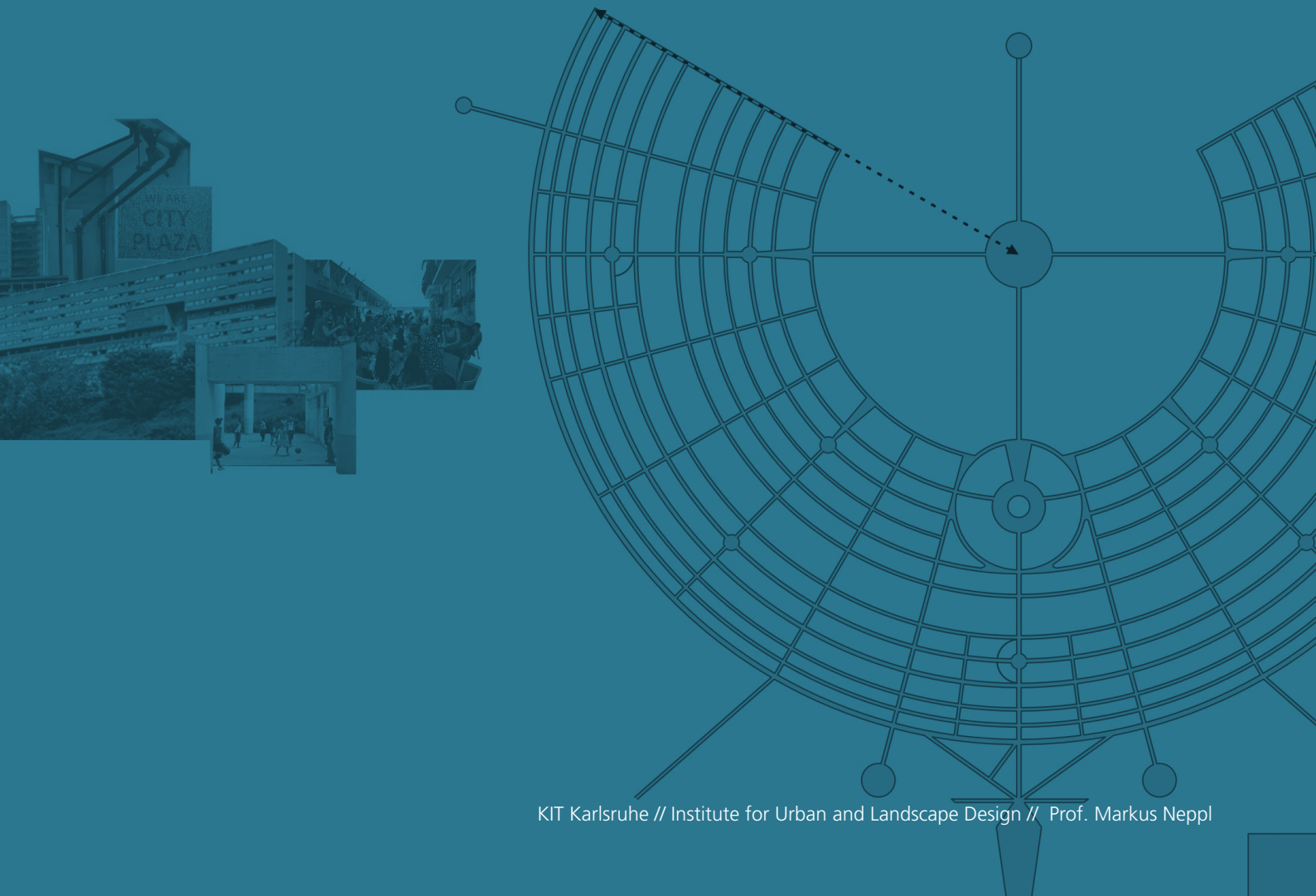STOP **KIT**
Karlsruhe Institute of Technology

IESL - Research Seminar Winter Term 2023/24

Ephemeral City

Planning Principles of Temporary Urban Structures

"Ephemeral Urbanism: Does permanence, as the sole instrument
in urban imaginaries, really matter?"
(Rahul Mehrotra and Felipe Vera, Ephemeral Urbanism 2020, p.357)

Content

Introduction

Prof. Markus Neppl, Dr. Manuel Giralt

PROJECT BACKGROUND

Alongside the dominant discourse on existing and newly planned permanent urban structures, the phenomenon of temporary structures tends to receive little attention in urban planning and architecture. This study considers temporary structures such as music festivals, religious gatherings, markets, emergency shelters, refugee camps, and major sporting events. Although temporary structures are omnipresent, they are rarely perceived as an important part of our everyday lives.

The fact that temporary urban structures can be an exciting field of study was demonstrated with the exhibition contribution *Ephemeral Urbanism: Cities in Constant Flux* by Rahul Mehrotra and Felipe Vera at the 15th Architecture Biennale in Venice in 2016. The authors presented a visually stunning summary of their research work on the *Kumbh Mela* in India. Due to its size the Kumbh Mela is an extreme example of a religious gathering that takes place at different locations across India every twelve years. In 2013, Mehrotra and Vera's team studied the Kumbh Mela at the confluence of the Ganges and Yamuna rivers in Uttar Pradesh. During this event, a temporary city was created to accommodate around five million inhabitants, and up to 100 million visitors were hosted over a period of 55 days. (Rahul Mehrotra and Felipe Vera, Ephemeral Urbanism 2020, p. 270 ff.)


Foto: © Halbot & Binder

Ephemeral Urbanism: Cities in Constant Flux by Rahul Mehrotra and Felipe Vera at the 15th Architecture Biennale, 2016

This study on the Kumbh Mela, which was conducted as part of a Harvard research project and shown on the 2016 biennale, was additionally published in two books: *Kumbh Mela: Mapping the Ephemeral Megacity* (NYOGI Books, 2017) and *Ephemeral Urbanism: Does permanence matter?* (BABEL International, 2020). In particular, the extended presentation of the phenomenon of temporary urban structures in the book Ephemeral Urbanism forms the conceptual and methodological basis of the research study in this publication.

The term ephemeral city refers to transient, fleeting, short-lived or temporary phenomena in an urban context. In the introduction to his book Ephemeral Urbanism, Rahul Mehrotra refers to the *Kinetic City* to further illustrate this term. The Kinetic City represents a city in a constant state of change. This means, for example, that uses in buildings change relatively frequently or that buildings go through a life cycle from construction to demolition over the course of multiple decades or even centuries, while the structure of plots, blocks or road networks are only subject to very slow changes. What is remarkable here is that the concept of the Kinetic City challenges the notion of a - sometimes illusory - permanence of urban planning and architectural solutions.

The concept of the ephemeral city broadens this perspective by focusing on even more short-lived urban phenomena that are intentionally designed as temporary facilities from the beginning. In the context of these temporary urban components, it becomes apparent that the primary purpose of each facility, whether it be festivals, markets, sporting events, or emergency shelters, determines its characteristics in terms of size, complexity, lifespan, and materiality. However, what they all have in common - and what distinguishes them from most conventional planning - is that all projects have a planned end from the very beginning. (Rahul Mehrotra and Felipe Vera, Ephemeral Urbanism 2020, p. 18)

In their book Ephemeral Urbanism, Mehrotra and Vera define the following seven overarching categories, which they underpin with various case studies: Religion, Celebration, Transaction, Extraction, Disaster, Military and Refuge. With festivals, christmas markets and refugee camps, the works of the KIT students are largely within these categories, but add the categories of major sporting events with a study on the Summer Olympics and an additional overarching topic with an investigation into the temporary occupation of existing structures.
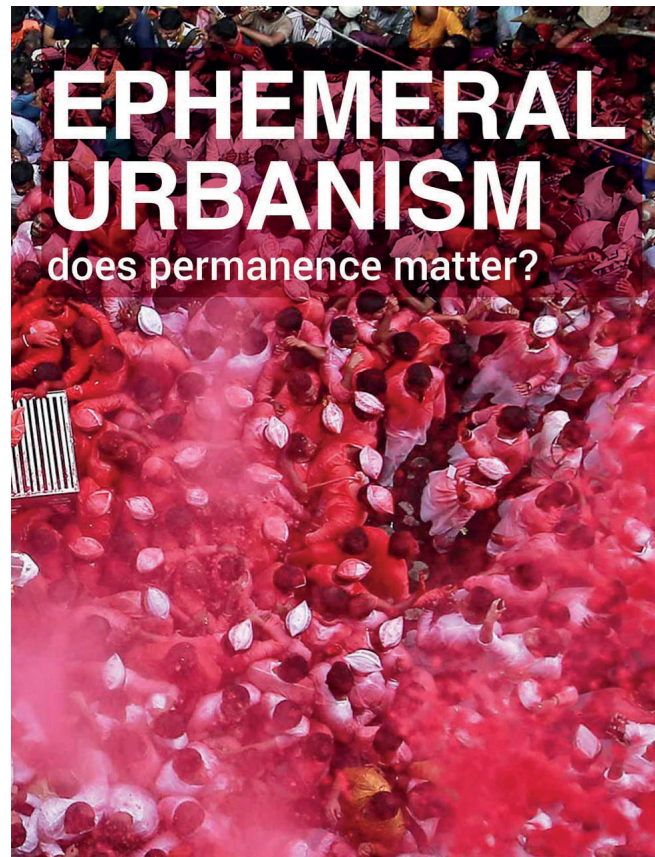
Ephemeral Urbanism: Rahul Mehrotra and Felipe Vera, BABEL, 2020
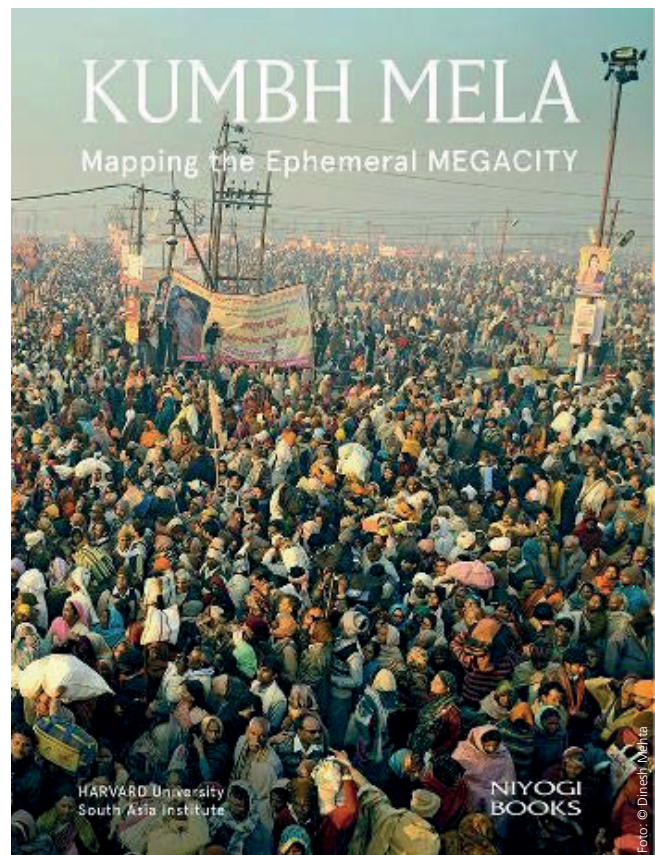
Kumbh Mela: Rahul Mehrotra & Felipe Vera et al., NIYOGI Books, 2016

The Grand Shrine in Ise, Mie Prefecture, Japan, should not go unmentioned here as a special example in the context of ephemeral urbanism and architecture. This is a shinto shrine that has been completely rebuilt every 20 years since the year 690 AD. This means that all the materials are replaced and rejoined identically in every iteration

The only things that are permanent about this fascinating building are the place itself, its religious and historical significance for the people and the underlying architectural concept.

Looking at this project almost inevitably leads to philosophical questions about the permanence or ephemerality of these buildings. Can we still speak of the same ensemble of buildings, even if the physical material is replaced every 20 years?

This brings us to a series of overarching central questions that have accompanied us throughout this study and were part of the programme's cross-project discussion:

• Where does the claim to permanence in architecture and urban planning come from?

• Is a permanent urban structure the only desirable form?

• What role has time and permanece in urban planning?

• Which temporary urban structures can we recognise and which functions do they fulfil?

• What positive and negative aspects of temporary urban structures can be identified?

Grand Shrine in Ise, Mie Prefecture, Japan

Foto: © Joseph Redwing Miranda

"Given the overwhelming evidence that cities are a complex overlay of
buildings and activities that are, in one way or another, temporary,
why have urbanists been so focused on permanence?"
(Peter Bishop and Lesley Williams, The Temporary City, p.10)

Task of the Research Project

Prof. Markus Neppl, Dr. Manuel Giralt

DEPARTURE

Building on the conceptual and theoretical foundations of Mehrotra and Vera, the aim of this research project is to open up new thematic areas and to expand the already published material with further case studies and new findings. In addition to structural analyses, e.g. of road networks, technical infrastructure, land and housing, aspects of organizational structure, planning processes and implementation strategies will also be examined. The findings from the analysis of these case studies will then be compared and summarized.

This seminar took place over three months in the winter term 2023/2024. The students' work was divided into a number of steps. The starting point was to find a research topic, in which the students were able to decide on an overarching thematic field. This was followed by preliminary research to select three suitable case studies. In the course of the analysis, the teams identified individual sub-aspects on which they focused their respective work and which formed the basis of their comparative analysis. These findings were then summarized in plans, infographics, diagrams, photos, tables and texts and finally prepared for this publication.

During the semester there was also the opportunity for an exchange with the Department of Planning at the COEP Technical University in Pune, India, led by Professor Pratap Raval and Dr Isha Panse. The aim of this joint workshop on ephemeral urbanism was to compare and discuss the research work of COEP in Pune with the preliminary results of KIT. The synopsis of the Indian and European examples showed how multifaceted the issues around temporary urban structures are. Using the case study of COEP students on street vendors and street markets in Pune as an example, it was discussed which - sometimes gradual - differences exist between formal and informal ephemeral urban structures and how these informal temporary phenomena can be integrated into future formal planning.

Kumbh Mela, Allahabad, India, 2013

RESULTS

This publication presents the work of six student teams who were each able to choose an overarching theme within the framework of the ephemeral city and analyse it in depth through three case studies.

The results can be roughly divided into two groups. The first three studies concentrate on temporary urban phenomena associated with sport, leisure, and culture. They operate in the context of positively associated events and voluntary participation. On the other hand, the three contributions in the second part focus on other aspects of the ephemeral city, such as informal squatting in existing buildings or camps for refugees. These arise from emergencies and represent a serious situation for those affected, sometimes without any alternative.

All the themes share a departure from the typical architectural discourse, offering intriguing insights into aspects of our built environment that are often overlooked. Each student team approached their respective topics with dedication and delved deeply into the subject matter during the research phase. Upon reading the papers, the enthusiasm and attention to detail can be seen in the various infographics and textual contributions that concisely summarise the key findings.

In conclusion, this research seminar was exceptionally engaging, rewarding, and enjoyable. We aim for our readers to enjoy this publication and gain new insights, which may also apply to conventional planning tasks, as they explore the topic of the ephemeral city.

Burning Man Festival, Nevada, USA, 2018

FESTIVALS

BURNING MAN, NEVADA; FUSION FESTIVAL, LÄRZ; DAS FEST, KARLSRUHE

Margarethe Gestrich, Nina Hasenfuß, Laura Mahler, Chiara Satriano

FUSION, LÄRZ

DAS FEST, KARLSRUHE

BURNING MAN, NEVADA

INTRODUCTION

Transitory landscapes of celebration find their justification in the staging of alternative realities. They suspend reality, offering an illusionary dimension that engages the senses of the body and the power of imagination.

This scholarly paper is dedicated to a detailed analysis of three well-known music festivals – Burning Man in Nevada, Fusion in Lärz, and Das Fest in Karlsruhe. The focus is on themes essential to understanding ephemeral city structures and innovative urban planning paradigms. These events not only serve as venues for cultural and musical experiences but also present themselves as complex social structures and temporary urban constellations that allow for a profound structural-analytical examination. The structural analysis aims to take a closer look at the temporary urban structures that emerge during the duration of these festivals.

These structures are characterized by temporary architectures and innovative spatial concepts, prompting a discussion of their adaptability, flexibility, and potential influence on long-term models of urban planning. The chronological sequence and organizational structures of these festivals are illuminated in the context of their complex temporal processes and the emergence of temporary social structures.

The structural-analytical investigation spans various dimensions, such as artistic expression, ecological sustainability, and social inclusion. Through a thorough analysis of these aspects, insights are sought into the extent to which these festivals can serve as ideation laboratories for innovative concepts that can be implemented in urban planning. Consequently, the paper presents a comprehensive evaluation of the transferability of these concepts to a broader urban context.

CASE STUDIES

The selected examples illustrate that flexible architectural configurations are globally deployed on a temporary basis to provide mid-term protection for massive crowds. These structures fulfill various functional tasks and are employed during musical and cultural events. Mass gatherings require the deliberate consideration of the time factor and adaptable spatial planning. Analyzing such recurring events and their locations provides a "formula" for designing a recurring urban settlement.

The aim of selecting these three cases was to choose festivals with, at first glance, the most diverse conditions possible in order to be able to analyse similarities and differences.

The first consideration was the appropriation of the existing conditions by the events and their interaction with the very different environments. While Burning Man takes place far away from civilisation in the desert, a former military base is converted for the Fusion Festival and Das Fest occupies an urban park for a weekend. In the process, the events find various existing built and non-built structures and find a way to utilise or deal with them. Each festival has its own challenges and approaches.

It is also relevant how mobility works on the festival grounds, what rules there are and how arrivals and departures are organised. The different settings of the festivals reveal clear contrasts and parallels, and aspects of climate protection and sustainability also have an impact in this context. Particularly interesting here is the type of transport used by visitors and how the location of the festival influences accessibility by public transport.

As the festivals are located in such different places and travelling to and from them varies in complexity, the aspect of accessibility also plays a major role. Questions arise regarding the accessibility of the site for people with disabilities, the accessibility of various areas on the site for visitors and, of course, the social accessibility of the festivals. On the one hand, regarding the audience that the respective festival addresses, but also in terms of the financial resources that someone requires in order to be able to participate in the event at all.

Burning Man, Nevada

Fusion Festival, Lärz

Das Fest, Karlsruhe

COMPARISON

BURNING MAN, NEVADA

Desert
The festival takes place in Black Rock Desert in Nevada, USA.

29,000 ha
The total size of the area.

25 min
It takes about 25 minutes to walk from the outermost point of a sector to the "man" (center).

9 days
The festival lasts nine days and traditionally ends on the first Monday in September (Labor Day).

37 years
The festival was first held in 1986.

**70,000 visitors**
The festival now attracts around 70,000 visitors a year.

Offers
The festival sees itself as a large art exhibition, as a place of intensive self-expression and is considered a big party.

Organization
The festival is planned by a non-profit organization, the camps and art exhibitions are organized by the participants themselves.

Burning Man

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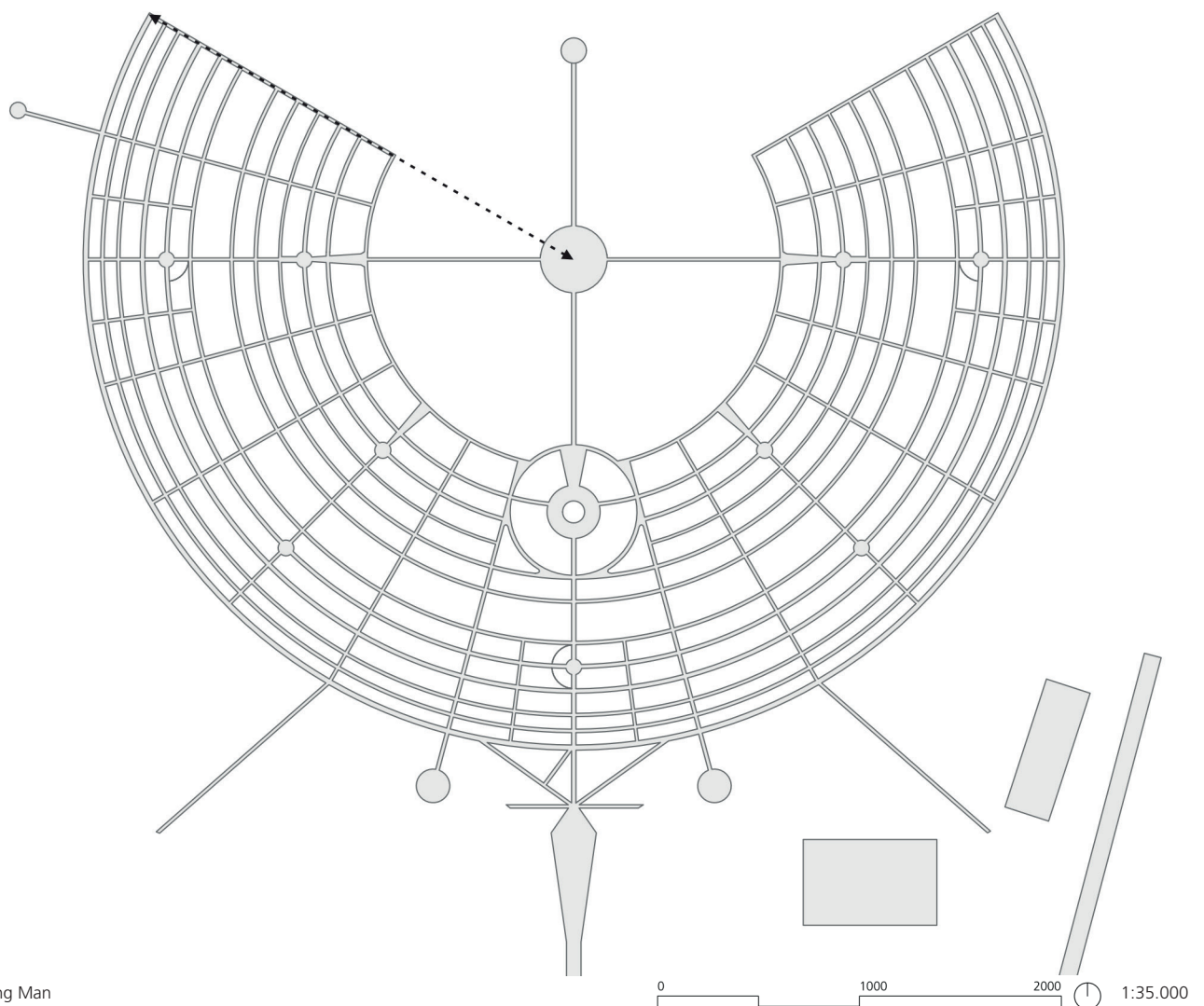
FUSION FESTIVAL, LÄRZ

Airfield
The festival takes place at the former military airfield in Lärz.

180 ha
The total size of the area.

15 min
It takes about 15 minutes to walk from the Fusion Lake to the „Luftschloss".

4 days
The Fusion Festival spans four days and takes place at the end of June / beginning of July.

27 years
The festival was first held in 1996.

70,000 visitors
The festival now attracts around 70,000 visitors a year, who are selected by lottery.

Offers
In addition to the music, there is cultural accompaniment such as theatre, art installations and performance art.

Organization
The site belongs to a limited liability company and is leased by an association, so that they can operate independently of each other. The festival is financed by ticket revenues and volunteer work.
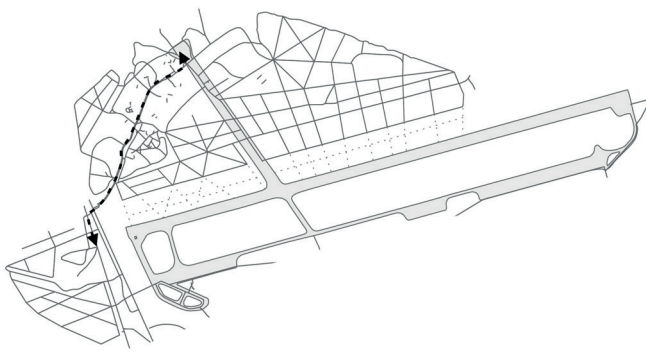
Fusion   0   1000   2000   1:35.000   Das Fest   1:35.000

DAS FEST, KARLSRUHE

Park
The festival takes place in the „Günter-Klotz-Anlage", which functions as a normal park for the rest of the year.

14 ha
The total size of the area.

10 min
It takes about 10 minutes to walk from the north to the south end of the site.

4 days
"Das Fest" lasts four days at the end of July and is heralded by the "Fest am See", which takes place the week before.

38 years
The festival was first held in 1985.

250,000 visitors
The festival now attracts around 250,000 visitors a year.

Offers
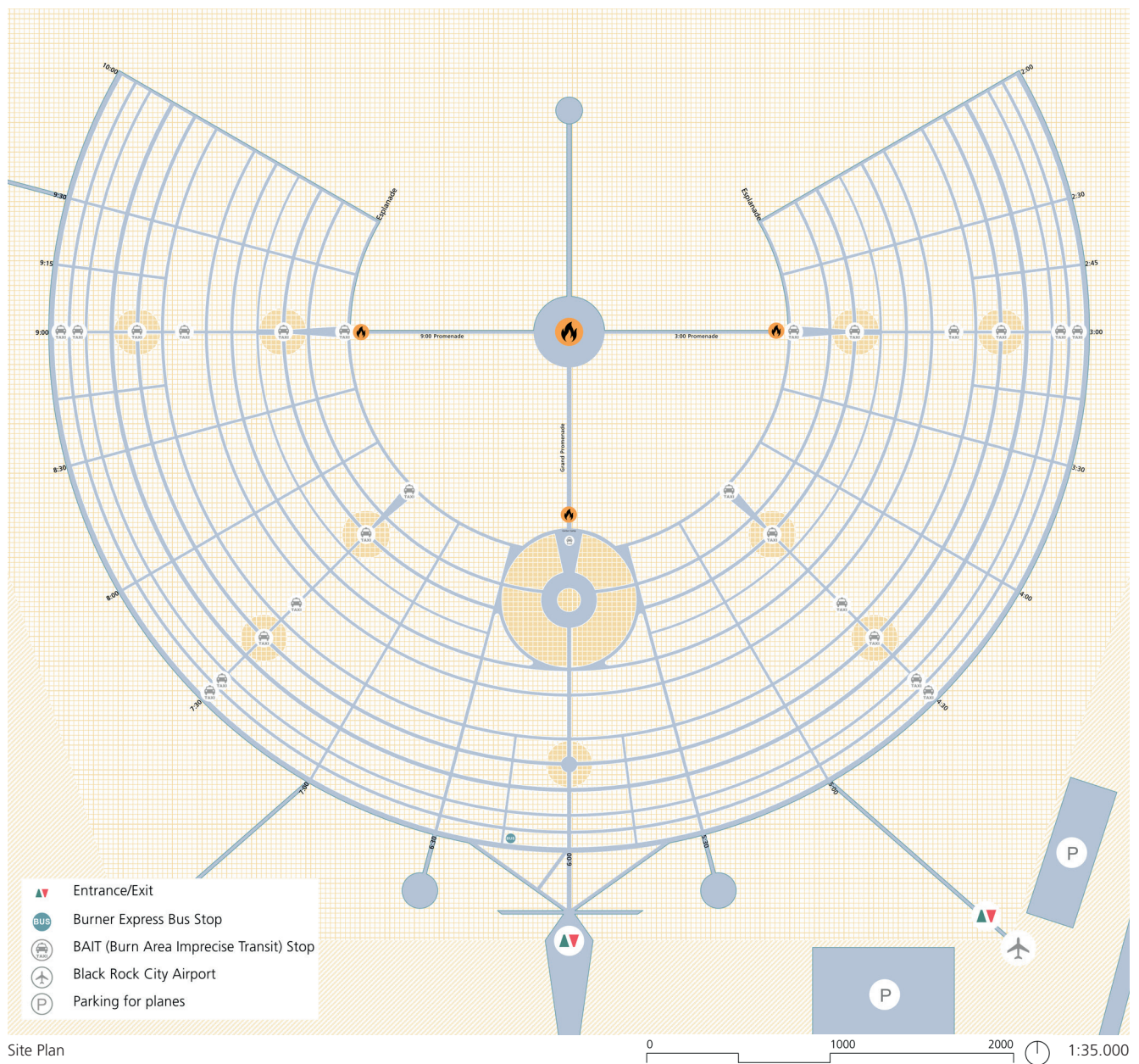In addition to music, there is an extensive range of family and cultural activities.
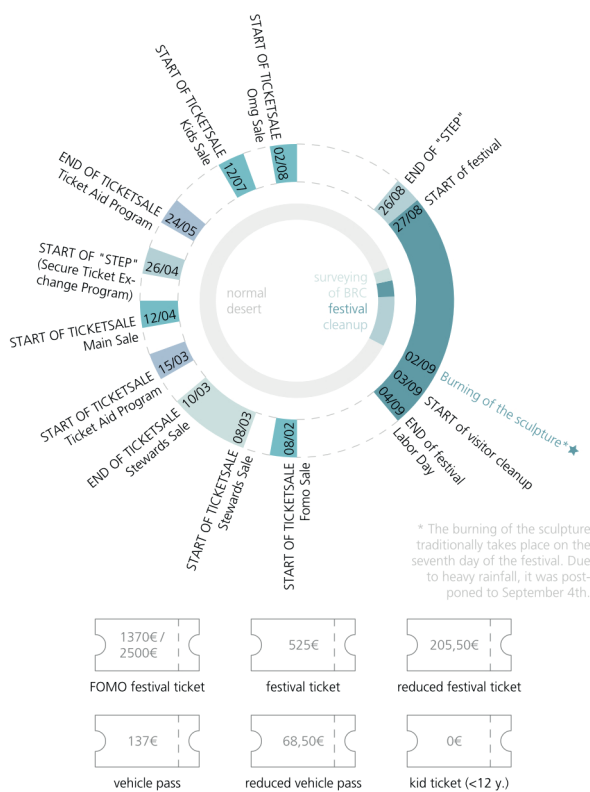
Organization
The festival is organized by a Marketing and Event GmbH based in Karlsruhe and financed by ticket revenues and advertising partners.
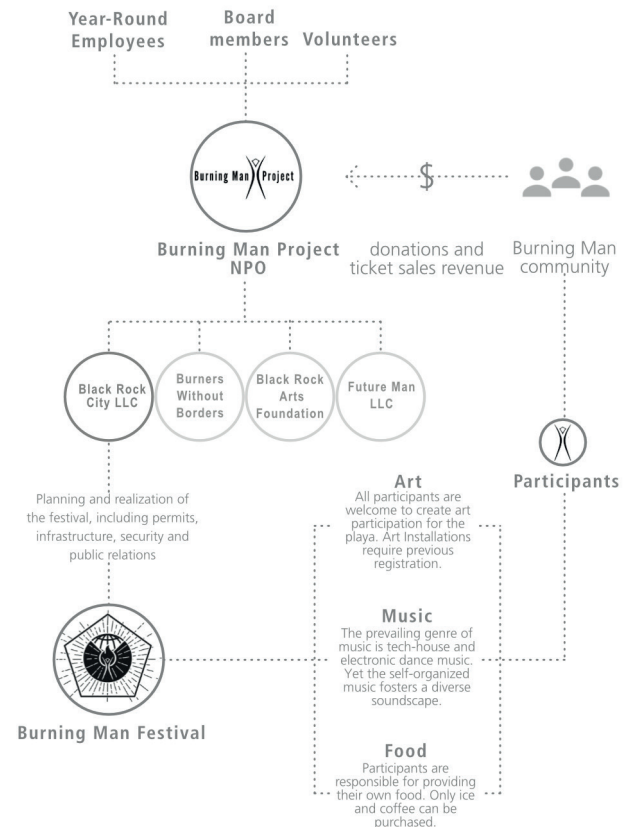
CASE STUDY 1:
BURNING MAN, NEVADA

The Burning Man Festival was founded in 1986 as a "pop-up" tent city that comes to life every year in the Black Rock Desert, Nevada, USA. This city called Black Rock City is entirely built and operated by participants, it is home to art installations of all shapes and sizes, theme camps that offer a variety of experiences, and countless opportunities for connection and self-discovery. It is an ephemeral city that disappears into the desert after the festival ends.

Participants are encouraged to shed their everyday personas and embrace their authentic selves, creating a unique atmosphere of self-expression, self-reliance, and community. The festival operates on a gift economy, fostering generosity and sharing among participants. This spirit of openness and inclusion extends to everyone, regardless of background or identity. At the end of the festival, the symbolic burning of a massive wooden effigy, the central art installation, known as "the Man," signifies impermanence and encourages participants to embrace change and transformation.

Legend:
- ▲▼ Entrance/Exit
- 🚌 Burner Express Bus Stop
- 🚐 BAIT (Burn Area Imprecise Transit) Stop
- ✈ Black Rock City Airport
- Ⓟ Parking for planes

Site Plan

0 — 1000 — 2000   1:35.000

Schedule and Ticket Sales
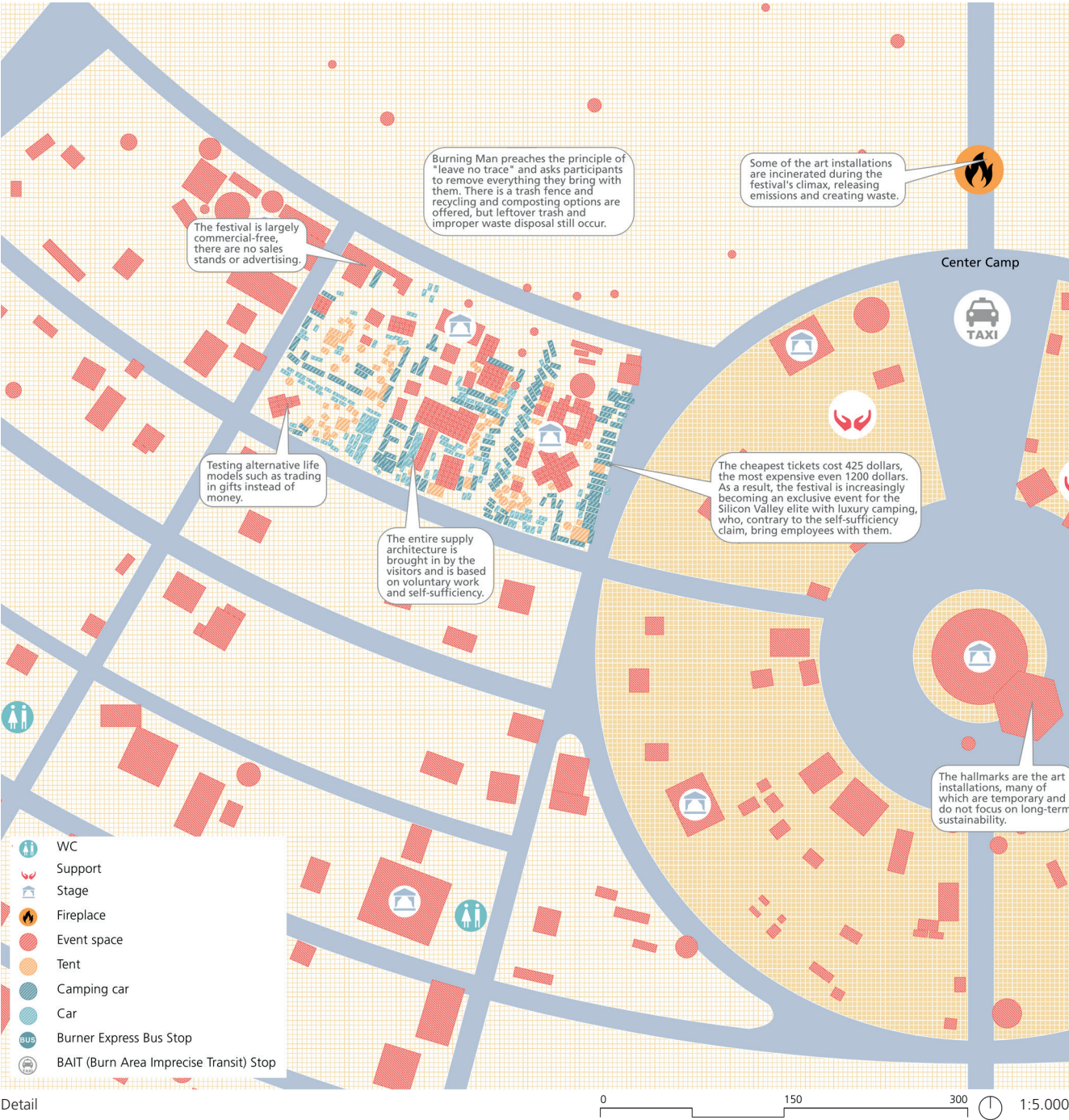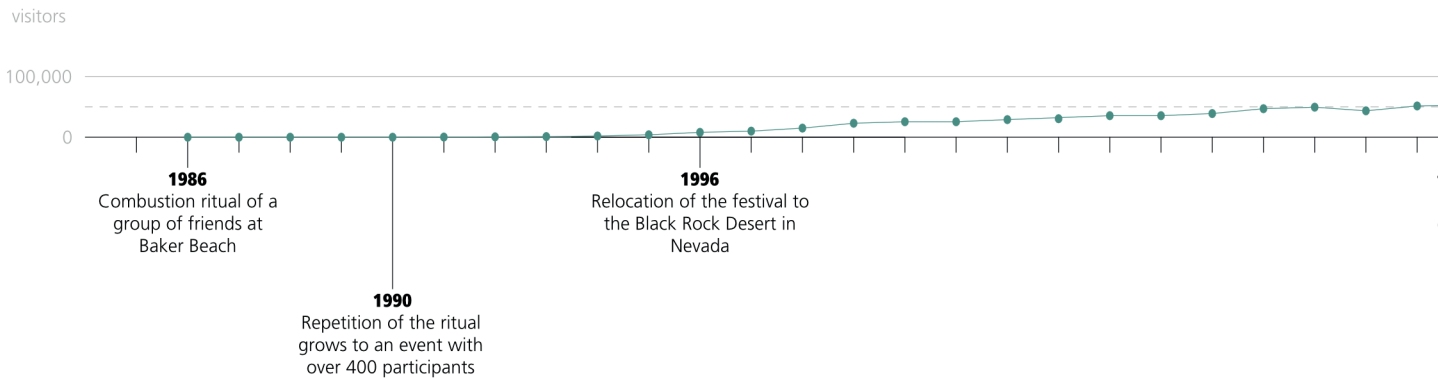

Organization Chart

TYPOLOGY AND USAGE

Black Rock City is arranged in a circular pattern, with the 'Man' located at the Playa, which is an open space where most of the event takes place. Radial streets extend from the center in a straight line, while concentric streets run around the center in alphabetical order. The Center Camp area serves as a central meeting place for the city, and the nine inner-city plazas were designed for public art and community building. The streets at the heart of Black Rock City are flanked by theme camps and villages, which provide participants with entertainment, gifts, and a range of experiences like art installations and live performance art.
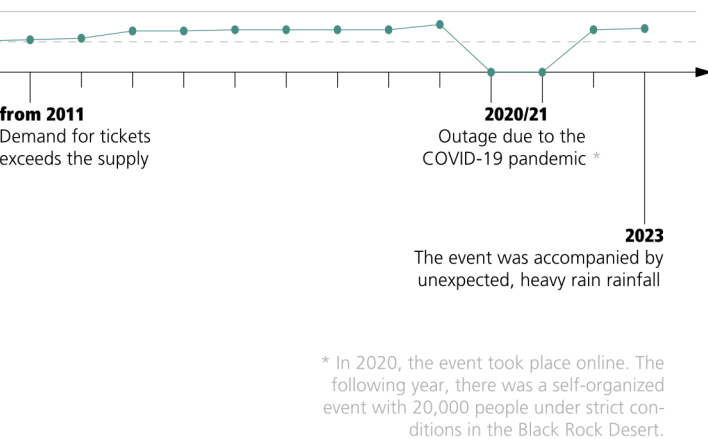
The typologies of temporary buildings at Burning Man vary greatly, reflecting the festival's ethos of self-expression, creativity, and community. Camps can be organized around common interests, such as art, music, or activism, or they can simply be groups of friends or acquaintances who want to camp together. These Camps are the primary living spaces, mostly consisting of cars, RVs and various types of tents.

MOBILITY

Burning Man can be reached by car, flying, or taking the Burner Express shuttle. Driving is the most popular option, with Interstate 80 and Highway 50 being the main routes. From the near airports, attendees can rent a car or take a shuttle to Black Rock City. The Burning Man Municipal Airport is a temporary airport located at the festival site, but it is only operational during the festival and is limited to smaller aircraft. The Burner Express shuttle service provides environmentally friendlier transportation from Reno and San Francisco to the Burning Man Festival site.

Transportation within Black Rock City is limited to walking, riding bicycles and specially designed vehicles operated by volunteers. Cars are strictly prohibited on the festival site. The most common mode of transportation is by bicycle, as it is a convenient and sustainable way to get around the vast playa. There is also a volunteer-run shuttle service called the Burn Area Imprecise Transit (BAIT). BAIT consists of artistic vehicles known as Art Cars that offer free rides to the most popular attractions.
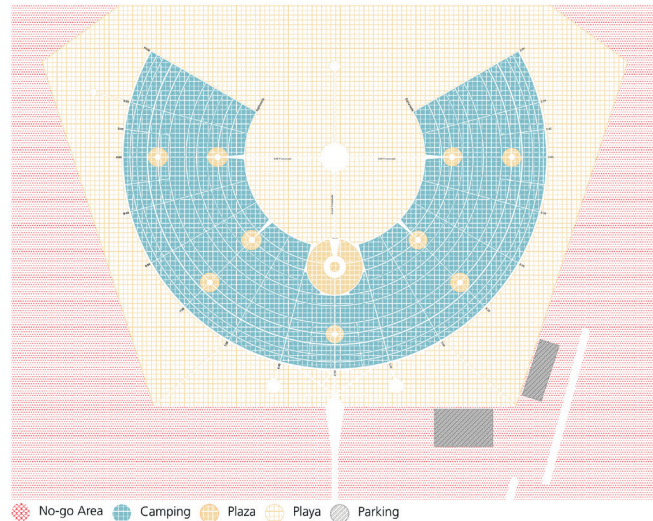
visitors

100,000

0

1986
Combustion ritual of a
group of friends at
Baker Beach

1996
Relocation of the festival to
the Black Rock Desert in
Nevada

1990
Repetition of the ritual
grows to an event with
over 400 participants

The festival is largely
commercial-free,
there are no sales
stands or advertising.

Burning Man preaches the principle of
"leave no trace" and asks participants
to remove everything they bring with
them. There is a trash fence and
recycling and composting options are
offered, but leftover trash and
improper waste disposal still occur.

Some of the art installations
are incinerated during the
festival's climax, releasing
emissions and creating waste.

Center Camp

TAXI

Testing alternative life
models such as trading
in gifts instead of
money.

The entire supply
architecture is
brought in by the
visitors and is based
on voluntary work
and self-sufficiency.

The cheapest tickets cost 425 dollars,
the most expensive even 1200 dollars.
As a result, the festival is increasingly
becoming an exclusive event for the
Silicon Valley elite with luxury camping,
who, contrary to the self-sufficiency
claim, bring employees with them.

The hallmarks are the art
installations, many of
which are temporary and
do not focus on long-term
sustainability.

Legend:
- WC
- Support
- Stage
- Fireplace
- Event space
- Tent
- Camping car
- Car
- Burner Express Bus Stop
- BAIT (Burn Area Imprecise Transit) Stop

Detail

0   150   300   1:5.000

from 2011
Demand for tickets
exceeds the supply

2020/21
Outage due to the
COVID-19 pandemic *

2023
The event was accompanied by
unexpected, heavy rain rainfall

*In 2020, the event took place online. The
following year, there was a self-organized
event with 20,000 people under strict con-
ditions in the Black Rock Desert.*

ACCESSIBILITY

Burning Man is an event that encourages self-expression, com-
munity, and generosity. It therefore welcomes people of all abil-
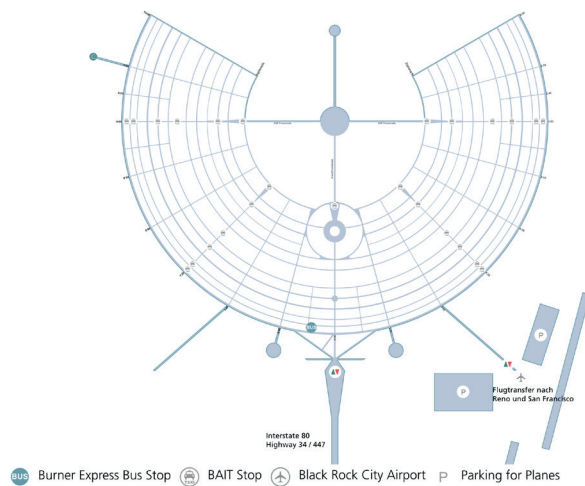ities and from all social backgrounds.

While it is generally accessible for those who can walk or cycle,
there are some challenges for people with mobility impairments,
such as the dusty playa and lack of ramps or elevators. Camps
and theme camps are designed to be accessible, and there are
water stations and shaded areas throughout the event.

The festival area is limited to the playa - an open space where
most of the event takes place - which is surrounded by a bar-
rier whose initial use is to catch wind-blown debris that might
escape from campsites during the event. The area beyond this
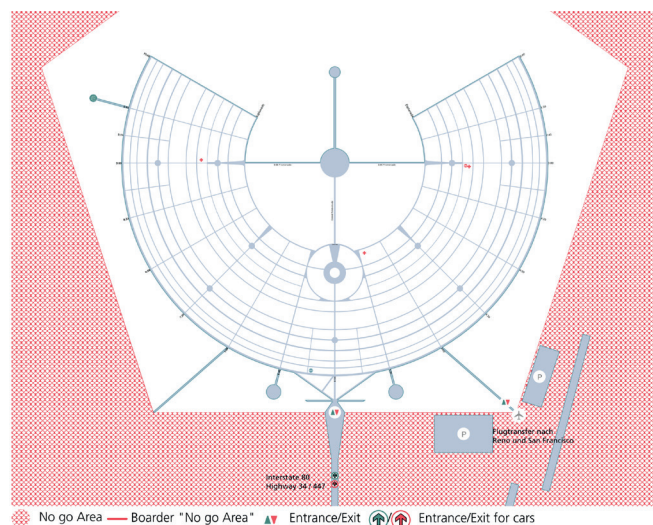fence is not accessible to Burning Man participants during the
event.

At Burning Man, there are no commercial transactions and
participants are encouraged to disconnect from their daily rou-
tines, consumerism and materialism and immerse themselves in
the present moment. Yet Burning Man is a costly event, with
ticket prices ranging from $550 to $1,200. There are addition-
al costs for transportation, food, water, and various camping
supplies. The total cost of attending Burning Man is estimated
to be between $2,000 and $3,000, which limits the act of wel-
coming all people to those who can afford to buy a ticket and
pay the additional costs.

No-go Area · Camping · Plaza · Playa · Parking
Typology and Usage

Burner Express Bus Stop · BAIT Stop · Black Rock City Airport · Parking for Planes
Mobility

No go Area — Boarder "No go Area" · Entrance/Exit · Entrance/Exit for cars
Accessibility

CASE STUDY 2:
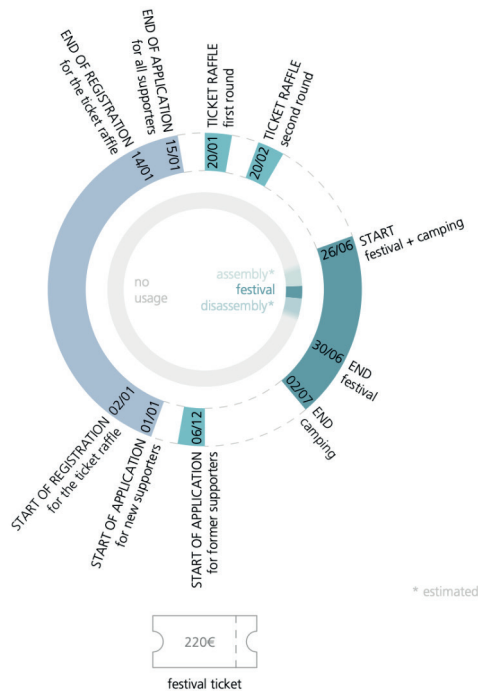## FUSION FESTIVAL, LÄRZ

The Fusion Festival sees itself as a place of fusion where people from the most diverse backgrounds and interests come together. During the four days of the festival, a parallel society unfolds in which consumption and commerce play no role, in which people celebrate art of all kinds and share a common passion for a diverse and open community.

The Festival site is centrally located between Rostock, Berlin and Hamburg on a former Soviet military airfield in Lärz near Lake Müritz in Mecklenburg-Vorpommern in northern Germany.
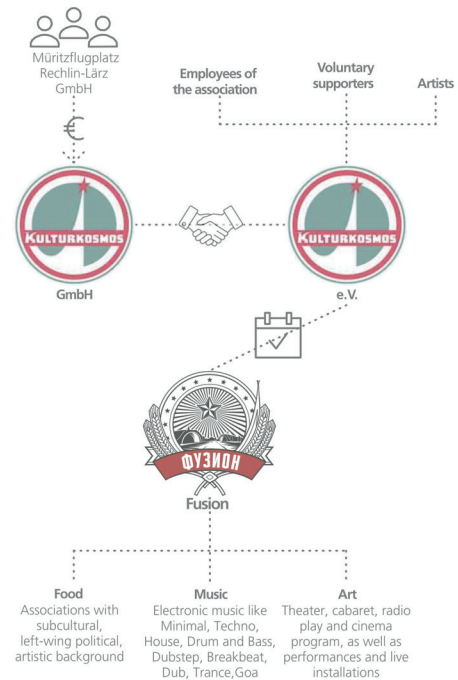
The Fusion has been organized by the non-profit association Kulturkosmos since 1999 and defines itself as a festival with left-wing political aspirations.

In the meantime, Kulturkosmos has grown into a large network of committed individuals and groups involved in subculture, left-wing politics, youth work and art. Their joint work forms the basis for the annual realization of Fusion as a cultural experience that brings people together to celebrate.

▲▼	Entrance/Exit
Ⓐ▼	Barrier-free
BUS	Bus route
P	Parking
TAXI	TAXI
✈	Artist landing
↑	Entrance
↑	Departure

Site Plan

0   600   1200   🕐   1:20.000

Schedule and Ticket Sales

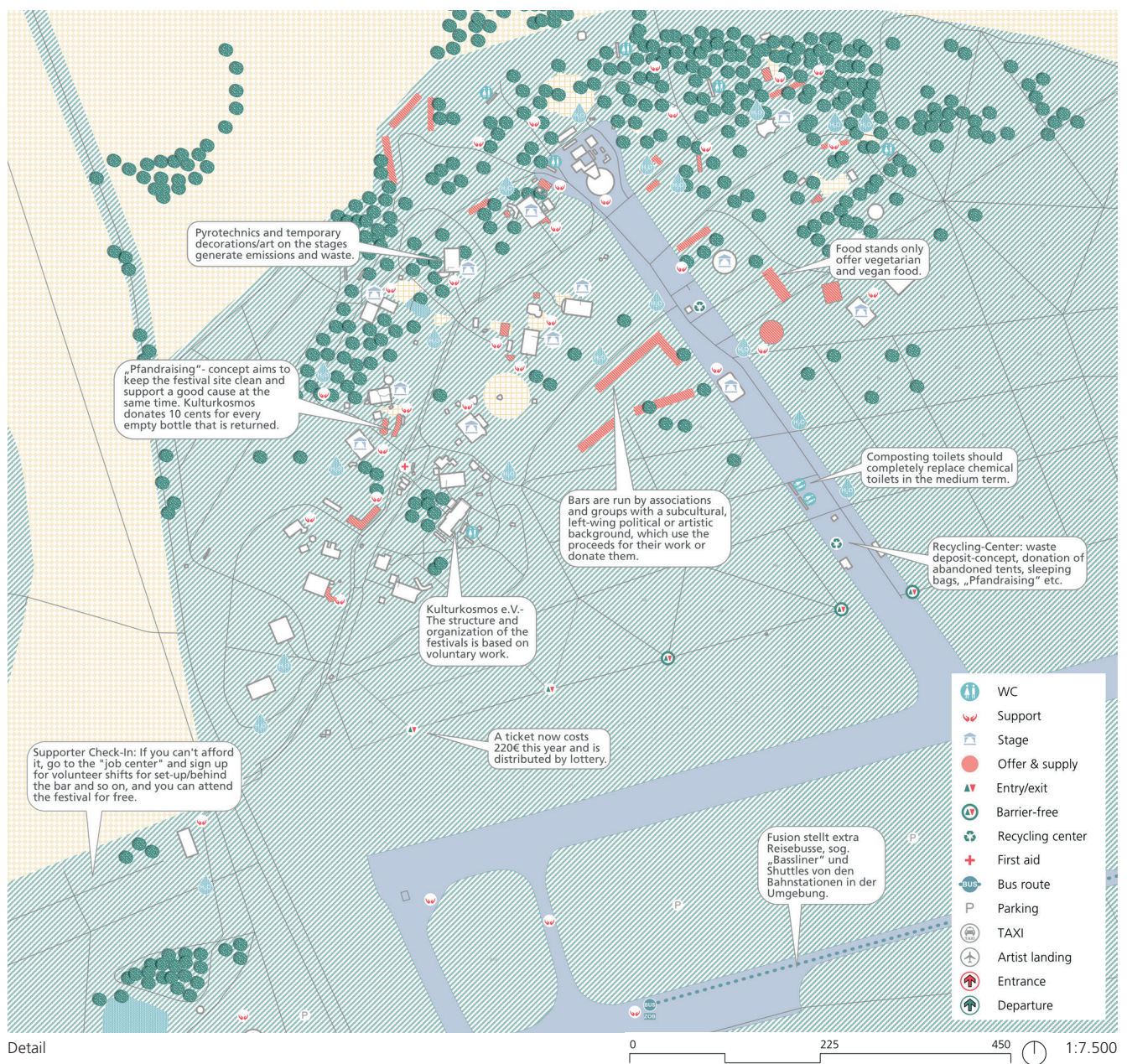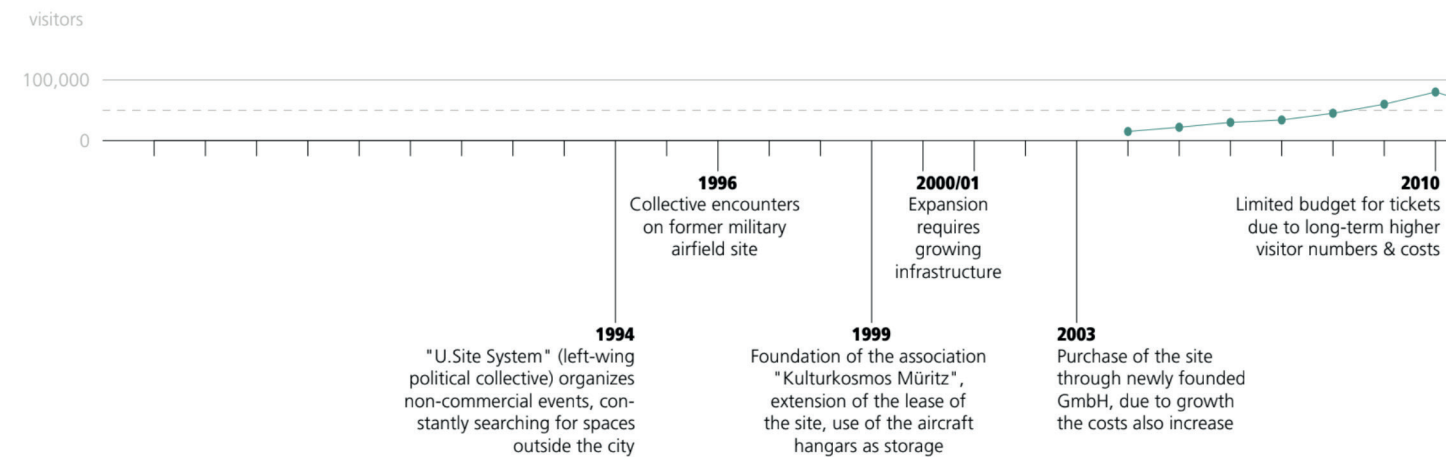Organization Chart

TYPOLOGY AND USAGE

The festival grounds are located on a former military airfield, the typical structure of which has been preserved and repurposed. In addition to the usual facilities found at an airfield, such as runways and taxiways there are also shelters for parking aircrafts. Back then, these 12 grass-planted so-called hangars scattered on the site, ensured an accommodation for military aircraft that was indistinguishable from enemy missiles. For the festival days, the aircraft hangars are continually transformed into theaters and music stages and throughout the remaining months, they are utilized as storage to reduce the effort of transporting.
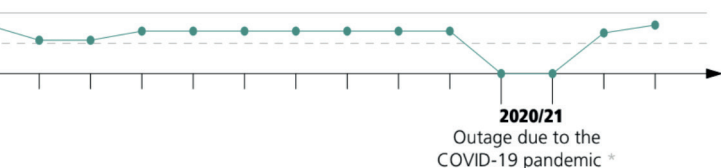
The entertainment offering at Fusion last year spanned across 32 floors, stages, and event areas. In proportion to the total area of the grounds, the offering occupies approximately a quarter of the space. Notably, there is no large main stage where the musical part mainly takes place. Instead, performances are distributed throughout the entire area by utilizing the hangars as stages. This results in smaller, more intimate areas, and each stage, with its performances, appears to be equal and significant.

MOBILITY

The preserved infrastructure of the military airfield, including the runway, occupies 15% of the grounds and is used as roads for those arriving by car and camper, as well as a bus lane in the southern area. Over 60% of visitors travel by train to Neustrelitz. From there, bus shuttles directly transport them to the festival's central bus station (ZOB). For those arriving by car, Fusion provides parking spaces on about 9% of its grounds. Between the runway with the parking lots and the entrances, known as "Schleusen," to the paid area, there is a roughly 20-hectare lawn where camping takes place. The second camping area, after the checks at the Schleusen, occupies almost a third of the entire grounds and is very linearly zoned and numbered.

In contrast, the pathways through the entertainment area with its many stages, bars, and stalls follow a very organic route through partly naturally preserved, wooded sections. Movement within the festival grounds is exclusively on foot. In the southwest-secluded camping area, volunteers and families have the opportunity to camp in a more silent surrounding. In between, there is a limited selection of camping spots in a quiet zone also for the other festival visitors.

visitors

100,000

0

1996
Collective encounters
on former military
airfield site

2000/01
Expansion
requires
growing
infrastructure

2010
Limited budget for tickets
due to long-term higher
visitor numbers & costs

1994
"U.Site System" (left-wing
political collective) organizes
non-commercial events, con-
stantly searching for spaces
outside the city

1999
Foundation of the association
"Kulturkosmos Müritz",
extension of the lease of
the site, use of the aircraft
hangars as storage

2003
Purchase of the site
through newly founded
GmbH, due to growth
the costs also increase

Pyrotechnics and temporary
decorations/art on the stages
generate emissions and waste.

Food stands only
offer vegetarian
and vegan food.

„Pfandraising"- concept aims to
keep the festival site clean and
support a good cause at the
same time. Kulturkosmos
donates 10 cents for every
empty bottle that is returned.

Composting toilets should
completely replace chemical
toilets in the medium term.

Bars are run by associations
and groups with a subcultural,
left-wing political or artistic
background, which use the
proceeds for their work or
donate them.

Recycling-Center: waste
deposit-concept, donation of
abandoned tents, sleeping
bags, „Pfandraising" etc.

Kulturkosmos e.V.-
The structure and
organization of the
festivals is based on
voluntary work.

Supporter Check-In: If you can't afford
it, go to the "job center" and sign up
for volunteer shifts for set-up/behind
the bar and so on, and you can attend
the festival for free.

A ticket now costs
220€ this year and is
distributed by lottery.

Fusion stellt extra
Reisebusse, sog.
„Bassliner" und
Shuttles von den
Bahnstationen in der
Umgebung.

🚻	WC
ᗐᗏ	Support
⌂	Stage
●	Offer & supply
▲▼	Entry/exit
♿	Barrier-free
♻	Recycling center
✚	First aid
🚌	Bus route
P	Parking
🚕	TAXI
✈	Artist landing
⬆	Entrance
⬆	Departure

Detail

0   225   450   1:7.500

2020/21
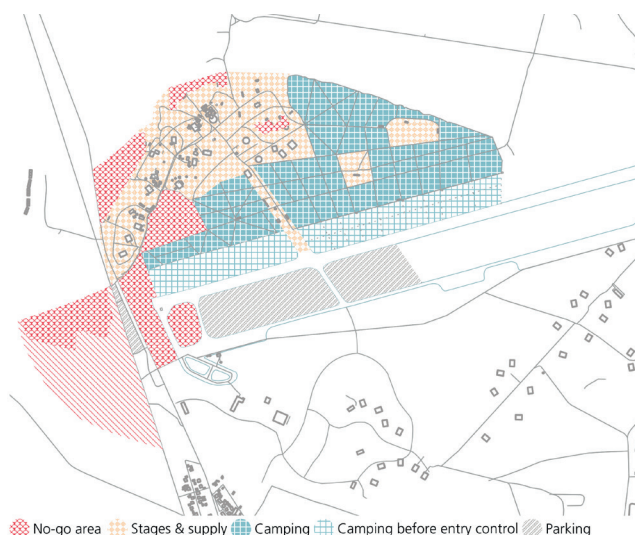Outage due to the
COVID-19 pandemic *

* In 2021, there was an alternative event
called "Plan:et C", which took place with
a reduced program on three weekends
in late summer with 10,000 visitors each.

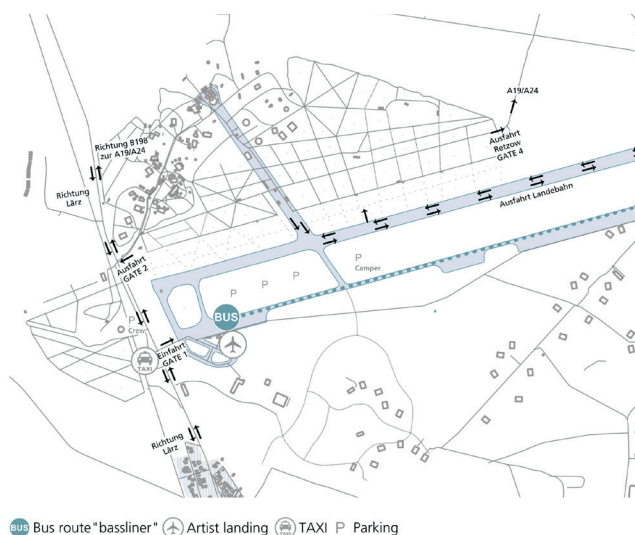◉ No-go area ▦ Stages & supply ▦ Camping ▦ Camping before entry control ▨ Parking

Typology and Usage

ACCESSIBILITY

The Fusion sees itself as a place where everyone is invited and welcome, regardless of origin and appearance. However, steadily increasing operational costs and the influx of visitors have led to the current ticket price for the Fusion Festival exceeding 200€. The ticket allocation is now done through a lottery system with two rounds, making it unaffordable for some. Those who cannot afford the entry have the option to participate in the festival for free by supporting and working on its realization as supporters.

Approximately one-eighth of the festival grounds is off-limits to visitors. This includes backstage areas behind the stages, as well as separate parking and camping areas for the crew, consisting of volunteers and members of the Kulturkosmos association. The dedicated camping area for supporters is located in the southwest of the grounds, above the small pond and the family or quiet camping zones. Backstage areas behind the stages and bars provide quiet and retreat zones for artists and the crew. The headquarters of the association is also within the backstage zone, overseeing the realization of the Fusion.

The festival is accessible to people with disabilities, as it takes place on flat ground with no steps in front of the hangars. The stages are connected by paved pathways, and accessible toilets and shower cabins are provided.

BUS Bus route "bassliner" ✈ Artist landing ⊕ TAXI P Parking

Mobility

◉ Backstage — No-go area ▨ Ticket area ▼▲ Entry/exit ⊕ Entrance
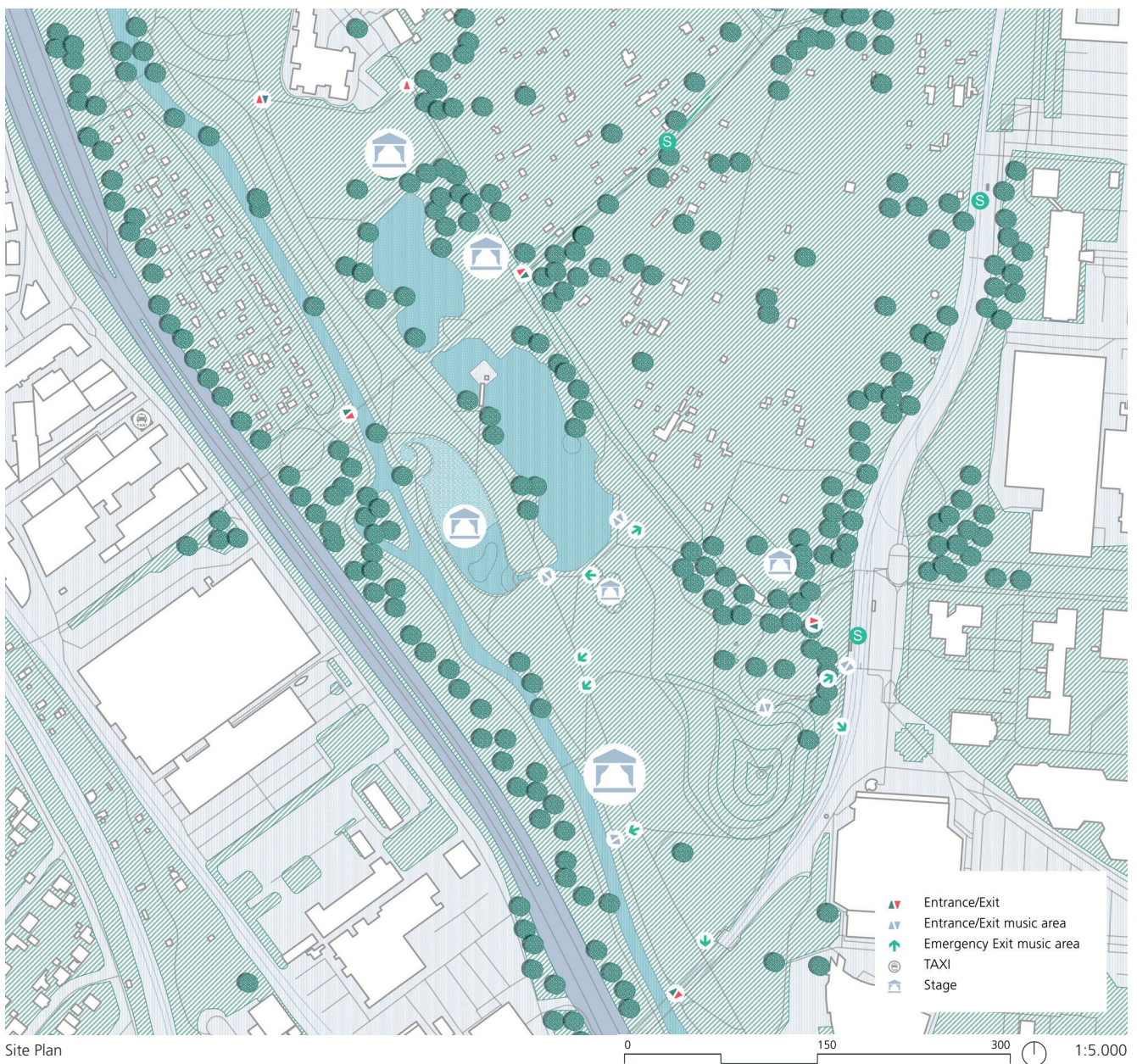▼▲ Barrier-free ⊕ Departure

Accessibility
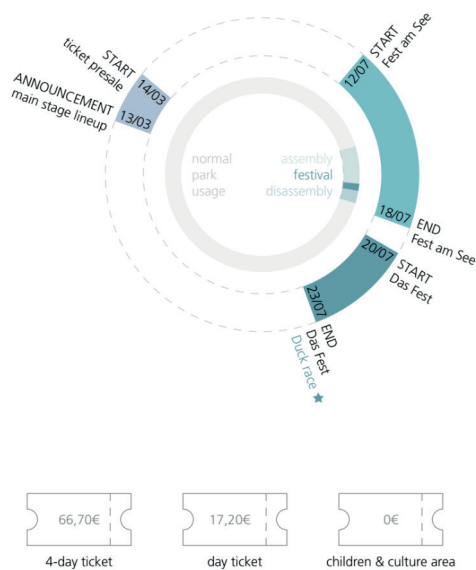
23
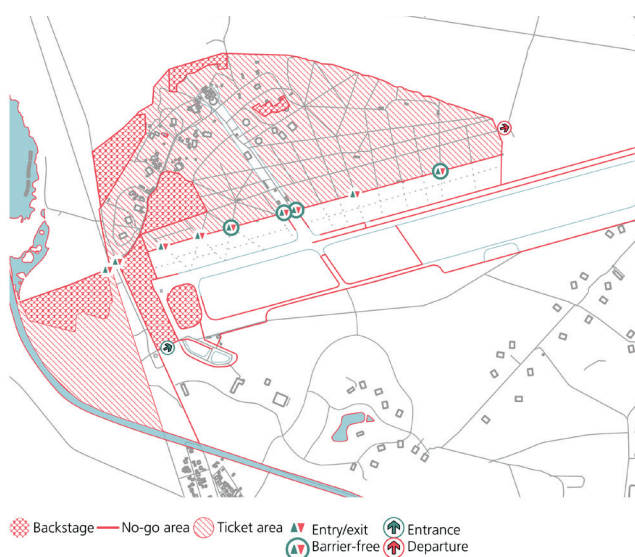
CASE STUDY 3:
DAS FEST KARLSRUHE

DAS FEST in Karlsruhe is the largest family and open-air festival in southern Germany and takes place over four days every year at the end of July. It was founded by rock musician Tim Lovanovski, who wanted to "bring a bit of Woodstock to Karlsruhe".

In 1985, around 800 people and four bands celebrated the first Karlsruhe Open Air Festival in the Günther-Klotz-Anlage with rock music. Since then, DAS FEST has developed from a small festival with local bands to a supra-regional festival with internationally renowned artists.

DAS FEST is now organized by KME Karlsruhe Marketing und Event GmbH which is the central municipal contact for major events and is responsible for city and location marketing in and for Karlsruhe.

The festival is mostly financed by sponsorship, advertising and drinks revenue. Almost 260,000 visitors attend the festival every year over four days in a public park, which is temporarily converted for the needs of the event within three weeks.

	Entrance/Exit
	Entrance/Exit music area
	Emergency Exit music area
	TAXI
	Stage

Site Plan

0   150   300   1:5.000

ticket presale 14/03
START
ANNOUNCEMENT 13/03
main stage lineup

normal
park
usage

assembly
festival
disassembly

START
12/07 Fest am See

18/07 END
Fest am See

20/07 START
Das Fest

23/07 END
Das Fest
Duck race

66,70€ — 4-day ticket

17,20€ — day ticket

0€ — children & culture area

KARLSRUHE
MARKETING EVENT GmbH

Karlsruhe

eventim

DAS FEST

Food
Primarily financed by
various stands that offer
meat-based, vegetarian,
vegan, lactose-free and
gluten-free food.

Music
Various music genres
like Rock, Pop, Hip Hop,
Raggae, Dancehall,
Folk, Punk, Techno,
Techhouse

Culture
Cultural and sports
programs such as
theater, art installations
and performance art
and competitions

Organization Chart

TYPOLOGY AND USAGE

DAS FEST is a Karlsruhe cultural highlight with a mixture of different people, cultures and arts. The festival offers a wide range of venues, such as wild concerts, musical highlights, cozy places by the lake and space for children to play and experience.

Culturally, visitors are offered a selection of art, acrobatics, circus, theater, games and fun. The stages, terraces and towers are set up during the pre-event DAS FEST AM SEE and are evenly distributed along the main paths in the park. They include, for example, the DJ stage, which is located in a part of the lake that is temporarily emptied for this use. The Sparda-Sportpark and a popular skate contest have been part of the music festival for 16 years and offer a varied sports program to watch and participate in. In addition to cultural and musical events, the festival also offers food and drink. The stalls are run by private individuals or small companies and can be found throughout the festival grounds. Through a cooperation with "Take a Stand", DAS FEST takes the initiative for social commitment, tolerance and humanity in the European festival family.

MOBILITY

The Günther-Klotz-Anlage is a publicly accessible park in the west of Karlsruhe and mainly attracts visitors from Germany and neighboring countries during the music event DAS FEST.

It is possible to get there by various means of transport, but public transport such as trains and buses are recommended. During the festival, trains run at more frequent intervals and are supplemented, especially at the end of the event, by additional services. The festival ticket can be used as a travel ticket in the entire city area on the day of validity. There are bicycle parking facilities around the festival site, some of which are equipped with charging stations for electric bicycles. Parking is also available around the Günther-Klotz-Anlage for those arriving by car, e.g. on the adjacent Bannwaldallee or nearby cultural institutions. The use of e-scooters is not recommended, as they are often not parked properly and can be overlooked in the dark. Due to its urban location, the park is also easily accessible on foot for residents. Within the festival boundaries, movement is only permitted on foot.
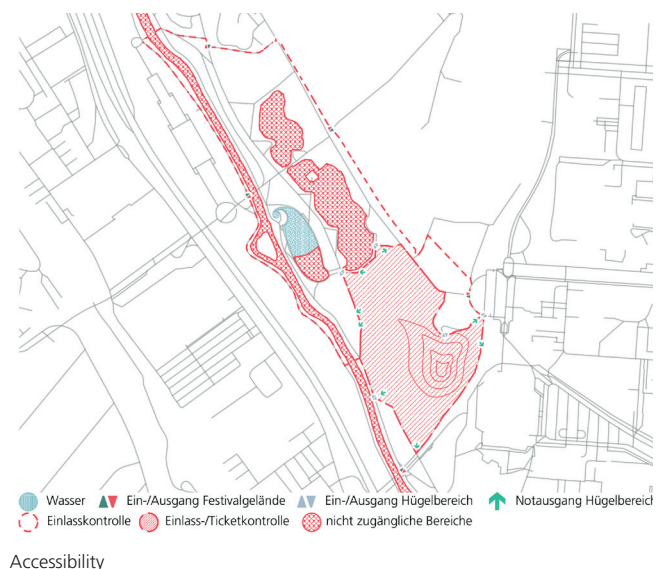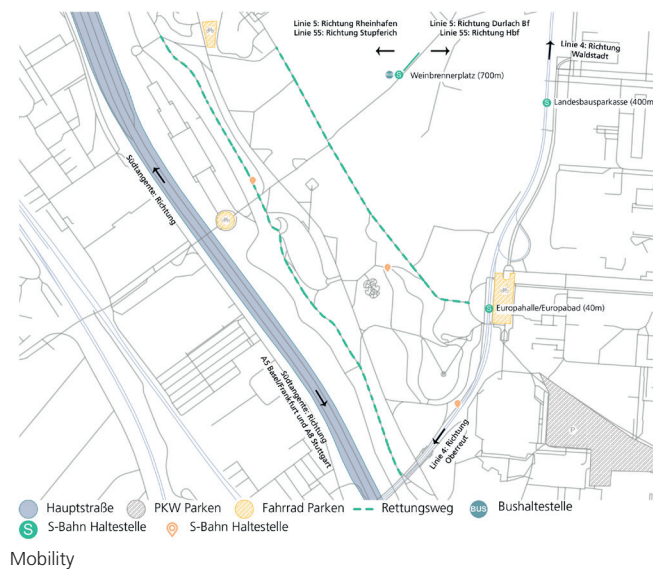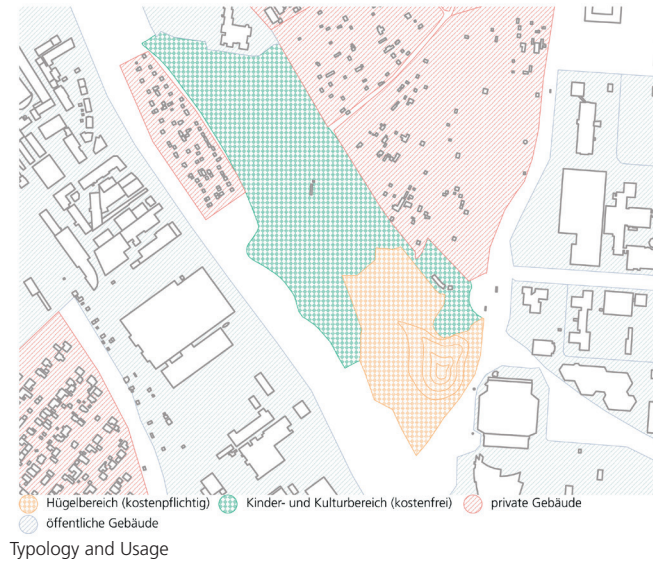
visitors

400,000

300,000

200,000

100,000

0

1985
First "Das Fest"

2000
Extension
with own
DJ stage

2006
Temporary
admission
stop due to
overcrowding

2009
The "Das Fest
GmbH" takes
over the con-
tinuation of
the festival

1998
First "Fest-Café"
("Fest am See" today)

2001
Fencing around the site,
admission controls, inte-
gration of the "Funpark"

2007
New concept and promise of
a municipal subsidy for three
years of 150,000€ each

A day ticket costs 17,20
EUR, the 4-day ticket for
all four FEST days costs
only 66,70 EUR.

The festival is financed by
sponsorship and advertising
revenue in addition to the
ticket proceeds.

The Sparda-Sportpark and
the popular skate contest,
the FEST Cup, have been
part of DAS FEST for 16
years and offer a varied
sports program to watch
and participate in.

The pond is drained every
year before the festival
and becomes a DJ stage
during the festival. Often
only some of the animals
are fenced off.

Plastic is avoided in the choice of drinks
cups and tableware. The cups are made
of corn starch, cutlery is made of wood
and the plates are made of palm leaf.

Sales stands are run
by private individuals
or small companies
(>65% regional).

Donation campaigns only
include the donation of the
deposit money (no additional
support from the organizer).

The Fest-Ticket is also a
ticket for the entire KVV
area on the day of validity.
There are extra trains
running, even at the end
of the event.

DJ Bühne

Cafébühne / dm Bühne

India Summer Days

Weinterrasse

Hauptbühne

Entrance/Exit	
Entrance/Exit music area	
Emergency Exit music area	
Stage	
WC	
SOS-Island	
Ticket Counter	
Train Station	
Bus Stop	
Bicycle Parking	
Parking	
Terrace	
Meeting Point	
ATM	
First Aid	
Offer & Supply	
Sport Service	

Detail

0   225   450   1:7.500

2020/21
Outage due to the
COVID-19 pandemic

2010
Division into charge-
able and free area

● validated
○ estimated

Hügelbereich (kostenpflichtig)   Kinder- und Kulturbereich (kostenfrei)   private Gebäude
öffentliche Gebäude

Typology and Usage

ACCESSIBILITY

In terms of concept and communication, DAS FEST is intended to appeal to and entertain all sections of the population, regardless of age or income.

The structure of the festival is largely determined by the structure of the park. Since 2001, the festival grounds have been surrounded by a fence where admission and bag checks are carried out. Due to increasing visitor numbers and a temporary halt to admission due to overcrowding, the festival's security concept has had to be continuously developed over the years.

The festival site can be divided into two main areas. The sports and family area with the DJ stage, field stage, info mile and various activities makes up around 70% of the entire area and is accessible free of charge. The music area includes the main stage around the so-called "Mount Klotz" - a 15-meter-high, artificial mound in the park - as well as the cabaret stage, and is only accessible upon presentation of a ticket. A day ticket for DAS FEST currently costs 17.20€ per day, which works out at 66.70€ for the entire festival period (as of 2024).

In both 2020 and 2021, DAS FEST was canceled due to the Covid-19 pandemic, and the validity of the tickets expired. There was an option to return the tickets and receive a refund or to donate the money. After the Covid break visitors returned with love and consideration, and there were almost no incidents. 'DAS FEST is an event that people love.'

Hauptstraße   PKW Parken   Fahrrad Parken   Rettungsweg   Bushaltestelle
S-Bahn Haltestelle   S-Bahn Haltestelle

Mobility

Wasser   Ein-/Ausgang Festivalgelände   Ein-/Ausgang Hügelbereich   Notausgang Hügelbereich
Einlasskontrolle   Einlass-/Ticketkontrolle   nicht zugängliche Bereiche

Accessibility

COMPARATIVE ANALISIS & SUMMARY

GENERAL INSIGHTS FOR URBAN PLANNING

Temporarily settled forms serve various functions in today's time. Music festivals like Burning Man in Nevada, Fusion in Lärz, and Das Fest in Karlsruhe are cyclical, short-lived events. They function as significant manifestations of temporary social communities and ephemeral city structures, and their potential to influence contemporary urban planning is of interest. These events present themselves as experimental platforms that facilitate the transition from conventional, permanent urban structures to more flexible and adaptive spatial concepts.

The temporary structures that manifest at these festivals raise an interesting question regarding their transferability to urban environments. The adaptability and creativity of such structures could serve as critical parameters to shift the focus towards dynamic urban planning approaches. This implies a shift from traditional, static construction towards flexible, temporary architectures that cater to the changing needs of urban communities.

Considering global challenges in the context of environmental protection, festival culture also emphasizes ecological aspects. The emphasized sustainable practices celebrated at these events could serve as a guiding principle for urban sustainability efforts. Renewable energy sources, waste management, and environmentally friendly transportation solutions could be considered essential elements of a progressive urban agenda in this context.

The introduction of temporary and flexible spatial concepts not only allows for a more versatile use of urban spaces but also emphasizes the need for increased citizen participation. The dynamic nature of festival structures encourages enhanced participatory planning, where residents are actively involved in the decision-making process to promote community-based urban development. This collaborative approach fosters a sense of ownership among the community members, creating a more inclusive and responsive urban environment that reflects the diverse needs and preferences of the residents.

In summary, music festivals can be regarded as incubating environments that foster the development of innovative concepts within the realm of urban planning. These events serve as testing grounds for various urban challenges, including issues related to accessibility and mobility, alternative forms of community and economy, as well as sustainability. Temporary city structures, such as those created for festivals, provide a unique canvas for experimenting with and addressing these challenges. Through this experimentation, music festivals contribute valuable insights and introduce new concepts that have the potential to shape the future of urban planning by offering practical solutions and ideas for creating more dynamic, inclusive, and sustainable urban spaces.
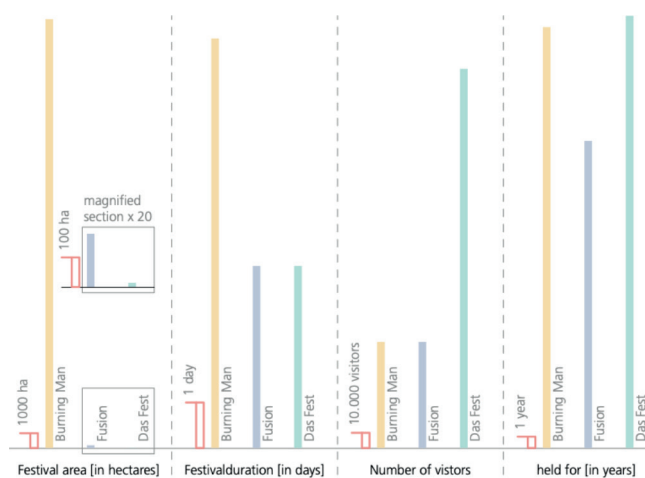
Comparison

ACCESSIBILITY AN MOBILITY

Burning Man, Fusion Festival and Das Fest are fundamentally different in terms of their location, accessibility and the use of the grounds on which the festivals take place.

Burning Man takes place in the desert, far away from civilization, it even has its own airport and driving there by car takes hours. The Fusion Festival is held on a former military base that gets repurposed annually for the event and 60 % of participants get there on public transportation. Das Fest takes place in a public park that is transformed into a festival area for a few days every year, participants get there on public transportation, by bike or by walking.

FORMS OF COMMUNALITY AND ECONOMY

All three festivals aim to be inclusive events for people from all sectors of society. Das Fest also caters to children and young people, as well as people from all income levels. 70 % of festival areas being free of charge and the low ticket costs to access the smaller stage area also add to this.

Burning Man and Fusion aim to create spaces where participants can embrace their authentic selves, celebrate art of all kinds, and share a common passion for a diverse and open community. Both festivals offer a glimpse into a parallel society where consumption and capitalism are not prioritised. However the ticket prices for both festivals are quite high.

SUSTAINABILITY

Burning Man Festival is committed to the principle of "Leave No Trace.", including recycling, composting, and the use of renewable energy. The Fusion Festival offers only vegetarian and vegan food, promotes recycling, composting and using public transportation. Das Fest promotes recycling, sells locally sourced food, exclusively uses renewable energy and has an animal rescue team on standby

Festivals in general produce a considerable amount of garbage. At Burning Man art installations are often temporary and are burned after the festival and Fusion uses pyrotechnics and decorations that produce emissions and waste.

Burning Man - Detail   0   75   150   1:5.000

Fusion - Detail   0   75   150   1:5.000

Das Fest - Detail   0   75   150   1:5.000
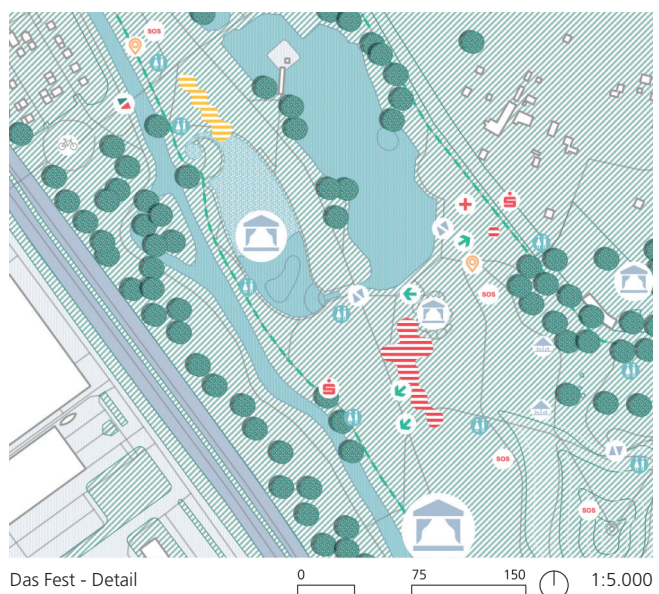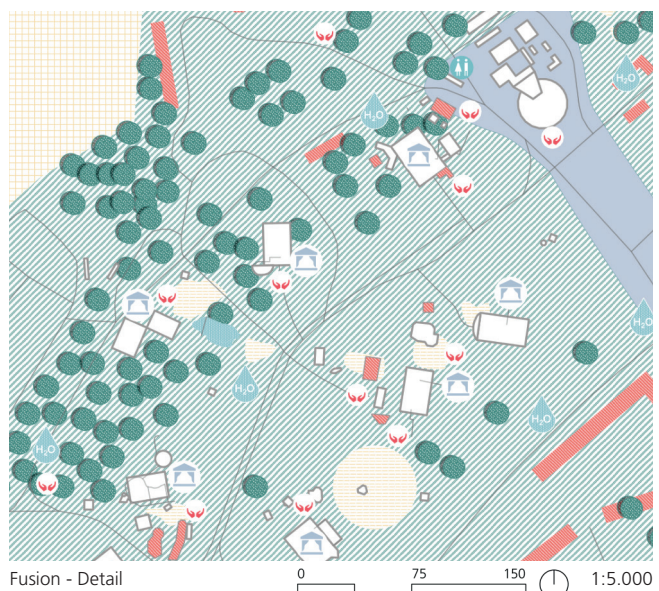
Burning Man, Nevada

Fusion Festival, Lärz

Das Fest, Karlsruhe

CONCLUSION

In addition to providing a wide range of entertainment pro-grams, such as music, art, theatre, and workshops, festivals also offer the opportunity to challenge social conventions and explore the ways in which we live together. They can be seen as temporary utopias, demonstrating how both used and unused spaces can be transformed in the short term through temporary appropriation. The Burning Man Festival is organized in a way that defines all boundaries, as the Black Rock Desert does not provide any guidelines. In contrast, the Fusion Festival has to deal with an existing but empty military area. Das Fest, on the other hand, involves the temporary conversion of an existing park area that is also used by the city corporation.

All three festivals prioritize sustainability and strive to imple-ment it in various ways. However, festivals often face the chal-lenge of managing the significant amount of waste generated in a short period of time, particularly in remote locations. Waste disposal at Fusion and DAS FEST is handled by the organisers. In contrast, at Burning Man, every visitor is responsible for their own waste disposal. The last day of the festival is dedicated to cleaning up, in line with the 'leave no trace' principle. DAS FEST is organised by a marketing company and the city of Karlsruhe, while Fusion and Burning Man are organised by non-profit as-sociations. However, the latter is set up and run independently by the participants.

While festivals claim to be socially inclusive, only Das Fest truly lives up to this claim by providing free access to 70% of the festival area and offering affordable tickets for the smaller stage area. On the other hand, the cost of a ticket for the Fusion fes-tival has now exceeded €200, making it unaffordable for many. However, the festival provides the chance to volunteer and par-ticipate in the event. The cost of Burning Man tickets is consid-erably higher, making it an event primarily for the wealthy and powerful, often serving as a networking opportunity for Silicon Valley elites with luxurious camping. This contradicts the funda-mental principles of the Burning Man Festival.

In summary, festivals encounter a range of challenges due to various constraints, which are addressed with different strate-gies. While some innovative ideas, particularly those related to sustainability and social utopia, are intriguing, they often pres-ent numerous issues and unrealistic promises.

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CHRISTMAS MARKETS

STRASBOURG, PFORZHEIM, RAVENNASCHLUCHT

Xavier Jahn, Fabian Juric, Aurélie Pha

INTRODUCTION

The tradition of Christmas markets in Europe, dating back to the Middle Ages, represent a diverse cultural heritage. These markets began as essential gatherings for townspeople to acquire supplies for the impending winter months and gradually evolved into the festive events we know today.

In modern times, German Christmas markets are renowned for their vibrant atmosphere and feature traditional crafts, foods, and the famous "Glühwein" (mulled wine), drawing visitors from around the world. These markets are not only significant for their festive appeal but also as a means of preserving and showcasing traditional German crafts and culinary arts.

In contrast, French Christmas markets, especially in regions like Alsace, focus on gourmet food and wine, along with regional artisanal crafts. The markets reflect the diverse cultural heritage of France, offering a different yet equally enchanting experience compared to their German counterparts. The economic impact of these markets is substantial, contributing significantly to local economies through tourism and sales. They are not just markets but social and cultural events that bring communities together, fostering a sense of togetherness and joy. Christmas markets has been exported globally, with variations of these markets appearing in countries far beyond Europe, each adapting the concept to local customs and traditions.

In essence, Christmas markets in Europe are more than just annual commercial events; they are a celebration of history, culture, and community spirit. They symbolize the unity and joy of the holiday season, making them an indispensable part of European heritage and a cherished festive tradition across the continent.

This analysis aims to provide a comprehensive insight into the structure of Christmas markets as ephemeral events.

CASE STUDIES

Three Christmas markets of varying sizes will be examined. Two located in Baden-Württemberg, Germany, and one in Alsace, France.

First, the Ravennaschlucht Christmas market, nestled in a forest, offers a magical experience with fairy lights illuminating the market. It's known for its intimate setting, providing a peaceful alternative from city markets.

Next, the Pforzheim Golden Christmas market blends tradition and modernity with its golden-themed decorations, honoring the city's jewelry history. The mix of lights and seasonal treats creates a warm atmosphere.

Finally, the Strasbourg Christmas market, "Christkindelsmärik," one of Europe's oldest, stands out for its size and diverse stalls. Located in the historic city, it offers traditional decorations and a variety of culinary delights.

All three markets have different infrastructure, security, and organizational needs, influenced by their various scales and locations. These peculiarities can be compared after conducting a structural analysis of each Christmas market.

PFORZHEIM

STRASBOURG

FRANCE

GERMANY

RAVENNA-
SCHLUCHT

SWITZERLAND

overview of the three Christmas markets

STRASBOURG
80 HA
the market stretches over 80 hectares across the entire "grand île"

30 DAYS
the Christmas market is open from 24 November - 24 December

3 M VISITORS
million visitors visited the christmas market in 2022

12 SQUARES
12 squares in the city are decorated with different themes

300 STALLS
around 300 christmas stalls are set up in the squares of Strasbourg every year

454 YEARS
the Christmas market has been held on place Kleber since 1569

PFORZHEIM
3 HA
the market covers over 3 hectares and a large part of the old town centre

26 DAYS
the Christmas market is open from 27 November - 22 December

100-200 K VISITORS
100-200 thousand visitors visit the market each year on average

2 SQUARES
2 squares in the city are transformed and decorated for Christmas

80 STALLS
around 80 stands are set up in the squares and streets every year

50 YEARS
the Christmas market has been held on the market square since 1973
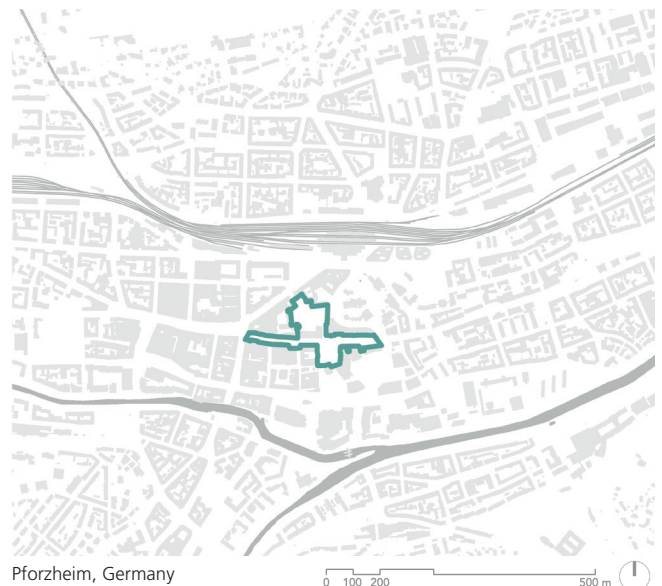
RAVENNASCHLUCHT
1 HA
the small market in the gorge is about one hectare in size

12 DAYS
open on weekends from 24 November - 17 December (Fri.-Sun.)

70 K VISITORS
70 thousand visitors visited the Christmas market in 2023

1 SQUARE
all the stalls are set up under a railway viaduct

40 STALLS
around 40 stalls are brought into the Ravenna gorge every year

14 YEARS
the Christmas market has been held in the Ravenna Gorge since 2009

Strasbourg, France   0 100 200   500 m

Pforzheim, Germany   0 100 200   500 m

Ravennaschlucht, Germany   0 100 200   500 m
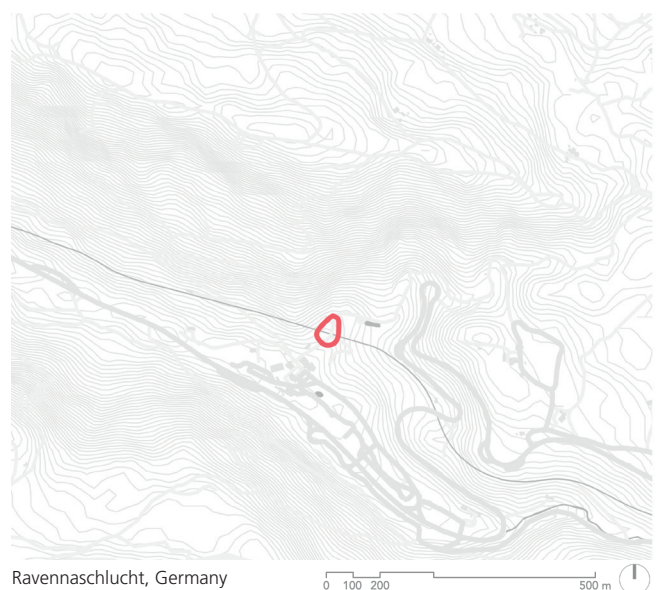
place Broglie, 2022, Strasbourg

crowded streets, 2021, Strasbourg

market square, Pforzheim

closed Christmas market in the morning, 2022, Pforzheim

Christmas market, Ravennaschlucht

summer 2017, Revannaschlucht

CASE STUDY 1:
CHRISTMAS MARKET STRASBOURG

Strasbourg is the capital of the Grand Est region in northeastern France and also the official seat of the European Parliament. The city is located on the border with Germany and combines German and French influences in its culture and architecture.

The Christmas market of Strasbourg is the oldest Christmas market in France and the largest in Europe and extends throughout the entire Advent season into January and developed since 1991 as the Christmas capital of Europe. Spread across several squares and streets throughout the 'Grand Île,' you'll find toys, sweet and savory treats, and crafts.

FREQUENCY AND FLOW OF VISITORS

The Strasbourg Christmas market shines beyond French borders, drawing visitors from around the globe. This year, it's expected to surpass the 3 million visitor mark a remarkable milestone compared to 2022, where 2.8 million people strolled through the streets of the Alsatian capital.

Particularly on Saturdays or during evenings, it becomes challenging, even for chalet owners. There are clear limitations as "public space is not expandable."

The city center of Strasbourg, the 'Grand Île,' where most of the Christmas celebrations are condensed, faces significant impact. In the mornings, before the Christmas market opens, the flow is relatively consistent, primarily composed of city residents. As the afternoon progresses, the streets gradually fill up, with popular squares and neighborhoods like La Petite France or the Cathedral Square becoming bustling hubs. Come evening, the flow from the train station to the city center intensifies, making navigation tough for tourists and strenuous for locals, especially on weekends.

Local authorities are actively exploring strategies to manage the increased footfall while ensuring both the enjoyment and safety of everyone attending this iconic holiday celebration. The prefecture has secured the use of drones to monitor the event.

Confronted with the immense crowds, authorities are rigorously enforcing the ban on street musicians or portrait artists, as they tend to create potentially hazardous gatherings.

visitor flow, morning

visitor flow, afternoon

visitor flow, evening

ORGANISATION CYCLE

The City of Strasbourg organizes the annual event "Strasbourg, Capital of Christmas," and the preparations start early. A team of four full-time employees works throughout the year, accompanied by a technical director who supports the project during the final four months of the year.

Additionally, approximately 30 municipal services are mobilized for this occasion (communications, security, cleanliness, waste collection, green spaces, lighting, territorial direction, legal matters, public areas, etc.).

During the market period from November 24th to December 24th, around 150 city employees take turns ensuring its quality,

smooth organization while adhering to safety conditions and ensuring responsible public fund management.

Applicants for stalls at the December 2023 Christmas market were required to submit their applications from April 1st to April 30th, 2023. The city's decisions were finalized by August 31st, 2023. Beginning in early October, a 30-meter-tall tree, symbol of the Christmas market, is cut down in the Vosges forests.

After all these years, the organizers are experienced, and the processes are similar from year to year. Security, stalls, the program, infrastructure, and decorations can be adjusted to meet current needs.
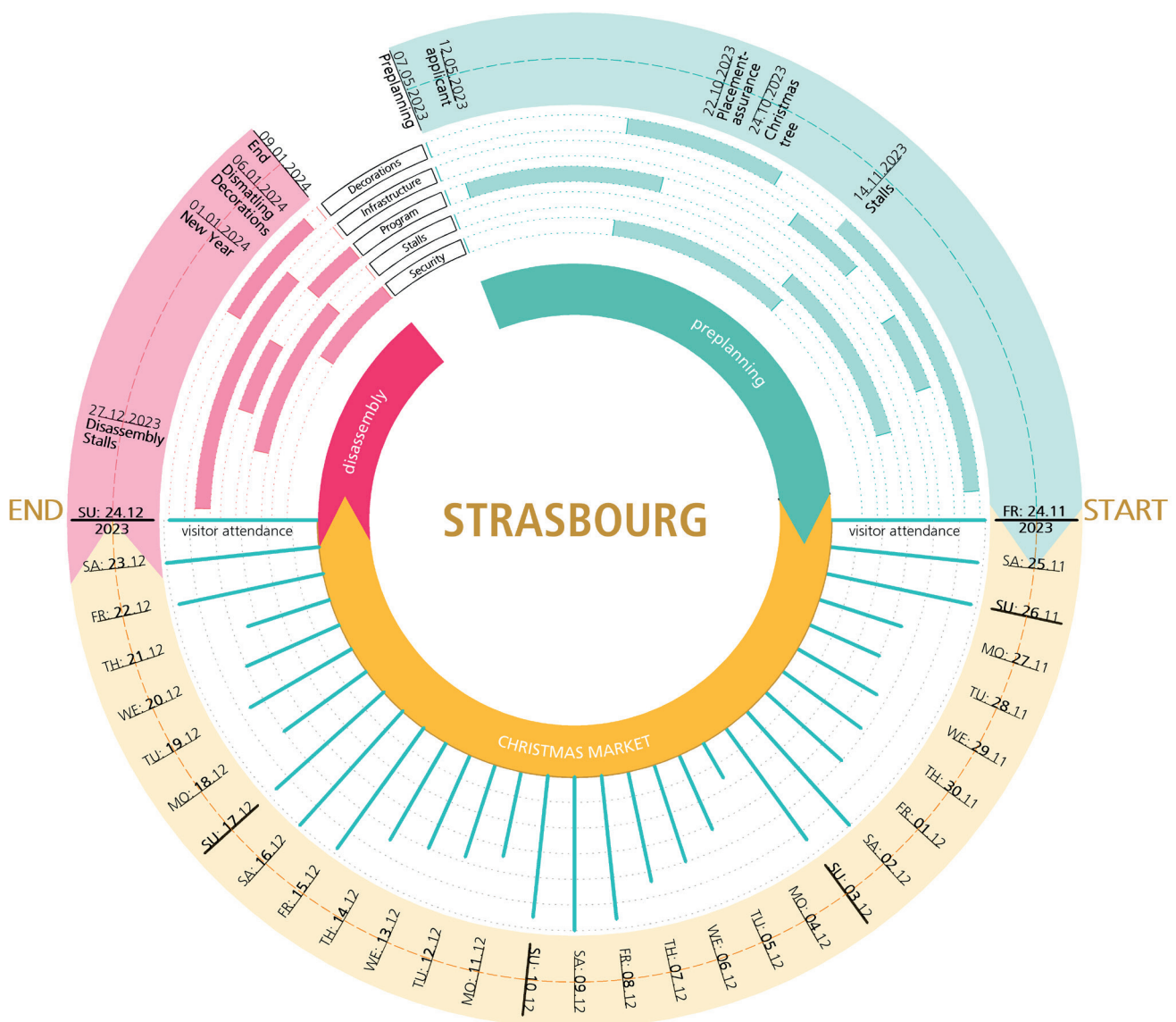
temporality

MERCHANTS AND STALLS

Approximately 300 stalls are spread across various squares of the Grande-Île.

56 stalls are located on Place Broglie in the center of Strasbourg. This square hosted the first market, known as Christkindelsmärik, back in 1569. Initially, it opened three days before Christmas Eve. It's also the square with the highest number of stalls. Here, you can find a wide variety of food, especially traditional Alsatian specialties. Alongside Christmas items and regional artisan crafts, there's an abundance of local gastronomy to indulge in.

The stalls can be categorized based on their offerings: food, articles, souvenirs, or those dedicated to technical and infrastructural aspects of the square. Only about a third of the stalls offer gastronomy, while the rest primarily sell merchandise. However, the food stalls tend to be larger in size.

Most exhibitors claim to come from Alsace, although the origins of the products and exhibitors remain vague. Only a fraction of the stalls could be traced back to their place of origin, as shown in the adjacent overview map. Only small artisans are transparent about their origins, hailing from Strasbourg, Alsace, or even from various parts of France or Germany, often traveling far to sell their products.

In the region, thanks to the Strasbourg Christmas market, retail revenues are expected to increase by 15% to 20%, according to estimates provided by Alsace Destination Tourisme.

stalls

origin of the merchants
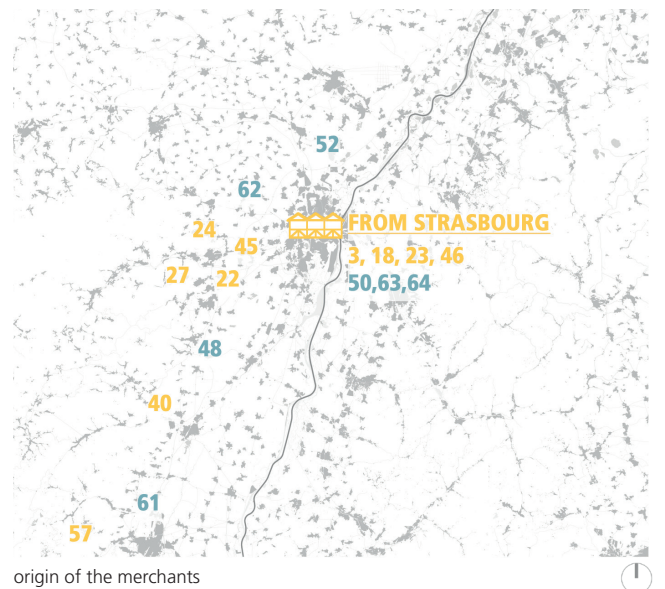
FOOD & BEVERAGE

3: Savory Foods, Maison Bodein, Strasbourg
7: Sweets, Alsace
11: Wine/Punch, Alsace
16: Sweets, Wimmenau
18: Gingerbread, Mireille Oster, Strasbourg
19: Savory Foods, Chalet Hubert, Alsace
21: Sweets, Alsace
22: Gingerbread, Fortwenger, Roppenheim
23: Alsatian Specialties, Chalet des 4 cigognes, Strasbourg
24: Confectionery, Jean Pierre, Wasselonne
26: Drinks and Sweets, Guyomard Bodein, Alsace
27: Savory Foods, Chalet Hoermann, la Broque
31: Savory Foods, Au chalet du petit Broglie, Alsace
35: Savory Foods, Alsace
40: Artisanal Confectionery at Rachel et Nico's, Gertwiller
45: Savory Foods, Le Hutzelbrot de Mathilde, Bischoffsheim
46: Macaron Factory cgcg, Strasbourg
51: Waffles, Alsace
54: Savory Foods, Alsace
57: Honey, Apiculture Gil, Dannemarie

MERCHANDISE

1: Decoration items, Alsace
2: Decoration items, Alsace
4: Crockery/Household items, Alsace
6: Decoration items, Alsace
8: Figurines by Marcel Carbonel, Provence
9: Decoration items, Alsace
10: Decoration items, Alsace
12: Jewelry, Alsace
13: Leather goods, Alsace
14: Christmas trees, producer La Petite Pierre, Vosges, Bas Rhin
17: Decoration items, Alsace
20: Decoration items, Alsace
25: Textiles, Alsace
28: Engraved items, Alsace
29: Hats, Alsace
30: Souvenirs at Véronique and Patrick's, Alsace
36: Decoration items, Alsace
37: Earthenware, Jean Luc Feltini, Matour
38: Santons de Provence
41: Wooden items, Art et Bois, Larroche
42: Decoration items, Alsace
43: Decoration items, Alsace
44: Decoration items, Alsace

47: Neon decorations, Alsace
48: Wooden articles, Art et K'Do, Damach la Ville
49: Paintings, Mr. and Mrs. Dulin, St. Nazaire
50: Doorbells, Dring Les Sonnettes Créatives, Strasbourg
52: Pottery by Beck, Soufflenheim
53: Wooden goods, Artisanat Bois, Alsace
58: Paper statues, Alsace
59: Jewelry items, Alsace
60: Cards by Perl et Jeremy, Alsace
61: Leather goods, Colin Millotte, Le Ménil
62: Puzzle games, Les Casses Têtes du Jura, Jura
63: Beer, Méthéor, Strasbourg
64: Artware, je.cha.art, Strasbourg
65: Decoration items, Alsace
66: Decoration items, Alsace

INFRASTRUCTURE

5: Mailbox for Christmas letters
15: Seating area for dining
32: Photo spot with Santa Claus
33: Public restrooms
34: Seating area for dining
55: Seating area for dining
56: Seating area for dining

LOGISTICS AND ORGANISATION

The organization and setup of the ephemeral structures at Place Broglie for the Christmas market start several weeks before the market's opening.

The city of Strasbourg provides items such as trees, decorations, string lights. However, exhibitors and shops have to decorate their own stalls according to specific guidelines. A total of 314 structures are set up in public spaces within the Grande-Île, across 12 sites, with approximately 700 sites illuminated, including schools, neighborhood town halls, churches, and building forecourts. Over 250 streets, squares, and places are lit up, featuring approximately 25 km of garlands adorning trees and firs.

To combine enchantment with sustainability, all lighting devices are equipped with energy-efficient LEDs. The city extensively reuses its decorations from year to year, repairs them, and largely resorts to the secondhand market. Exhibitors are prohibited from turning on their decorations before four p.m.

Safety distances between stalls, escape routes, and delivery paths must be planned and adhered to. Additionally, a dedicated power supply network is established, and specific gastronomy stalls are equipped with water connections. Waste and deposit systems are also implemented. Drink sales are conducted using reusable cups, except for exhibitors offering specific cups. The regular supply of these cups is managed by a provider. The washing of these cups is exclusively handled by the provider.

Christmas decoration

facilities and delivery

WC	public toilets
🗑	trash can
—	electricity line
◄- -►	delivery path
✳	christmas tree/decoration
———	christmas decoration organisator
———	christmas decoration stalls
▬	stalls

32%
58%
10%
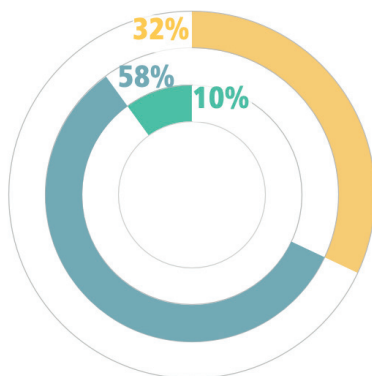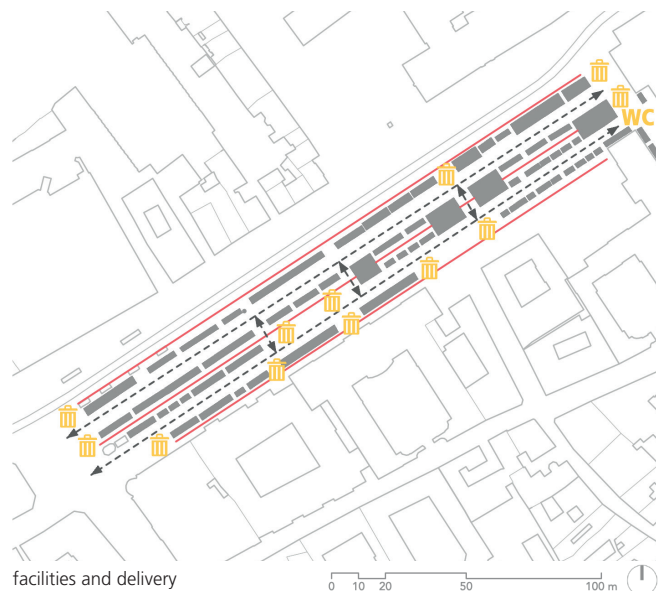
distribution: **food & beverage, merchandise, infrastructure**

INFRASTRUCTURE MANAGEMENT

Strasbourg is well-connected to the European long-distance network through its TGV station. During the Christmas market, Strasbourg benefits from visitors arriving by train. Various forms of mobility are altered during the market period.

The most central tram station, Homme de Fer, is the only one operational in the city center during opening hours. Bus routes that typically pass through the city center are redirected. Pedestrians and cyclists may undergo random checks at access points and within the Christmas markets. Large items (suitcases, backpacks, cargo bikes) will be subject to systematic searches when accessing the Grande Île. Some access points and bridges are blocked. During Christmas Market opening hours (11:30 am - 9 pm), cyclists are advised to follow alternative routes. Pedestrians have priority, and cyclists must proceed at a slow pace.

Car traffic is completely prohibited on the Grande Île from 11:30 am to 9 pm, except for residents and authorized merchants. Only specific access points will be open, and a designated traffic flow must be followed. Located on the outskirts, 10 park-and-ride facilities are available for motorists. Downtown parking is not accessible for visitors.

The municipal police are actively involved before and throughout the Strasbourg Capital of Christmas event, with 40 municipal police officers present 24/7 throughout the Christmas market's duration (four weeks). Foot patrols will operate during the Christmas market opening hours.

P parking lot

H public transport stop

security check

vehicle control

entry and exit route

blocked

authorised cycle routes

authorised bicycle parking spaces

regular infrastructure

modified infrastructure

safety measures
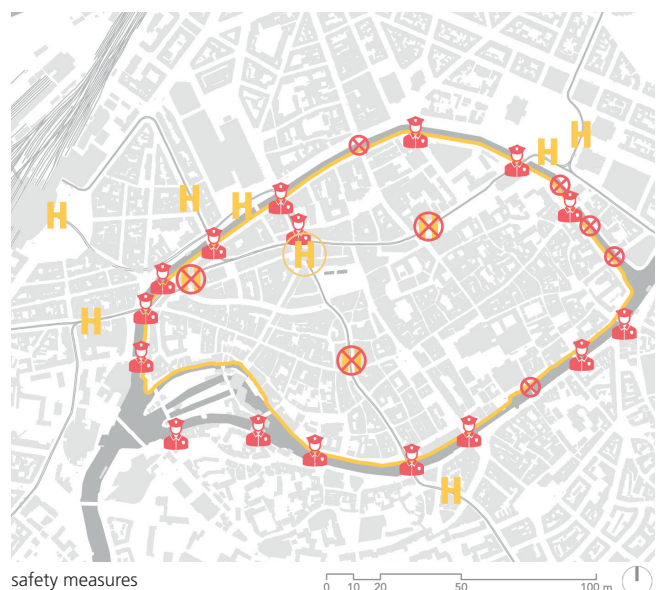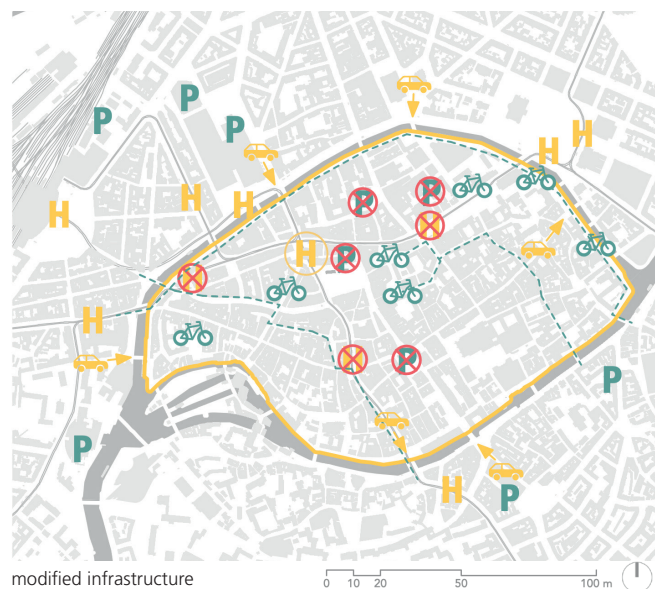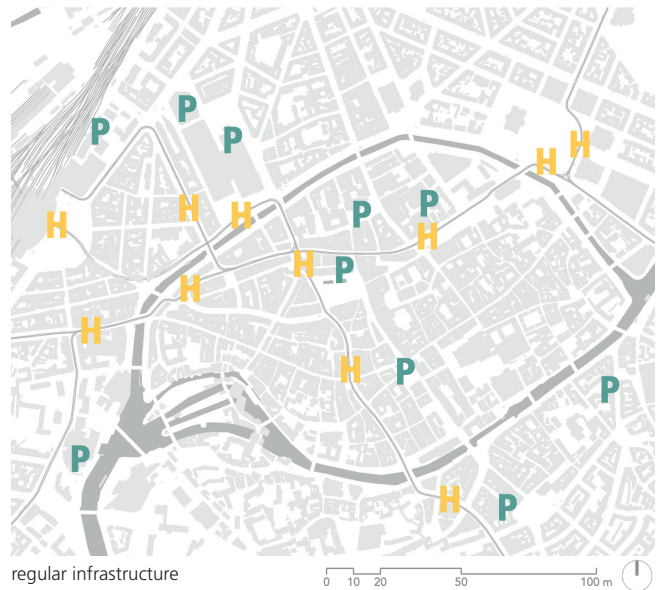
DESIGN OF THE STALLS

In Strasbourg, exhibitors apply to secure a spot. Various criteria are considered, such as uniqueness, origin, chalet design and history.

The applications who are accepted must necessarily complete their participation file by submitting their sales infrastructure project. Typically, chalet depths should range between two and a maximum of three meters, depending on the locations.

The fees for a stall vary based on its location in the city and the surface area in square meters. The most expensive spots include Place Kléber, Place Broglie, Place de la Cathédrale, and Place du Château. Along with site fees relative to the surface area, there's a contribution towards promotional, security, and ecological costs. An exhibitor paying around 3,000 euros per stall for a prime location quickly sees returns on their investment, especially for those in gastronomy. For all exhibitors, the Christmas market serves as advertisement, providing economic benefits throughout the year.

While there isn't a common design for all stalls, they must adhere to specific rules regarding materials and decorations. At Place Broglie, a quarter of the exhibitors had "Rustyle", an Alsatian brand offering modular chalets. Another French brand, "Euro Chalet", presents structures made from sustainably managed Northern European pine forests.
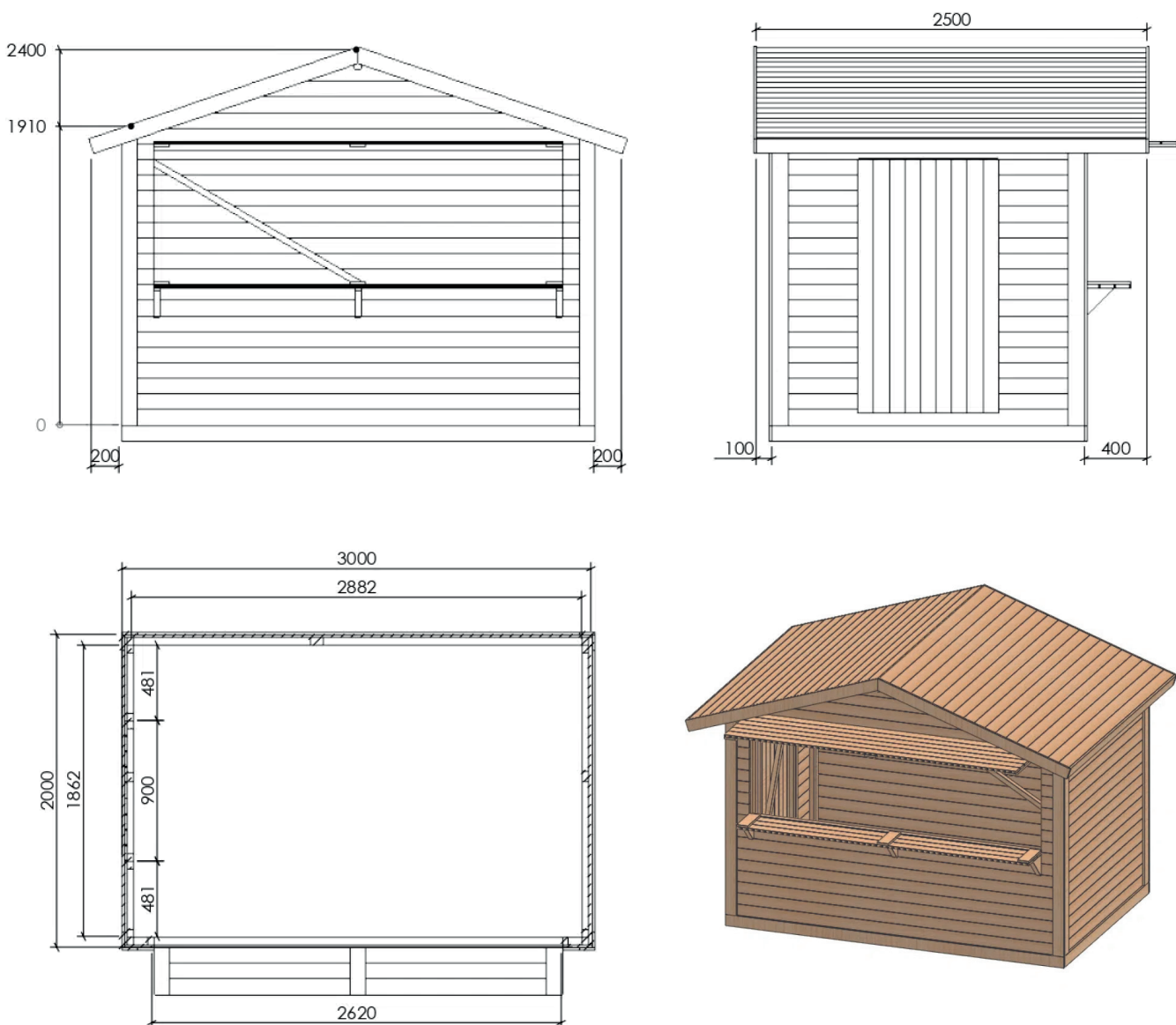
construction plan sample chalet
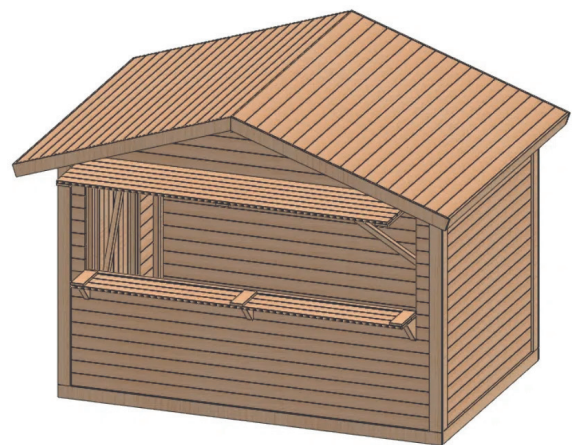
CASE STUDY 2:
CHRISTMAS MARKET PFORZHEIM

Pforzheim, the "City of Gold," is renowned for its jewelry and watchmaking heritage. Showcased in the Golden Christmas market, during the festive holidays, the city becomes a glittering wonderland.

Adorned with golden lights and ornaments, the market uniquely blends festive cheer with Pforzheim's rich history, offering seasonal delights and exquisite local crafts. This unique setting celebrates the city's artisanal legacy, attracting numerous visitors to enjoy traditional German market experiences and the vibrant character of Pforzheim.

FREQUENCY AND FLOW OF VISITORS

The Pforzheim Christmas market, traditionally held in the historic Marktplatz, has undergone significant evolution alongside the city's urban developments, changing its location and expanding its influence. Initially, the Marktplatz, in the absence of the market, experienced minimal visitor flow, primarily serving routine activities.

However, the introduction of the Christmas market brought a transformative shift, evident in images showing increased visitor density in the afternoon and evening, particularly around the central market areas, signifying the market's success in attracting those seeking festive ambiance and unique shopping experiences.

Post-renovation, the market's expansion to include both the Marktplatz and the pedestrian zone led to a more balanced distribution of visitors. This strategic expansion not only diversified the offerings for visitors but also effectively alleviated congestion, enhancing the overall experience. Moreover, the presence of a nearby medieval Christmas market adds historical depth, offering an alternative experience steeped in tradition and authenticity.

These developments highlight the Christmas market's vital role in Pforzheim's urban life, enhancing visitor experiences and enriching the city's festive offerings. The market's continuous adaptation reflects Pforzheim's commitment to preserving its cultural heritage while accommodating modern urban needs, thereby contributing to the city's vibrant and evolving character.

MARKETPLACE

visitor flow, without Christmas market   0   10   20   50 m

visitor flow, afternoon   0   10   20   50 m

visitor flow, evening   0   10   20   50 m
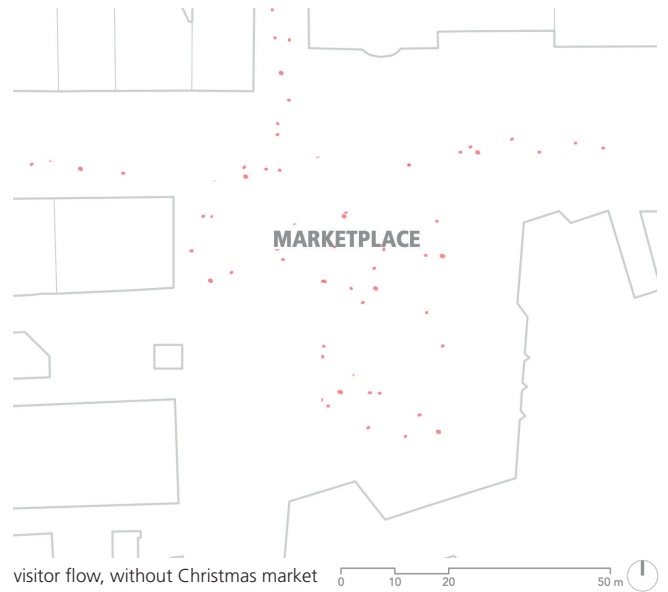
ORGANISATION CYCLE

The Pforzheim Christmas Market, initiating its annual festivities with early stall applications, sets the stage for a vibrant and diverse marketplace. Starting on November 23, 2023, the careful selection of stalls is pivotal, ensuring a dynamic market. At its core is the "Weinachstbaum", the Christmas tree, symbolizing the festivities' commencement and serving as a central gathering point for visitors.

As the opening approaches, Pforzheim dresses itself in festive decorations, with the Golden Ornament being a significant symbol, marking the transition from preparation to celebration and creating an inviting, warm atmosphere. The increase in visitors, particularly notable on weekends, underscores the market's role as a bustling hub of social interaction, brimming with holiday cheer and unique cultural experiences.

Following the market's conclusion, a systematic two-week deconstruction phase begins. However, the festive atmosphere is prolonged, with decorations such as the Golden Ornament and Christmas Tree staying until after Epiphany, extending the holiday spirit. The lifecycle of the Christmas market Pforzheim, meticulously outlined in the timeline, demonstrates its careful planning and cultural significance. Each stage, from initial stall vetting to the installation of final decorations, is infused with anticipation and tradition, reflecting the Christmas spirit in Pforzheim.
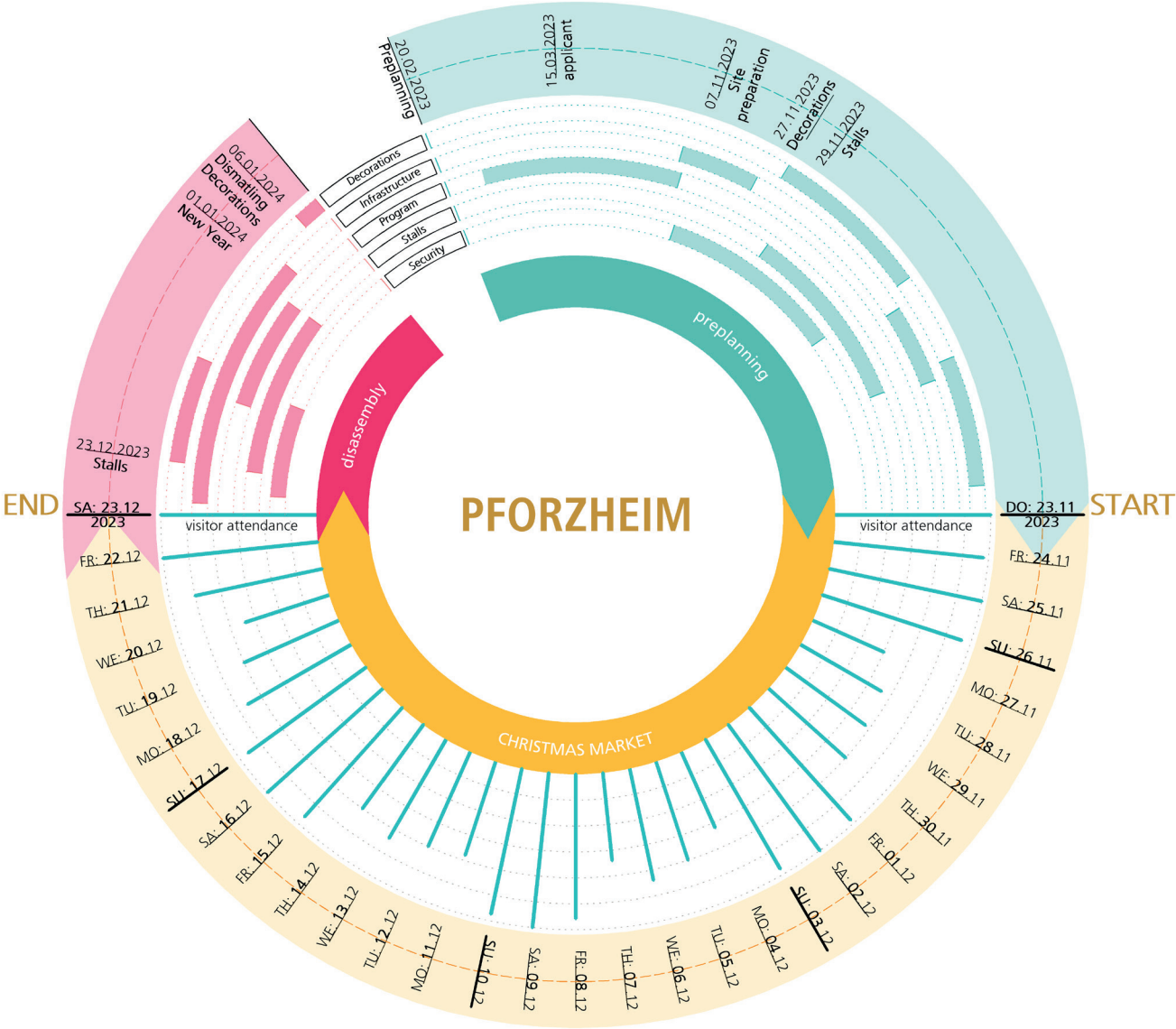
temporality

MERCHANTS AND STALLS

The Pforzheim Christmas market in 2023 was characterized by a rich diversity of German vendors, each bringing a slice of regional specialty to the festive gathering.

In the gastronomy category, visitors could indulge in a variety of traditional German foods and drinks. From liqueurs or beer, to confectionery delights, the market was a celebration of regional culinary arts. The offerings were not limited to sweets; they also included savory options such as the sausage specialties, the traditional "Flammenkuchen" or handmade bread.

The merchandise stalls were a testament to German craftsmanship. Artisans from across the country, like the Christmas decorations from Aalen and the exclusive wood products from Zalfani in Niederkassel, presented their wares. Each stall told a story of regional craftsmanship, from leather products from Bretten to the unique ceramics from Bad Wildbad.

Moreover, the infrastructure of the market was meticulously organized, with facilities like restrooms and stages strategically placed for convenience and entertainment.

This market went beyond commerce; it served as a cultural display of Germany's diverse regions. Vendors from cities such as Stuttgart, Nuremberg, and Hanover, among others, brought with them the essence of their local communities. In addition to offering their products, they actively engaged visitors by sharing the spirit and traditions that characterize their unique locales, creating an immersive and enriching experience.

stalls

origin of the merchants
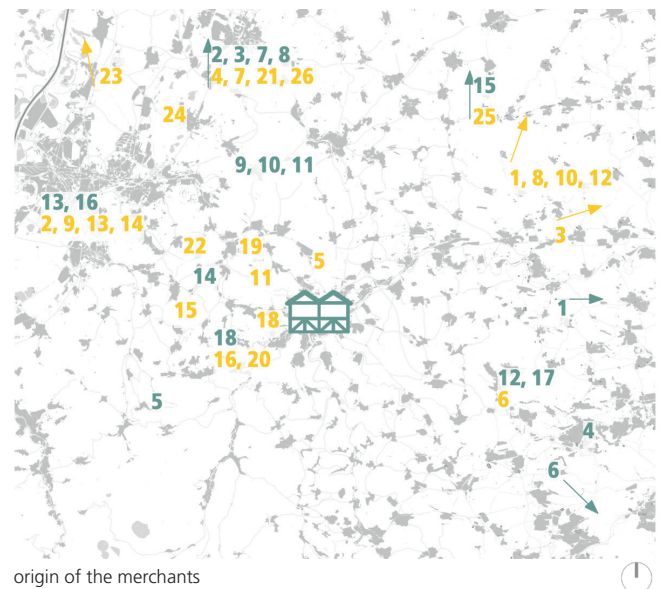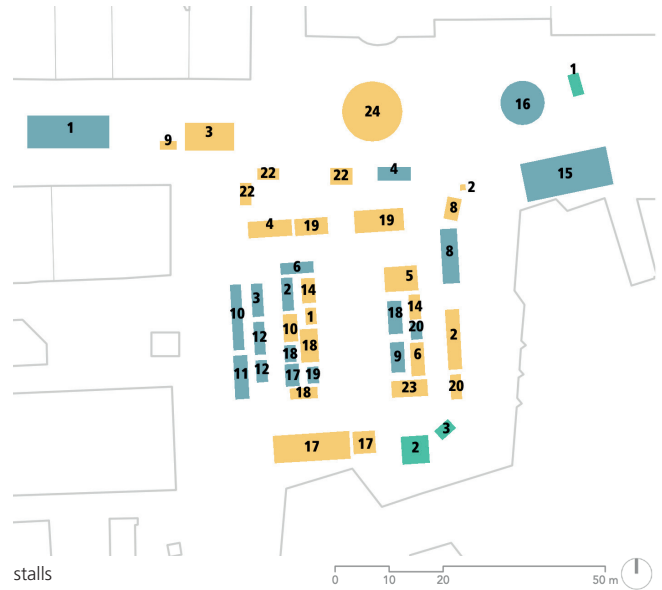
FOOD & BEVERAGE

1: Liqueur, O'Donnell, Berlin
2: Confectionery, Filder, Karlsruhe
3: Confectionery, Schweizer, Nuremberg
4: Confectionery, Schneider, Weisenheim
5: Confectionery, Mann, Mühlacker
6: Confectionery, Gronen, Stuttgart
7: Confectionery, Nagel, Wiesloch
8: Christmas stollen, Mamo, Großpostwitz
9: Chestnuts, Thelen, Karlsruhe
10: Hand bread, Rawiel, Großdeuben
11: Berner Gourmet Products, Bürger und Müller GmbH, Kieselbronn
12: Wela products, Wela-Trognitz Fritz Busch GmbH&Co. KG, Ludwigstadt
13: Crêpes, Thelen, Karlsruhe
14: Langos, Thelen, Karlsruhe
15: Langos, Daubner, Keltern
16: Churros, Krämer, Pforzheim
17: Grillstube, Lössel GmbH
18: Tarte flambée, Rösch, Wurmberg
19: Waffelbäckerei, Schreiber, Neulingen
20: Mulled wine, Kaiser, Pforzheim
21: Drinks, Barth & Sohn, Zotzenheim
22: Sausage specialities and drinks, Platzer,

Königsbach-Stein
23: Tarte flambée, Baguet, Bertsch, Pirmasens
24: Mulled wine, Arnoux, Bruchsal
25: Food and drinks, Ahrend, Hannover
26: Meat specialities and drinks, Schäfer, Mannheim

MERCHANDISE

1: Christmas decorations, Kaufer, Aalen
2: Olive wood products, Zalfani, Niederkassel
3: Handicrafts, wood, Oberreichenbach
4: Glass engravings, Vasilache, Esslingen
5: Ceramics, Bletzingeer, Bad Wildbad
6: Jewellery, Rösch Schmuckatelier, Ulm
7: Jewellery, Perlkönig GmbH, Erbes-Büdesheim
8: Wickerwork, Zösch, Langenfeld
9: Fur products, Monder M.S, Bretten
10: Knitwear, Monder, Kaur, Bretten
11: Leather products, Monder M.S, Bretten
12: Household products, Harhamer, Stuttgart
13: Balloons, Filder, Karlsruhe
14: Children's carousel, Dongus, Kämpfelbach
15: Ferris wheel, Fuchs, Preetz
16: Children's carousel, Thelen, Karlsruhe
17: Heart painting, Gronen, Stuttgart
18: Tea, herbs, spices, Delic, Pforzheim

19: Handcraft
20: Handcraft
21: Handcraft

INFRASTRUCTURE

1: WC
2: Stage
3: WC
4: Display area
5: PZ hut (Pforzheimer Zeitung, Weihnachtspost)

LOGISTICS AND ORGANISATION

The Pforzheim Christmas market expertly utilizes the city's preinstalled water and electrical infrastructure, a strategic approach that significantly streamlines the setup process for the annual festivities. Market stalls are strategically positioned to optimize visitor circulation, with dedicated pathways for service operations distinctly marked to minimize any disruption to the festive atmosphere.

Public amenities, such as toilets and waste disposal units, are tactically placed on the market's periphery. This ensures accessibility while maintaining the central festive ambiance. The iconic Christmas tree, a traditional centerpiece of the market, serves as a navigational beacon and is thoughtfully positioned to prevent obstructing the natural flow of foot traffic.

Discreetly planned delivery routes cater to the logistical requirements of stall owners, particularly during the market's peak times. This ensures smooth operations and that stall owners can conduct their business effectively without impacting the visitor experience.

The market's layout is meticulously planned and zoned into specific areas designated for gastronomy, merchandise, and infrastructure. This zoning maximizes space utilization and operational efficiency. The food stalls are grouped to create a vibrant and enticing culinary zone. In contrast, merchandise stalls are distributed throughout the market to promote visitor exploration and shopping. The overall infrastructure is seamlessly integrated to support these activities without any interference.
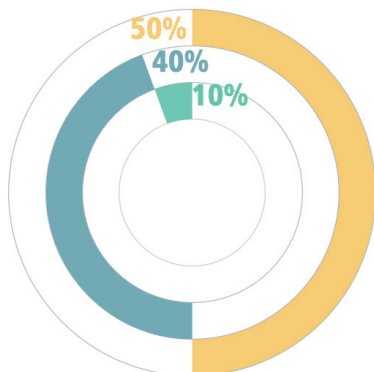
Christmas decoration

0 10 20 50 m

WC

facilities and delivery

0 10 20 50 m

50%
40%
10%

WC   public toilets

🗑   trash can

──   electricity

◄--►   delivery path

✺   christmas tree/decoration

✛   christmas decoration organisator

✛   christmas decoration stalls

▬   stalls

distribution: **food & beverage** merchandise, **infrastructure**

CASE STUDY 3:
CHRISTMAS MARKET
RAVENNASCHLUCHT

The Christmas market in "Ravennaschlucht" has been held since 2009, organized by Hochschwarzwald Tourismus GmbH. Unique for its setting beneath a 40m high railway viaduct and surrounded by 600m high rock faces in the Black Forest, it features regional craftsmen and craftswomen selling products. Some merchants have been part of the Christmas market since the first day.

Open on Fridays, Saturdays, and Sundays, access is primarily via a shuttle bus and requires an advance online ticket purchase. The 2023 market ran from November 24 to December 17.

FREQUENCY AND FLOW OF VISITORS

The Christmas market's entry fee allows Hochschwarzwald Tourismus GmbH to control visitor numbers and flow. Tickets, with a two-hour time slot, permit approximately 300 visitors per slot, which is enough to visit the Christmas market.

In 2023, ticket sales begin on October 16 at 10:00 and are only available online to reduce paper consumption. Evening tickets sell out first due to the enchanting night ambiance with all the lights on and the winter atmosphere. Saturdays are the first days to be sold out, while Fridays and Sundays are often sold out later.

The market operates from 15:00 to 21:00 on Fridays, 14:00 to 22:00 on Saturdays, and 14:00 to 20:00 on Sundays. 8,000 visitors are counted on Saturday. During noon, hikers can cross the site accompanied by a representative of the Christmas market. On regular days, the Ravennaschlucht is a popular hiking spot. The hiking track crosses places where the Christmas market is erected during the Christmas time and passes underneath the railway viaduct.

Year by year, this Christmas market gains in popularity, especially through social media. But compared to Christmas markets in cities, the Ravennaschlucht doesn't have more space to allow an extension of the Christmas market. Furthermore, to guarantee a quality of stay, Hochschwarzwald Tourismus GmbH prefers to lower the visitor count and consequently raise the prices. Annually, the Christmas market is open on one afternoon only for the local inhabitants of the Hochschwarzwald for a cheaper entry price.

visitor flow, regular day, hiking trail

visitor flow, afternoon

visitor flow, evening
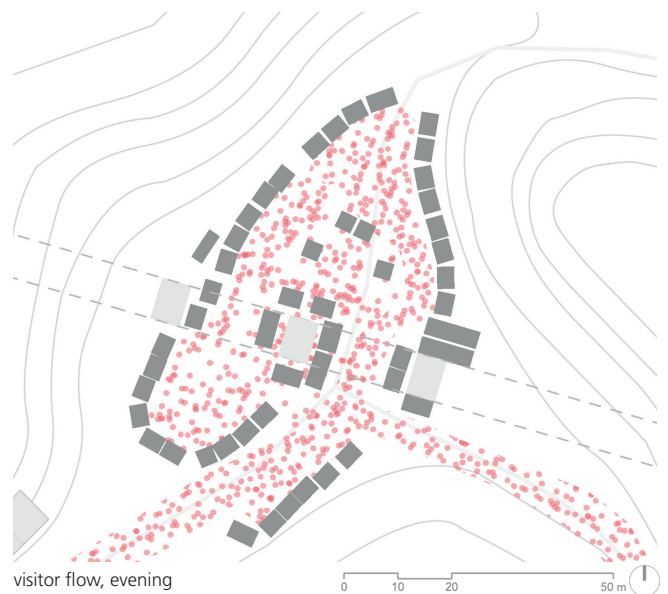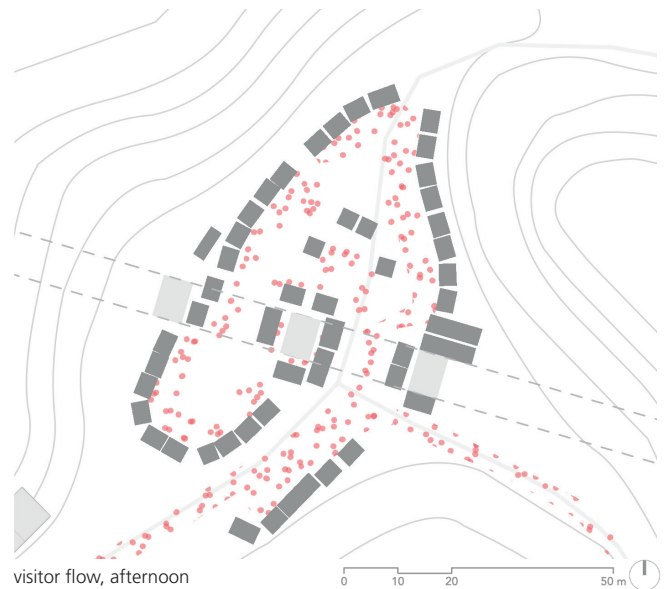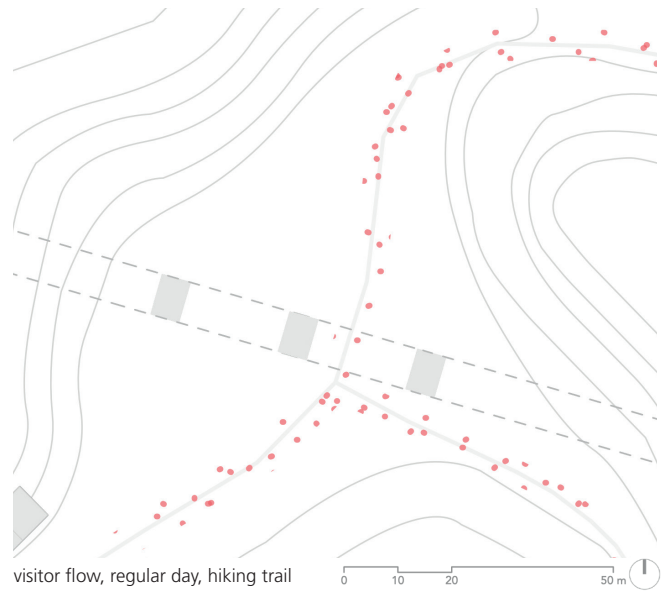
ORGANISATION CYCLE

For the Christmas market to take place, the location must be booked every year, and the organization begins in July. In September, more substantial investments are initiated, and a service center is created to answer questions from potential visitors about the Christmas market, especially regarding online tickets.

The installation of the Christmas market begins in mid-October, approximately six weeks before the opening. One worker from Hochschwarzwald Tourismus GmbH is responsible for overseeing the process and remains fully occupied until the end of the Christmas market. Local farmers and craftsmen support them in clearing the place, removing rank growth, setting a new gravel base, and installing the stalls, electricity supply, decorations, the

Christmas tree, and 300 small fir trees. The process is highly influenced by weather conditions, and due to its mountainous location, there is a high probability of snow.

During the Christmas market, three workers from Hochschwarzwald Tourismus GmbH will be stationed, one per shuttle station, to verify tickets and ensure everything runs smoothly. After the Christmas market, eight of the own stalls will be brought to Schluchtsee for the Winter market, while the others will be deconstructed and stored in Titisee. They will wait to be reused a year later for the next Ravennaschlucht Christmas market. Merchants with their own stalls have to clean up themselves, ideally before Christmas Eve.
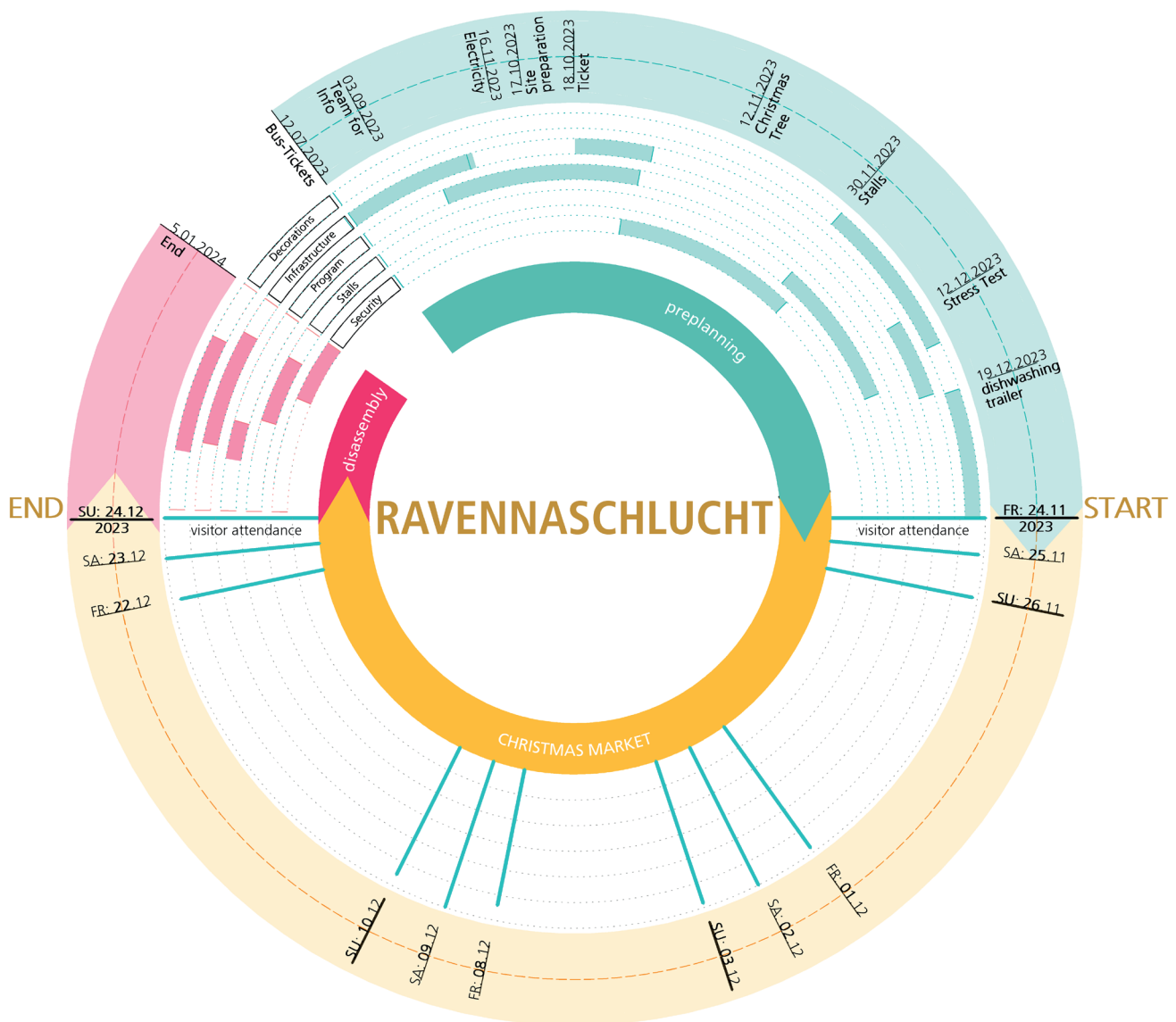
temporality

MERCHANTS AND STALLS

Having regional merchants is an essential aspect of the Ravennaschlucht Christmas market. The products, sourced locally from the Black Forest, add to the market's appeal for tourists. In total, 40 stalls are available.

Merchants who adhere to the exhibition and stall location conditions may receive prioritization in the selection of new merchants in the following years, rewarding their good conduct. Consequently, some participants have been part of the market for 14 years.

Visitors to the Ravennaschlucht Christmas market anticipate a diverse range of handmade goods. This expectation is likely influenced by the uncommon entry prices for a Christmas market. Hochschwarzwald Tourismus GmbH also monitors the number of restoration stalls, aiming for a balance with merchandise stalls. The goal is to avoid an overemphasis on food stalls while ensuring there are enough to reduce waiting times for visitors seeking refreshments.

There is a high variety of products in this market. Some merchants have bigger shops and sell their products online as well, while others are independent retailers offering handcrafted products such as woodcrafting, sewing, drawing, and modeling, which are difficult to find online. Some work with sheep and cow skin to create leather products or felt clothes, perfect for winter. Restoration stalls also use self-produced products like meat products, sausages, delicacies, spirits, oils, and more.

stalls

origin of the merchants
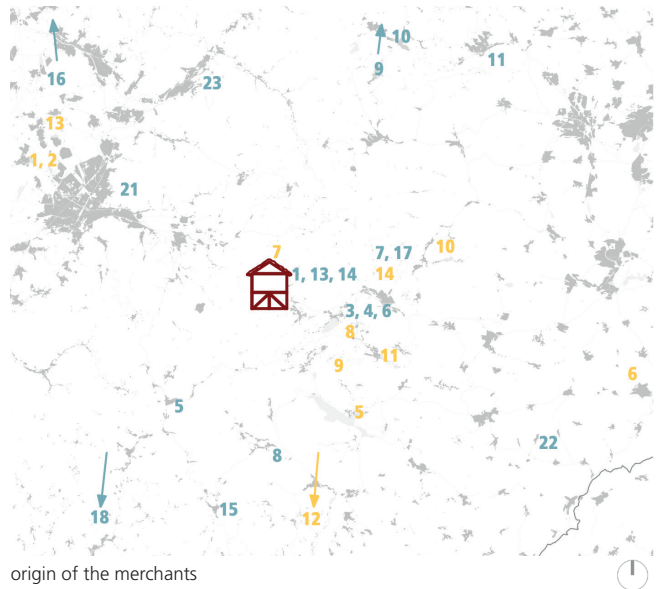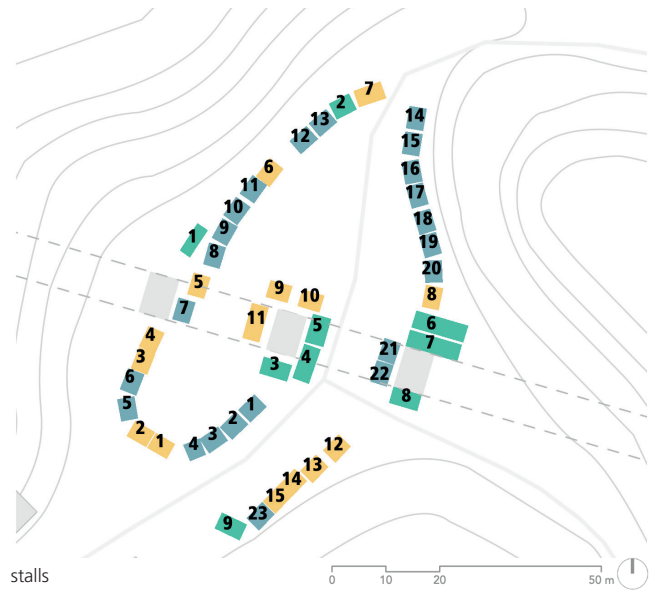
FOOD & BEVERAGE

1: Barbecue specialities, Mike Bächle, Umkirch
2: Barbecue specialities, Mike Bächle, Umkirch
3: Fire tongs punch and mulled wine
4: Fire tongs punch and mulled wine
5: Pancake roll, Till mountain farm, Schluchtsee
6: Sausage specialities, Schwarzwaldhof / EDEKA, Cologne
7: Soup and wine, Hofgut Sternen, Breitnau
8: Potato pancakes and drinks, Bistro zum See, Titisee
9: Flamkuchen and drinks, Hilpertenhof, Lenzkirch-Raitenbuch
10: Meat specialities, Fritz butcher's shop, Eisenbach
11: Fish specialities, Kaiser Freudig fish farm, Lenzkirch
12: Meat specialities, Boll butcher's shop, Görwihl
13: Confectionery, Reinhardt, March
14: Goulash soup, Lions Club Hochschwarzwald & Rotary Club Hochschwarzwald, Titisee-Neustadt
15: Confectionery and drinks, Ravenna-Crepes

MERCHANDISE

1: Food and cosmetics, Ospelehof, Hinterzarten
2: Gutscher
3: Fashion items and food, Brunner, Titisee
4: Fashion items and food, Brunner, Titisee
5: Bürten, Keller and Faller, Todtnau
6: Figures, Holzer Wood-carving, Titisee
7: Delicacies, Villinger, Titisee-Neustadt
8: Decoration, Wood-manufacture Bernau, Bernau im Schwarzwald
9: Figures, Sculpture Jung, Gütersloh
10: Herbs and spices, Schwarzwaldsalz, Triberg
11: Wines, La Provence, St. Georgen
12: Ceramics and textiles, Ars Ceramicae
13: Honey and jam, Rauchhülsi, Hinterzarten
14: Household goods, Heimat in Herz, Hinterzarten
15: Sheepskin products, Loisel's Schafstube, Todtmoos
16: Spirits, Franz Wild, Gegenbach
17: Fashion items and household goods, Hanne Cathrin, Titisee-Neustadt
18: Fashion items and decoration, Nadelwichtel, Magden
19: Fashion articles, U.Schülke,
20: Artworks, Engelkind

21: Delicacies, Hakuna Matata, Freiburg
22: Game specialities, Schwarzwaldwild Hevart, Bonndorf-Dillendorf
23: Jewellery and decoration, Horst'les Biegeecke, Waldkirch-Kollnau
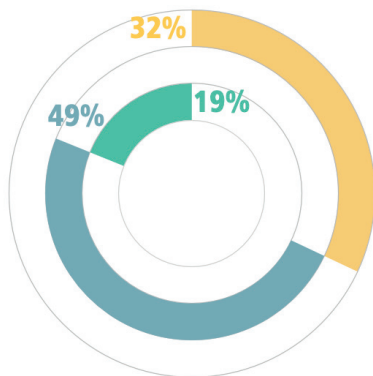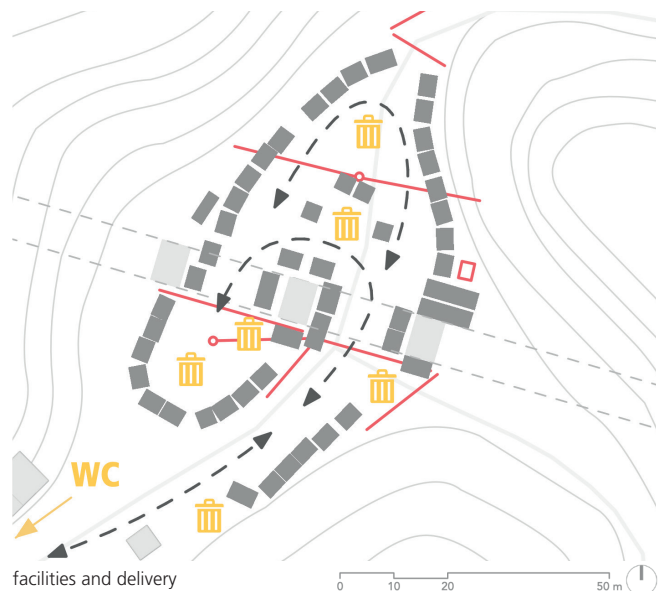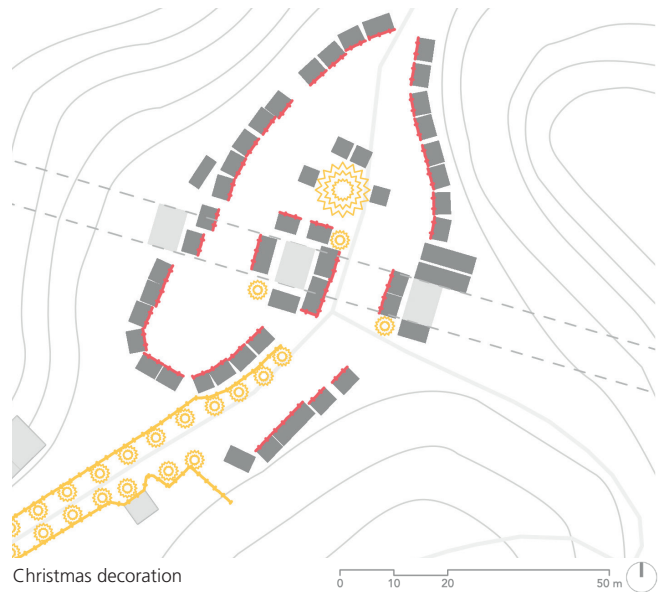
INFRASTRUCTURE

1: Dishwashing mobile
2: Christmas mailbox
3: SWR
4: Technology
5: Radio
6: Container
7: Grit
8: HGT
9: Mobile stand

LOGISTICS AND ORGANISATION

Furthermore, the location is not connected to electricity or water infrastructure. The market doesn't have fixed power cabling from the "Hofgut Sternen", instead, it is using an electricity box located underneath the bridge. Several years ago, they buried pipes underground to conceal the electricity cables. However, establishing a connection to the mains water supply remains unfeasible. In winter, there is a risk of the pipes freezing and bursting. Instead, mobile washrooms were installed near the "Hofgut Sternen." Merchants, especially those dealing with food, can access a mobile sink by paying a fee of 200€. Some also bring their own washing facilities. Restoration merchants receive information about the number of visitors, enabling them to anticipate the quantity of food needed and deliver it to their stall up to 15 minutes before the start.

To prevent issues in the visitor's car park, Hochschwarzwald Tourismus GmbH employs security staff to coordinate vehicles. The police may also make periodic visits to control traffic. Tickets will be checked a second time at the entrance of the fenced Christmas market. The first check will be either at the car parking for those who own a parking ticket or at the shuttle station for those who booked a shuttle bus ride.

As mentioned before, the Christmas market opens in the afternoon on Fridays, Saturdays, and Sundays. Because this place is crossed by a hiking track that is still used during the Christmas market, passage through the market is granted if escorted by a curator.

Christmas decoration

0　10　20　50 m

facilities and delivery

0　10　20　50 m

WC public toilets

　 trash can

　 electricity line + shaft

　 delivery path

　 christmas tree/decoration

　 christmas decoration organisator

　 christmas decoration stalls

　 stalls

distribution: **food & beverage, merchandise, infrastructure**

INFRASTRUCTURE MANAGEMENT

Three buses serve the Christmas market at Ravennaschlucht. The two buses departing from Himmelreich and Hinterzarten each have seats for 70 people, while the bus coming from Freiburg has 78 seats. The latter has a longer distance to cover and, therefore, does not run as frequently. The other shuttle buses depart every 20 minutes.

In addition, there are 70 parking spots available. To use a parking spot, one has to book a parking ticket within the same time slot as their market ticket. These parking tickets sell out quickly. Merchants have two parking spots each.

Members of Hochschwarzwald Tourismus GmbH are allowed to park at the "Hofgut Sterne" parking lot, but no one else, as they are also limited in the number of spaces and require them for their employees and customers.

The Christmas market must be accessed by foot, as the bus stations and parking spots are located near "Hofgut Stern," around 150 meters away from it.

At the beginning of the Christmas market in 2009, there were no shuttle buses available, which meant that visitors had to come individually by car, significantly soiling and damaging the gravel roads. To prevent the annual deformation of the forest paths, Hochschwarzwald Tourismus GmbH introduced the shuttle buses. This reduced vehicle circulation without reducing the number of visitors.

regular infrastructure

0 20 50 100 200

modified infrastructure

0 20 50 100 200

Accompanied passage during the day

safety measures

0 10 20 50 m
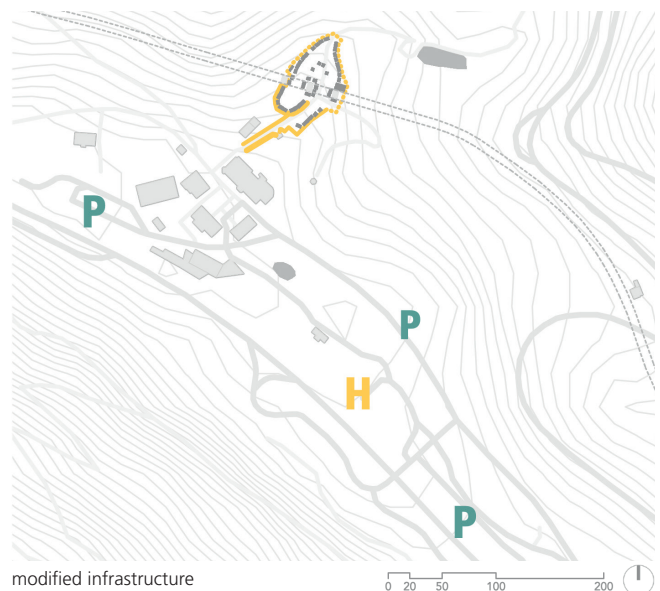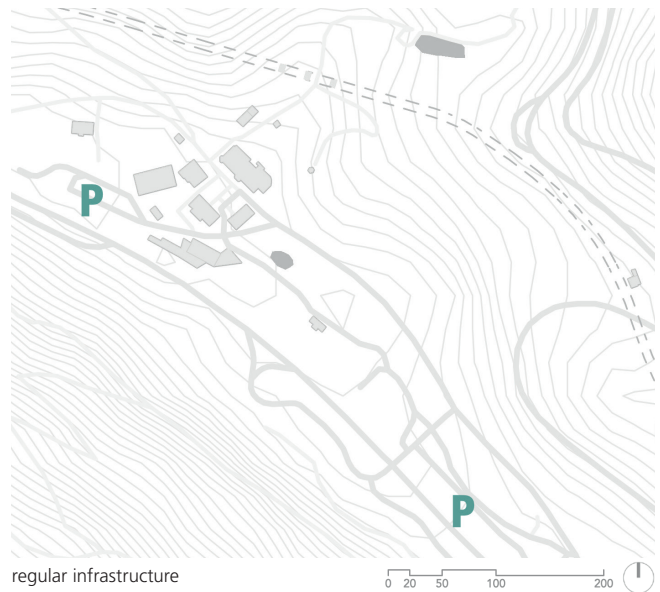
P   parking lot

H   public transport stop

🛡   security check

DESIGN OF THE STALLS

The stalls are designed by a local craftsman, Holzkette Schwarzwald, and are used every year. Hochschwarzwald Tourismus GmbH owns twenty-two stalls of the same type, which can be rented by merchants. If needed, they also provide canopies and counters to add to the stalls.

Merchants, like butchers, bring their own stalls and, in addition, a stall to smoke their merchandise. Due to its location, there is limited space to store goods, so merchants must store them behind the stall. Some, such as restaurant stalls, have their storage stalls. However, there is a limit to the stall capability, meaning that a merchant can only bring more stalls if another merchant renounces bringing additional stalls.

The stall's decoration should be brought by the merchants following the Christmas market's guidelines. Plastic decoration is forbidden.

Everyone must pay 800€ to contribute to the electricity costs, and beveradge stalls have to pay an additional 800€.
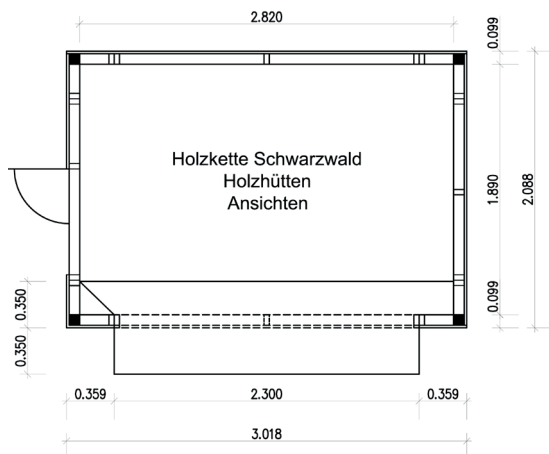
construction plan sample chalet
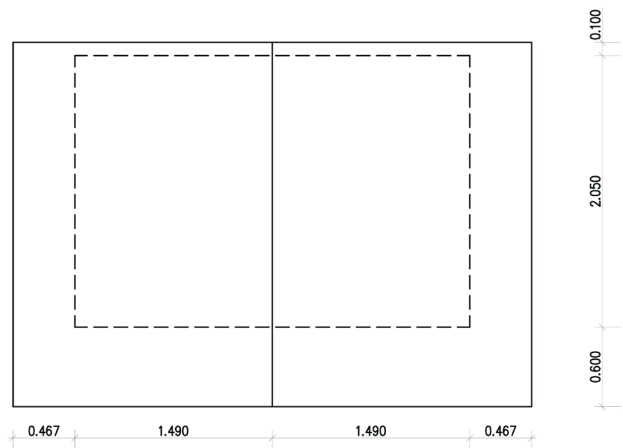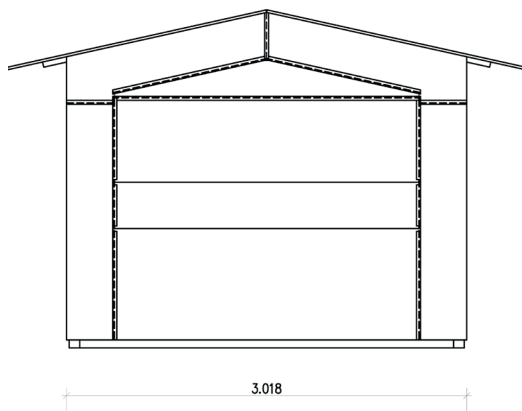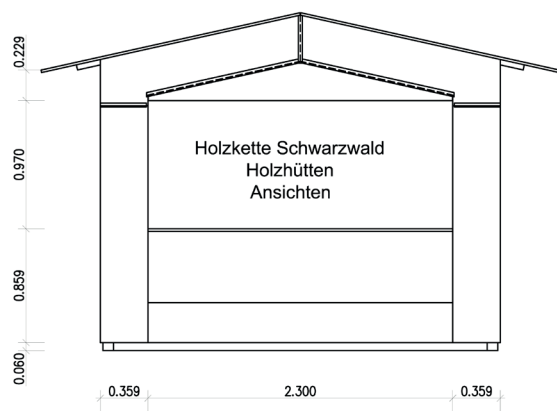
COMPARATIVE ANALISIS & SUMMARY

ORIGIN OF THE MERCHANTS

We contacted the organizer of our chosen Christmas market, spoke with representatives from Pforzheim and Hochschwarzwald Tourismus GmbH for Ravennaschlucht. Unfortunately, the Strasbourg organizer was too busy, but we found necessary information through their documentation and referred to our research for more details.

After analyzing each Christmas market, we realized that the bigger the market, the less local and more anonymous it becomes. For Ravennaschlucht and Pforzheim, we obtained a list of our contacts. For Strasbourg, the largest in our selection, we couldn't find any list, and when we visited the site, barely any stalls displayed their contacts. We could recognize some merchants from Strasbourg, and some had "Alsace" written on their stalls. F

or the other two Christmas markets, we easily found the location of the merchants. Ravennaschlucht, the smallest market of the three, explicitly featured regional merchants (except for one merchant from Switzerland on the border to Germany), while for the Christmas market of Pforzheim, around half of the merchants were regional, and the others were from different regions in Germany.

SIZE AND EXPANSION

Out of the three Christmas markets, Strasbourg had the largest development. It began with one place, the Broglie Square, which we analyzed, and later expanded to 11 other places on the "grand île" (center of Strasbourg) and a few around."

There are still more places in the center of Strasbourg that could be used to expand the Christmas market. However, during our research, we noticed that the Broglie Square had a lower number of merchants in 2023 compared to 2019. So perhaps the Christmas market of Strasbourg does not wish to expand. Other possibilities we thought of include increased safety measures to prevent mass panic, similar to the situation in Seoul during Halloween in 2022, or heightened hygiene measures resulting from COVID.

The Christmas market of Pforzheim began in the market square.

Strasbourg

Pforzheim

Ravennaschlucht

origin of the merchants: **local, from the same country, other country, unknown**

110 stalls in 2019,
place Broglie, Strasbourg

0 10 20   50   100 m

65 stalls in 2023,
place Broglie, Strasbourg

0 10 20   50   100 m

50 stalls in 2019,
pedestrian street, Pforzheim

0 10 20   50   100 m

50 stalls in 2023,
market place, Pforzheim

0 10 20   50   100 m

40 stalls in 2009,
Ravennaschlucht

0 10 20   50   100 m

40 stalls in 2023,
Ravennaschlucht

0 10 20   50   100 m

Due to renovation in 2008, it was relocated to the pedestrian passage beside it. Afterward, both places were used. Through our dialogue and correspondence, we learned that there is currently no need to expand the market.

Last but not least, the Ravennaschlucht Christmas market is very popular and has experienced growth over the years. However, due to its location, there is literally no space to expand. To ensure good quality, Hochschwarzwald Tourismus GmbH prefers to increase the entry price and lower the visitor capacity.

In conclusion, we have a small Christmas market that would like to expand but can't, and two other Christmas markets that could expand but don't.

VISITORS POINT OF VIEW

All three Christmas markets are popular for different reasons. The Eurométropole Strasbourg is known as the capital of Christmas, attracting visitors from around the world every year. Similarly, the Ravennaschlucht has grown in popularity through social media. On the contrary, the Christmas market of Pforzheim is more of a local market where people from surrounding villages and cities like to gather.

All three markets have the city procuring decorations for the settings, streets, and open spaces. For the stalls, merchants are responsible for the decorations, following guidelines given by the curators. Depending on the time, the Christmas market can be extremely crowded, especially in Strasbourg, where moving can be a challenge. This is less the case in Pforzheim, except possibly on Saturday night, and it is not the case in the Ravennaschlucht, as they control visitor quantity through the entry fee. However, having an entry fee is a special component. The majority of Christmas markets don't have any entry fee unless there are special circumstances that implement it. Usually, a Christmas market in Europe aims to entertain people before Christmas, and without an entry fee, it is accessible to every income, if you are not considering the various amounts of food, drinks, and products to buy.

In conclusion, we have a small Christmas market that would like to expand but can't, and two other Christmas markets that could expand but don't. They start and end around the same weeks, while one of them is only open on weekends due to the organization. The balance between restoration and selling of products is important for all of them, as well as well-chosen decorations to emphasize the Christmas atmosphere.

stalls and entrance, Place Broglie, Strasbourg

stalls, Pforzheim

stalls, Ravennaschlucht

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Olympic Summer Games

LONDON 2012, RIO 2016, TOYKO 2021

Lukas Kirchgäßner, Ida Vincon, Kyra Weis

INTRODUCTION

The Olympic Games, the pinnacle of sporting competition, unite nations worldwide in their harmonious pursuit of excellence. They not only stand for athletic masterpieces, but also symbolize universal values such as peace, togetherness and fair competition. On this unique stage, athletes from different cultures and backgrounds come together to offer a fascinating spectacle through their discipline, dedication and toughness.

The roots of the Olympic Games go deep into history, following on from the tradition of the ancient Greeks. Today, the Games serve as a platform for spreading positive messages that go beyond sport. This important event not only creates sporting heroes, but also stories of perseverance, fairness and cohesion.

The London 2012 Olympic Games were a unique and unforgettable event that captivated the world. The British capital set new standards in organization, innovation and cultural diversity by providing an impressive backdrop for this global sports festival from 27 July to 12 August 2012. Olympic flair permeated the entire city, from iconic sporting venues such as the Olympic Stadium, London Arena and Velodrome to historic landmarks such as Buckingham Palace and Tower Bridge.

One positive aspect of the London Games was the emphasis on sustainability and social responsibility. The Olympic Village was built to environmental standards and the Games supported projects to improve education and sport in disadvantaged communities. Despite these successes, there were also challenges, including high costs and criticism of public funding.

The 2016 Olympic Games in Rio de Janeiro were characterized by successes and challenges. The event combined sporting excellence, cultural diversity and social challenges. The colorful opening and closing ceremonies reflected the rich Brazilian culture and created a vibrant atmosphere. The Games brought the world closer through peaceful competition between athletes from different nations.

In terms of sport, the Rio Games provided memorable moments with broken records and new sports stars, including inspiring successes by Brazilian athletes and the participation of refugees as their own team. Despite these positive aspects, the Games were not free from controversy. Social inequalities and displacement due to infrastructure projects led to protests.

Promises to improve living conditions were not fully realized and environmental impacts, including the ecological impact on Guanabara Bay, remained a concern.

The Olympic Games in Rio therefore present an ambivalent picture. While they united the world in a common celebration of sport and culture, structural problems and social inequalities were revealed at the same time. This duality underlines the complexity of such major events and emphasizes the need for sustainable and socially responsible planning for future Olympic Games.

The Tokyo Olympics in 2020 had been postponed due to the COVID-19 pandemic, but took place one year later in summer 2021. The event showcased impressive athletic performances, innovative organization and the challenges of hosting during the global health crisis.

Despite the pandemic, the Games showed adaptability and determination. Strict health protocols were implemented, innovative technologies and virtual spectators contributed to a unique Olympic Games. There were inspiring sporting moments with new records and stories of perseverance. The diversity of sports and worldwide participation reflected the global dimensions. However, the Games were not free from controversy as the decision to hold them divided opinion. The absence of spectators affected the atmosphere and social interaction was limited. Overall, the Tokyo Games were a complex event that symbolized human adaptability and common purpose, both as a sporting event and in the context of society.

In the following, the Olympic Games are compared and analyzed in terms of Olympic Venues, specific mobility solutions for the games and the Olympic Village. In the context of the three categories above, also aspects such as sustainability and socioeconomic factors will be discussed.
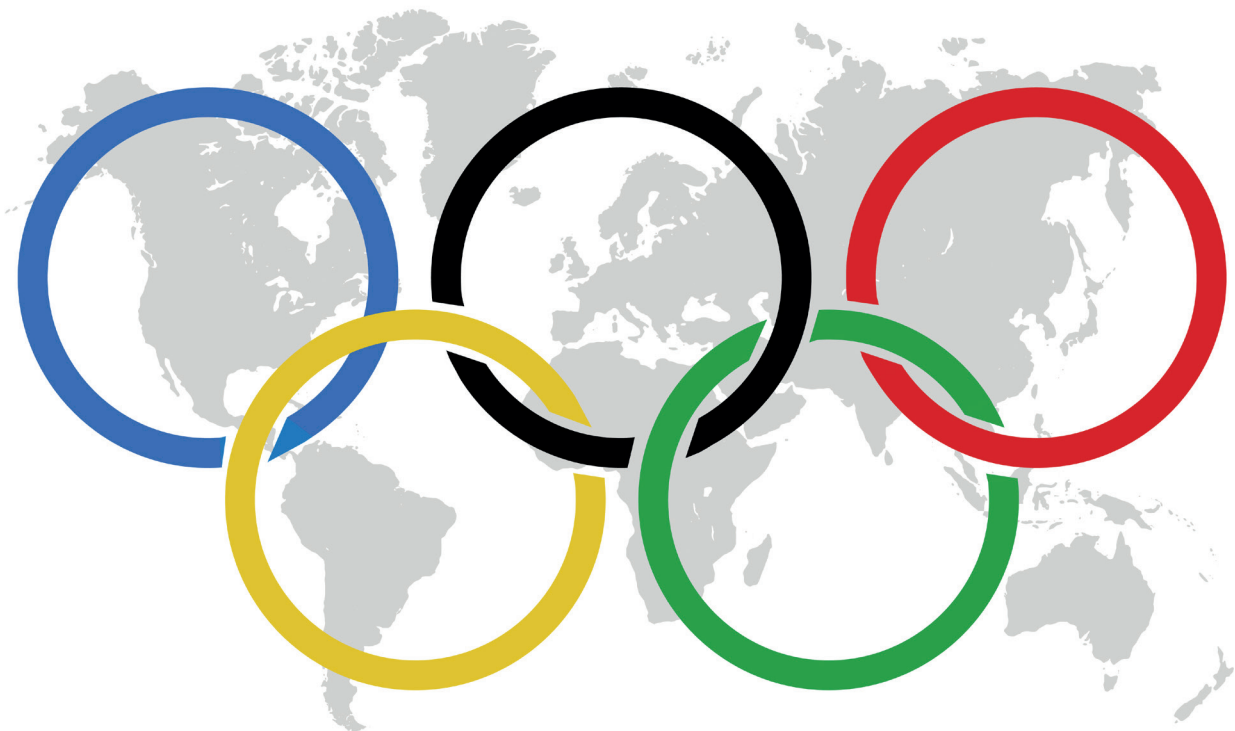
CASE STUDY 1: LONDON 2012

The 2012 Olympic Games in London were an outstanding event, characterized not only by spectacular sporting performances, but also by innovative infrastructure, mobility solutions, the Olympic Village and a focus on sustainability. The Olympic stadiums in London, including the iconic Olympic Stadium in Queen Elizabeth Olympic Park, impressed not only with their architectural splendor, but also with their multifunctional use after the Games. This sustainable reuse of the sports venues emphasized the desire to achieve a long-term positive impact on the local community.

Mobility during the Games was facilitated by efficient transportation systems and innovative solutions, including dedicated transport routes and the integration of public transport. Efforts to minimize traffic congestion and environmental impact helped ensure that the Games ran smoothly not only for the athletes but also for visitors.

The Olympic Village in London was not only used as temporary accommodation for the athletes, but was also designed with sustainable building principles in mind. It represented a modern, environmentally friendly approach to temporary housing design and provided the athletes with an optimal environment for recovery and preparation.

The use of renewable energy sources, waste reduction and environmental initiatives demonstrated the commitment to a green Olympics.At the same time, programs were implemented to promote community participation and improve the quality of life in the host cities.Overall, the London Olympics not only left sporting memories, but also shaped sustainable standards for future major events by focusing on environmentally friendly infrastructure, efficient mobility, athlete accommodation and social responsibility. In the following analyses, these observations are reinforced and illustrated with analytical graphics.

London Map

0   2,5   5km

Aquatics Centre (1)

Basketball Arena (2)
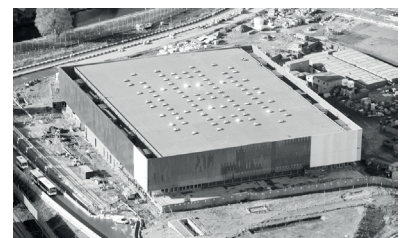
Copper Box (4)

OLYMPIC VENUES

The Olympic Games of London were supposed to be realized with a sustainable responsibility. All of the new buildings should have an excellent standard of the british certification system BREAM. Reuse and recycling played central roles in the competitions around the olympic venues. In 1948 London already had the chance to host the Olympic Games in London.

Especially in the Olympic Parc (1-8) new buildings were planned for the sports competitions. Out of the 24 considered venues, 18 are still in use, 5 were dismantled and 1 was demolished.

TEMPORARY ASPECT

In the Aquatics Centre (1) **seats were reduced** from 17,500 to 2,500. Another change they realized was to open the Aquatics Centre for the public use after the games.
The Basketball Arena (2) was the **biggest temporary stadium** in the Olympic history. It had a capacity of 12,000 seats and was

meant to be used in the following games in Rio 2016, but this couldn't happen because of the responsible people in Rio.

Another temporary stadium was the Riverbank Arena (6), which hosted the hockey games. It was built with 16,000 seats, this **temporary seating stands** were dismantled afterwards. The whole **stadium was relocated** and named Eton Manor.

The Copper Box (4) is extremely **flexible**, with retractable seating that can change the floor size within the venue, facilitating different activities during and after the Games. In 2013 this venue opened up as a **public multi-purpose arena**.

London's oldest venue was the Lord's Cricket Ground (12), which was built in 1814. In 2012 they added **temporary tribunes** for the Olympic Games and later they were dismantled again in only 13 days.
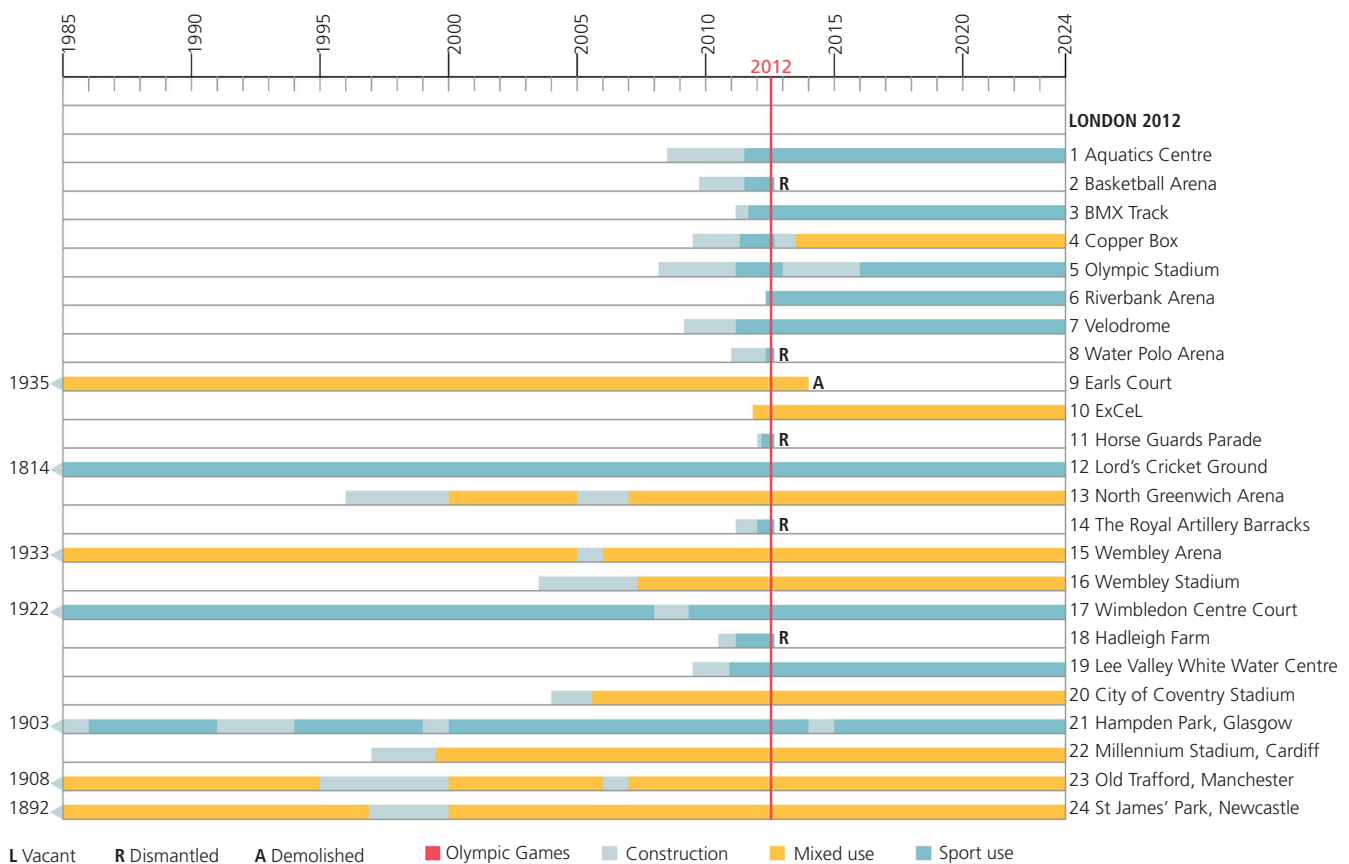
Timeline London

TRANSPORTATION AND MOBILITY

The mobility and transport concept in London 2012 has been overwhelmingly praised as a success and recognized as benchmark in the Olympic Games history.. The main priority in planning was assessing what was achievable within the existing transport system, then working out how client expectations could be accommodated. The main priority in planning was building on the existing infrastructure and transport system and improving it with mostly temporary measures.

Main part of the mobility concept was the so called Olympic Route Network (ORN), inspired by the 2000 Summer Olympics in Sydney. The ORN was a temporary network of roads connecting venues, training sites and the Olympic village. It was reserved for officials and athletes only. Depending on the events and active venues the ORN changed. The London Traffic Control Center monitored the flow of traffic via cameras and made real time changes to the layout of the ORN depending on the events and active venues. The dedicated roads where marked with the Olympic rings and temporary signs. The goal was to have 90% of the officials and athletes travel less than 20 minutes and 80% less than 20minutes to their destination.

To encourage visitors to use public transport, the mobility concept also included temporary changes in public transport. For example the ticket for an event was also a free travelcard for the duration of the games. Another successful strategy was the concept of 'the last mile', involving detailed planning of the area within 1 km of each venue. Almost each venue had a dedicated station, with multilingual signage and upgraded accessibility. The routes between stations and venues also included signage, information and entertainment booths.
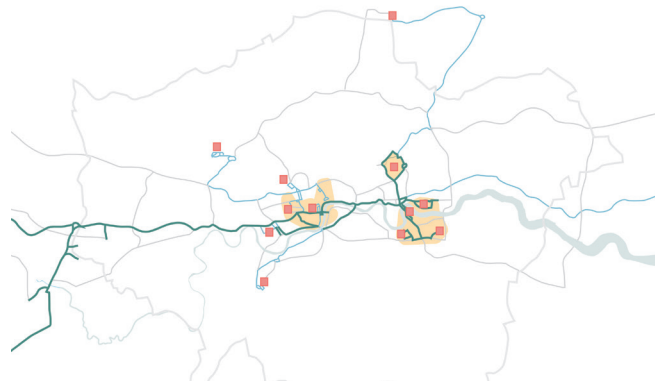
Regional Olympic Route Network (ORN) in London

Olympic Route Network (ORN) and Paralympic Route Network (PRN)

Olympic Route Network (ORN) ORN during roadevents

Alternative Olympic Route Network (AORN)

Venues
Olympic Zone

dedicated stations
Railways

Stratford international
& Stratfort station:
Increase in transport capacity from 100,000 to 240,000.

St. Paul's Cathedral

Westminster Abbey

Central Zone

Olympic Zone

London City Airport

River Zone

0   2   4km

ORN (Olympic Route Network) in the center of London

OLYMPIC VILLAGE

The Olympic Village in London, which played a central role during the 2012 Olympic Games, not only left a lasting impression on the event itself, but also had a lasting impact on the city and its infrastructure.

The Olympic Village in London was designed specifically to house the athletes and team members during the Games. It consisted of modern, sustainable apartments and provided a comfortable environment for the athletes. After the Games, the village was transformed into a forward-thinking housing project that became a new neighborhood called the East Village.

One of the most striking changes that the Olympic Village has brought to London to date is its impact on urban development. The East Village project has not only improved the housing market in the area, but has also contributed to sustainable urban development. Care was taken to ensure that existing facilities, including parks and green spaces, were preserved and new infrastructure was created to meet the needs of residents.

Another impact of the Olympic Village on the city of London is the promotion of environmental awareness and sustainable practices. The green standards implemented during the Games, including energy efficient buildings and environmentally friendly transportation, served as a precursor for similar initiatives in urban planning. The integration of renewable energy and the creation of green open spaces have not only improved the quality of life for residents, but also positioned London as a sustainable metropolis.

Google Earth Image capture from: 2022

The Olympic Village in London has therefore not only provided temporary accommodation for athletes, but has also brought about a lasting change in urban development and environmental awareness. By creating a modern, sustainable urban district, the London Olympic Village has had a positive impact on the quality of life and infrastructure in the British capital, and its sustainable principles serve as inspiration for future urban development projects worldwide.
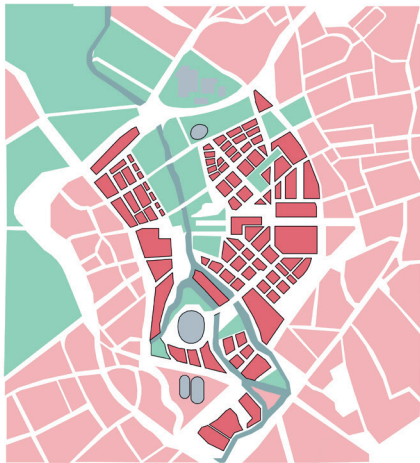
Starting Point 2012   Transformation   Completion 2030
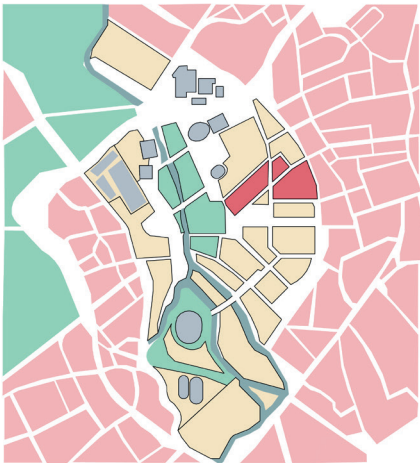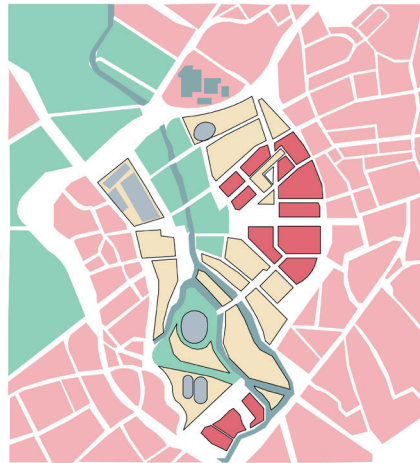
|	Areas of other use		Living		Green spaces		Olympia building

Masterplan Development

CASE STUDY 2: RIO 2016

The city of Rio de Janeiro became the first in South America to host one of the largest sporting events in the world. Since then the city has been profoundly transformed. Billions of reais were spent, hundreds of improvements were planned but not all of them were completed. The games were distributed in several places in the city of Rio de Janeiro, which were grouped in four regions, and in five other Brazilian capitals: Belo Horizonte, Brasília, Salvador, São Paulo and Manaus.

Barra da Tijuca: In addition to being the place chosen for Olympic and Paralympic Village, Barra will be the great heart of the Olympics, concentrating most of the installations of the Olympic Games and the Paralympic Games of 2016. For this reason it was the area that focused the greatest efforts on improvements related to infrastructure and transport.

Deodoro: The neighborhood, located in the western part of the city, was chosen to host the competitions of equestrian, mountain biking, cycling BMX, modern pentatlo, sports shooting, slalom canoeing, grass hockey, rugby and basketball in the Olympic Games. The choice of this place is mainly due to its history and existing equipment.

Copacabana: This area was the site of athletic walking competitions, road cycling,water marathons, triathlon, sailing, beach volleyball, rowing, canoeing and paratriathlon.

Maracana: This area includes the Sambódromo, the João-Havelange Olympic Stadium (Engenhão) and the Maracanzinho.

Rio Map

0   10   20km
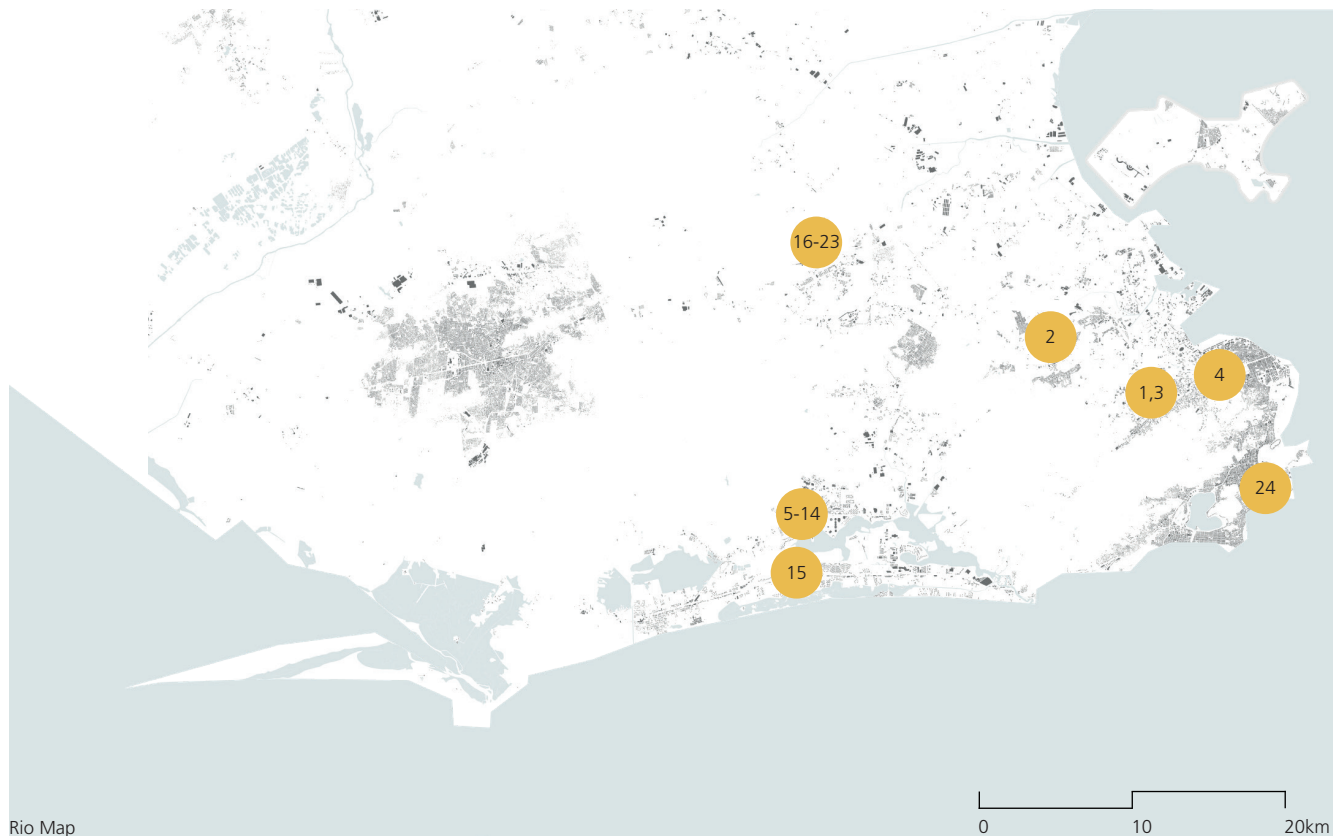
Jeunesse Arena (5)

Aquatic Center (6)

Arena do Futuro (10)

OLYMPIC VENUES

As part of the opening ceremony in Rio 2016 many signs were showed to emphasize the goal of having sustainable Olympic Games. Instead of this many unfavourable things happend during the construction time and later when it came to the future use of the venues.

The Maracana Stadium (1) was built in 1948, so it was an already existing stadium fot the Olympic Games, but still it had to be renovated with a cost of 316 mio €. After the Olympic Games the stadium was in a very bad condition and no longer usable. The operator were in debt to the utility company and electricity was turned off. There was a legal dispute between the then operator and the Olympic Organising Committee over responsibility for the maintenance of the stadium after the Olympic Games. Until today there are still problems and since

november 2023 electricity is turned off. Out of the 29 considered venues, 18 are still in use, 8 are abandoned and 3 were dismantled.

TEMPORARY ASPECT

The Olympic Park (5-14) is today a mostly abandoned place. For example the Aquatic Center (6) was meant to be temporary, it **should have been dismantled and then replaced**, but instead it is empty and no longer used. The Arena do Futuro (10) **should have also been dismantled and the material used for school projects**, but the plans were rejected in August 2017. Durig the construction time of the Arena da Amazônia (29) many people protested against it, because there were **no plans about future uses**.

L Vacant   **R** Dismantled   **A** Demolished   ■ Olympic Games   ■ Construction   ■ Mixed use   ■ Sport use
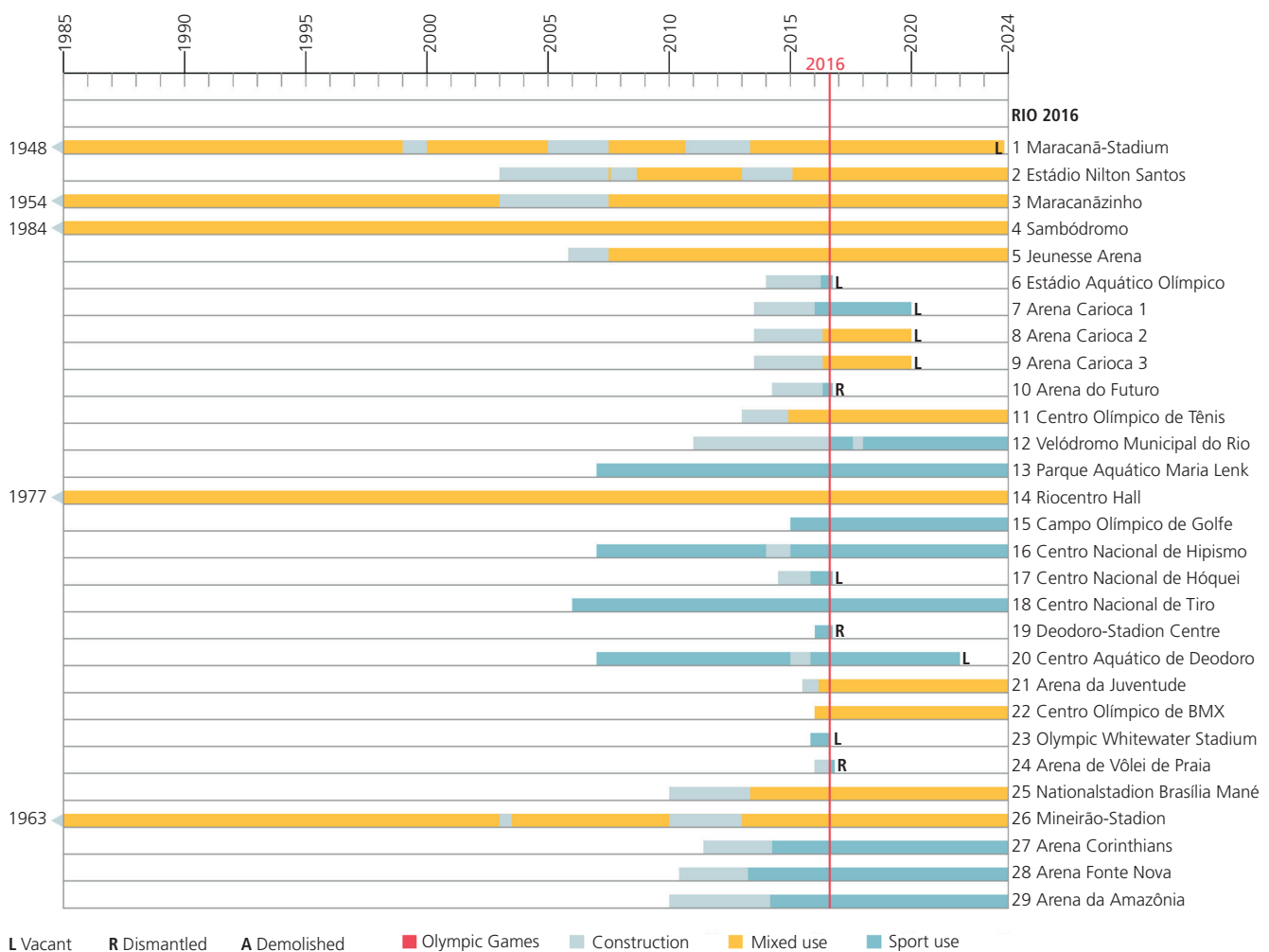
Timeline Rio

TRANSPORTATION AND MOBILITY

Even before the official allocation, there were significant doubts about whether the existing infrastructure in Rio was capable of hosting such a massive event. The mobility concept aimed for long-term changes in the infrastructure system to handle the projected visitor numbers and the considerable distances between venues and accommodations.

At the core of these measures was the establishment of the Bus Rapid Transit Network (BRT) a regional transport ring consisting of four bus lines connecting the most important venues within the Olympic zones. Originally planned as a long-term measure in the legacy plan of the games, the BRT operated during the games under special conditions. During the event the operating hours of the buses were extended and access was only possible with an Olympic ticket and a separate travel ticket. The same applied to other forms of public transport.

The mobility concept was based on segregating visitors and locals, especially from socioeconomically weaker neighborhoods. Changes in the route plan ensured that visitors were transported directly from their accommodations to the venues. The routes were changed to avoid socially disadvantaged neighborhoods and some stations were not serviced.

Regional Bus Radpid Transit Netwerk (BRT) in Rio

BRT Network in Rio

OLYMPIC VILLAGE

The Olympic Village in Rio de Janeiro during the 2016 Olympic Games was a key element of the event that had a far-reaching impact on the city and its urban development. The analysis of the Olympic Village in Rio highlights both positive and challenging aspects that can still be felt in the city's urban landscape today.

The development of the Olympic Village as a contribution to urban development should be highlighted as a positive aspect. The village was built in the Barra da Tijuca region and helped to turn this part of the city into an important center for sport and leisure. After the Games, the Olympic Village was to be transformed into a residential complex that would alleviate the housing shortage in the region and contribute to the development of a new neighborhood, but these remained promises rather than realities.

However, there are also negative aspects to consider, particularly in terms of social impact. The construction of the Olympic Village led to the displacement of local residents, resulting in social tensions and protests. This issue highlights the challenges of dealing with social justice and the displacement of communities in the context of major events.

Another aspect analyzed is the sustainability of the Olympic Village in Rio. During the Games, environmental aspects were emphasized, such as the renaturation of rivers and the creation of parks. However, the long-term sustainability of these measures is the subject of critical discussion, as not all environmental promises have been fully implemented in the post-Olympic phase.

Google Earth Image capture from: 2022

In addition, the financial dimension remains to be analyzed. The costs for the construction and transformation of the Olympic Village must be considered in the context of the economic challenges. The costs often exceed the original estimates and can put a strain on public finances.

Overall, the Olympic Village in Rio de Janeiro has brought about both positive and critical changes in urban development. It served as a catalyst for the improvement of certain neighborhoods and created new infrastructure, but at the same time it posed social challenges and questions regarding long-term sustainability. The comprehensive analysis of these factors is crucial in order to draw lessons from the Olympic Games and enable better integration of major events into urban environments.
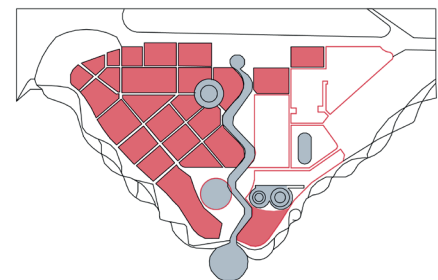
Starting Point 2016
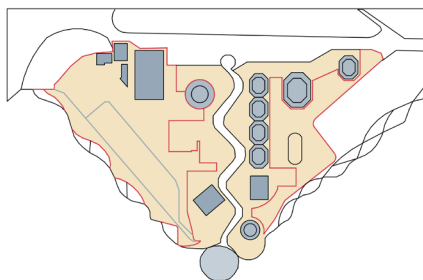
Transformation 2018
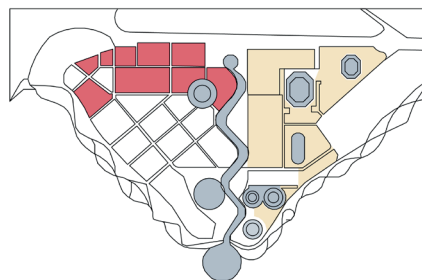
Completion 2030

■ Areas of other use   ■ Living   ■ Olympia building

Masterplan Development

CASE STUDY 3: TOKYO 2021

The 2021 Olympic Games in Tokyo presented themselves as a fascinating chapter in Olympic history, characterized by impressive Olympic stadiums, innovative mobility solutions, a modern Olympic Village and a strong commitment to sustainability. The Olympic stadiums in Tokyo were characterized not only by their architectural splendour, but also by their technological sophistication. Above all, the Olympic Stadium, which served as the venue for the opening and closing ceremonies, impressed with its futuristic design and created an impressive backdrop for the top sporting performances.

Tokyo, already a metropolis known for its efficient public transportation, implemented additional measures to ensure the smooth flow of athletes and spectators. This included special transportation routes, improved train connections and innovative solutions for the last mile. The Olympic Village in Tokyo was not just a temporary home for the athletes, but a modern example of sustainable urban planning. The accommodation was designed with environmental considerations in mind and the infrastructure promoted social interaction and a pleasant quality of life for the athletes.

Tokyo set the standard for environmentally friendly events by utilizing renewable energy, reducing waste and implementing eco-friendly construction projects. The Games were not only a demonstration of sporting excellence, but also an example of how major events can be organized in harmony with the environment.

In summary, the Tokyo Olympics were not only a global sporting event, but also a showcase for innovative architecture, efficient mobility, modern athlete housing and exemplary sustainability efforts. With these Games, Tokyo set a benchmark for the organization of major events in the 21st century.

Tokyo Map
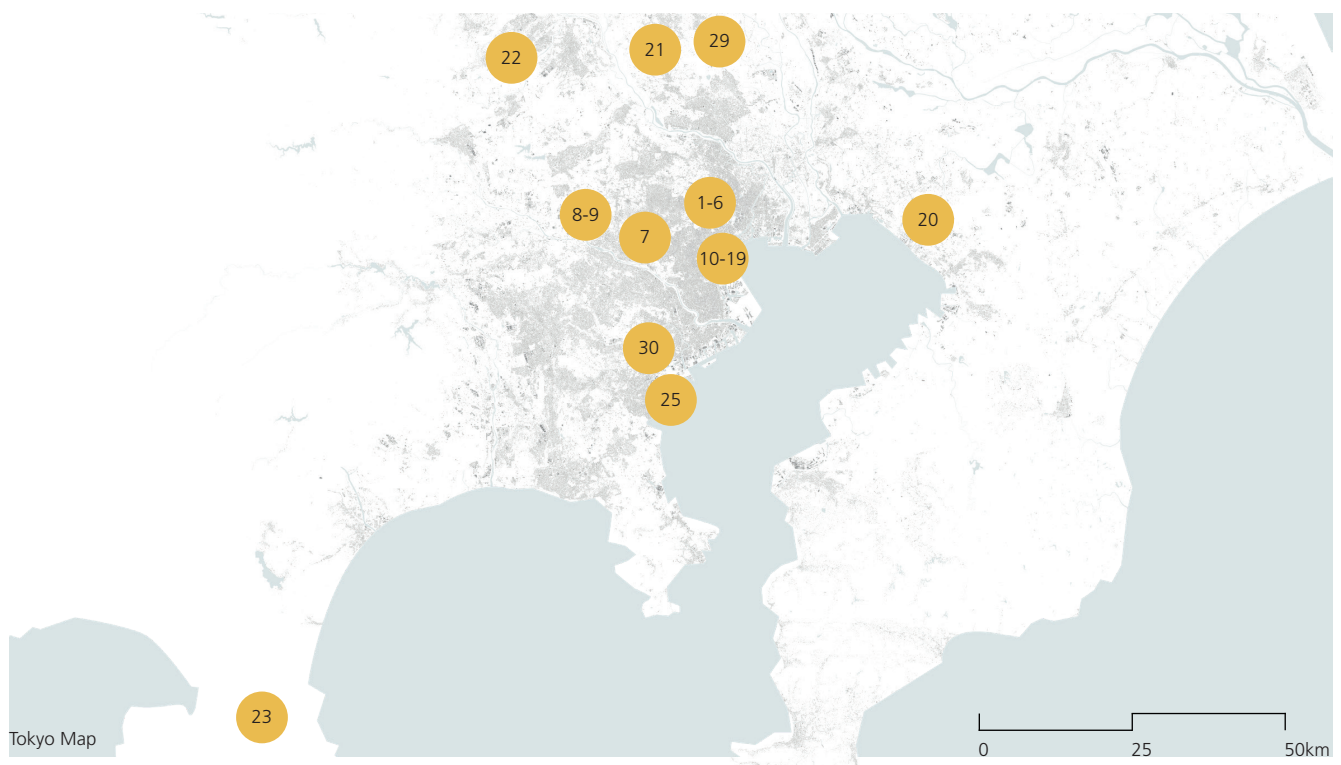
Tokyo Taiikukan (2)

Aiomi Urban Sports Park (14)

Tatsumi International Swimming Center (19)

OLYMPIC VENUES

Tokyo set a goal to host the most sustainable games of the history. They wanted to have a maximum circular flow of ressources and a minimum amount of waste.

In 1964 Tokyo already hosted the Olympic Games and some Stadiums were still in use for 2021.

The Tokyo Taiikukan (2) was built in 1953 and then renovated in 2020 to be used for the Olympic Games. After the Games it took a few months for the cleanup, then it was opened for the

public as a multiuse arena. Out of the 30 considered venues, 27 are still in use, 1 is not used anymore and 2 were dismantled.

TEMPORARY ASPECT
The Aiomi Urban Sports Park (14) was an olympic venue for basketball and sport climbing. After the Paralympics it was no longer needed and therefore **dismantled**.

The Tatsumi Swimming Center (19) was built in 1990, in 2023 they decided to open it as a **public swimming center.**
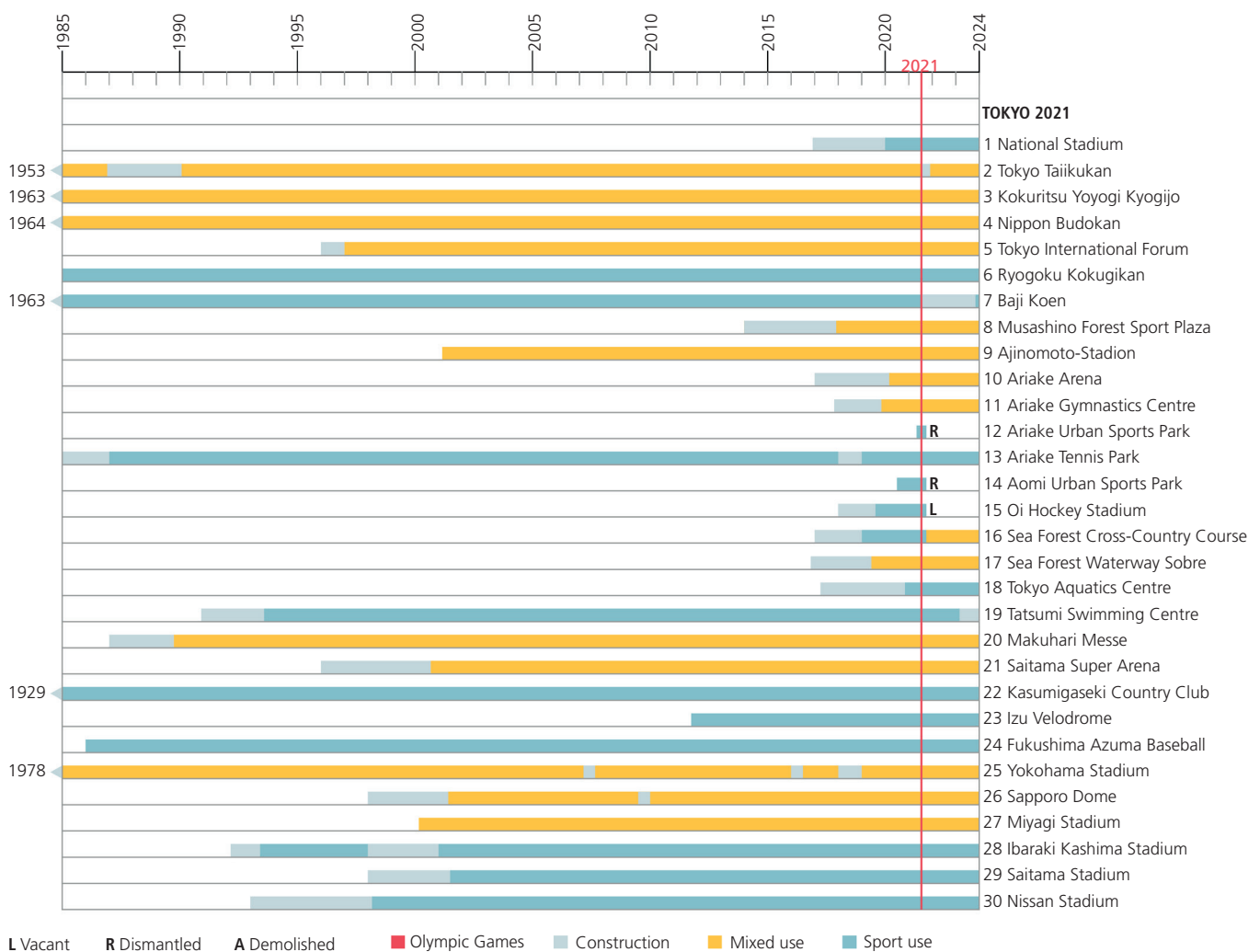
Timeline Tokyo

TRANSPORTATION AND MOBILITY

The public infrastructure network of Tokyo is among the most efficient and advanced networks in the world. Therefore, the organizing team of the Olympic Games in Tokyo chose a similar approach to that of London 2012. All measures were intended to build upon the existing system and be improved through minor interventions or temporary measures. In fact, many strategies were directly adopted from the mobility concept of the 2012 London Olympic Games. Due to the pandemic, only a few of the planned measures were ultimately implemented.

For officials and athletes, an Olympic Route Network (ORN) was to be established in the road network, the course of which could be flexibly adjusted based on traffic conditions and events. Depending on demand, individual lanes were converted into "Olympic Lanes" and were thus only open for Olympic transport. Visitors were encouraged to primarily use public transportation. Schedules were expanded, and stations were equipped with additional signage and staff.

During the Event forward-looking and experimental transport and mobility soloutions were tested. This primarily included autonomous shuttles. Vehicles specifically designed for athletes could be called on demand via an app. This allowed participants to travel flexibly and comfortably between their destinations.
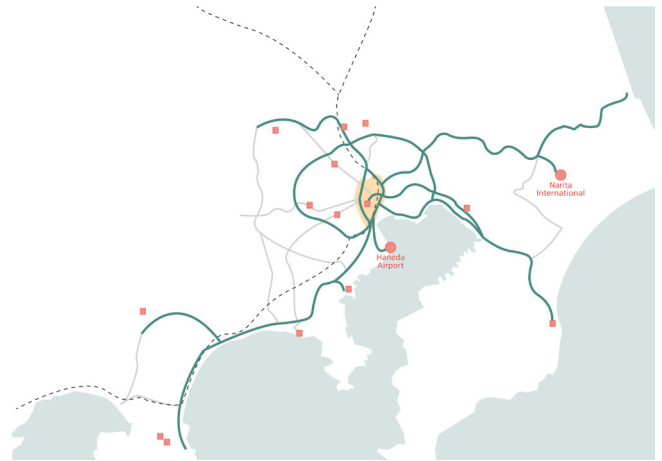
Regional Olympic Route Network (ORN) in Tokyo
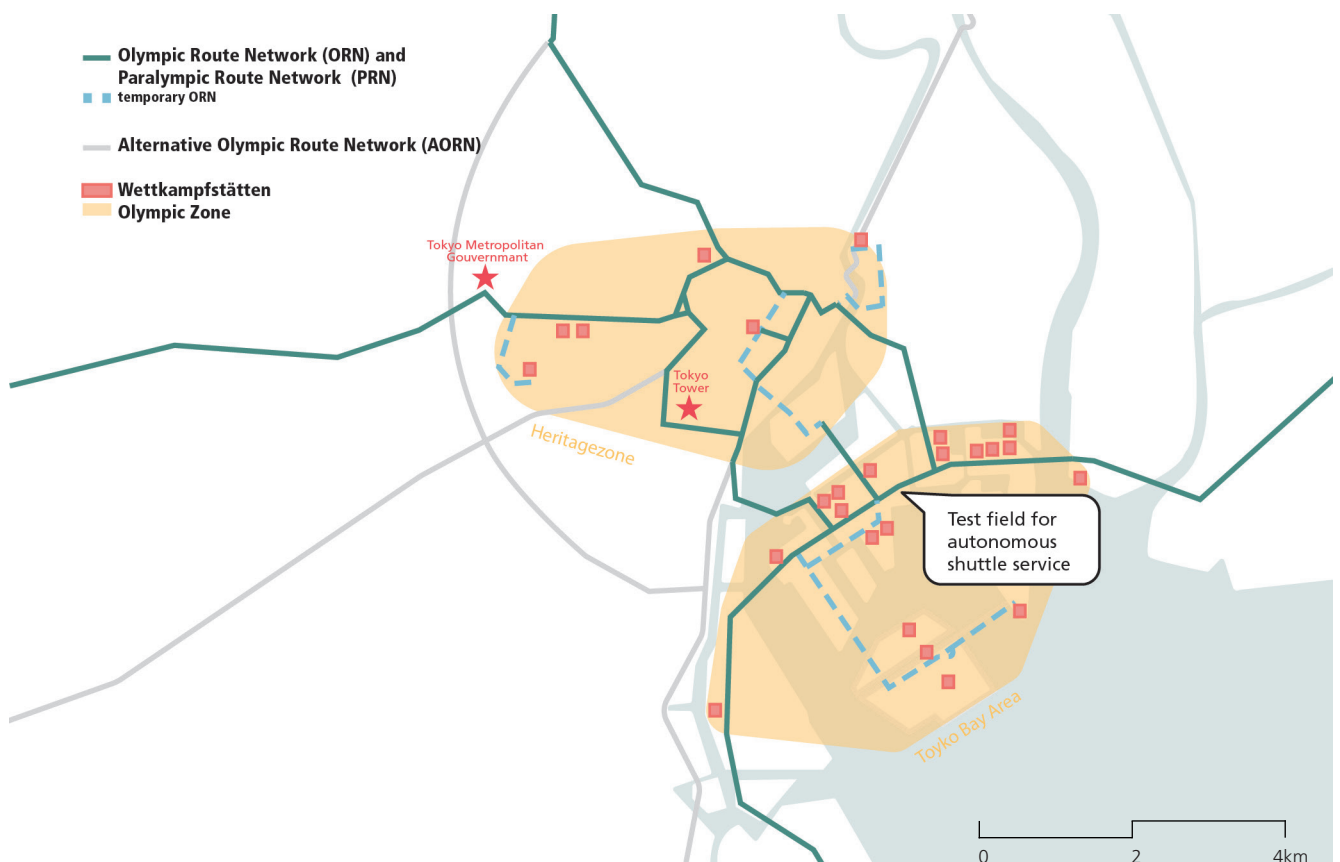
ORN in the center of Tokyo

OLYMPIC VILLAGE

To date, the Olympic Games in Tokyo in 2021 and the Olympic Village in particular have had a lasting impact on the city, both in positive and challenging ways.

One positive aspect is the long-term use of the Olympic Village in Tokyo. The village was developed with sustainability and urban planning needs in mind. After the Games, the village was transformed into a modern residential complex, which helped to improve the housing market. This move demonstrates strategic planning and the ability to utilize Olympic infrastructure for urban development. Another positive aspect is the promotion of sustainable and accessible housing concepts. The Olympic Village in Tokyo was designed to incorporate the principles of Universal Design to ensure accessibility for people with different abilities. These progressive approaches to housing have raised awareness of inclusive architecture and urban design.

The environmentally friendly aspects of the Olympic Village in Tokyo should also be emphasized. The infrastructure has been developed with a focus on energy efficiency and sustainable materials. This helps to position Tokyo as an environmentally conscious metropolis and underlines its commitment to environmental responsibility. Nevertheless, there are also challenges to consider. The cost of planning, building and subsequent use of the Olympic Village has been significant and there is a need to ensure that these investments deliver the expected social and economic benefits in the long term.

Google Earth Image capture from: 2022

Another issue is that of social inclusion. Although the village has been designed as a sustainable residential area, the social impact on the local community still needs to be assessed. It is important to ensure that the positive changes brought by the Olympic Village in Tokyo reach all parts of the population.

Overall, the analysis of the Tokyo Olympic Village shows that proper planning and integration into urban development can have significant positive impacts. However, it remains important to monitor the long-term social, economic and environmental aspects of these changes and ensure that the legacy of the Tokyo Olympics promotes sustainable and inclusive development.

Olympia building   Living   Areas of other use
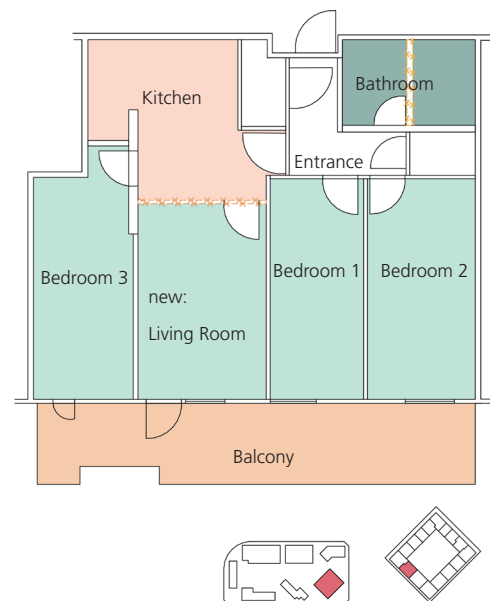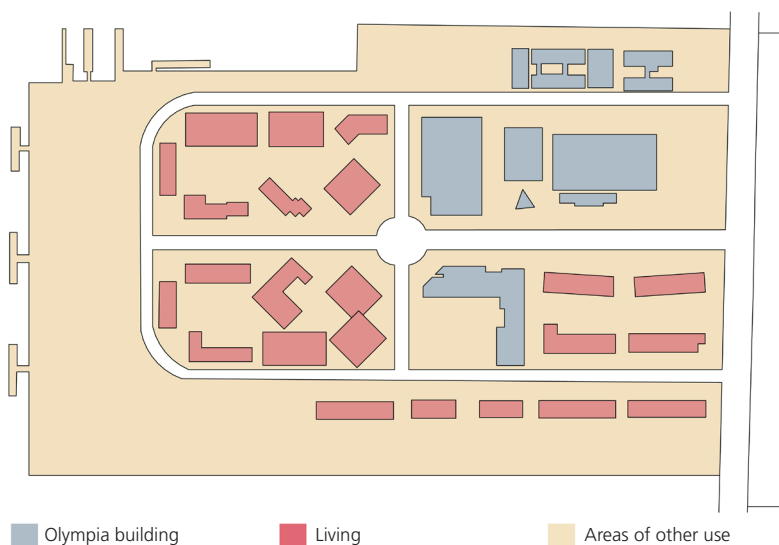
Development Site plan and example apartment in 2023

COMPARATIVE ANALYSIS & SUMMARY

OLYMPIC VENUES:

In comparison with the other Olympic Games, London had very old stadiums in use. Although it is our oldest case study, London had very good plans for the following use of the venues. They kept in mind to have temporary stadiums and to reduce seats, which are no longer needed.

During the construction time in Rio 80,000 residents were displaced to use the area to build new stadiums. Overall the bad quality of some venues led to bigger problems, together with budget problems and missing thoughts about future uses. By looking at the timeline you can see that on average Rio has the shortest timelines.

Due to the travel ban and rising covid-19 cases, athletes from around the world had to compete in mostly empty venues. In line with the strategic sustainability roadmap, Olympic hosts were required to make maximum use of existing venues and minimise new construction. As usual, the venues were closed after the Games to allow contractors time to dismantle and remove temporary structures, but afterwards one after another opened again for public usage.

MOBILITY:

The Olympic Games exert immense stress on the infrastructure networks of host cities. London and Tokyo were able to rely on already established infrastructure networks and further enhance them. The supplementation with small-scale, subtle, and temporary measures ensured a smooth operation for officials and athletes. Additionally, it provides an opportunity to test and evaluate forward-looking concepts and new technologies within the framework of the Olympic Games.

In Rio, significant portions of the infrastructure had to be created from scratch. The drastic measures taken led to a limited durability. Large-scale infrastructure projects are challenging to realize within the preparation time for the Olympic Games. Lack of foundations and overly ambitious goals resulted in only temporary measures remaining from the intended legacy.

Overall, it is evident that smaller, temporary interventions in already well-functioning infrastructure networks prove more successful than large-scale projects. The adaptability and efficiency of such measures contribute to the overall success and sustainability of the Olympic Games.

OLYMPIC VILLAGE:

In London, some conversion measures are visible so far, but the big step forward is unfortunately not recognizable. There are still many places where construction work has not yet begun or is still in the starting blocks. In the areas adjacent to the residential area, the conversion work has already been largely completed. In the central areas of the Olympia Park, there are still many construction sites or outstanding projects. All in all, however, it is clear that measures are being taken to implement the master plan.

There are no recognizable changes in Rio, only traces of weathering and decay. The Olympic Park resembles a ghost town. Many areas are no longer accessible as the buildings are in danger of collapsing. Many promised measures have yet to be implemented and are now just unfulfilled statements. There is a lack of funds and people responsible for the necessary implementation and renovation everywhere. The city has difficulties in maintaining and effectively using the former Olympic sites, which leads to a stark contrast to the promises made during the Games.

In Tokyo, construction work is clearly visible and many apartments are already for sale on various real estate sales platforms. Nevertheless, it must be said that the plans were drawn up in advance so that no major construction work is required afterwards. In the Olympic Village, there were only a few temporary interior walls inside the apartment to adapt the floor plan to the future residents. As Tokyo did not have a large contiguous Olympic Park, it was easy for Tokyo to carry out the promised conversion work on the individual Olympic arenas themselves. There was no need for major changes, as there was no park to be partially converted into residential areas, as was the case in London and Rio. Tokyo benefited from careful planning that allowed for efficient use of existing infrastructure.
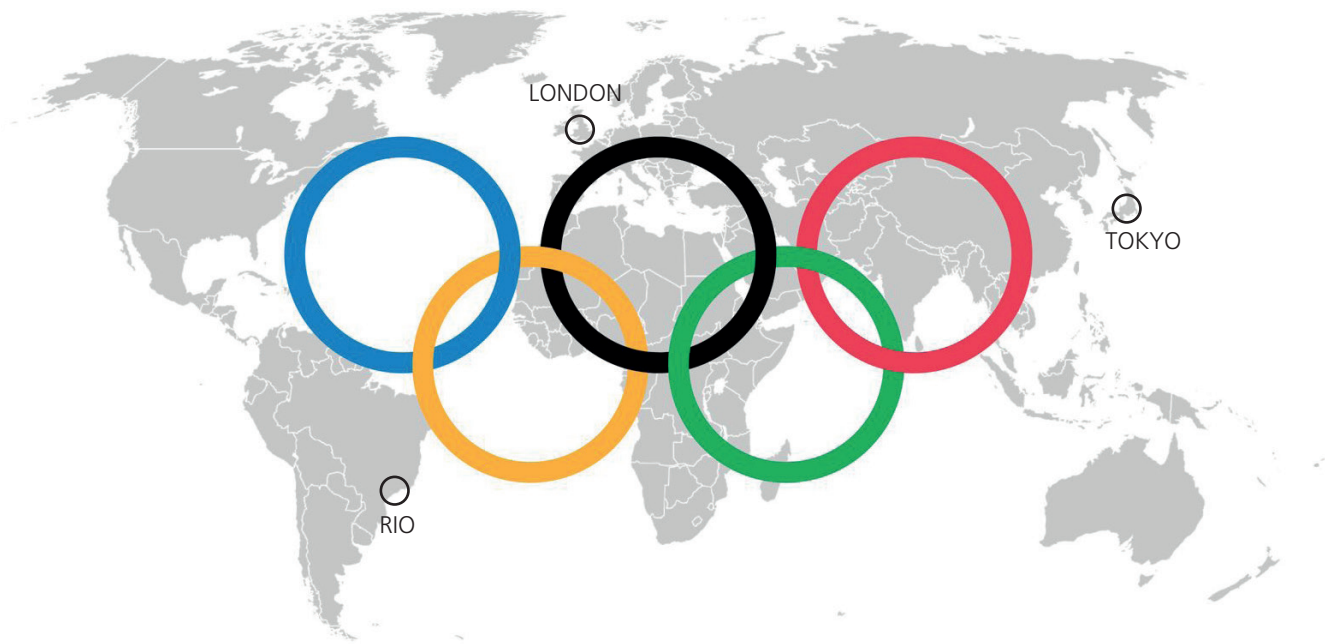
Olympic Games Map

INTERESTING FACTS AND NOTES

OLYMPIC VENUES

The Olympic Basketball Arena from London 2012 is an example for a temporary venue, which was planned very detailed by Wilkinson Eyre Architects. It was one of the largest temporary venues ever built for any Games and could be constructed in just six weeks.

The rectangular structure was about 35 m high and existed of a 1,000 tonne steel frame, that was covered with 20,000 m² of recyclable translucent PVC fabric. This surface was stretched across arched steel framing modules that pushed the fabric out to create an undulating, three-dimensional texture across the façade.

Even if it was a very simple design, it was very impressive from outside and inside. Wilkinson Eyre Architects have created an impressively functional building with very few resources, the sustainability of which was ultimately be proven by its use. The only major handicap of their construction is that it is only suitable for continuous operation in one warm region of the world.

In January 2013 the stadium was dismantled, the seating was sold to Barnet owner Tony Kleanthous to be used in the construction of The Hive Stadium.
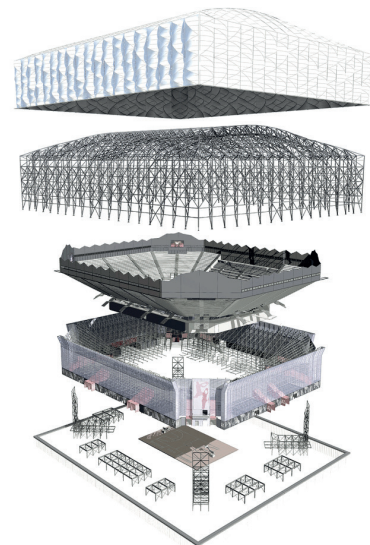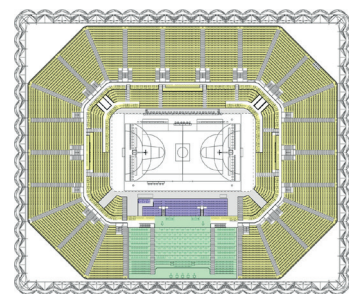

Foto: © Wilkinson Eyre Architects

Foto: © Wilkinson Eyre Architects

Basketball Arena

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MOBILITY

To encourage visitors to use public transportation, the organisation team developed the concept of the 'last mile'. This required detailed planning of the urban areas in the vicinity of the competition venues, as well as between the stops and the venues.

The aim was to promote sustainable and healthy mobility. Additional signage, information, entertainment offerings, and staff were placed along the last mile to help visitors navigate better. The areas of the last mile were accessible to the entire population, thus also fostering general acceptance for the major event and the associated restrictions.

Special attention was also given to ensuring that the final segments of the routes were safe and easily accessible for visitors. In addition to their entertainment and informational value, the last mile was also part of the overall security concept in the urban space. By engaging visitors, they were more cooperative. There were no significant incidents within the last mile areas.

The implementation of smaler, temporary measures was an overall success. After the end of the Event, the last mile sparked discussions aabout whether some of the measures could be adopted in the long term.

London: Staff in front of information booth
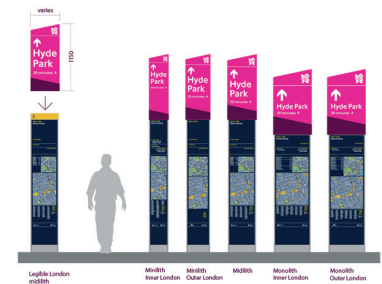
London: special signage and wayfinding

OLYMPIC VILLAGE

The beds in the athletes' village at the 2020 Olympic Games in Tokyo were customizable. They were made of sturdy cardboard and could be extended as required. The beds were designed to be extremely comfortable, as there was an app for the special mattresses that could be used to adjust the degree of firmness. After the Games, the athletes' village became an attractive new residential area with a harbor and ferry dock. The sale of apartments has already begun, but the apartments were renovated and the temporary walls removed after they were used by the athletes for the first time. And of course, the cardboard beds were also disposed of, which is why cardboard beds were chosen to provide a recyclable and affordable standard.

Tokyo-based studio Nikken Sekkei designed a wooden community building for the Athletes' Village at the 2020 Tokyo Olympics, constructed from 40,000 pieces of Japanese wood. The temporary building, which was to serve as a central meeting point for the athletes in the Olympic Village, contained a café, a bank, medical rooms, lounges, hairdressing salons, retail space and a media center. Nikken Sekkei had arranged the donated timbers to create a structure inspired by the design aesthetics of traditional Japanese buildings. The pieces were labeled with the names of the donor regions. Each piece of wood used for the building was stamped with the name of the region it came from. After dismantling, the timbers were returned to their region or the donor and used for buildings in that region.

Tokyo: Cardboard beds for better recycling

Rio: temporary community building

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INFORMAL SHELTER IN EXISTING STRUCTURES

TORRE DAVID, CARACAS; CORVIALE, ROME; CITY PLAZA HOTEL, ATHENS

Magdalena Hehnen, Joachim Kausch, Kevin Schulz, Moana Ühlein

INTRODUCTION

The occupation of empty buildings/spaces and the selfmade construction of informal shelters is a phenomenon often related to social, economic, and political crisis. These movements are typically driven by a variety of different circumstances including poverty, lack of affordable housing, unemployment, social inequalities or search for refuge. Individuals or whole communities of people facing these challenges may seek shelter in unused spaces because of their immediate need for housing without the perspective of archieving that on a legal basis. The nature and placement of these occupied spaces vary quite a lot but it's mostly unused buildings, house floors or spaces that didn't fulfill their intended use, leaving them empty for a longer period of time.

Informal shelters, often referred to as squatter settlements, grow as a result of initially temporary occupations. These dwellings are often developed and constructed using materials found on site or by collecting and even deconstructing parts of the given environment due to and lack proper infrastructure and facilities. Residents of such informal settlements are facing cir-cumstances and living conditions that might seem inadequate from the outside: Limited access to basic services like a working water system or proper sanitation are problematic factors that informal dwellings are often, not in all cases, challenged with. Combined with the constant uncertainty due to the politcally fragile and temporary nature of their housing, the occupants define and implement their own socio-economic rules/conventions in these communities. Those places seem capsulated from the outside world, forming an enclosed society that comes with it's own hierarchies, duties, rights and also qualities:

The communal connection inside the settlements seems to form a bigger sense for communication and bonding between individuals, given that those communities rely on all inhabitants working together to keep the system running. Daily needs and chores make these settlements evolve, sometimes in social and sometimes in economic ways. These developments are closely linked to the dwellings size, reasons of occupation, the radius of inhabitants heritage or the nature of the occupied space. For this paper we will analyze these dwellings in three case studies.

Collage: 3 Case Studies

CASE STUDIES

The examples that are being discussed in this context have been chosen due to their varying form and development linked to the different reasons for occupation, the timespan over which they happened / are happening and the social aspects that formed the communities and social systems within the appropriated space.

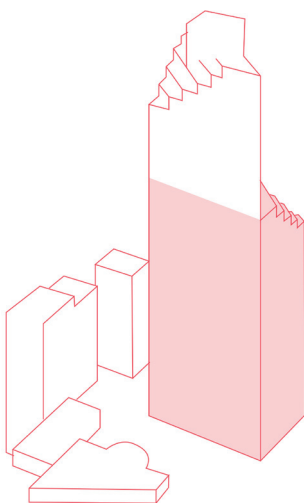The chosen informal housing communities are:
1.) Torre David, Caracas
2.) Corviale, Rome
3.) City Plaza Hotel, Athens

The Torre David, located in Venezuela, is an unfinished high-rise building in the city of Caracas. Originally designed in the financial district, the construction of the tower was stopped in the 1990s due to a national banking crisis, leaving the tower as raw construction. Over time, the building became occupied by a community of squatters seeking shelter due to a lack of housing in the city center. The informal settlement in Torre David represents an example of adaptive reuse, as the occupants transformed the unfinished tower into a vertical urban community. At its peak, the building housed thousands of residents, shops and businesses. Also communal spaces were created within its structure. Lacking basic infrastructures, such as a working water supply, the dwellers were dependent on self-made solutions.
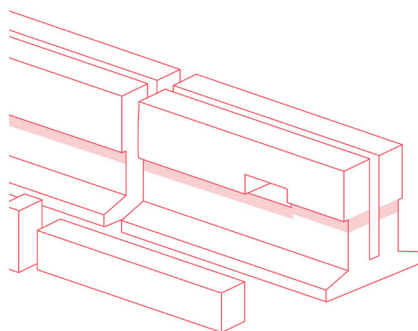
Corviale is a neighborhood on the southwestern perimeter of Rome, Italy, and is known for its shape as an architectural land-

mark, the "Serpentone". This huge residential complex was designed and completed in the early 1980s. The building is a long, snake-like structure that spans over almost one kilometer and is home to thousands of residents. The 'piano libero', as the centerpiece of the urban and economic facilities was supposed to serve the inhabitants but instead got appropriated by occupiers in 1983. Over time, Corviale has become an example for the challenges associated with informal settlements. Originally intended to provide affordable housing, it has struggled with issues such as social deprivation, high crime rates and a lack of basic infrastructures due to it's isolated location, failed maintenance and poor management.
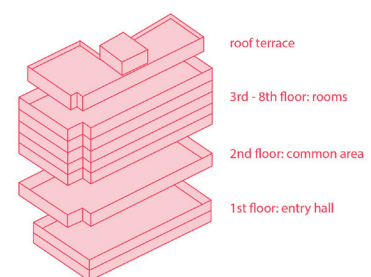
The third example for informal shelter is the vacant Hotel City Plaza in Athens, Greece. Due to a massive wave of political refugees trying to get to middle-europe through Greece in combination with international decisions, a huge number of them was held inside the country. That made a large number of accommodations necessary, which couldn't be provided by the government over the longrun. The empty City Plaza Hotel was carfully chosen and then occupied by an activist initiative, that aimed for finding fitting housing alternatives to the precarious situation in the refugee camps outside the cities. The new inhabitants, refugees and some activists, implemented a social and democratic system that made a shared living in the former hotel possible. Adequate living conditions, communal activities, social cohesion and a working system of shared shores made the community inside the dwelling an example for a very positivley perceived informal dwelling.

TORRE DAVID, CARACAS

CORVIALE, ROME

CITY PLAZA HOTEL, ATHENS

roof terrace
3rd - 8th floor: rooms
2nd floor: common area
1st floor: entry hall

CASE STUDY 1:
TORRE DAVID, CARACAS

The Torre David, located in the center of Caracas, is a building designed as an office complex. The plan was to expand the financial center with the skyscraper, which contained a bank, other offices and a hotel. However, due to the death of the developer and the financial crisis, the construction of the tower was interrupted.

In 2001, a first attempt was made to sell the Torre David to investors and thereby enable the resumption of the construction site. However, this was unsuccessful and the building was left untouched for a further six years - until the first occupation by around 200 families. The second attempt to sell the building to investors in 2015 was also unsuccessful. The 45-storey, 190-metre-high, empty shell of the building dominated the cityscape of Caracas.

As a result of the failed resale, there was no person or company who felt responsible for the building and therefore it was left to its own fate. The foundation was laid for the occupation of the high-rise building.
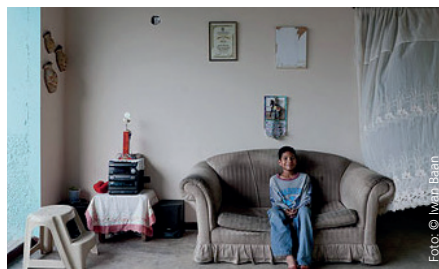
TIME

Construction work on the Torre David began in 1990, but the financing company went bankrupt in 1994 due to the death of the managing director – David Brillembourg, who died in 1993 – and the bankruptcy of the company in the wake of the

financial crisis 1994 in Venezuela. As no new investors could be found, the building stood empty for a total of 13 years. The lack of housing in in the city center of Caracas led to the beginning of the occupation in 2007 where more than 110,000 sqm of open space in a prominent location were claimed by the new residents. Although an official residential permit was never issued, FOGADE, which was given the Torre David, tolerated the occupants.

During the years a good 50% of the total area had been appropriated by over 1,000 families. The infrastructure for electricity, water and mobility was improvised by the residents. They also introduced an autocratic democracy. Various factors such as hygiene, accident risks and the growing attention led to the eviction of the building in July 2014. Initially, 160 of the 1156 families were relocated to the outskirts of the city. After eight years of occupation, the squat of Torre David was finally ended in 2015. Since then, the tower block has been an unused building left to its own devices. In addition, an earthquake in August 2018 caused further damage to the building shell, with the top five floors beginning to lean.

INHABITANTS

The primary reason that led to the occupation of Torre David is the lack of affordable housing that is integrated into the urban environment. The many years of unused buildings in a complex
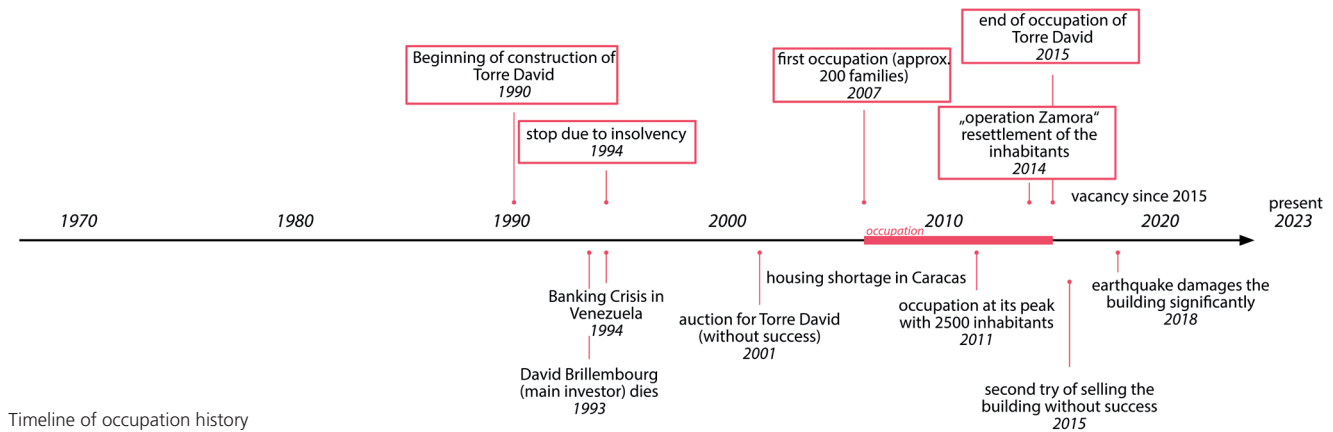

Picture: Outside view

Picture Galery: Inhabitants

Beginning of construction of
Torre David
1990

stop due to insolvency
1994

first occupation (approx.
200 families)
2007

end of occupation of
Torre David
2015

„operation Zamora"
resettlement of the
inhabitants
2014

vacancy since 2015

1970 *1980* *1990* *2000* *occupation* *2010* *2020* present
2023

Banking Crisis in
Venezuela
1994

auction for Torre David
(without success)
2001

housing shortage in Caracas

occupation at its peak
with 2500 inhabitants
2011

earthquake damages the
building significantly
2018

David Brillembourg
(main investor) dies
1993

second try of selling the
building without success
2015

Timeline of occupation history

originally planned as an office block favoured the appropriation of the residential space. The building has been in a permanent state of remodelling as a result of changing occupants and the permanent conversion of the structure.

The division into five building sections can also be recognised in the form of the occupation. The tower block is the main part of the temporary housing. In addition to the majority of residents, there are a large number of communal areas, for example grocery shops.

In the other buildings of the block, which were designed as a car park, a hotel and office space, the residents also created a Protestant church, a basketball court and other sports facilities, such as a gym with a view over the city, as well as various rooms for meetings and discussions, in addition to the more private living spaces. The tower block therefore contained various

uses and facilities on the different floors, which have developed over the period of its appropriation. In addition to living space, it also provided jobs. There were various shops whose prices were regulated so that every business was able to take part in the competition. There was a hairdresser, a tailor, coordinators, taxi companies, security staff as well as an electricity and water crew.

During the early stages of the occupation, a communal kitchen was set up in the lobby area of the tower block. At the beginning of the takeover, only the ground floor was connected to the electric system. The people lived in tents and the communal kitchen functioned as a collective supply medium.

Due to the fear of eviction, the respective property was permanently guarded by family members at the beginning of the process. When a threat of eviction was issued, the residents started
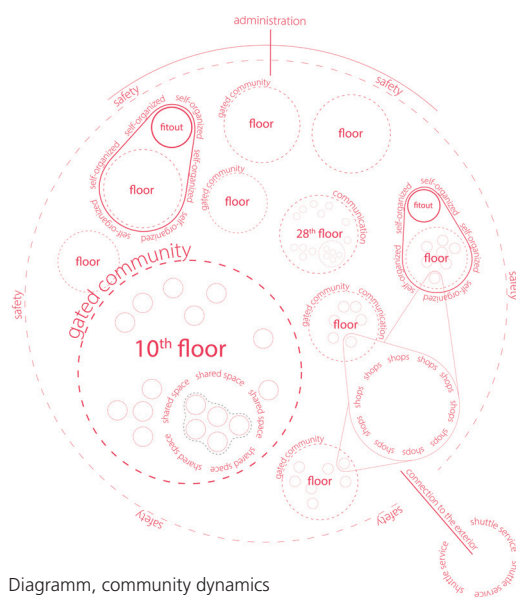
Diagramm, community dynamics

world map: occupiers hertiage

to expand into the higher floors, giving the families the opportunity to make the potential of the tower block their own.

Together, they cleared the floors of rubbish, built balustrades and renovated communal areas as well as private flats. Each floor provided housing for 15 families. Communities joined forces and supported each other in both providing care and creating security. Rules have been developed within the community to which residents must adhere. Respectful interaction with one another was essential. This was the only way for the project of Torre David to develop and actually work.

Not everyone could become part of the collective. At the beginning of the occupation, future residents had the opportunity to apply on Mondays between 3 and 8 pm. If accepted, the new residents were encouraged to move into the tents on the ground floor. If they proved themselves, they were assigned an area on the upper floors to expand. There was also a points system for offences and disregarding the rules. Points were assigned for frequent, loud and long-lasting parties, littering, violence and so on. Once you have received three points, you are required to give up Torre David as your home and leave the tower block. A large board in the lobby provides information about new rules and other regulations.

The flats were not owned by the residents. A monthly rent of $15 was charged. This was used to pay for things like water and electricity, the cleaning of communal areas and security staff. In addition to the monthly expenses, investments could be made in the remodelling and expansion of the allocated living space. Conversions and furnishings became the property of the residents. When they moved out, this could either be taken with them or sold to their successors. The community was essential for the life in Torre David. The support of the residents along with the collective establishment of rules and the election of future residents created a form of communal living - in a country where people and their needs had not been seen and treated before.

BUILDING STRUCTURE

The basic structure of the shelter is the structural framework of the Torre David, which was originally planned as an office complex. Simple fabric structures are initially added to the building on the ground floor and offered protection at the beginning of the appropriation. Due to the infrastruc-

ture initially only being available on the ground floor, it took some time for the residents to expand to the upper floors. During the process of expansion, solid railings were added to the structure to protect the residents from falling into the depths, as well as brick wall elements that divided the open space into living units. Furthermore, the residents also installed collectively used and financed infrastructure on the upper floors in terms of water and electricity supply. There was a main water tank, various water pumps and an electricity grid that ran through the entire tower block.

In contrast, the residents themselves were responsible for the development and the associated financing of the flats. This brought a variety of design and housing models to the project.
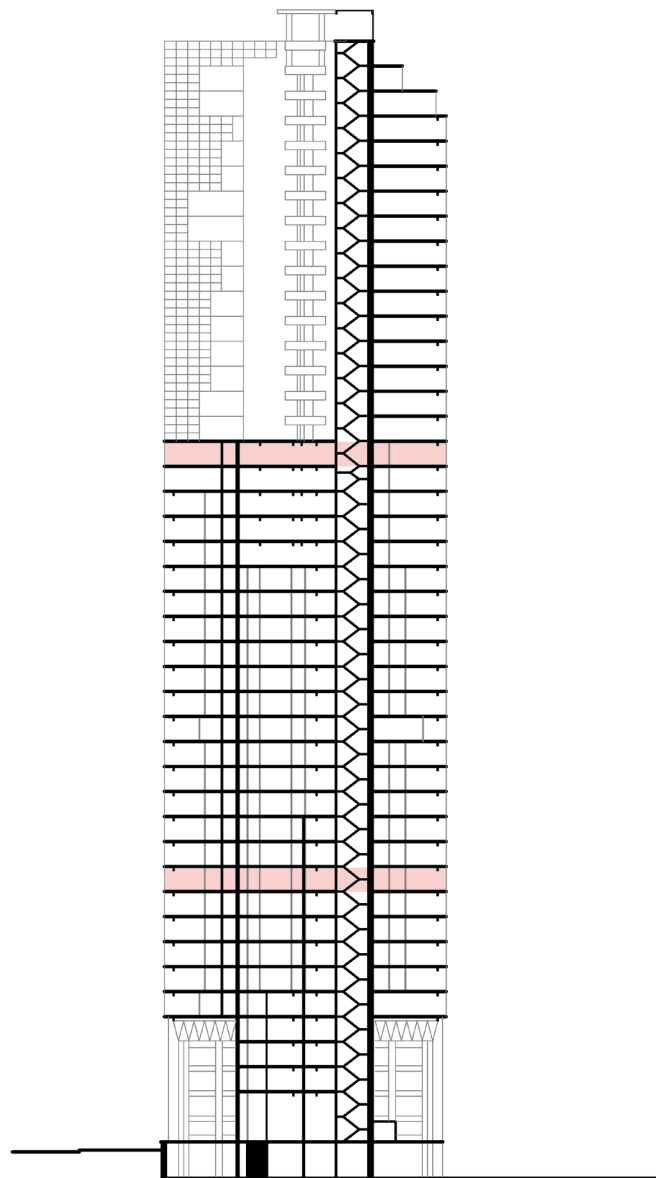
Section, Torre David

Due to the earthquake and the damage to the building structure, the Torre David is abandoned today. The façade that emerged from the squatting is still visible, telling the story of the five-year-long occupation and emphasising its significance.

KEY FINDINGS

The temporary occupation of Torre David shows how relevant dealing with unused buildings within urban structures is today. The lack of affordable accommodation and its integration into everyday, well-connected life is a fundamental theme of architectural practice. Therefore it is important - also from a global perspective - to find sustainable and innovative solutions to this problem. Where there is a lack of this supply, people find ways to appropriate opportunity spaces and adapt them to their needs and requirements.

The Torre David would have had the chance to transform itself into a permanent solution. However, further security measures would have been needed - whether by the state or NGOs. It is impressive how the residents have developed their own legal system for living together and have therefore been able to offer many people a home. By sticking together and combed forces, the residents were able to transform a unfinished building, which initially did not appear to be a place to live, into a space that could serve as a home for several hundred families.
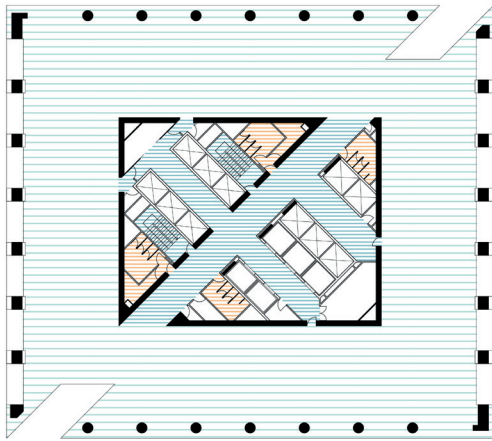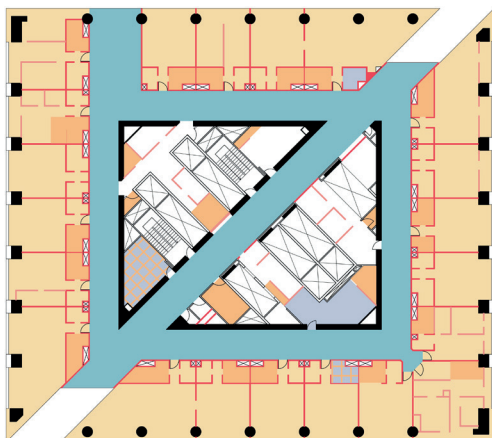

Groundplan 10th floor, Torre David - planned
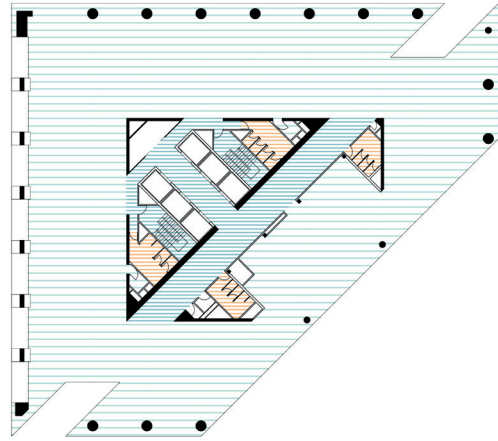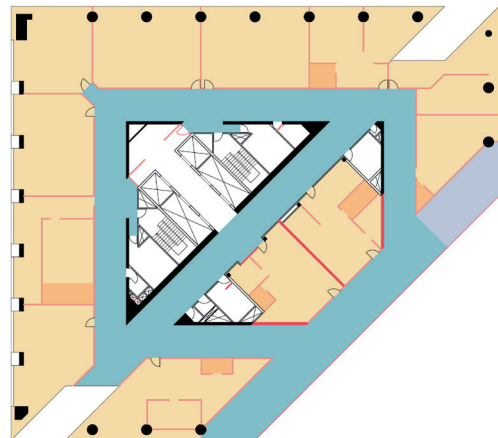
Groundplan 27th floor, Torre David - planned

planned office space   planned access space   planned bathrooms   10m   20m

Groundplan 10th floor, Torre David - occupied

Groundplan 27th floor, Torre David - occupied   [1]

access space   community space   bathroom   private space   additional walls

CASE STUDY 2:
CORVIALE, ROME

The residential mega-project Corviale was realized on the southwestern outskirts of Rome with the concept of a decentralized city, conceived as a demarcation from the suburban developments of the 1960s. It was designed to inhabit 8000 residents within a kilometer long concrete structure.

The planning aimed to establish a self-contained neighbourhood within the building. A conceptual framework of this structure was the maximization of density while preserving as much nature as possible, coupled with a cost-effective construction approach. The guiding idea of the ‚city within the city' intended the comprehensive fulfillment of the daily needs of the residents. The conceptual basis originated from the rural community, considered as a counterproposal to the fascist, petit-bourgeois community. For this purpose, a floor was designated to include neighborhood spaces, conference rooms, cafes, restaurants, as well as facilities for education, healthcare, and food supply, along with other retail services.

countryside, functioning as ‚a structure for order.' It represents a late manifestation of modernism, influenced by urban planning ideals of the Congrès Internationaux d'Architecture Moderne (CIAM). Although the physical structure was largely completed by 1982, there was a lack of social and everyday infrastructure.

The first occupation occurred in 1983 when 700 families occupied vacant apartments. Between 1982 and 1987, social infrastructure was entirely absent, and there are reports of violence and mistrust during this time, exacerbated by the isolation of the complex. In 1995, 200 Peruvian women moved into the abandoned parts, but were shortly thereafter evacuated from the building by the city. During the third occupation, the focus primarily shifted to the Piano Libero, with families arriving from shantytowns, illegal dwellings, and villages in the vicinity. In 2010, 40 million euros were spent on necessary maintenance work without noticeable benefits for the residents.

TIME

The planning phase began in 1972, and construction took place from 1974 to 1982. After a construction period of seven years, the northern section of Corviale was completed, and the initial apartments were occupied. Architect Mario Fiorentino conceived the project as a defense against formless suburbs and as a boundary between the city and the surrounding

INHABITANTS

The allocation of commercial spaces was the responsibility of the municipal administration, which, however, did not act purposefully. Subsequently, the projected extent of the service offerings has been criticized as too expensive. Due to insolvency and legal disputes involving the developers, construction costs increased, leading to delays. As a result, the Piano Libero was never used for services according to the original plans, and the
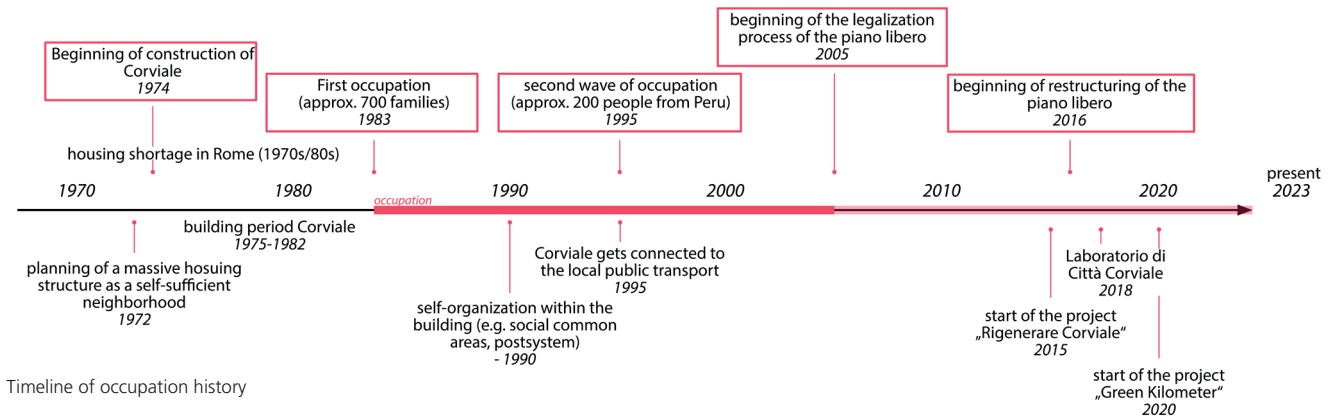

Picture: Outside view

Picture Galery: Self-constructed apartments

Timeline of occupation history

open structure emerged unplanned as an incidental feature. The neglect of vacancies led to the occupation of the spaces by residents and individuals seeking accommodation.

The occupiers reconfigured the spaces, weakening access and communal areas. The apartments in the Piano Libero did not follow a uniform access pattern. Over time, they underwent changes as some were expanded, and former entrances were bricked up. Electricity and water supply partially relied on the planned infrastructure, with some additions or sourcing from neighbors in other floors.

Self-built walls and makeshift sanitary units became rudimentary long-term solutions. The interior of the apartment could be furnished according to individual preferences, allowing for a more self-determined setup due to rent-free living conditions. Despite the informal appropriation of the Piano Libero, the size of the construction project means that there are more residents

per staircase than usual in multi-story apartment buildings. The primary access is little used due to the distance to most apartments. Although the entrance portals are present in the facade, they play a subordinate role in the daily practice of the residents. Shortcuts through small emergency staircases are preferred, although occasionally the path is blocked. The walkways have been transformed by residents into small private areas, sometimes obstructed by self-built extensions. Windows facing the walkway are often bricked up, deteriorating lighting and complicating fresh air supply to the apartments.

40% of the residents are single and in a life phase where their children are already living away from home. The allocation of vacant apartments is exclusively intended for families with many children. Over 60% of the residents on this floor live there illegally.

Residents engage in formal and informal exchanges with each

Diagramm, community dynamics

world map: occupiers hertiage
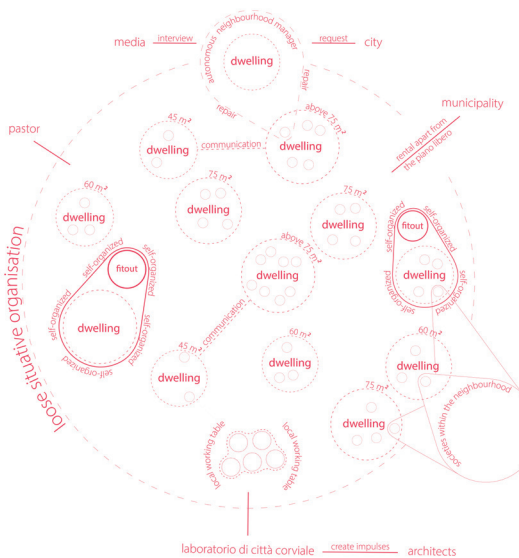
other through everyday conversations and requests for support in emergencies and building damages. A voluntary neighborhood caretaker, Angelo Scamponi, undertaking maintenance work and coordinating communication between authorities and residents. Missing work and open problems are addressed through private initiatives, including cleaning and disposal initiatives, joint maintenance of used spaces, and a self-organized mailbox system. In a database of the Laboratorio di Città Corviale, 85 families living in the Piano Libero are registered. Several generations have grown up in Corviale, identifying with this place.

In the external area east of Corviale, there are some outdoor spaces designed for the neighborhood, including an outdoor stage. However, these spaces are used minimally, serving as meeting points, deteriorating over time, and indicating limited maintenance by the city.

Social infrastructure facilities were established through individual initiatives as they were not implemented by the property developer. In the immediate vicinity, there are organizations for sports and culture, a library, as well as a religious institution. In approximately the center of the eastern area of the building, a pedestrian junction was integrated, including the administrative center and a linear park. The Piazzetta was intended as a cultural focal point but is now largely unused.

The administration is planning a redesign of the Piano Libero. In 2016, the city issued a tender for the temporary relocation of residents to provisional accommodations. The construction of 103 houses is expected to take place in 10 phases, while the work continues with the Piano Libero still occupied. For the refurbishment of the facade, improvement of thermal insulation, and internal infrastructure, 90 million euros will be available from the Corona Reconstruction Fund in the future.
The Laboratorio di Città Corviale acts on-site in conflict prevention during the renewal process, informs about the reconstruction, creates opportunities for involving the residents, and opens up discourse. The laboratory, consisting of architects, analyzes and interprets the problems occurring on-site to consider them in the redesign. It also aims to reduce the distance between institutions and citizens and provide easier assistance in case of damages.

Since 2019, efforts have been made towards revitalization and sustainable improvement of living conditions. The option of subdividing larger apartments into smaller units is being considered, as a significant portion of the residents live alone. In collaboration with social services, projects are initiated to foster a sense of responsibility for the care of shared spaces and improve social relationships. Increased cooperation with other local associations active around Corviale is also sought.

BUILDING STRUCTURE

The ‚sala condomiale', spaces for neighborhood exchange, span three floors. This community space recurs along the Piano Libero, causing a shift in the Piano Libero between the 4th and 5th floors. Primary access is through a few staircases, and the extensive network of pathways between them forms residential sectors with lengths of up to 200 meters.

Apartments are accessed through two centrally located corridors, separated by a 4-meter-wide light well. This design makes the place introverted and corridor-like, with sunlight reaching only the upper floors. Separate elevators are provided for the top five floors.

Fiorentino viewed Corviale as a cohesive unit, where the infrastructure metaphorically represents a kilometer-long street. Apartment entrances are arranged along this structure and accessible through five large entrance portals with stair towers. The building, with a length of 990 meters and eight floors. In
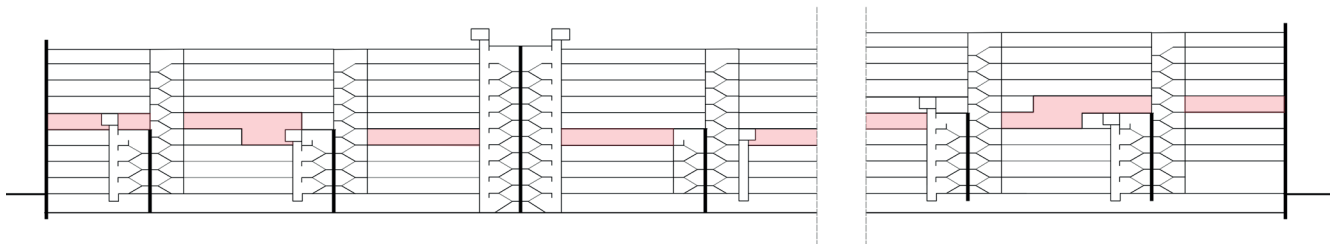
Section, Corviale

addition to residential use on floors 6 to 8, there is a basement and a garage floor. The functional floor, Piano Libero, in a relatively central position, serves for services and neighborhood purposes.

The appearance of Corviale is characterized by a precast concrete system, with additional features including the associated seriality and large-format components. The externally visible concrete facade appears uniform, compact, and homogeneous. Corviale was developed against a speculative housing market.

KEY FINDINGS

The extended occupation period of Corviale underscores the relevance of a sustained informal spatial practice, attesting to a lack of political action for affordable housing and becoming a defining characteristic of this residential complex. Although the initially planned size of Corviale held the promise of lowering housing shortages, this pledge seems to have fallen short. If the

housing programs in progress at that time had been sufficient and affordable for an adequate number of people, the occupation of Corviale would likely not have been necessary.

Corviale reinforces its function as a residential building through the ongoing transformation of the Piano Libero, maintaining residential uses and supplementing individual collectively used areas. It continues to illustrate how a group of architects, acting as stakeholders with municipal commission, can expand previously sporadic communication and involve people in planning processes. Within their resident community, they are loosely interconnected, coming together in the face of problems to benefit from each other's diverse skills and bring about temporarily effective solutions.

Consequently, the lack of care for a building is privately assumed by residents, compensating for the city's perceived insufficient action and ensuring the continued usability of the building as a place of residence.

OG 5 | OG 4

groundplan 4./5.th floor (piano libero), Corviale - planned

— planned access space ≡ planned shops ≡ planned community space

OG 5 | OG 4

groundplan 4./5.th floor (piano libero), Corviale - occupied

■ access space ■ bathroom ■ private space — additional walls   10m   20m

CASE STUDY 3:
CITY PLAZA HOTEL, ATHENS

The occupation of the City Plaza Hotel in Athens was highly political. The situation on the Greek islands and in the capital city Athens had come to a head due to the continuing stream of refugees arriving. From the beginning of 2015 to mid-2016, around one million people had arrived in Greece. However, only around 1.5% had applied for asylum in 2015, as most of the refugees were travelling through to Central Europe. The situation changed in 2016 due to two political decisions: the Turkey-EU agreement and the closure of the Balkan route.

As a result, 57,000 people were detained in Greece, most of them without a place to stay, living in temporary "Transit camps" throughout open spaces within the city. When these camps started to close and the people were moved to sealed off camps outside the city, activists from the group "Solidarity Initiative to Economic and Political Refugees" initiated the "City Plaza a refugee accommodation and solidarity space". It aimed to create a centrally located accommodation for refugees where people from different backgrounds could live together in dignified conditions and create a resilient community among each other.

The City Plaza Hotel in its original use had to close in 2010 due to insolvency and had been empty ever since. The building was chosen due to its well-suited morphology, as the existing hotel structure fit the new use as a shelter perfectly, and the socially and politically influenced neighbourhood. On 22 April 2016, after a month of intensive preparation, it was occupied by the initiative with the help of the hotel's former employees that supported the activists in their project. As compensation for the short-term termination of employment in 2010, the former staff had been given the entire inventory of the hotel, giving them access to the building.
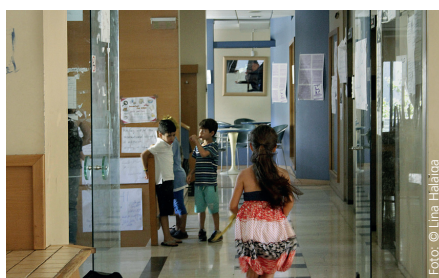
TIME

The project was an experiment from the outset and the appropriation ultimately lasted 3.5 years from 2016 to 2019. As the building structure only had to be slightly adapted for use and no permanent changes were made, the City Plaza Hotel is a temporary appropriation. The end of the project was decided in 2018. Due to the change in the political situation, combined with the fear of eviction and the associated deportation of some residents, as well as the decline in support and dwindling resources, those responsible decided to end the project of their own accord. No new people have been admitted in the last 1.5 years of the project and an alternative housing solution has been found for all current residents.

After the closure, the keys were symbolically returned to the former employees of the hotel, who had ownership rights to the furniture. The building has been vacant again since that day.


Picture: Outside view

Picture Galery: Inhabitants

Timeline of occupation history

INHABITANTS

The City Plaza Hotel was a place of community and co-habitation. Over the 3.5 years, more than 2,500 people were part of the community, with around 350-400 refugees, mostly half of them children, and 30-40 activists living together in the hotel during the individual phases. Right at the beginning, three basic rules were democratically established in the first general house assembly: 1. Conflicts are resolved through dialogue as well as general understanding instead of violence and arguments, 2. drinking alcohol within the hotel is prohibited and 3. the building and all people living in it are to be treated with respect.

Communication and respect for each other was extremely important, especially due to the very mixed residents. Over time, refugees from more or less 10 countries have lived together in City Plaza. The different political, religious, cultural, social and economic backgrounds associated with this could lead to potential for conflict. Added to this are the individual stories of the residents with their extremely difficult experiences on their way to Greece.

Over time the inhabitants learned how to deal with these differences and while the state-organised accommodations were strongly segregated according to origin to precisely avoid these conflicts, City Plaza was able to serve as an example of how diversity can be a benefit for the residents.

One part of the successful creation of the community was the fact, that every person needed to participate and engage in in. Every adult resident had to fulfil one service throughout the weeks which could be cooking, cleaning or helping to maintenance the house. In addition to the mandatory services there was a wide range of activities organised by residents or volunteers to form and support the community. There were for example dance classes, language courses, lectures and film evenings. House Assembly and Working Groups.

Diagram, community dynamics
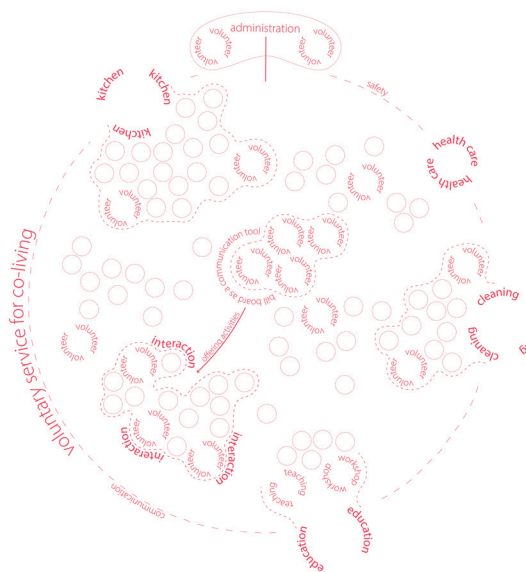
world map: occupiers hertiage

In addition to practical participation through these activities, involvement in decision-making was also an important pillar of the community. Important topics were discussed and democratically voted on at the House Assembly every second week. Although every resident was able to take part, around 150 of the 400 people were usually represented. The idea of involving everyone and making decisions as a community is not self-evident in practice with the most diverse cultural backgrounds. Women in particular were often afraid to express their opinions openly and as most of the residents had the goal to move on to other countries the motivation to invest in the community was not always given. In order to make the participation as easy as possible, a number of smaller groups were formed that looked for example after the kitchen, managed the reception together with the volunteers or organized childcare in the City Plaza.

"This place looks like a hotel, but it is not a hotel" - this sentence was one of the most important principles that new residents learnt right from the start. The reason why the initiative was so eager to implement the community thought had two reasons. Of course, the everyday life had to be organized and could only be managed if everyone pitched in to help but there was also a psychological aspect in taking part: The feeling of dependency and being categorised in a hierarchy disappears as soon as everyone works together and is jointly responsible for each other. Many were unfamiliar with the concept of self-organised accommodation in the beginning, in which commitment and personal effort were required, as most had already spent some time in state camps which worked differently. But after some time, the feeling of belonging helped the people to understand the value of their work.

When selecting the building to be occupied, the initiative paid attention not only to the morphology of the building but also to its location. The City Plaza Hotel is located close to Victoria Square, where one of the largest camps for refugees in transit developed in 2015, and in a neighbourhood that is heavily influenced by voters of the radical right-wing Golden Dawn party. Although this initially led to some conflict, the initiative made a conscious decision to open the solidarity space in this neighbourhood. The hotel was not only intended to provide accommodation and community for the refugees, but also to provide education and interaction on a larger scale. While the encounters with the neighbourhood were mainly negative at the beginning of the occupation, the mood changed over time and the neighbourhood benefited from the City Plaza Hotel.

Residents helped out on an everyday basis, the overall feeling of security was rising due to security service at the entrance to the Hotel and the new life in the building and the neighbours were invited to participate in workshops, events and parties at City Plaza.

BUILDING STRUCTURE

The building was chosen by the initiative primarily because of its appropriate typology and layout. Unlike schools or other public buildings, the structure of the hotel already offers many advantages for shelter as for example, lockable private rooms with their own bathroom and balcony as well as sufficient communal space. On the one hand, this ensured the residents' privacy from the beginning on and, on the other, no major changes had to be made to the building structure.

In total, there were 126 rooms in the eight-storey, 4,900 m2 building, 100 of which were rooms for refugees. These were occupied by individual families or shared by individuals. Volunteers who travelled from all over Europe to be part of the project could stay in 20 shared rooms.

The remaining rooms were used as classrooms, storage rooms or as common rooms, for example especially for women. The entrance situation of the hotel, with a reception on the mezzanine floor and the public areas such as the dining room or the bar on the first floor, could be adapted very well to the new use. The only small intervention was in the dining room, where a flexible wall was used to create an area for childcare.
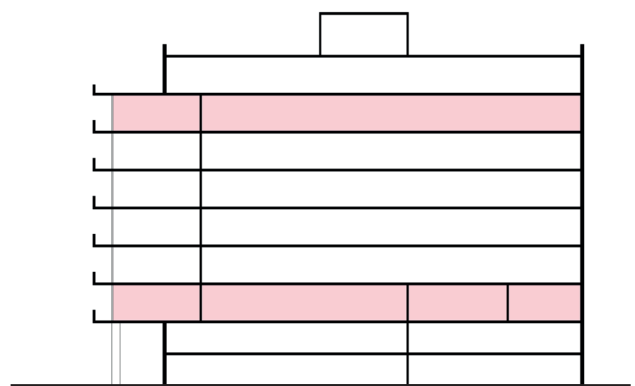
Section, City Plaza Hotel

Although the structural form of the building was not drastically altered, the typology changed. The newly implemented functions transformed the hotel into a small eight-storey village with a kindergarten, medical care, classrooms, private rooms as flats and community spaces.

KEY FINDINGS

The appropriation of the City Plaza Hotel has a political background, which had both symbolic and very practical effects. In a period of 3,5 years, it was a place to around 3,000 people where they could seek shelter, experience a community and find a home in the most unordinary circumstances while looking for refuge. And other than that it was also an experiment on how social spaces could be used in refugee policy and how to start dismantling racism, sexism and colonialism of the refugee policy through hard work, step by step and day to day.   The building of the former City Plaza was selected mostly because of its suitable architectural structure, but the occupancy also had a political message. While camps were built outside the cities to give shelter to the refugees, a high number of buildings within the urban structure have been empty for a long time. The project showed, that using these buildings and integrating the people in the city can have benefits for all involved. The handling of shelter for refugees and their integration into the urban structure and society will play a major role in Europe in the coming years and decades. The City Plaza Hotel provides a good basis for how this task could be accomplished, using existing building structures.
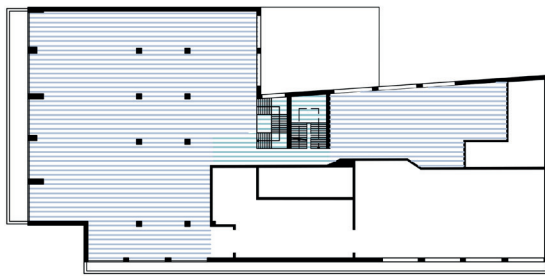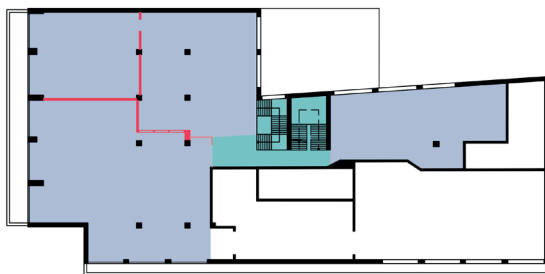
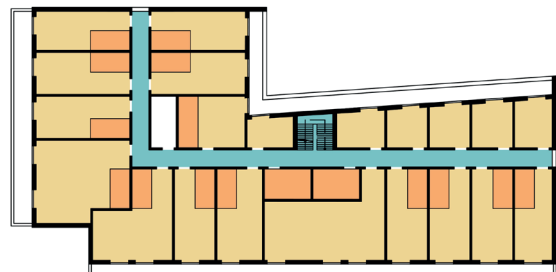groundplan 1st floor, City Plaza - before occupation
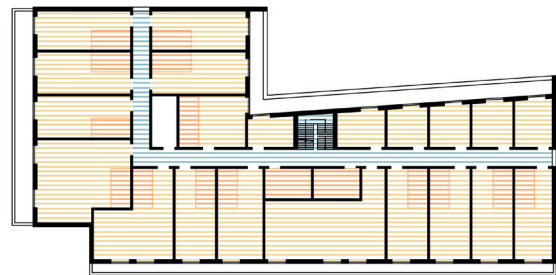
groundplan 6th floor, City Plaza - before occupation

planned access space   planned community space   planned bathrooms   planned private space

10m   20m

groundplan 1st floor, City Plaza - occupied

groundplan 6th floor, City Plaza - occupied   [2]

access space   community space   bathroom   private space   additional walls

COMPARATIVE ANALYSIS & SUMMARY

If we now conclude the analysis of temporary housing structures by comparing the three projects with each other, we notice various points that unite the projects but also differentiate them strongly. For this reason, the themes of the period of appropriation, the residents and the building structure need to be compared again in order to emphasise parallels and differences. In all projects, the origin of the appropriation can be traced back to the lack of (affordable) available, usable living space. However, the squatting groups differ in terms of origin and motive. The period of appropriation and the architectural interventions also vary greatly within the projects.

However, not only the period of occupation, but also the time required for appropriation must be taken into account in the comparison. The City Plaza Hotel, for example, was quickly assigned new spatial functions, the planning process took only about a month before the residents could move in. In Torre David and Corviale the building process itself took more time already. Both projects started off as temporal housing with plastic sheets and tents before more permanent building materials were used. Furthermore these buildings are much bigger than the ordinary sized eight-story high City Plaza and required more time to be occupied.

COMPARISON: TIME

The different periods of occupation are the easiest to show. It should be noted that the City Plaza Hotel as emergency accommodation and the occupation of the Torre David by Caracas residents only lasted a few years. This contrasts with the on-going conversion of the Piano Libero (Corviale), which has the potential to be permanent.

COMPARISON: INHABITANTS

The essential reason for spatial appropriation in the three projects is the lack of affordable housing, due to political failure. While the residents of Torre David have been inhabitants of Caracas before, the high-rise is to be understood as a regional shelter project. In contrast to that, the other two projects show a variance in countries of origin. Corviale accommodates both
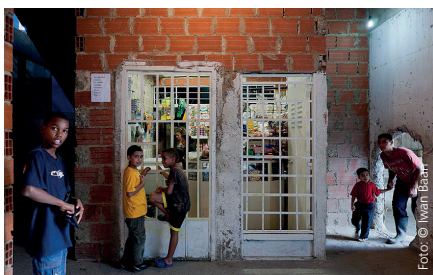
Torre David, Caracas   Corviale, Rome   City Plaza Hotel, Athens

Romans and migrants from all over the world. The City Plaza Hotel is primarily used by refugees and volunteers, only some of them from Greece. The language barrier and the cultural differences can cause problems in the everyday encounter, especially as City Plaza is dependent on a strong community.

Talking about the bond between the residents there are notable differences as well. In all projects the communal thought plays an important role, but the practical fulfilment varies. It's interesting to see, that Corviale, which was planned to be a community, has the weakest connection between the residents, especially in the piano libero which has been occupied. While there are communal spaces planned in every residential floor, the Piano libero itself should have been the floor for the community. Now with all available spaces occupied, these spaces to encounter are missing. Other than that, the appropriation is permanent with solid walls and actual apartments the residents are living in. In comparison to City Plaza and Torre David there is no need for a tight community. In City Plaza the whole everyday life was organized in a communal way. Cooking, cleaning and free time activities were organized together, and it was mandatory for every person to participate in it. During the beginning also the inhabitants of Torre David formed an intense commune around the only working community kitchen in the ground floor but with the extension of the occupation to the upper parts of the building, smaller groups within the floors were formed. There were a lot of communal spaces and sport facilities for everybody to use and business were established that provided essential goods for the residents. But with a total of 1000 families at its peak, a tight community as in City Plaza was not manageable.

The three projects show how important it is to have support among an occupation movement. Sharing different tasks, building material or infrastructure reduces the individual work and can lead to a more successful outcome.

COMPARISON: BUILDING STRUCTURE

The shape of the three buildings differ a lot. The City Plaza Hotel, as a more standard building volume, stands opposite to two extreme ones - one really high, the other a kilometer long.

It therefore seems obvious that, of the three projects, the appropriation of the hotel involves the least effort in terms of architectural modification. Hotel rooms are a simple form of

When we made the decision to occupy this space we found several realities, among them: this dead giant. A giant of 192 m, dead in the middle of our capital city, dead, with 45 floors uninhabited!
When we arrived at the top floor of this tower and we stood on that heliport and we looked around, we realized that the whole population that had come to fill this land of Caracas - those who came from Los Llanos, from Colombia, from wherever they came from - we realized that not all of these people were here in the center, in the healthy, flat part of the city. All of these people were sent out, to the surroundings, to the hills, where there is a higher level of risk. They were told: go occupy those zones!
And it was for this housing need that we deforested and damaged several spaces that today we know as our barrios.

Fernando, former resident of Torre David

Look, what's important here is that after we do this work we have to go floor by floor to talk to the whole community and explain to them that we must be aware of energy consumption. We need to lower consumption because demand is too high and the amperage is too high.

Jorge Morales, head electrician and resident of Torre David

Quotes: Inhabitants, Torre David

Nearly behind every door is a social drama unfolding. Many are struggling with financial constraints. These in turn lead to problems with the justice system.

Gabriele Petreni, pastoral care

»A lot of bad things are said about us. But all kinds of people live here. Many righteous citizens and a few others. It's like everything else.«
»With 70 square meters, mine is by law too big for one person, but nobody seems to care.«

Massimo, resident of Corviale

»I have seen situations of decay that broke my heart and yet I did not know how to help. Illegals living in a room, a quarter of this one.«
»Our apartment was in a miserable state when we moved in. The flooring and the sanitary facilities were missing. We had to invest a lot of money to make it habitable.«

Angelo Scamponi, resident of Corviale

»The 'Serpentone' is an architectural project that had to fail. The concept is unbearable as it was conceived. And today, after 30, 40 years, all the defects and all the associated dramas are coming to the surface. A building made of cement that would have to be maintained – and that hasn't happened for years. Some kind of tank cruiser in open decay. Unbearable, unbearable. In my opinion, the inhabitants are heroes.«

Stefano Lucidi, district administration

Quotes: Inhabitants, Corviale

»For the refugees in Greece there is nothing like this place, because here, first of all, we are considered humans.«

Ali, refugee resident

»For cultural reasons, many of them (women) spend the whole day in their rooms because they and it diffcult to stay in group spaces like the bar, that's why it was important for them to have a private place.«

Vittoria Marrone, volunteer resident from Italy

»The collaboration model works, but only to a certain extent, since it is ensured by a rigid hierarchical organisation inside the hotel. Refugees have to be constantly spurred to participate; many of them contribute, but others just behave like guests.«

Valeria Raimondi, researcher resident

»It was one of the best experiences of my life. I live in France now, but I will try to come back home, and the City Plaza is my home.«

Rabyee, former refugee resident who moved on to France

»At the beginning there was a lot of fighting over the food. A lot. Before they made the cards, they were discriminating between the Afghans and the Syrians. I'm not saying that all Syrians are good and all Afghans are bad. In the end, allof us are humans. Really. Our heart should be one.«

26 year old man from Syria

»The conditions at the hotel [City Plaza] are really good. They are trying as much as they can to help us, to live with us, to live our injury with us. Our joy is their joy, our sadness is their sadness. This is what I've seen. They are good people, I love them.«

Syrian woman

Quotes: Inhabitants, City Plaza Hotel

living space that already provide water infrastructure and privacy. Torre David, on the other hand, is a long vacant unfinished structure that could function as a shelter in the beginning but needed more time and work to function as housing. As the tower was initially planned as a large office building with open floors, it was essential for the residents to create smaller spaces that could provide individual apartments. The occupation transformed the space inside Torre David to liveable conditions, although it was in fact still rudimentary, unfinished and far away from proper housing circumstances. In Corviale the Piano Libero was initially planned as a commercial floor so there already have been various subdivisions for shops and restaurants that the first occupiers could use as apartment walls. As there were also functioning residential floors below and above, infrastructure was available but needed to be relocated and creatively tapped into by the residents. Corviale is the most permanent occupation as there are families that have been living in their self-assembled apartments for more generations by now.

KEY FINDINGS

A correlation can be seen between the points analysed in the three projects. The longer the appropriation lasts, the more permanent the construction measures become and the less communal thought there is among the residents, which could be

due to their decreasing dependence on each other. This can be seen in the Piano Libero in Corviale. The City Plaza Hotel is the counterpart. The project with the shortest duration of occupation has the strongest community and the least structural appropriation, which is of course also due to the very suitable building typology. The Torre David is in the middle of the field in all analysis points. The residents had a sense of cohesion and yet individual living areas that allowed a certain degree of independence. The structural appropriation has taken place with permanent and temporary materials, so that the building has been adapted to the needs, but its structure has been preserved.

The detailed analysis of the projects has shown how new creative solutions, also by non-professionals, add value to architectural development. Especially in times of western demolition moratoriums it is important to see, that empty or unfinished buildings offer the opportunity to generate new living space. Courageously converting the vacancy of mostly office-buildings in our cities into housing could lead in the long term to more affordable and attractive cities.

Architecture is political - always. Architects should be aware of this in practice and planning. The projects show that if we don't manage to design for society, it will find ways to appropriate spaces according to its needs.

	building intervention	communication	time
Torre David	• building structure offered shelter but not much technnical infrastructure • high amount of self-initiative • temporary and permanent interventions	• well connected community especially within the floors • autocratic democracy • self-organized shops, community areas, sport center	• occupation: 8 years (2007-2015) • goverment-based decision due to security reasons • relocation of occupants
Corviale	• building structure offered shelter with partly functioning infrastructure • temporal interventions turned to permanent apartments over the time • high amount of self-initiative	• mostly seperated households without overarching communication • former community areas on the piano libero were turned into apartments	• occupation: 22 years (1993-2005) • legalization prozess trough the government started 2005 • today: in the prozess of legally rebuilding the apartments and relocating the occupants
City Plaza Hotel	• no big interventions necessary • functioning hotel structure • common and private areas given	• tight community • mandatory to take on tasks • organized in different working groups by volunteers	• occupation: 3 years (2016-2019) • self-decided end of the project • relocation of occupants

Visual Comparative Analysis

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[1] Based on the sources, we assume that there are two types of added walls, especially in the lower part of the building: permanent walls (dark red), which were permanently installed as residential   partition walls, and temporary walls (light red) made of light materials, which   were individually installed by the residents themselves.

[2] The basis for the plans was kindly provided by Eleni Katrini, who reconstructed the building with the help of site visits. We have made small changes and adapted the plans to other information we found, for example bathrooms in the private rooms.

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REFUGEE CAMPS

Moria Refugee Camp, Oncunipar Refugee Camp, Azraq Refugee Camp

Yifei Wang, Martyna Ruszala, Karina Prajs, Ignacia Ramírez

INTRODUCTION

Refugee camps are temporary facilities established to provide shelter, basic survival needs and humanitarian care to refugees who are forced to leave their original place of residence due to force majeure factors such as war, natural disasters or political persecution. The refugee issue is a serious current problem faced by today's society. According to data released by UNHCR on June 14, 2016, there are approximately 29.4 million refugees in the world, of which approximately 6.6 million live in refugee camps.

Affected by many factors of the economic, political, and cultural, the scale and conditions of refugee camps vary. This scholarly paper is dedicated to analysis and comparison of three refugee camps with similar locations and similar sizes (population 20,000 to 50,000). These are respectively the Moria refugee camp in Greece, the Oncunipar refugee camp in Turkey and the Azraq refugee camp in Jordan.

The research is mainly focuses on the analysis of temporary structures in refugee camps, with a special emphasis on the public spaces within those refugee camps. The research methods include reconstructing the developmental history of the refugee camps and quantifying the basic information of specific functional areas in each case, such as area, number, distribution location, and average number of users, through textual materials and satellite imagery.

Quantitative and visualized information is helpful for a more intuitive understanding of the structure and regional composition of the refugee camp, aimed at sparking reflection on the temporariness, adaptability, and comfort of these camps. It also aims to stimulate discussion on the contradictions between assumptions about short-term residence and the reality of long-term stays. Additionally, quantified information allows for more objective comparisons. By contrasting the differences in various types of public spaces and combining people's evaluations of these areas, we further summarizing the impact of public spaces on the quality of life in refugee camps, with the purpose of applying these conclusions to subsequent refugee camp design.

Location of the Refugee camps

Moria Refugee Camp

The Moria refugee camp, located on the Greek island of Lesbos, originated in response to the intensifying refugee crisis fueled by conflicts and persecution. From its establishment, Moria has been instrumental in providing shelter for a substantial population of displaced individuals escaping diverse regions. In the face of persistent humanitarian challenges, the camp is dedicated to delivering essential resources, humanitarian aid, and a transitory refuge for those navigating the intricate circumstances of forced migration. Despite the commendable efforts, Moria has faced unique obstacles, including overcrowding, inadequate infrastructure, and evolving geopolitical dynamics, which have further compounded the complexities of its mission, the camp closed in 2020.

Moria Refugee Camp, Moria, Greece

Oncunipar Refugee Camp

The refugee camp in Killis, Turkey, was established in response to the Syrian conflict that began in 2011. As violence, persecution, and destruction escalated in Syria, a significant number of Syrians sought refuge across the border. Killis, being near the Syrian border, became a crucial location for hosting refugees. The camp was created to provide shelter, essential services, and humanitarian assistance to those displaced by the conflict. Turkey has been at the forefront of hosting a large number of Syrian refugees, and the establishment of camps like those in Killis reflects the international effort to address the urgent needs of displaced populations affected by the ongoing crisis in Syria.

Oncunipar Refugee Camp, Kilis, Turkey

Azraq Refugee Camp

The Azraq refugee camp, was located near in Azraq, Jordan, built for refugees of the Syrian Civil War, was first opened in April 2014 by the United Nations High Commissioner for Refugees (UNHCR) in conjunction with the Government of Jordan, in order to solve the population saturation problem of the Zaatari refugee camp. The Azraq refugee camp is divided into several different "villages", with shelters and facilities being widely dispersed, in order to preserve traditional social arrangements and structures of Syrian communities as much as possible. Despite the challenges of the desert arid climate and resource shortages, Azraq refugee camps continues to offer humanitarian assistance to a large number of Syrian refugees.


Azraq Refugee Camp, Azraq, Jordan

CASE STUDY 1:
MORIA REFUGEE CAMP, GREECE

Moria refugee camp was established in 2013 and served as the largest refugee camp in Europe. It was strategically situated near the village of Moria on the island of Lesbos, Greece. Its geographical proximity of Turkey made it a crucial entry point for those escaping conflicts from countries like Syria, Afghanistan, Iraq, and parts of Africa, crossing in a relatively easy way the Aegean Sea. The objective was to provide temporary shelter and humanitarian assistance to individuals seeking refuge. And its primary purpose was to serve as a processing center where refugees could apply for permanent asylum, receive humanitarian aid, and await potential relocation or resolution of their situations.

Originally designed for 3,000 people, the camp experienced a 667% growth, reaching 20,000 people by 2020. This overcrowding problem caused Moria refugee camp to grapple with significant challenges, such as inadequate living conditions marked by a lack of proper shelter, sanitation facilities, education facilities ect. Residents do not even have adequate access to basic necessities, such as clean water, which contributing to serious public health issues.
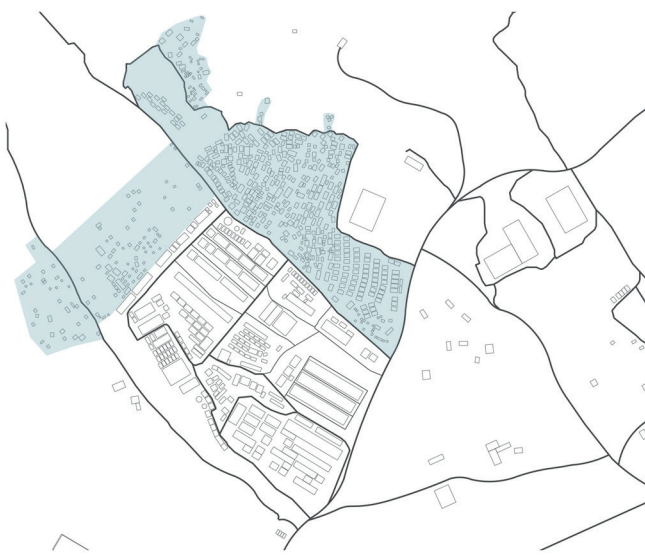
In September 2020, a devastating fire destroyed a significant part of the camp, resulting in the need to displace thousands of residents.
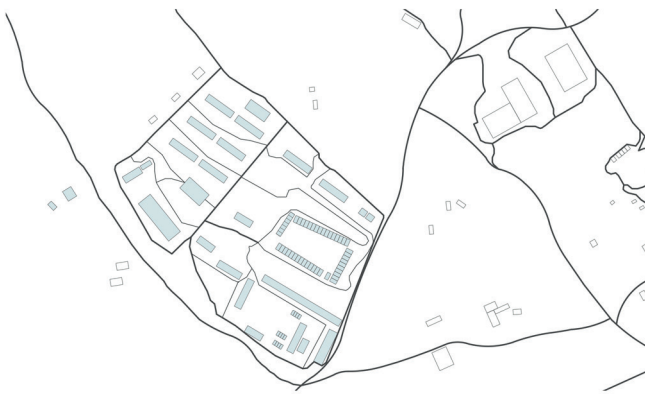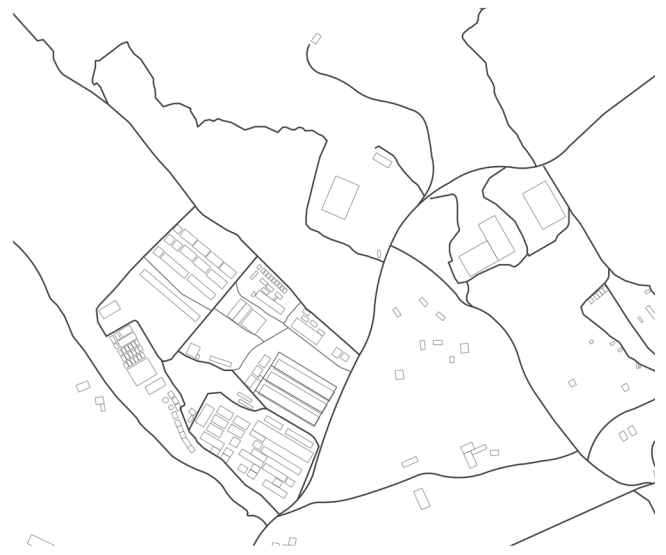

Development of the Camp (2007)

Development of the Camp (2018)

Development of the Camp (2019)

Development of the Camp (2020)

Due to overcrowding, people in the Moria refugee camp began settling outside designated areas, facing disorderly conditions because the lack of organization. The distribution of the layout in the Moria refugee camp encompasses various types of settlements including:

• Permanent or semi-permanent housing solutions (15%): Characterized by prefabricated and modular houses.
• ISO-Boxes (15%): Modular containers that serve versatile purposes, including temporary housing or public buildings. These containers, conforming to international shipping standards, can be stacked, or arranged to create larger structures.

• UNHCR Tents (20%): Tents provided by the United Nations Refugee Agency are temporary shelters designed to house displaced persons due to their transportable and quickly assembled, modularity, durability against weather conditions, and temporary nature.
• Makeshift Structures (20%): Improvised constructions created by the camp's residents using available materials. These structures can vary widely.
• Small Camping Tents (30%): These tents are smaller, portable, and typically associated with camping. They offer a quick and easily deployable solution, suitable for temporary stays. These tents usually have very poor living conditions.


entrance
shelters/roads
distribution point/market
registration
offices
water facilities
security
district compound
open public space
playground
sport facilities
community centre
warehouse
generator
mosque
education facilities
health facilities
theater
toilets

Site Plan

0 10 20   50   100   150

Moria Refugee Camp Distribution by Function

Functions	Quantity	Area	Share
Land Area		174,200 m²	
Residential Area		140,500 m²	80.65%
Public Bulidings		4,100 m²	2.35%
Greenary		4,200 m²	2.41%
Other Area		25,400 m²	14.56%
Necessary Supplies		**1,600 m²**	**0.92%**
Distribution point	2	1,000 m²	
Water facilities	8	600 m²	
Electric facilities	1		
Medical Facilities		**650 m²**	**0.37%**
Hospital and Clinic	3	500 m²	
Other	2	150 m²	
Security Facilities		**300 m²**	**0.17%**
Wall	1	Remarks: About 950m long, 3m high	
Police-Frontex	2	240 m²	
Social and entertainment facilities		**370 m²**	**0.21%**
Sport	1	240 m²	
Theater	1	50 m²	
Community Center	1	80 m²	
Education		**140 m²**	**0.08%**
School	1	140 m²	
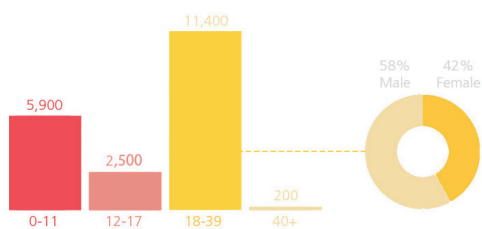
Age Breakdown
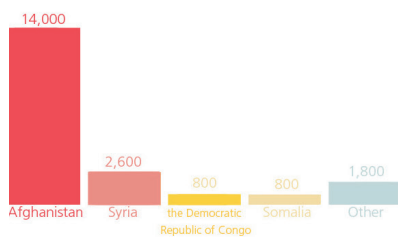
Place of Origin in Syria
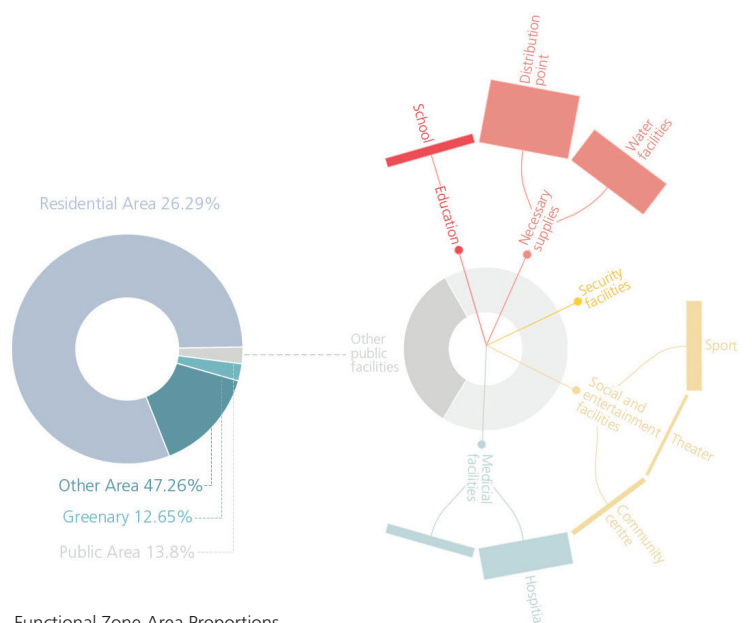
Functional Zone Area Proportions

TYPOLOGY AND USAGE

The public spaces within the Moria refugee camp presented a complex set of challenges for its inhabitants, compounding the already difficult conditions they face. The intensified hardships experienced by the residents contribute to overcrowded living quarters and heightened competition for essential services, creating an environment marked by strain and scarcity.

One significant issue within the camp are the elevated security risks, exacerbated by the overcrowded conditions. This situation not only fosters tension among the residents but also makes them more susceptible to criminal activities. The combination of cramped living spaces and increased security concerns forms a volatile backdrop that adds to the overall challenges faced by the refugees.

From an architectural standpoint, the dearth of recreational spaces further compounds the difficulties faced by the residents. Limited access to leisure activities impacts their well-being, creating an environment where individuals struggle to find moments of respite from their challenging circumstances. The overcrowding not only affects the quantity but also the quality of shared spaces, leading to restricted movement and prolonged wait times for essential services.

Moreover, the inadequacies in the camp's design not only fail to accommodate its rapid growth but also have profound sociological and psychological ramifications. The absence of communal spaces and recreational areas contributes to heightened levels of stress, anxiety, and conflicts among the residents. The lack of a supportive social infrastructure further amplifies the already immense challenges faced by those living in the Moria refugee camp.

Aditionally, in 2020, the camp, faced significant challenges during the COVID-19 pandemic, impacting even more the functioning of the public spaces. The camp's overcrowded conditions made it difficult to implement effective social distancing measures, exacerbating existing issues. Sanitary conditions were poor, and limited access to medical facilities heightened health concerns. The pandemic also disrupted aid operations, impacting access to essential resources.
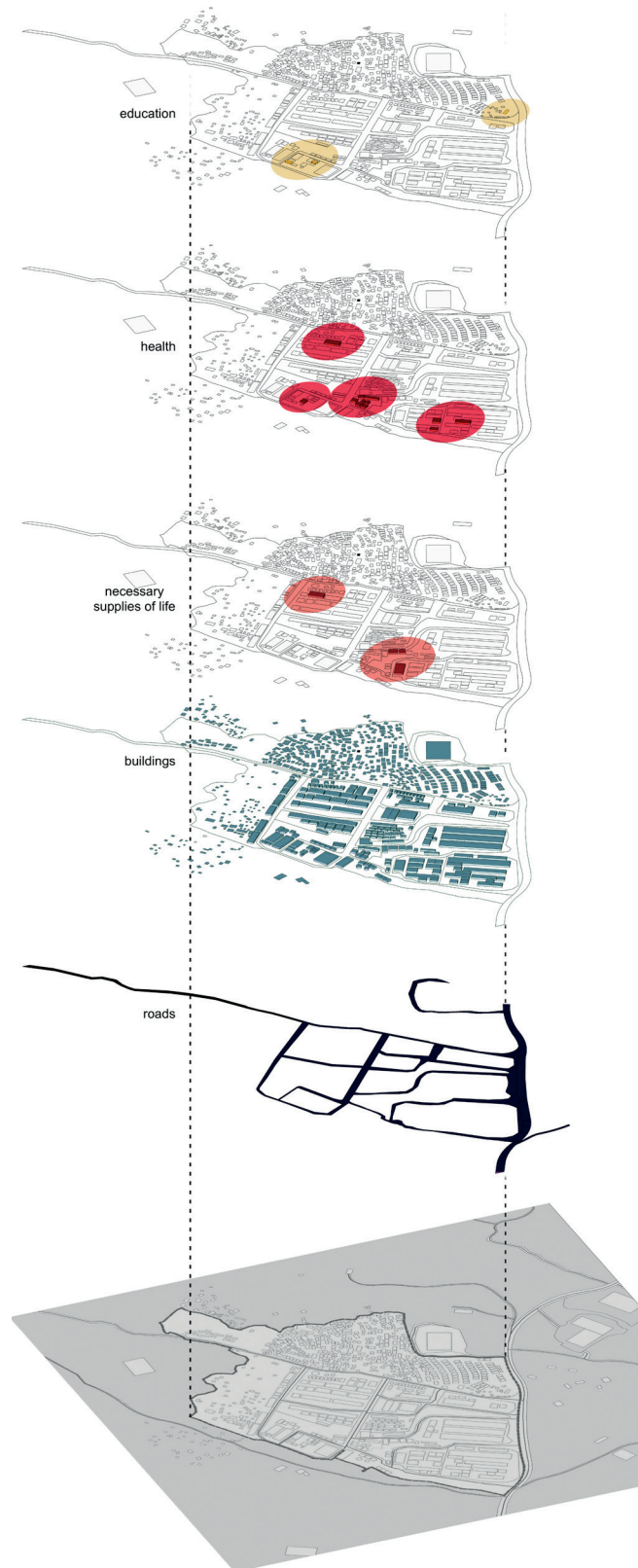

Exploded View

CASE STUDY 2:
ONCUNIPAR REFUGEE CAMP, TURKEY

In 2009, the camp area featured a functional border crossing, and remarkably, all existing structures from that time remain intact today. A retention basin adorned the southern part of the compound. The camp's establishment in 2011 marked notable development, seen in satellite imagery from 2012. Irregularities in camp boundaries, especially along the western side of the border crossing, were observed. Despite this, the architectural landscape persisted, although the southern water reservoir disappeared. Shipping containers were meticulously arranged, presenting a well-designed layout. The complex's focal point transformed into a green space hosting a playground.

By 2015, new constructions were added to the southern and southwestern sectors, differing in dimensions. Simultaneously, the southern green space expanded to accommodate additional structures. Forwarding to 2023, the internal configuration remained largely unaltered, with all containers in their original positions. The southern sector saw the introduction of new sporting facilities and a community center. Beyond the camp boundaries to the north, a considerable parking facility emerged. This narrative encapsulates the camp's evolutionary trajectory, grounded in empirical evidence from satellite imagery, providing a comprehensive account of its developmental chronicle.

Development of the Camp (2009)
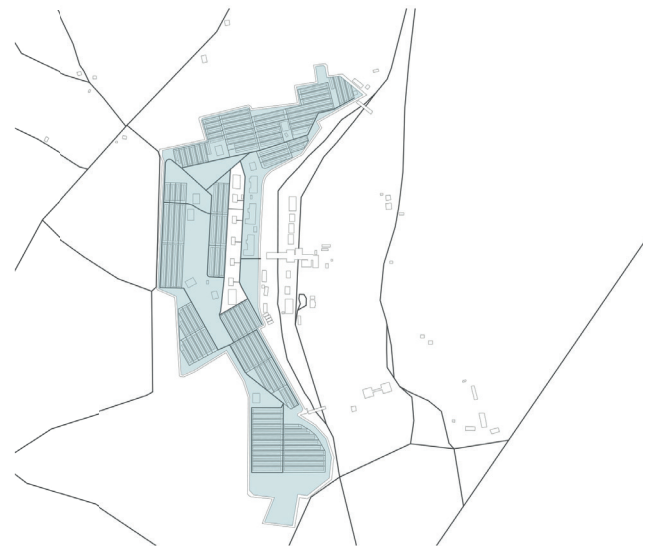
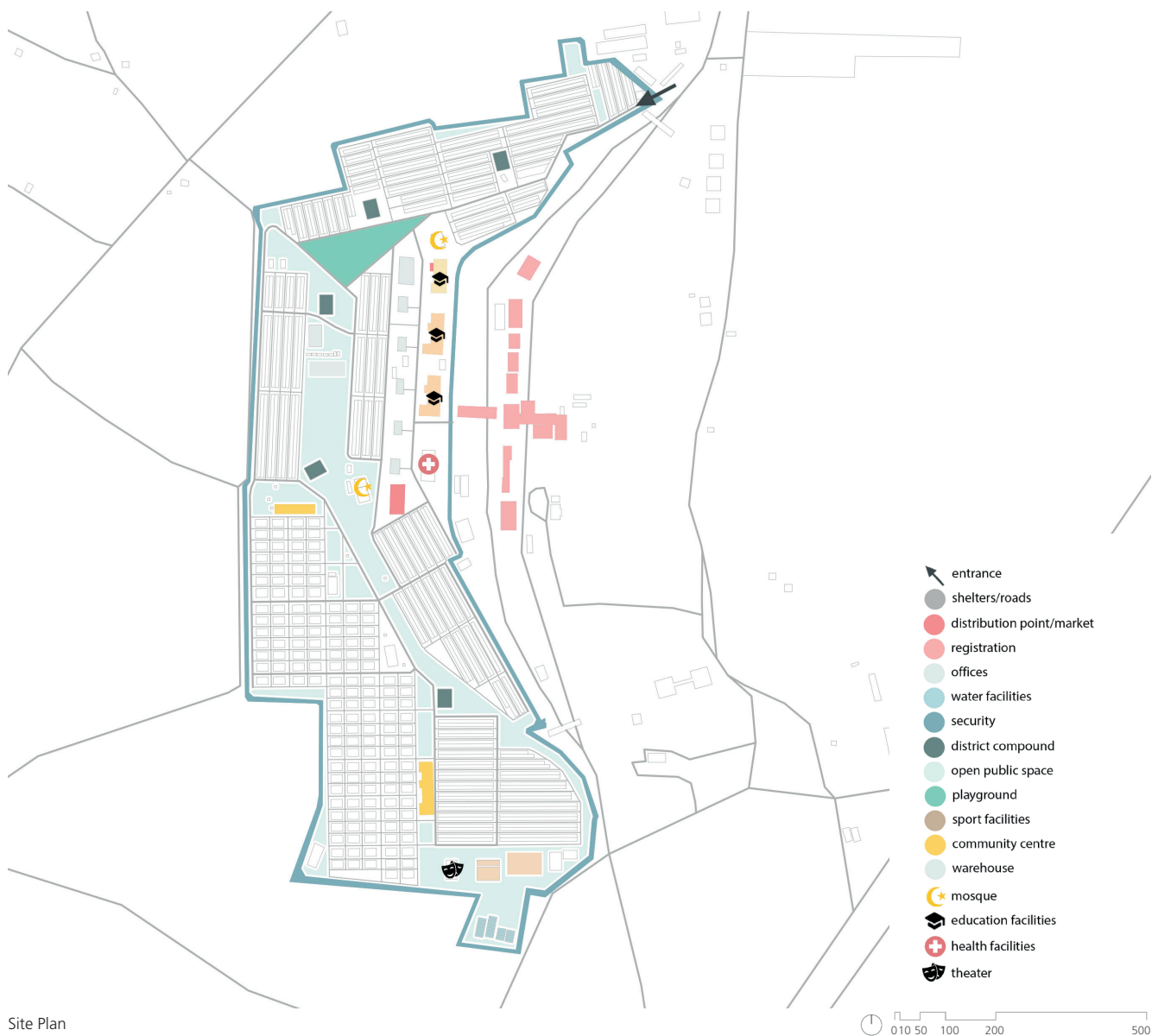Development of the Camp (2012)
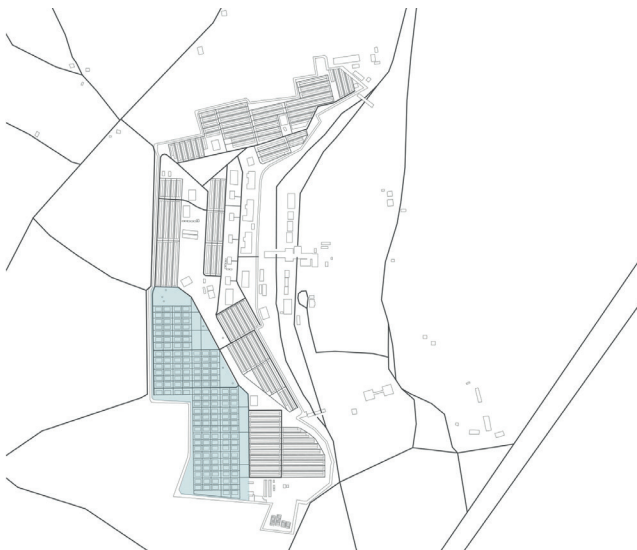
Development of the Camp (2015)

Development of the Camp (2023)

The camp comprises 2053 containers interconnected by brick paths. Each container, measuring 23 by 10 feet, features three rooms, including a lockable front door, a bathroom with dedicated plumbing and a hot-water tank, and a kitchen equipped with a refrigerator and stove. Despite the technical classification of the 14,000 residents as "guests" rather than refugees, the Oncunipar camp signifies a departure from the conventional short-term and emergency-focused approach to refugee settlements. Notably, the camp's planning and development prioritize long-term sustainability and contemplate the gradual integration of residents into the local urban fabric.

A distinctive feature of the camp lies in its emphasis on fostering community ties. The layout of the camp addresses the diverse social and cultural needs of the residents, underscoring a deliberate effort to cultivate a resilient and supportive community within the settlement. Beyond the commendable amenities, cleanliness, and impressive facilities offered by the camp, a poignant reality emerges: the occupants, despite these comforts, harbor a reluctance to embrace the camp as a permanent abode. This sentiment underscores the transient nature of their stay, prompting reflection on the challenges associated with creating a genuine sense of home in a temporary environment.


Site Plan

entrance
shelters/roads
distribution point/market
registration
offices
water facilities
security
district compound
open public space
playground
sport facilities
community centre
warehouse
mosque
education facilities
health facilities
theater

0 10 50 100   200   500

Öncüpınar Accommodation Facility Distribution by Function

Functions	Quantity	Area	Share
Land Area		393,600 m²	
Residential Area		103,500 m²	26.29%
Public Bulidings		54,300 m²	13.80%
Greenary		49,800 m²	12.65%
Other Area		186,000 m²	47.26%
Necessary Supplies		**1,200 m²**	**0.31%**
Distribution point	2	200 m²	
Water facilities	1	1,000 m²	
Medical Facilities		**900 m²**	**0.21%**
Hospital and Clinic	1	900 m²	
Security Facilities		**27,200 m²**	**6.91%**
Wall	1	27,000 m²	Remarks: About 3900m long, 3m high
Watchtower	14	200 m²	
Social and entertainment facilities		**10,000 m²**	**2.55%**
Playground	1	5,500 m²	
Sport	3	2,000 m²	
Theater	1	500 m²	
Community Center	2	2,000 m²	
Education		**3,500 m²**	**0.89%**
School	2	2,600 m²	
Kindergarten	1	900 m²	

Due to Turkey's official secrecy policies and the closed nature of the Oncunipar refugee camp, there is currently no information available on the age, gender, and origin composition of the refugees within the camp. Only very vague data is available, indicating that in 2014, the camp accommodated approximately 14,000 refugees from Syria. As of 2023, Kilis is home to a total of 75,970 refugees, but this figure includes the Oncunipar refugee camp, other nearby camps, and the city itself.
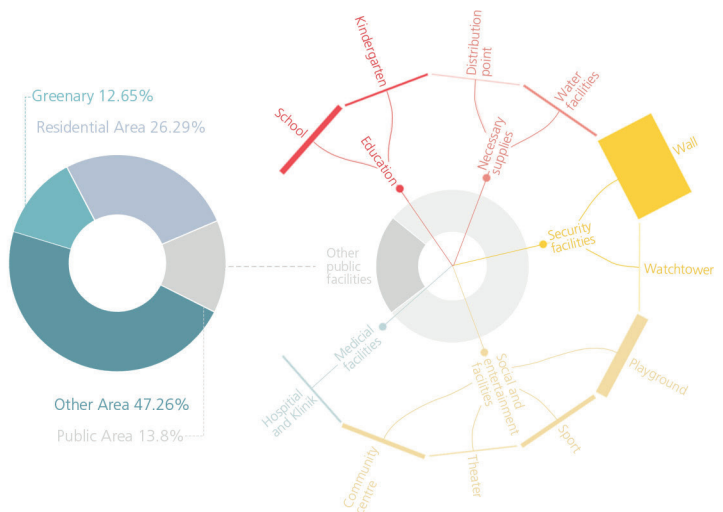
Functional Zone Area Proportions

TYPOLOGY AND USAGE

The camp comprises 2053 interconnected containers with delineated brick paths and is enclosed by a 3-meter-high perimeter wall for security. Entrances strategically positioned near the former border crossing allow access, guarded by ten posts. Five district compounds, evenly spaced, include an administrative sector in the eastern zone.

Educational facilities progress northward, from a preschool to a regular school and a school for individuals with disabilities. The sole hospital, serving the entire refugee population, is south of the schools. In the northern administrative area, one mosque is situated, with the second in the southwestern segment. Adjacent to the latter mosque, the camp's only market is positioned. Additionally, a distribution point at the forefront of the preschool serves a pivotal role.

Further south, strategically positioned water facilities cater to the entire camp, ensuring water provision for each container. Two community center buildings, centrally and in the southern section, fulfill living requirements and provide communal spaces like a theater, sports fields, playgrounds, and community centers.

This camp design is a departure from conventional refugee settlement approaches, emphasizing meticulous urban planning and infrastructure development. The intentional layout includes distinct zones for residence, education, healthcare, and recreation, fostering a holistic living environment. Educational and healthcare facilities are thoughtfully distributed for accessibility, and community spaces aim to foster social cohesion.

The incorporation of mosques recognizes cultural and religious needs, while the market and distribution point highlight an emphasis on sustenance and essential supplies. Water facilities strategically placed throughout the camp reflect a commitment to addressing basic human needs systematically. In sum, the camp's architectural and organizational elements not only fulfill essential living requirements but also underscore a commitment to enhancing the overall well-being and community resilience of its residents.
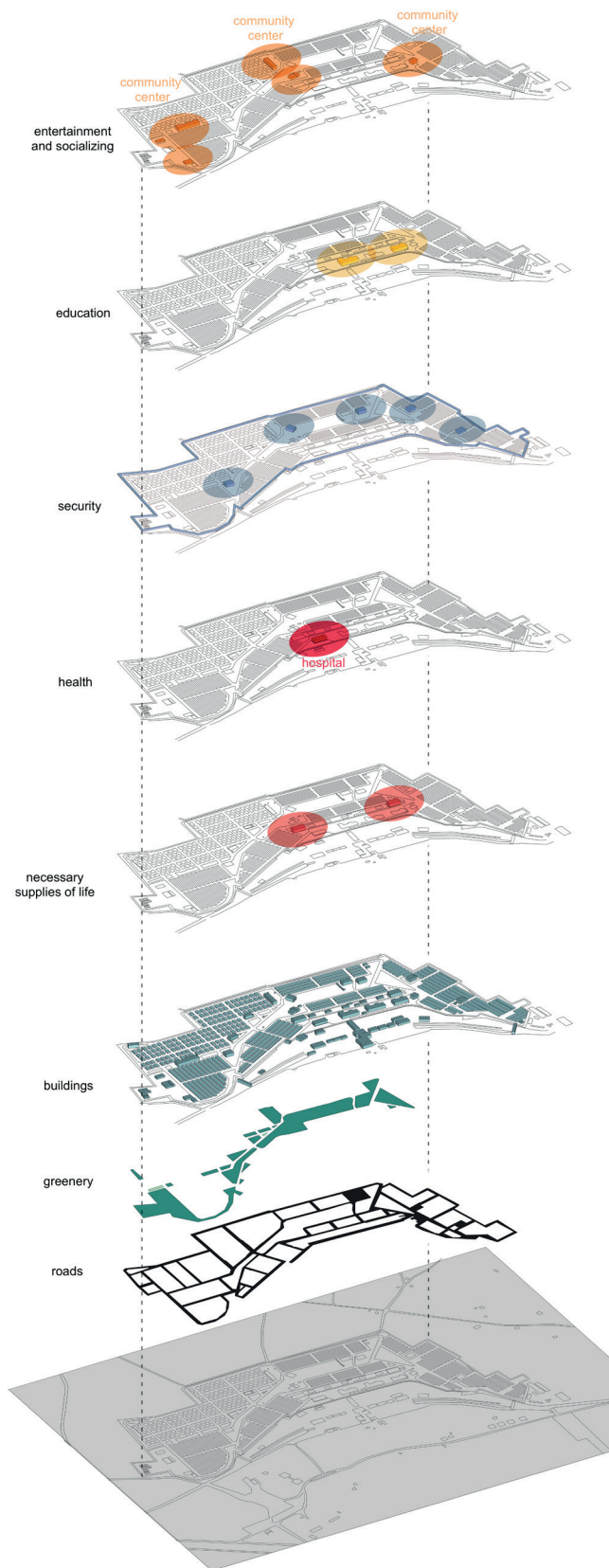
Exploded View

CASE STUDY 3:
AZRAQ REFUGEE CAMP, JORDAN

During the Gulf War of 1990-1991 , the area where the Azraq refugee camp is now located was a temporary camp for Iraqi and Kuwaiti refugees, which was later demolished. Prior 2013, this area had been an uninhabited land with abandoned roads.

Construction of the Azraq Refugee Camp began in May 2013. It is easy to see from the satellite images that the construction of the Azraq Refugee Camp was very rapid and well-organized. By July, road refurbishment and ground laying were completed. From July to October, The construction of water facilities was completed. And by the end of the year, a portion of important public facilities, such as distribution points, hospitals, schools

and security facilities, as well as a small number of shelters, were built.

By 2014, the shelters and public facilities construction of the two "village" within the camp had been basically completed, and a supermarket operated by The World Food Programme (WFP) was established in the center of the refugee camp.

Until 2017, a total of five well-equipped areas were constructed, including a solar power plant. From 2017 to the present, only a few buildings and facilities have been dismantled or constructed, with no significant changes to the camp's structure.
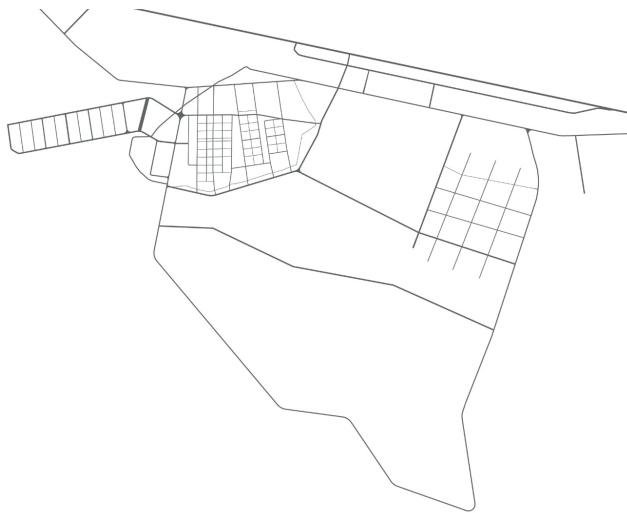
Development of the Camp (2012)

Development of the Camp (2013)

Development of the Camp (2014)

Development of the Camp (2020)

In terms of urban structure, the design of Azraq Refugee Camp mimics traditional Syrian villages, It's aimed to preserve the traditional Syrian social structure as much as possible. This approach reflects humanitarian care for refugees on one hand, helping them establish cultural identity. On the other hand, it also ensures the continuity of the culture of refugees, emphasizes the temporary nature of the refugee camp.

The most striking feature of Azraq's refugee camp is that the shelters in Azraq are white huts with insulation and sloped roofs, made from materials like zinc and steel. This shelters are easier to construct and dismantle than shelters made of concrete and brick. This also indicates that Refugee camps are designed as temporary residences rather than long-term settlements.

The Azraq Refugee Camp has faced challenges with electricity shortages. Therefore, a solar photovoltaic power plant was built. Dispite expensive intallations, solar power facilities have lower operating and maintenance costs, implying that the longer it is used, the more cost-effective it becomes. This conflicts with the temporary nature of the camp. However, many of the practical problems encountered in the camps can only be solved by constructing such facilities. Refugee camps inevitably showed signs of developing into longer-term settlements.


entrance
shelters/roads
distribution point/market
registration
offices
water facilities
security
district compound
open public space
playground
sport facilities
community centre
warehouse
solar panels
mosque
education facilities
health facilities

Site Plan

0 100 200   500   1000   1500

Azraq Refugee Camp Distribution by Function

Functions	Quantity	Area	Share
Land Area		6,500,000 m²	
Residential Area		2,576,900 m²	39.64%
Public Area		747,800 m²	11.50%
Greenary		75,000 m²	1.15%
Other Area		3,101,300 m²	47.71%
Necessary Supplies		**124,400 m²**	**1.91%**
Distribution point	5	14,500 m²	
Markt	4	58,800 m²	
Water facilities	9	19,000 m²	
Electrical facilities	1	32,100 m²	
Medical Facilities		**30,200 m²**	**0.46%**
Hospital and Clinic	4	28,200 m²	
Relief Agencies	1	2,000 m²	
Security Facilities	**10**	**41,500 m²**	**0.64%**
Social and entertainment facilities		**43,600 m²**	**0.67%**
Playground	7	7,200 m²	
Sport	1	9,100 m²	
Community Center	12	27,300 m²	
Education		**140,100 m²**	**2.16%**
School	15	125,500 m²	
Kindergarten	5	14,600 m²	

Age Breakdown
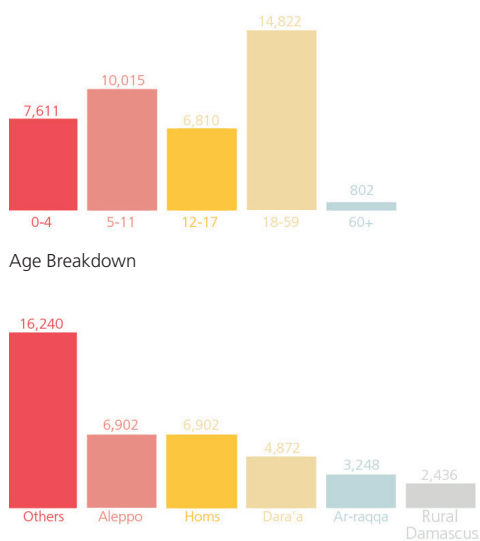
Place of Origin in Syria
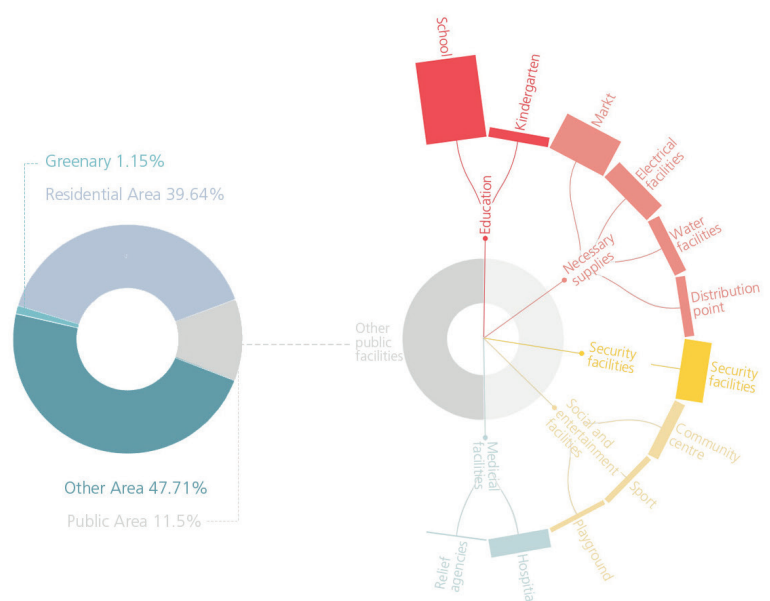
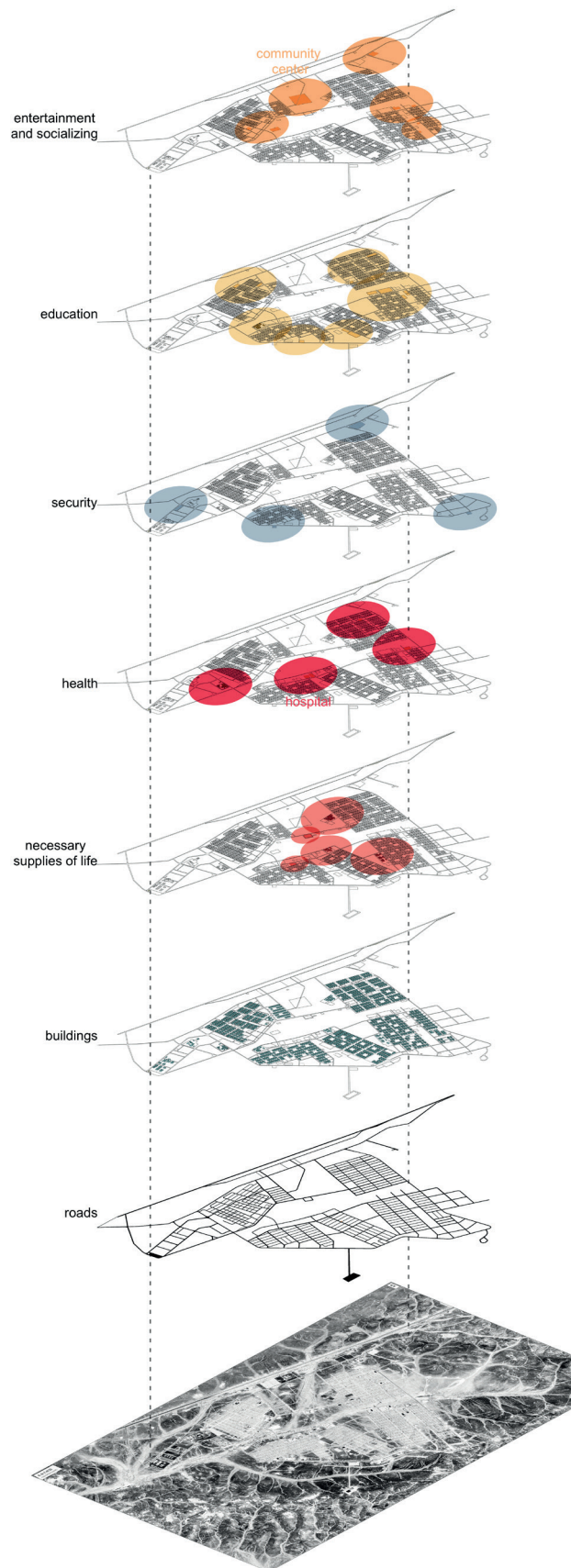Functional Zone Area Proportions

TYPOLOGY AND USAGE

To preserve the traditional Syrian social structure, the overall plan of Azraq is not as compact as the Zaatari Refugee Camp. It consists of multiple similar areas connected by circular roads, with each area housing numerous shelters, essential infrastructure, and ample public spaces. Additionally, it has the potential to expand outward and accommodate more refugees.

The designers are committed to ensuring that each area has sufficient infrastructure, with fifteen schools and five kindergartens, security facilities, community centers, medical facilities and playgrounds evenly distributed across each area, greatly enhancing the convenience of refugee life. Distribution points, markets, and mosques, which require larger space or serve more people, are mostly located in the central area of the camp.

Notably, the camp has established numerous training and community centers specifically for women. These centers offer vocational skill courses in sewing, carpentry, and finance. There are also activities that aim at protection, such as campaigns and support for addressing domestic violence and early marriage. This indicates that the Azraq Refugee Camp provides additional support and humanitarian care to its most vulnerable groups.

In the northwest corner and at the entrance of the camp, areas are designated for registration, storage, and NGO offices, responsible for refugee management and registration, as well as the storage, distribution and transportation of goods.

Despite its meticulous planning and management creating favorable living conditions, Azraq Refugee Camp is still not considered by all to be an ideal refugee camp. One reason is environmental and climatic; the hot, arid desert climate means that more infrastructure is needed compared to most other camps to provide similar living conditions for refugees. Politically, to prevent the entry of terrorists, the processing of refugee applications is slow, resulting in Azraq not reaching its anticipated population, this may be one reason why some public facilities have been dismantled since 2017, as seen in satellite images. Lastly, Azraq maintains a relatively liberal management style, allowing refugees to enter cities and search of job opportunities, a common feature of many Jordanian camps. However, many refugees end up settling illegally in cities and never return to refugee camps.

community center

entertainment and socializing

education

security

health

hospital

necessary supplies of life

buildings

roads

Exploded View

Moria Refugee Camp

Kilis Refugee Camp

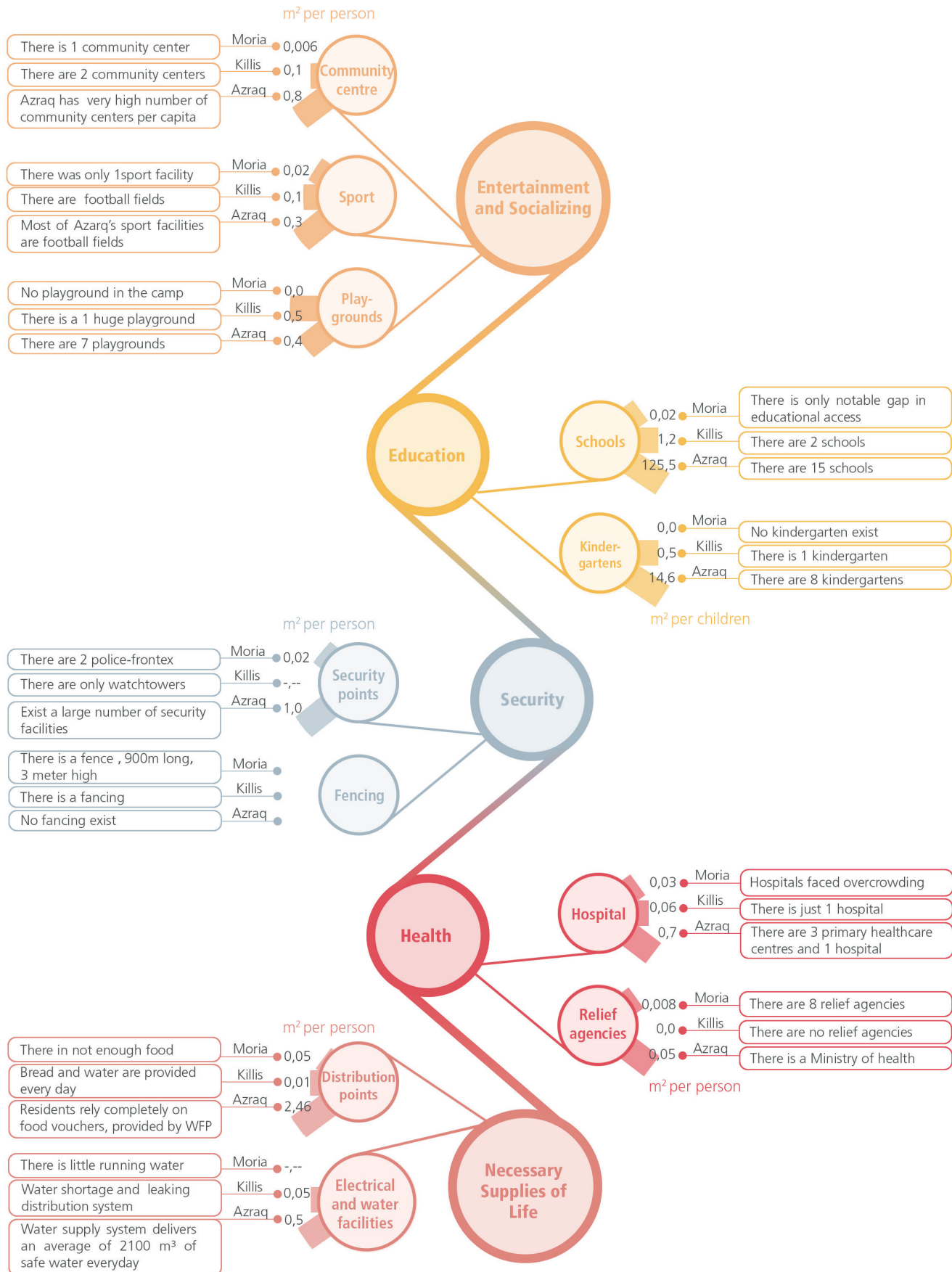Azraq Refugee Camp

COMPARATIVE ANALYSIS & SUMMARY

We aim to explore the impact of public spaces on the dynamics of people in refugee camps. Our analysis focuses on the architectural design perspective, correlating it with the experiences and outcomes observed in these environments, and understanding the positive and negative impacts that architecture can have on physical and mental health.

It's essential to acknowledge the complexity of refugee settlements, marked by the emotional stress resulting from the loss of homes or family members. Refugee camps, by their nature, can be isolating, intensifying feelings of loneliness and alienation. Additionally, the challenge of keep harmonious coexistence among diverse cultures adds another layer of difficulty, often leading to tensions within the community.

This tensions were noticeable in Moria leading to multiple situations of violence and crime. The challenges related to overcrowding, added to the limited public spaces, cause a significant impacting in the availability of communal areas, and the access for social activities. The public spaces in Kilis were thoughtfully designed, featuring two accessible community centers, a renovated playground, and facilities for sports and education. Azraq is considered to have the best public space design among the three cases, standing out for its urban planning, featuring community centers and play areas, focusing in recreation. Also, the strategic placement of educational and healthcare centers reflects a commitment to accessibility and attention to essential community needs.

This characteristics accelerate refugee integration, creating a sense of belonging that conducive a positive community relationship, safer environments and well-maintained infrastructures, making a difference on mental health, mitigating feelings of boredom and depression. Also taking into account an holistic approach that considers therapeutic elements within public spaces.
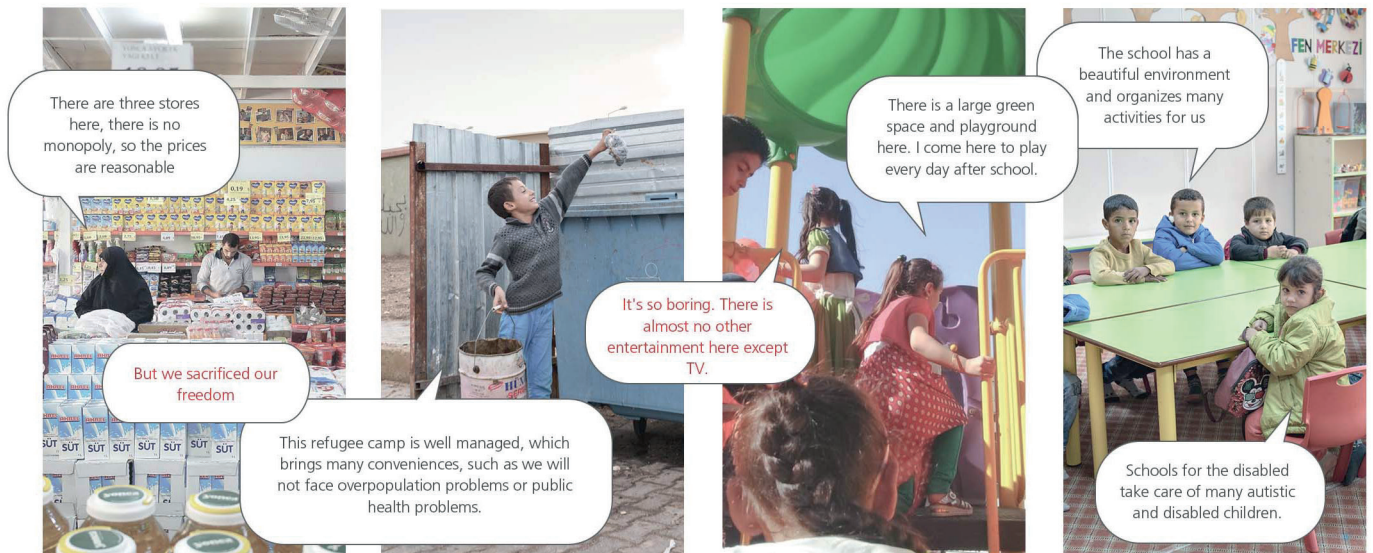
While refugee camps are intended as temporary structures, the minimum stay is 17 years according to the UNHCR, being crucial to create structures that facilitate the proper adaptation of individuals. However, in cases like Moria, where basic requirements were not insured, the creation of public spaces was not a primary necessity.

m² per person

	Moria	0,006	Community centre
There is 1 community center — Moria — 0,006
There are 2 community centers — Killis — 0,1
Azraq has very high number of community centers per capita — Azraq — 0,8

Community centre

There was only 1sport facility — Moria — 0,02
There are football fields — Killis — 0,1
Most of Azarq's sport facilities are football fields — Azraq — 0,3

Sport

No playground in the camp — Moria — 0,0
There is a 1 huge playground — Killis — 0,5
There are 7 playgrounds — Azraq — 0,4

Play-grounds

Entertainment and Socializing

Education

Schools

0,02 — Moria — There is only notable gap in educational access
1,2 — Killis — There are 2 schools
125,5 — Azraq — There are 15 schools

Kinder-gartens

0,0 — Moria — No kindergarten exist
0,5 — Killis — There is 1 kindergarten
14,6 — Azraq — There are 8 kindergartens

m² per children

m² per person

There are 2 police-frontex — Moria — 0,02
There are only watchtowers — Killis — -,--
Exist a large number of security facilities — Azraq — 1,0

Security points

There is a fence , 900m long, 3 meter high — Moria
There is a fancing — Killis
No fancing exist — Azraq

Fencing

Security

Health

Hospital

0,03 — Moria — Hospitals faced overcrowding
0,06 — Killis — There is just 1 hospital
0,7 — Azraq — There are 3 primary healthcare centres and 1 hospital

Relief agencies

0,008 — Moria — There are 8 relief agencies
0,0 — Killis — There are no relief agencies
0,05 — Azraq — There is a Ministry of health

m² per person

m² per person

There in not enough food — Moria — 0,05
Bread and water are provided every day — Killis — 0,01
Residents rely completely on food vouchers, provided by WFP — Azraq — 2,46

Distribution points

There is little running water — Moria — -,--
Water shortage and leaking distribution system — Killis — 0,05
Water supply system delivers an average of 2100 m³ of safe water everyday — Azraq — 0,5

Electrical and water facilities

Necessary Supplies of Life

Comparison of per Capita Area of Public Spaces

Moria Refugee Camp Reviews

Oncunipar Refugee Camp Reviews

Azraq Refugee Camp Reviews

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REFUGE AND URBANISATION

ZAATARI, JORDAN; DADAAB, KENYA; KUTUPALONG, BANGLADESH

Oscar Aporius, Marcel Erdmann, Christian Hoffmann

INTRODUCTION

According to a report by the UNHCR (United Nations High Commissioner for Refugees), 108.4 million people worldwide are displaced (as of June 2023). This figure has risen by 21% compared to the previous year and will continue to rise due to current conflicts and global climate change. Of this total number, around 45.9 million people are fleeing outside their home country in search of safe havens. Many of these refugees live in refugee camps, which are the subject of the following pages.

The reasons for fleeing abroad can vary greatly. According to the United Nations, the most common reasons are wars and violence, such as in Syria from 2011 onwards. Another common cause is the violation of human rights, with people being persecuted and disadvantaged for ethnic, religious or gender-specific reasons and having to protect their lives. Famines or climate and environmental disasters, both of which are exacerbated and made more frequent by global climate change, are also causes of flight.

As these causes of flight make clear, refugee camps are never created voluntarily, but out of urgent necessity. The people affected often flee to neighbouring countries where refugee camps are then set up to accommodate them. In other cases, the attempt to flee to Europe or the USA is undertaken at enormous personal risk.

Refugee camps are often set up with the aim or hope of a temporary stay for the inhabitants. However, many of the conflicts continue and the possibility of the refugees returning to their homeland is therefore ruled out, which means that the camps remain in existence for much longer than originally assumed. In some cases, camps have existed for decades with no prospect of an end.

Nevertheless, refugee camps are not recognised as permanent settlements or cities, even though they fulfil many of the criteria and characteristics of a city or develop them over time, such as centrality for the surrounding area, a permanent minimum size

Urbanisation of Zaatari // before

Urbanisation of Zaatari // after

of the resident population, compactness (density), functional structuring and a pronounced social and economic differentiation. In some cases, the refugee camps would be among the largest cities in their host countries.

In the following pages of this publication, the aim is to analyse three case studies in more detail in order to be able to illustrate similarities and differences. The examples are examined in terms of their origin, context, climate, growth, location, infrastructure and organisational structure. The urbanisation of the camps is then also considered.

CASE STUDIES

A total of three case studies were selected for analysis and subsequent comparison: Zaatari in Jordan, Dadaab (Ifo) in Kenya and Kutupalong in Bangladesh. These three refugee camps were chosen because they are each among the most populous camps in the world and in all of them an armed political conflict, such as civil wars or ethnically motivated persecution in a neighbouring country, was the reason for their creation.

The first example is the Zaatari refugee camp in Jordan, close to the Syrian border. The camp was created in 2012 as a result of the Syrian civil war and grew to 200,000 inhabitants in 2013. Today, around 80,000 people still live in the camp. Another example, Dadaab, consists of a total of three camps, Dagaha-

ley, Hagadera and Ifo, the latter of which was analysed. The camps were created as a result of a civil war and famine in 1991 and comprise around 300,000 people. Dadaab is located in Kenya, close to the border with Somalia, where most of the refugees come from.

The last camp analysed is Kutupalong in Bangladesh. It is currently the largest refugee camp in the world with almost 600,000 inhabitants and a significantly high density. Like Dadaab, Kutupalong was set up in 1991 and expanded rapidly from 2017 onwards due to the ethnic and religious persecution of the Rohingya population in Myanmar.

Zaatari Aerial Image

Daddab Aerial Image
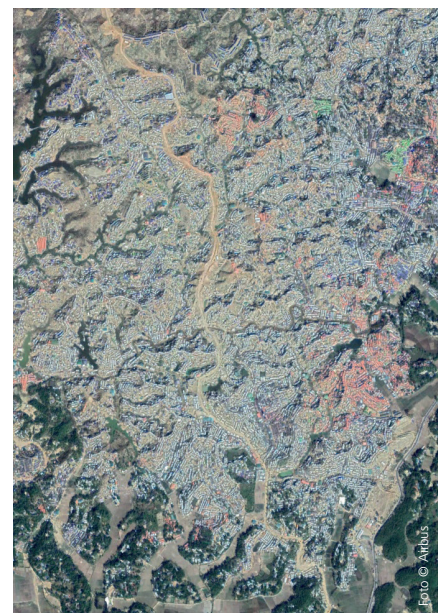
Kutupalong Aerial Image

CASE STUDY 1:
ZAATARI, JORDAN

2012
Zaatari was constructed to
accomodate refugees from Syria
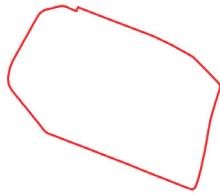
200.000
Highest population of the camp (2013)

6,94 km²
Size of the camp

15.293/km²
Population density

ZAATARI

30°		600 mm
24°		480 mm
18°		360 mm
12°		240 mm
6°		120 mm
0°		0 mm

J F M A M J J A S O N D
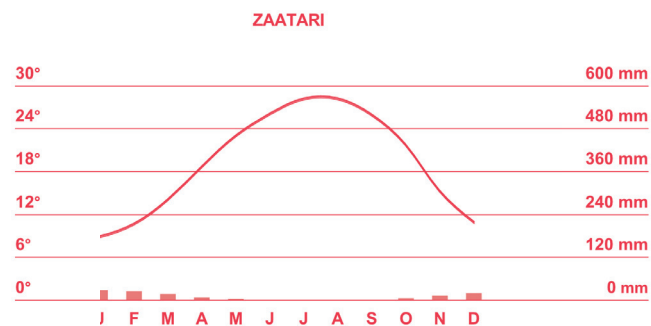
Precipitation and Temperature, Averages from 1991 to 2022

ORIGIN & EXPANSION

In March of 2011, the arrest of a group of children who had written anti-government graffiti sparked protests against the Syrian al-Assad regime in the city of Daraa. This was part of a more widespread series of anti-government protests beginning to occur in many arab countries in the early 2010s. Within the following months, unrest in Syria grew and the protests started to spread nationwide. Syrian police and security forces violently clashed with demonstrators, resulting in many civilian deaths as well as mass incarcerations. The escalating violence resulted in many civilians being displaced and forced to flee the country.

One of the main refugee routes at the time led across Syrias south-western border to Jordan. At first, camps and shelter were improvised in different locations near the border, one of the larger ones being the Al-Bashabsheh residential complex in Ramtha. As the refugee influx continued and the complex got overcrowded, more and more refugees started to settle in cities and villages near the border. This led to the UNHCR planning an expansion of aid and relieef measures in northern Jordan in April of 2012. One of those measures was the proposal of a new refugee camp in a desert area, near the gorvenorate capital of Mafraq. Within two months the camp was built and in July of 2012 a group of about 450 syrian refugees could find accomodation in the newly built Zaatari refugee camp.

In the beginning the camp was dimensioned for about 10.000 refugees. However, over the course of the next months and with the refugee crisis continuing, the number of Zaatari inhabitants rapidly climed into the tens of thousands, eventually surpassing 100.000 in early 2013. At this point in time, the UNHCR began replacing the initially used tents with more durable containers and the camps borders expanded multiple times.
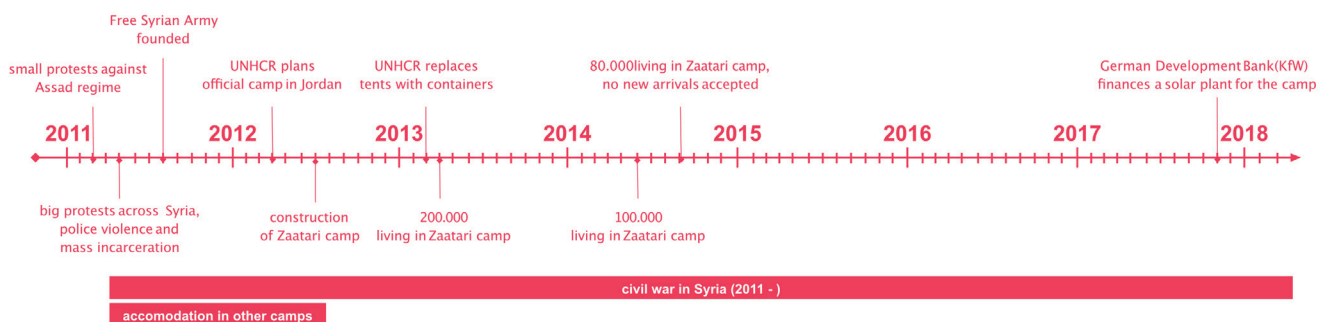
Timeline of Cause of Conflict and Development of the Camp

It can also be observed that, opposed to the initially organized structure the tents and containers were arranged in, the inhabitants began to dismantle the spatial order and arrange their shelters individually. The count of inhabitants reached its highest point in Spring of 2013 at more than than 200.000. In April of 2014, a new camp opened in Azraq and could accomodate new refugees. From then on the numbers in Zaatari began decreasing to around 80.000 and the camp was closed to new arrivals. In November of 2016, a solar plant, financed by German Development Bank KfW was built right next to the camp, allowing for more stable access to electricity.

CLIMATE

Being located in the desert, the climate in Zaatari is very dry with little to no precipitation year-round. This makes it hard to grow food in the region and Zaatari has to rely on import. Temperatures change depending on the season and are around 30° in summer and just below 10° during winter. These fluctuating temperatures also pose a challenge for the shelters.

Zaatari Building Typology

Nov 2012
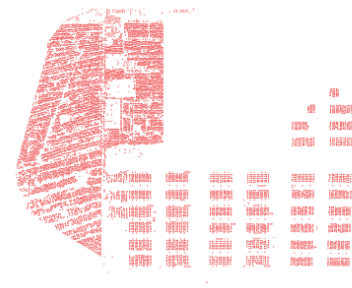
Jan 2013

Feb 2013

May 2013   0   0,5   1   2 km
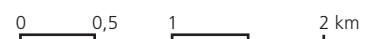
LOCATION

The Zaatari refugee camp is located in northern Jordan, a neighbouring country of Syria. Situated in a sparsely populated region, about 10 kilometres east of Mafraq and six kilometres south of the Syrian border, Zaatari is linked to the governorate capital of Al Mafraq by Road 10.

This geographic location not only allows for relatively easy humanitarian access, but also provides a link to Al Mafraq, where much of the regional population lives. In addition, smaller towns are evenly distributed in the surrounding area, which promotes regional integration.

INFRASTRUCTURE

The structure of Zaatari is characterised by a clear street grid that defines each camp area. This clear layout not only allows for efficient organisation, but also provides orientation for residents. There are 12 different camp areas in total.

Public facilities are concentrated along two main axes, optimising the distribution of services and resources. This architectural concept not only strives for efficiency, but also creates a supportive environment for the refugees who seek shelter here.

Over time, private shops and service providers have also sprung up along the same transport axes, making the streets not only necessary infrastructure but also economic and social spaces.

Zaatari has a fixed electricity grid, which is powered by solar energy, as well as a fresh water supply and a sewage system for the households. These infrastructures are unique features

compared to the other case studies and an important factor in the ongoing urbanisation of the temporary structure.

ORGANISATION

The Zaatari refugee camp is organised by the UNHCR (United Nations High Commissioner for Refugees) and its director, in cooperation with various international and national groups such as UNICEF, the Norwegian Refugee Council, THW or OXFAM. In total, more than 139 different organisations are working together in the camp, providing different services such as WASH (water/sanitation/hygiene), health care, food and education, all under the direction of UNHCR. Coordinating so many groups is a difficult task and can cause problems.

The camp is also supported by the host country, Jordan, and its government. At around $870 million per year (as of 2018), they are a major donor to the camp, while also providing political support to the camp's population. The permanent water system, improved housing, solar farm and street lighting were all approved by the host government, in stark contrast to the other two case studies that follow.

The camp's population has a strong social hierarchy, reflected in better housing and better locations for higher-ranking families. In order to prevent conflicts and to create order, Kilian Kleinschmidt, the former director of the camp, tried to eliminate mafia-like structures by talking to unofficial leaders and finding allies among them. His aim was to treat people with dignity and to see Zaatari as a city rather than a camp. The idea was to involve the people in the day-to-day running of the town, helping

Surroundings

0   4   8   16 km

Infrastructure

0   0,5   1   2 km

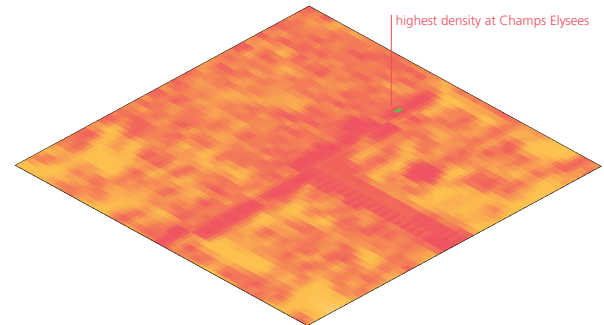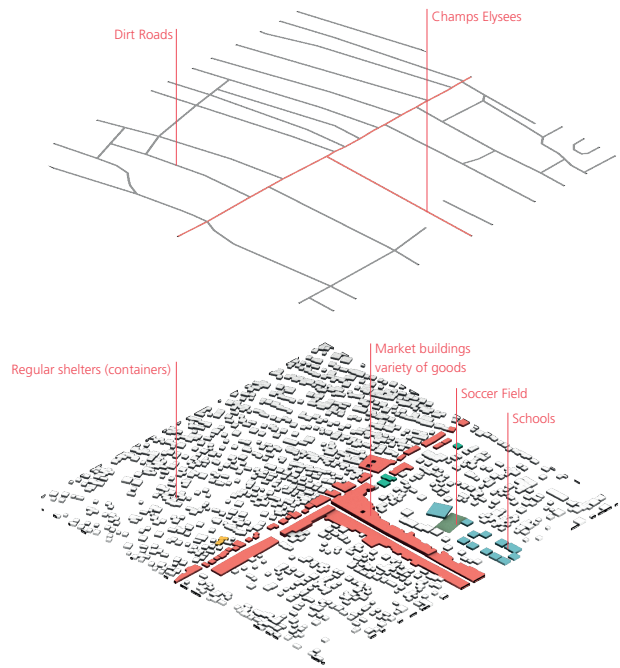Organisation

Roads, Building Structure and Density
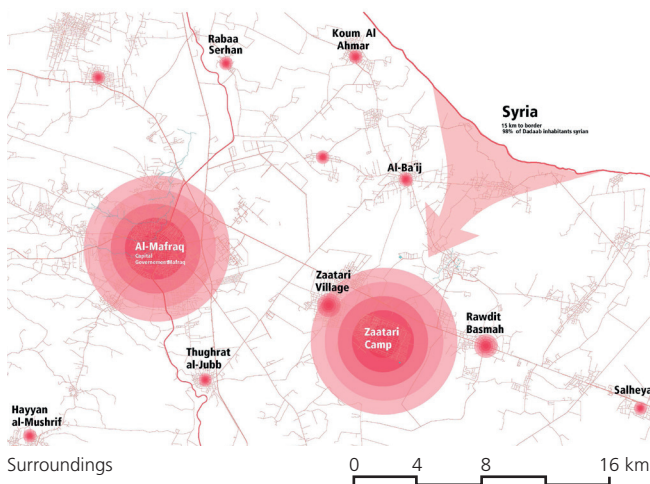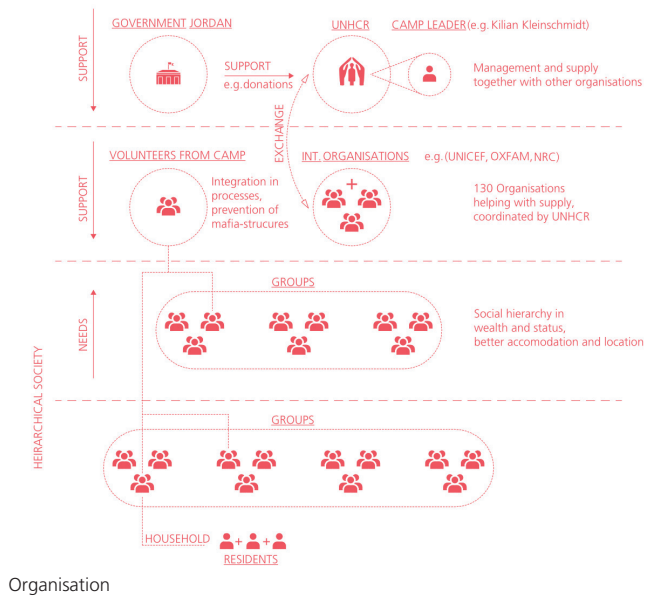
to maintain and develop it. The strategy is to support the refugees and not to block organic development with regulations.

URBANISATION

If Zaatari were considered an official city of Jordan, it would be the country's fourth largest. It began as an emergency shelter of tents in the desert, but quickly evolved into a more permanent city to meet the needs of the population.

Since the start of the conflict in Syria in 2012, the camp has undergone constant change. What started with tents has become a large city of containers that provide a safe and more stable shelter, some with air conditioning. Typical urban buildings such as schools, hospitals, mosques and aid centres were built, as well as football pitches for children and shops offering a wide range of goods and services. As a result, a market economy has emerged, linked to businesses outside the camp. The emerging economy is most visible on the so-called "Champs-Elysee", a three-kilometre street inside Zaatari that contains a large number of shops, cafes, workshops and other commercial buildings. The street is also an important social centre for residents. The area around the street is very dense (see map above) and open spaces and shops are sold at high prices (rising trend). There are an estimated 3,000 shops in Zaatari.

A very important foundation of a city is its infrastructure, such as electricity and water. Over the years, this aspect has been greatly improved. In November 2017, a large solar power plant was installed outside the camp to power street lights and other essential electrical systems. The streets have become safer after sunset and people have access to electricity for approximately 14 hours a day. Fresh water and sanitation are also now permanently installed in homes, making daily life easier and healthier. Permanent infrastructure also reduces running costs.

In this case, the development of a permanent city is supported rather than hindered. The adaptation of the camp by its residents is seen as natural and should not be stopped by the authorities, leading to better living conditions overall. Nevertheless, there is no absolute freedom for the people of Zaatari. Movement, trade and other personal rights are restricted and people are trapped, unable to return to their homes until the conflict is over.

CASE STUDY 2:
DADAAB, KENYA

1991
Dadaab was constructed to
accomodate refugees from Somalia
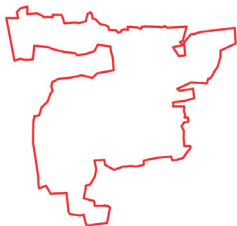
500.000
Estimated population of all Dadaab camps (2016)

# 7,2 km²
Size of the camp (Ifo)

11.867/km²
Population density

DADAAB

Precipitation and Temperature, Averages from 1991 to 2022

ORIGIN & EXPANSION

In 1991 the overthrow of Somalian president Mohamed Siad Barre marked the beginning of the ongoing civil war in Somalia. As a result of the following unrest, many Somalians were forced to seek refuge in neighboring countries. Kenya, being one of Somalias few neighboring countries was one of the main refugee destinations during this mass exodus. Somalia is the main country of origin for refugees in Dadaab, however there is also a small percentage from other african countries, such as Ethiopia.

At the time, three refugee camps were constructed along main roads in eastern Kenya, close to the Somalian border: Ifo - which will be the focus of our research - as well as Dagahaley and Hagadera. Two UN peace missions (UNOSOM 1 and UNOSOM 2) aimed at stabilizing the situation in Somalia were conducted between 1992 and 1995, but the conflicts continued.

Many different parties are involved in the Somalian civil war. In 2006 a stabilisation attempt by the ICU (Islamic Courts Union) was averted by ethiopian military forces. In 2007 Al-Shabaab established a de-facto government in many parts of the counrty. From 2011 until 2012 there was a military offense conducted by AMISOM (African Union Mission In Somalia). In 2010, with the civil war still active and combined with a period of drought in Somalia, a second big wave of refugees crossing the border to Kenya prompted the construction of two new camps in Dadaab - Ifo 2 and Kambioos. Also, the existing camps were expanded. Ifo 2 and Kambioos provided shelter for the newly arrived Somalians, but were later closed down after many refugees returned back to their home country. The other three camps however still exist.
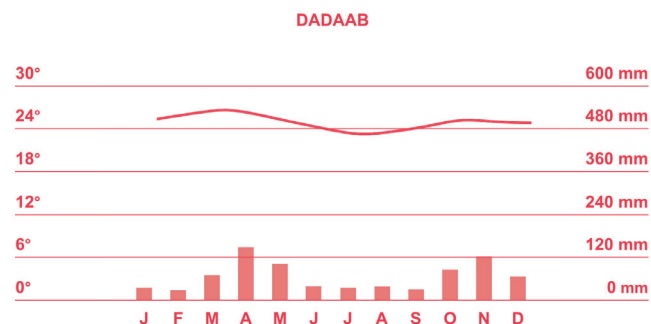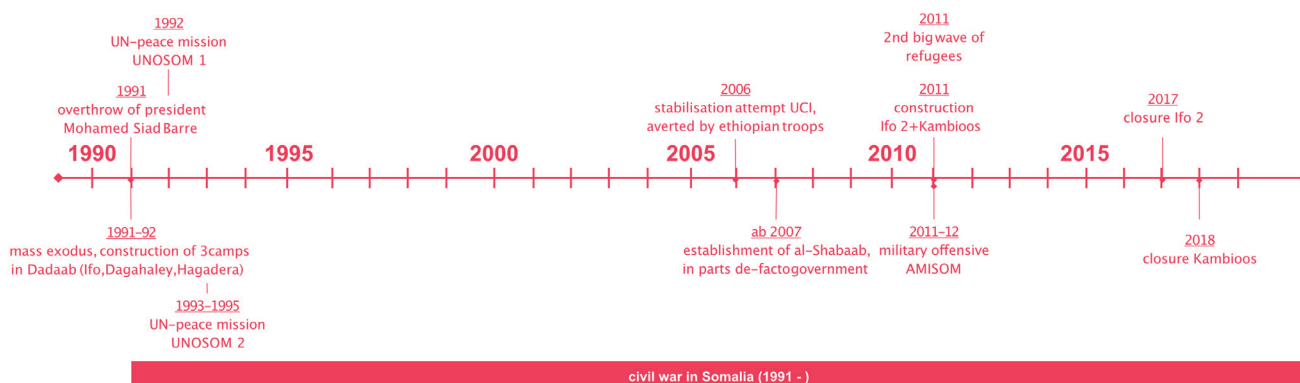
Timeline of Cause of Conflict and Development of the Camp

Ifo camp stayed relatively consistent in size over the years and was expanded mostly towards the north in correspondence to the new wave of refugees in 2010.

The density within the residential areas has increased considerably over time and the layout of the individual buildings has also changed. The centrally located market has expanded to the north, similar to the expansion of the dwellings.

CLIMATE

Its location in the desert makes for a consistently hot and dry climate in Dadaab. The relatively consistent temperatures make it easier to construct weather resistant shelters. Rainfall is scarce and unreliable, with peaks around April and November. The region is a very flat plain without any larger hills or mountains.

Dadaab Building Typology

May 2000

Feb 2007

Apr 2010

Jan 2023

0   0,5   1   2 km

LOCATION

As an integral part of the comprehensive refugee response in Dadaab, eastern Kenya is another important refuge for people fleeing conflict and insecurity. Situated in the dry and arid landscape near the Somali border, Dadaab provides protection as well as a refugee settlement in a sparsely populated region. Between the camps is Dadaab, the only major town with some public facilities. The connection between the camps and Dadaab itself is via the A3 road. Of the other two camps, that have been closed and dismantled, only the infrastructure was left intact - a testament to the challenges of the past and the adaptation to the needs of the refugees.

INFRASTRUCTURE

The clear structure of the camp, characterised by a structured street grid and clear main axes, not only facilitates organisation within the camp, but also provides easy access to essential facilities. In the centre of the camp, large communal areas are planned to encourage social interaction with appropriate access. In addition, the camp will include schools, health centres and communal areas to provide comprehensive services to the residents. The temporary shelters will be adapted to the climatic conditions in order to provide the refugees with the safest and most comfortable environment possible.

ORGANISATION

As in Zaatari, Dadaab is run by the UNHCR, which coordinates all national and international agencies involved in providing ba-

sic services such as education, health care, food and hygiene. A democratic system of representation has been set up to communicate the needs and concerns of the population and to resolve conflicts. A certain number of households in the camp form a block. Each block elects two leaders: one female and one male. They represent the interests of their block and elect two section leaders (m/f). A section consists of at least one block and up to 30 blocks. The section leaders then elect two camp leaders (m/f) who represent whole camps such as Ifo. At the final level, these leaders elect a chairman for all the camps. However, this system is not a way of deciding what happens in the camp, it is just a way of communicating and hearing from people inside the camp.

In stark contrast to the situation in Zaatari, the Kenyan government is very hostile towards the refugees. This has resulted in very limited support and strict rules about, for example, the design of houses. Homes that "look too much like real houses" have had to be demolished. Refugees are not allowed to work legally and cannot work for the UN or other agencies running the camp because they are not Kenyan.

URBANISATION

Unlike many refugee camps, the Dadaab camps were designed by planners who introduced a grid structure and a central market to all the camps (red buildings on the map on page 11). Refugee housing also started as tents and evolved over time into more stable houses. Compared to a camp like Zaatari, there are many prohibitions and rules for buildings, containers like in

Surroundings   0   4   8   16 km

Infrastructure   0   0,5   1   2 km
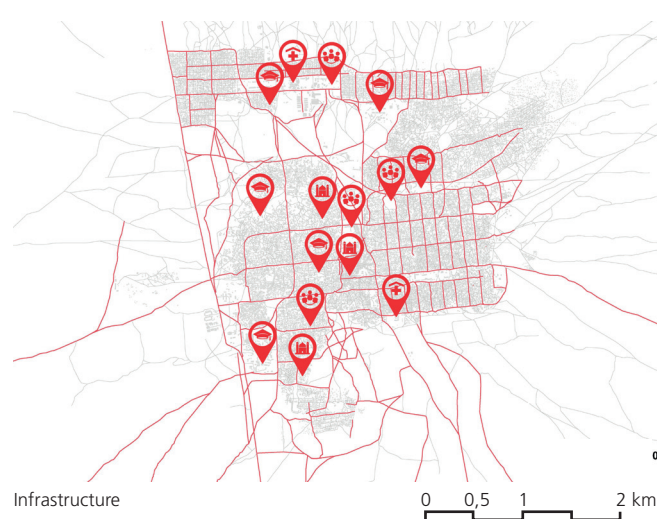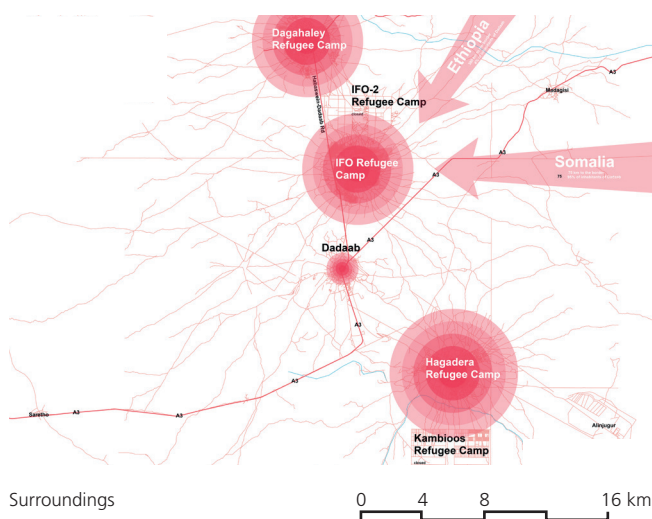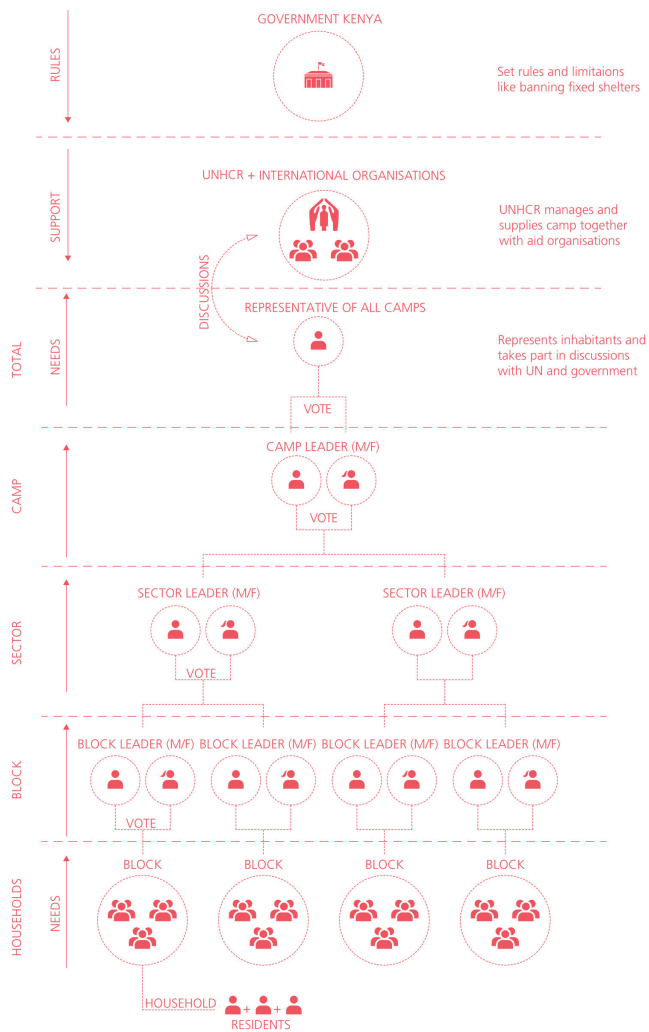
Organisation
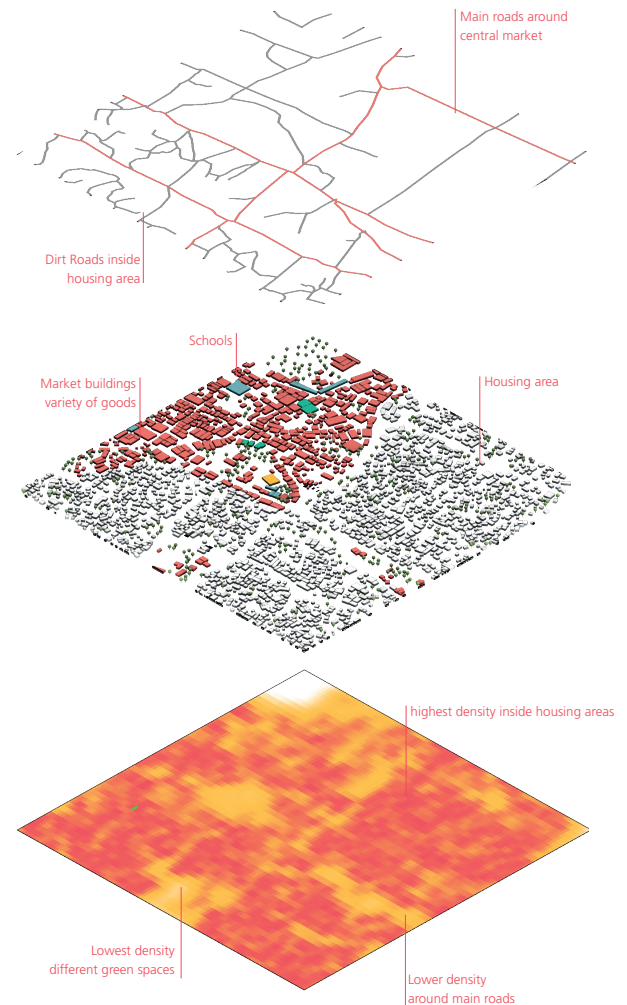
Roads, Building Structure and Density

other camps are not allowed. The Kenyan government does not want permanent houses, or permanent camps in general, and there have been many attempts to close them down. Therefore they try to limit the transformation of a camp into a permanent town. The rules apply not only to housing, but also to the construction of electricity grids and fresh water systems. Possible solutions such as solar power plants are therefore privately and unofficially run by refugees.

Water and food are delivered by trucks along the roads that define the blocks. Urban buildings such as schools and hospitals have been set up by international aid agencies and are scattered throughout the camp, but mostly concentrated around the central market, which is not only the financial hub of each camp but also the social centre for most residents. Access to

education is generally very elementary and opportunities for higher education are very limited, as are jobs, despite a growing economy within the camp. Shops in the markets sell a wide range of products, from ice cream to smart phones.

The camps in Dadaab all share the problem of limited development. Without the government's prohibitions, much could be done to improve the lives of large sections of the population, for example by installing permanent infrastructure and therefore progressing urbanisation.

CASE STUDY 3:
KUTUPALONG, BANGLADESH

ORIGIN & EXPANSION

1991

Kutupalong was constructed to accomodate refugees from Myanmar

971.904

Estimated population of the Kutupalong-Balukhali Expansion Site (2023)
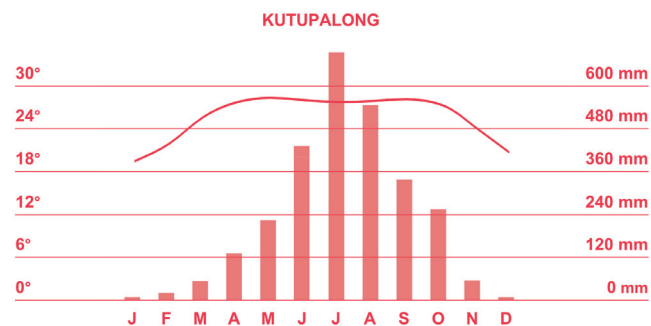
19,18 km²

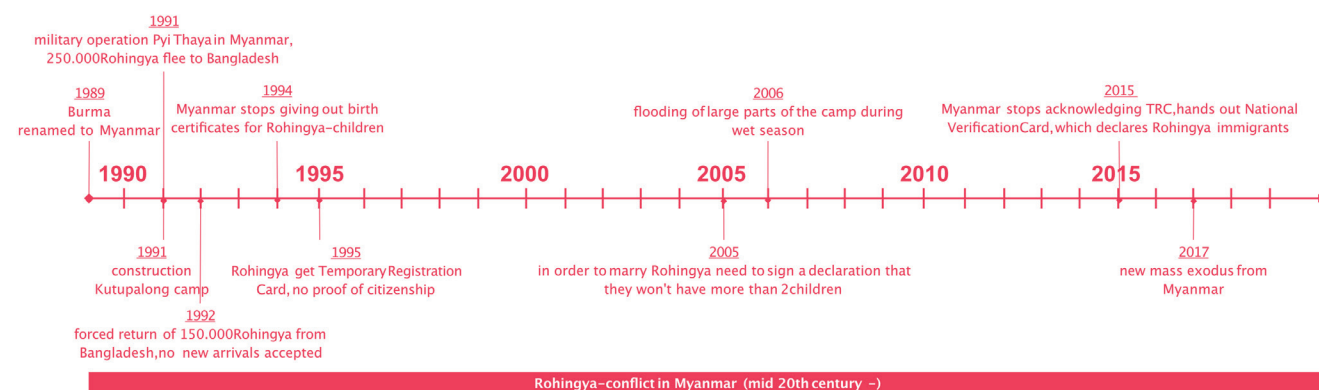Size of the camp

30.625/km²

Population density

The persecution of the Rohingya - an ethnic group in Myanmar - began around the mid 20th century and is an ongoing conflict. In 1991 a large military operation was conducted and many Rohingya were displaced. Around 250.000 fled across the eastern border to Bangladesh. Multiple refugee camps were constructed the same year, one of them being the Kutupalong camp, which at the time was planned to accomodate roughly 35.000 poeple.

As part of an agreement between Bangladesh and Myanmar, around 150.000 Rohingya were forced to return to Myanmar in 1992 and most camps were closed to new arrivals, including Kutupalong. As the persecution of the Rohingya continued in Myanmar, from 1994 Rohingya children did no longer receive birth certificates, from 1995 so called Temporary Registration Cards were issued which did not serve as proof of citizenship, meaning Rohingya were no longer recognized as regular citizens. Groups of refugees kept arriving in Bangladesh and eventually extensions were made to the existing camps. In 2005 Rohingya were now asked to declare that they would not have more than two children, in order to be eligible for marriage. In 2015, the Temporary Registration Cards were replaced with National Verification Cards, declaring Rohingya immigrants.

The continuous conflict sparked a large wave of Rohingya refugees in 2017, causing Kutuplaong and other camps close to the border to multiply in size. So much, in fact, that the Kutupalong camp and the Balukhali refugee camp south of Kutupalong essentially grew together and became one big complex of shelters, which is therefore often referenced as the Kutu-

KUTUPALONG

Precipitation and Temperature, Averages from 1991 to 2022


Timeline of Cause of Conflict and Development of the Camp

palong-Balukhali Expansion Site. At the moment, the number of refugees in the Kutupalong-Balukhali expansion site is well above 900.000, ranking it amongst the biggest cities in Bangladesh.

CLIMATE

The climate in Kutupalong is quite warm year-round with temperatures ranging from 20 to 30°. Precipitation numbers are generally high, especially from June to August the monsoon causes large quantities of rainfall. This often lead to problems for camps like Kutupalong, since most of the shelters as well as the ground they were built on aren't very durable as the expansion areas were formerly forests and the deforestation caused the ground to become looser. In 2006 large parts of the camp were flooded and thousands of refugees lost their shelter.

2002
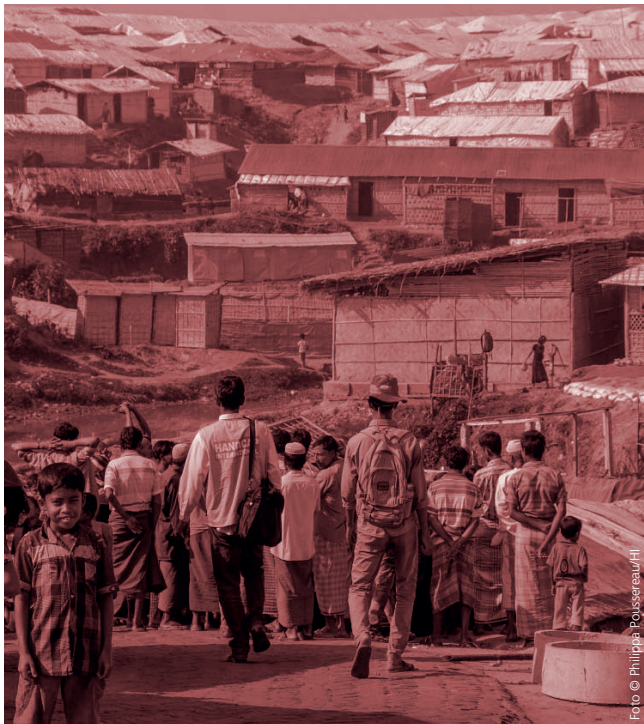
Nov 2014

Dec 2017

Kutupalong Building Typology

Foto © Philippe Poussereau/HI

2023
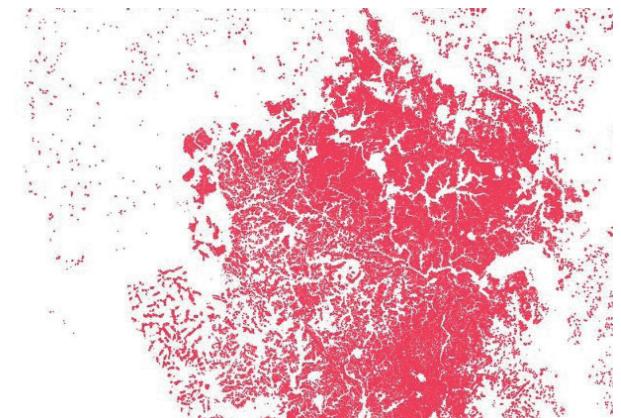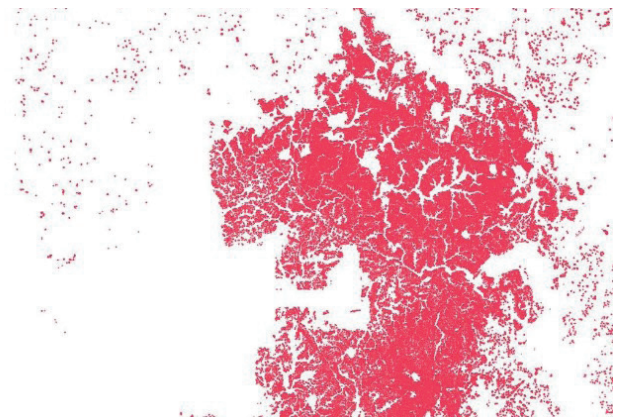
0   0,5   1   2 km

LOCATION

The Kutupalong refugee camp in Bangladesh has played a crucial role in sheltering people fleeing conflict in Myanmar. Located west of the Myanmar border, the landscape is characterised by swamps and rivers. Other refugee camps that connect to Kutapalong to the south, such as Balukhali Camp, are noticeable as the camps spread like a carpet across the terrain. There are also some very small villages along the coast that have developed independently of the camps.
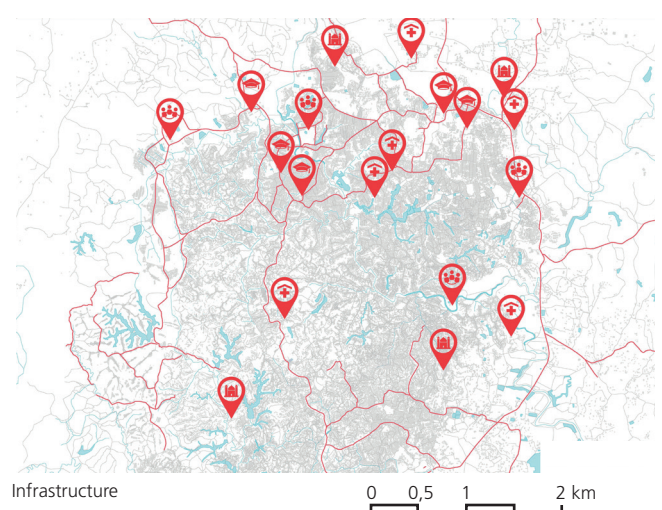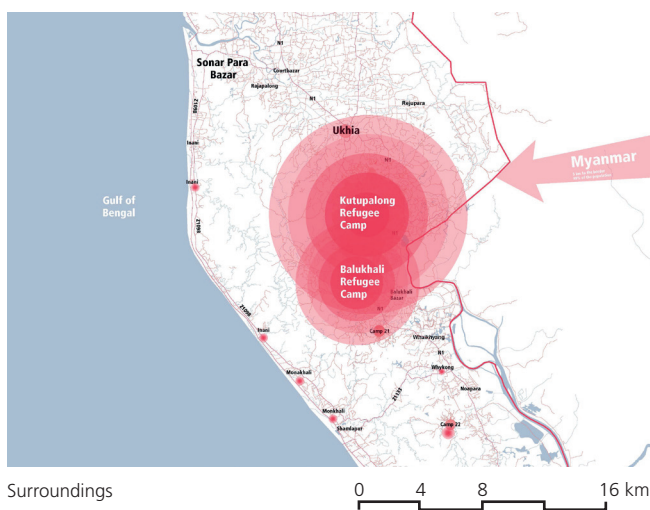
INFRASTRUCTURE

The structure of the camps, especially Kutupalong, is characterised by an organically grown appearance. In contrast to clearly structured camps, there are few recognisable axes, and paths are often interrupted by bodies of water and rivers. This reflects the challenges posed by the rapid and unpredictable increase in refugee numbers. Public buildings are located in less densely populated areas and along the main N1 road, with a layout adapted to the geographical conditions. The unstructured nature of the camps reflects the challenges that can arise when dealing with refugee flows. The topographical features of the region, characterised by water and rivers, shape the established structure of the camps and present humanitarian organisations with the challenge of finding flexible and adaptable solutions to accommodate and care for the refugees.
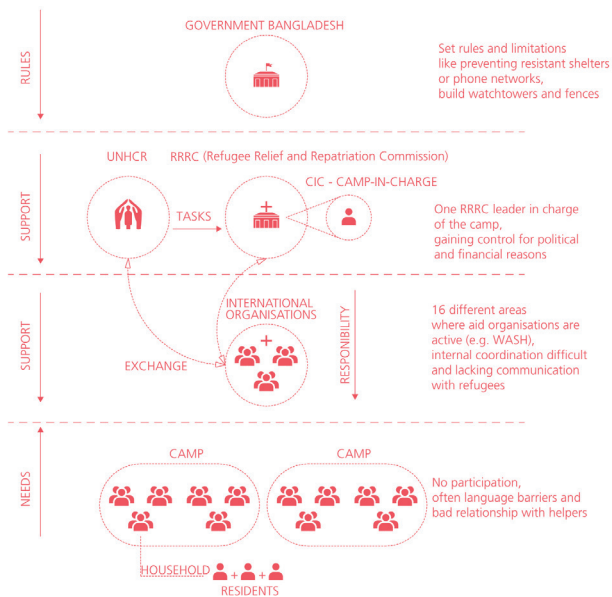
ORGANISATION

In a similar way to the situation in Dadaab, Bangladesh also has a hostile political climate towards the inhabitants of the Kutupalong refugee camps. Rules and bans, as well as the erection of watchtowers and fences around the camp, make daily life difficult for the refugees and prevent natural urban development.

Another similarity to the case studies already discussed is the administration by the UNHCR. They coordinated the cooperation of the various international aid organisations by drawing up a service map of the camp, which defined the areas of responsibility of the individual organisations. Since 2019, all administrative tasks previously carried out by the UNHCR have been gradually handed over to the RRRC (Refugee Relief and Repatriation Commission), which is part of the Bangladeshi government. As a result, the state in which the camp is located has increasing influence on the lives of the Rohingya refugees. The reason for these changes is the political atmosphere in Bangladesh and the financial considerations involved in running the camp. For each of the more than 30 camp districts, there is one person, the so-called CIC (Camp-In-Charge), who is responsible for the specific camp and administers it.

The refugees themselves have no opportunities of participation or political involvement in the camp. Government decisions, for example no longer paying money to refugee volunteers, have also worsened the relationship between aid organisations and
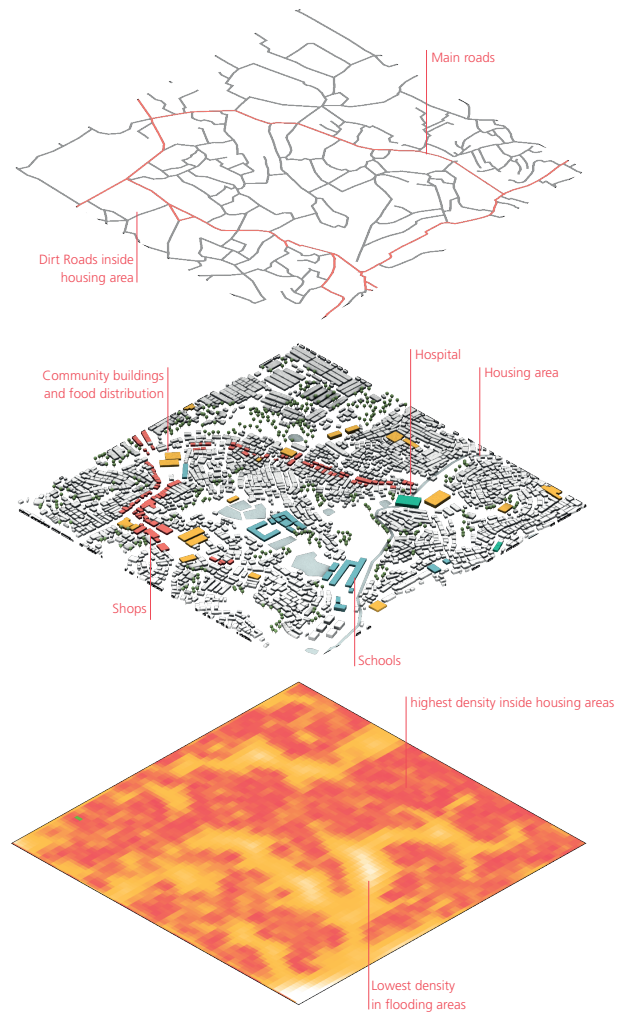

Surroundings

0   4   8   16 km

Infrastructure

0   0,5   1   2 km

Roads, Building Structure and Density

refugees. The Rohingya language also represents a major communication barrier, as it is only understood or spoken by a small number of aid workers.

URBANISATION

As previously explained, Kutupalong has existed as a refugee camp over several decades and has only developed into its current structure and size since 2017. A very high number of new arrivals in a very limited period of time made coordinated urban or camp planning, such as in Dadaab, impossible. In order to create enough space for the refugees' dwellings, large areas of woodland were deforested, which on the one hand were the habitat of numerous animal species and on the other were located on permanently moist and swampy soils. These geological characteristics of the region and high rainfall in summer due to the monsoon caused regular flooding, which damaged buildings and severely worsened the hygienic conditions for the inhabitants.

Most of the dwellings are simple huts made of bamboo and tarpaulins, due to government regulations that prohibit permanent dwellings, as the refugees are only supposed to stay in Bangladesh temporarily. Due to the high building density and the materials used, fires can spread quickly and destroy thou-

sands of shelters, as happened in March 2023 or January 2024. However, work has also been done over the years to improve living conditions. New wells, liquid gas for cooking, public toilets and new sewage systems are intended to make the camps cleaner and more hygienic. Shops and a high volume of motorised traffic have also sprung up along major roads through the camp, signs of the incipient urbanisation of the camp.

In "Extension Camp 4", prototypes of new dwellings are being developed which, thanks to bamboo and a steel frame, should also enable multi-storey constructions to minimise the problem of "urban sprawl" and provide people with more stable and better ventilated dwellings. Despite this progress, there is still a great need for action. There is no universal electricity supply, running water and limited privacy or security. Given that the Rohingya are unable to return to their homes, these problems are of great importance and require solutions.

COMPARATIVE ANALYSIS

REGIONAL ANALYSIS OF REFUGEE CAMPS

The bar charts offer a detailed view of the population characteristics in the Zataari, Dadaab, and Kutupalong refugee camps. One crucial factor is the extremely high population density, which is evident when comparing that of the camps to that of the surrounding urban areas. Even larger district capitals in the immediate vicinity have a similar number of people, highlighting the unique dynamics of the refugee camps. Only German cities with significantly higher populations have a similar number of inhabitants as the refugee camps, making the population more comparable.

The refugee camps require much less space compared to the surrounding areas, which is a striking feature. The overcrowding in Zataari, Dadaab, and Kutupalong is in stark contrast to the larger district capitals with their high land consumption. The spatial limitations of the refugee camps are illustrated by these differences, as they need to accommodate a large number of people in a limited space. In contrast, German cities consume considerably more land, highlighting the difference in spatial expansion between the two.

Additionally, the population density in the refugee camps is much higher than in the surrounding areas. The Zataari, Dadaab, and Kutupalong refugee camps are characterized by their high population density, which is much higher than that of the surrounding cities or German cities. The challenges of infrastructure, resource distribution, and quality of life for the refugees are considerably exacerbated by this immense occupancy in a limited space. The challenges faced in these camps go beyond typical urban conditions. Specific measures and international support are needed to address these challenges and find workable solutions.

STRUCTURE AND INTEGRATION IN THE CITIES

Diagram 4 shows the gender and age distribution in the Zataari, Dadaab and Kutupalong refugee camps. All three camps have a significant child population. However, the male and female residents are evenly distributed. This data highlights the challenge of the camps to meet the needs of a young population, in addition to managing the large number of residents. The high number of children highlights the necessity for education and care facilities, as well as the requirement to provide special support to this vulnerable group.

Additionally, the countries of origin of the refugees reflect the diversity and global challenges of the refugee crisis. In Jordan, Syria is the primary country of origin, and the impact of the Syrian conflict continues to force a significant number of people to seek protection in the country. The statistics for Kenya show that Somalia is the main country of origin for refugees. This indicates prolonged conflict and instability in the region. In Bangladesh, Rohingya refugees from Myanmar are fleeing to neighbouring countries due to ethnic conflicts and persecution.

The percentage of refugee camp residents compared to the total population is shown, which reveals important implications for the respective country and its structures. This is particularly evident in Zaatari, Jordan, where the proportion of camp residents is the highest at over 1%. This not only means that Zaatari accounts for a significant percentage of the total population, but also that the influence of this camp on the country is palpable. Zaatari makes up a bigger part of the countrys population than the nearby state capital.

CLIMATIC CIRCUMSTANCES

The quality of life and infrastructure planning in refugee camps are heavily influenced by the climatic conditions. Zaatari, Dadaab, and Kutupalong have specific climate conditions, which can be observed through three climate diagrams.

Zaatari, located in Jordan, experiences high temperatures and low rainfall, which pose significant challenges for the inhabitants, particularly in terms of heat and water supply. Dadaab in Kenya has similar temperature patterns to Zaatari. However, it has fewer fluctuations and receives slightly more rainfall. These stable weather conditions can positively impact the habitability of the area by making it easier to adapt to the climate. In Kutupalong, Bangladesh, the high rainfall, accompanied by a swamp-like environment, is noticeable. The humid climate and rainfall in this area affect both residents' daily lives and building design and infrastructure. It is important to consider these factors when planning and constructing in this region.
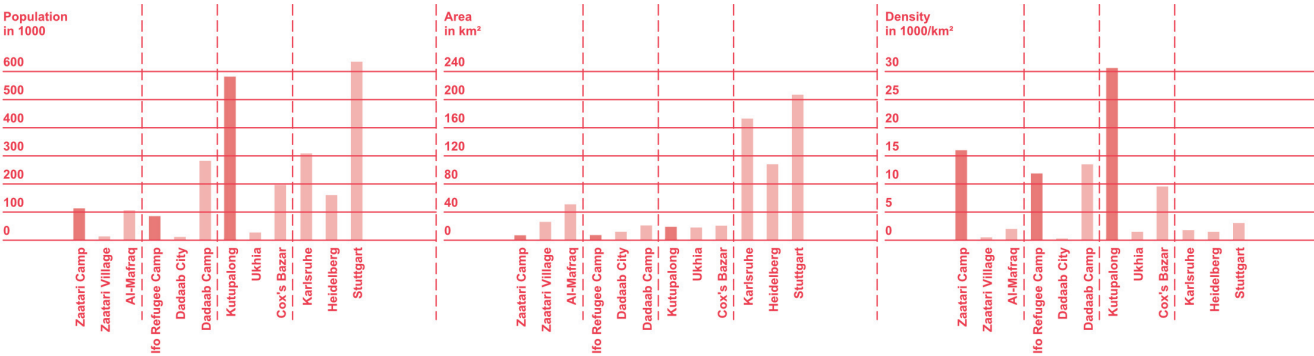
1. Comparison of populations
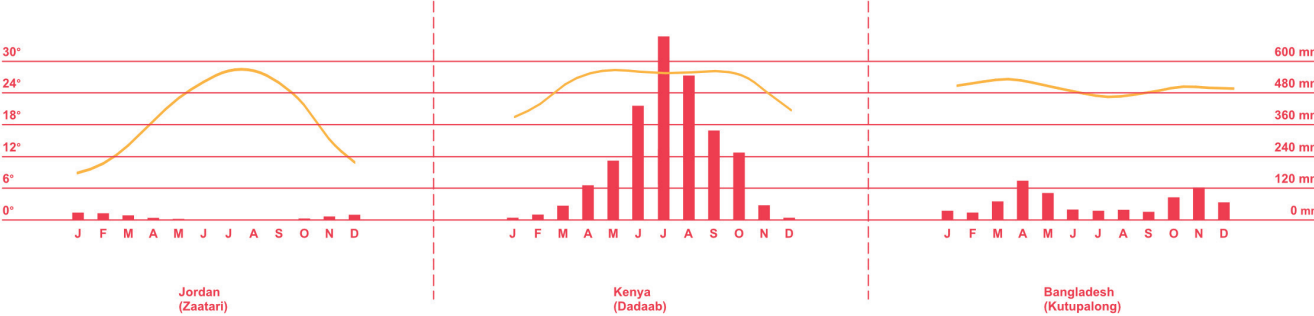

2. Comparison of area

3. Comparison of density

4. Comparison of gender and age distribution

5. Comparison countries of origin

6. Comparison share of the total population

7. Temperature and precipitation, Averages between 1991and 2022

CONCLUSION

A comparison of the refugee camps analysed here shows that in each of the three locations, people live in precarious living conditions and are forced to live there not by choice, but out of necessity and without the possibility of returning to their home country. As a result, camps that were once intended to be teporary often become permanent settlements, to the detriment of the inhabitants. The camps present general problems and challenges, but local factors can also cause individual complications.

Significant local factors are the geological and climatic conditions on site. In Zaatari, the extremely arid climate and dry soil mean that agriculture is not possible. In contrast, the camp in Kutupalong is regularly flooded due to high rainfall and swampy soils. As a result, buildings are damaged and the hygienic situation severely deteriorates. As the global climate becomes more and more extreme, the problems caused by this also increase.

The decisions of local governments and their cooperation with national and international aid organisations are also major local factors. The examples of Dadaab and Kutupalong in particular show the consequences that actions at the political level can have. An active blockade of infrastructure projects such as solar power plants or the ban on permanent housing or the use of suitable building materials make life extremely difficult for the inhabitants and can even be life-threatening in the case of the summer monsoon or frequent fires in Kutupalong. Cooperation between organisations such as the UNHCR and the local government, as in the case of Zaatari, can lead to an improvement in hygiene, health, education and general satisfaction. The mere lifting of existing bans could lead to positive changes. However, a work permit for refugees was not granted in any of the three case studies. However, such a permit in particular could drastically reduce the dependency of camp residents on aid organisations and have a positive effect on the economy of the host countries, as well as generating more taxes. An official permit could also prevent illegal activities and better protect workers from exploitation.

These political issues are decisions that are made by people and, unlike climatic factors, can be influenced locally. These decisions have a significant impact on life in the camp.

Zaatari

0   0,5   1   2 km

Dadaab

0   0,5   1   2 km

Kutupalong

0   0,5   1   2 km

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Imprint

EPHEMERAL CITY - Planning Principles of Temporary Urban Structures

RESEARCH SEMINAR WINTER TERM 2023/2024

In contrast to the prevailing permanent urban structures, the phenomenon of temporary settlements is often overlooked in urban planning and architecture. Therefore this study aims to highlight the significance of these structures, including music festivals, religious gatherings, markets, emergency shelters, refugee camps, and major sporting events. By analysing these phenomena, we create a better understanding of ephemeral structures in our built environment.

This research seminar is based on the contribution ´Ephemeral Urbanism: Cities in Constant Flux´ at the 15th Architecture Biennale in Venice in 2016 and the publication ´Ephemeral Urbanism: Does Permanence Matter?´ in 2020 by Rahul Mehrotra and Felipe Vera. Building on these conceptual and theoretical foundations the aim of this research project is to open up new thematic areas and to expand the already published material with further case studies and new findings.

This publication presents the work of six student teams who have chosen individual overarching themes within the framework of the ephemeral city and analysed it in depth through three case studies each. The results can be roughly divided into two groups: The first three studies concentrate on temporary urban phenomena associated with sport, leisure, and culture. They operate in the context of positively associated events and voluntary participation. On the other hand, the three contributions in the second part focus on aspects of the ephemeral city that arise from emergencies, such as informal squatting in existing buildings and various examples of refugee camps.

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