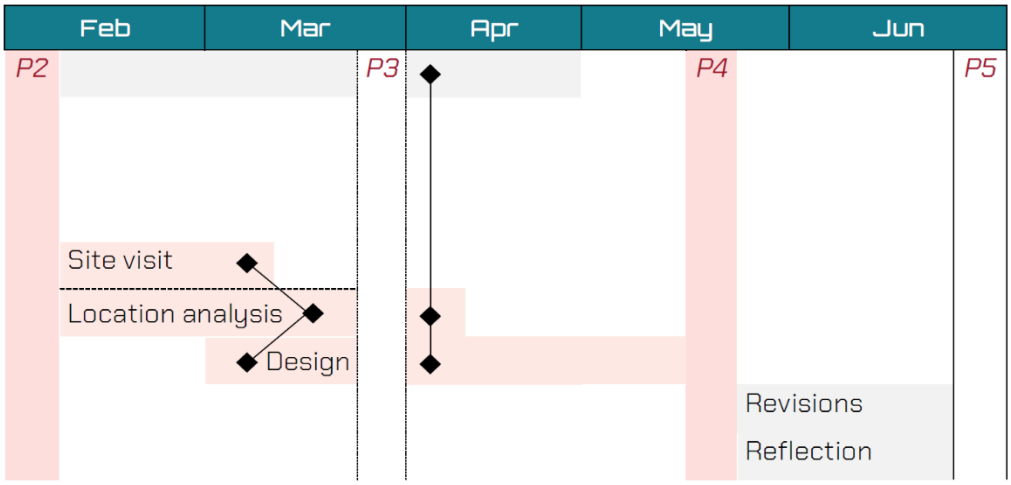
Research question 1	What are the spatial consequences of the social, economic, and digital practices of digital nomadism & how do these spatial practices support or hinder co-existence with local communities?		
Aim	To understand the produced spaces and time structures of digital nomadism by means of their materialisation in place so that the tensions as well as potential mutual benefits between nomadic and settled communities can be determined		
Methods	Literature study Online research - news articles	Digital ethnography - online communities - social media posts	Mapping & diagramming
Expected outcome	Written and visual (maps and diagrams) overview of the spatial impacts of digital nomadism that can be used as comparative material for the location analysis & as input for the design assignment		

Research question 2	What are the affordances of the existing built environments of Curaçao for coping with the spatial practices of digital nomadism?	
Aim	To determine the qualities of the existing social and material infrastructure of Curaçao from the perspective of supporting a multiplicity of mobilities	
Methods	Ethnographic mapping Interviews Desk research	Mapping & drawing
Expected outcome	Visual documentation of the built environment of Curaçao seen from the mobilities perspective showing strengths and gaps	



Research question 3	In what ways can digital nomadism have a mutually beneficial impact on the socio-spatial context of Curaçao?	
Aim	To discover the common ground between the practices of digital nomadism and the local needs and opportunities in Curaçao	
Methods	Deductive reasoning	Mapping, drawing, & diagramming
Expected outcome	Potential area of mutual benefits and overview of spatial contexts that are conducive to capitalizing on these benefits	

Main Research question	**What spatial interventions can facilitate mutually beneficial co-existence in the socio-spatial context between digital nomads and local communities in Curaçao?**	
Aim	To design the spatial contexts that may facilitate mutually beneficial co-existence between digital nomads and local communities in Curaçao	
Methods	Deductive reasoning Imaginative travel (using imagination to arrive at an alternative future)	Mapping, drawing, & diagramming
Expected outcome	Visual representation of the spatial strategies that will make up the material context in Curaçao facilitating co-existence of a multiplicity of mobilities	



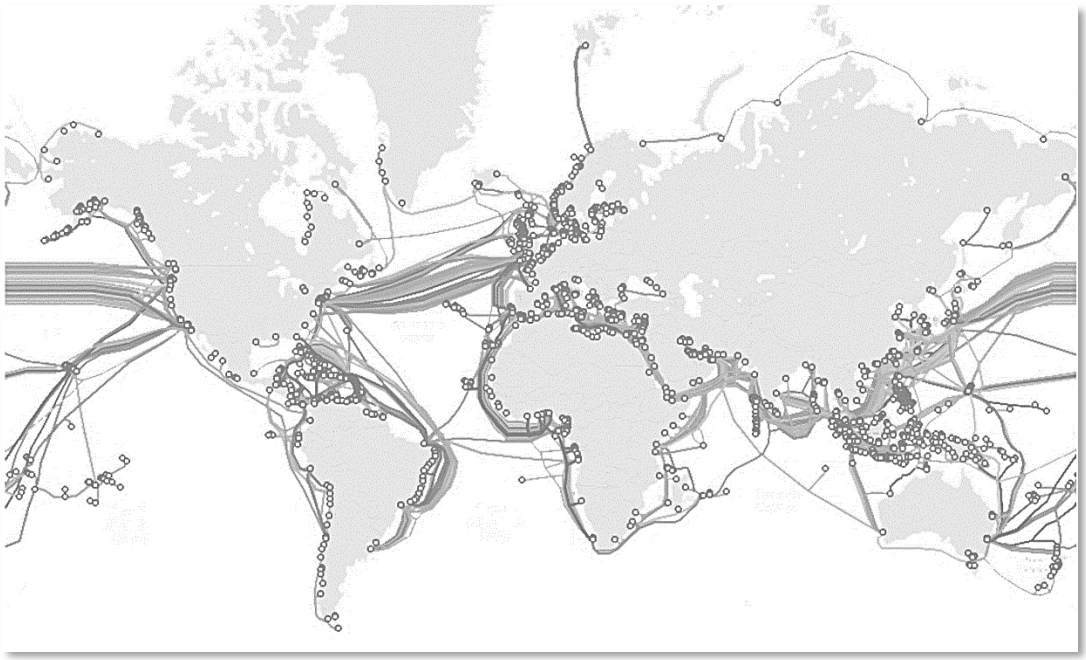
Problem analysis

The enablers and implications of digital nomadism as they play out in each layer of The Stack are explored in this chapter through a written and visual discourse. The goal is to obtain a deeper understanding of the social, economic, and digital practices of this phenomenon so that we can surmise what it might entail for the future of built environments. Following the layered approach of The Stack allows for identifying effects on different scales and across different contexts. Except perhaps for co-working places, the places of digital nomads are everyone's places. How they use and value these places is what seems to be different. Understanding the implications of this difference will be important for identifying where conflicts and mutual benefits may occur in order to formulate a design brief for subsequent spatial interventions.

Cloud layer

The Cloud layer represents all the data produced, shared, stored, and/or moved through the global networks of software infrastructure, such as databases, cloud platforms, and digital applications. Cloud platforms employ technical protocols to structure and facilitate communication via (personalised) Interfaces as well as to mediate the interaction between Users, who are all identifiable via their Addresses (Bratton, 2016, p. 44), while also policing which data and information can be accessed by whom or what (Bratton, 2016, p. 111). However, "computation is not virtual; it is [a] deeply physical event" (Bratton, 2016, p. 12). The digital infrastructures of the Cloud layer are dependent on the mineral sourcing and energy extraction from the Earth layer and are made possible by the planetary networks of hardware infrastructure positioned in the City[2] layer (Bratton, 2016, p. 110), including undersea fibre-optic cables, data centres, telecommunication towers, and energy grids. To facilitate a globally connected information sphere, 99% of all transnational digital communications is carried underground and undersea (Starosielski, 2015, p. 1) through 486 submarine cable systems and 1,306 landing stations as per the last count of 2022 (TeleGeography, n.d.-b). The total cable length is estimated at 1.4 million kilometres at the start of 2023 (TeleGeography, n.d.-a).

The Cloud layer both centralises and decentralises power. Their decentralising effect on power is recognizable in the fact that platforms are open to any and all Users and do not impose predetermined hierarchies on Users' interactions (Bratton, 2016, pp. 48, 49).



map (02). Submarine Cable Map (including landing stations) by TeleGeography

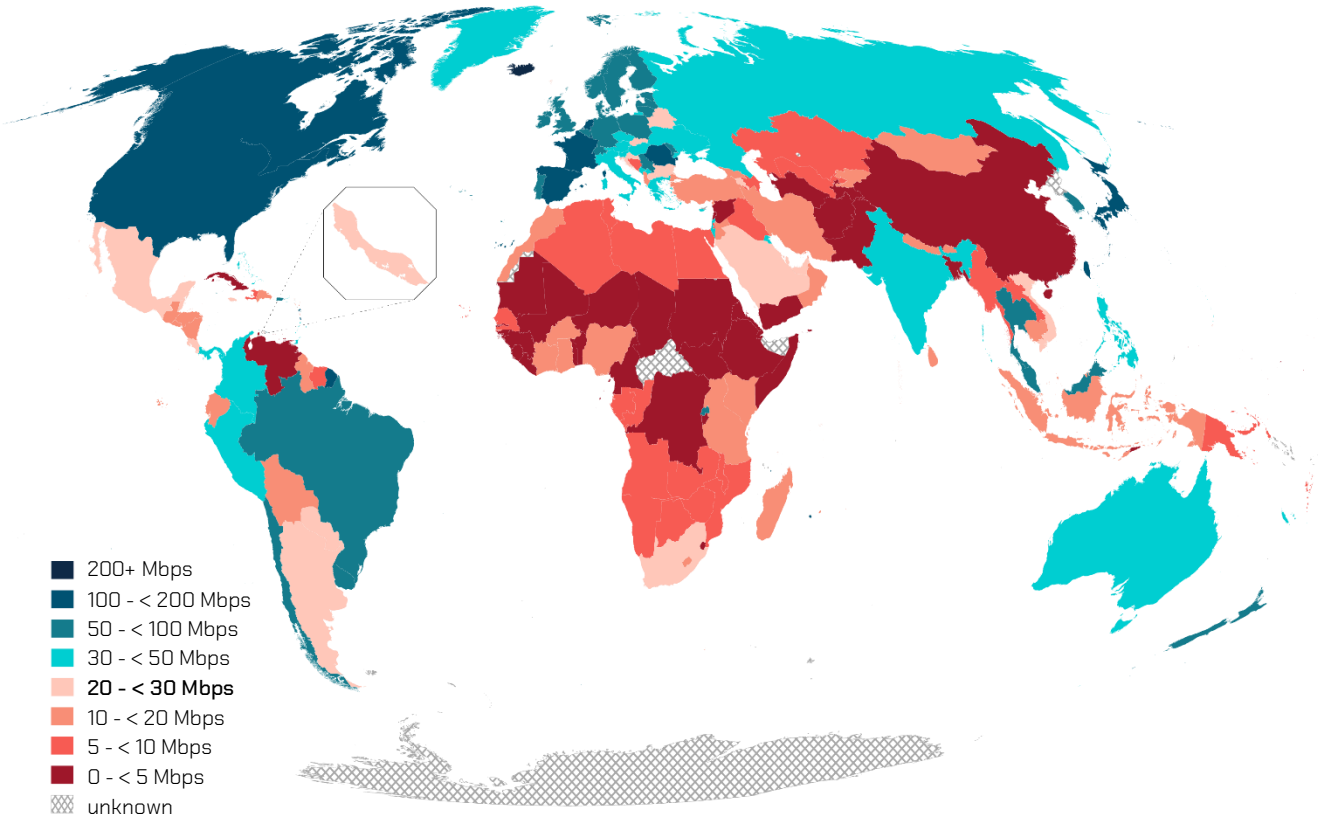
[2] The City layer as discussed in this thesis refers to all human built spaces, be they urban, rural, aquatic, infrastructural, mining, industrial, or even outer space.

image (11). Repairing submarine fibre-optic cables. Photo by U.S. Pacific Fleet

Meanwhile, they centralize power (for themselves) through their User value; the User value is dependent on generative entrenchment whereby a User's continued involvement and participation with the platform is what creates this value making it costly for the User to switch platforms (Bratton, 2016, pp. 47, 48).

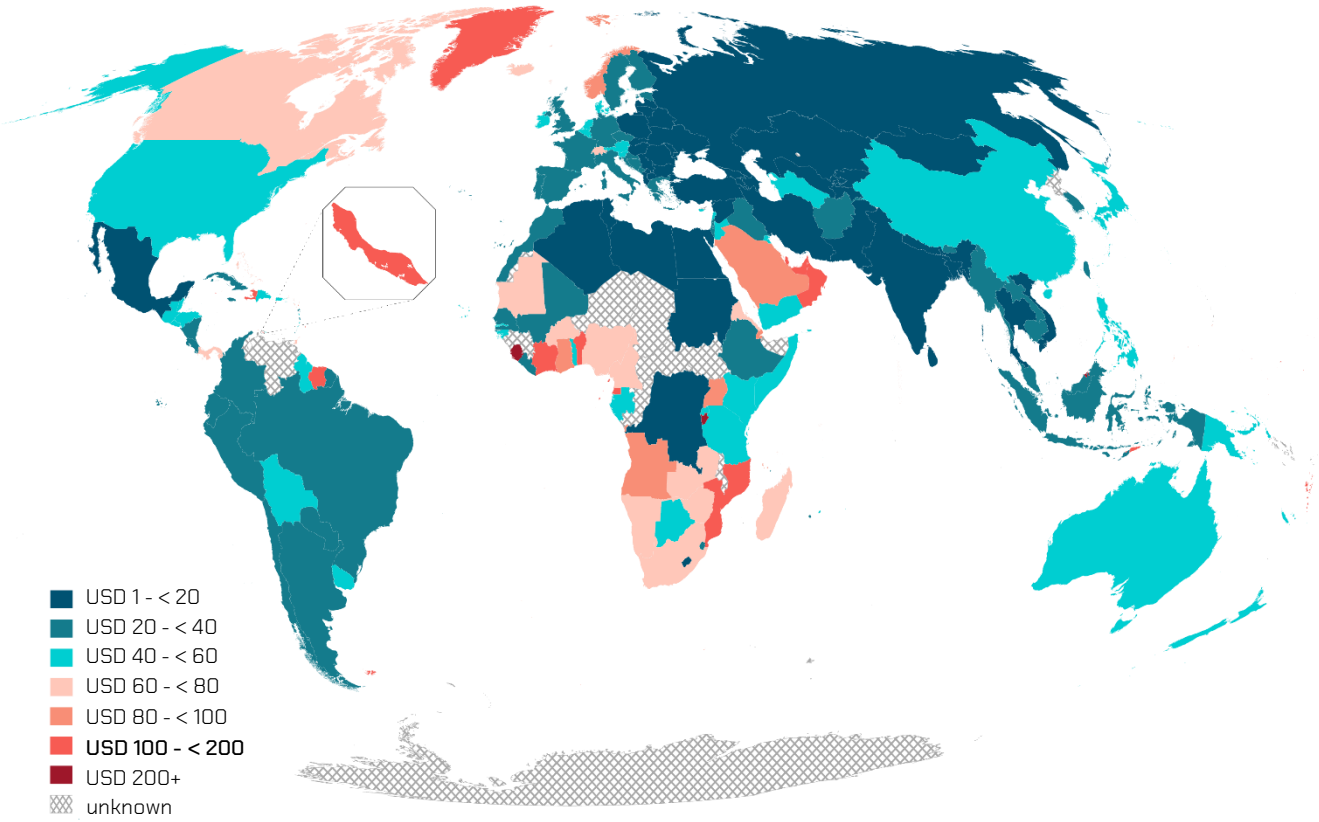
Bratton (2016) likens the Cloud layer to a geopolitical machine akin to the state (p. 110). It is a machine that sometimes reinforces the state and at other times is in competition with it, making the Cloud layer akin to a new continent that can be colonised (Bratton, 2016, p. 26), one that is pure digital space yet is fully reliant on physical elements in physical space. This digital-physical interdependence makes ownership in the sense of sovereign power a contested one and a challenge for the traditional (Westphalian) geopolitical order. An example of the reinforcement of states, what Bratton (2016) calls "the evolution of states into cloud platforms" (p. 70), is Estonia with their e-Residency program (Republic of Estonia, 2022). e-Residency is a transnational government-issued digital identity launched in 2014 and open to anyone in the world who wants to run a location-independent EU online business. Comparatively, an example where the state gets competition from a platform is Plumia (n.d.-a), an internet country in development with the ambition to offer anyone the option to participate in their citizenship system, which will include a passport, while opting out of traditional nation-state systems.

Digital nomadism came into being because of the possibilities afforded by the Cloud layer. This layer is thus an important mode of production for digital nomads. It has enabled those with wanderlust to engage in a (transnational) nomadic existence while doing remote work using digital technologies. Having fast and reliable internet access is therefore at the top of the digital nomad's requirements list. A requirement that determines whether a destination is chosen by the digital nomad as well as one that prompts further local governmental and business investments to improve digital access to local services. An example of the latter is when restaurants and cafés invest in providing free Wi-Fi access to their customers to attract more clientele and thus more sales. These traditional so-called third places, as conceptualised by Oldenburg, are being transformed into 'fourth places', effectively changing the landscape of spatial practices in the buildings and in the public realm, and ultimately the lived spaces in a city. But digital technologies are not for the sole benefit of the digital nomad; we are all actively using these technologies daily, meaning that differences in internet speed affect us all.



map (03). Average internet broadband speed Q1 2022. Data from Cable.co.uk

Digital technologies are becoming embedded in almost all aspects of human life, making it one of the most transformative modes of production of spaces yet. The global reach of the internet and the proliferation of digital devices has enabled instant communication and sharing of information across multiple spatial and temporal scales, figuratively shortening distances and eliminating time differences, making the world seem smaller and more accessible. However, access to the Cloud layer and its services is not a constitutional right but a voluntary one, contingent on one's ability to pay for the access and the fast internet speed (both on the country level and by an individual) and one's ability to understand how to use the services. At the start of October 2022 an estimated 63.5% of the global population had access to the internet (Kemp, 2022c), which is a little lower than Curaçao's internet penetration rate at the beginning of 2022 of 68.1% (Kemp, 2022b). In comparison, the Netherlands's internet penetration rate was about 96.0% in January of 2022 (Kemp, 2022a). These global differences have inadvertently contributed to socio-technical inequalities due to digital illiteracy (SER, 2022), from restaurant menus that are only available digitally via QR codes, to inaccessible banking, education, and healthcare services, and exclusion from job opportunities, including those that facilitate a digital nomadic life or a comparable income to that of the digital nomad via international remote work at home.



map (04). Average internet broadband cost Q1 2022. Data from Cable.co.uk

Earth layer

"The *Cloud* is not virtual; it is physical … There is nothing immaterial about massless information that demands such energy from the Earth" (Bratton, 2016, p. 29). It has been estimated that the carbon footprint of digital technologies is around 3.7% of global greenhouse gas emissions (Ferreboeuf et al., 2019), which is more than the carbon footprint of global aviation estimated at around 2.5% (Ritchie, 2020b; Overton, 2022). With digital technologies being adopted more and more in all aspects of our life, it is interesting that its contribution to the climate crisis is not being debated widely. The digital footprint includes the energy consumed by data centres, networks, and consumer products during usage as well as by manufacturing companies during the production of devices. In recent years much effort has gone into minimising the energy consumption by migrating data centres to colder climates, where the produced heat could also be used as a resource for district heating systems (Pearce, 2018), and by pushing the energy transition forward. However, neither option is without its caveats.

The location on Earth where your data is stored is intimately tied to privacy concerns and control over the data in the Cloud (Hicks, 2019; Michalsons, 2020) making it difficult to realize the benefits from migration to cold climates. Similarly, the energy transition requires large amounts of non-renewable metals (LePan, 2021a) in addition to the metals needed to produce digital devices (Venditti, 2021), with mining practices themselves contributing to climate change with approximately 4% to 7% of global greenhouse gas emissions (GlobalData, n.d.).

image (12). Data centre in Luleå, Sweden. Photo by Meta

Metal mining also comes with geopolitical tensions due to China controlling the largest reserve of rare earth metals (LePan, 2021b; Lu, 2021; Fan et al., 2023), in addition to ecological and cultural tensions from the fact that about 54% of mining projects are located on or near the lands of Indigenous and peasant peoples (Owen et al., 2023; refer to map 05), not to mention the health risks for those working to provide us with Cloud technologies (Frankel, 2016; Monserrate, 2022). In some cases, multinationals misuse their power to gain uneven economic benefits from mining on Indigenous people's land (Frankel & Whoriskey, 2016; Kung et al., 2022). Moreover, practices of planned obsolescence (Booth, 2022; Fowler, 2022) combined with the limited recycling of global e-waste of only 17.4% as per 2019 (Forti et al., 2020) further increases the demand of non-renewable metals beyond what is truly necessary to serve the global population.

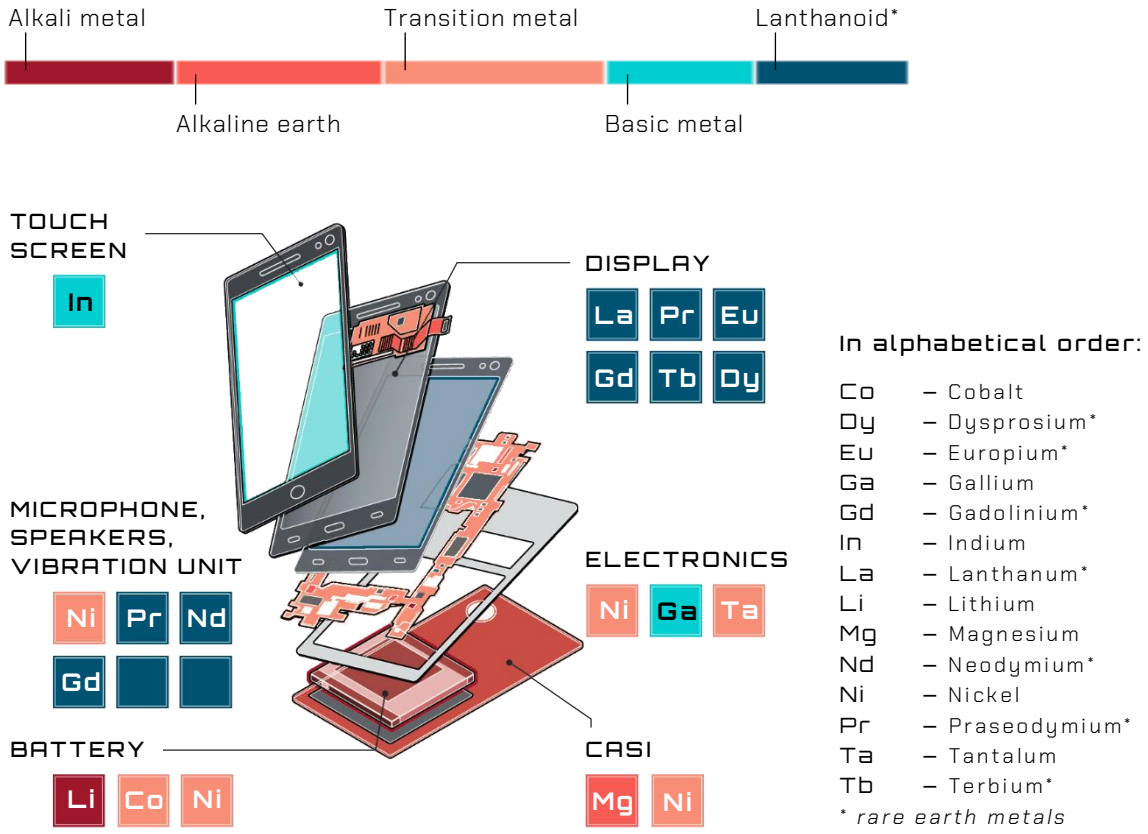
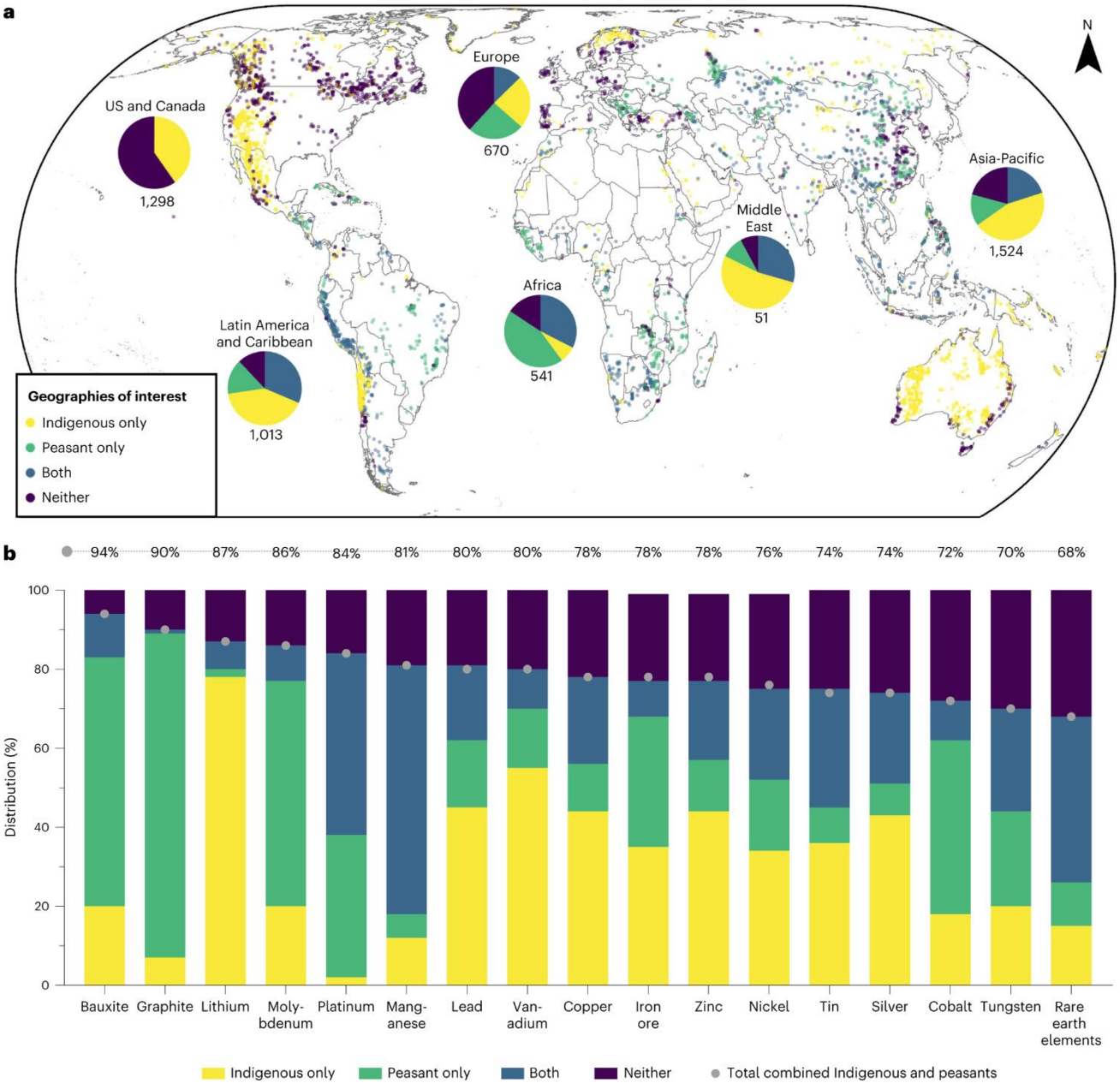


image (13). Critical metals in a smartphone. Graphic design by Visual Capitalist, adapted by Leito

Digital nomads are not the main nor sole beneficiaries of digital technologies. This means that our collective consumption patterns as well as the manner of conducting business are inhibiting the potential for 'upwards' mobility in social and economic sense for the communities affected by the extractive practices that are currently inherent to this capitalist economy.



a, Geographic distribution of mining projects, n = 5,097.
b, Distribution of energy transition minerals and metals reserves and resources. The selected 17 minerals and metals have the highest number of extractive projects worldwide. Percentages at the top of the figure represent those for the 'total combined Indigenous and peasants' variable.

map (05). Minerals and metals reserves and their intersection with Indigenous and peasant peoples' land. Map and graph by Owen et al., 2023

Europa

Mensen moeten wijken voor mijnbouw in Zweeds stadje

Ria Cats

Het Zweedse stadje Kiruna gaat de komende jaren gefaseerd tegen de vlakte omdat huizen, scholen en zelfs het ziekenhuis dreigen in te storten als gevolg van mijnbouw. Drie kilometer verderop verrijst het nieuwe stadscentrum. Het van oudsher nomadische Samivolk mort, omdat het wil delen in de winst uit de mijnbouw.

Stefan Mikaelsson (65) koestert een grote weerzin tegen de 'discriminatoire' Zweedse overheid. Om die reden brengt hij al ruim dertig jaar niet meer zijn stem uit bij de nationale verkiezingen in Zweden.

Sinds 1993 is er volgens hem iets beters dan het Zweedse parlement in Stockholm. In dat jaar kreeg zijn volk, de van oudsher nomadisch levende Sami, een eigen volksvertegenwoordiging, in navolging van de Samiparlementen in buurlanden Finland en Noorwegen. Mikaelsson heeft daarin al die tijd een zetel gehad.

Daarnaast voorziet hij als rendierherder in zijn levensonderhoud, vertelt de in traditionele Samikleding gestoken politicus in het besneeuwde Zweedse mijnstadje Kiruna. Dat is al eeuwenlang de gebruikelijke broodwinning van zijn volk, dat de rendierkuddes in hun voedseltrek achterna reist in het hoge noorden van Scandinavië. In dit gebied, dat bekendstaat als Lapland, maar dat de Sami zelf liever Sapmi noemen, houden de Sami de dieren voor hun melk, vlees en huiden.

Herders als hij hebben het steeds lastiger, verzucht Mikaelsson, en niet alleen doordat de Zweedse buren klagen over de rendierkuddes die zich op wegen of te dicht bij hun dorpen begeven. Een nog belangrijker reden is volgens Mikaelsson het aanhoudende wangedrag van de Zweedse overheid ten opzichte van de Sami. Het laatste inheemse oervolk van Europa werd tot ver in de twintigste eeuw zwaar ge-

image (14). Scan of news article in Het Financieele Dagblad from January 21, 2023 on the conflict between the Sámi, the indigenous nomadic people from the Sápmi region (covering the northern parts of Norway, Sweden, and Finland), and the Swedish government regarding the Swedish mineral and rare earth metals mining project in the city Kiruna

image (15). Ergonomic travel set-up. Photo from r/digitalnomad by ozExpatFIRE

image (16). Comprehensive travel set-up. Photo from r/digitalnomad by cyldx

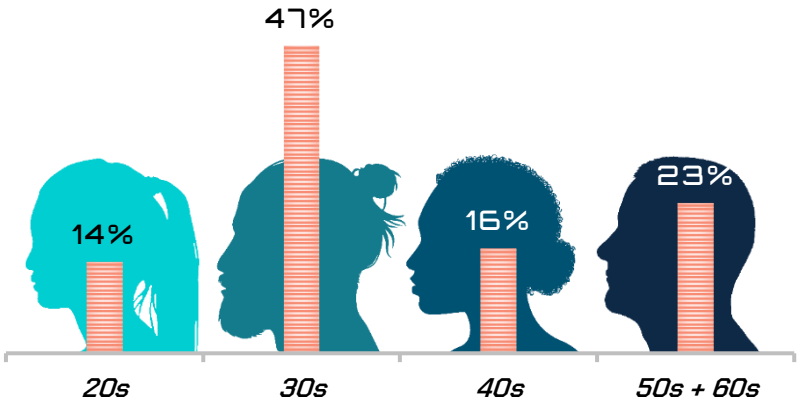
The global daily internet use by users between 16 and 64 years old was averaged at 6h37m in October 2022 (Kemp, 2022c) and while there is no data available, I estimate that the use of cloud services by digital nomads would be more than that. On the other hand, the minimalism inherent to nomadic living, which does not allow for toting a lot of hardware, does mean that the number of devices owned by a digital nomad is less than that of an average settled person in a wealthy country. However, the digital nomad does not necessarily live a simple life like the original (hunter-gatherer) nomads. Digital nomads do want modern conveniences; thus, they rent and use local services and infrastructures that require hardware investments.

image (17). Minimalist nomadic living (by a male solo traveller). Photos from https://krausefx.com/blog/one-year-nomad

In general, one can surmise that digital nomads are buying less products by choice and/or by necessity compared to a settled person but they are using products equally. They are commuting less than the average worker but they are using more cloud services. Finally, it is debatable whether the travels by plane of a 'slowmad' (a digital nomad who travels transnational every 6 to 12 months or so) are, on average, more or less than a Western citizen who goes on vacation twice a year.

User layer

The User layer in The Stack includes both human and non-human entities with no discernible hierarchy between them. In the case of digital nomadism, typical User entities participating in the digital systems of planetary-scale computation would be the digital nomads themselves as well as their laptops, tablets, and mobile phones. As previously mentioned, digital nomads are mobile professionals who choose to travel in a nomadic way while leveraging workplace flexibility and using digital technologies to perform their work remotely. Far from being a homogeneous group of people, this definition covers a broad range of identities and professions.



graph (01). Nomads by age. Data for the year 2022 from abrotherabroad.com/digital-nomad-statistics/ retrieved on April 3, 2023

According to the digital platform Nomad List (n.d.), working from a home office is the preferred work location reported by 61% of the members. Working from a home office is cheaper and has fewer distractions, no commute, and no dress code. In comparison, 15% of digital nomads prefer working at a co-working place, while 8% work regularly in a café.

15% prefer working at a co-working place:


1


2


3

8% prefer working at a café:


4


5

61% prefer working at their rental home office:

image (18). Various photos by digital nomads of their work locations. Photos from:

1. www.twoticketsanywhere.com/benefits-of-coworking-spaces/
2. www.facebook.com/coworldcuracao
3. www.christhefreelancer.com/coworking-cafes-canggu-bali/
4. r/digitalnomad by tresslessone
5. www.arthurguiot.com/costs-digital-nomad/
6. r/digitalnomad by ductapephantom
7. www.novo-monde.com/en/digital-nomad-life/
8. curacao.nu/curacao-moet-paradijs-voor-digital-nomads-worden-en-miljoenen-opleveren/
9. r/digitalnomad by TravelingUkelele
10. & 11. culturalfoodies.com/2021/08/29/25-practical-and-useful-tips-for-digital-nomads-working-around-the-world/
12. & 17. happylittletraveler.com/retrospective-on-the-first-year-of-living-as-digital-slowmads/
13. www.nothingfamiliar.com/digital-nomad-working-remote/
14. r/digitalnomad by Monkeystache_HH
15. www.projectuntethered.com/digital-nomad-traveling-office-setup/
16. bridgesandballoons.com/digital-nomad-life-berlin/

Digital nomads can be creative and inventive with their temporary work-from-home set-up when necessary.

Photo from:

1. r/digitalnomad by xxxFading
2. r/digitalnomad by trailweblaze
3. r/digitalnomad by WildwoodsWalkway2016
4. r/digitalnomad by ToadyWoady
5. r/digitalnomad by Fit-Signature8414

image (19). Various photos by digital nomads of their improvised standing desks (an iron board seems to be popular) and monitor lift hack

image (20). Remote work at a laundromat offering free Wi-Fi to meet a deadline. Photo from r/digitalnomad by gershgoroth

Approximately 53% of digital nomads reported in an online survey to be self-taught in their current profession, while 45% credit formal education for training them for their current job (A Brother Abroad, 2022). This implies that, while a formal education is necessary to open doors, (continuous) informal learning is at least as valuable.

There are several articles written on the lifestyle and identity characteristics of digital nomads based on studies using methods of (virtual) ethnography and/or interviews (Mancinelli, 2020; Prester et al., 2019; Thompson, 2019; Mancinelli, 2018; Reichenberger, 2018) as well as books written using similar methods by and about the life of digital nomads (Razavi, 2022; Woldoff & Litchfield, 2021). Comparable findings were reported in all these studies.

Digital nomads describe themselves as people who resist conforming to the imposed capitalist societal norms of participating in 'the rat race' and spending money on material possessions to show their level of success. They report to be in search of (creative) freedom, meaningful work, and a better quality of life by cutting commuting time and having agency and autonomy in how they balance work and non-work time. Digital nomads share common values, such as productivity, purpose, collaboration, and a flexible attitude towards their living location. However, the imaginings of being a digital nomad do not always match the realities of a nomadic life in which one is constantly on the move while trying to achieve financial security. Therefore, aside from a stable internet connection, digital nomads tend to choose their destinations based on the physical presence of a community of like-minded nomad people to share experiences and to stave off feelings of loneliness and isolation. Many who prefer working from a home office thus occasionally work at co-working places and/or attend nomad events for the social life, networking opportunities, and to get inspired by learning from others.

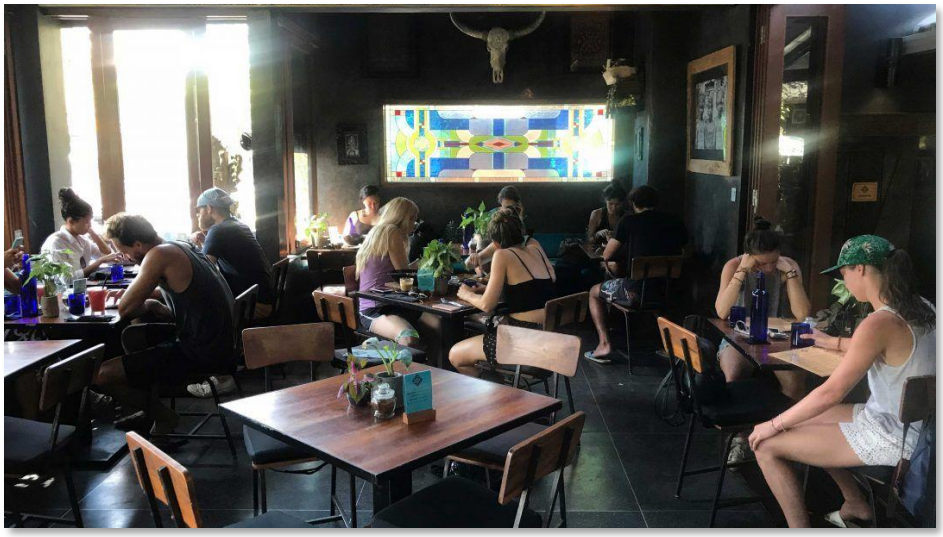
image (21). Workshop (left) & Meeting like-minded people at a co-working place. Photo from www.twoticketsanywhere.com/benefits-of-coworking-spaces

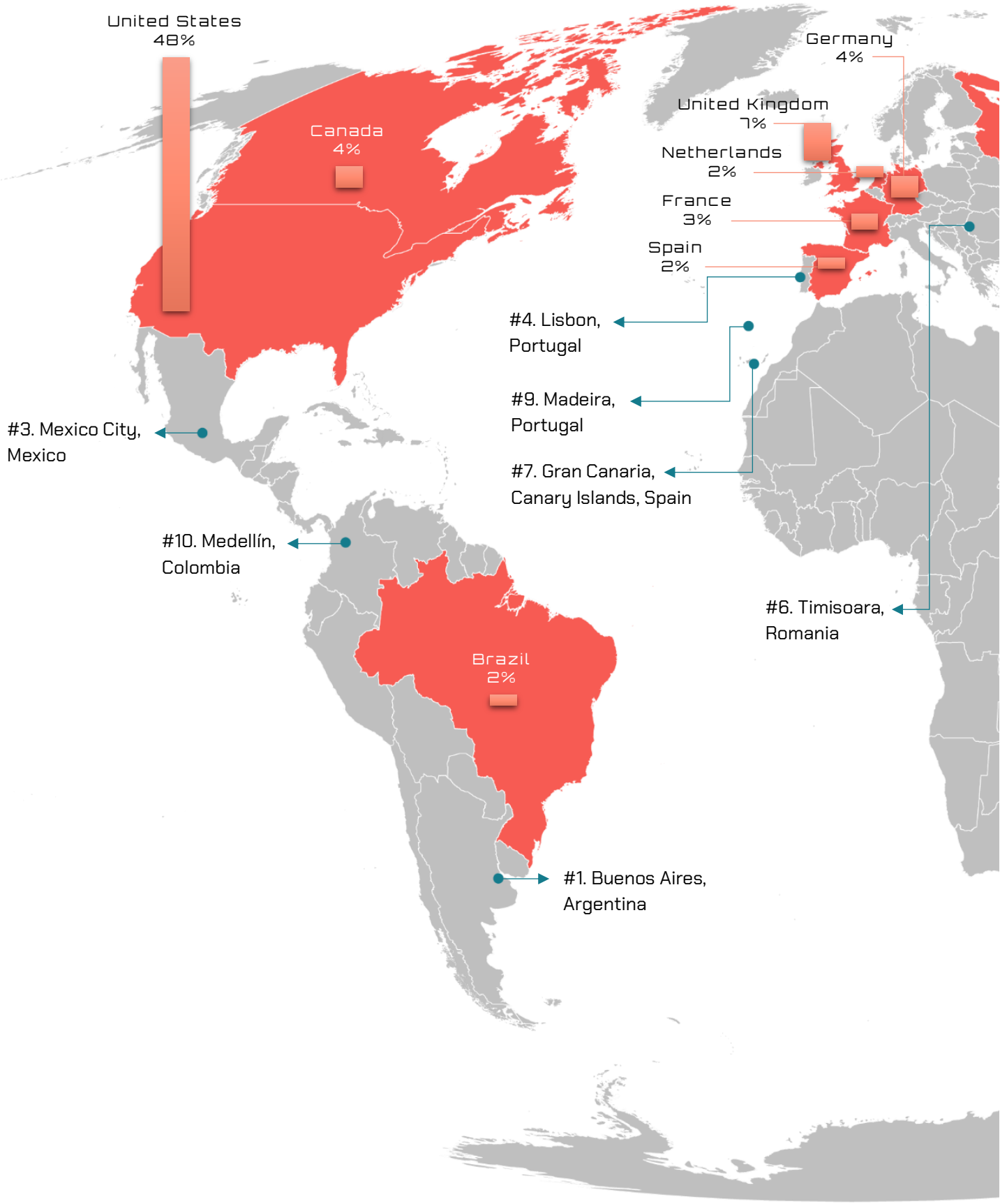
image (22). Bansko Nomad Fest. Photo from travellingjezebel.com/digital-nomad-retreats-nomad-events/

When the digital nomad community in a specific city becomes large enough, the result is oftentimes a self-clustering by digital nomads in so-called remote working hubs that act as borderless enclaves effectively excluding and pushing out locals who do not share the mobile lifestyle or their resources. As will become clear in the section discussing the Address layer, achieving spatial and temporal freedom is currently primarily available for people having strong passports and only possible when relocating to places with a lower cost of living. The previously mentioned articles and books concluded that while digital nomads seek to escape the capitalist mode of life and its overpriced cities, such as San Francisco, they end up making extensive use of the existing global socio-economic inequalities that are the result of this capitalist system to pursue their dreams. Digital nomads know this. Some of them respond that governments should start with making the choice of a digital nomadic life accessible to everyone irrespective of passport power or income, so that more can choose to leave if they want to (Razavi, 2022; Holland, 2018). Then, where does that leave the ones that do not want to leave? The ones who just want their own equal opportunities where they live and not be priced out by a deluge of wealthier nomads?

Image (23). Various photos from 2018 of cafés and co-working places in Canggu, Bali. Let's play 'Where's the local':

Photos from www.christhefreelancer.com/coworking-cafes-canggu-bali/





map (06). Top 10 nationalities of digital nomads based on Nomad List membership data from nomadlist.com/digital-nomad-statistics & Top 10 cities according to Nomad List. All data retrieved on April 3, 2023 (refer to next section on Interfaces for background on Nomad List)


Russia
5%
#2. Bangkok,
Thailand
#8. Penang,
Malaysia
#5. Canggu, Bali,
Indonesia
Australia
2%
Top 10 digital nomad (DN) nationalities
Top 10 Nomad List-ranked cities

Meanwhile, locals of some countries are experiencing the consequences of unrestricted access to digital nomads during and after the pandemic. By early 2022, local communities in Mexico City and in Lisbon, Portugal, two cities that have consistently featured in the top 5 on Nomad List during 2022, are more than fed up (Haeck & Volpicello, 2023; Elton, 2022). They have started to publicly object to the negative impacts of the influx of digital nomads (image 24). While governments are saying that more visitors equal more jobs, locals are feeling the flip side of the coin. From their perspective, digital nomads are (too) rapidly changing the demographics and economics of the local community by causing increased gentrification effects displacing both residents and local small businesses with their purchasing power as well as increasing the cost of living for locals (Woldoff & Litchfield, 2022).

image (24). Locals of Mexico City and Lisbon protest. Screenshots of tweets

Very few digital nomads propose to minimize or slow-down their own travel patterns to popular low-cost countries so as to decrease socio-economic shock and allow the local population space and time to adapt to the changing socio-spatial landscape. Digital nomads are thus existing as an extension of the prevailing neo-liberal system, which privileges the self at the expense of the collective, rather than as a challenge to the existing capitalist logics (Aroles et al., 2020; Mancinelli, 2020; Thompson, 2018). On the other hand, prohibiting digital nomadism may not be realistic either. There is thus indeed a need to look for alternative ways to realize mutual benefits between those with wanderlust (including creating opportunities for the would-be wanderers from countries with weak passports) and those who prefer to stay (mostly) settled in one place.

30 | Het Financieele Dagblad
Zaterdag 26 november 2022

Gentrificatie

Mexico-Stad omarmt 'digital nomads' en Airbnb profiteert

Arthur Debruyne

Waar ga je naartoe als je niet gebonden bent aan kantoor en overal kunt werken waar je internet hebt? Steeds meer mensen kiezen voor Mexico-Stad. Het stadsbestuur ziet de buitenlandse kenniswerkers graag komen, maar de door Airbnb aangejaagde stijging van de huren leidt ook tot verdringing.

De wijk Roma, iets ten westen van het drukke *centro histórico*, staat te boek als een van de kroonjuwelen van Mexico-Stad. Met zijn schaduwrijke straten, stijlvolle bars en restaurants, exclusieve boetieks en coole nachtclubs kan het gebied gerust als bohémien-chic omschreven worden. En steeds vaker klinkt er Engels op straat, niet enkel uit de mond van toeristen, maar ook — of misschien wel vooral — van zogenoemde *digital nomads*: buitenlanders die niet gebonden zijn aan het werken op kantoor en daarom elders kamp opslaan, vaak in exotische oorden.

Tijdens de coronapandemie was er in Mexico al een toename te zien van het aantal Amerikanen, niet zelden mensen die op zoek waren naar betaalbaarder toevluchtsoorden met ook minder coronabeperkingen. Nadat de pandemie was geluwd, vroegen er nog eens dubbel zoveel Amerikanen een verblijfsvergunning aan in hun buurland. En waar in 2020 nog tweeduizend leden van de onlinecommunity Nomadlist per maand naar Mexico-Stad trokken, nadert hun aantal in november al de achtduizend.

De regering van de progressieve burgemeester Claudia Sheinbaum wil er nog meer aantrekken. Daartoe heeft ze een partnerschap gesloten met het Amerikaanse verhuurplatform Airbnb, dat in accommodaties voor de laptopwerkers moet voorzien. In de nabije toekomst hoopt de metropool ruim 77.000 digital nomads aan te trekken, die elk gemiddeld $1500 per maand zouden uitgeven. 'Dat betekent $1,4 mrd per jaar voor Mexico-Stad', zei Sheinbaum. 'Als ze een partner of gezin meebrengen, $3,72 mrd.' Haar plan wordt echter onthaald op grote bezorgdheid over het soort ontwrichting van de woonmarkt dat Europese steden als Amsterdam heeft getroffen.

'Ze zijn meer dan welkom: de pandemie heeft er hard ingehakt en we hebben de inkomsten nodig'

'Wij zijn Europa niet: Mexico-Stad is zeer afhankelijk van toerisme, en mensen moeten banen hebben'

De hoofdstad van Mexico is zeer gewild bij buitenlandse kenniswerkers die genoeg hebben aan een terras, een laptop en een internetverbinding. FOTO: RAQUEL CUNHA/REUTERS

Geruïneerde stad

Mexico-Stad is trending in de internationale gemeenschap van digital nomads. Op Nomadlist.com staat de Mexicaanse hoofdstad op de vierde plaats van populairste steden onder rondreizende thuiswerkers, na de Portugese hoofdstad Lissabon — dat een speciaal visum heeft opgetuigd voor digital nomads — Chiang Mai in Thailand en Canggu op het Indonesische eiland Bali. 'Beste buurt om te verblijven: Roma', stelt de site.

'Ze zijn meer dan welkom', zo echoot July Mérida (63), uitbater van een sandwichkraam op een straathoek in Roma, de mening van de meeste handelaren die we spreken — zij hebben natuurlijk baat bij kapitaalkrachtige buitenlandse bezoekers. 'De coronapandemie heeft er hard ingehakt, we hebben de inkomsten nodig.' Toegegeven, de buitenlanders zijn best veeleisend (enkel eiwit, geen eigeel op de uitsmijter) en spreken zelden Spaans, maar de foto's die ze op Instagram posten, vormen uitstekende promotie, zegt July. Wel merkt ze dat steeds meer van haar vertrouwde buren vertrekken en hun woning verhuren, onder meer op Airbnb, voor de aantrekkelijke inkomsten.

En dat is meteen het belangrijkste punt van zorg rond het plan van de hoofdstedelijke regering: gentrificatie. Op Twitter regent het negatieve berichten over hogere prijzen en ontwrichting op de woonmarkt. Huurders die uit hun appartementen worden gezet omdat de huisbaas er Airbnb-verblijven van maakt, beklagen zich tegenover media. De lokale editie van de krant El País schetste het beeld van een geruïneerde stad, waarin inwoners naar de periferie verdreven worden en moeten pendelen om dure macchiato's te bereiden voor meervermogende buitenlanders.

Diana Alarcón, die als coördinator internationale aangelegenheden van Mexico-Stad het akkoord met Airbnb

image (25). Scan of news article in Het Financieele Dagblad from November 26, 2022 on gentrification in Mexico City in relation to digital nomadism.

Interface layer

The Interface layer is both a mediator and a gatekeeper. Interfaces govern the conditions of exchange between two things (Bratton, 2016, p.220) and they come in forms as simple as levers, doorways, and office layout schemes, and as complex as national borders, belief systems, and cultural traditions (Bratton, 2016). Interfaces have the power to create and reinforce inequalities or to facilitate communication and connection. Two types of interfaces that are important for digital nomads for both work and travel are digital platforms/apps and travel visas.

Digital Interfaces in the form of apps provide synthetic, codified, images of the Address and User networks embedded in the City and Cloud layers (Bratton, 2016, p. 12). The window of the world that is opened for the User by digital Interfaces is a narrow one, showing only a codified version of the totality of reality. These images may also differ per User, as Interfaces open different windows to the digitised world for each User based on previous interactions (Bratton, 2016, p. 49). Users then take action based on this representation of reality, thereby remaking reality to fit this codified image (Bratton, 2016, p. 229). The image that a digital nomad gets from a city via the representations shared by other digital nomads is not the same as the one based on the lived experience of the locals, as is attested by the clash between visitors and locals in Mexico City (image 26).

image (26). Mexico City according to a digital nomad versus Mexico City according to a local. Left image from Google search (original tweet has been deleted), right image from twitter.com

Two of the many digital platforms that offer online communities to digital nomads are Nomad List and the subreddit group r/digitalnomad. Their popularity shows the benefits of complementing physical meetings with digital interaction for community bonding.

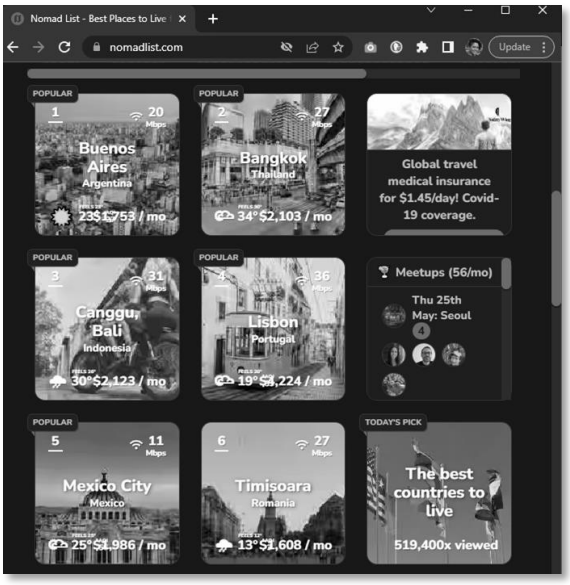


image (27). Screenshot: Nomad List

One of the best-known and often-cited digital platforms to gather information about places to visit as well as to connect to a global network of digital nomads is https://nomadlist.com/, a website launched in 2014. The site offers a daily updated ranking of global cities. It uses public data sets and APIs to calculate a 'Nomad Score', with the highest weight given to internet speed, cost of living, weather, and safety. The ranking list of cities is freely accessible, while a paid membership is required to view location details and to connect with others.

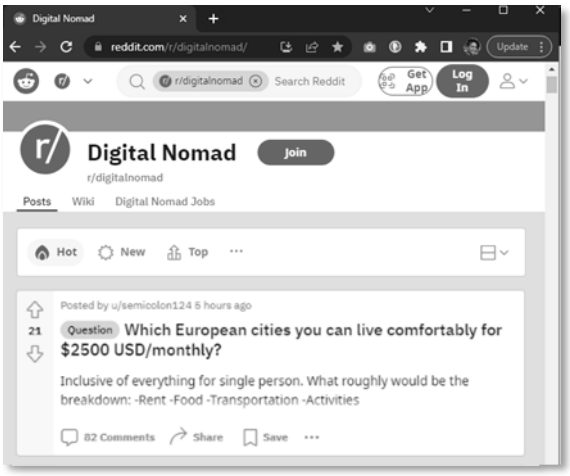


image (28). Screenshot: r/digitalnomad

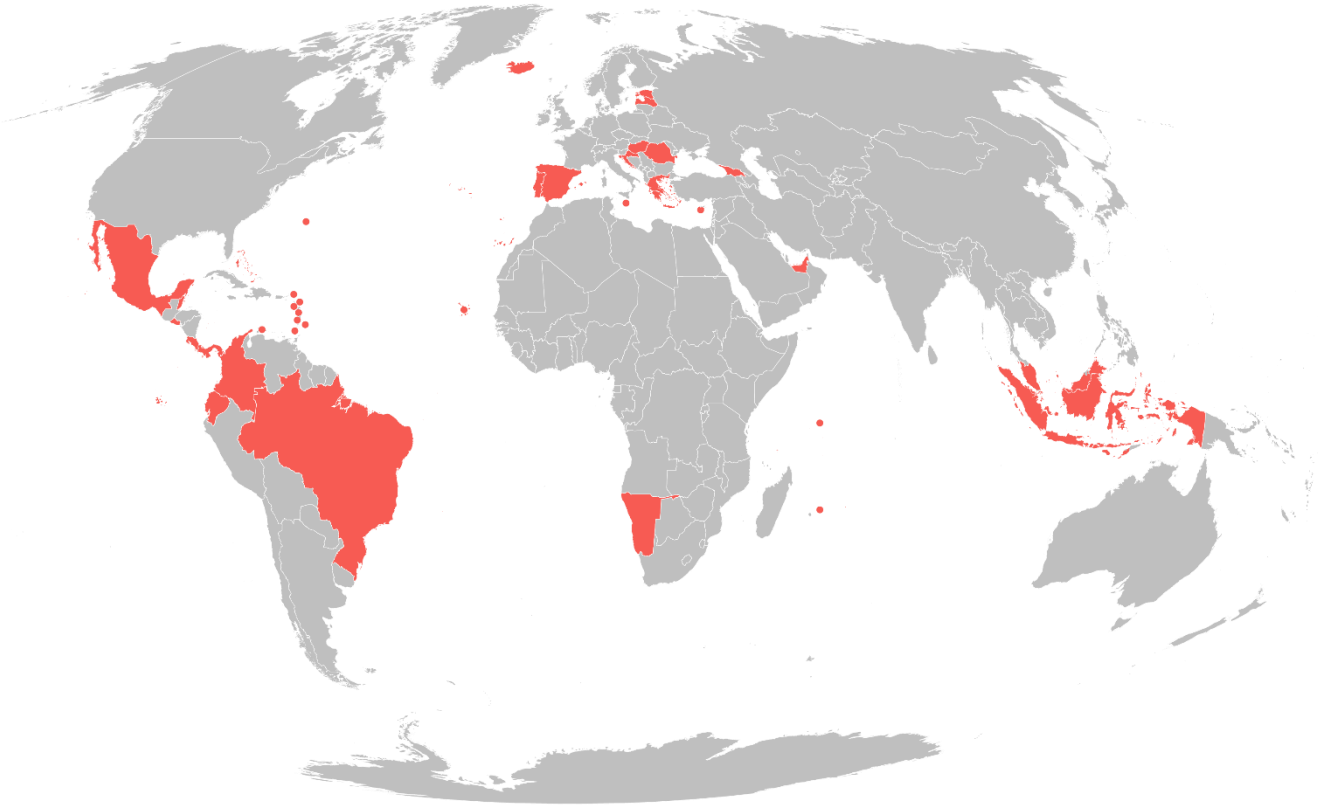
Reddit is one of the world's most visited free platforms. The subreddit group r/digitalnomad, created in 2009, offers a platform to its members where they can ask each other advice about all aspects related to digital nomad life as well as find links to remote jobs websites and visa policies, among other things. Reddit is set up to foster community and knowledge sharing. They have moderators actively monitoring adherence to the general group rules posted on the page to ensure that posts are informative, and that the community stays civil and kind.

Travel visas, an example of real-world Interfaces, mediate entry and length of stay on behalf of some while disallowing access for others. Since 2020, formal digital nomad/ remote working visa programs (DN visa) are being marketed by numerous countries (table 01). DN visas have the following conditions:

- Maximum length of stay is typically 6 or 12 months, longer than that of a tourist visa.
- It is prohibited to participate on the local labour market or have local clients.
- Usually, remote workers are exempt from local income taxes for 6 months or longer.

Government officials choosing to market a DN visa belief that the increase in long-stay knowledge workers with a relatively high income will help government's budgets and create more local jobs. There are, however, some caveats with this belief:

- Many require a minimum income. Although it is a sensible tactic to ensure that remote workers can support themselves and do not need to participate on the local job market, in some cases the requirement is much higher than the local average income. Coupled with no restrictions in the number of applicants that are approved for a DN visa, this creates unfair competition on the local housing market at the expense of the locals.
- The types of jobs typically created are in the service sector. A sector that is known for its low wages. Employers do not have an incentive to increase these low wages but can easily increase their sale prices to improve their profit margin with the presence of a wealthier customer base. The result is increased cost of living for locals, virtually no increase in wage income for the average local worker, and homogenisation of the urban landscape with trendy cafés at every corner.
- Change is inevitable. The fact that time exist is because there is always something changing somewhere. In a globalizing world, this change has global consequences far beyond our constructed national and cultural boundaries. When economic factors are the main or only ones viewed as relevant when leaning into changing lifestyles, efforts to integrate these global influences into local culture fall behind. Erosion of local customs and community values are the result. Social and spatial factors must thus also be considered.



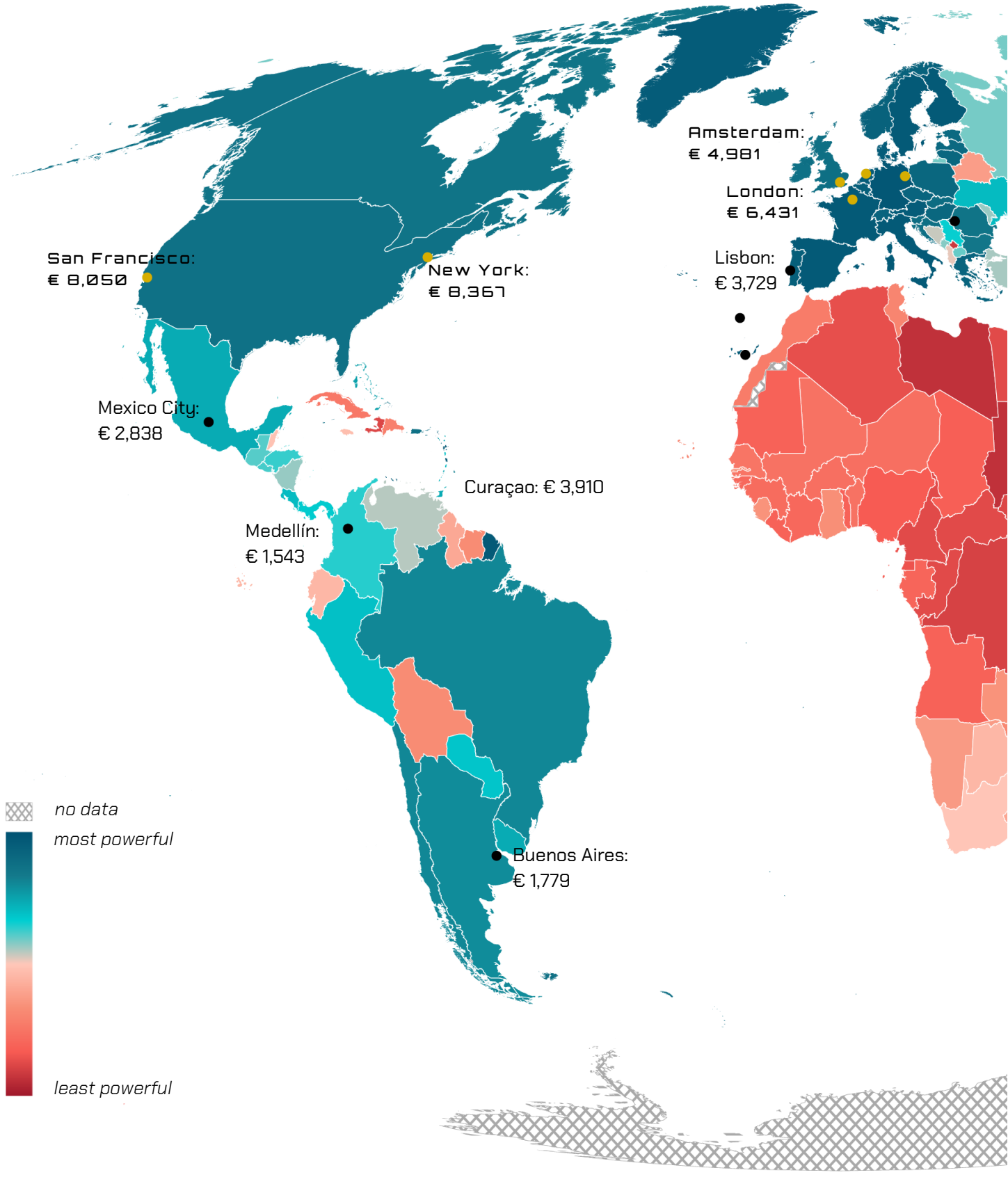
map (07). Countries known to have a separate DN visa. Data from nomadgirl.co & nomadsembassy.com, retrieved on April 7, 2023

Continent/ Region	Country	Duration (extension) *in months*	Eligible to all Yes / No	Minimum income* Yes / No	Highest Nomad List ranking
Africa	Cape Verde	6 (+6)	No	Yes	929
	Mauritius	12 (+12)	No	No	67
	Namibia	6	Yes	Yes	450
	Seychelles	12	Yes	No	1276
Asia & Middle East	Indonesia	6	Yes	Yes	5
	Malaysia	12 (+12)	Yes	Yes	8
	United Arab Emirates	12	Yes	Yes	83
Caribbean & islands in the west of the North Atlantic Ocean	Anguilla	12	Yes	No	not incl.
	Antigua & Barbuda	24	Yes	Yes	1274
	Bahamas	12 (+24)	Yes	No	1215
	Barbados	12 (+12)	Yes	Yes	1263
	Bermuda	12 (+12)	Yes	No	1188
	Curaçao	6 (+6)	Yes	No	225
	Dominica	18	Yes	Yes	not incl.
	Grenada	12 (+12)	Yes	Yes	not incl.
	Montserrat	12 (+12)	Yes	Yes	not incl.
	Saint Lucia	12	Yes	No	not incl.
Europe	Croatia	12	Yes	Yes	61
	Cyprus	12 (+24)	Yes	Yes	255
	Estonia	12	Yes	Yes	48
	Georgia	12	No	Yes	
	Greece	12 (+24)	Yes	Yes	108
	Hungary	12 (+12)	No	Yes	44
	Iceland	6	Yes	Yes	595
	Latvia	12 (+12)	No	Yes	236
	Malta	12 (+12)	Yes	Yes	1082
	Portugal	12	Yes	Yes	4
	Romania	12 (+12)	Yes	Yes	6
	Spain (taxes apply)	12 (+24)	Yes	Yes	7
North & Central America	Belize	6 (+6)	Yes	Yes	951
	Costa Rica	12 (+12)	Yes	Yes	330
	El Salvador	24 (+24)	Yes	Yes	884
	Mexico	12 (+36)	Yes	Yes	3
	Panama	9 (+9)	Yes	Yes	388
South America	Brazil	12 (+12)	Yes	Yes	69
	Colombia	24	Yes	Yes	10
	Ecuador	24	No	Yes	57

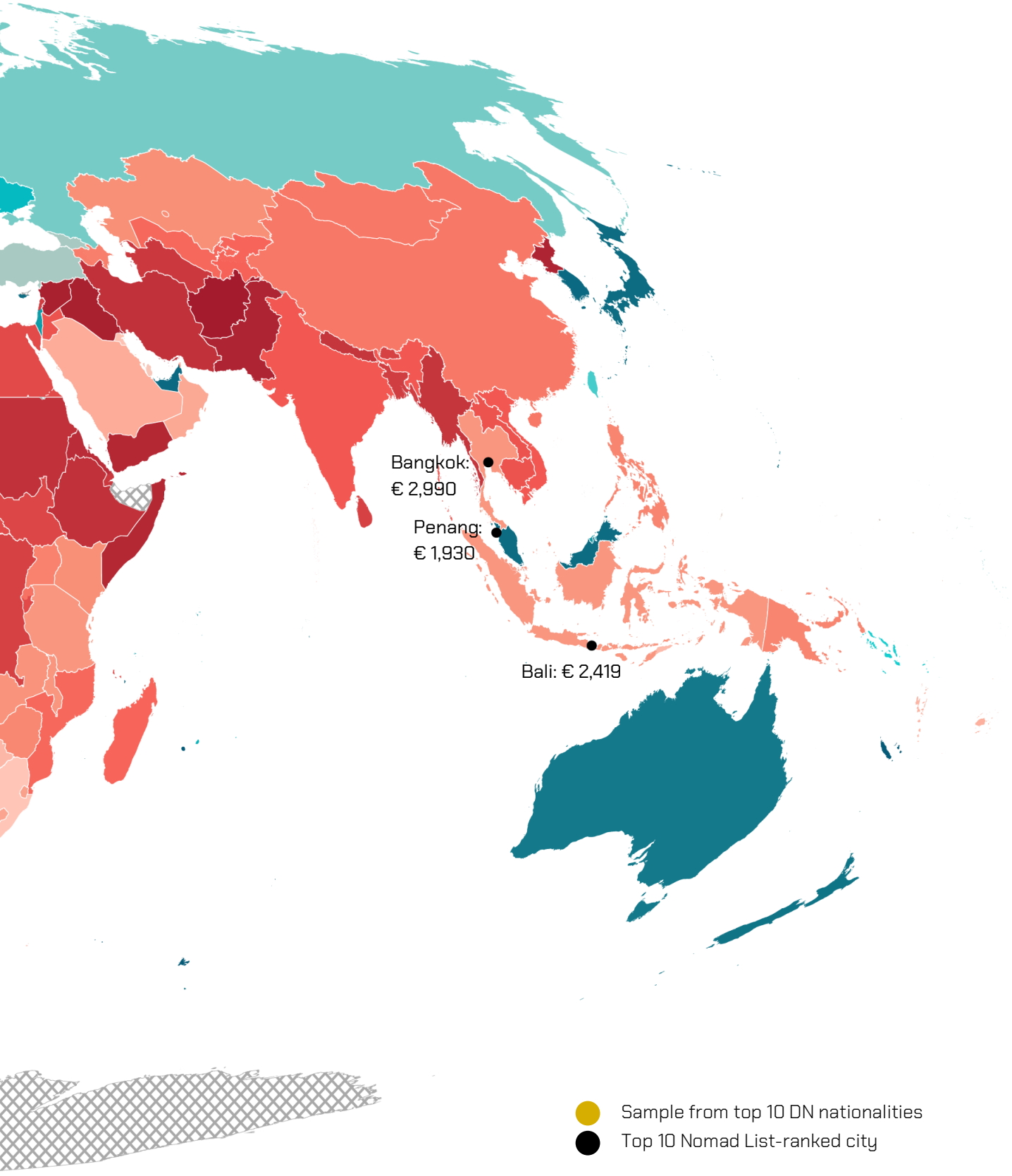
***** *Proof of (self-)employment is always required*

table (01). Countries known to have a separate DN visa. Data: refer to map 07. & Highest Nomad List ranking refers to the highest ranked city from each country. Data from nomadlist.com, retrieved on April 3, 2023

Even though tourism is an important employment sector for many countries, Interfaces in the form of policies and appropriate taxes should be in place to ensure that direct investments are made to improve on residential security and affordable amenities for locals, community sustainability, and indeed job opportunities. We've already seen the detrimental effects of overtourism in cities such as Venice. The rapid increase in potential future nomads due to flexible remote working policies is adding urgency to the need for governance and spatial strategies that look beyond economic benefits only.



map (08). Global passport power in January 2023 based on how many countries one can visit visa-free with one's passport. Data from Passport Index. & Cost of living comparison. Cost of living calculated from data retrieved in May, 2023, from www.numbeo.com/cost-of-living/


Bangkok:
€ 2,990
Penang:
€ 1,930
Bali: € 2,419
Sample from top 10 DN nationalities
Top 10 Nomad List-ranked city

Address layer

The Address layer includes all addressing systems that assign unique measurable (and trackable) identifiers to people and things, i.e., the Users. The User gains users' privileges in The Stack when they are assigned an Address in the Address layer. These privileges are then further tailored based on the platform interaction and personal data shared on the Cloud layer, resulting in different windows opening or closing for the User via the Interface layer. As previously mentioned, the physicality of the Address and City layers are then subject to change due to the User's physical actions that match the virtual image. Similarly, privileges are also awarded to Users in the physical world based on their assigned Addresses, such as nationality, last name, and gender.

Addresses in the digital realm would be IP addresses, URLs, and SIM cards, and in the physical realm zip/post codes, GPS coordinates, passports, and even fingerprints. Some of the latter are also used for identification in the digital realm. It is the Addresses that allow sender and receiver to be recognised and located, and thus to send and receive communications to and from one another (Bratton, 2016, p. 192).

What makes the Address layer especially significant is firstly, the social hierarchies that are embedded in addressing systems. These hierarchies allow for structuring and way-finding, but also for discriminatory and exclusionary practices. A notable example of the latter on the global scale is passport power (map 08). Although at its core digital nomadism is about an individual's freedom of choice with regards to living and working place, it is the existing geopolitical relations that determine how much freedom one can claim in terms of physical (& digital) Addresses. The Address layer is thus an important mode of production for the digital nomad due to their nomadic way of living.

This means that currently digital nomadism is more about privilege, based on the country in which one is born, than it is about freedom and true choice. Being able to travel freely to another destination is based on the very thing that most of the digital nomads seem to oppose, namely the obligations that are part of being citizens of a nation-state, a nation that has constructed global mobility rights and benefits on their behalf. Even so, the idea of freedom of mobility and the notion of global citizenship is not without merit, but whether digital nomads are the ones to inspire changes in these geo-political relations remains to be seen.

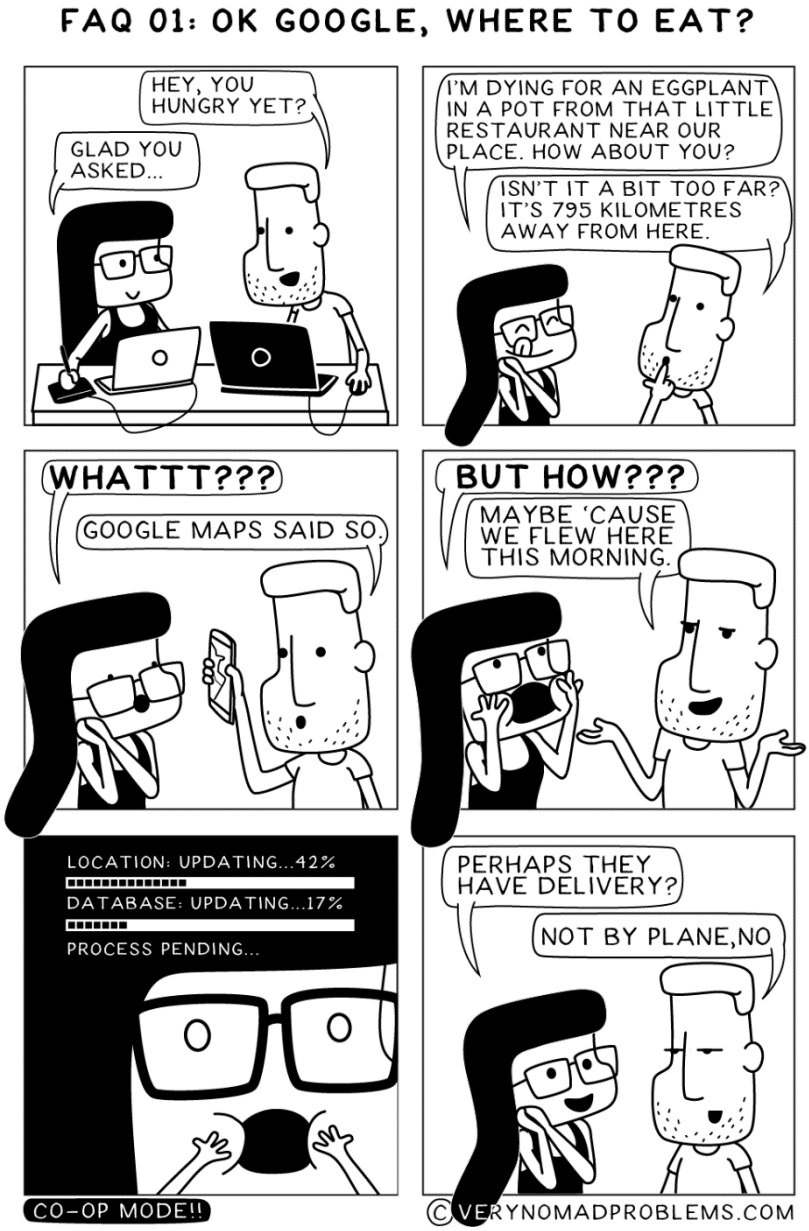


image (29). When Interfaces distort Address distances. Comic written and drawn by Giang Cao; edited (and sometimes co-written) by Matthew Harris

Secondly, the Address layer has significance due to the economic exchange value that can be assigned to something based on its geographical location. It is this attribute that has enabled geo-arbitrage, short for geographic arbitrage, meaning physically moving to a different location (can be domestic or international) to benefit from a lower cost of living, without having to give up on the (higher) income nor standard of living from the initial location. Geo-arbitrage is one of the main factors driving digital nomadism, as cost of living is one of the deciding factors for choosing a destination (A Brother Abroad, 2022) as well as for leaving the home country (Woldoff & Litchfield, 2021). In general, digital nomads are not engaging in international geo-arbitrage primarily to get rich, rather they seek to use geo-arbitrage, some probably more successful than others, to 'gain' time. If we take a work week of 40 hours as a hypothetical standard, the lower cost of living would either a) enable them to work less than this to cover their basic expenses, thereby having more non-work time available for other activities, b) allow them to afford more with the same amount of money earned in their country of birth while working these 40 hours a week, or c) permit them to reach their economic goals in less years due to having more disposable income after basic expenses to invest and save.

Aside from the ethical considerations of this practice, as it only considers the benefits for the person engaging in geo-arbitrage and not at the potential negative impacts for the community where they are relocating to, it says something about our economic system that cities are becoming so expensive to live in, such as San Francisco in the US, that people cannot sustain a healthy living situation and feel the need to resort to such practices. Of course, in a capitalist economy, those engaging in geo-arbitrage end up causing the same increase in cost of living and gentrification effects that they are fleeing from when they relocate en masse to another location in a short period of time.

Geographical location is also important on a smaller scale: digital nomads always choose their living accommodation in close vicinity to their work location to minimize commute time. Passenger road transport accounts for the largest part of CO2 emissions from transportation (Ritchie, 2020a) in part due to the need to travel to work. More importantly, commute time is 'wasted time' and digital nomads are all about making the best use of their available time. The choice of physical Addresses by a digital nomad is thus motivated by their prioritisation of lived time over traditional time practices. The majority of digital nomads report preferring to work at their living accommodation. Co-working places feature in second place in the list of preferred work locations. Working apart together has always existed. The commercialisation of that concept within the knowledge economy began in 2005 in San Francisco (Coworking Insights, 2018). Co-working places provide both a dedicated desk to work productively and a way to connect to like-minded people. More importantly, co-working places are always located near living accommodations and vice versa.

The notion of working near where you live has always been the case before and during the first Industrial Revolution when the working class had their homes at walking distance of their work. With the introduction of affordable cars, a lot more people had the opportunity to live further away where there was more room for bigger houses, with the current heavy commute traffic as a result. Now we are trying to combat the negative effects of this with concepts like transit-oriented development, yet the important part that is overlooked is that the centralisation of workplaces in global cities and office parks is what needs to be reversed as well.

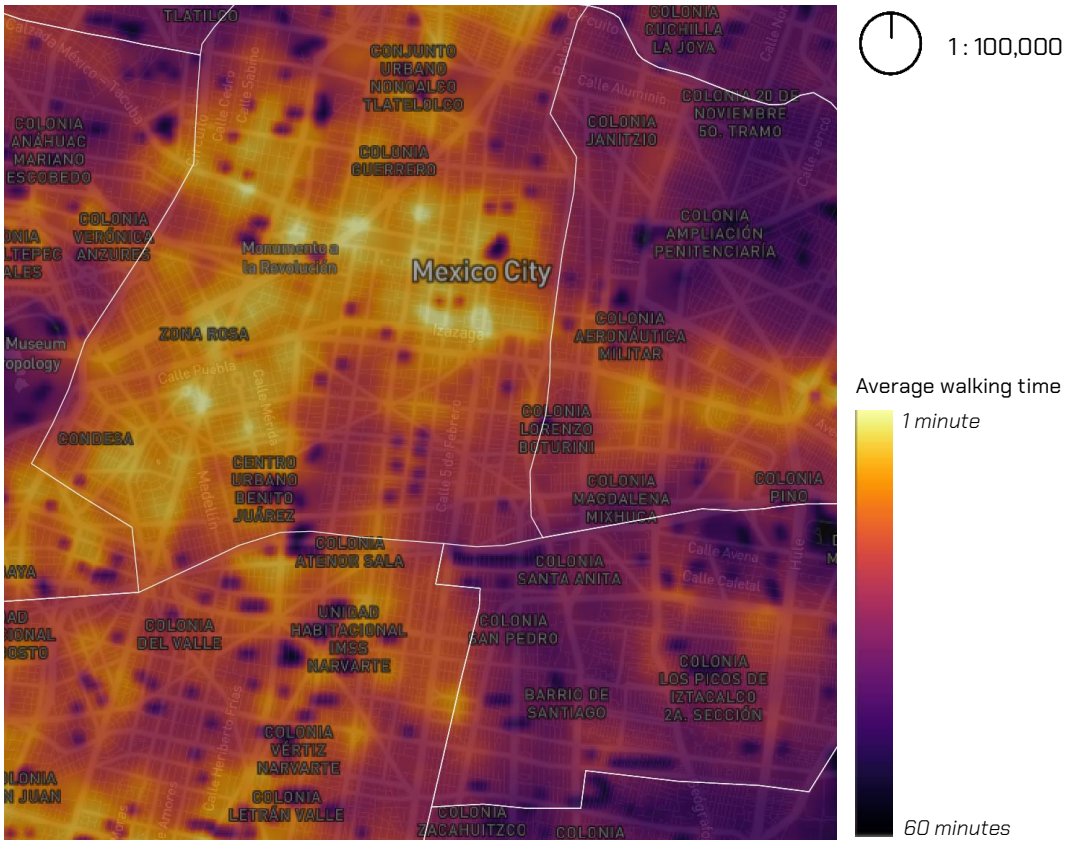
City layer

The City layer is where all mobilities come together, be they sedentary or nomadic: “the City layer of The Stack does not enforce dichotomies between urbanisms of enclosure and urbanisms of mobility as much as it combines them” (Bratton, 2016, p.148). The City layer holds the low mobility nodes, such as co-working places, urban amenities, and community hubs, that anchor highly mobile lines, in this case the wandering digital nomad. Destinations are chosen based on the availability of a diverse set of amenities near an appropriate work location and within walking distance of each other. Yet the temporariness of the digital nomads’ stay makes their choices extractive in nature, meaning that Interfaces in the form of policies and taxes must be in place to ensure a balanced use of the available Addresses in the frequented Cities.

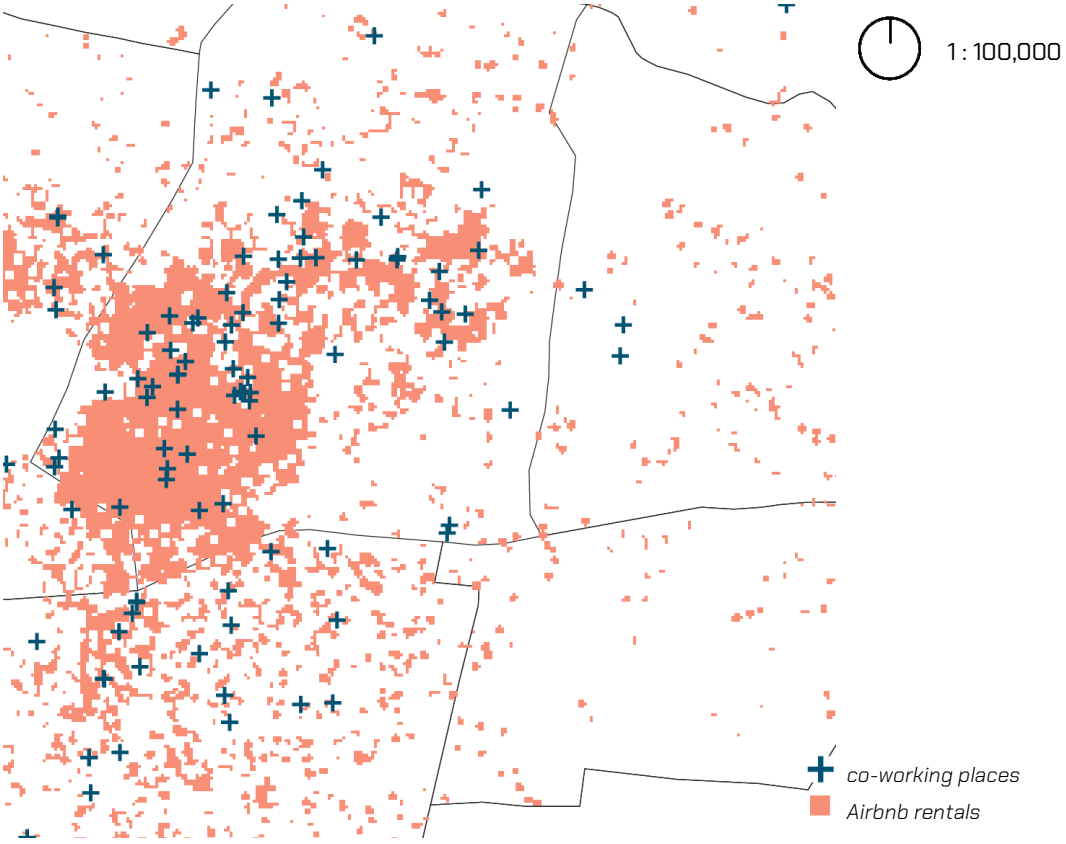
Maps 09 and 10 show that for Mexico City the concentration of amenities in the city coincides with a clustered pattern of Airbnb rentals and co-working places alluding to displaced locals in favour of temporary visitors in these neighbourhoods. The government of Mexico is actively trying to attract digital nomads (refer to image 18) and does not have policies in place to limit the number of Airbnb rentals nor to minimize the number of digital nomads (or traditional tourists) that can visit the city. Mexico City is quite popular among digital nomads ranking at #3 on Nomad List on April 3, 2023, up from #7 on January 3, 2023 (ranking is updated daily on nomadlist.com).

Maps 11 and 12 show a different picture for Amsterdam with a more dispersed pattern. Amsterdam has changed its policies in recent years that make it more difficult to rent (multiple) places year-round on Airbnb and is actively trying to manage the number of tourists visiting the city. Map 13 shows that Curaçao currently resembles Mexico City with regards to the concentration pattern of amenities. The clustering of Airbnb rentals (map 14) in three locations is the product of traditional tourism, where people visit the island for its beaches and aquatic activities and/or to visit the historic city centre with its UNESCO heritage architecture. As Curaçao is still in the early stages of attracting digital nomads, learning from other countries is important to minimize potential negative externalities.

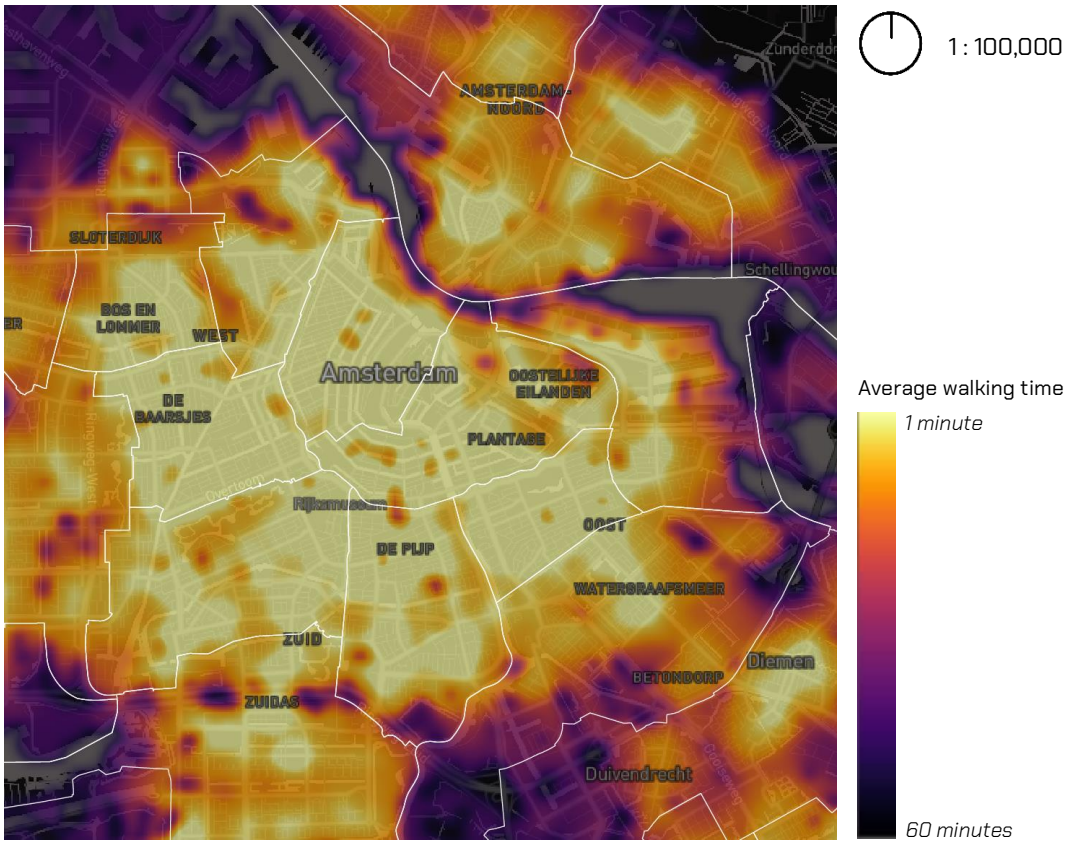
The frequent change in Addresses also centralizes capital. Digital nomads need to rent a place to live as well as a desk at a co-working location in the countries they visit. These accommodations still need to be maintained, and thus owned, by someone. In our current globalised capitalist economic system, where real estate is seen as an asset from which profit can be gained, oftentimes only a few people have the capital to invest in rental units and to set up co-working locations. In Mexico City, for example, the number of hosts with tens of apartments listed on Airbnb dominates the ranking of listings per host (Inside Airbnb, n.d.-b). In comparison, the vast majority of hosts in Amsterdam only have one apartment listed (Inside Airbnb, n.d.-a). Sharing economy and rental economy driven primarily by private parties creates power imbalances and a deepening of socio-economic inequalities.



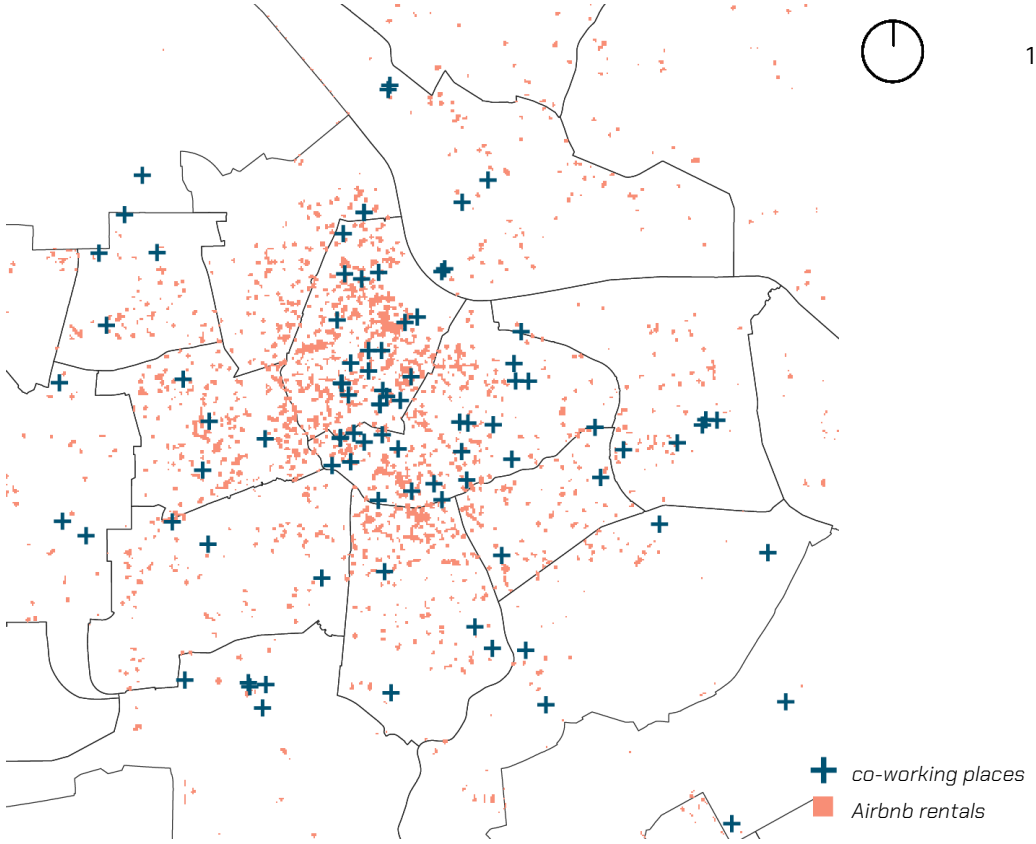
map (09). Access map showing walking accessibility to a variety of services for **Mexico City**. Map by CityAccessMap



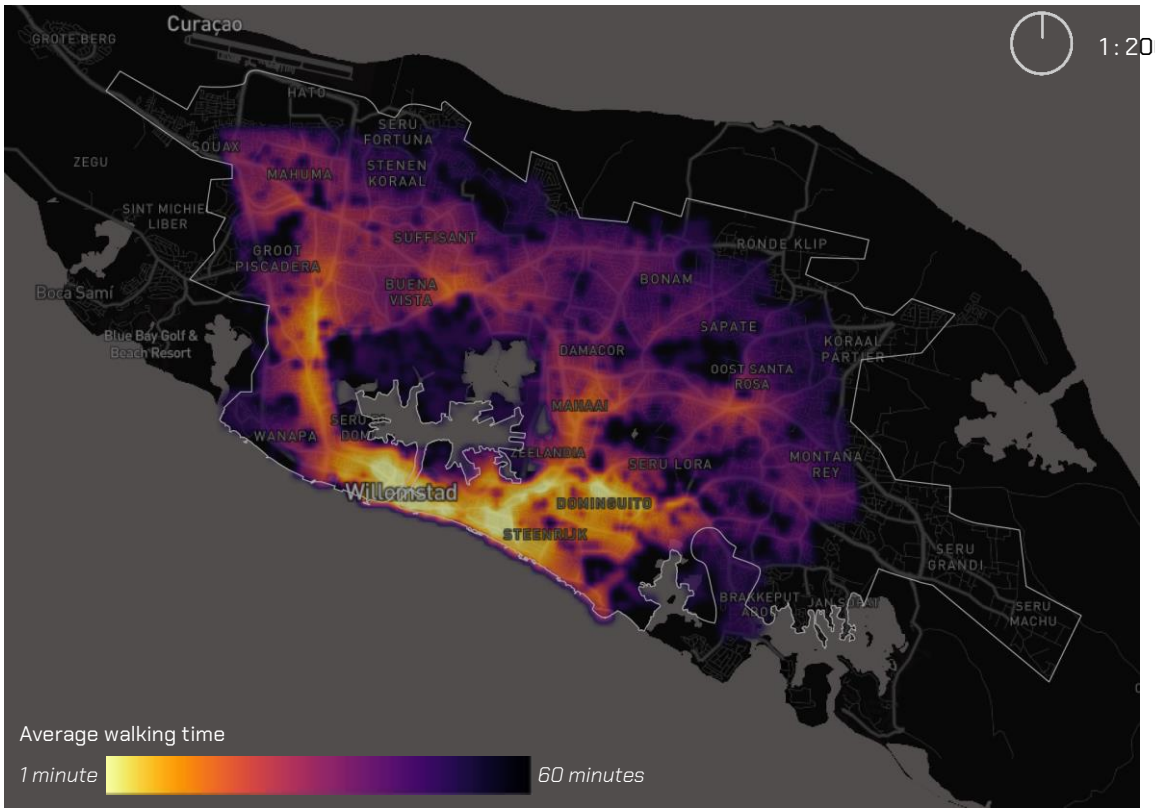
map (10). Clear **clustered pattern** of Airbnb rentals and co-working places matching access map for Mexico City. Data from Inside Airbnb & Google maps, respectively



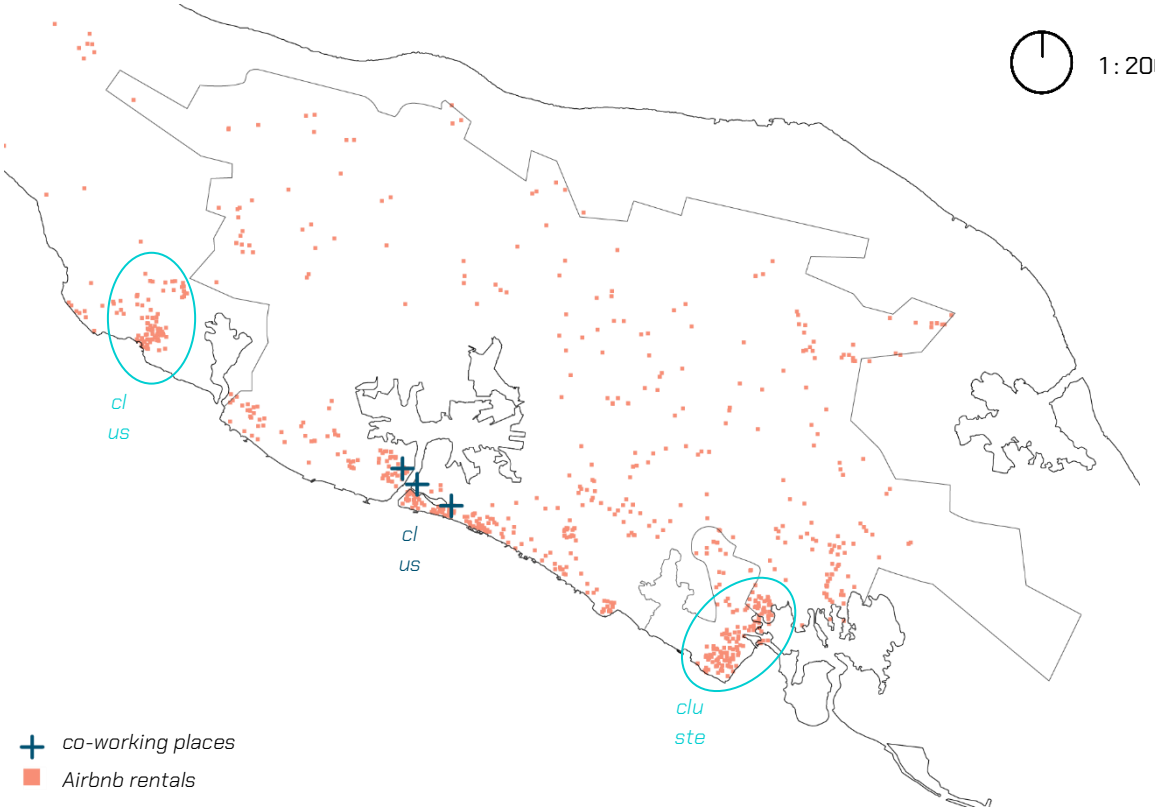
map (11). Access map showing walking accessibility to a variety of services for **Amsterdam**. Map by CityAccessMap



map (12). Relatively **dispersed pattern** of Airbnb rentals and co-working places matching access map for Amsterdam. Data from Inside Airbnb & Google maps, resp.



map (13). Access map showing walking accessibility to a variety of services for **Willemstad**, the only city of Curaçao. Map by CityAccessMap



map (14). **Clustered pattern** of Airbnb rentals and co-working places in the inner city of Willemstad matching access map for Curaçao. Data scraped from airbnb.com & Google maps, respectively

During the COVID-19 pandemic, an entrepreneurial digital nomad pitched the idea of a digital nomad village (DN village) to government officials of Madeira, an archipelago and autonomous region of Portugal. The co-working and living places would (initially) offer space to a maximum number of digital nomads, which would facilitate deeper community bonding, while local businesses are involved to set-up housing and other services, which would boost the local economy (Ward, 2021). 'Madeira as your new home…' reads the home page of https://digitalnomads.startupmadeira.eu/. With tourism largely halted due to travel bans, the idea sounded appealing to the Madeiran government and to the local businesses, and by February 2021 the Madeira Nomad Village became a reality.

The DN village, located in Ponta do Sol, has been dubbed the first digital nomad village in the world. In contrast to popular digital nomad hubs that grew over time from the bottom-up, like Bali in Indonesia and Chiang Mai in Thailand, Madeira would boast a full-fledged planned community hub with government support that includes ready-made digital and material infrastructures for digital nomads. Where the hubs in Bali and Chiang Mai resulted in nomad/expat bubbles that have altered the socio-economic landscape to fit the wealthy American and European aesthetic, Madeira would be a hub integrated into the local community, where digital nomads would live alongside locals and interact with them in community places and restaurants, and through organised gatherings by a dedicated community manager.

While the idea seemed promising, the reality may be less so.

Branding the community hub as a 'DN village' still creates a borderless enclave mainly attractive for digital nomads. While reports mention opportunities for local volunteering (Partington & Smith, 2022), the DN village works essentially as a digital nomad haven, made for digital nomads and mostly run by digital nomads.

The involvement of local businesses is geared towards adapting local products and services to serve the needs of the digital nomads (By Digital Nomads, 2023). This puts the social and spatial needs of the local community at large on the back burner (if considered at all) and only focuses on the economic benefits for local business owners. The end result is that after a year in business, Madeira is also suffering an increase in housing prices and a decrease of available long-term rental units for locals (Ferreira, 2022).

Integration between digital nomads and locals does not seem to be a success. Locals do not feel welcome to join the community's gatherings due to how its branded or are not interested in the types of events organised by the DN village (Ferreira, 2022). Digital nomads are also not encouraged to learn the local language. Only a few take the initiative to find ways to connect with locals.

On the website of the DN village, every page is focused on what the digital nomads will receive or gain from joining the village community. Nowhere is spoken of what is expected of them as guests in a settled community. The virtual separation between the nomad and local communities means that a planned and branded digital nomad hub also feeds social and spatial extractivism, with very few that truly participate in ensuring cultural and socio-economic sustainability in the host communities.

image (30). The Madeira Nomad Village website. Screenshot of homepage

Discussion on the spatial practices of digital nomadism

The goal of the problem analysis was to investigate the spaces produced by digital nomadism to provide an answer for the research question:

> *What are the spatial consequences of the social, economic, and digital practices of digital nomadism & how do these spatial practices support or hinder co-existence with local communities?*

I will hereafter highlight the main tensions as well as potential mutual benefits between nomadic and settled communities.

The way how an Interface is set up is a reflection of the social system that has designed it (Bratton, 2016, p. 56), with "design as in to "designate", and to govern through material intervention" (Bratton, 2016, p. 44). A social system that equates a person's value to how much money they have will create Interfaces that would discriminate based on income. Consequently, many government officials strive to attract digital nomads for the perceived boost to the local economy that their purchasing power may bring by offering special visa programs and elaborate tax breaks, while low-income locals must pay high income taxes. These political decisions have their roots in the idea of trickle-down economics. Trickle-down economics is a concept that purports that tax breaks for the wealthy and well-off will benefit everyone else. However, both research (Chancel et al., 2021, p. 170) and the real-life effects of digital nomadism in the socio-economic context show that tax exemptions for the wealthy and well-off primarily leads to centralisation of capital, higher cost of living in these places, and the lower income class working in the service economy and failing to achieve a basic standard of living. That is not to say that the short-term capital influx is a not a positive thing for the local community; it is. However, the tax system should remain fair for all.

Digital nomads rarely consider how they can be good guests for their host communities. When left to their own devices, nomads tend to show very inclusive behaviour towards those with the same lifestyle while at the same time show exclusionary behaviour towards the people in the country they are visiting. The majority do not bother to learn the local language as their work is international and their community global, and thus English-speaking (Häzaq, 2022). The spaces they create become exclusionary nomad enclaves withing the host country.

From a leisure landscape perspective, digital nomads are another type of tourist for host communities, and they behave as such as well. They expect host communities to adapt their products and services to them (By Digital Nomads, 2023; Razavi, 2023) as any typical tourist would, but their longer stay result in homogenisation of places and services, and further commodification of local culture. This practice is in essence an appropriation of local places at the expense of the local community resulting in social and spatial extractivism. Furthermore, their active use of geo-arbitrage produces and exacerbates existing socio-economic inequalities and displaces the local population through (transnational) gentrification, while changing and infringing on local culture and places of social meaning (Haeck & Volpicello, 2023; Elton, 2022). The socio-economic gap between digital nomads and local communities causes such rapid changes that it leads to a compressed materialisation of new spaces in existing places. The result is destruction of local social life rather than adaption.

That said, not everything about digital nomads is doom and gloom. There is much that can be learned from how they organize themselves and make use of their community to support their endeavours. Collaboration and knowledge sharing is standard practice for the digital nomad. They learn from and with each other. They have created a sense of community that manages to cross both physical and digital barriers and acts as a form of social safety net for when the going gets tough. They are deep down curious beings, willing to learn new skills outside of traditional means, and in the process have managed to change the political landscape to benefit their lifestyle. Whether you agree with their practices or not, such feats are admirable.

Local communities can benefit from these global travellers if they can meet each other in the knowledge sphere. The digital nomad must be willing to adapt somewhat to local customs and lifestyle. After all, the purpose of travel is to gain new experiences and try out new things. Locals must be willing to interact and actively exchange ideas and experiences. Governments for their part must first and foremost advocate and strive for economic as well as cultural and socio-spatial sustainability for their citizens, and in doing so attract digital nomads based on shared values and not only based on their income. If governments fail to do so, local places may end up as (borderless) segregated communities instead of assimilating global influences and new knowledge for the benefit of local progress, as is attested by the failed integration of nomad and local communities in Madeira despite lofty aspirations to the contrary (Ferreira, 2022).

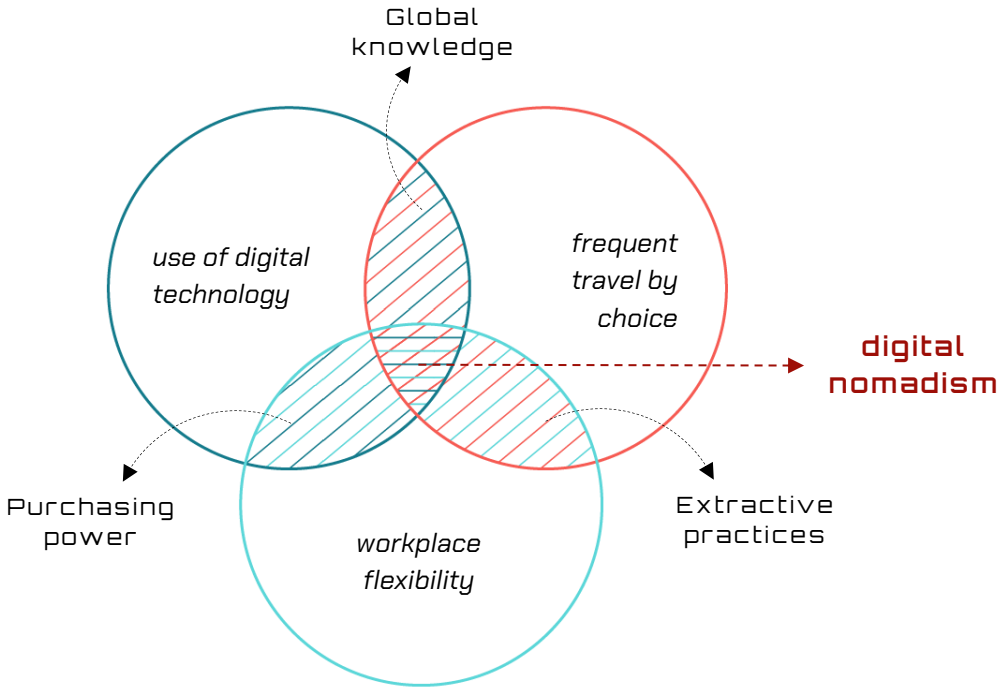


diagram (05) The key externalities of digital nomadism for host communities

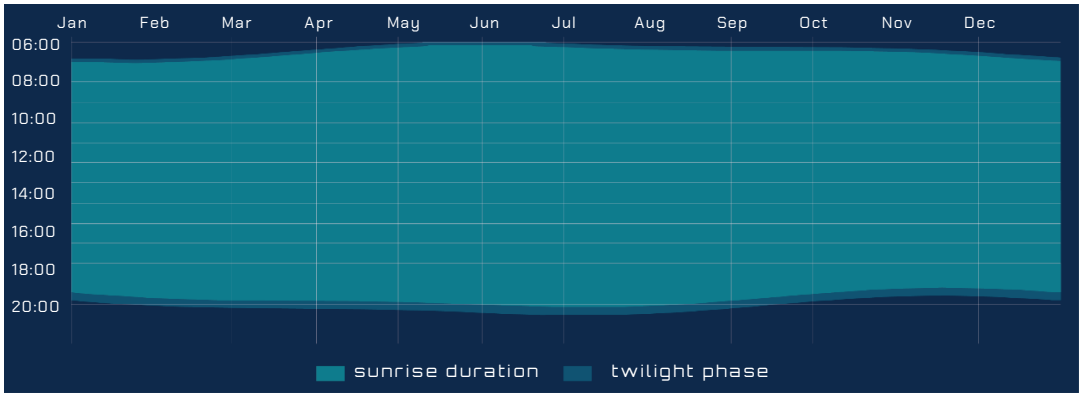
Location analysis

Now that a clearer picture is emerging of what systems and infrastructures digital nomads use to enable their nomadic life, the local context of Curaçao can be analysed and visualised using this picture as a guide. This chapter contains documentation of the existing social and material infrastructures on the island as well as a discussion on their affordances to cope with the spatial practices of digital nomads. By complementing desk research with field observations and informal talks with locals and Curaçao-born 'globals' (those currently living abroad), I looked at the context from an outsider's perspective and in the process gained a new understanding of the qualities of the local social and material infrastructures for supporting a multiplicity of mobilities. The following chapter contains the results of the location analysis and the concluding remarks that summarises where the potentials lie for leveraging global knowledge for local opportunities.

Earth layer

Curaçao has a semi-arid to arid climate with a distinguishable dry and rainy season. There is very limited freshwater, therefore seawater is desalinated to provide the island with drinking water. Desalination is an energy intensive and thus costly undertaking, which contributes to the high cost of drinking water. This combined with limited rainfall makes food production on the island challenging. Hence, much of the food is imported, making especially fruits and vegetables more expensive than, for example, in Mexico.

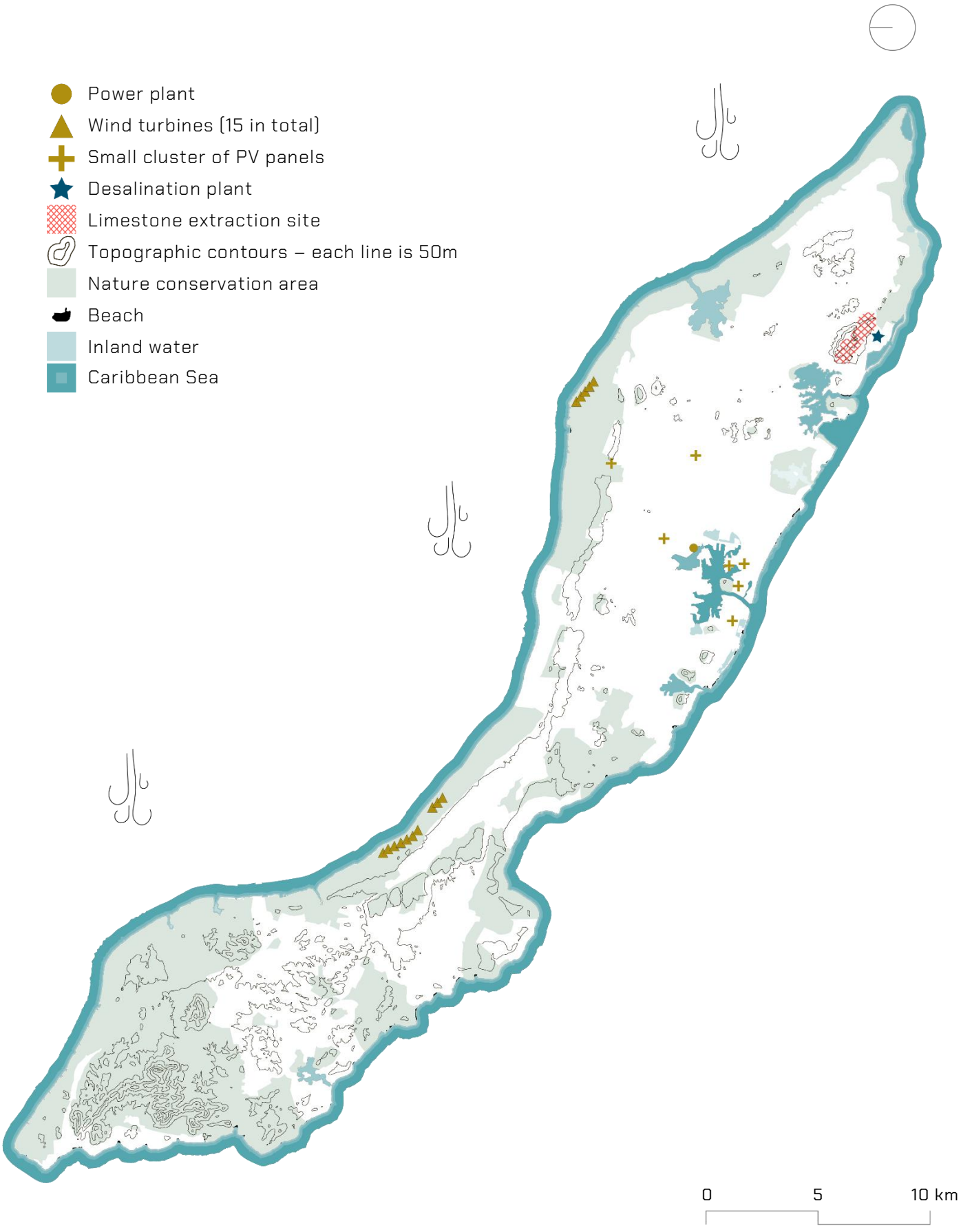
A robust trade wind blows all year round from the east and hits the northern coastline of the island first. The nearly 40 beaches, except for one, are therefore all located on the calmer southern coastline (map 15). The trade wind makes the hot temperatures of on average 30 degrees Celsius during the day and 26 degrees Celsius during the night more bearable. The island's location between 12 and 13 degrees north of the equator means that day-light hours are very consistent throughout the year. Sunrise occurs between 6:15 AM and 7:00 AM, while sunset time varies between 6:10 PM and 7:05 PM.



graph (02). Sunrise and sunset times in Curaçao. Data from timeanddate.com

The above-mentioned climate traits are essential to understand the general experience of time on the island. Time practices are directly influenced by the sun's natural cycle. With temperatures peaking between 12:00 PM and 2:00 PM (combined with the limited rainfall), most outdoor leisure activities happen during early to mid-morning hours or in the evening (after 5:00 PM). Schools also start early, between 7:00 AM and 7:30 AM, while work hours generally start around 8:00 AM and end around 5:00 PM. Consequently, the representations of time in our modern society, with '9 to 5' business hours for office and indoor work, generally match the preferred local time practices of indoor activities during the day.

Lived time is also influenced by the natural elements: the hot temperatures necessitate a slower pace of life, the steady cycle of the sun provides clear guidance for each moment of the day, and the ebb and flow of the surrounding ocean offers a tranquil background to the stresses of life. Islanders are therefore very relaxed in their time practices, not adhering much to clock time outside of work. Lived time on Caribbean islands has consequently gained its own popular moniker: island time.



map (15). Elements of the Earth layer. Data & locations from Aqualectra N.V. and Google Maps satellite view

Cloud layer

The strong wind and daily sun hours are used to generate almost 30% of the electricity production (Aqualectra, 2021). Still, electricity costs on the island are quite high. Data from Cable.co.uk show that these costs in island nations tend to be the highest, and Curaçao had the highest cost per kWh in the Caribbean during 2021. Furthermore, power outages are a regular occurrence due to insufficient capacity, oftentimes lasting hours.

There are two mobile internet providers on the island and neither offers unlimited data plans. While the cheapest sim-only subscription in the Netherlands can be obtained for EUR 20 in June 2023, a 30-day prepaid plan with 25 GB (the maximum data available as of June 2023) has a cost of ANG 140 (EUR 72). Furthermore, monthly costs for internet at home in Curaçao, with a maximum available download speed of 500 Mbps, are around ANG 229 (EUR 120), while providers in the Netherlands offer a download speed of 1000 Mbps for around EUR 70.

With an unemployment rate of 13.1% in 2022 (CBS, 2023), many living below the poverty line, and the high costs for internet access, cloud services, and utilities, it is unsurprising that Curaçao's internet penetration rate at the beginning of 2022 was only 68.1% (Kemp, 2022b). Opportunities in the digital arena remain out of reach for many in this way. Platform economy has also not gained much traction on the island; at the start of 2020 only 23% of the population has reported to have shopped online (CBS, n.d.-b) as opposed to 79% of Dutch citizens in 2019 (CBS, 2021).

image (31). The public library offers use of a computer for an hourly rate of ANG 2.50 for members and ANG 5.00 for non-members in 2023

map (16). Elements of the Cloud layer. Data from https://www.ams-ix.net/car/colocations and TeleGeography (www.submarinecablemap.com/)

image (32). Wind turbines.
Photo from eventscuracao.com/
the-wind-turbines-of-curacao/

image (33). Tier IV data centre in Curaçao.
Photo from ams-ix.net

image (34). PV solar panels on commercial properties. Photo from knipselkrant-curacao.com

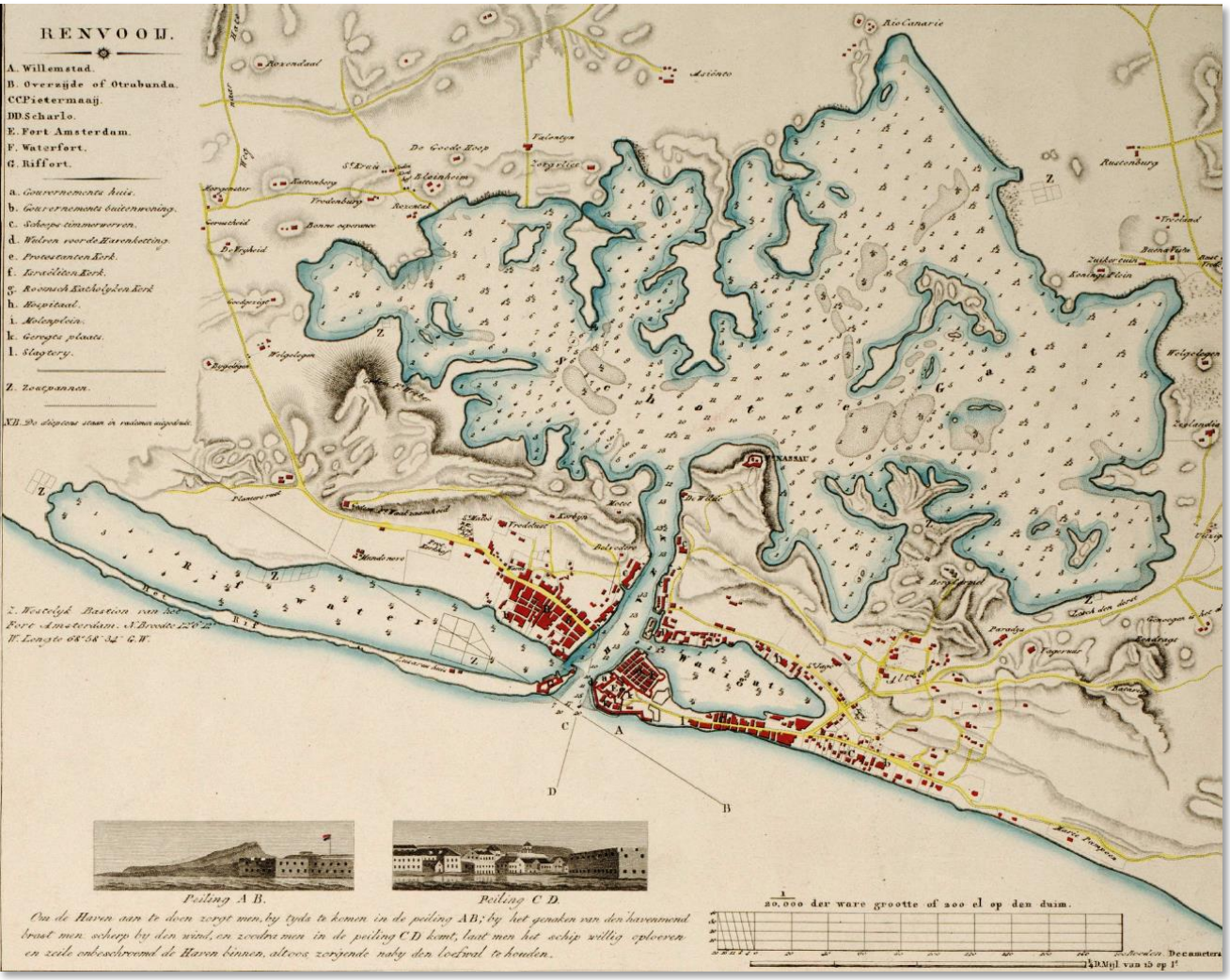
image (35). Tafelberg in Curaçao can be used until around 2045 for the extraction of limestone (gravel, blocks, and sand), when the supply is estimated to run out. Photo by Bea Moedt

image (36). Mining for limestone at Tafelberg. Photo by Bea Moedt (found online)

City layer

Urbanisation

Urban development started in the 1600s by the Dutch on the eastern side of the mouth of the Sint Anna Bay (Canon van Curaçao, n.d.-a), the deep channel that leads to the largest natural harbour of the island (map 17). This area is known as the neighbourhood Punda. Expansion followed in the 1700s, first on the other side of the channel with the neighbourhood Otrobanda (a literal translation of 'other side' in Papiamentu) and then north of Punda with the neighbourhood Scharloo. These three neighbourhoods together form the current city centre area and hold a designation as UNESCO heritage site with 743 listed monuments. The historic city centre has the most amenities within walking distance, including the 4 co-working places of the island.



map (17). Map of the urban development in 1836 of the areas that are now part of the city centre. Drawing by R.F./van Raders, Daniël Veelwaard jr. (III). Image from https://commons.wikimedia.org/wiki/File:Cura%C3%A7ao1836.png

Otrobanda

- Established in 1707
- Area = 1.2 km^2
- 1,369 inhabitants in 2011 (date of last census)

Punda

- Established in 1634
- Area = 0.4 km^2
- 99 inhabitants in 2011 (date of last census)

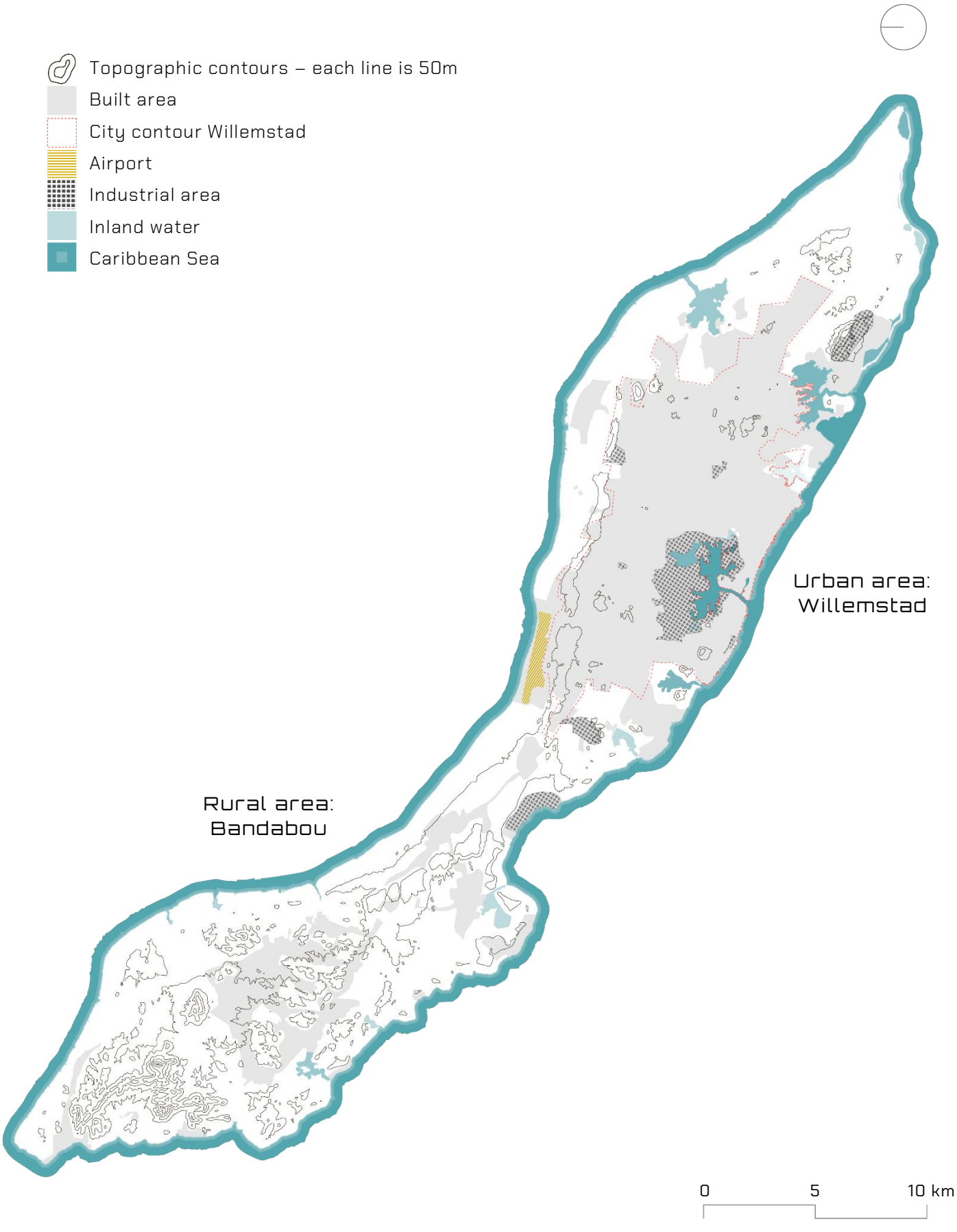
Scharloo

- Established in 1753; growth from 1850 onwards
- Area = 0.5 km^2
- 523 inhabitants in 2011 (date of last census)

map (18). Neighbourhoods (geozones) in the city centre. There is no recent demographic data available on neighbourhood level, but number of inhabitants have not changed much based on information gleaned from field observations. Census data from cbs.cw

Urbanisation mainly took place on the eastern side of the island, which was less hilly than the western side. This led to the current division with an urban area in the east, where around 90% of the population lives, and the rural area Bandabou in the west. Urban development was traditionally very segmented. Neighbourhoods were built for each community, with division based on religion (Protestants vs. Catholics vs. Jews), economic status (merchants vs. working-class people vs. those with political power), nationalities (Portuguese vs. African vs. Dutch), and/or employer (Shell vs. KLM). Nevertheless, the built environment outside of the denser city centre is almost uniformly characterised by standalone houses, oftentimes with a walled garden (images 38 – 40).

image (37). *Top*: aerial view of Westpunt, a neighbourhood in Bandabou. *Bottom*: aerial view of the city centre neighbourhoods Otrobanda, Scharloo, and Punda in 1955. Photos from www.nationaalarchief.cw



map (19). The island Curaçao

Traditionally, small, mid-size, and large residences outside of the city centre area are built as standalone houses. Photos (38 – 41) from www.nationaalarchief.cw

image (38). Self-built 'kas di kunuku' (house of plantation workers/ enslaved people) located in Bandabou

image (39). Spacious residences in the neighbourhood Julianadorp built by Shell for the management and senior staff

image (40). Jewish mansion in Scharloo (currently housing the National Archive Curaçao)

image (41). *Top-left*: housing project in Steenrijk; *Top-right*: residences in Fleur de Marie for working-class Shell employees, mostly from Bonaire; *Mid-left*: residences in Suffisant for working-class Shell employees from Portugal and Venezuela; *Mid-right*: houses in Damacor built by KLM for its employees; *Bottom*: urban development in Welgelegen, Charo, Mundu Nobo. Photos from www.nationaalarchief.cw

image (42). Segmentation within one neighbourhood, Scharloo, between the quarters Scharloo Abou (Jewish mansions) and Fleur de Marie (houses of working-class Shell employees).

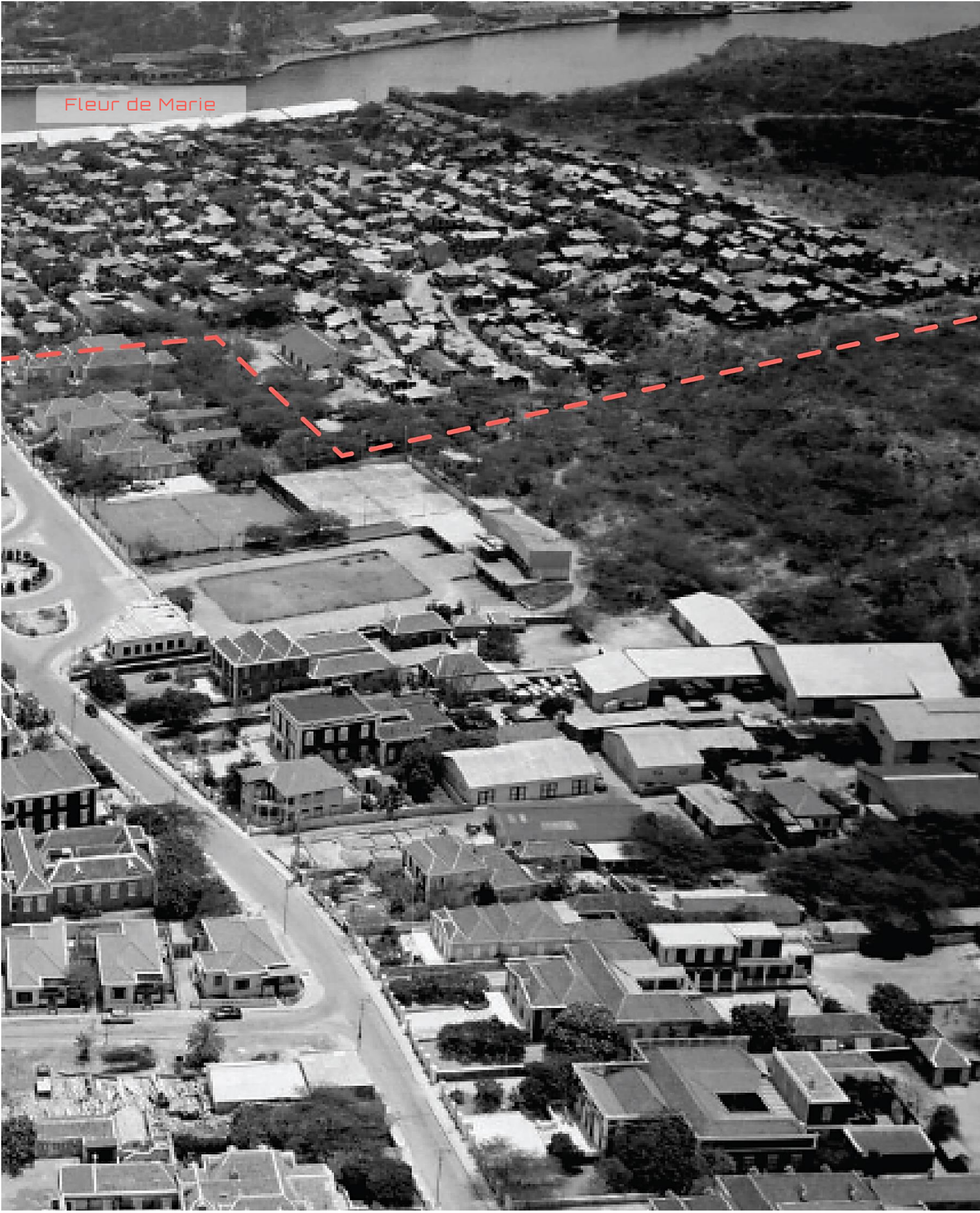


Photo from www.nationaalarchief.cw

Mobility

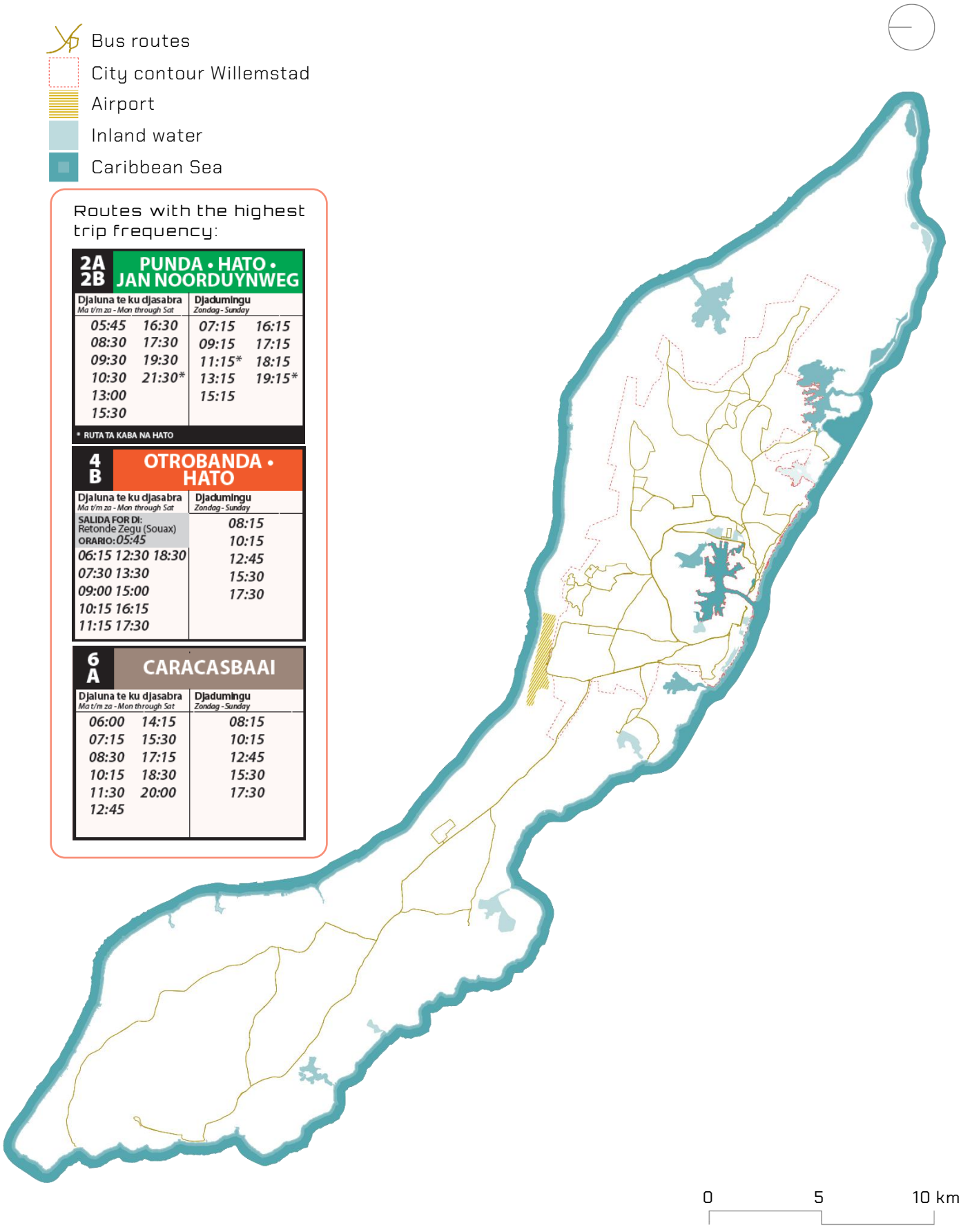
The island culture is very car-centric. The hot temperatures and the relatively low price of gasoline led to a preference for car mobility over other mobility modes. Biking is not an advisable option anyway due to the hot temperatures, the lack of bike lanes, and the generally hilly topography. Furthermore, public transportation on the island has a very low trip frequency, which makes getting around without a car quite cumbersome.

While there are sidewalks everywhere, car drivers have a habit of parking on these sidewalks on a regular basis, oftentimes impeding easy walkability.

image (43). Cars parked on sidewalks across Scharloo

Locals therefore employ spatial measures to deal with this behaviour.

image (44). Measures against parking on sidewalks



map (20). Public transportation's (limited) coverage. Trip frequency from autobusbedrijf.com

User layer

Currently there are almost 150 thousand people living on the island. The Curaçaoan culture, just like the language Papiamentu and the local cuisine, is truly a mix of the different communities that have made their home on the island during the last four centuries. This includes among others African, Dutch, Portuguese, Venezuelan, Indian, Chinese, Colombians, and other Caribbean Island nations. As previously mentioned, much of the local rhythm can be ascribed to the climate traits: outdoor life happens mostly in the evening and activities, organised events, and large family gatherings are oftentimes held outdoors.

▲ image (45). Riffort Village courtyard in the sunny afternoon (*top*), the start of the evening (*middle*), and during happy hour with outdoor dancing (*bottom*). Sources: *top* photo by James Camel / franks-travelbox; *middle* from edsaplan.com; *bottom* from nl-nl.facebook.com/curacaotb/

◀ image (46). Even on overcast days, very few people make use of the public playground during the day (*top*), as temperature remain high compared to the evening (*bottom*)

Street food on Curaçao is ubiquitous along the main roads all around the island. Examples are a) the 'trùk di batido' selling fruitshakes (identical to the 'licuados' from Mexico), b) the 'trùk di pan' or 'trùk'i pan' (literally, bread truck) selling grilled meat with bread or fries after 9:00 PM (some have permits that allow placing tables and chairs while the truck remains mobile), and c) the 'snèk', a mix between a bodega (mini convenience store) and a street bar.

image (47). Trùk di batido. Photos by Gilly-Ann & Joshua

image (48). Trùk'i pan


SUPER MI LUCHA


Local Snek
Coffeebar & Lunchroom
ON TOUR SINCE 1873
Heineken

image (49). Various snèks, which are frequented by a diverse group of people. *Top* photo by @harms2624 / Happy Turtle on Pinterest. *Bottom* photo by Fred Hoogervorst (found online).

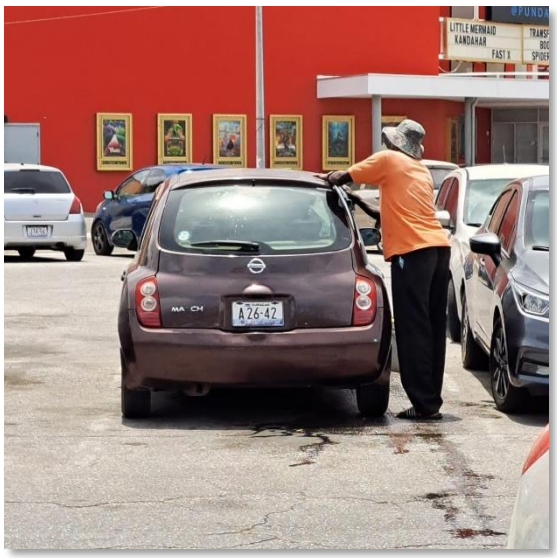
◀ *Left page: Top* photo by Jasmin & Karl. *Middle* photo by Moraima Severina. *Bottom* photo by Jasmin & Karl.

A Caribbean, and thus also Curaçaoan, staple of both friendly competition and camaraderie is people playing domino (and sometimes cards) at community centres, outdoors in the evening at minimarkets, at bus stations and taxi stands, or under a neighbourhood tree, oftentimes with spectators looking on. Talks and discussions on a wide range of topics happen between each round of play.

image (50). *Top*: neighbours playing under a neighbourhood tree in Scharloo. *Bottom-left*: friends playing on a neighbourhood square. *Bottom-right*: taxi drivers playing domino during their break. *Top* photo by @michaelkoorenphotography on Instagram. *Bottom-left* photo by Sinaya R. Wolfert (found online). *Bottom-right* photo by Alfred Strijker from columbusmagazine.nl

image (51). People playing cards outside at a minimarket. Photo by Gilly-Ann & Qurchen

These spatial practices characterised by a public and relatively relaxed street life is possible with minimum conflict because of the not-dense built environments with open public spaces that can be appropriated by enterprising people. The flip side of this is the lack of diversity in work opportunities that is partly a consequence of the low number of inhabitants and the limited natural resources that can be exported. Yet, here as well the entrepreneurial mindset of locals needing to supplement their income becomes apparent: many are selling their home-grown fruit, beverages, and sweets on the street to passersby or take small sales jobs from local companies. This is currently only possible because carrying cash money is still quite common on the island. However, tourists typically do not carry a lot of cash, meaning that these micro-entrepreneurs may not truly benefit from an increase in visitors. Digital solutions around peer-to-peer monetary transactions using QR codes would offer more opportunities for locals to expand their micro businesses and reach visitors as easily as they do locals. However, such developments are dependent on the accessibility and cost of internet data, which necessitates investments in the Cloud layer. The government thus must a play a role through laws and/or policies to ensure affordable access to all where market systems fail to provide business incentives to do so.



▲ image (52). *Top-left*: man selling home-grown mangoes in a shopping area. *Top-right*: woman selling non-alcoholic beverages (water and juices) to car drivers. *Bottom-left*: man selling newspapers at traffic lights. *Bottom-right*: woman selling sweets in Punda. Photos by Moraima Severina

◀ image (53). *Top-left & bottom-left*: women selling lottery tickets. *Top-right*: woman selling non-alcoholic beverages from the window of her house (i.e., a window shop). *Bottom-right*: man washing the car of a moviegoer.
Top row photos by Jasmin & Karl. *Bottom row* photos by Moraima Severina

To uncover the hidden world of lived spaces of locals and Curaçao-born globals, I asked a simple, albeit complex, question to a few friends and family: What does Curaçao mean to you? This answer yielded one unanimous answer: Curaçao is Home. It is the place where all of them feel at peace, experience a sense of belonging, and feel safe and secure to be themselves among their family and friends.

Yet the undercurrents of disunity, first instilled during the slavery period and later perpetuated through the spatial segmentation of the different communities that have immigrated to Curaçao (as discussed in the City layer), are still present in the lived spaces of locals. Many respondents lamented that Curaçaoans are often vocally critical of everything and everyone, especially when that something or someone is bringing about change. The limited progression in the island's economy evokes the general feeling that the fortune of one will always come at the expense of that of another. When one has little or must work really hard for what they have, this feeling of lack of abundance also inhibits helping others, which leads to the basic human feeling of jealousy at the apparent progress of others. As a result, the persistent high economic inequality on the island frequently leads to societal tensions.

Some respondents also highlighted that there is a lot of potential for the island and especially in its people. Lack of financial prospects, financial and digital illiteracy, a conservative mindset, lack of innovation, and a lack of investment in knowledge and skills are holding the people of Curaçao back from achieving their full potential. A clear indication is given that many people simply don't know how to improve their situations due to the limited educational options and limited options for knowledge exchange.

Where the digital nomads' community are generally clear on the values they share, despite their differences of opinion on how said values are to be lived (see discussions on r/digitalnomad), Curaçaoans lack this common ground despite all identifying as a 'Yu di Kòrsou' (Child of Curaçao). Then again, where their nomadic lifestyle provides digital nomads with the freedom to refrain from interacting with other nomads that do not match their vibe by just moving elsewhere, settled communities have chosen to live together on shared ground. Lacking shared values then becomes a chasm too big to cross. Building walls and garden walls in the public realm are now increasingly being used by local artists to address social issues and to spark change. And it seems to be effective.

image (54). *Top*: street art in Punda by local Aruban-Curaçaoan artist Garrick Marchena, titled 'Angry Boy'. Photo from nl.wikipedia.org/wiki/Garrick_Marchena ▶
The text reads: 'They come. They close. They take away. Without asking. And **we** let them.' This piece is a protest and a statement on the apathy of the local population when it comes to not protesting the sale of land along the coast to (foreign) investors and the consequent privatisation and commercialisation of these areas, thereby depriving locals of free access to (what used to be) public beaches.

image (55). *Bottom*: street art in Scharloo by local artist Robert Rodriguez a.k.a One Man, titled 'Dikon Chino? Dikon no mener?' ('Why Chino? Why not sir?). Photo by Gilly-Ann & Qurchen. This piece relates to "how some local people speak in a certain way to people of Chinese descent. Many don't even notice that it is degrading and disrespectful … His message sure went viral on the island … With this mural, (the artist) managed to spike up island-wide discussions about this topic" (text from: scharlooabou.com/art/) ▶


Panasonic
E/S


DIKON Chino ?
? ? ? DIKON NO
MENER!


EMANCIPATE YOURSELF FROM
MENTAL SLAVERY


HAVENSTRAAT
Bisti e brel positive
it takes a village to raise a child
MCB

image (56). Street art in Otrobanda by local artist Francis Sling, titled 'Sunú' (Naked).
This piece emphasizes the importance of revealing one's true self fearlessly and was accompanied by the project 'Kita sunú' (Get naked) sparking conversations on how to be the best version of yourself

◀ image (57). *Top*: iron mural in Otrobanda by local artist Giovanni Abath a.k.a. 7.1, titled 'Emancipate yourself from mental slavery'.
Photo from www.giovanniabath.com.
This piece is a reminder that each person can find their own emancipation

◀ image (58). *Bottom*: street art in Otrobanda by artists Irsaidy Recordino, Olinda Gonesh, Kayla Hartogh, Quirine Guato, and Channon Toulon from local collective Art Heals Foundation, titled 'Bisti e brel positivo' (loosely translated as 'Look on the bright side', literal meaning 'Wear the positive glasses'), alongside the famous saying 'It takes a village to raise a child'. Photo from www.michaelprophet.com.

image (59). Street art in Otrobanda by local artist Sander van Beusekom, titled 'Life is a beautiful struggle' (in Papiamentu: 'Bida ta un bunita lucha')

Curaçao, my home

by Joshua Palm

Curaçao, the little island with profound richness in the South-Caribbean, has a varied significance to many. To most, it's an idyllic leisure holiday destination: a place with nice weather, and beautiful beaches and scenery where a weary visitor can relax. For others it's mostly a centre for international business: an interconnected hub for trade, shipping and finance, a fantastic environment for lucrative ventures. For outsiders looking in a great little place to visit and profit.

To me it is so much more: Curaçao is my home, and a fundamental part of my very soul.

Curaçao is the location I was born in, the homestead I was raised in, and the community I grew up in. It is the environment that formed who I am, and that still drives my growth day-in, day-out. It is my past, my present, and my future.

The friendly and talented people, rich culture, delicious food, and beautiful nature make it the perfect place to make a happy living, form a family, and help improve the community. Although imperfect in some ways, that does not detract from its charm.

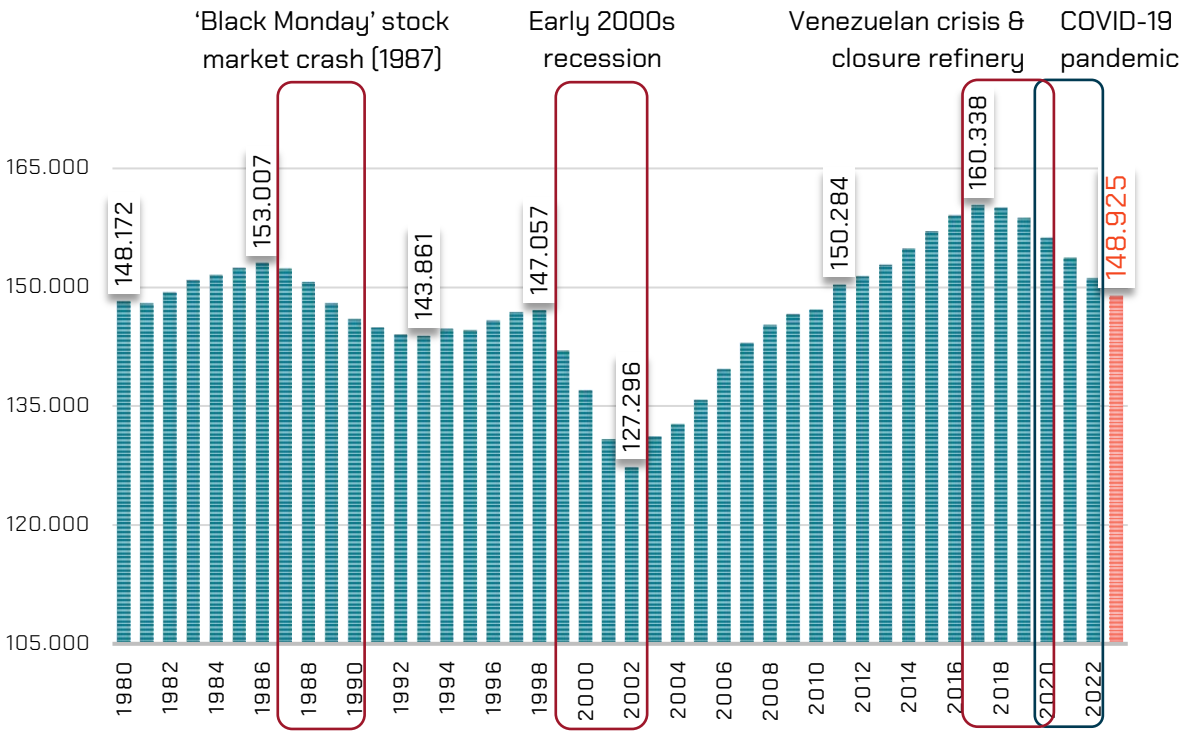
Curaçao is my workplace, where I can keep performing at my peak. An educational and vocational centre, to advance professionally and hone my craft.
This little island is also the grand playground where I can play sports, ride my motorbike, explore nature, hike the highest peaks, dive to the deepest depths, and sail the azure seas. All, weekly activities to blow away the stress and refocus my mind.
It is also my domicile, and retreat: a nurturing environment to rest and recharge.

Curaçao is part of me, and I am part of Curaçao.

There's no place I would rather be.

Note: one response to the question 'What does Curacao mean to you?' expressing feelings of belonging and pride, with undertones of hope. Printed with permission

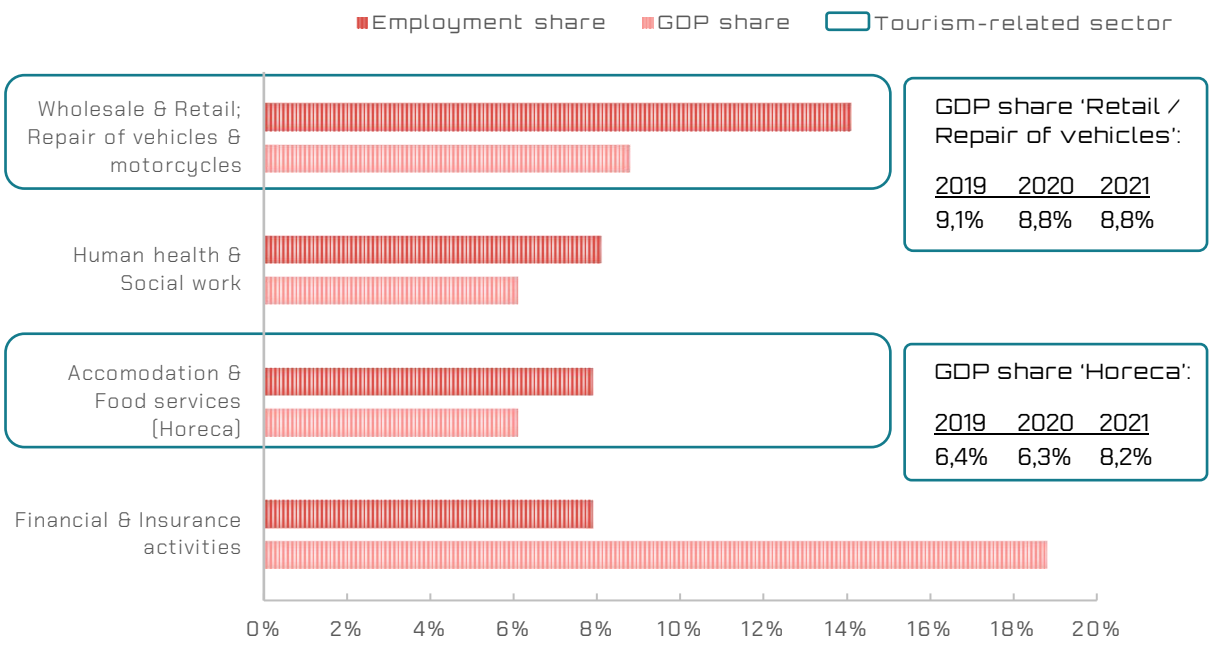
The limited governmental social safety nets on Curaçao have had the effect that the year-over-year population numbers fluctuate in line with local and global economic status (graph 03).



graph (03). Population Curaçao as of the 1st of January of each year for the last 44 years. Data from https://www.cbs.cw/population; Highlighted are the global crises that coincided with a decline in population

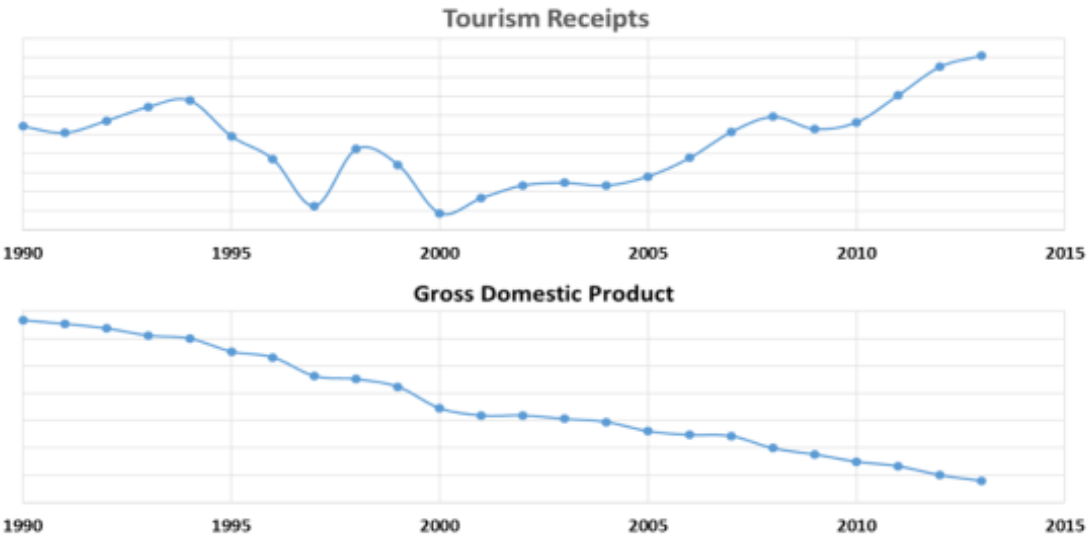
The tourism economy of Curaçao has steadily grown in the last decade and this industry has been the one to bounce back the most after the global economic downturn during the pandemic (CBS, 2022). Currently, a large part of the employed population has a job in a tourism-related sector. However, these sectors generally do not have the highest contribution in the island's economy (graph 04). This would be in part due to the low wages that are common in this industry. More importantly, a survey performed on behalf

of the Curaçao Tourist Board in 2015 showed that the locals' perception of the tourism industry was overwhelmingly negative regarding the even distribution of income opportunities from tourism development (Croes et al., 2015, p. 19). Locals felt that only a few parties on the island truly benefited from tourists' expenditures implying a system of capital centralisation on the island. Furthermore, people aged 21 to 37 at the time of the survey had the perception that there were few available or desirable job opportunities in the tourism industry (Croes et al., 2015, p. 30-31). This age group may thus benefit the most from opportunities to broaden their skill sets and gain new experiences by engaging in knowledge sharing and informal learning with digital nomads and Curaçaoan globals.



graph (04). Top 4 sectors **based on employment share** medio 2020 compared to the direct GDP share of these sectors in 2020. The GDP shares of the tourism-related sectors for 2019 and 2021 has been added for comparison purposes. Data from www.cbs.cw/labour & www.cbs.cw/economy-1

Additionally, while tourism is contributing to boosting the economic growth of Curaçao following the pandemic, it has been shown that the relationship between the growth of tourism and the island's economic growth is quite weak (graph 05). A conclusion one can draw from this is the following: while direct job creation increases in tandem with the growth of the tourism industry, the indirect job and income creation due to tourism may not outweigh the (in)direct job and income losses from a contraction in other sectors.



graph (05). Curaçao's tourism receipts vs. economic growth. Graph from Croes et al., 2015, p. 46

The perception that job opportunities in the tourism industry are not a good alternative to the lack of job opportunities in other sectors is also echoed in the fact that the 'brain drain' on the island is not decreasing. Brain drain refers to a substantial or prolonged emigration of local talent and/or skilled employees and it is caused by a perceived lack of job opportunities or the possibility of earning higher wages elsewhere (Young, 2023). According to de Witt Hamer (2015, p. 40), brain drain for Curaçao includes:

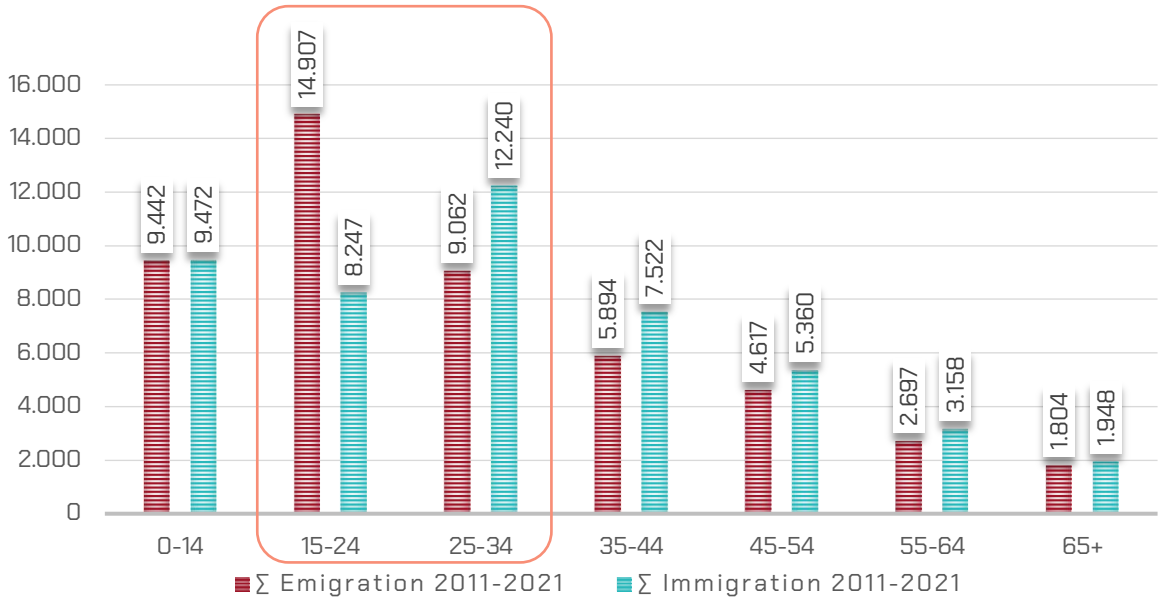
- The group of local young students, especially those graduating from HAVO and VWO, who emigrate on a yearly basis to follow an education abroad but who do not return after completion of their education.
- Local graduates who leave the island after completion of their local education.
- Skilled employees who emigrate during times of recession and local socio-economic instability.

Curaçao has been suffering from brain drain since the 1970s/1980s, which was an important factor in the decision to establish the University of the Netherlands Antilles in 1979 (Canon van Curaçao, n.d.-b), currently known as the University of Curaçao dr. Moises da Costa Gomez (UoC). Yet despite this, brain drain continuous to be a challenge for the island to this day (ANP, 2022). A complicating factor is that those who do want to return to the island after their studies cannot afford to do so financially. Most have to take the maximum loan amount when studying in the Netherlands because they do not have family there to stay with. Furthermore, exchange rates between EUR and ANG have as a result

that any financial contribution in ANG has a substantially lower purchasing value in the Netherlands. The result is high student debts which cannot be easily paid back with the starting salaries on Curaçao while still meeting the daily needs.

A noteworthy insight gained from comparing the narrative from governments surrounding digital nomads versus those surrounding brain drain is that while some governments seem to roll out the red carpet for digital nomads and other wealthy migrants by improving and adapting local services and offering a myriad of tax incentives, they mostly speak of the responsibility that local talent have to return to their country and contribute to the economy. No red carpet, no talk of incentives, no investments in improving the things that dissuade 'brain-drainers' from returning. This is clearly a case of perceived short-term economic gains being consistently prioritised above long-term economic sustainability.

Looking at the GDP contributions of each sector, there is clearly a lack of investment in improving the economic activities and thus job opportunities in other sectors alongside the tourism industry, such as in scientific and technical activities, education, agriculture, manufacturing, and the arts. Many of these sectors will benefit from people who are entrepreneurial, digitally savvy, and creative – many qualities that are part of the digital nomad ethos. Therefore, leveraging the global knowledge that these visitors have through knowledge exchange, and fostering a local community based on values of collaboration, entrepreneurial mindset, curiosity, and continuous learning may attract the type of visitors that will want to contribute to local knowledge creation, but more importantly create an environment that will be attractive for locals to maintain their home base on Curaçao.



graph (06). Emigration of young people is higher than their immigration. Data from cbs.cw

Address layer

Formal education on the island is primarily concentrated in Willemstad. Young students living in Bandabou wanting further education must thus travel to the city. However, as mentioned in the City layer, the trip frequency of the public transportation is very limited. Many living in the rural area also do not have the monetary means to pay for the daily commute to school due to the extreme lack of work in this area. Bandabou deserves its own research project, which is unfortunately outside of the scope of this thesis.

Curaçao has one public library which is located in the city centre in the neighbourhood Scharloo. The public library is the quintessential public function for knowledge gathering and a symbol for informal education. As such, Scharloo is chosen as the project location.

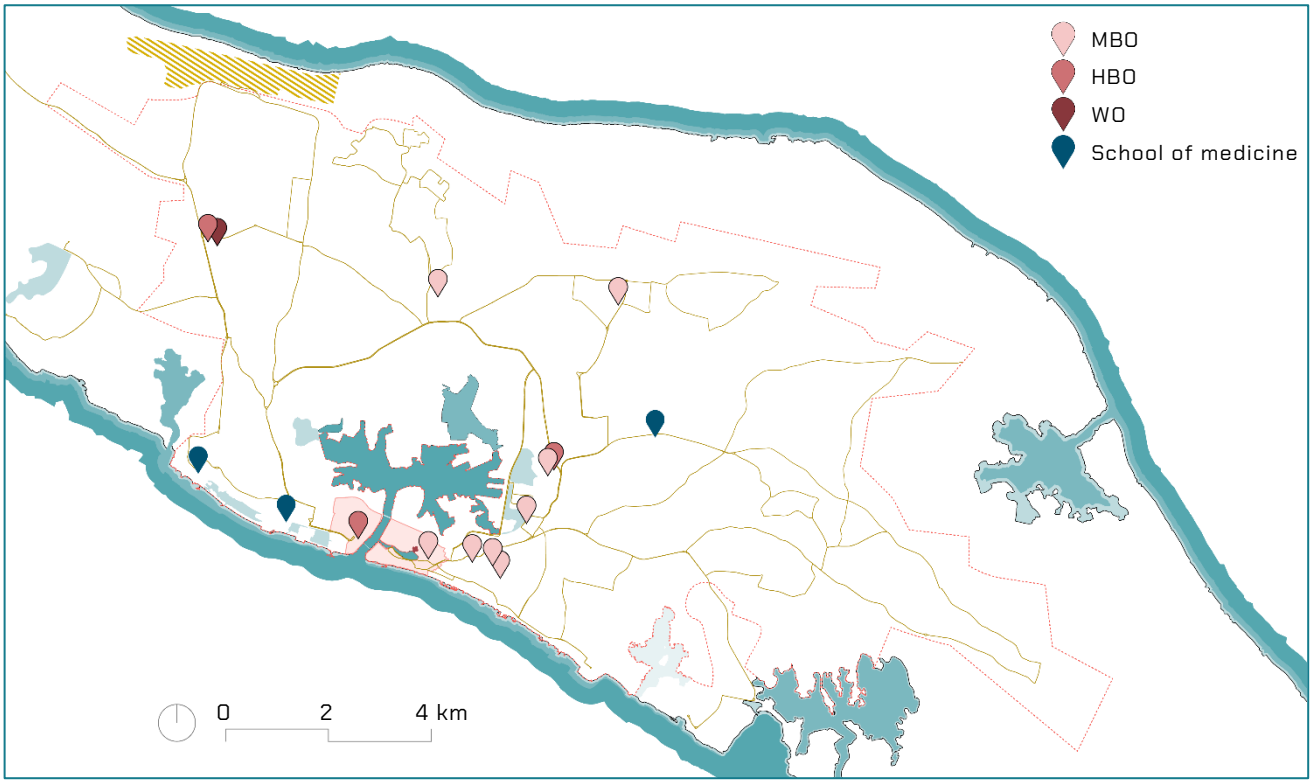
Scharloo (Skalo in Papiamentu) started as a residential neighbourhood, built in the 18th and 19th century by wealthy Jewish merchants (Pruneti Winkel, 1987). By the end of the 1950s, Scharloo consisted of three quarters, namely Scharloo Abou in the southern and flattest part adjacent to the water where the Jewish mansions were located, and Fleur de Marie and St. Jago which were two working-class quarters for Shell workers built against the hills in the north-western and the north-eastern parts of the neighbourhood. Later a fourth quarter, Swaen (also known as Zwaan), developed west of St. Jago. Swaen is currently the smallest and least developed quarter.

In the 1960s Scharloo was essentially divided in two by the construction of the access road to the Julianabrug (image 62). To accommodate the new access road, almost two-thirds of the workers' homes in Fleur de Marie were demolished. Spatially, this was not only a major infrastructural intervention, but also a harmful socio-spatial affair for Fleur de Marie. Concomitantly, many of the Jewish families started to move to other (newly built) neighbourhoods for two main reasons, namely a) the increasing cost of maintaining the elaborate mansions and b) the decline in image that Scharloo suffered in the eyes of the wealthy merchants with the arrival of the working-class inhabitants (Pruneti Winkel, 1987). Most of these mansions were left abandoned and eventually became ruins. These two events resulted in a sharp decline in the number of inhabitants.

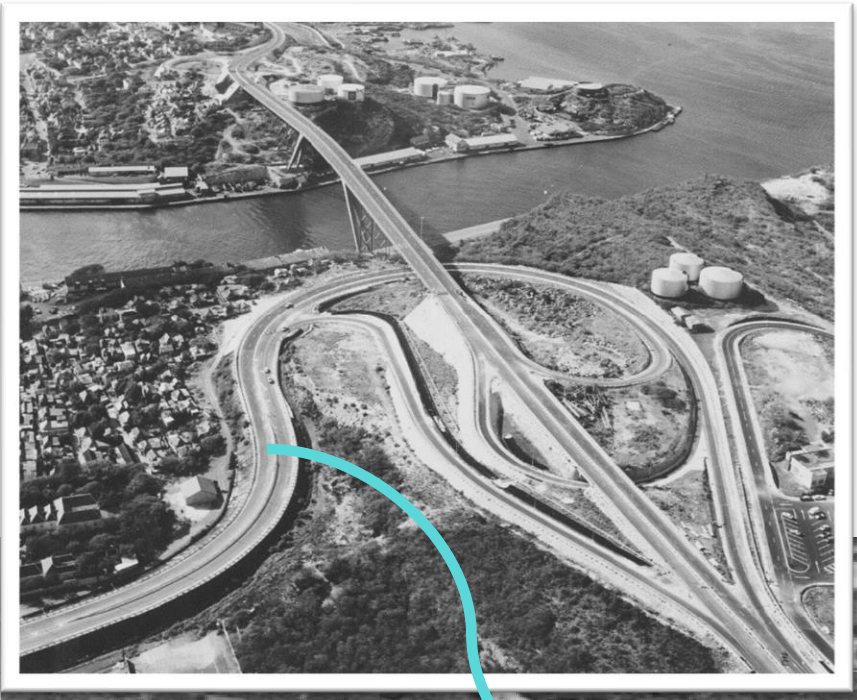
Today, all the remaining Jewish mansions located in Scharloo plus a few of the workers' homes are listed as UNESCO monuments. As such, these buildings function as material carriers of past social and architectural knowledge. Most of the renovated heritage buildings in Scharloo are used as offices. The result is a monofunctional area with very low mobility of people and of social relations that feels abandoned at night (map 29).

Time, meaning the awareness of change, thus plays an important role in Scharloo: the heritage buildings as living relics of the past keep the colonial history and its system of separation present, while the scar left by infrastructural interventions has not completely healed. The status as monumental buildings also means that to manifest the future, this past must be taken along. While there are efforts to renovate the buildings left in ruins, a great number are still standing empty and unused (map 22). But, if we don't manage to change the past in the present, meaning effect change in the lived spaces surrounding these monuments from separation to unity and from low to high mobility, the future is already present. In the dimension of the lived space, past and future time thus coalesce in the present, meaning time is neither linear nor circular, but rather exist only in the 'now' moment.

map (60). Secondary schools – mostly located near main roads, none in inner-city. Location data scraped from Google maps & validated with data from the Ministry of Education



map (61). Vocational schools & universities – two located in inner-city area. Source: Location data scraped from Google maps & validated with data from the Ministry of Education



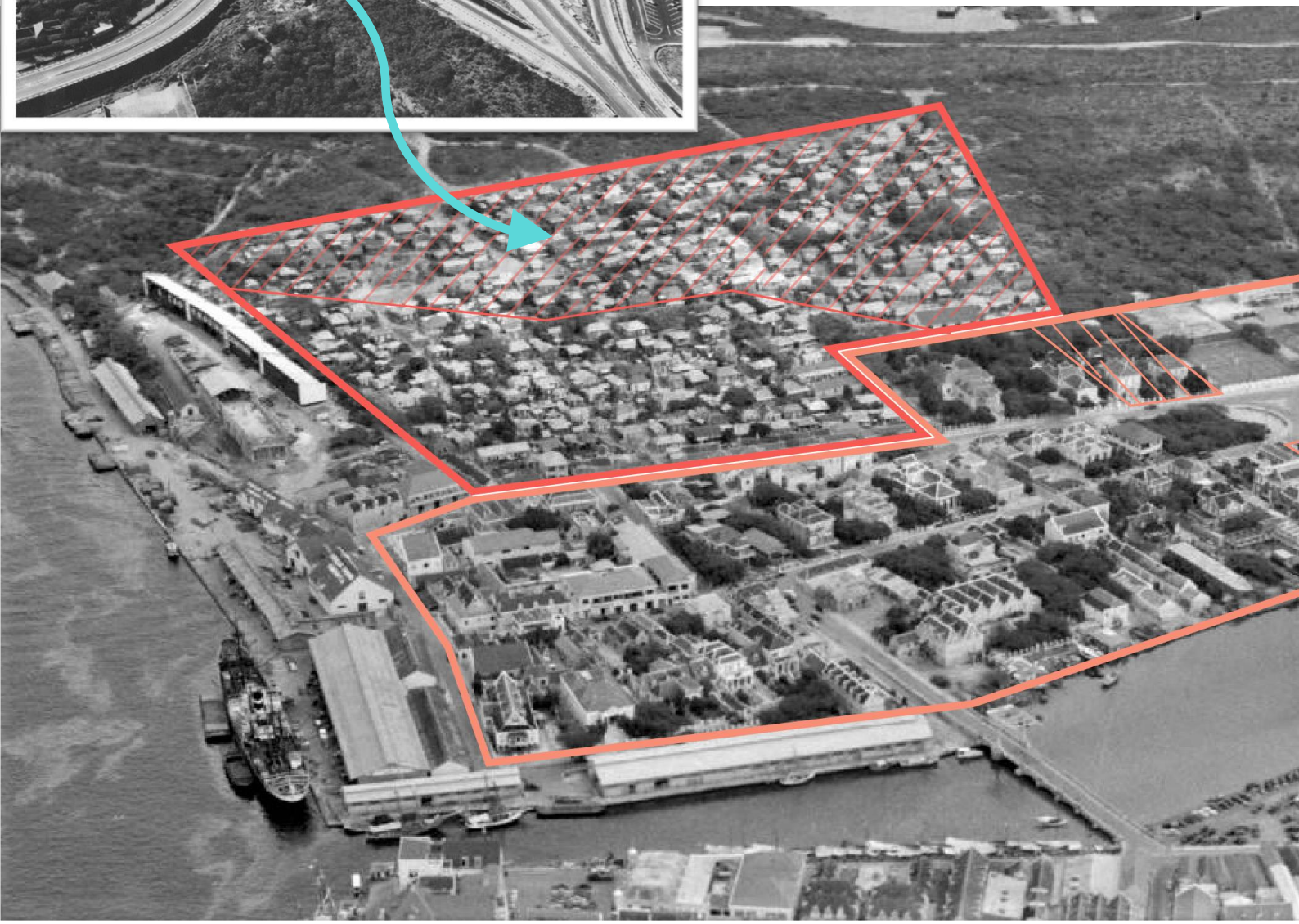


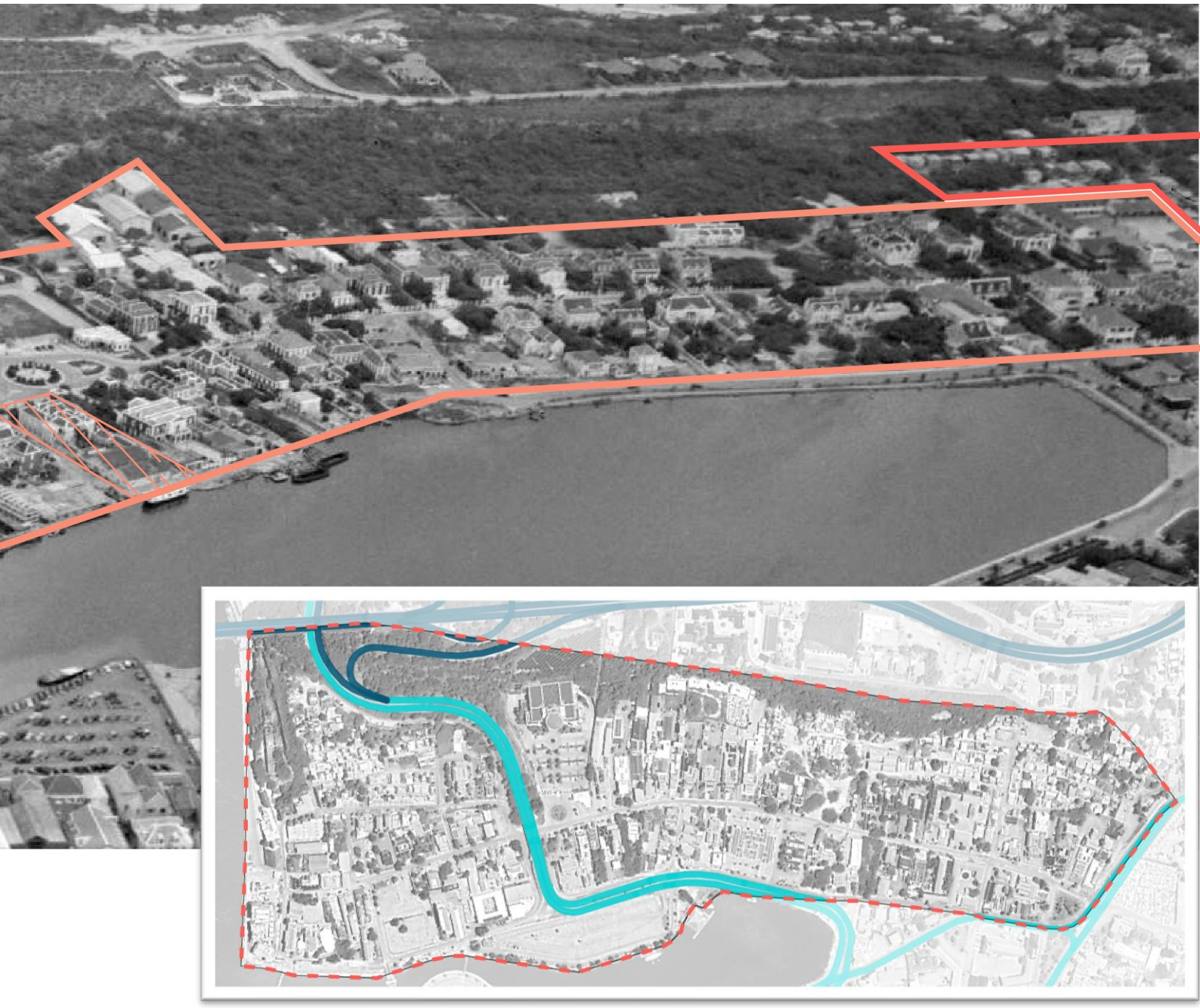
image (62). Situation before and after the construction of the access road to the Julianabrug. Photos from www.nationaalarchief.cw

Working-class quarters, Fleur de Marie in the west and St. Jago in the east

Jewish quartOer, Scharloo Abou, with mansions and warehouses

Built area in Fleur de Marie that was demolished

Jewish homes that were demolished

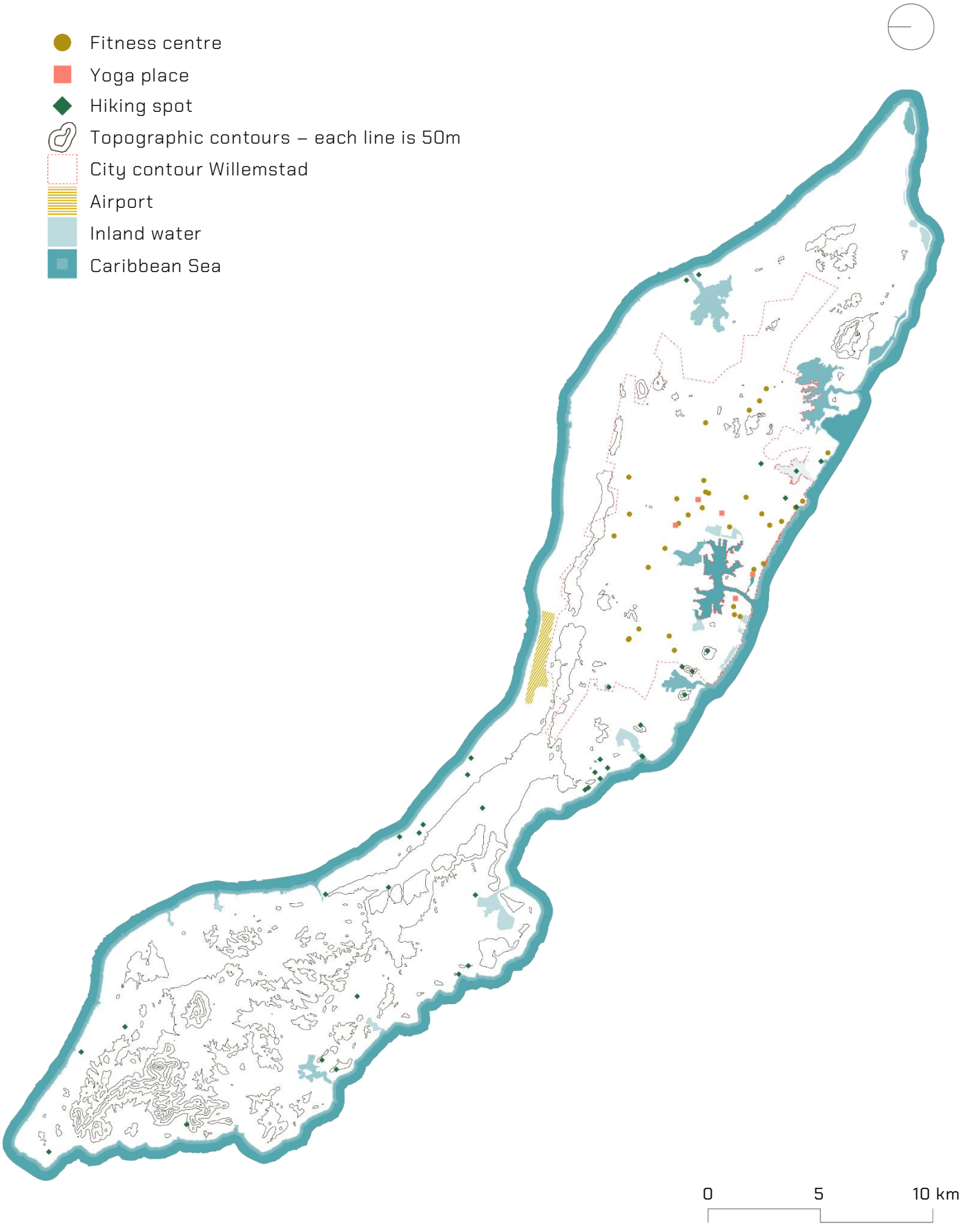


map (21). Monuments in Scharloo. Photos are of renovated monuments.

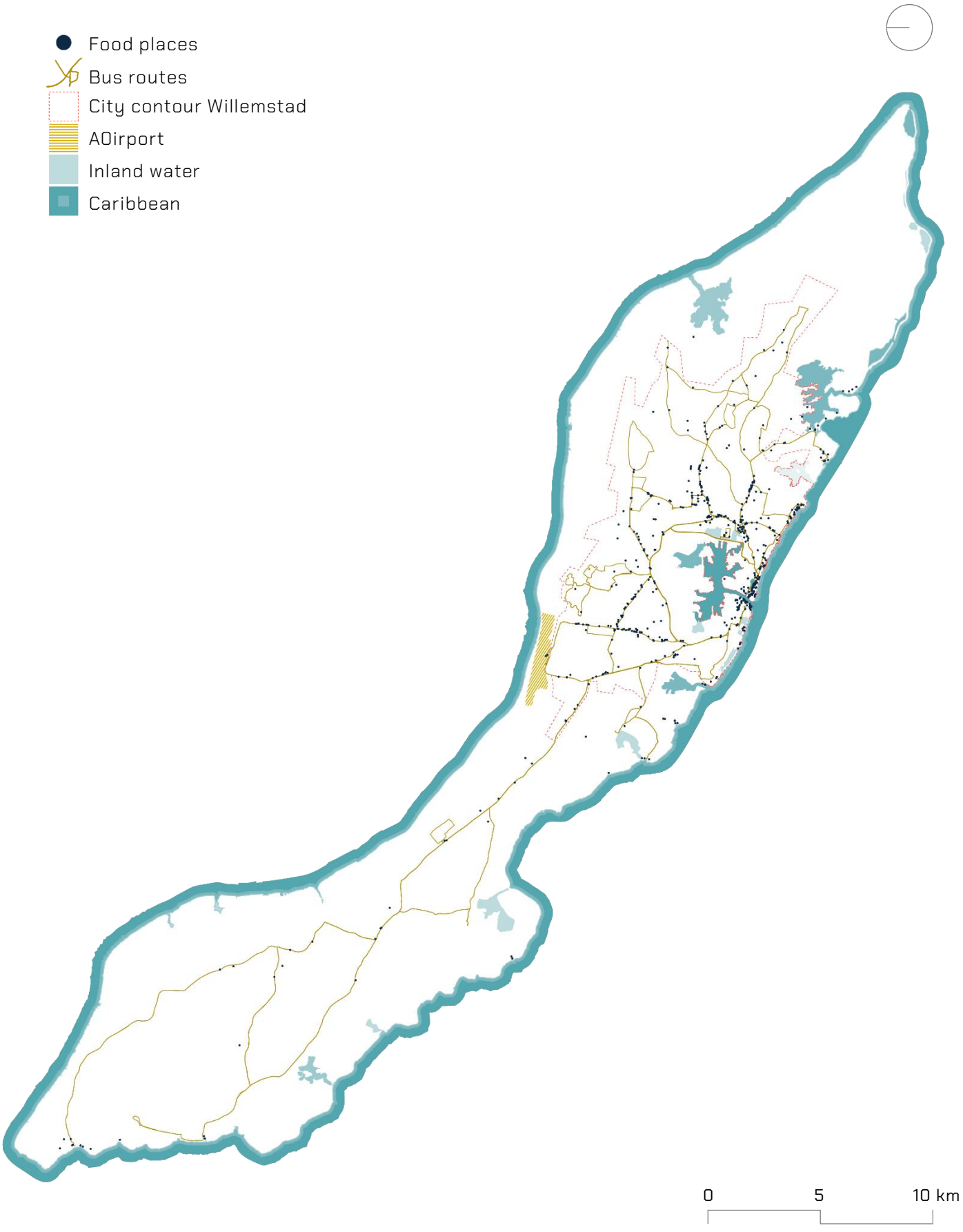
Photos on this page by Gilly-Ann & Qurchen

map (22). Buildings in ruin or vacant. Photos are of buildings in need of renovation.

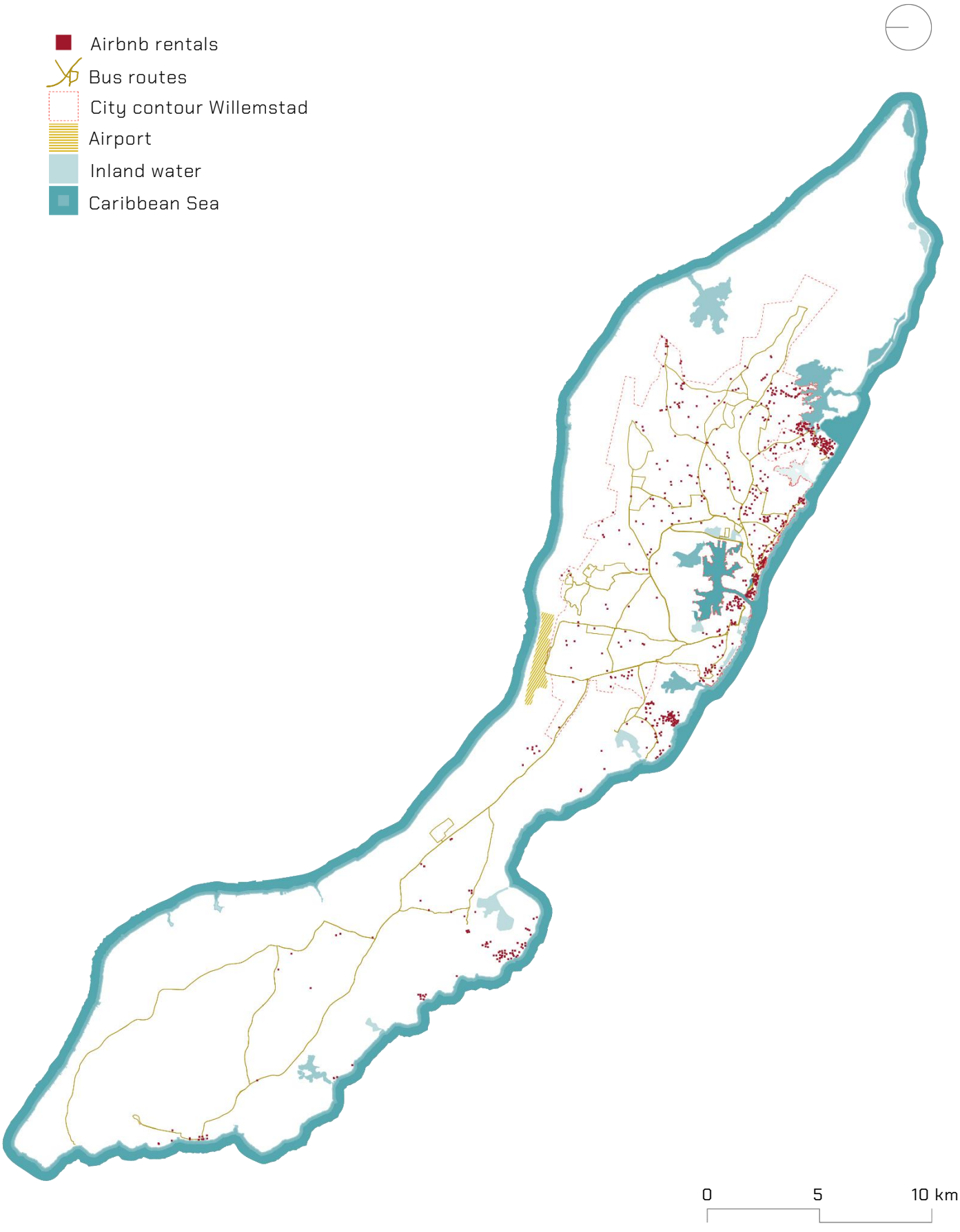
Most of these ruins are private properties whose owners are oftentimes living abroad



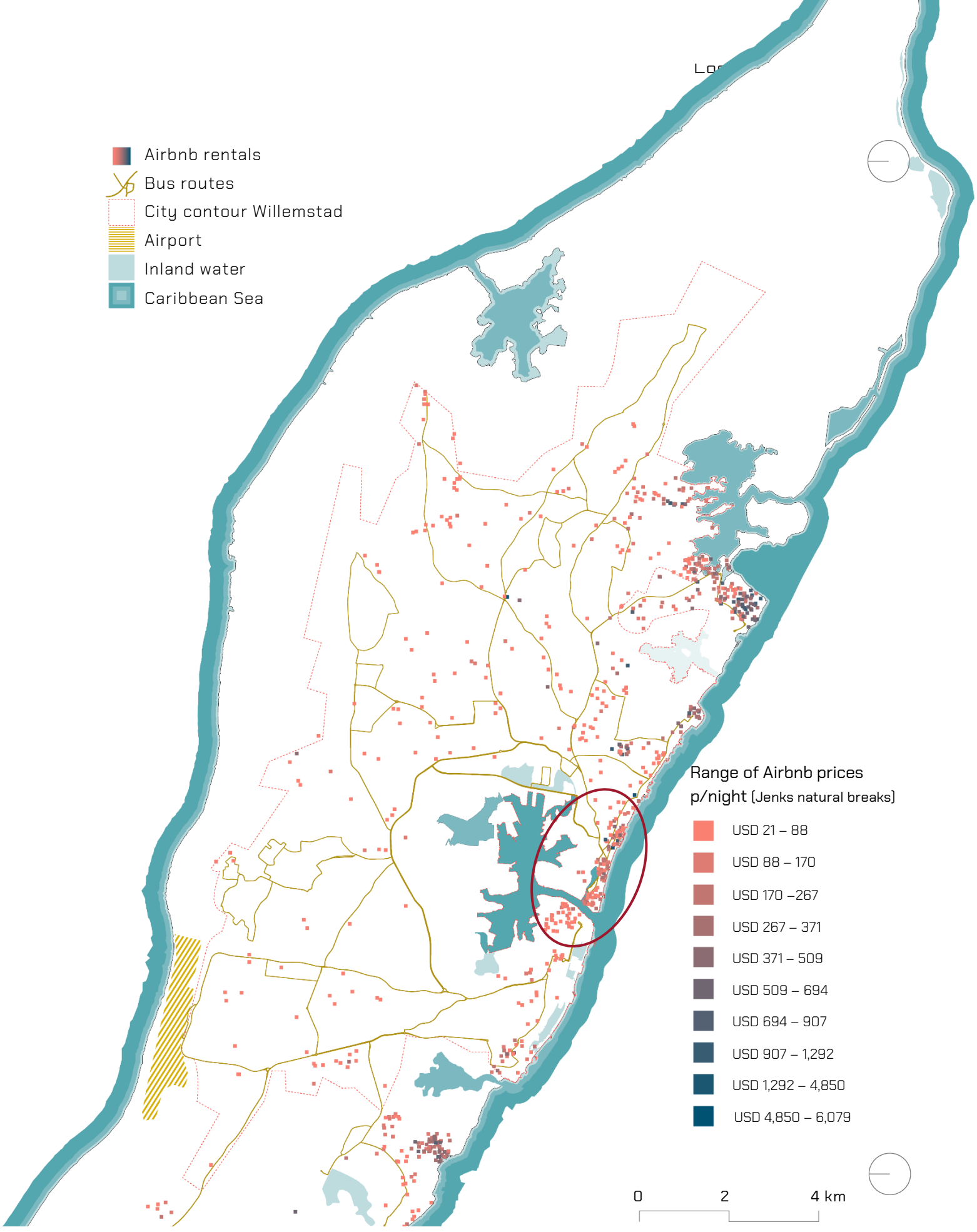
map (23). Top nomad sports according to Nomad List. Location data scraped from Google Maps



map (24). Overview of food places – majority are along the main roads.
Location data scraped from Google maps



map (25). Overview of Airbnb rentals – concentrations of rentals are on beachfront properties. Location data scraped from Airbnb.com



map (26). Airbnb rentals – biggest price range in city centre. Data scraped from Airbnb.com

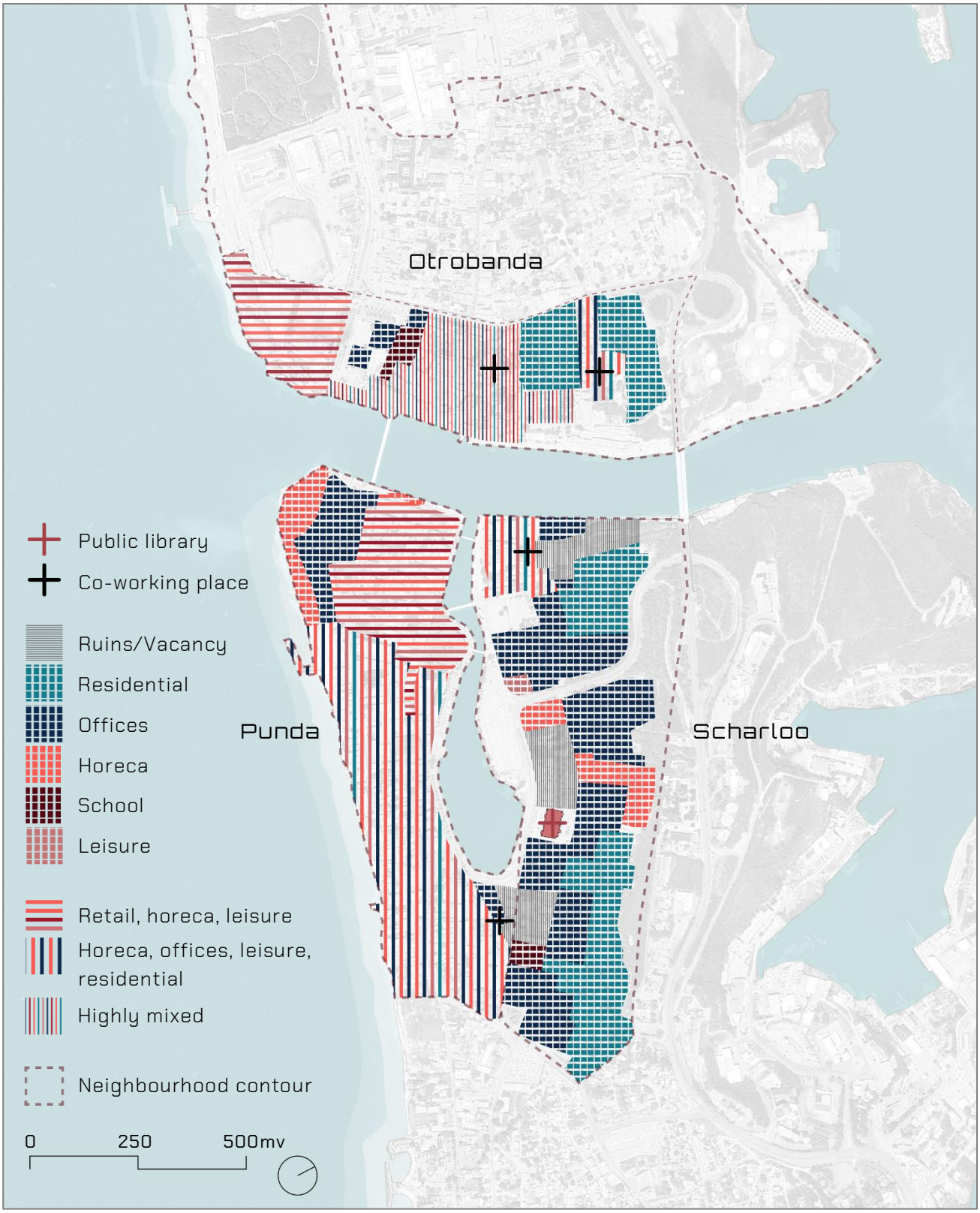
map (27). City centre area = UNESCO heritage area

map (28). Bus routes & bus stops in city centre area. Data from autobusbedrijf.com

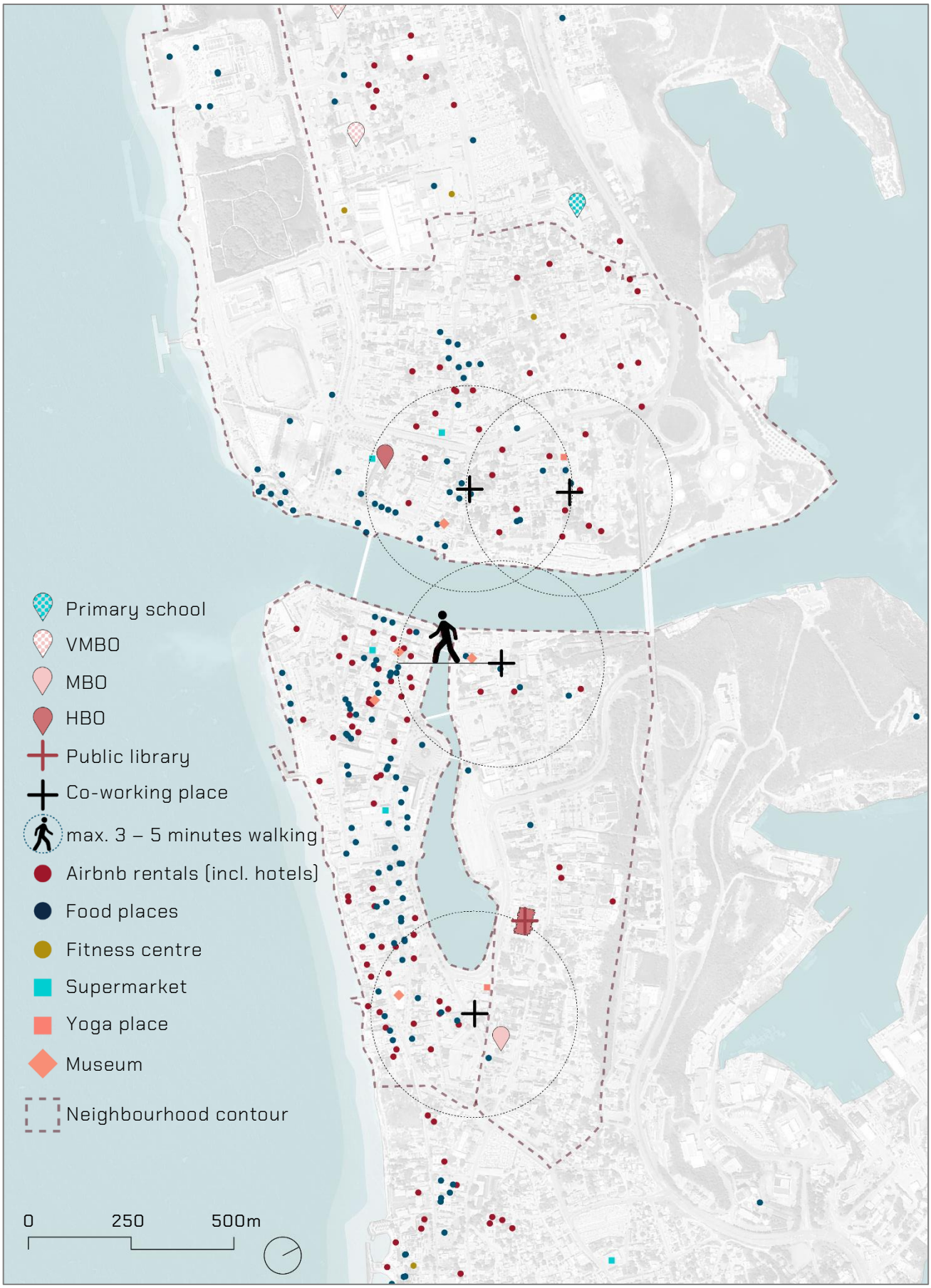
Punda: mixed-use area with very little residential units & the most hotels and Airbnb rentals in the city centre area

Otrobanda: gradient from 100% residential in the north to 0% in the south & in between a highly mixed area

Scharloo: mostly monofunctional areas & zero retail



map (29). Functional areas. Location data from Google Maps & field research



map (30). Main DN amenities & knowledge institutions. Location data scraped from Google Maps

The prioritisation of high-income-people's wants over low-income-people's needs is clearly spatialised in Scharloo. While governmental approval has been given for a high-end residential project with apartments on sale for prices between USD 302,000 and USD 855,000, the request for governmental approval for investments in improving the infra-structure in Swaen as well as for the request by Swaen inhabitants to obtain a lease on the heritage building currently standing in ruins in this quarter are year-in year-out ignored.

image (63). Rendering of high-end residential project currently under construction. Photo from thewharfcuracao.com

image (64). Headline of article on unheeded request from Swaen inhabitants. Screenshot from knipselkrant-curacao.com

map (31). The Wharf and Swaen are within a 10-minute walking distance of each other

residences

heritage

public space

image (65). Photos of the underdeveloped quarter Swaen. Aerial photo (*top*) by Michael Marugg jr.

Sports court:

lacks benches & shading for spectators

1

Outdoor lounge area:

lacks shading where there are benches

2

map (32). Existing designed public spaces in Scharloo. Photos show the characteristic use of colour by Curaçaoans as well as the consistent lack of benches and/or shading

Playground:

lacks sufficient benches

3

Outdoor lounge area:

lacks benches

4

Public space used as free parking

1

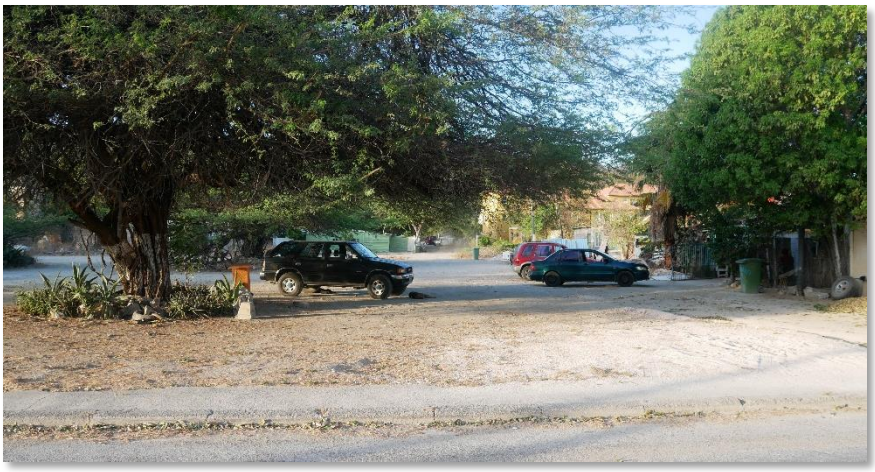
Private plot left unused

2

map (33). Existing private plots and public spaces in Scharloo that are unused or underused

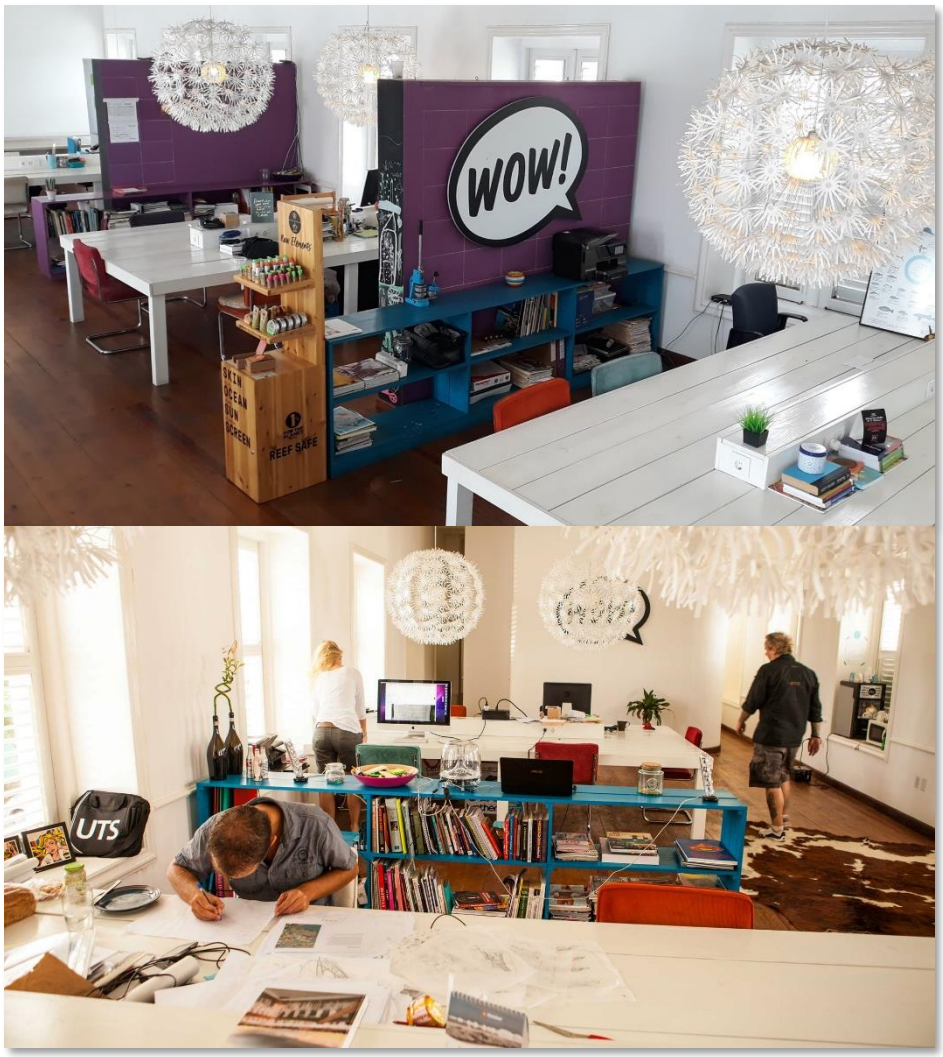
Undeveloped public terrain

3



Private plot left unbuilt

4



Open & extrovert architectural interior

image (66). Open & creative interior of coworking place Workspot in Scharloo. Photos from www.facebook.com/workspotcuracao/photos

Extrovert in the courtyard

image (68). Extrovert social space in the courtyard of restaurant De Broeders in Scharloo. Photo from www.facebook.com/debroederswillemstad/photos

Closed-off & introvert architectural exterior:

lacks interaction with public life

image (67). In contrast to the extrovert interior (image 66), the exterior of the coworking place is closed-off and introverted

Introverted architecture on the street side:

lacks interaction with public life

image (69). In contrast to the extrovert courtyard (image 68), the architectural design is introverted on the street side. Photo from stadsherstel.com/van-raderstraat-9-23-2/

image (70). The meaning of a unique Curaçaoan word: 'dushi'.

Street art in Punda by BAGIRA

Discussion on the socio-spatial qualities in Curaçao

In the location analysis I took a deeper look at the qualities of the existing social and material infrastructure of Curaçao, and in particular Scharloo, in order to understand:

> *What are the affordances of the existing built environments of Curaçao for coping with the spatial practices of digital nomadism?*

The picture that emerges is of an area that needs interventions to improve the socio-spatial context both for the current inhabitants and for any economic ambitions that the island may have regarding strengthening the quality of its tourism sector.

At first glance, Curaçao gives the impression of a paradisaic context with 'dushi' people, 'dushi' and relaxed vibe, and 'dushi' food. There is a feeling of richness and groundedness that becomes part of you when you grow up running around barefoot on soil year-round, swimming almost every weekend in the ocean, and where everything can be a reason to celebrate with good food, good music, and good company. Curaçao is a place where family includes every blood relative and their significant others and not just the stereotypical mother-father-children, where all modern conveniences are available, yet nature is so close that you cannot help but go with its natural flow, and where so many different cultures live alongside each other, all of them identifying as a 'Yu di Kòrsou' (Child of Curaçao).

image (71). Curaçao is where the chickens and the goats can freely wander in the neighbourhood, being their true selves. Chickens from Scharloo sitting in the tree at outdoor lounge #2 shown on page 135. Goat from Montagne Rey, walking on the garden wall of my mother's neighbour

Curaçao is also a place where large families can become their own echo chambers, making progress and change a very slow and difficult process, where modern conveniences are oftentimes too expensive to obtain and it becomes easier to not pursue your goals than to struggle without hope, where conflict and judgment easily arises because of the many different voices trying to claim the correctness of their point of view.

Lack of money, both personal and on the country level, is oftentimes used as reason for why necessary changes are not implemented. Many live below the poverty line – while being employed – due to a lack of social safety net, a low minimum wage, financial illiteracy, and an economic system that favours the rich immigrant and foreign investors over the working-class population. Opportunities in the digital arena remain out of reach for many due to the high cost of internet, and in the case of parts of Bandabou the absence of internet access, as well as inadequate education. Governmental bodies and representatives of the tourism sector consider growth in tourist activities to be a key solution to the high unemployment rate. However, tourism in Curaçao is not perceived by locals as producing equal income opportunities for all.

Looking from the digital nomads' perspective, if the higher cost of living compared to, for example, Thailand or Mexico, does not decrease the attractiveness of Curaçao, then the regular power outages, the limited public transport, and the lack of quality public places will pose a serious deterrent. More importantly, the economic, spatial, and political situation is such that should digital nomads set their sights on Curaçao as the next place to be, the socio-spatial impact on the local communities would be similar to what other cities currently suffering from overtourism (including by digital nomads) are experiencing, for example, in Venice, Lisbon, and Mexico City.

With an average monthly income far below the typical budget of a digital nomad, there is undoubtedly a possibility of an increase in local rent prices with an influx of well-off long-term visitors. Furthermore, the lack of diversity in the current housing stock means that both locals and visitors would have a harder time finding appropriate accommodation. Policies to cap the number of Airbnb rentals as well as improving on the diversity of residential typologies are therefore a prerequisite. Increasing the number of locals from all socio-economic backgrounds that live long-term in Scharloo will also make the area more lively and culturally vibrant. Finally, due to climate change, temperatures are expected to rise further. Hence, efforts must be taken to introduce more protective measures in outdoor places against direct sun exposure to improve the comfortability of outdoor life.

Multiple responses on my question 'what does Curaçao mean to you' emphasised that Curaçao has a lot of talented people in different fields, yet the talent is wasted due to lack of fitting opportunities and the tendency of many to not value, nurture, and support the expression of said talent. This is where fresh perspectives and new ideas coming from visitors and global locals (those who have studied and/or lived abroad) may add true value to the island and its settled inhabitants. The global knowledge and view can alert us to what we have come to consider normal but does not work as well as we think.

As the analysis into the spatial practices of the digital nomads has shown, the meeting of minds and ideas needs a spatial context to truly benefit from the exchange of knowledge. The need for more knowledge and the willingness to share knowledge is where locals and digital nomads can find each other. One layer of Bratton's model that has not been discussed in the location analysis is the Interface layer. Places are composed of an organised set of Interfaces that coordinate public life and social interaction (Bratton, 2016, p. 43). The Interface layer is thus where interventions occur. The proposed interventions in the next chapter therefore include a set of Interfaces that will aid in arriving at a mutually beneficial co-existence between nomads and locals.

Design interventions

The intention of this project is to uncover what spatial interventions can facilitate mutually beneficial co-existence between digital nomads and Curaçaoan communities. The supposition is that the juxtaposition of the social, economic, and digital practices of digital nomads with the social and material infrastructures of Curaçao would inspire design interventions otherwise not discovered. From the location analysis in Curaçao, an image of an island that is soulful and rich in cultural diversity yet troubled by economic and social disparities is formed. Any design intervention must thus first and foremost serve the locals. In doing so, the social fabric of local communities is strengthened, thereby becoming flexible enough to adapt to the inflow of new and different spaces rather than breaking under the onslaught of rapid changes, which would lead to a state of zero mobility or death for the local social environment. The design interventions proposed are thus imagined with the local culture and the local needs at the forefront. Digital nomads can only benefit more from being able to experience the true and authentic Curaçaoan life instead of a carbon copy of every other tourist/digital nomad hub elsewhere.

Intention

Before delving into the proposed interventions, it is necessary to (again) acknowledge that the core of this project is about social relations. Conflict and separation arise when the Interfaces put in place either exacerbate the differences between these social relations (*space*), create power imbalances in the process of space production (*time*), or are lacking in their ability to remove obstacles and/or build bridges (*place*). Interfaces that effectively act as mediators, on the other hand, seek common ground in the myriad of social relations existing (*space*) and facilitate the meeting of these differing social relations at a moment (*time*) on shared ground (*place*).

While Lefebvre (1991) warned against "the speculative primacy of the conceived over the lived" which "causes practice to disappear along with life, and so does very little justice to the 'unconscious' level of lived experience *per se*" (p. 34), he did acknowledge that "it is possible … to form a mental picture of a primacy of concrete spaces - of semi-public, semi-private spaces, of meeting-places, pathways and passageways" (p. 363). The agency of a spatial designer then lies in their power to articulate the spatiality of these concrete spaces and to mediate through their design (thereby acting as human Interface) between the reality of the present and a possible desirable shared future. Evidently, any conceived design must hold the conditions that enable lived spaces to easily manifest rather than be deterministic conceptions that limit the creativity and agency of Users when they are acting out their spatial practices in the physical place.

Lefebvre (1991) also asserted that "spatial practice is lived directly before it is conceptualised" (p. 34) which is precisely the hypothesis of this thesis: the analysis into the spatial practices of digital nomads would act as starting point for the conception of design interventions. While from the work landscape perspective, digital nomads qualify as a distributed workforce, the findings from the problem analysis show that similarities can be gleaned between a) the propensity of digital nomads to disperse and then physically agglomerate in specific places, emerging as digital nomad hubs, for the purpose of connection, inspiration, and idea generation, and b) the practices of formal learning trajectories in which students from all over come together in university campuses, which are clustered in one dense area, with the shared purpose of gaining, sharing, and producing knowledge. Equally similar are the commercial types, the corporate campuses, which seek to attract 'talent' from around the globe to a centralised location of knowledge production for the purpose of capital gain.

All three of these knowledge nuclei have exclusionary practices embedded implicitly or explicitly in their formation, such as partaking in a nomadic life (digital nomad hub), enrolling as a student (university campus), and accepting an employment offer (corporate campus). Yet, all three succeed in bringing together a diverse group of people sharing a common purpose: the pursuit of knowledge. While university and corporate campuses have recognizable spatial morphologies consisting of large buildings set in specific configurations, are planned top-down, and are materialised separate from non-campus urban structures, the digital nomad hubs are formed exclusively by bottom-up spatial practices and lived spaces that are then formalised into the conception of a hub that

alters non-campus urban structures and processes to function as such. From this, the following question naturally arises: what inclusive structure can act as permeable knowledge nuclei through bottom-up processes serving both the locals and the digital nomads?

To this question I propose the civil (knowledge) campus.

image (72). Co-working in various settings. Sources: Google Earth (left images) &

1. www.twoticketsanywhere.com/benefits-of-coworking-spaces/
2. www.tudelft.nl/bk/onderzoek/research-stories/gezond-uitdagend-ontwerponderwijs-de-balans-tussen-leren-en-presteren
3. www.businessinsider.com/the-most-productive-teams-at-google-have-these-dynamics-2016-4?amp

Design brief

The civil campus as Interface and glocal place is the informal learning realm manifested in the City layer. The idea of the civil campus is a reinterpretation of the city, meaning its public areas, as key facilitator of learning and knowledge sharing. In the civil campus, outdoor places are as conducive to knowledge sharing and learning as indoor places. Furthermore, everyone is welcome irrespective of income, job type, or education level. The people living, working, and/or socialising in the civil campus are both the source of knowledge and the beneficiaries of said knowledge. The civil campus functions both day and night, allowing a diverse group of people to find 'their' place and 'their' time where and when they can be their best selves.

Throughout history and across cultures, knowledge sharing has always been an important social learning activity that has taken many forms, from oral traditions teaching community members about life and morality to apprenticeships where one learns a new craft through observation, communication, and doing. Yet, somewhere along the way we have placed a hierarchy on what types of knowledge and what modes of learning are the most valuable. While formal education is of immense importance to our personal and societal development, informal learning through knowledge sharing as a social activity should be regarded again as an essential complement and of equal importance.

As mentioned in the User layer from the Location analysis chapter, all respondents to my question 'what does Curaçao mean to you' answered that, first and foremost, Curaçao means home. The Papiamentu word for home is 'kas'. If the civil campus is to truly work, its users, both locals and visitors, should feel at home (which is coincidentally also the slogan of the digital nomad visa program). To achieve this, 'kas' is used as acronym for the three main actions that must be employed to produce the civil campus. These actions are 'konektá' (connect), 'aktivá' (activate), and 'sostené' (support).

K.A.S. is then linked to the three interconnected domains that make up the civil campus, namely the social, material, and digital domains. These domains are a translation of findings in Paul van den Brink's PhD thesis (2003) on the three conditions that enable knowledge sharing in organisations.

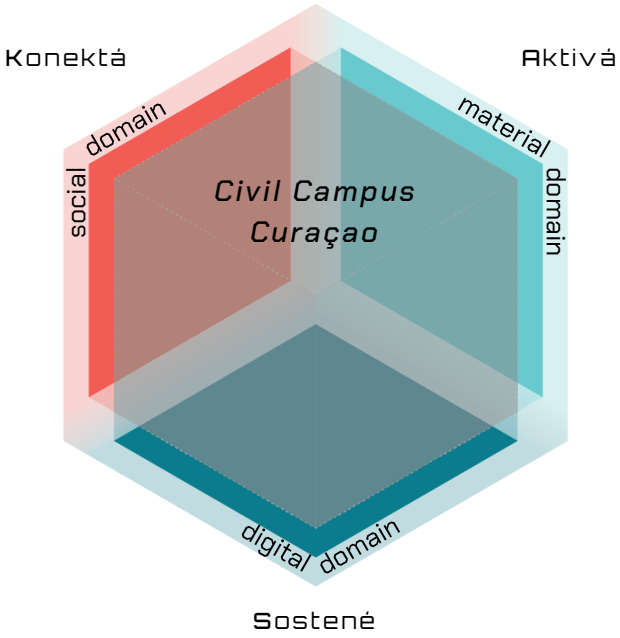


diagram (06). A conceptual model of the interconnected domains that make up the civil campus and the related actions K.A.S. (connect, activate, support) with which the civil campus in Curaçao is produced

Konektá (the social domain)

Knowledge sharing happens when there is a sense of trust and good social cohesion (Parrino, 2015; Oluruntoba, 2013). Therefore, successful co-working places employ community managers who mediate introductions between members who otherwise would not find each other (Endrissat & Leclercq-Vandelannoitte, 2021; Parrino, 2015).

I propose that intercommunal events become part of a purposeful agenda (initially) led by local community facilitators. These facilitators form an ensemble of bridge builders who work together to initiate, facilitate, and promote connections across communities. They would know what types of knowledge and social events are beneficial for their communities, determine which other communities could also benefit through regular discussions with other community facilitators, mobilise local and global knowledge-holders (corporations as well as individuals) to share their knowledge, and encourage their community members to participate.

The community facilitators include, among others:

- Librarians
- Community managers of the co-working places
- Leaders of the neighbourhood associations
- Representatives of local businesses with a social function
- Representatives of local knowledge institutions
- Any other interested party

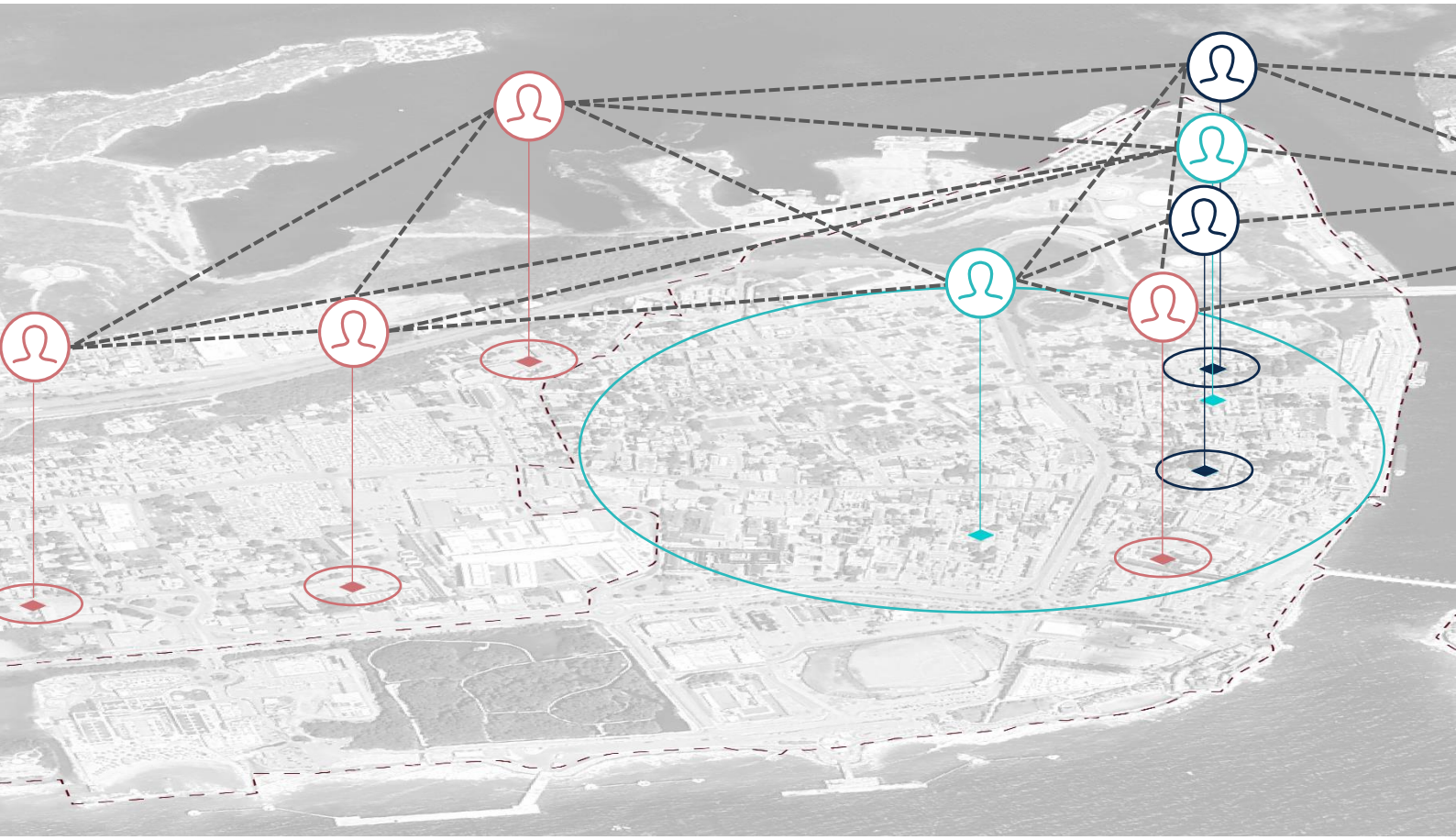
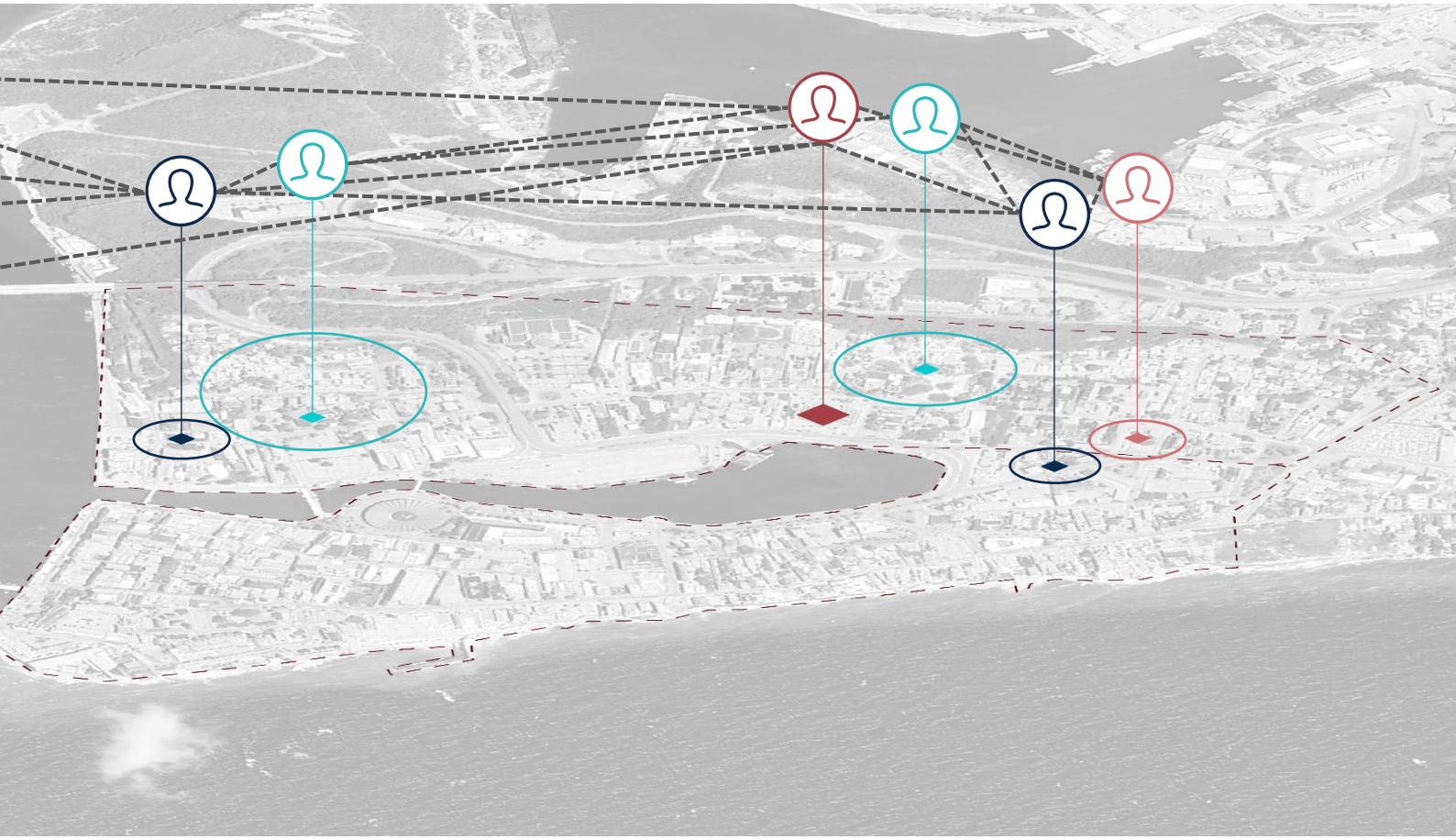


image (73). Ensemble of community facilitators

Rather than waiting and relying on official policies and programs, knowledge events happen through informal grassroots initiatives. Together, community facilitators mobilise people and information within the campus, across the island, and to/from the Curaçaoan diaspora. The premise is: 'Those who know, share. Those who can, teach.'

The ins and outs about how the ensemble of community bridge builders will function must be determined by the community facilitators together. To start off the process, the librarians, the co-working community managers, and the leaders of the Scharloo neighbourhood associations can organize try-out events for knowledge sharing and social interaction in the civil campus area located in Scharloo. Based on findings during these events, adaptations can be made, and the types of events can be expanded.

The social dimension of course cannot be upheld only by the community facilitators. Every community member is called upon to actively connect with the community facilitators to offer support, ideas, and information on which knowledge gaps exist. Each community member is also called upon to act as intracommunal connector, connecting members within their community, thereby creating a ripple effect of social benefits as different communities overlap through each individual.



Aktivá (the material domain)

The fact that knowledge sharing also happens in outdoor places has been proven by empirical studies (Soares et al., 2022; Oluruntoba, 2013). However, just having a place available for community use does not automatically lead to interaction (Endrissat & Leclercq-Vandelannoitte, 2021; Parrino, 2015). Outdoor places must therefore be activated through a set of material Interfaces to increase the chances of knowledge exchange. These material Interfaces supplement (but can never replace) the efforts by community facilitators and community members acting as human Interfaces in the social domain.

Knowledge sharing could happen through several activities. In this project, the five activities considered are talking, presenting, group events, playing, and collaborating. The material Interfaces proposed act on three levels, namely seating arrangements on the micro level (furniture), the library Biblioteka Nashonal Kòrsou (BNK) as civil knowledge node on the mezzo level (architecture), and the civil campus infrastructure on the macro level (neighbourhood).

The micro level: Seats

As a spatial artefact, a seat is simply a place to sit. Symbolically, a seat as Interface has many meanings:

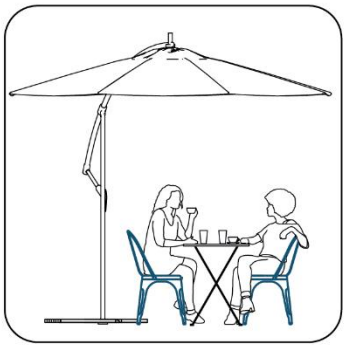
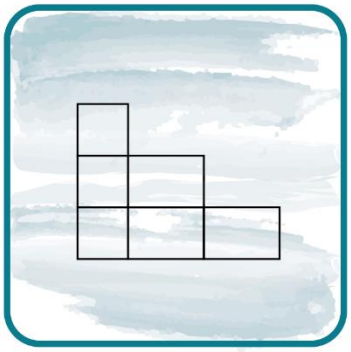
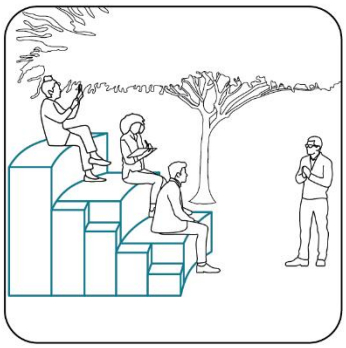
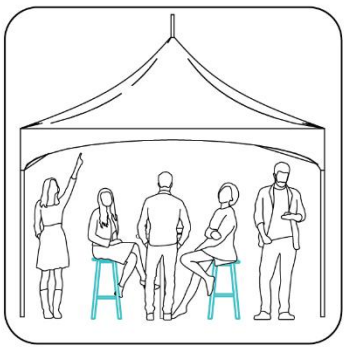
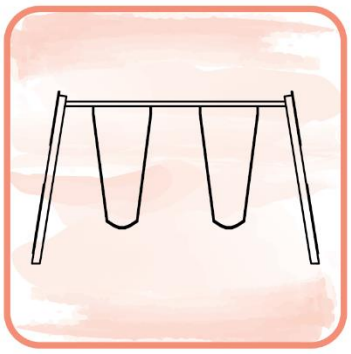
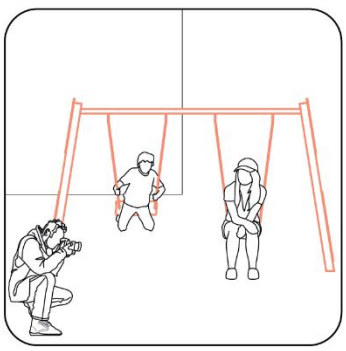
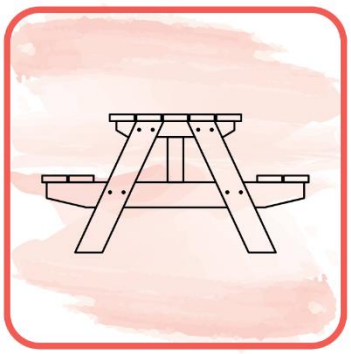
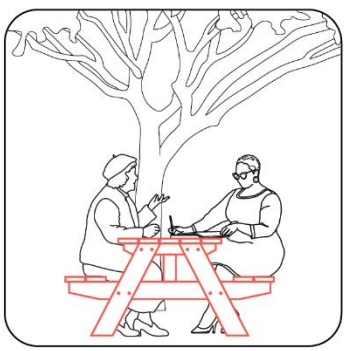
- A pause in movement to give attention to the 'now' moment.
- A levelling of the playing field when one sits at the same level as another.
- A sign of feeling safe when sitting down next to another.

In outdoor places, the absence of (adequate) seats inhibits people from lingering and from performing activities in place that would attract others to watch, to discuss, and to interact. Seats combined with shared tables and proper shading due to the tropical context of Curaçao improve comfort levels in outdoor places that allow for longer-term social interaction in the public eye.

The choice for a specific shape of seat facilitates certain knowledge sharing activities while inhibiting others. Thus, consciously offering a specific or a diverse set of seats and seating arrangements increases the opportunities for a plurality of spaces to be produced, meaning different types of social interaction, as well as for the number of knowledge sharing activities that can happen in a location.

Regarding the materiality, by first using recycled materials and natural elements such as wood to produce the seats makes it possible for anyone in the community to construct and maintain them. When a seating arrangement proves to be successful, the seats can be replaced by more durable materials and/or semi-permanent constellations.

image (74). Seats and the knowledge sharing activities they facilitate ▶

Seat	Activity	
		Talking
		Presenting
		Events
		Playing
		Collaborating

The mezzo level: Public library

The public library, located in the Address layer, is the repository and symbol of societal knowledge and currently the only public institution whose mandate is to provide access to all interested. As such, the public library can and must play a leading role as an Interface for knowledge sharing by attracting, facilitating, and mediating knowledge exchange in the civil campus, both in its indoor places and in its outdoor areas, as well as in the local knowledge landscape in general. Modern public libraries are currently going beyond their traditional role as repositories and study location of past knowledge. They are becoming important socio-cultural centres offering community space, learning spaces for modalities other than the written word, and democratic gateways to future opportunities by contributing to active knowledge production (Dobrovolska et al., 2022).

Currently, the public library of Curaçao offers traditional services. Furthermore, almost all activities are focused solely on children and the elderly. The public library is also suffering from lack of funds. Research by the University of Aruba (Alofs et al, 2022), commissioned by the National Library of the Netherlands, revealed that only 2,700 of Curaçaoans were members of the library in 2021; that is only 1.75% of the population. Library membership is also not free for youth under 18 years.

A low-hanging fruit that the library can relatively easily pick is to execute a campaign in close collaboration with local knowledge and social institutions for maximum impact to promote library membership among adults as a way to sponsor a) free membership for children and b) library services against a reduced fee to low-income citizens. In addition to increasing the spending budget for the library, on the long-term this will also stimulate adults to frequent events that the library organises using their membership.

image (75). Current situation outdoor areas public library

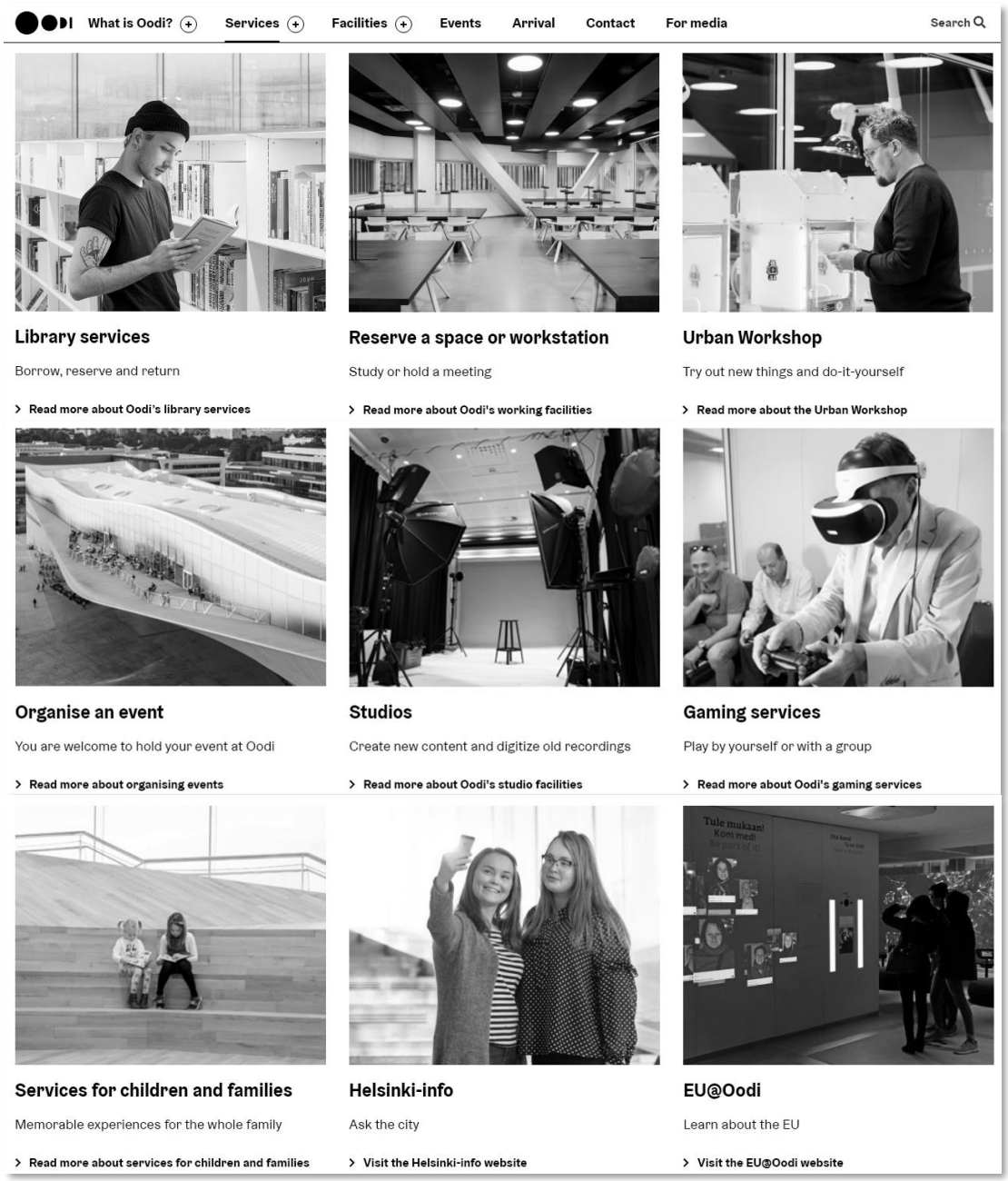


image (76). Reference material: Services of Finland's public library. Source: https://oodihelsinki.fi/en/

To broaden the reach of the library within the community, the following interventions are proposed to transition the library into a knowledge node in the civil campus:

1 Transform the parking area in the front into an outdoor community space with ample seating and shading offering free 24/7 Wi-Fi access outdoors f or anyone to use on their own devices.
2 Make the remaining parking area in the back multifunctional by also using it as outdoor event space.
3 Enlarge the library entrance space to create a multifunctional community lounge.
4 Expand the physical footprint to include:
    - a co-working café in the outdoor community space in the front,
    - quiet co-working spaces on the second floor based on reservations (free for members, paid for visitors including digital nomads, with a maximum in the hours per day or days per week), and
    - podcast recording studios on the parking area in the back (idem).

Adding to the library's footprint can only be done as funds increase, however, the other proposals can be executed together with the community. The efforts to revive Otrobanda with the Kaya Kaya festival (www.kayakayafestival.com) is an exemplary reference for the success of community-led change that also generates monetary income for its inhabitants.

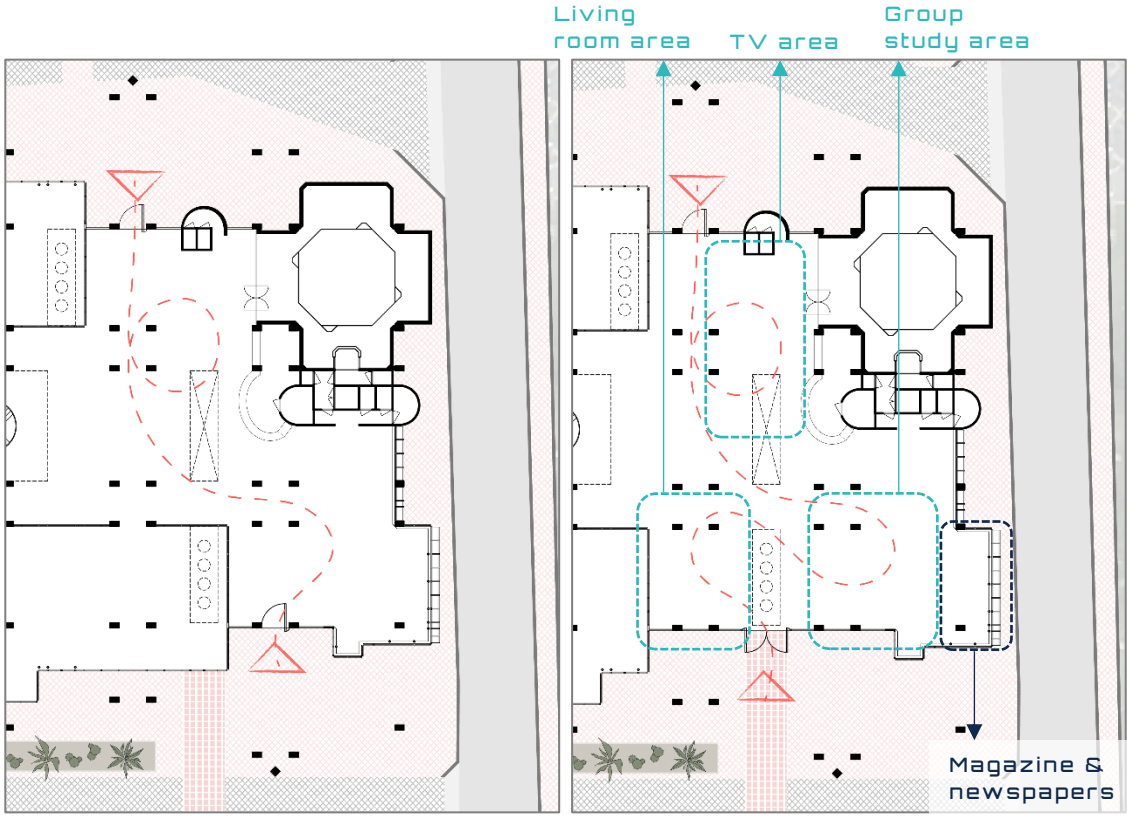


image (77). Before (left) & After: increased size of library entrance area to accommodate a spacious community lounge. Door size is doubled and moved to the left where it is more visible and thus more inviting (intervention #3)

image (79 on pg. 161). Bird's eye view of outdoor community space (Wi-Fi Park) offering free Wi-Fi & outlets and new Bites 'N Kòfi café (BNK café) ▼

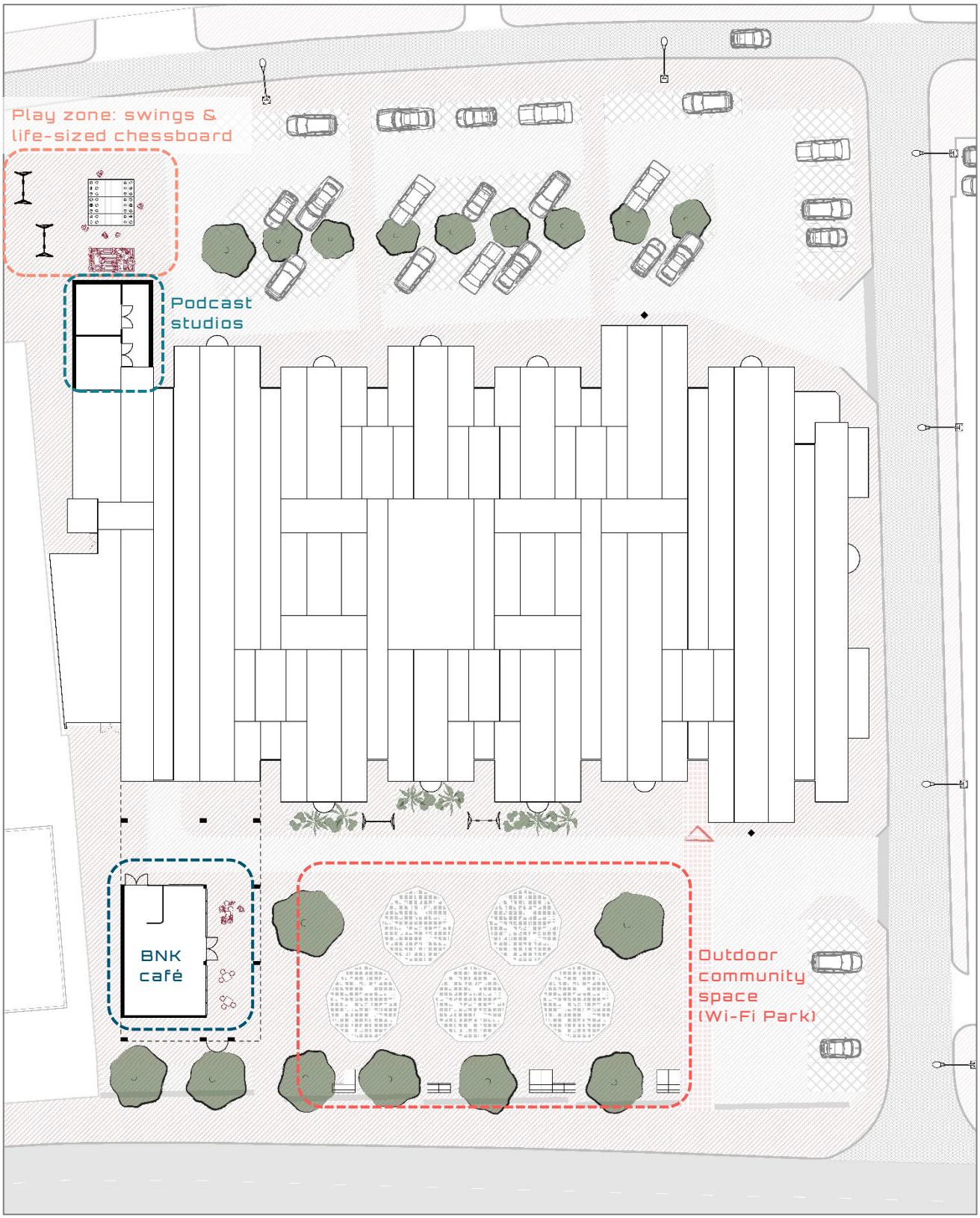
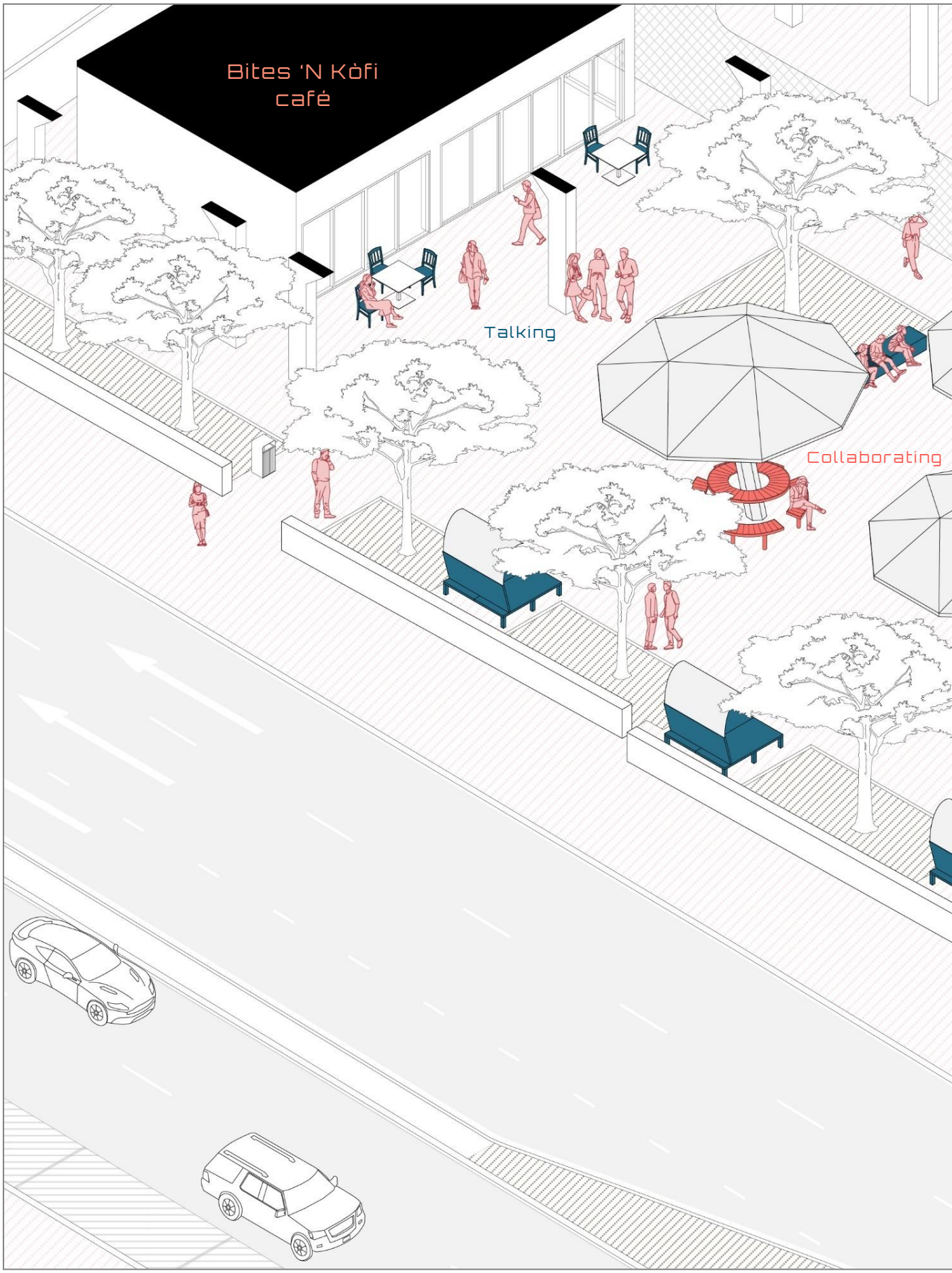
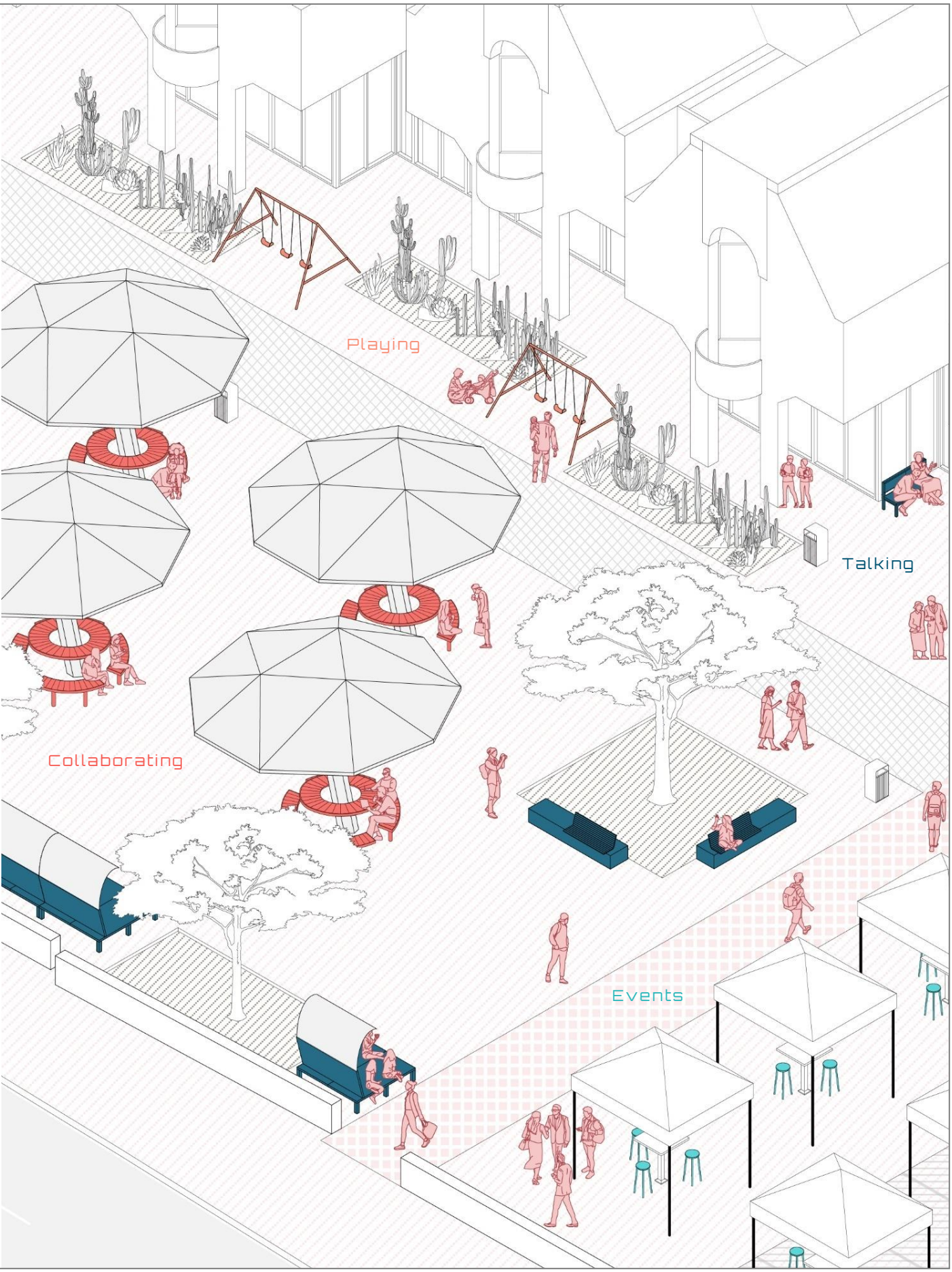


image (78). Plan view library plot. In the front: Bites 'N Kòfi café, outdoor community space (Wi-Fi Park), and 1ste floor addition for adding quiet co-working spaces (outline shown over BNK café). In the back: addition for podcast recording studios. (interventions #1 and #4)


Bites 'N Kòfi
café
Talking
Collaborating


Playing
Talking
Collaborating
Events

The macro level: Civil campus infrastructure

The campus infrastructure includes the totality of its public spaces, pathways, and building functions. The urban configuration, sound levels, and accessibility have a direct impact on the utilisation of the campus places. The existing outdoor places in Scharloo are therefore analysed using these characteristics.

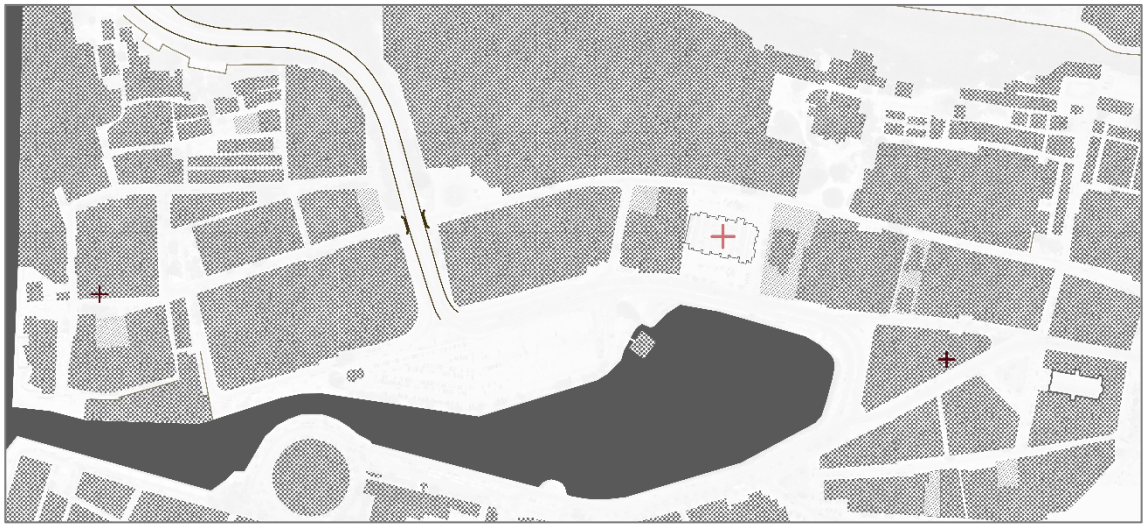


image (80). Public vs. private/inaccessible places: there is little porosity in the urban fabric of Scharloo with large areas privatised and/or fenced off

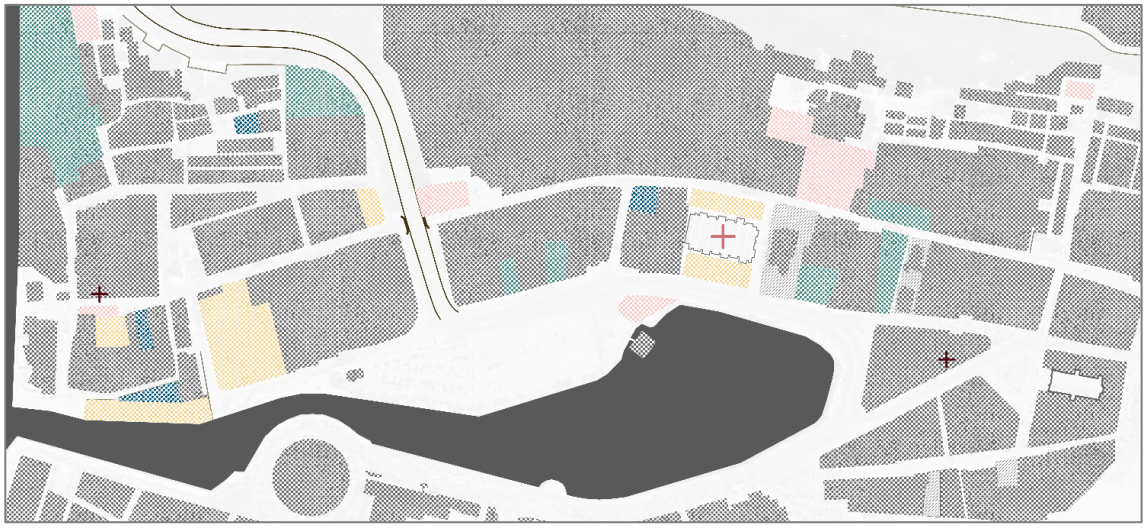


image (81). Underused or unused private and public plots

- Private/fenced area
- Private plot – not fenced
- Parking lots
- Empty/unused plots
- Underused garden/unbuilt & unpaved private plot
- Underused public space
- Public library
- Co-working places

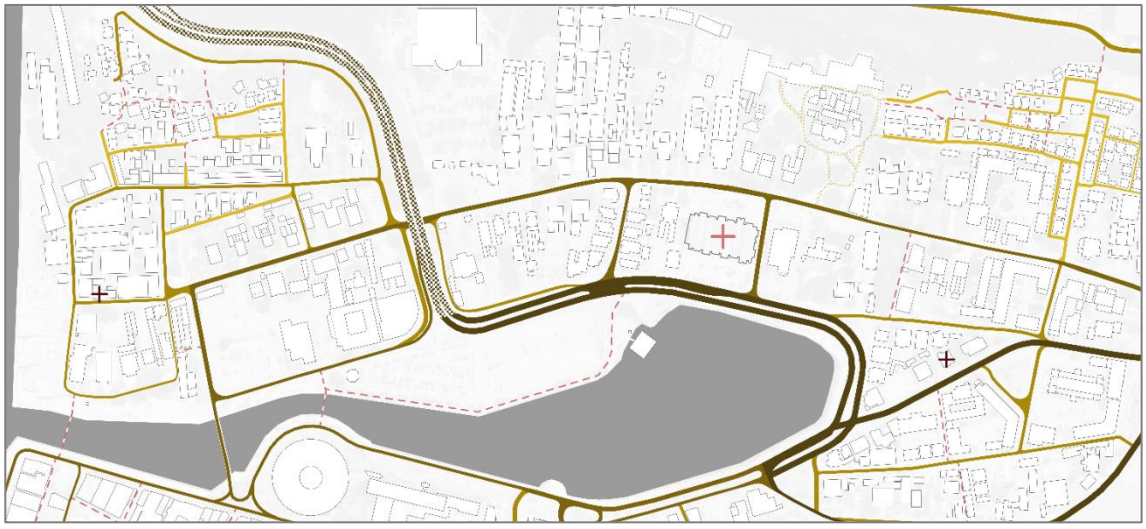


image (82). Road hierarchy

image (83). Sound levels based on traffic noise

- Area access road – no pedestrian
- Area access road
- Neighbourhood access road
- Collector road
- Residential street
- Unpaved residential street
- Pedestrians only

In traditional nomadic practices, the basic composition of the physical natural surroundings is minimally altered as it must maintain its generative abilities to be able to sustain the nomadic society in the following seasons. In keeping with the tradition of these traditional nomadic societies, the starting point of the design is to maintain and design around natural elements, such as mature trees and unpaved areas, that provide shading, decrease urban heat, and sustain local biodiversity.

image (84). Before: wide one-way road prioritising car mobility and street parking leaving little room for sidewalks

The proposal for the campus infrastructure includes:

5 Reduce street parking on the main road within Scharloo, Scharlooweg, and widen the sidewalks to improve accessibility and walkability for pedestrians.
6 Introduce a network of different types of outdoor social places spread out over Scharloo. Which outdoor functions should be placed where must be determined together with the Scharloo communities. An initial proposal is provided in image 86.
7 Make use of street art to create signs that stimulate interaction, civil debate, and learning as social activity, especially in outdoor lounges and public squares.
8 Renovate the Swaen heritage building currently in ruins to house a makerspace and a community centre.
9 Build a new parking building at Scharlooweg 154. The governmental organisation currently occupying the existing (non-heritage) building can be moved to one of the vacant buildings listed as for rent.
10 Attract more knowledge-relations functions in the vacant buildings, for example, a Crafts Academy that teaches old and new Curaçaoan crafts.
11 Introduce policies that makes it expensive for the owners of heritage buildings standing in ruins to keep the buildings without renovating and using them.

image (85). After: remove street parking, widen sidewalks, and slow down traffic for easy walkability (intervention #5)

example furniture outdoor lounge

Ser'i Otrobanda urban farm

❑ outdoor lounge with street art*. reference: furniture lounge

❑ urban farm /
❑ outdoor art school

❑ outdoor lounge with street art*

❑ public square

image (86). Plan proposal for network of outdoor places (intervention #6). Greyed out buildings can be renovated as residential units.

* each outdoor lounge with street art has its own unique design, for example, the street art at the outdoor lounge in front of the central bank educates on financial literacy

image (87). Plan design of the civil campus area surrounding the public library ▼


Yubi Kirindongo sculpture garden

- ❑ outdoor lounge with street art* *(see image 89)*
- ❑ playground
- ❑ public square
- ❑ food spot
- ❑ small amphitheatre *(see image 87)*
- ❑ sculpture garden. reference: Yubi Kirindongo sculpture garden

- ❑ food truck spot
- ❑ event space
- ❑ parking
- ❑ Wi-Fi Park *(see image 79)*
- ❑ green park with outdoor fitness equipment for adults


example outdoor fitness equipment

image (88). Current situation unused plot

image (90). Transformation into an outdoor lounge: playful early mornings

image (89). Transformation into an outdoor lounge: talking & collaborating in the afternoons

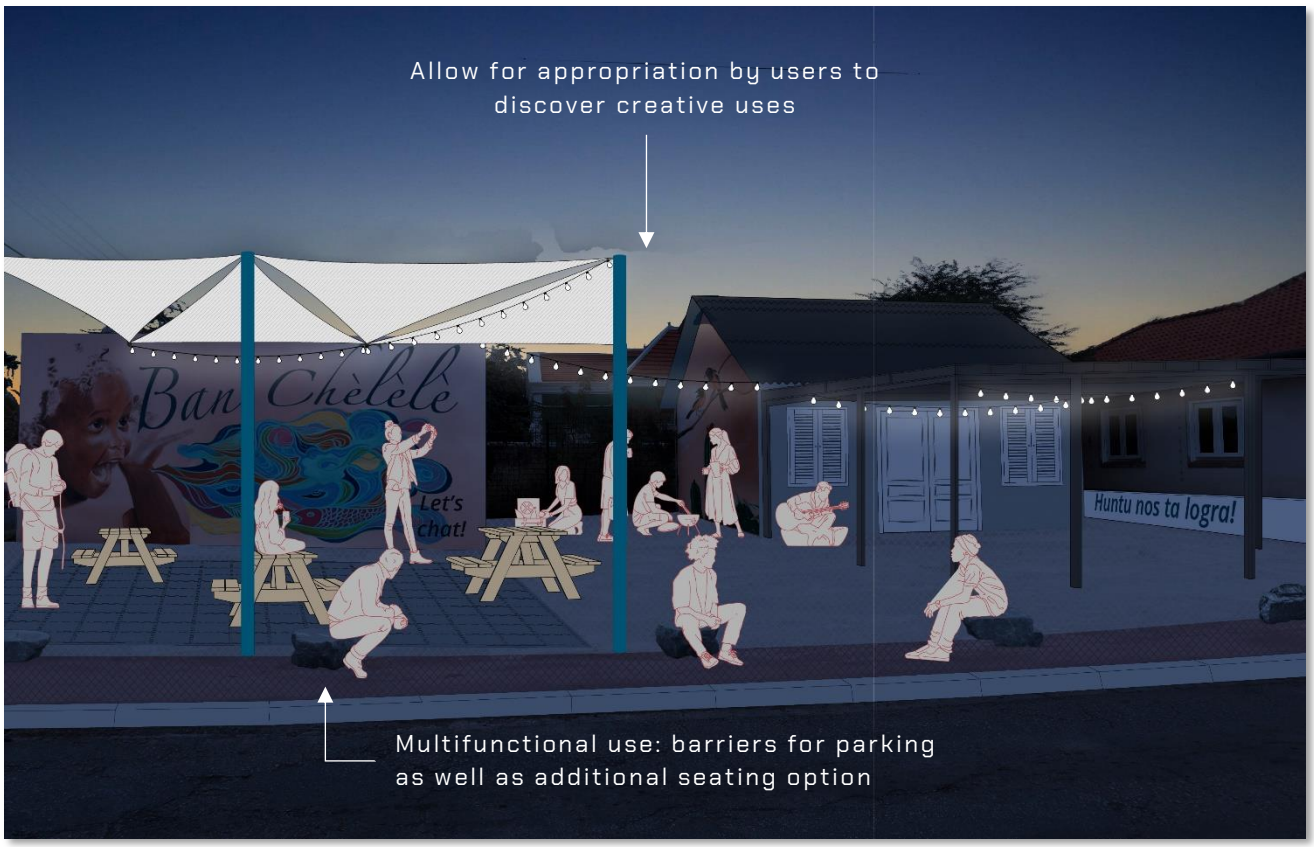


image (91). Transformation into an outdoor lounge: talking & relaxing in the evenings

Sostené (the digital domain)

Digital spaces have become an indispensable part of social life. Images 92 – 97 show the proposed digital interventions that will aid in supporting social connections across geographic distances as well as access to global knowledge to remain on the road of continuous (informal) learning.

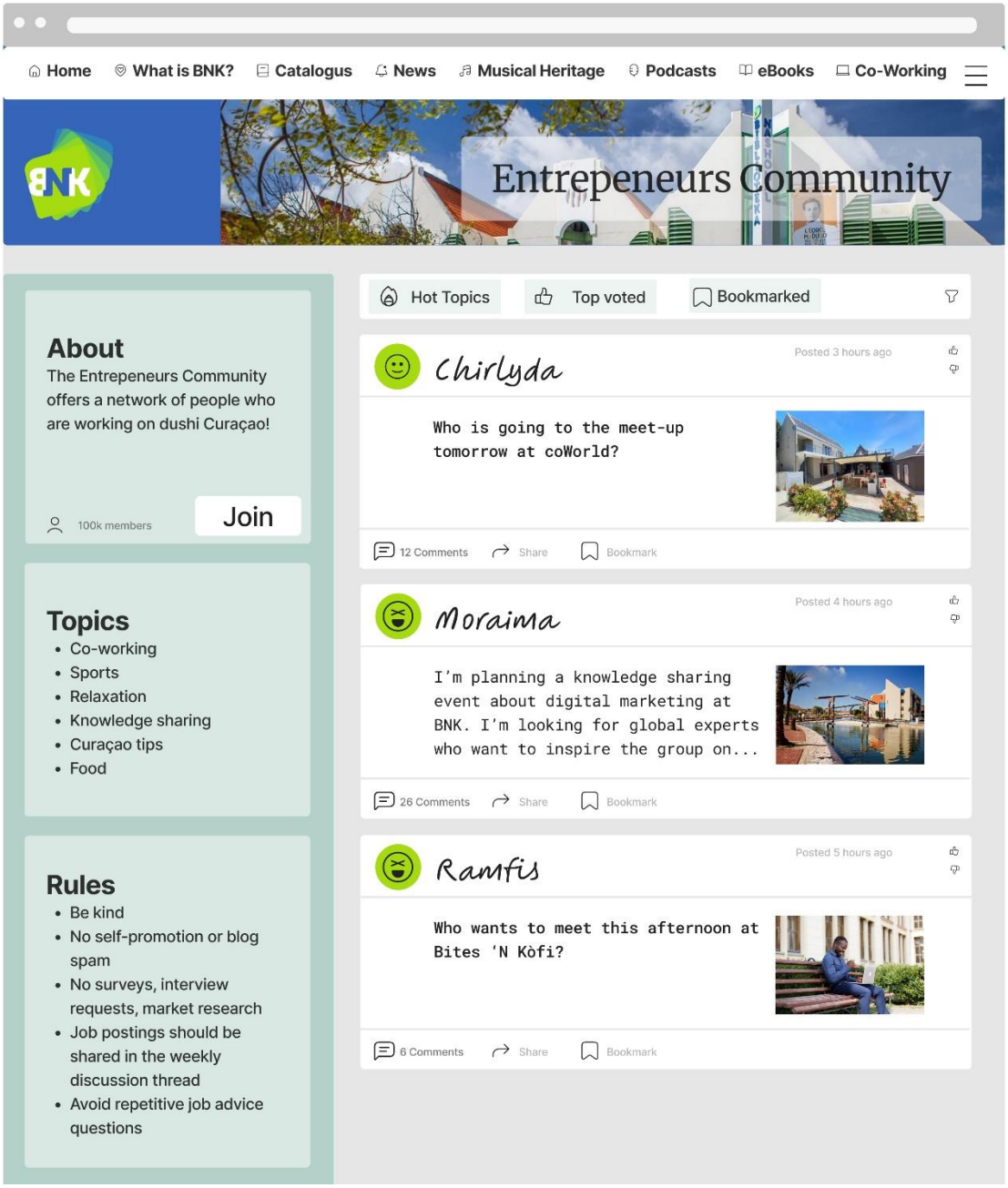


image (92). Mock-up of the community interaction webpage

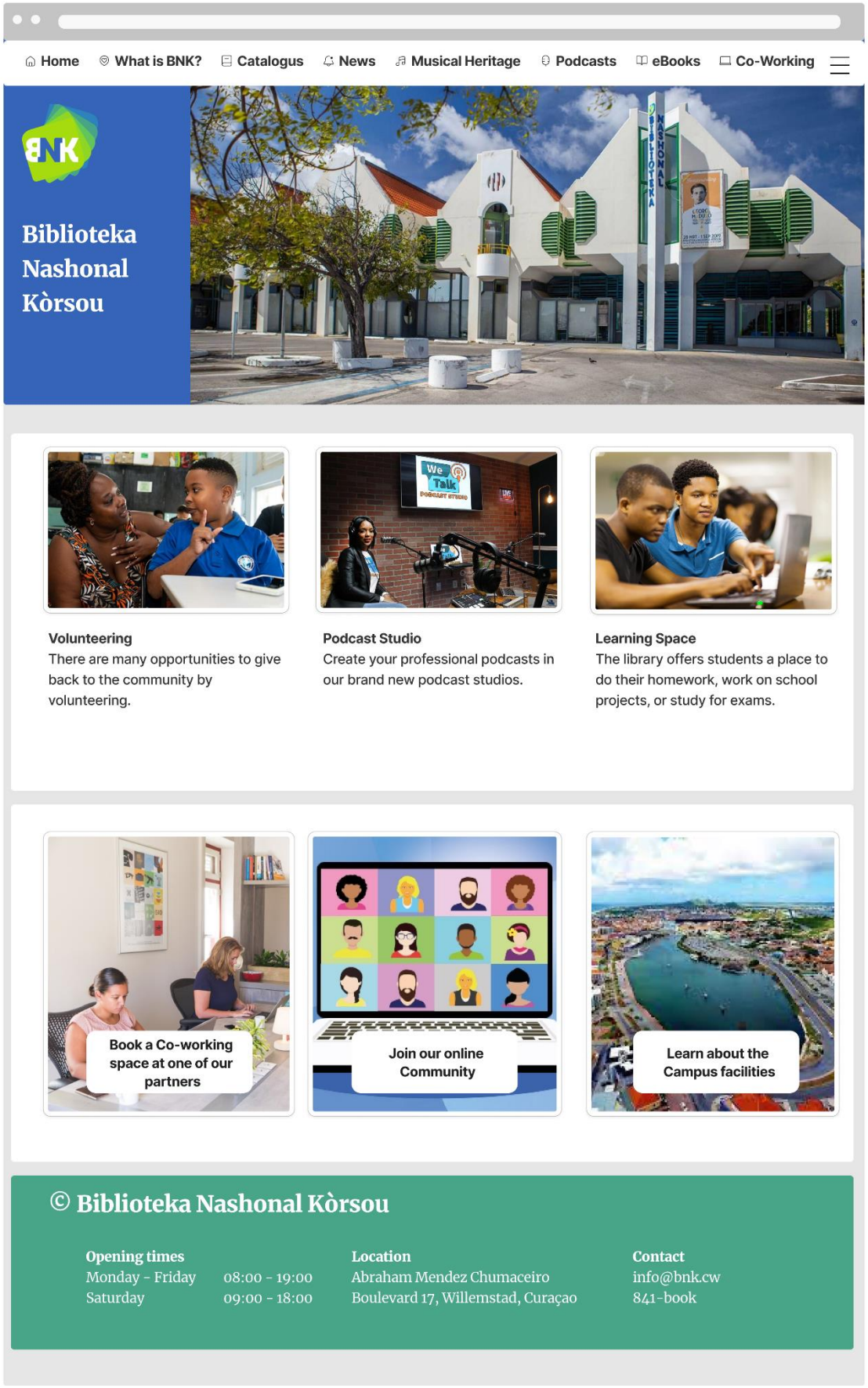


image (93). Mock-up of home page showcasing new facilities, community engagement options, and link to the co-working places in the city centre area

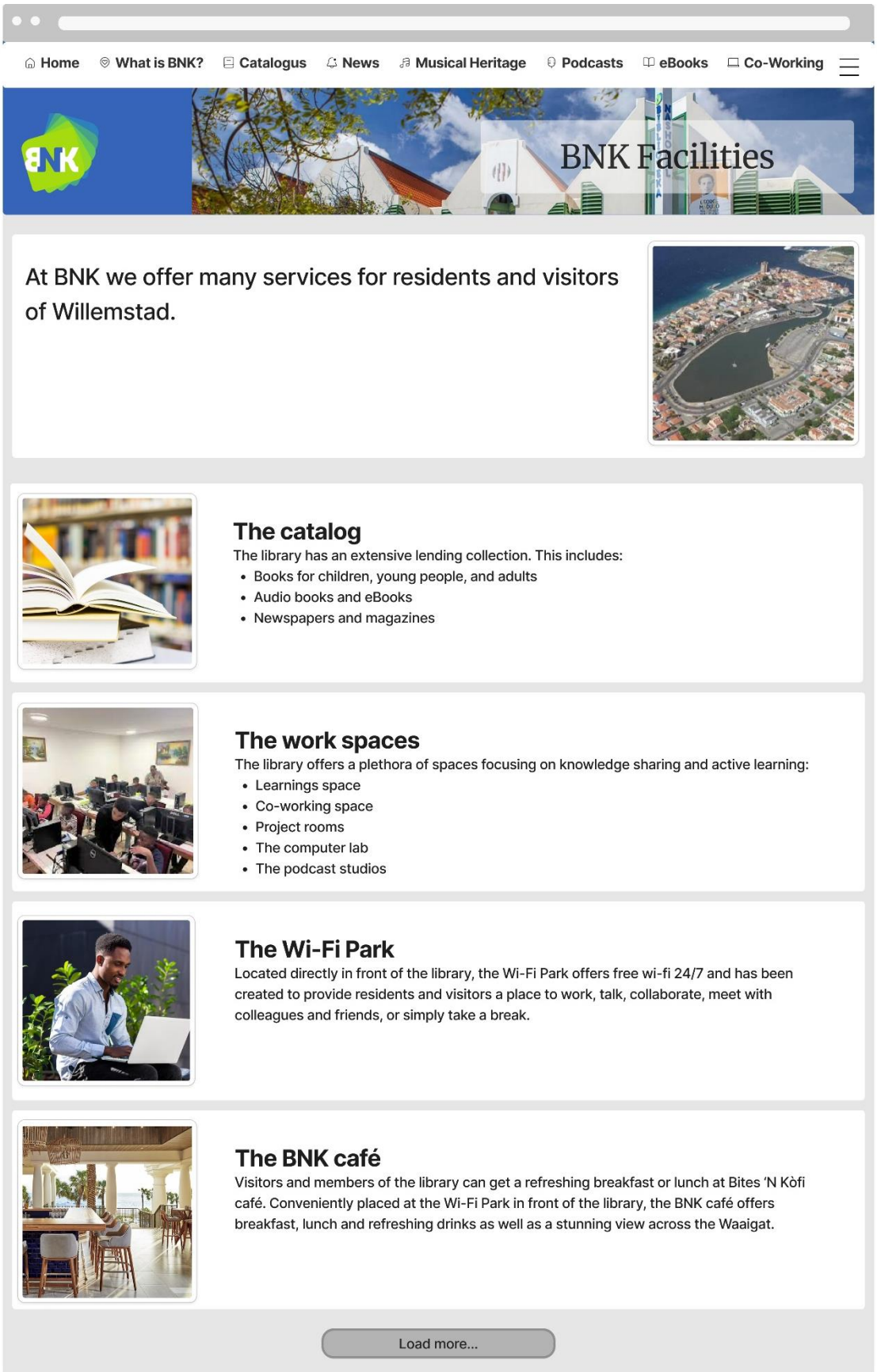


image (94). Mock-up of webpage highlighting all the BNK facilities

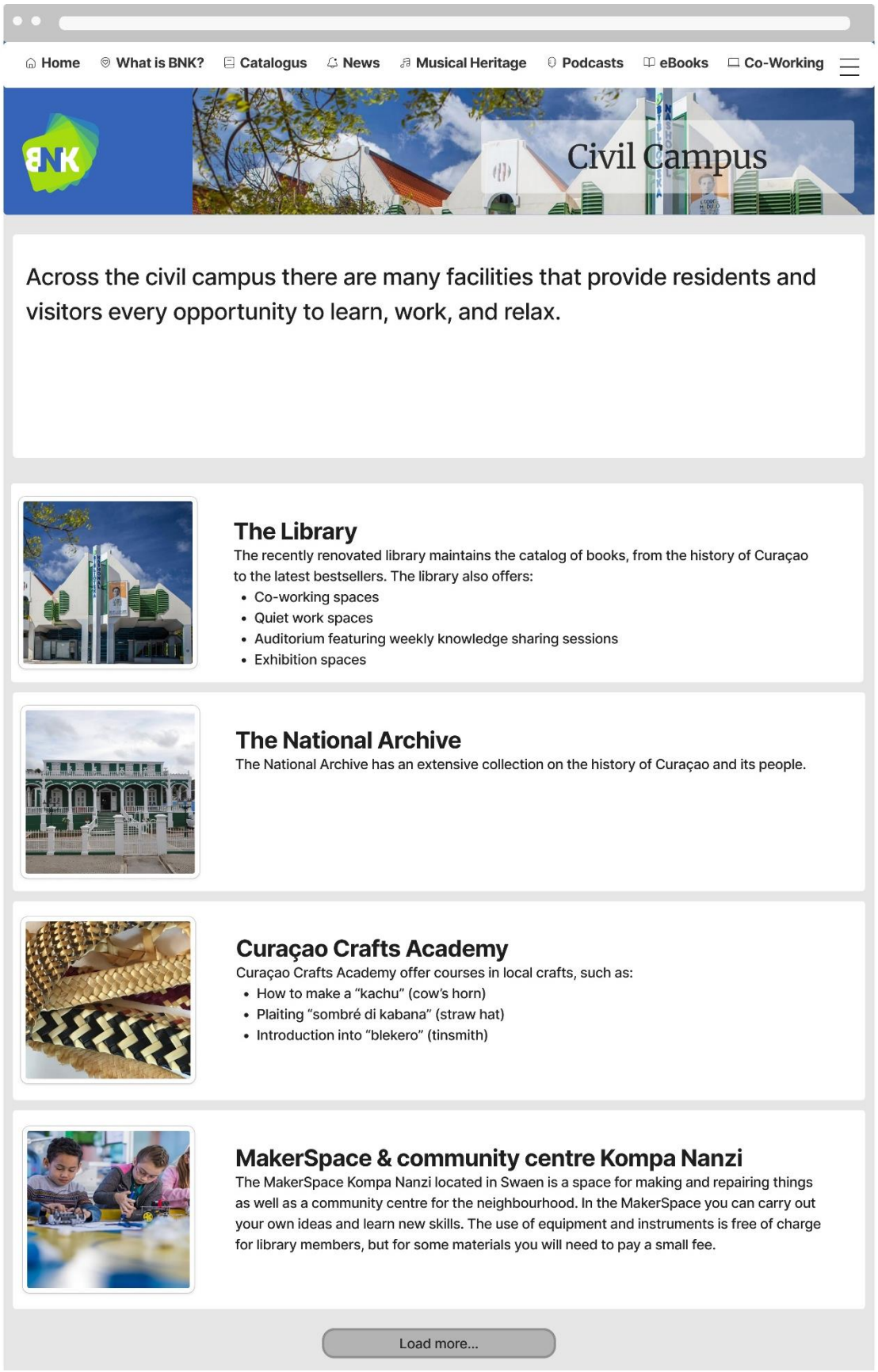


image (95). Mock-up of webpage highlighting all the civil campus facilities

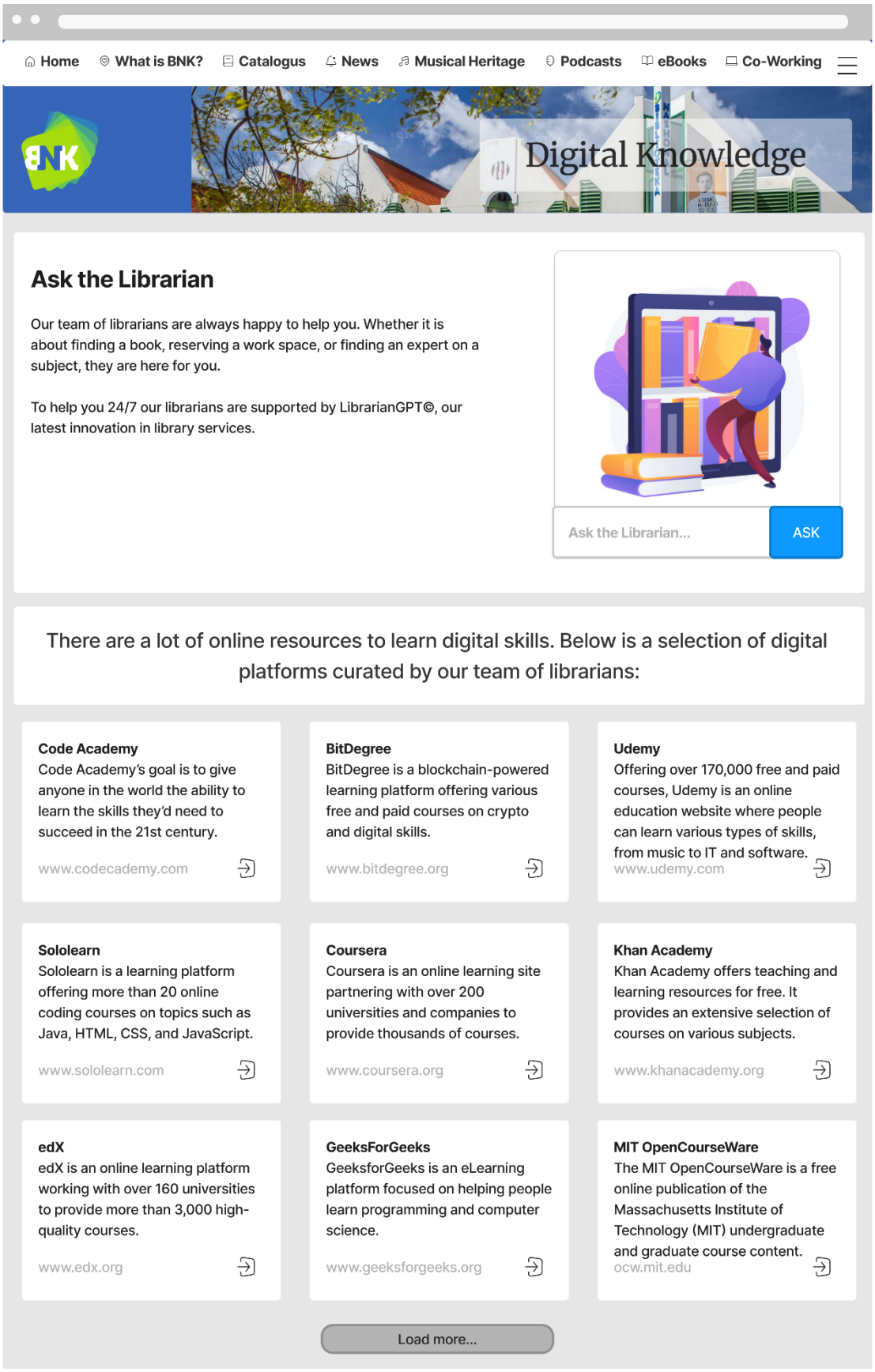


image (96). Mock-up of webpage with links to (free) online resources for learning digital skills

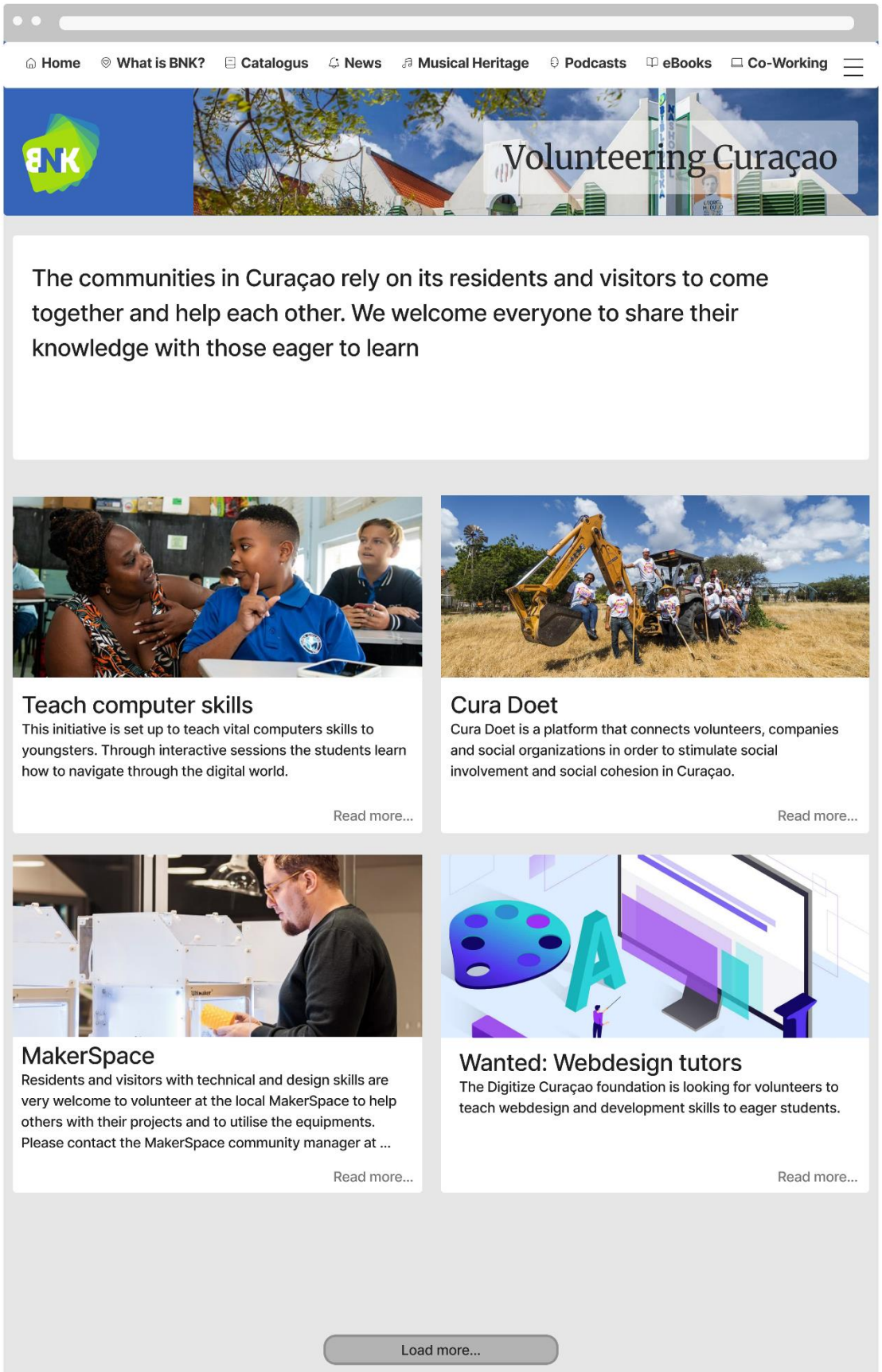


image (97). Mock-up of webpage showing volunteering opportunities in the wider community

Discussion on the proposed design interventions

In the design interventions chapter, the findings from the problem analysis and the location analysis are juxtaposed with each other to answer the following question:

> *In what ways can digital nomadism have a mutually beneficial impact on the socio-spatial context of Curaçao?*

The answer to this question lies indeed in looking beyond economic benefits to discover what unites us as human beings who are in essence all seeking to create a more fulfilling life.

As stated in the discussion on the spatial practices of digital nomadism, the knowledge sphere is where digital nomads can provide the most benefit to local communities beyond economic factors. The location analysis then highlighted that local communities in Curaçao would indeed benefit from fresh ideas and new perspectives. These insights inspired the idea of a civil (knowledge) campus.

The campus is an archetype for the coming together of people to pursue knowledge in a formal capacity. Such a spatial context provides its users with a frame of mind focused on gaining and producing knowledge in collaboration with others. However, these locations are oftentimes in some ways closed off for the larger community. The civil campus is the community-led and community-focused alternative; a place produced and materialised by the social relations among locals as well as between locals and visitors, and dedicated to the pursuit, creation, and sharing of informal (and formal) knowledge. The civil campus as a concept and vision works to bring together people from all walks of life base on the shared values, such as collaboration, purpose, and a mindset of continuous learning.

Then, by imagining the material expression of the civil campus in the context of Curaçao the main research question is answered:

> *What spatial interventions can facilitate mutually beneficial co-existence in the socio-spatial context between digital nomads and local communities in Curaçao?*

A campus as a 'total environment' offers places to live, work, as well as play. A core community of locals living in the civil campus area offers the stable, low-mobile, social infrastructure that will sustain the high-mobile activities of visitors and other locals coming and going to stay in temporary living locations, to work in the offices, co-working places, and the library, and to socialise (play) in the outdoor places, food places, and makerspace.

The outdoor places allow people to share and gain knowledge in an informal way by offering a varied set of meeting places furnished to allow for multiple knowledge sharing activities. More importantly, the idea of an ensemble of community facilitators alongside community members actively engaging in knowledge sharing activities forms the immaterial design that underpins and increases the use value of the civil campus, just as the User value of digital platforms increases through its Users' continued involvement and participation with the platform (Bratton, 2016, pp. 47, 48). By acknowledging the importance of the Users' involvement in the materialisation, use, and maintenance of the civil campus, the "speculative primacy of the conceived over the lived [space]" (Lefebvre, 1991, p. 34) is decreased.

The social domain cannot be formally designed, only the vision for it can be offered. Nor can the material domain be materialised through a prescriptive top-down conception if ownership for the success of the civil campus is to be assumed by the local community. Therefore, this project is not final with the design proposals in this thesis. Rather, these proposals are a starting point: a preliminary visual representation of the potential of the location for facilitating social interaction and knowledge and a guide for locals for how to go about producing a shared space and shared ground that welcomes everyone while respecting and adding value to the local culture and local social environment.

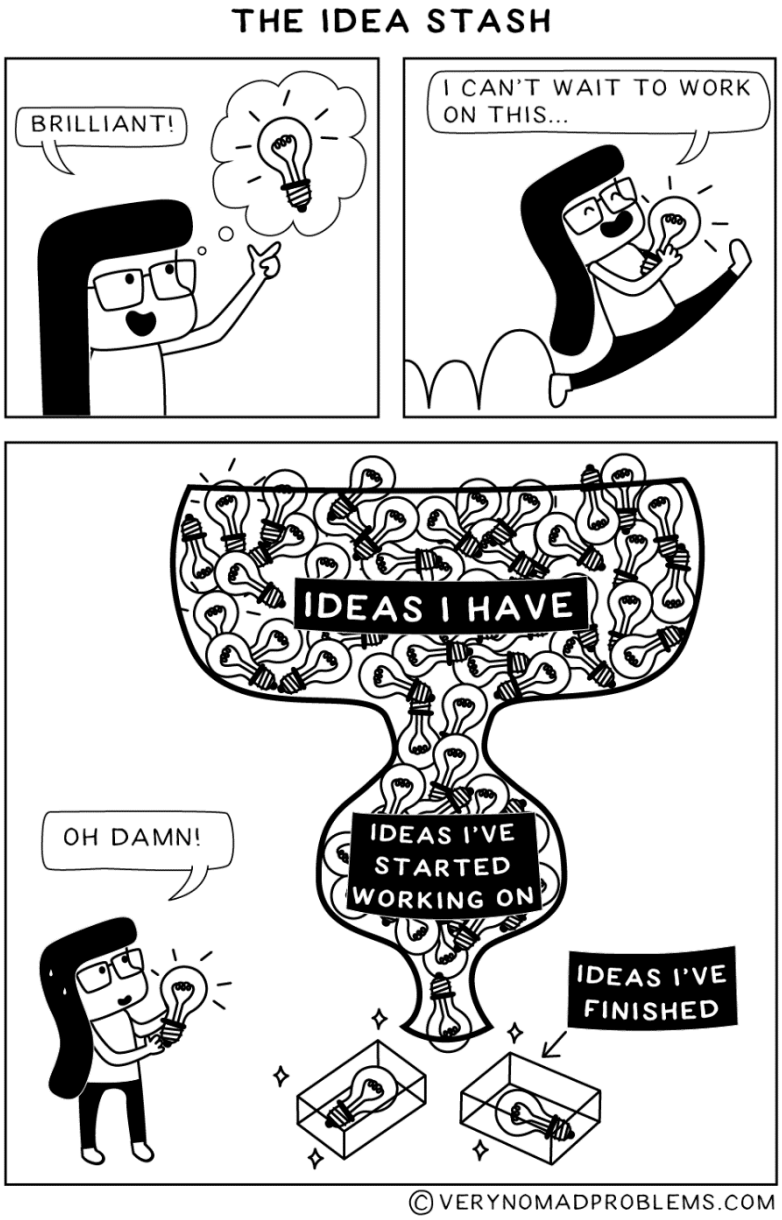


image (98). Ideas are the bread and butter of digital nomads. Comic written and drawn by Giang Cao; edited (and sometimes co-written) by Matthew Harris

Conclusion

The research questions have been asked and answered in the three previous chapters of this thesis. The following chapter contains concluding remarks on the project findings and proposed interventions. While the final design proposal is grounded in extensive research into the produced spaces of both digital nomads and settled locals in Curaçao, it bears noting that we are forever contending with the ramifications of past design choices while, with our present choices, we are inadvertently producing the potentials for new complications to emerge in the future. Therefore, this chapter also discusses the limitations inherent in the analysis and in the design as well as how transferrable the design proposal is to places outside of the context of Curaçao.

Spatial decisions are (globally and locally) often taken based on the highest economic short-term return rather than the highest benefit for the population's well-being, such as the privatisation and commercialisation of many of the once public beaches in Curaçao. Despite all these revenue-based spatial decisions and investments by foreign parties, especially in the tourism sector, the economic situation of the working-class population has not been improving in the last decades.

Before there were digital Interfaces providing a codified image of the totality of the world, we had and still have our cultural narratives, societal norms, and scientific theories regarding the human condition that provide a codified model of how the world works. Just like the codified images by digital Interfaces are limited, so is our codified understanding of what makes the world go round. As a result, I employ a healthy scepticism towards the effectiveness of spatial interventions to lastingly solve deeply held cultural, social, economic, and political convictions that are based on values which oftentimes remain unspoken and therefore unchallenged. Nevertheless, I am convinced that uncovering the intensely spatial characteristics of these cultural, social, economic, and political codes is a necessity to provide awareness and spark change. Freedom of mobility and spatial access, and the lack thereof, have always been used as tools to create social differences between groups of people. Our access to opportunities is entirely spatial: something as random as in which neighbourhood in Curaçao you are born (or from which part of the world you come from) is directly influencing your chances of receiving a good education, opportunities for work, and thus prospects for a good quality of life. Therefore, by investigating and documenting the practices of digital nomadism from the spatial perspective, thereby also highlighting the entangled nature of individual choices and global consequences, I have contributed to rectifying the framing of this mobile lifestyle as being 'location-independent'.

Space and its material expression in place is produced by the prevalent social relations. It is therefore inevitable that the design interventions include an important role for interventions in the social domain. These social interventions are the strength of the proposal, but also its greatest weakness. The proposed design, while spatial in nature, very much hinge on the willingness and the readiness of community members to take on the responsibility to go beyond their comfort zone, ignore popular narratives of exclusion, and pursue change without waiting on another to go first. Furthermore, while the design has been discussed and informally validated through talks with a select group of people, these people already possess (some) access to global knowledge. The people most in need of obtaining this access were not involved in the process. So, while the proposal includes tangible interventions in the material and digital domains, further local empirical work is needed to determine how exactly the proposal can bear the fruits that it promises. Still, this project is at this stage more for the knowledge-holders than the knowledge-seekers, as it is a call to action to these knowledge-holders, both locals and Curaçaoan diaspora, for their active contribution is needed. It is a call to action to them to act **for** equality, to share their knowledge consciously and patiently, and to be advocates for those struggling to thrive. Because those struggling are talking, yet their voices are not considered to be important enough by those in power to listen.

Many communities around the globe are currently facing struggles around digital nomads and other international remote workers who use geo-arbitrage to make a better living

situation for themselves at the expense of the local social fabric. While each community has different areas of conflicts and will experience these conflicts in different ways, the premise of seeking common ground for finding ways to co-exist applies to all. Furthermore, the general message that governments should not only look at short-term economic benefits but also consider the longer-term social and cultural sustainability of their communities is also relevant to all countries. So, while specific design interventions should be determined based on each specific location, the design project in this thesis proves that understanding the spatial consequences of social and political actions is a prerequisite to someday realise social justice, and to find and leverage the common ground between seemingly opposing lifestyles.

Special note on grassroots movement in Curaçao

Big socio-political, socio-economic, and socio-cultural changes in Curaçao have often been initiated by grassroots movement: a) The slave revolt in 1795 led by Tula that planted the seed in many enslaved peoples' hearts of their rights as equal citizens. b) The dockworkers' strike in 1922 led by Felix Chacuto that resulted in the first collective labour agreement in Curaçao. This strike was the first in a series of labour strikes culminating in a large solidarity strike on May 30, 1969, known as 'Trinta di Mèi' (Thirtieth of May), that started the process of decolonisation by the Dutch government and the end of the political dominance of white Curaçaoans (the first black governor and one of the longest-serving governors of Curaçao, Ben Leito, was appointed in 1970). c) The universal suffrage granted in 1948 after efforts by, among other, mr. Moises da Costa Gomez, who was the first person from the Dutch Antilles to advocate in the Netherlands for autonomy and universal suffrage for the population of the Netherlands Antilles, and Adèle Rigaud who led a group of women in collecting signatures for a women's petition for women's suffrage addressed to the House of Representatives in the Netherlands. These successful grassroot movements in Curaçao were all the product of citizens coming together in a show of solidarity with their fellow citizen. This same spirit of solidarity is needed to enact true change in the socio-economic landscape of Curaçao.

There is a slogan that is popularly bandied about on the island: 'Nos mes por' ('We can do it ourselves'). While superficially it seems to be an inspirational, perhaps even empowering, slogan, what is left unspoken is who belongs to this 'we' and why. Because this slogan carries an implicit assumption that there is no need for cooperation with 'the other' who does not belong to the 'we' that should do it themselves. In the current neoliberal political climate, the slogan has thus been used and misused to put the responsibility of living in poverty and/or not having access to opportunities on the shoulders of those who never had the means to choose otherwise, instead of focusing on the (global and local) systems that perpetuate the inequalities and on how to implement necessary changes together, even when financial means are insufficient. This project thus calls for all Curaçaoans to embrace a new slogan: 'Huntu nos ta logra' ('Together we achieve'), which underscores the importance of co-reliance ('samenredzaamheid' in Dutch). More importantly, this project shows the need to design the spatial contexts where we can all meet each other face-to-face (*place*) with hearts, minds, and souls fully acknowledging the current realities of social inequalities (*time*) in order to discover the commonalities that bind us (*space*).

I have spoken.

Reflection

It is personal convictions, beliefs, and values that have always been the seed from which scientific discoveries have been pursued. The idea that there exists one universal truth is false. From this personal conviction, I have embarked on this journey to discover a version of the 'truth' where the 'us vs. them' mindset does not predominate and where a design for the local scale is imagined from a focus on cooperation and mutual benefits, both on the global level and on the local scale. This year's topic of the graduation studio Design of the Urban Fabric is 'Embracing Plurality, Growing Porosity' which deals with the question 'how will we live together'. The answers to this question depend on the intangible beliefs and values that guide our tangible and spatial actions, and whether we are willing to accept the possibility that a multiplicity of spatial practices can live together if we focus on what unites us rather than what differentiates us from each other. Providing new spatial perspectives on how we can live together now and in the future are the main objective of this graduation studio.

Since I was a child, I always asked questions about why things work as they do rather than how they work. While I did not consciously articulate this then, I am convinced that how things work oftentimes is the result of this hidden why. And vice versa, when you understand why something must work (its purpose), it will inform how you will go about making it work. The core of this project dealt with the inquiry and analysis into the spatial practices of digital nomads and Curaçaoans, but it attempted through this analysis to uncover why these spatial practices exist and are materialized in the way they are. Consciously engaging with the 'why' question is necessary for the urbanism and architecture fields because urbanists and architects are actively producing much of the spatial infrastructures based on 'whys' of others (and of themselves) that they do not always understand clearly.

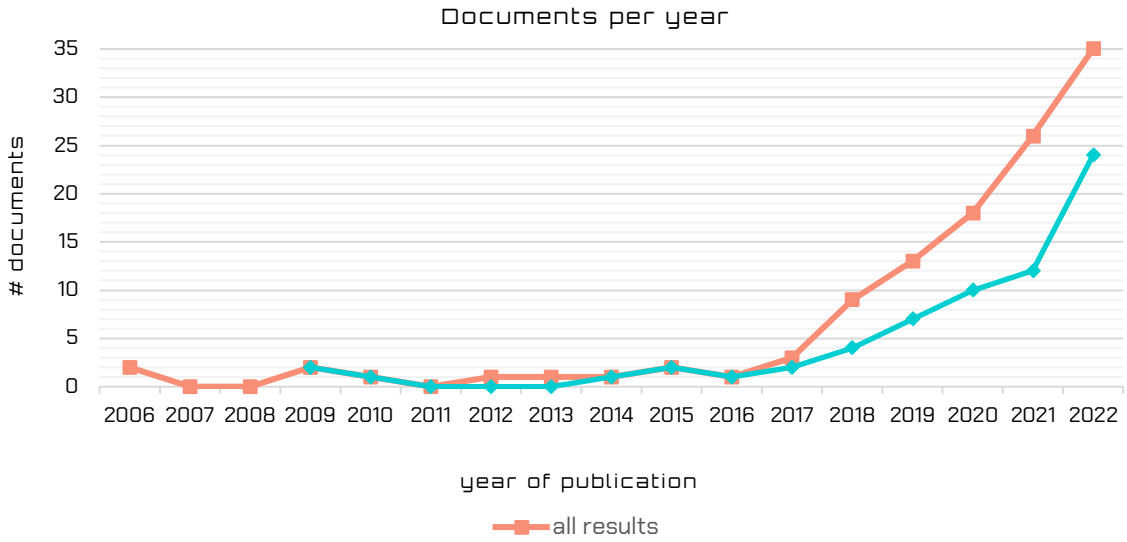
That said, I found that it was a very difficult process to translate the immateriality of social relations to tangible products, both in the research part and in the design section. It took me a long time to uncover the intricacies that lie beneath the spatial practices of digital nomads and Curaçaoans and how this 'why' could then inform a spatial design for both. I first went about this process, for both the problem and the location analyses, in a very theoretical way and looked at many different points of view from fields such as sociology, economics, philosophy, psychology, systems theory, and even quantum social sciences (most of them did not make it into this final report). This resulted in a sea of data and information that, on the one hand, showed the complexity of this subject but, on the other hand, made it that much more difficult to see the forest through the trees. The feedback I received from my mentors also pointed at the lack of 'the human' in my representations of the research subjects. This approach thus took me away from the core of the project, which was the social relations and the 'feeling' aspect of the human experience. I had inadvertently put too much credence to the conceived representations of the human experience instead of focusing on the lived spaces; just as Lefebvre warned against. It was thus necessary for me to let go of most of these branches of inquiry and focus on the empirical side of the project. I started to focus on the personal accounts of digital nomads and Curaçaoans, reading and listening to their stories and how they experience life, its difficulties, and why they end up performing spatial practices that are morally questionable at best and unethical at worst.

Nevertheless, I confirmed for myself that my strengths as a person, and thus as a designer, are not to be found in designing my way through the research (in other words, focusing mainly on the 'how'), but to let all these little bits of research and empirical data percolate in unconscious processes (which is our very own biological AI system) to spark ideas and connections that in the end do result in a spatial design. Would a research process initiated by practical design tasks, including producing multiple design variations of solutions, have resulted in a more tangible and practical design proposal? I have no doubt that that would be the case. Yet, my contribution is that I am motivated to uncover the hidden assumptions that oftentimes are the reason why such tangible and specific solutions fail to work long-term in practice.

This project was thus truly a process of discovery. The end proposal was by no means anticipated and only started to emerge towards the end of the P3 process. An important part of the location analysis as well as the problem analysis (which would have been part of the P2 and P3 milestones) were also performed in the last 4 weeks after P4; the status of the design proposal required new empirical insights from both the nomads' and the Curaçaoans' perspectives. In the last 10 months, every step led to the next as well as necessitating 'going back in time' to previously executed steps in order to re-examine,

enrich, and adapt the analysis tasks as well as to reevaluate the meaning of the findings. Here as well, time was never linear nor truly circular as each insight acquired depth and richness by the multiple instances of actions 'in the past' prompting new, previously unthought of, directions for the future. Our conceived notions of past and future are thus always anchored in, influenced by, and redefined through the ever-expanding present, the 'now' moment. In this way it has been shown again that time is not a substance onto itself; it has no physical bearing other than being inscribed in the changes in space that come into our awareness.

This process of discovery also fit the subject matter, which is one that is still under-researched from the spatial perspective. There are currently very few studies done on the spatial impact of digital nomadism, especially on the impact for the host communities. A quick search on the Scopus database at the start of this project using the search terms "digital nomad" OR "digital nomadism" in the title, abstract, and keywords yielded 115 results published in the years 2006 – 2022 of which 66 has Social Sciences as subject area (graph 05). Of the Social Sciences results, 45 are journal articles with journals related to tourism, technologies, and geography/urban networks equally represented. However, only 3 have addressed the socio-spatial impacts of digital nomadism for the host community, two written in English and one in French. This thesis thus also contributes to closing this gap.



Graph 05. A total of 115 Scopus results for "digital nomad" OR "digital nomadism"

Throughout my research I had to deal with limited data availability for Curaçao. These circumstances necessitated some creative data gathering work, such as searching for open online data sets, which turned out to be quite fitting for the topic of this thesis. I had to combine open-source maps from OpenStreetMap and Bing Maps for the spatial configuration of streets and buildings with data queries via the APIs of Google maps to get some of the functions of the buildings. Additionally, I had to use online tools like Apify.com to scrape data from Airbnb for Curaçao (rather than going page by page to copy paste data from the listings on the website). This made me appreciate the value of having up-to-date and comprehensive maps and data sets made possible by all the progress in the field of digital technologies. I am also grateful that beginner's skills in pro-

gramming are being taught to every student enrolling in the bachelor's program at TU Eindhoven, where I obtained my bachelor's degree in architecture, urbanism, and building sciences. The tasks of the urban designer will only become more enmeshed with other disciplines, including computer science, if we are to design The Stack to come.

In this project I have shown how the model of planetary-scale computation, The Stack, by Bratton relates to the theory on the production of space by Lefebvre. This has demonstrated that the spatial triad theory is very valid as basis for any model that attempts to represent the complexity of how we are making and remaking the world through our interactions and relations with others, including non-human entities. Additionally, this thesis was consciously built on the premises of the mobilities paradigm by Sheller and Urry to not view the world as consisting of opposing binary notions, but to find the common ground between the nomadic and the sedentary practices that make up our world.

I am grateful for the freedom granted to us during this graduation process to curate our journey, to discover our design agency, and to uncover what direction we will want to pursue after our studies. I have rediscovered why I have such complex feelings about my home country Curaçao: why I have wanted to live abroad, at least for a while, even though I feel most grounded when I am amid its raw nature and at times exasperating yet always loving people. This thesis is thus also a call to action to me.

The oldest, mightiest trees have all started as a single tiny seed. My hope is thus that I have succeeded in crafting such a seed that others may take and plant, water it, grafting it with their own plants, and gifting it their loving energy that it may grow to become something more mighty and more beautiful than I could have imagined.

This thesis is all about the relationships between people because it starts and ends with us. Looking at the global ecological problems, nature does not need our input to thrive. Nature has been adapting to changing circumstances for millennia. It is therefore up to us to acknowledge and respect the vast ecosystem we are only a miniscule part of. This is why we must learn to look at spatial interventions that focus on mutually beneficial relationships with each other and with our non-human Earthlings: the balance that nature is made to continuously achieve will eventually simply overwhelm those (us humans) that do not learn to live and work within its inherently reciprocal system, no questions asked.

A few quotes re. 'What does Curaçao mean to you?'

It's where it feels natural to "Be".

It's where everything is "schots en scheef" but it wouldn't have its charm without it.

It's where I feel that I am at Home.

Home. Where I can always return to if there are no other options.

Curaçao for me is a synonym of home.

Every country has its own challenges, but Curaçao is simply worth the fight.

Curaçao is where you can just be amid chaos and still feel at peace and happiness.

It is a place I call home and where I sit at the feet of every sunrise and sunset.

My home (foundation). Family

Curaçao is home, nature, colonial history, wealth and poverty, but above all a lot of potential.

Curaçao is joy and tears.

For me, Curaçao is my home. Where I build the foundation of my personality.

Curaçao means home to me.

Not only where I was born and raised, but also where I feel most comfortable (most of the times).

I am living for a long time in the Netherlands now, but as long as I have family there, it will always feel like home.

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