

a playce like home

a pattern language for a home on the move

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2024-2025
Transitional Territories

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Pattern Booklet

January 9, 2025

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Introduction

This booklet is a catalogue of design patterns for the development of refugee camps. Christopher Alexander introduced the pattern language [1977] as a systemic approach to designing spaces. A pattern language is a structured set of design solutions addressing challenges of the living environment.

The pattern language translates research findings, both from literature as well as empirical research, into concrete design guidelines. The three main objectives of this pattern language are safety, agency and belonging, as these are crucial emotions in our experience of home [Boccagni & Duyvendak, 2021]. The patterns exist on their own, but combining them will make them more powerful in reaching its goals.

This pattern booklet is created as a tool for designers, to create a playce like home in a temporary context. The patterns can have different implementations and be applied in different combinations. This way unique designs will be created to respond to specific needs of different environments, rather than imposing a one-size-fits-all solution. The pattern language itself is not fixed as well, it welcomes additions and alterations!

The presented pattern language was designed for the context of refugee camp Mavrovouni on Lesbos, Greece. This makes some patterns very specific to this location, whereas others are more universal applicable.

Accompanying this pattern booklet is a game with pattern cards, designed to engage stakeholders in the design process. The pattern language provides a common vocabulary for designers and non-experts, such as residents. Through playing with the patterns to shape the living environment, the title 'a playce like home' takes on a deeper meaning.

Page Explanation

In this booklet the patterns are explained in detail, structured as depicted on the right page. The patterns are divided according three main target groups; children, [adult] residents and organisation, with the first letter indicating the group.

At the top of the page a short and catchy title is given of the pattern. Directly under it, the hypothesis is placed. This statement provides a more concrete explanation of the pattern, including a cause-effect relation. The top-right image illustrates the idea, while pattern colours represent categories. Yellow is related to the program in the camp, blue is a pattern that influences the governance and pink indicates a pattern about the spatial design of the camp.

The text on the page consists of three parts, field research, literature backing the hypothesis, and design implications. Sometimes an inspiration part is added as well.

On the right side, related patterns are listed, these can complement the pattern in the design. Conflicting relations are not stated, but can exist. The patterns are assessed on their timespan, if their implementation would be on the short or long term. Additionally, their tangibility is stated; are the design implications concrete or more abstract? Lastly the patterns are placed in the triangle of the three main objectives, to make clear which one they serve; agency, safety and belonging.

On the bottom of the page, a reference image shows how the pattern could occur. The majority of these images are made during the field trip, for example in the village Panagiouda. This emphasizes the contrast of the living situation within proximity, between a refugee and a local or even the researcher. Other patterns use other projects or situations, that can be used as inspiration for the design.

X.1 Title of the pattern

Hypothesis of the pattern

Child Mavrovouni
Resident Mavrovouni
Organisation Camp

Program
Governance
Spatial Design

Drawing

Field research

Conclusions from the empirical research during the field trip, these are based on ethnographic observations, interview data and the participatory workshop.

Theoretical back-up

Literature that supports the hypothesis.

Practical implication

One or more concrete implications of the pattern for the camp design.

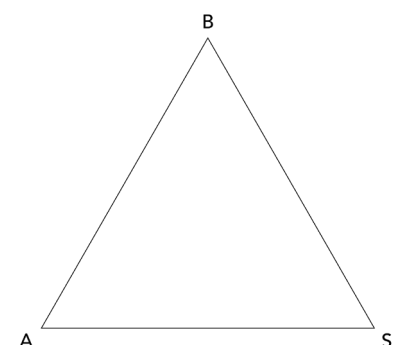
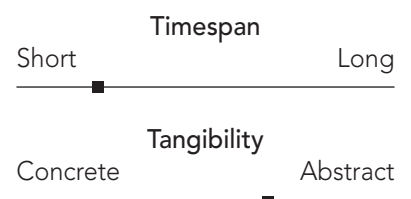
[Inspiration]

Added occasionally and taken from the design of a theme park.

Relates to:

X.1

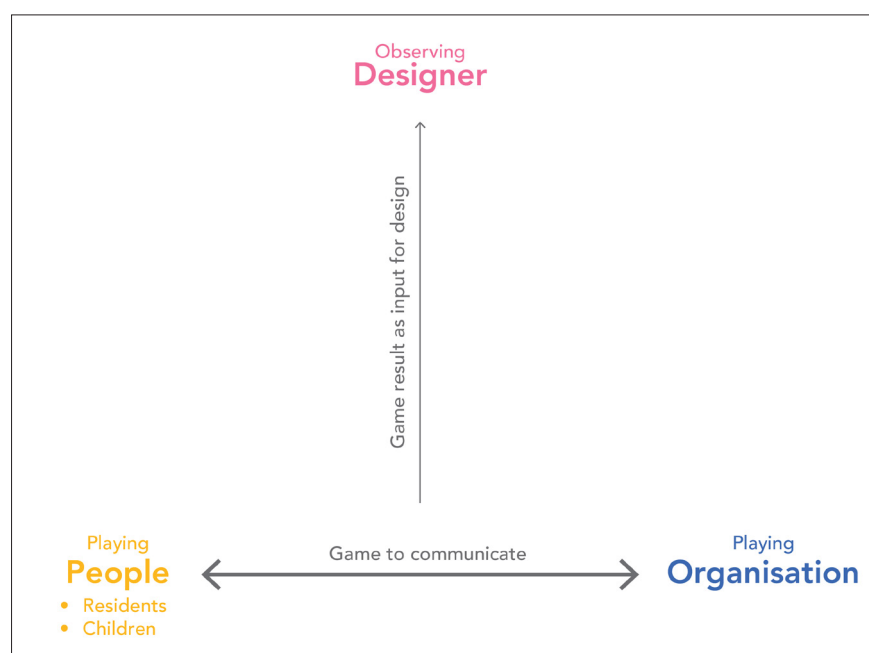
Reference image



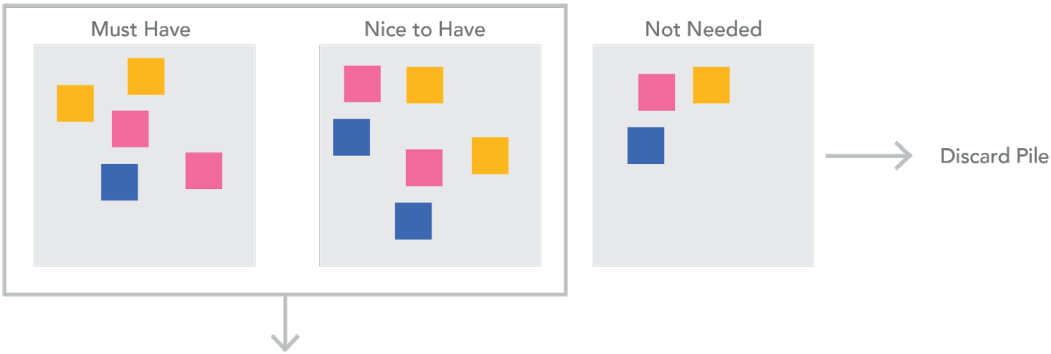
The Game

To bring the pattern language as a communication tool for different stakeholders to its full potential, a game is created. In this game the organisation, residents and children play together to give input for the designer, see image below. Through playing with the patterns stakeholders can shape their living environment to evoke a sense of home.

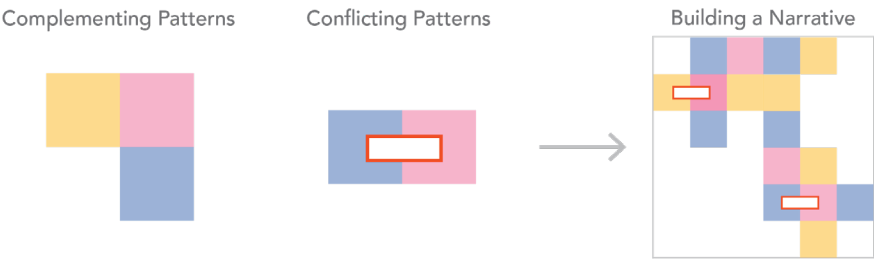
The concept version of the game consists of 3 rounds, they are depicted on the right side. The first round is played per group separately, to decide which patterns are useful. The next round the stakeholders play together to build a narrative of complementing and conflicting patterns, the latter will be indicated by red blocks. The last round consists of a discussion of the output with the designer, each stakeholder can assess the best and worst patterns by respectively a star and a circle. On the next page the appearance of the pattern cards is shown.



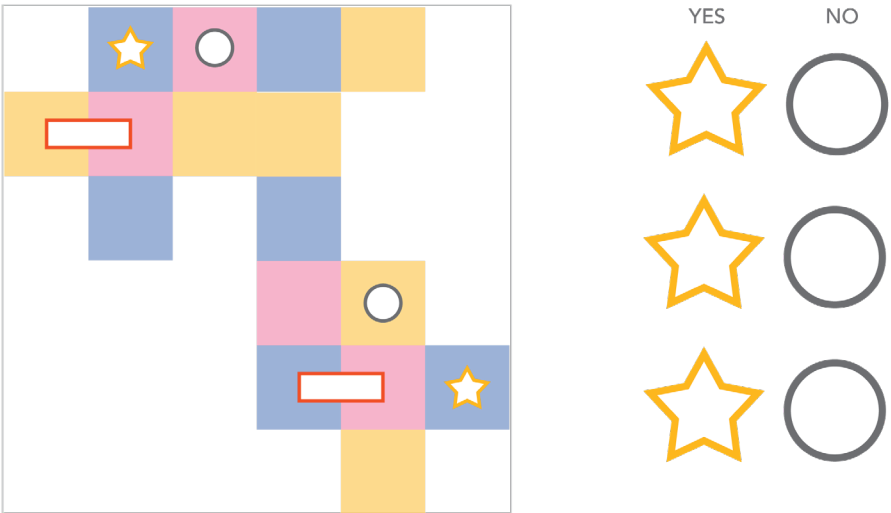
Round 1
Exploring within group:
Which patterns are important for us?



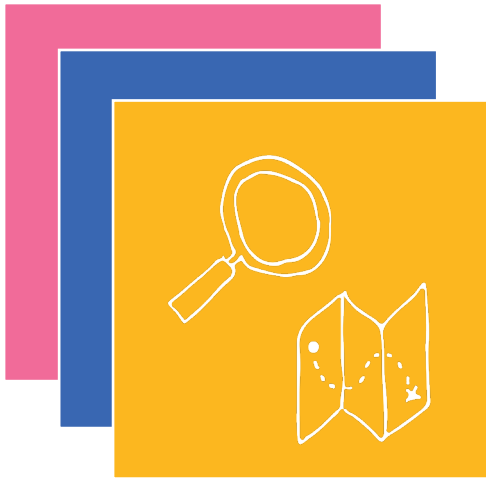
Round 2
Playing together:
Which combinations of patterns are complementing or conflicting?



Round 3
Discuss output with designer:
Which patterns are crucial or bad ideas?



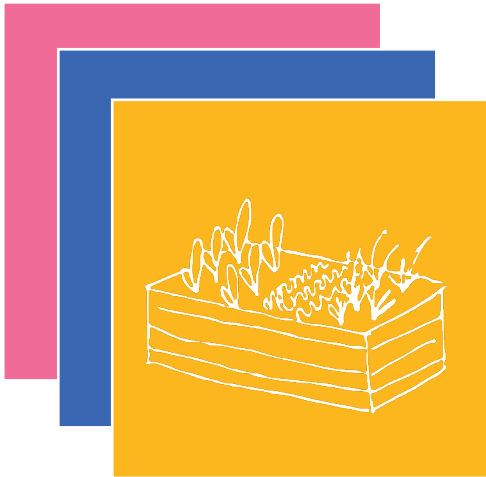
Child cards



C.1 Scavenger Hunt

Children taking part in scavenger hunts benefits environmental awareness and attachment to surroundings.

Resident cards



R.1 Eat your Veggies!

Growing your own vegetables is sustainable and stimulates a healthy diet.

Organisation cards



O.1 Sport to Connect

Sporting together with camp residents stimulates social connection and cohesion.

Type

Program

C.1 Scavenger Hunt
C.2 Customized Classes
C.3 All Types of Playce
C.4 Ap-Art
C.5 Welcome to the Club!
C.6 Leave me Alone
C.7 Eat your Veggies!
C.8 Sea the Fun
R.1 Eat your Veggies!
R.2 Trash to Treasure
R.3 Sea the Opportunities
R.4 Communal Cooking
R.5 I'm in Sales
R.6 Sport to Connect
R.7 Ap-Art
R.8 Secluded Sanctuary
R.9 From Tools to Tables
O.1 Sport to Connect
O.2 Daily Diversity

Governance

C.9 Little Voice, Big Impact
C.10 My Own Pattern
R.10 Raise your Voice!
R.11 Jobbortunity to Parenting
R.12 Online Opportunity
R.13 My Own Pattern
O.3 Open your Ears
O.4 Belonging through the Scales
O.5 Line up the Rhythms
O.6 Trusted Transparency
O.7 Adapt to the Season
O.8 My Own Pattern

Spatial Design

C.11 Guide the Way
C.12 Climbing the Trees
C.13 Small to Big
C.14 I Like to Move It
C.15 People to Watch
C.16 Live on the Rainbow
C.17 Safe to Play, Made to Move
C.18 Play with Me!
C.19 Tactile Textures
C.20 Play in the Middle
R.14 Steps to your Home
R.15 Live on the Rainbow
R.16 Use for All
R.17 I Like to Move It
R.18 Areas of Appropriation
R.19 Eye See You!
R.20 Light up the Night
R.21 Let's Meet at the Fence
R.22 Rise to the Heights
R.23 Seasonal Weather Wishes
R.24 Steps to Sanitary
R.25 Lovely Landscape
R.26 Meet in the Middle
R.27 Move my Home
O.9 Join the Gang!
O.10 Size the Site
O.11 Meet in the Middle
O.12 Chosen Configurations

Target Group

Child Mavrovouni

- C.1 Scavenger Hunt
- C.2 Customized Classes
- C.3 All Types of Playce
- C.4 Ap-Art
- C.5 Welcome to the Club!
- C.6 Leave me Alone
- C.7 Eat your Veggies!
- C.8 Sea the Fun
- C.9 Little Voice, Big Impact
- C.10 My Own Pattern
- C.11 Guide the Way
- C.12 Climbing the Trees
- C.13 Small to Big
- C.14 I Like to Move It
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- C.16 Live on the Rainbow
- C.17 Safe to Play, Made to Move
- C.18 Play with Me!
- C.19 Tactile Textures
- C.20 Play in the Middle

Resident Mavrovouni

- R.1 Eat your Veggies!
- R.2 Trash to Treasure
- R.3 Sea the Opportunities
- R.4 Communal Cooking
- R.5 I'm in Sales
- R.6 Sport to Connect
- R.7 Ap-Art
- R.8 Secluded Sanctuary
- R.9 From Tools to Tables
- R.10 Raise your Voice!
- R.11 Jobbortunity to Parenting
- R.12 Online Opportunity
- R.13 My Own Pattern
- R.14 Steps to your Home
- R.15 Live on the Rainbow
- R.16 Use for All
- R.17 I Like to Move It
- R.18 Areas of Appropriation
- R.19 Eye See You!
- R.20 Light up the Night
- R.21 Let's Meet at the Fence
- R.22 Rise to the Heights
- R.23 Seasonal Weather Wishes
- R.24 Steps to Sanitary
- R.25 Lovely Landscape
- R.26 Meet in the Middle
- R.27 Move my Home

Organisation Camp

- O.1 Sport to Connect
- O.2 Daily Diversity
- O.3 Open your Ears
- O.4 Belonging through the Scales
- O.5 Line up the Rhythms
- O.6 Trusted Transparency
- O.7 Adapt to the Season
- O.8 My Own Pattern
- O.9 Join the Gang!
- O.10 Size the Site
- O.11 Meet in the Middle
- O.12 Chosen Configurations

Objectives

The patterns are placed in a triangle depicting to which objective[s] they answer to. For example, a pattern can target agency exclusively, or it can primarily target agency while also contributing to a sense of belonging to a lesser extent. Alternatively, it can address all three objectives simultaneously.

Belonging



Agency

Safety

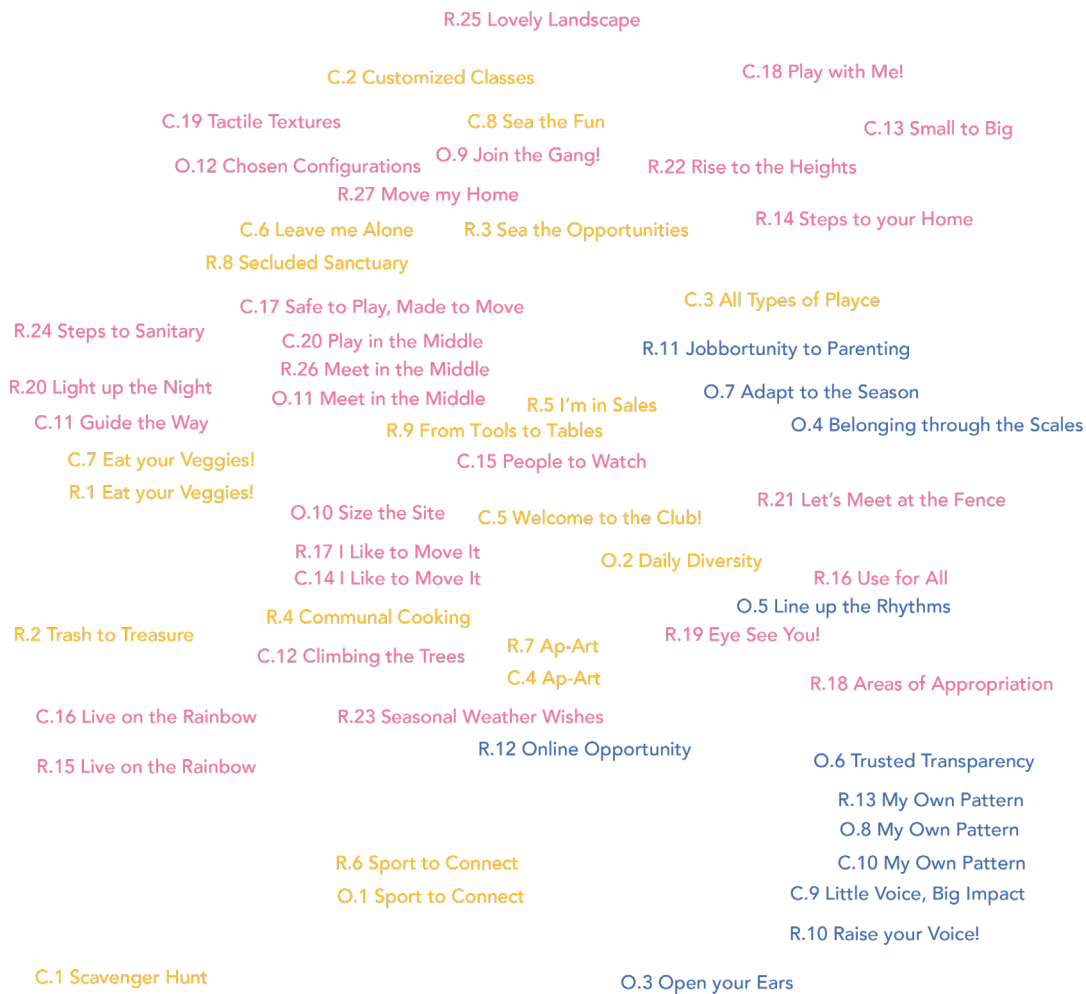
Time and Tangibility

The patterns are placed in a field with two axes; the vertical axis depicts the timespan, the horizontal axis presents the tangibility.

The timespan of a pattern is the point in time of the first implementation of the pattern. Thus, the pattern still occurs after that point, for example 'O.3 Open your Ears' should be implemented on the short term, but has to be maintained throughout the years. The term of implementation is based on a combination of the ease of implementation, for example 'C.1 Scavenger Hunt' is easy to organise, and secondly on the importance of quick implementation. This goes for 'R.10 Raise your Voice!'. It is crucial to incorporate the voice of residents in decisions about the living environment on the short term.

The tangibility axis depicts if the pattern is a concrete idea or an abstract rule. For example 'R.16 Use for All' emphasizes the need for multifunctional spaces, but the practical implication can differ. While 'R.24 Steps to Sanitary' is very concrete, the practical implication with a distance to the sanitary facilities makes it a measurable pattern.

Long term



Concrete

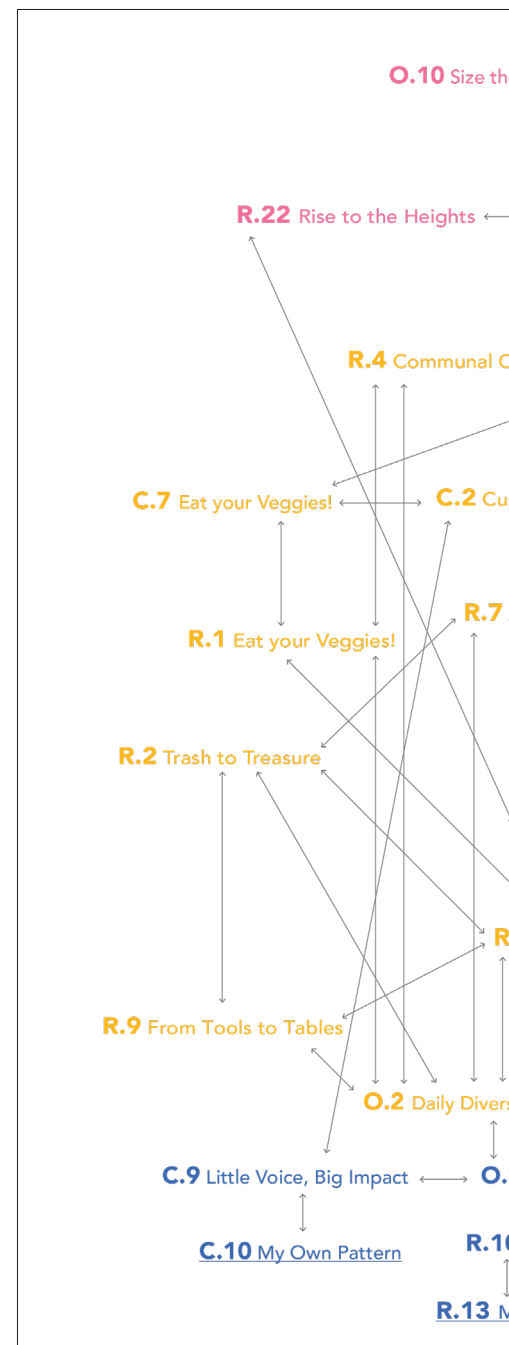
Abstract

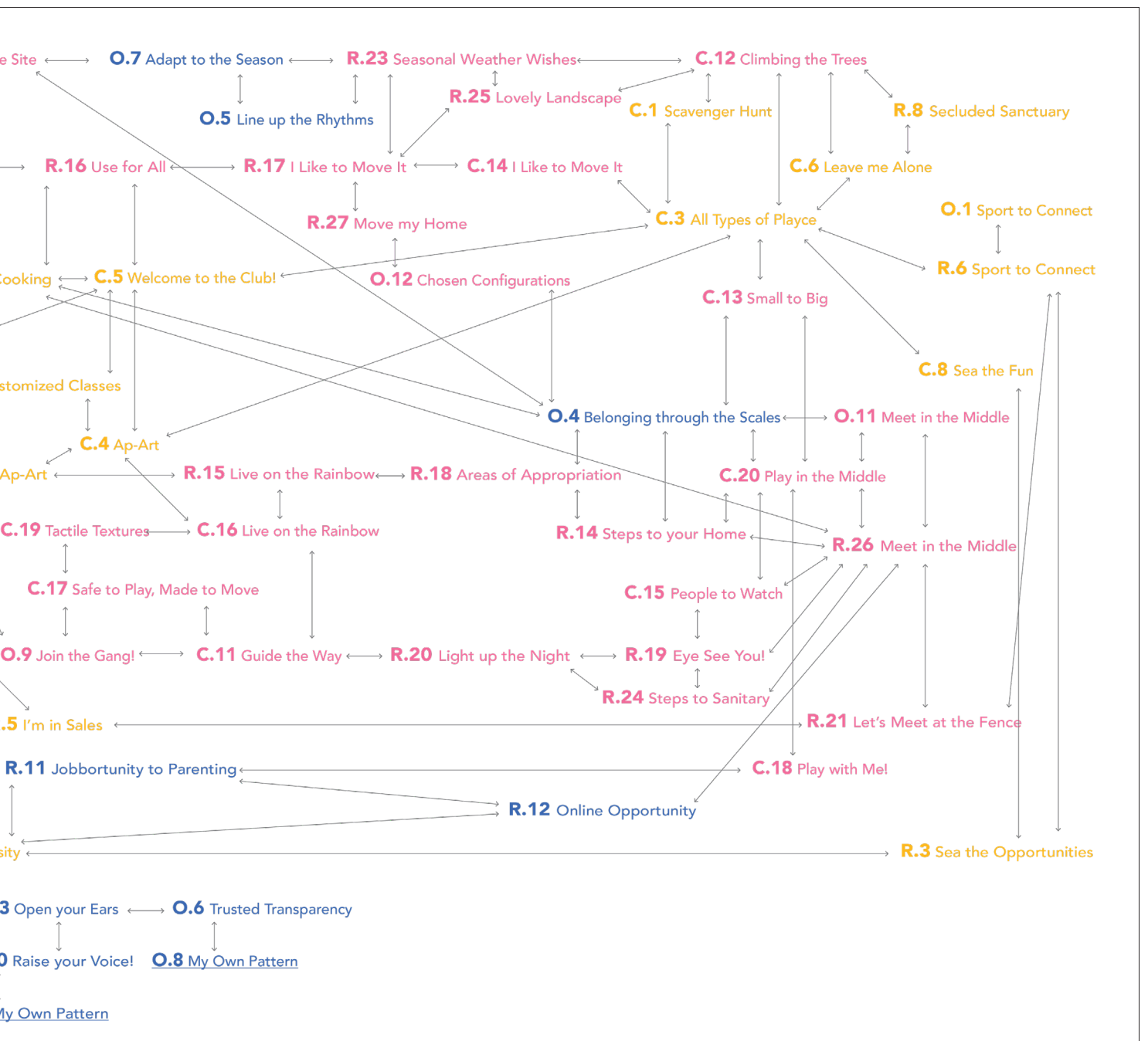
Relations

In the image on the right the possible connections between patterns are shown. The arrows depict symbiotic relations, the patterns reinforce each other. Through combining the patterns, a design will be created. This diagram can support a designer with ideas of pattern combinations. But it could be that more relations exist than depicted here.

The different colours reflect the three categories of patterns. There are several clouds of the same colour visible, clearly the patterns within one category have many relations amongst them. For example R.14 Steps to your Home can be easily combined with R.18 Areas of Appropriation, by providing space to shape a front garden in between the private home and the street. But also patterns of different categories can support each other, for example the spatial design pattern R.15 Live on the Rainbow, can be supported by the programmatic pattern R.7 Ap-Art, through residents creating colourful art in the public space.

Patterns with more relations are a more crucial part of the language, but the contrary is not true. For example, R.13 My Own Pattern is an essential pattern that provides residents with the ability to come up with ideas and influence their living environment.





C.1 Scavenger Hunt

Children taking part in scavenger hunts benefits environmental awareness and place attachment.



Field research

The hill Mavrovouni takes up a large part of camp, but is barely used by residents. The hill has natural vegetation, beautiful cliffs and stunning views of the sea and the coast of Turkey.

Theoretical back-up

Naturally, children are curious, eager to explore their surroundings, when provided with enough stimuli [Hoornaert, 2022]. Scavenger hunts are a way of discovery learning. Scavenger hunts can teach people in an unfamiliar setting how to navigate their surroundings. Thereby, it can encourage social interaction between children, as collaboration is inevitable [Islam, 2017].

Practical implication

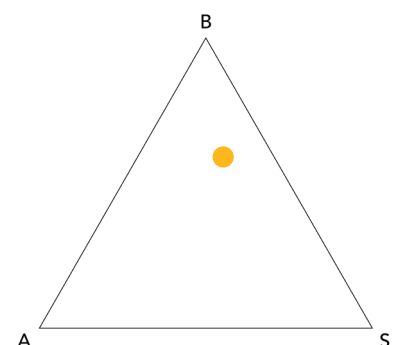
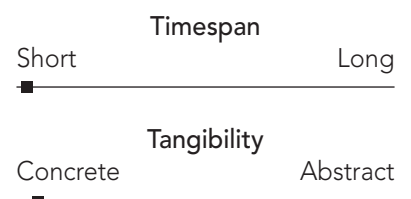
- The camp layout and vegetation stimulates curiosity and exploration
- Organise scavenger hunts through camp, including Mavrovouni hill on a regular basis
- Permanent scavenger hunt set out with signs, especially targeted at newly arrived children to get to know their new living environment



Rainbow Scavenger Hunt [Mikhail, n.d.]

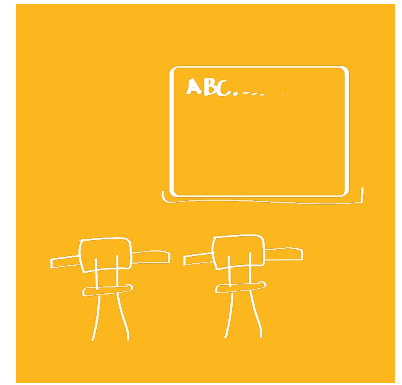
Relates to:

C.3 All types of Playce
C.12 Climbing the Trees



C.2 Customized Classes

Children having access to suitable learning facilities have better self esteem and future careers.



Field research

Currently there is a considerable gap in skill levels between children in Mavrovouni. They learn Greek and English in camp, and they are likely to learn other languages after moving away. Children do not show up at school everyday. The last lesson of every school day differs subject daily, children love this, for example the music class [see photo].

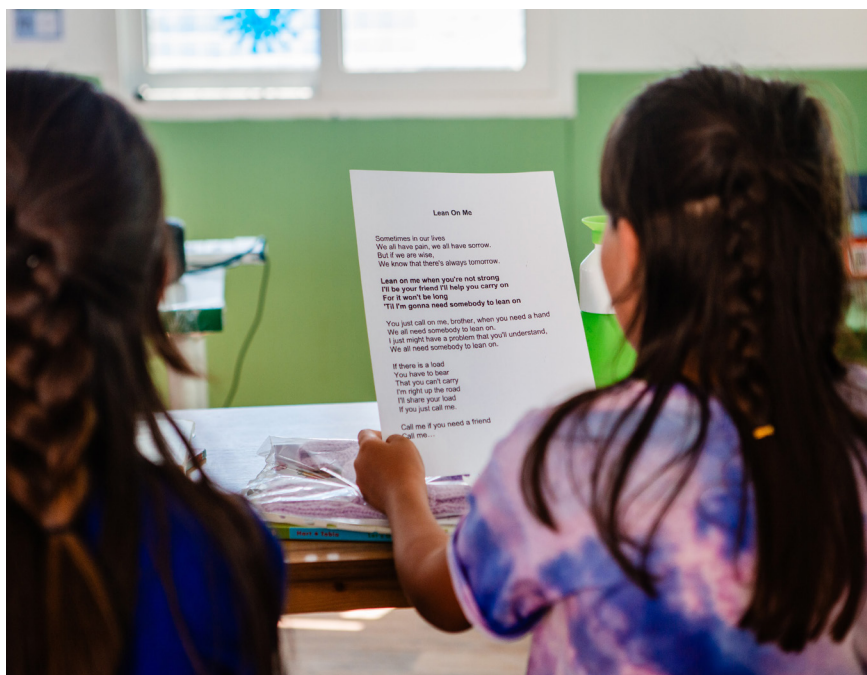
Theoretical back-up

Education is one of the children's rights, children should be encouraged to go to school. Education should help them develop their talents and abilities [UNICEF, n.d.].

Practical implication

Learning is facilitated for different ages and levels.

- Dedicated spaces for different educational activities
- Diverse learning supplies, such as books, tools and computers are available



Music Class in Mavrovouni [Eurorelief, 2024]

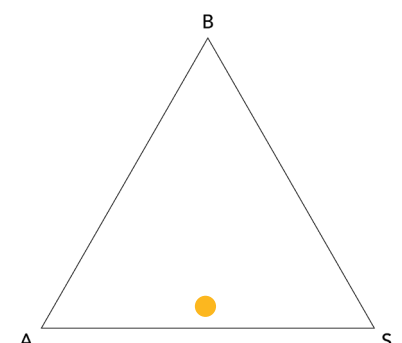
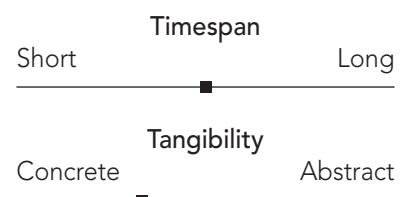
Relates to:

C.4 Ap-Art

C.5 Welcome to the Club!

C.7 Eat your Veggies!

C.9 Little Voice, Big Impact



C.3 All Types of Playce

Diversity in play opportunities stimulates children to play.



Field research

There are three play spaces and a sports field in Mavrovouni. These are the only spaces dedicated to playing and their play possibilities are not diverse. There are two playhouses but they are barely used by children.

Theoretical back-up

Every child has the right to play [UNICEF, n.d.]. Children's play can be divided into four main types; build, move, fantasy and rest [Anel, 1985]. These types of play have different spatial requirements.

Practical implication

For every play type there is at least one dedicated play space that provides safety during those types of activity.

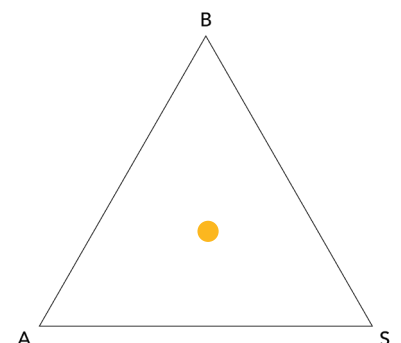
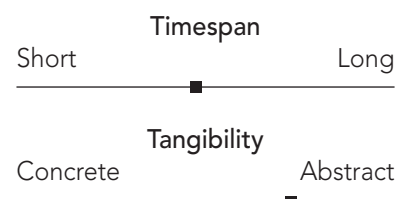
- Move: open space to run around or do sports activities, swingset
- Fantasy: for example a playhouse, possibly with moveable furniture
- Rest: bench to sit on, located near places of interest
- Build: for example an open space with soft ground cover where some building materials are provided

Relates to:

C.1 Scavenger Hunt
C.4 Ap-Art
C.5 Welcome to the Club!
C.6 Leave me Alone
C.8 Sea the Fun
C.12 Climbing the Trees
C.13 Small to Big
C.14 I Like to Move It
R.8 Sport to Connect

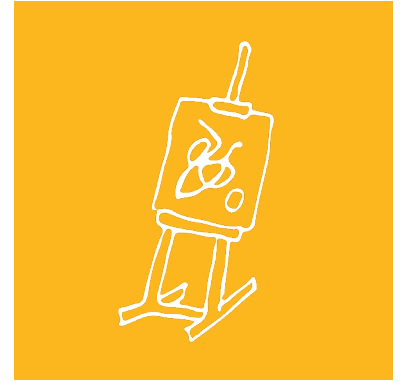


Playground in Panagiouda [own photo, 2024]



C.4 Ap-Art

Creating art helps children to cope with traumas.



Field research

Sometimes children create art about their experiences of the war or the boat journey in a craft lesson at school.

Theoretical back-up

Children have the right to take part in cultural and creative activities [UNICEF, n.d.]. Art can be a vital support for refugees facing mental health challenges. It can be a tool to engage with traumatic experiences or be a distraction from them. Art projects are an empowering way of self-expression, leading to a feeling of agency. Art can give residents a platform to have their voices heard, across language barriers [Counterpoints Arts, 2023].

Practical implication

Creating art is stimulated through concrete interventions.

- Space and materials for creating art, this could be combined with educational facilities
- Spaces for exhibiting art; for example outdoor structures to hang paintings or a theatre for [musical] performances



Drawing of a Syrian refugee child [Save the Children et al, 2016]

Relates to:

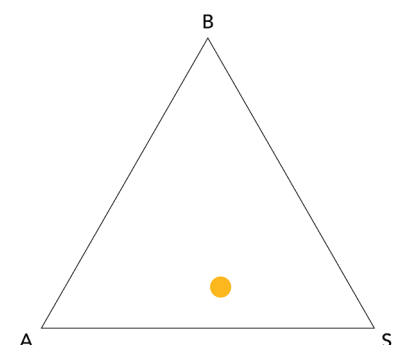
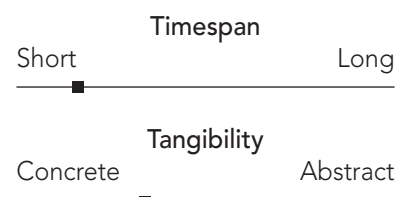
C.2 Customized Classes

C.3 All Types of Playce

C.5 Welcome to the Club!

C.16 Live on the Rainbow

R.7 Ap-Art



C.5 Welcome to the Club!

Communities or clubs give children and residents a sense of belonging.



Field research

Children have left their community in Syria or other countries and possibly lost loved ones. They want to make friends to play with, the fact that people leave often makes friendship difficult.

Theoretical back-up

A child has the right to join or set up groups or organisations, and they can meet with others [UNICEF, n.d.]. To be part of a community, gives one a sense of belonging through personal familiarity and shared experiences. This enhances feelings of safety, control and connection, thus giving a sense of home. Thereby it encourages residents to take responsibility of their physical environment and each other [Wekker, 2020].

Practical implication

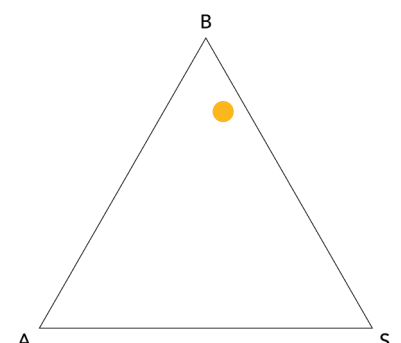
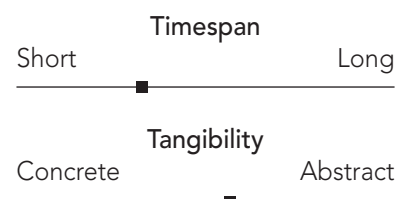
- Indoor and outdoor public spaces are created to facilitate the gathering of groups. Each culture, community or club has other spatial requirements, the camp structure should facilitate the diverse needs
- A notice board can be an easy tool for communities to announce their gathering

Relates to:

C.2 Customized Classes
C.3 All Types of Playce
C.4 Ap-Art
C.7 Eat your Veggies!
R.6 Communal Cooking
R.16 Use for All



Communal space: church in Panagiouda [own photo, 2024]



C.6 Leave me Alone

Spaces for contemplation allow children to cope with trauma.



Field research

The housing units consist of one room, that has to be shared with the whole family or with strangers. Thus, privacy is limited and sheltered spaces to have time alone are lacking.

Theoretical back-up

Every child has the right to privacy [UNICEF, n.d.]. Moments of solitude are essential in coping with adverse life experiences. Being alone gives children the possibility to engage in cognitive processing without external distractions. Solitude can serve as a means of rest and recovery, which benefits emotional resilience. Taking time for oneself is a way of recharging mentally and restore well-being [Haraz & Danut, 2023].

Practical implication

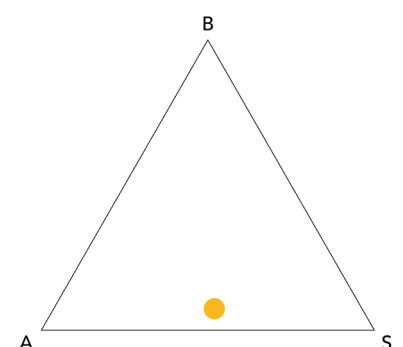
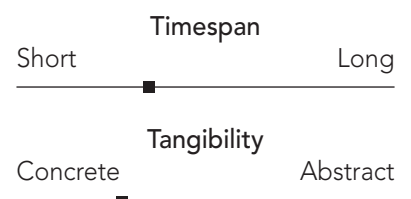
- Building materials are provided to create rooms within the housing units
- Small half-open public shelters with seating are created on locations with few distractions. These spaces allow for meditation or praying.



Hammock hanging chair [Cacoon, 2017]

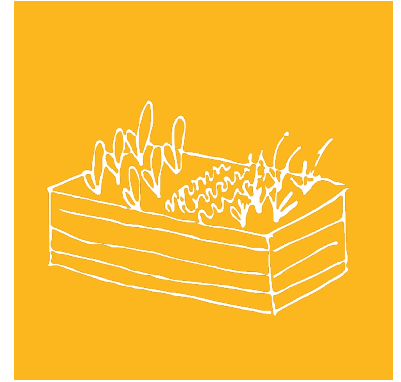
Relates to:

C.3 All Types of Playce
C.12 Climbing the Trees
R.8 Secluded Sanctuary



C.7 Eat your Veggies!

Growing your own vegetables can learn children about healthy diet.



Field research

Food for camp residents is daily provided by a caterer, residents can not choose what they would like to eat. Thereby, camp residents have limited means to buy other food, like fruit and vegetables.

Theoretical back-up

Community gardening is associated with increased intake of fruit and vegetable and has a positive effects on psychosocial well-being [Hume et al, 2022]

Practical implication

There are multiple possibilities for gardening, these can be organised per household or as communal gardens [for example per class].

- Vegetable garden boxes
- Gardens on the roof of isoboxes
- Field[s] for agriculture
- Orchard, as separate field or within living areas

Relates to:

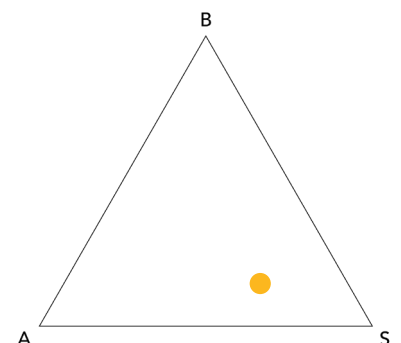
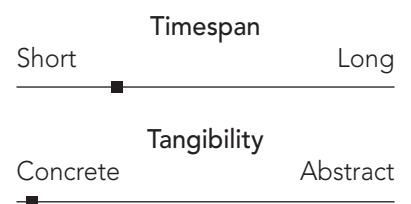
C.2 Customized Classes

C.5 Welcome to the Club!

R.1 Eat your Veggies!

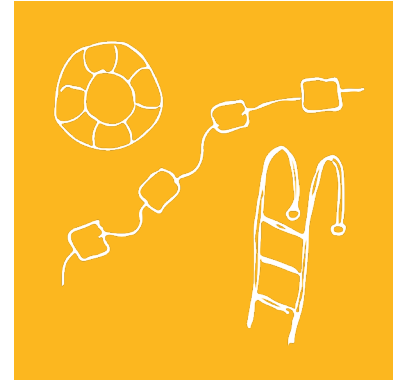


Planters near Eurorelief trailers [Eurorelief, 2024]



C.8 Sea the Fun

Activities at sea make it possible to reconnect with water in a positive manner.



Field research

Residents crossed the sea to Lesvos, this could have been a traumatic experience, because of the full boat, the stormy sea or push-backs, making the relation with water difficult. The rocky shore in camp is one of the play spaces of kids, especially to fish. Children play in the big gutters as well with mud, after rainy days they jump puddles.

Theoretical back-up

Water gives play opportunities for both children and adults. The cognitive abilities of children are stimulated by water, for example when seeing their reflection [Van Duijn, 2004]. Activities at water bodies can mitigate negative emotions by promoting physical activity and connecting with nature. This leads to reduced anxiety and psychological resilience [Zhang et al, 2021].

Practical implication

Activities at sea should be offered safely.

- A shore pier to land boats
- Swimming lines in the bay
- Adapt the gutters through materialisation and steps for small children

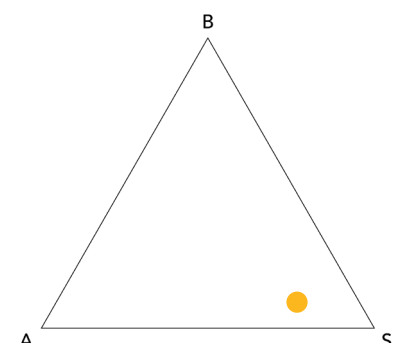
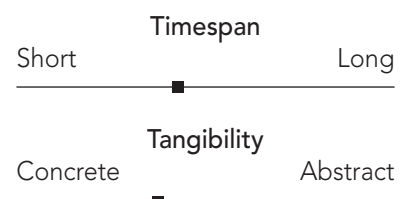


Swimming beach in Panagiouda [Own photo, 2024]

Relates to:

C.3 All Types of Playce

R.3 Sea the Opportunities



C.9 Little Voice, Big Impact

When children are able to have a say in decisions and voice their concerns, they will develop independence.



Field research

Children have been taken on this journey by their parents, probably without any say in the matter. And the camp is not facilitating any influence of them on matters either.

Theoretical back-up

Allowing children to voice their concerns and participate in decision-making fosters independence. It builds their confidence and sense of control. Their involvement in matters affecting them is linked to positive outcomes on personal and societal level. Thereby child empowerment is important in promoting child rights [Gottschalk en Borhan 2023].

Practical implication

Participation activities are organised, that could be in the classroom;

- Feedback sessions
- A children's council meeting regularly

Relates to:

C.2 Customized Classes

C.10 My Own Pattern

O.3 Open your Ears

Visioning Play

Visioning activity developed by CatalyticAction

Visioning Play is an activity in which participants' memories of play spaces are initiated in order for them to create visions of their desired future playground, expressed through art making. Children affected by displacement might not have had opportunities to enjoy play spaces, or might have experienced traumatic events such as the loss of friends and family members or the destruction of their homes or other spaces where they used to play. A guided visualization led by the facilitator can engage participants' imagination as they navigate memories, in order to dream and reach new ideas.

Tip: Throughout the session, be sensitive to the children's individual situations, and conscious of images you choose, what associations they might trigger and how you discuss them. Images that are associated with memories of war such as destruction, small dark rooms, and loud sounds may cause traumatic memories to resurface in children who have experienced displacement. It is helpful to have a professional's support.



Purpose:
For participants to create their individual vision of the playground



Duration:
50 minutes



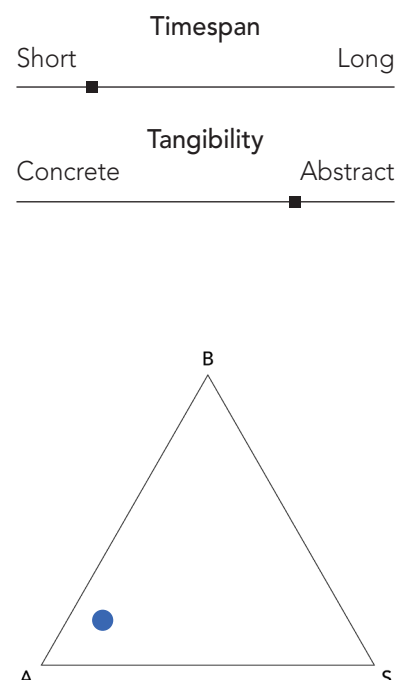
Group size:
Ideally up to 15 participants with one facilitator, up to 30 participants with two facilitators



Suggested Age:
4+



Materials:
Papers; Pencils; Crayons; Glue stick; Scissors; Printed texture templates; white board, flipchart or large papers; markers.



C.10 My Own Pattern

Children are creative, including their ideas can lead to better designs and boost their confidence.



Field research

Children come up with their own games and see play opportunities in the physical environment. For example during the conducted workshop Visioning Play, one child saw the potential to make rings from the provided materials [see photo below].

Theoretical back-up

The engagement of children can improve their self-esteem and development. Especially for displaced children this can be empowering, by giving them a sense of control, they will become more attached to the place. Children’s perspectives, talents, and creativity are frequently undervalued. Children know how they want to play, their ideas are valuable for design [Rigon et al, 2021].

Practical implication

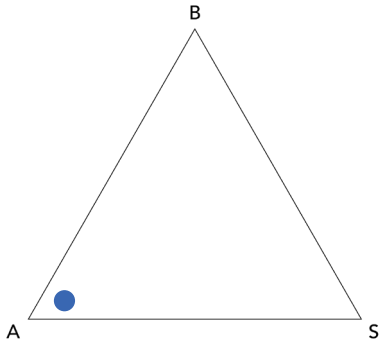
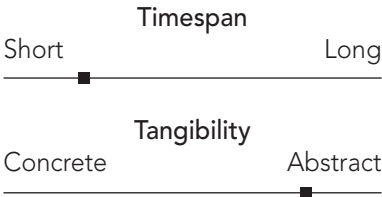
- Arts and Crafts workshops
- Participatory games
- Idea box in class



Children made ‘rings’ for teachers during craft time [own photo, 2024]

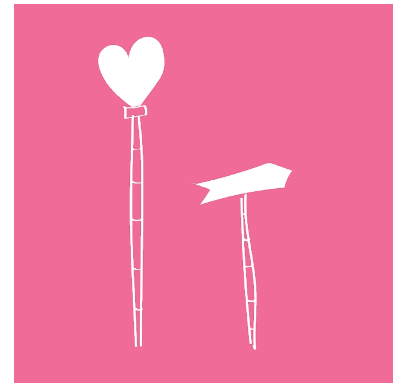
Relates to:

C.9 Little Voice, Big Impact



C.11 Guide the Way

Visual guiding elements will make camp easier to navigate, especially for children.



Field research

Sometimes children are lost in camp and do not know where their house is. In a new living environment, especially when every house looks the same it can be hard to find the way to facilities or your home, especially as a child.

Theoretical back-up

When children can explore their living environment on their own, they experience independence and develop autonomy. Therefore, the outdoor environment should be easy to navigate. Recognisable landmarks help children to orient themselves outside their home and find the way in their surroundings [Doumpa et al, 2018].

Practical implication

Implementation of clear signs that help navigate the space.

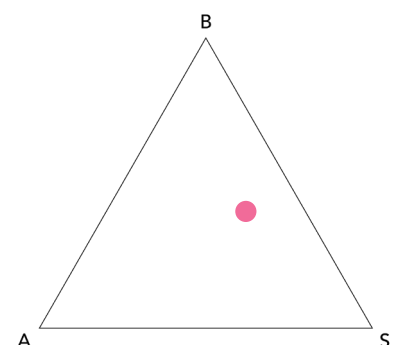
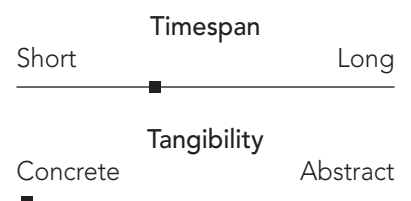
- Colorful objects
- Orientation poles indicating zones or blocks
- Direction signs to facilities

Relates to:

C.16 Live on the Rainbow
C.17 Safe to Play, Made to Move
R.20 Light up the Night
O.9 Join the Gang!



Sign to Taverna, near beach on Lesbos [own photo, 2024]



C.12 Climbing the Trees

Greenery all around living areas will benefit development of children and provides well-being for all.



Field research

Within the living areas there is a lack of greenery. Only the Mavrovouni hill can be seen as a park, but is not accessible for small children. Children climb the few trees in blue zone sometimes.

Theoretical back-up

Spending time in nature benefits emotional and physical well-being, reduces stress and has several other health benefits. Nature, with its changing elements, can transform spaces into playful environments, where children can develop their cognitive skills [Doumpa et al, 2018 and van Duijn, 2004].

Practical implication

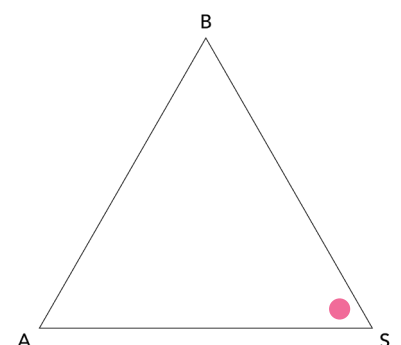
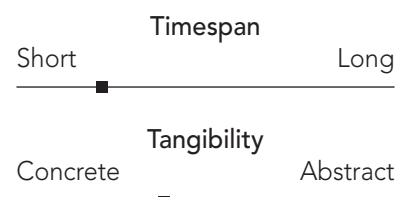
- Greenery is implemented on different scales in camp
- Children of every age have access by themselves to nature
- Natural areas offer possibilities for play and rest

Relates to:

C.1 Scavenger Hunt
C.3 All Types of Playce
C.6 Leave me Alone
R.8 Secluded Sanctuary
R.23 Seasonal Weather Wishes
R.25 Lovely Landscape

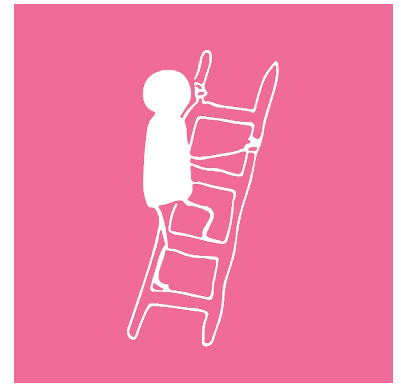


Children meeting in the shade in Panagiouda [Own photo, 2024]



C.13 Small to Big

Play spaces on different scales matches childrens development.



Field research

There are three small playgrounds in camp, one of them located in the family living zone. The sports fields are located on top of the hill. Thus, especially for the smaller ages, accessibility of play spaces is limited.

Theoretical back-up

Every child has the right to play [UNICEF, n.d.]. With a hierarchy of spaces, a child can become acquainted with the living environment step by step. The older the child, the more freedom to move on its own through the camp, towards bigger play spaces [Van Duijn, 2004]. Corners have potential to provide a play space for children, being nearby people, a visible space and easy accessible [Doumpa et al, 2018].

Practical implication

- Every residential compartment is equipped with at least simple play structure, such as a marble or hopscotch track
- The size of the playgrounds and the amount of play objects within, scales with the community it serves



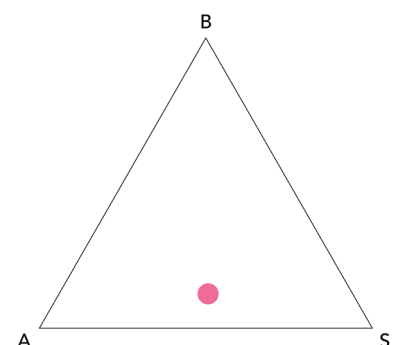
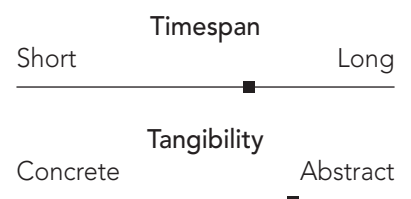
Self made Tic Tac Toe [own photo, 2024]

Relates to:

C.3 All Types of Playce

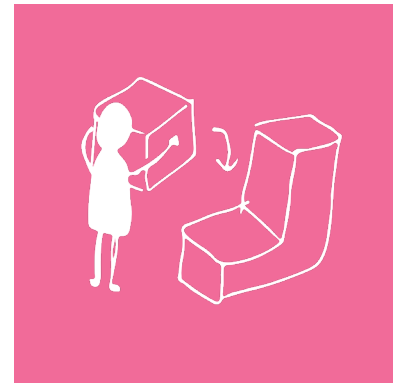
C.20 Play in the Middle

O.4 Belonging through the scales



C.14 I Like to Move It

Moveable play objects stimulate childrens development and meets different play needs.



Field research

Current play structures in camp are lacking adaptability for children. Their design seems to be focused on the minimizing of molestation.

Theoretical back-up

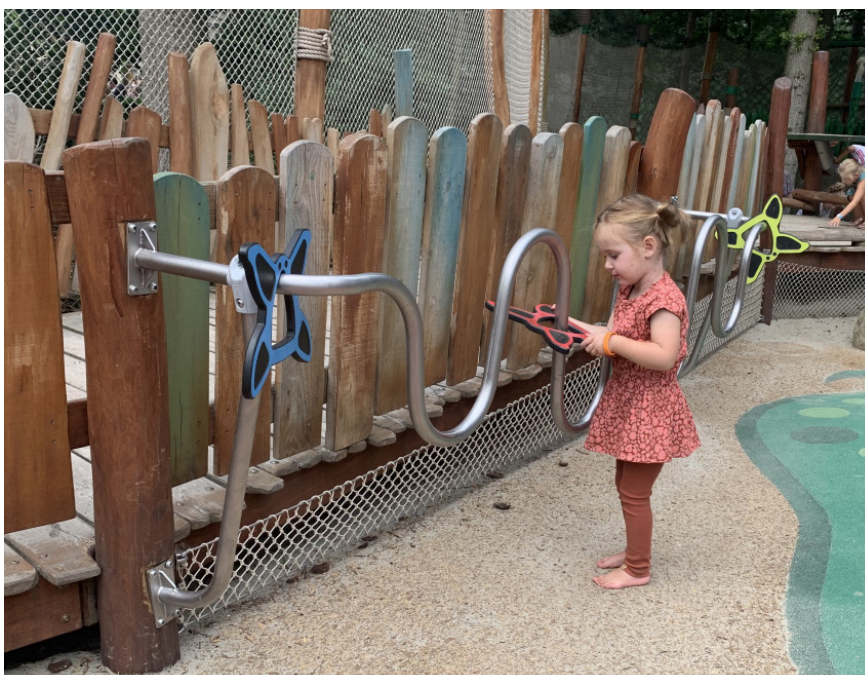
Children can ascribe meaning to a place by making small manipulations of the space, acts like moving a stick increase the child's place attachment [Cele, 2008]. Traditional playgrounds with non-moveable play equipment are not challenging enough. Children need opportunities for experimentation, to discover how the world works. Loose materials make a place more flexible to accommodate different types of play, for instance building [Doumpa et al, 2018].

Practical implication

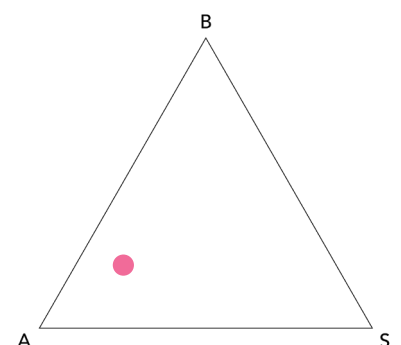
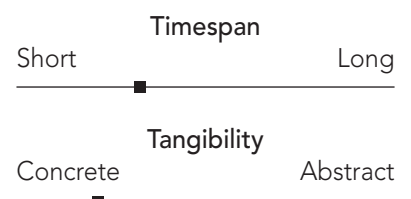
- Playgrounds with moveable play equipment
- Moveable chairs or sitting blocks

Relates to:

C.3 All Types of Playce
R.17 I Like to Move It



Moveable elements in playstructure [Eftepedia, 2022]



C.15 People to Watch

Children learn by seeing others and want to be seen to feel safe.



Field research

During the foodline in the family zone, children play together in the open space of the Rubb-Hall. They meet each other and play together or they sit on the edge and watch other children or adults passing by.

Theoretical back-up

Children develop themselves by watching adults or other children, this is why rest is important play behaviour for kids [Andel, 1985]. By interacting they improve their language[s] and social behaviour. Thereby, children feel safe at a place with 'social eyes' [Doumpa et al, 2018; van Duijn, 2004].

Practical implication

- Create play spaces near busy places where residents come together
- Make sitting space with a protected backside near crowded places

Relates to:

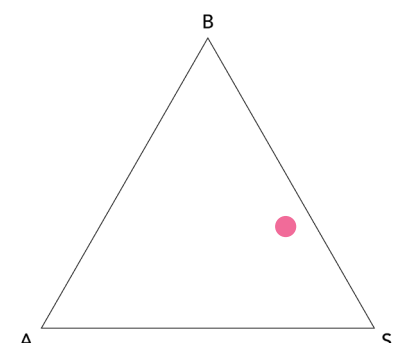
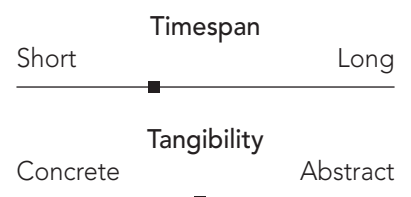
C.20 Play in the Middle

R.19 Eye See You!

R.26 Meet in the Middle

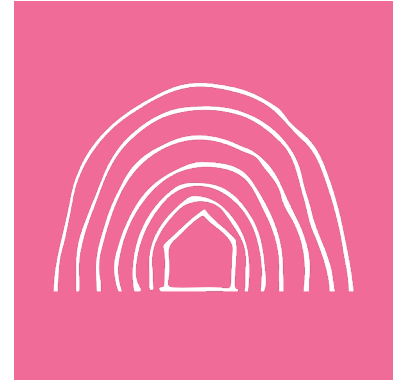


Children watching adults at the library [Eurorelief,2024]



C.16 Live on the Rainbow

A colorful living environment has a positive effect on physical and mental well-being.



Field research

The majority of materials and surfaces in camp is white. All housing units look the same. Thereby, the white surfaces reflect sunlight intensely, without sunglasses this causes headaches.

Theoretical back-up

Colours in the living environment are significant for well-being. It is important to take colours into account in environmental design, as it can enhance health and balance sensory experiences [McLellan & Guaralda, 2014].

Being able to act upon and modify your dwelling is important to create a more personalized and meaningful sense of home [Després, 1991]. Thereby, the use of colours, textures and patterns can make a place more stimulating for children [Doumpa et al, 2018].

Practical implication

Pavement and housing have:

- Diverse materials
- Different colours



Colorful homes Panagiouda [own photo, 2024]

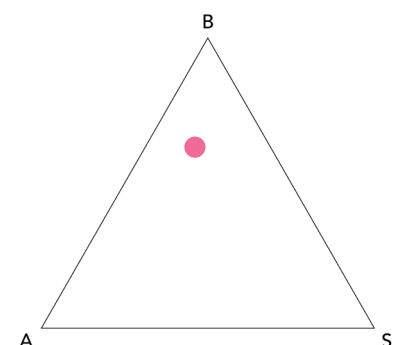
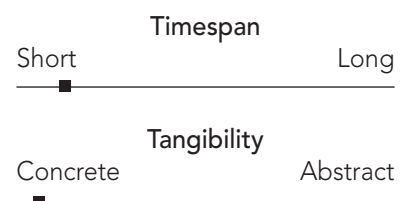
Relates to:

C.4 Ap-Art

C.11 Guide the Way

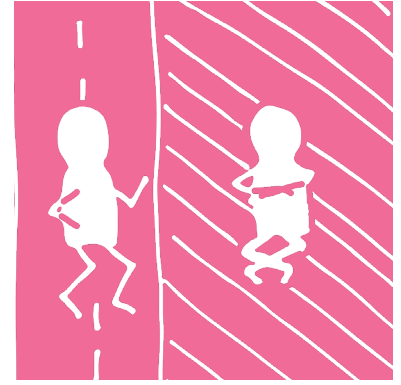
C.19 Tactile Textures

R.15 Live on the Rainbow



C.17 Safe to Play, Made to Move

Diversity in materialisation of public spaces increases play safety.



Field research

All public space has the same surface paving, gravel, there is no division between transport roads or meeting spots.

Theoretical back-up

Clearly separated traffic streams, by the use of different materials make it easier for children to choose safe walk and play spaces [Hoornaert, 2022]. Designing the pavements of public spaces in terms of selecting materials, can significantly improve the comfort of use and accessibility for all users of the public space. By visually distinguishing walk and play areas, confusion is minimized, thus enhancing safety [Gil-Mastalerczyk et al., 2023].

Practical implication

The pavement of roads differs from the paving of:

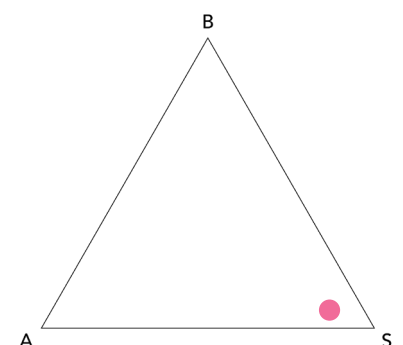
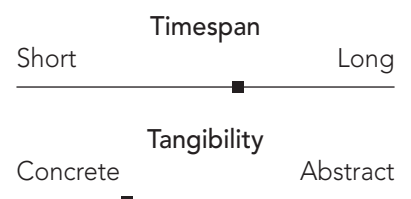
- Pedestrian paths
- Play spaces
- Front gardens

Relates to:

C.11 Guide the Way
C.19 Tactile Textures
O.9 Join the Gang!



Playground Panagiouda separated from road [Own photo, 2024]



C.18 Play with Me!

Involvement of caregivers in play, supports both the development and safety of children.



Field research

Children in camp often play on their own in camp, without the presence of a parent or guardian. This lack of supervision can lead to dangerous situations. For instance, during field research, a toddler was observed playing with a piece of wire and putting it in their mouth, highlighting the potential risks.

Theoretical back-up

Parents are responsible for bringing up a child and should consider what is best for that child. Governments should help parents with children's upbringing [UNICEF, n.d.]. The relation with the parents is crucial in the development of the child [Bronfenbrenner, 1979]. The built environment can stimulate interaction between children and their caregivers [Doumpa et al, 2018].

Practical implication

- Play spaces activate adults
- Play furniture accommodates adults
- Pleasant seating near play areas

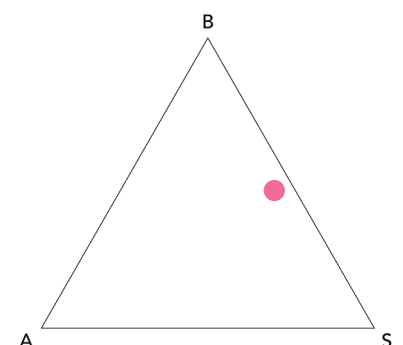
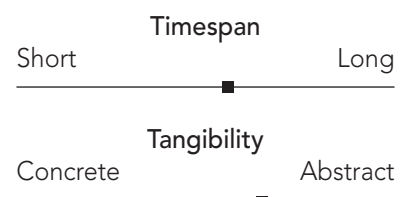


Bench near swings on playground in Panagiouda [own photo, 2024]

Relates to:

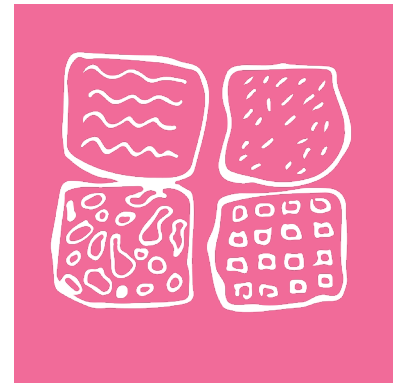
C.20 Play in the Middle

R.11 Jobbortunity to Parenting



C.19 Tactile Textures

Diversity of materials in surfaces stimulates explorative play and safe play choices.



Field research

All camp surface is gravel, increasing dangers during some play activities, like climbing trees, running or racing with bikes.

Theoretical back-up

A variety in materials, colours and textures in the street helps children orientate themselves. It stimulates creativity, for example in inventing games. Textures of vegetation encourage children's learning [Doumpa et al, 2018].

Practical implication

- Diverse materials for facilities, housing units and ground surfaces
- Diverse vegetation included as texture

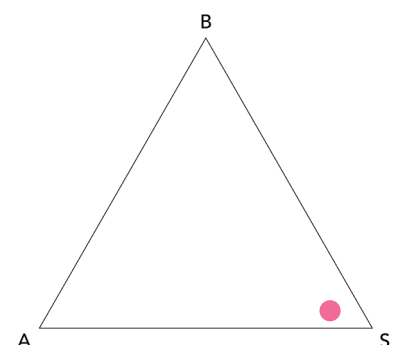
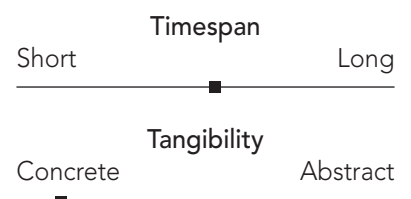
Relates to:

C.16 Live on the Rainbow

C.17 Safe to Play, Made to Move

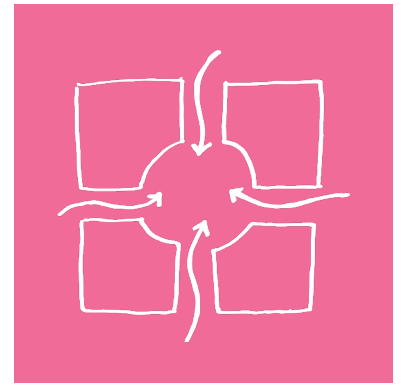


Pavement differences Panagiouda [own photo, 2024]



C.20 Play in the Middle

Play spaces located amidst housing increases safe use and children meeting friends.



Field research

During the discussion with the education team, the following came up; playgrounds should be somewhere central, to gather with your friends and to increase safety as children are surrounded by adults. The library is located on the hillside and visitors are minimal, with a cart some books are taken to children into blue zone [see photo].

Theoretical back-up

Facilities located within the living environment make them more accessible for everyone. People are attracted by other people. Locating facilities in the middle of residential zones, will make people pass-by often. These spaces will become more social spaces, stimulating a feeling of community [Whyte, 1980].

Practical implication

- Facilities will be located amidst residential zones
- More residences are built on the hillside

Relates to:

C.15 People to Watch

C.18 Play with Me!

R.14 Steps to your Home

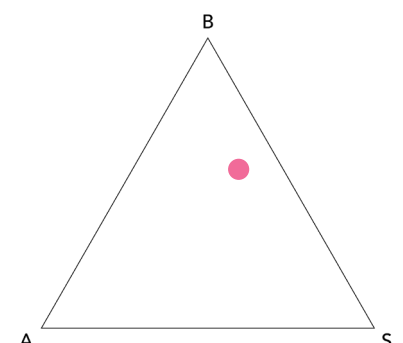
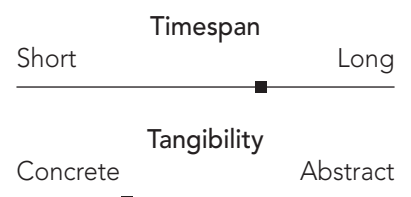
R.26 Meet in the Middle

O.4 Belonging through the Scales

O.11 Meet in the Middle

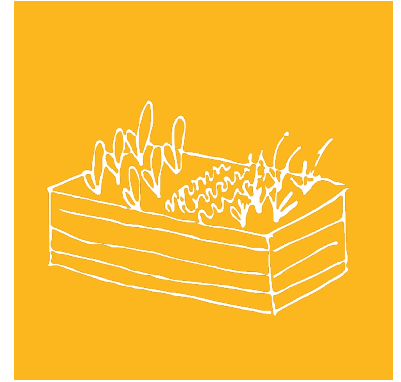


Library cart taken to the children [Eurorelief, 2024]



R.1 Eat your Veggies!

Growing your own vegetables is sustainable and stimulates a healthy diet.



Field research

Food for camp residents is daily provided by a caterer, residents can not choose what they would like to eat. Thereby, camp residents have limited means to buy other food, like fruit and vegetables.

Theoretical back-up

Community gardening is associated with increased intake of fruit and vegetable and has a positive effects on psychosocial well-being [Hume et al, 2022]

Practical implication

There are several possibilities for gardening, which can be organised per household or as communal gardens.

- Vegetable garden boxes
- Gardens on the roof of isoboxes
- Field[s] for agriculture
- Orchard, as separate field or within living areas

Relates to:

C.7 Eat your veggies!

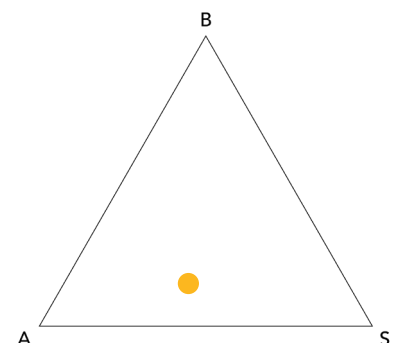
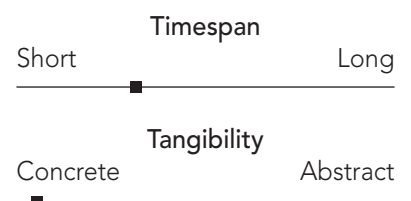
R.4 Communal Cooking

R.5 I'm in Sales

O.2 Daily Diversity



Planters near Eurorelief trailers [Eurorelief, 2024]



R.2 Trash to Treasure

Recycling opportunities create a circular economy within the camp.



Field research

When camp residents move away, their home is emptied, belongings are thrown away. Sometimes residents take stuff from the garbage cans to reuse. At the Skills Area in camp one can build things from scrap wood, for example furniture for the library furniture [Eurorelief, 2024].

Theoretical back-up

Instead of throwing household items and materials away, camp can make use of the circular economy. This is based on material cycles, meaning the implementation of reduce, reuse and recycle activities. This benefits economic prosperity as well as environmental quality [Korhonen et al, 2017]. With the collection and separation of waste materials, residents can reuse products and up-cycle materials easily.

Practical implication

- A free shop, where residents can choose second-hand household items for free, residents moving away can leave their stuff there
- Recycle stations across camp, with containers or cabinets in which different products and materials can be collected



Recycling containers in Panagiouda [own photo, 2024]

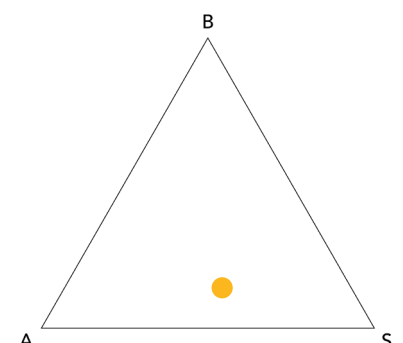
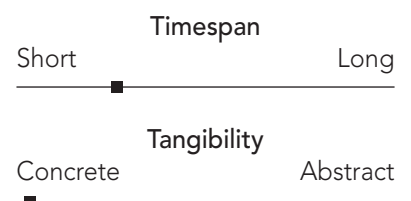
Relates to:

R.5 I'm in Sales

R.7 Ap-Art

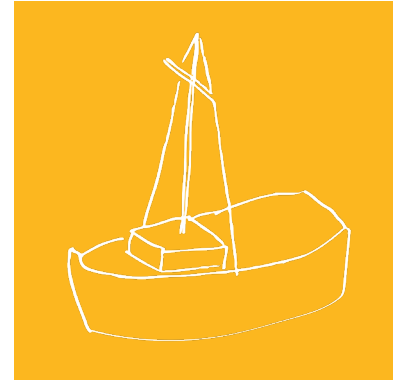
R.9 From Tools to Tables

O.2 Daily Diversity



R.3 Sea the Opportunities

Activities at/near the sea make it possible to reconnect with water in a positive manner.



Field research

Residents crossed the sea to Lesvos, this could have been a traumatic experience, because of the full boat, the stormy sea or push-backs, making the relation with water difficult.

Theoretical back-up

Water gives play opportunities for both children and adults [Van Duijn, 2004]. Activities at water bodies can mitigate negative emotions by promoting physical activity and connecting with nature. This leads to reduced anxiety and attentional fatigue. Engagement with aquatic environments fosters psychological resilience [Zhang et al, 2021].

Practical implication

Activities at sea should be offered safely.

- Shore pier to land boats
- Boats and fish nets available
- Swimming lines



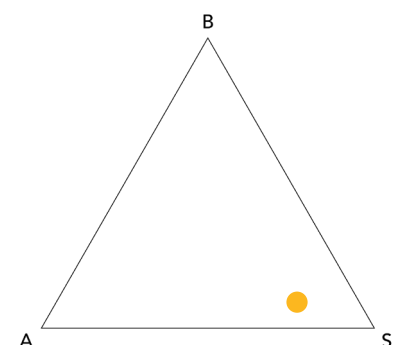
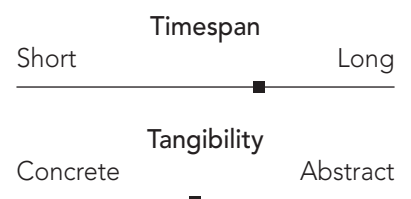
Harbour of Panagiouda [Own photo, 2024].

Relates to:

C.8 Sea the Fun

R.6 Sport to Connect

O.2 Daily Diversity



R.4 Communal Cooking

By preparing food together, people have agency over their meals while connecting with others.



Field research

Food for camp residents is provided by a caterer every day, residents can not choose what they would like to eat. The homes do not have cooking facilities to heat up food by themselves.

Theoretical back-up

Home cooking is important for families for several reasons, first and foremost it gives the ability to control their own food supply. Secondly cooking can help them connect to others and explore their own and other food cultures [Simmons and Chapman, 2012].

Practical implication

- A communal kitchen [indoor or outdoor] for every 10 households, where all families have the opportunity to prepare their own meals and meet each other
- Barbecue places

Relates to:

C.5 Welcome to the Club!

R.1 Eat your Veggies!

R.16 Use for All

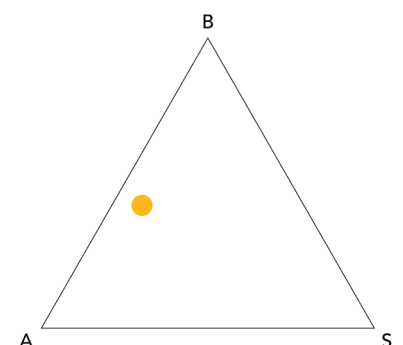
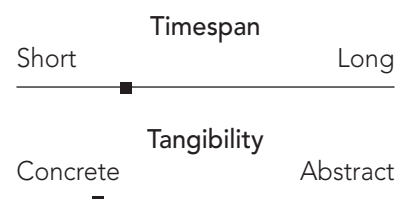
R.26 Meet in the Middle

O.2 Daily Diversity

O.4 Belonging through the Scales



Communal kitchen during fieldtrip [own photo, 2024]



R.5 I'm in Sales

A market to sell food or small goods will give residents a purpose as well as a meeting space.



Field research

The lack of organized activities during the day contributes to a sense of monotony and boredom among camp residents. They merely wait for their passport and do not have a daily purpose.

Theoretical back-up

A farmers market with stalls encourages small entrepreneurship, residents are given a platform to earn an income. Thereby markets function as social spaces, where residents can meet and connect with locals. A farmers market gives a sense of community and incorporates values related to conscious consumption [Johnson, 2013].

Practical implication

- A market is organised regularly in or nearby camp, stalls are provided and can be reserved by residents for their own sales
- Some permanent stalls near the border of camp to accommodate small businesses of residents

Relates to:

R.1 Eat your Veggies!

R.2 Trash to Treasure

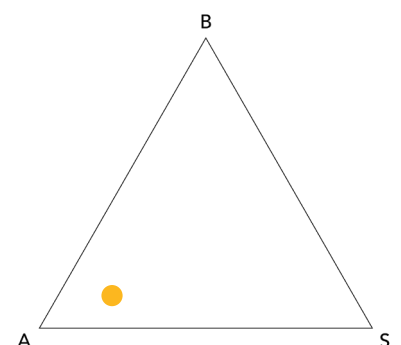
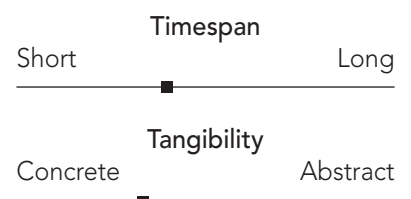
R.9 From Tools to Tables

R.21 Let's Meet at the Fence

O.2 Daily Diversity



Market in Ayvalik [Own photo, 2024]



R.6 Sport to Connect

Locals sporting together with camp residents stimulates social connection and cohesion.



Field research

There are some organisations in the camp that sport with residents regularly, doing football or volleyball. Volunteers and residents enjoy being active together. Some residents built a bench press by themselves, and recently a gym opened in camp [see photo].

Theoretical back-up

Sport tournaments contribute to feelings of social cohesion, it has potential to unite disparate people and communities. Several projects have been implemented to overcome social, cultural and ethnic divides [Schulenkorf, 2012].

Practical implication

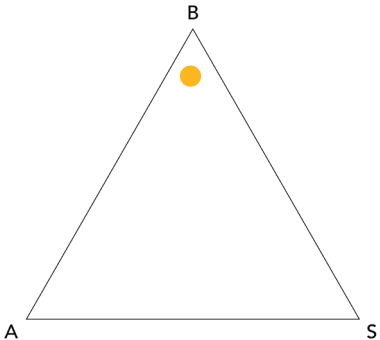
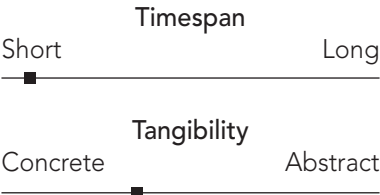
- Weekly sport trainings open to residents and locals
- Monthly sport tournaments
- Sport facilities in camp are accessible for locals as well

Relates to:

- C.3 All Types of Playce
- R.3 Sea the Opportunities
- R.21 Let’s Meet at the Fence
- O.1 Sport to Connect

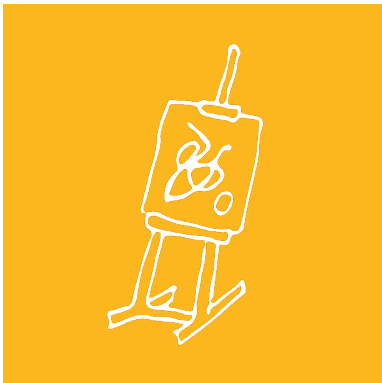


Gym facility in camp [Eurorelief, 2024]



R.7 Ap-Art

Creating art helps to cope with traumas.



Field research

Some shelters and trailers in camp have artworks painted on them, like the library [see photo below]. In both community centres there is a wall with artworks of residents, for example with country flags or crying faces.

Theoretical back-up

Art can be a vital support for refugees facing mental health challenges. It can be a tool to engage with traumatic experiences or be a distraction from them. Art projects are an empowering way of self-expression, leading to a feeling of agency. Art can give residents a platform to have their voices heard, across language barriers [Counterpoints Arts, 2023].

Practical implication

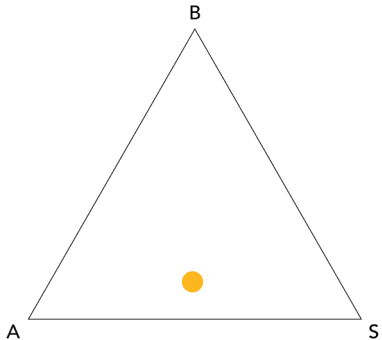
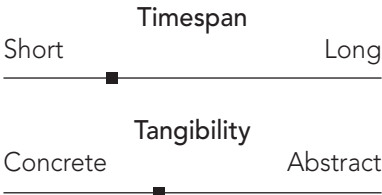
- Space and materials for creating art, this could be combined with educational facilities
- Spaces for exhibiting art; for example outdoor structures to hang paintings or a theatre for [musical] performances



Wall painting library made by resident [Eurorelief, 2024]

Relates to:

- C.4 Ap-Art
- R.2 Trash to Treasure
- R.15 Live on the Rainbow
- O.2 Daily Diversity



R.8 Secluded Sanctuary

Spaces for contemplation allow residents to cope with trauma.



Field research

The housing units consist of one room that has to be shared with the whole family or with strangers. Thus, privacy is limited and sheltered spaces to have time alone are lacking.

Theoretical back-up

Moments of solitude are essential in coping with adverse life experiences. Being alone gives individuals the possibility to engage in cognitive processing without external distractions. Solitude can serve as a means of rest and recovery, which benefits emotional resilience. Taking time for oneself is a way of recharging mentally and restore well-being [Haraz & Danut, 2023].

Practical implication

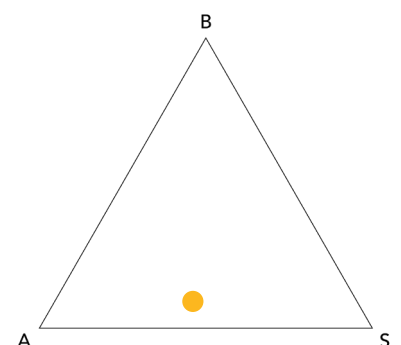
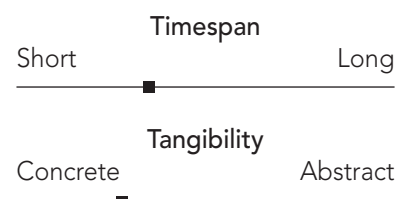
- Building materials are provided to create rooms within the housing units
- Small half-open public shelters with seating are created on locations with few distractions. These spaces allow for meditation or praying.



Hammock hanging chair [Cacoon, 2017]

Relates to:

C.6 Leave me Alone
C.12 Climb the Trees



R.9 From Tools to Tables

Building your own furniture benefits self-esteem and owning unique furniture stimulates feeling at home.



Field research

The housing units only come with beds and do not have any other furniture. But in camp there is a 'Skill Area', with basic tools en wood to build furniture or repair bikes. This place is appreciated by residents, it is also known as the playground for men! "The Skill Area has become increasingly busy over the last months ... people are coming to Skills with a small specific task in mind like, 'my tea kettle is broken' or 'I need a shoe rack.'" [Eurorelief, 2024].

Theoretical back-up

Having furniture and household goods is vital for ones self-esteem, physical and mental health. Being owner of specific furniture plays a crucial role in creating a sense of belong, as the home feels more personal and welcoming [Hartwig & Mohamed, 2020].

Practical implication

- Expanding the tool set of skill area
- Availability of a diversity of at skill area
- Safety measures to welcome inexperienced people



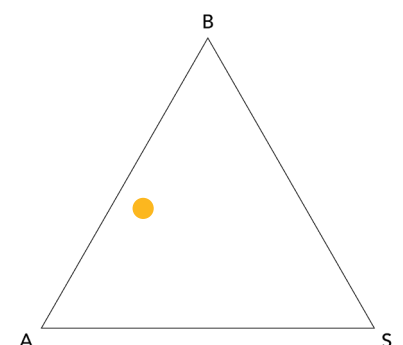
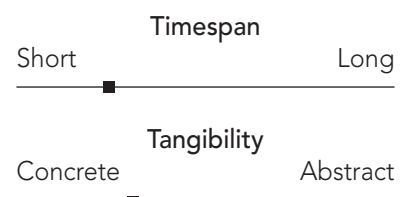
Skill Area in Mavrovouni [Eurorelief, 2024]

Relates to:

R.2 Trash to Treasure

R.5 I'm in Sales

O.2 Daily Diversity



R.10 Raise your Voice!

Involvement of residents in the decision making process on their living environment improves self confidence.



Field research

In camp a lot of decisions are made for the residents, such as what food they eat, which housing unit they will live or which clothes they get. They lack agency and have limited influence on their 'neighbourhood'.

Theoretical back-up

To create a more inclusive and culturally sensitive environment, camp planning should embrace citizen participation [Williams, 2005]. For residents it is important to be able to make choices about their living environment as a form of agency, this will benefit their well-being.

Practical implication

- Feedback sessions
- Feedback box
- A residents' council meeting regularly

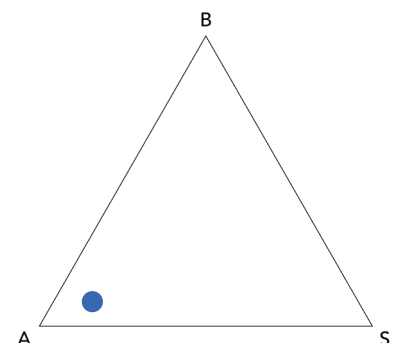
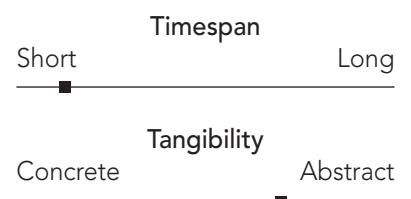
Relates to:

R.13 My Own Pattern

O.3 Open your Ears

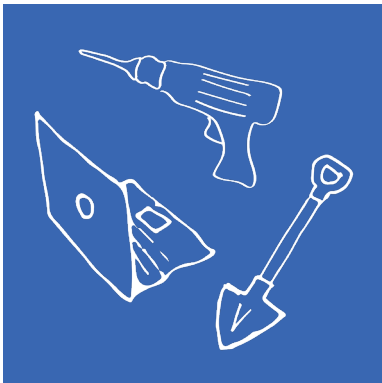


Statement on the wall in Moria, the former camp [own photo, 2024]



R.11 Jobbortunity to Parenting

Parents with a daily purpose will have better parenting abilities.



Field research

Parents do not have a lot of obligations during the day, only going to foodline. Still, they often sent their children to get food, although that is not allowed [when they are under 13 years of age]. Parents seem to have more difficulty dealing with their traumatic experiences, minimizing the attention for their children.

Theoretical back-up

Children with jobless parents have poorer developmental outcomes, on cognitive and socio-economic level, compared to children in families working full-time/long part-time hours. The joblessness affects parental mental health and parenting style [Baxter et al, 2012].

Practical implication

Parents are stimulated to be active during the day, through the availability of a diversity of activities in camp:

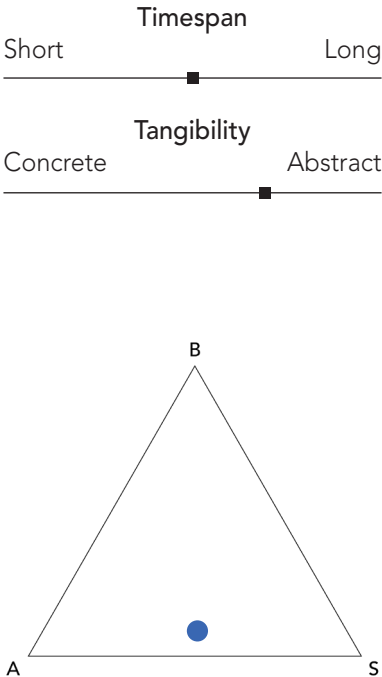
- Activities for fun, like making art or sport
- Activities with a purpose, like helping camp organisation [see photo], growing vegetables or sewing clothes



A resident volunteer helping at foodline [Eurorelief, 2024].

Relates to:

- C.18 Play with Me!
- R.12 Online Opportunity
- O.2 Daily Diversity



R.12 Online Opportunity

Internet is a basic need to access information, communicate and provides opportunities for education and jobs.



Field research

Some residents have a smartphone, mostly to stay connected with family in their former country.

Theoretical back-up

The internet is essential for accessing information, facilitating communication, and providing educational and job opportunities. It has made these aspects of life more accessible and efficient, thus becoming a fundamental resource in the 21st century [Joshi et al, 2024]. This goes for camp organisation as well, Eurorelief needs laptops and internet to function [see photo].

Practical implication

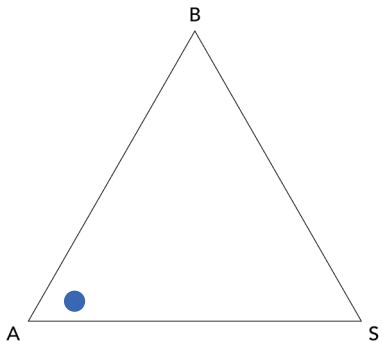
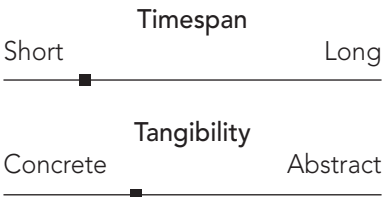
- Wi-Fi is available in some areas, this can easily be combined with other communal spaces
- A building like a library where PC's or laptops are free to use would be a good addition

Relates to:

R.11 Jobbortunity to Parenting
R.26 Meet in the Middle
O.2 Daily Diversity



Internet is crucial for the camp organisation at foodline [Eurorelief, 2024]



R.13 My Own Pattern

Residents best understand how to improve their living conditions; their creativity upgrades the camp and boosts their confidence.



Field research

Residents come up with initiatives for tasks to do in- and outside camp. Some residents saw the field with trash along the road to Lidl and wanted to clean it, so they came to Eurorelief with this idea [see photo].

Theoretical back-up

By allowing citizens to come up with creative ideas for public spaces in urban projects, liveability, engagement and satisfaction is increased [Shalina et al, 2021].

Practical implication

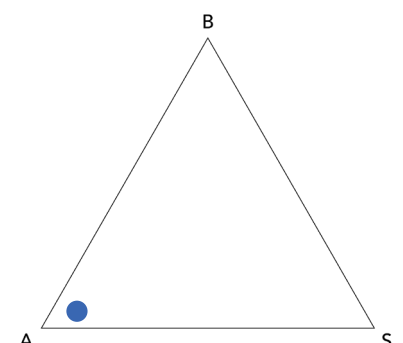
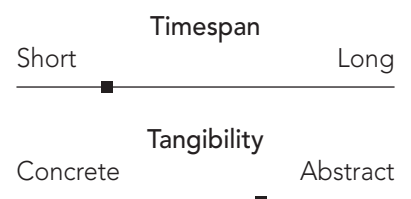
- Regular brainstorm meetings with residents
- Idea box for initiatives
- Participatory design activities

Relates to:

R.10 Raise your Voice!

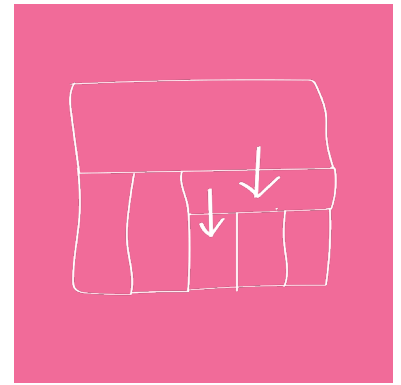


Residents initiative to pick up trash aside road [Visser, 2024]



R.14 Steps to your Home

Gradual transition between public space and private household gives more privacy.



Field research

There is only a door as border between the street and the bedroom, limiting privacy. People create small stoops or verandas as an extra step between street and house.

Theoretical back-up

According to UNHCR [2024] rigid layouts should be avoided, as they would give a sense of alienation. The cultural preferences should be taken into account. The spatial analysis of Aleppo showed territorial depth, especially by different courtyards [AlWaer et al., 2023].

With more territorial steps, the transition from public to private is soft and privacy is increased. Communal spaces are in between public and private, this can benefit social cohesion and safety [Williams, 2005].

Practical implication

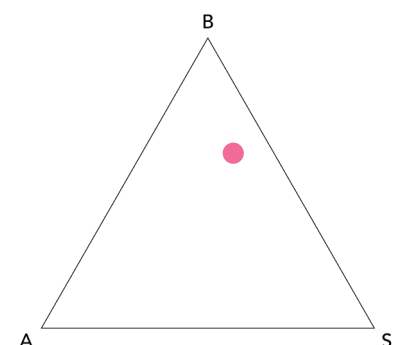
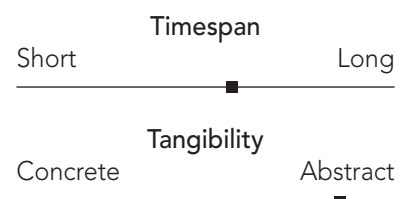
- Define front yard through materialisation or physical structure
- Adapt grid structure into morphology with more territorial depth, like courtyards

Relates to:

C.20 Play in the Middle
R.18 Areas of Appropriation
R.26 Meet in the Middle
O.4 Belonging through the Scales

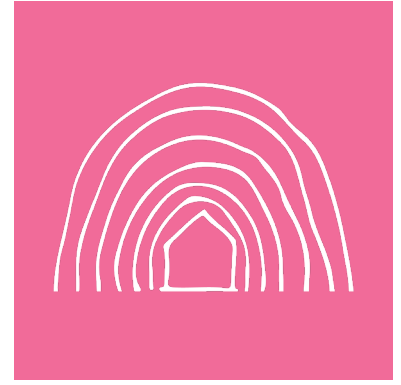


Entrance to courtyard of volunteer homes [own photo, 2024]



R.15 Live on the Rainbow

A colorful living environment has a positive effect on physical and mental well-being.



Field research

The majority of materials and surfaces in camp is white. All housing units look the same. Thereby, the white surfaces reflect sunlight intensely, without sunglasses this causes headaches.

Theoretical back-up

Colours in the living environment are significant for well-being. It is important to take colours into account in environmental design, as it can enhance health and balance sensory experiences [McLellan & Guaralda, 2014].

Being able to act upon and modify your dwelling is important to create a more personalized and meaningful sense of home [Després, 1999].

Practical implication

Pavement and housing have:

- Diverse materials
- Different colours

Relates to:

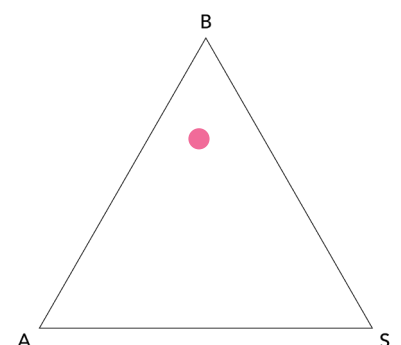
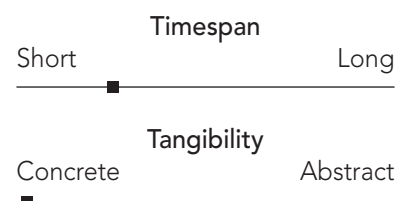
C.16 Live on the Rainbow

R.7 Ap-Art

R.18 Areas of Appropriation

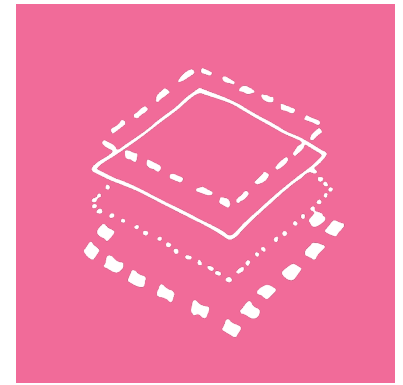


Colorful homes Panagiouda [own photo, 2024]



R.16 Use for All

If multiple activities can take place in a space, spaces are used efficiently & a liveable community is stimulated.



Field research

Facilities are often empty and quiet, such as the water points or the lego hut.

Theoretical back-up

Multifunctional spaces are more frequently used throughout the day, which significantly benefits social cohesion. Multifunctional spaces maximize the utility of limited land and minimize the resources required. The thoughtful integration of multifunctional spaces can support traditional communities, enhance economic opportunities and preserve cultural identities. Especially open urban spaces are essential for accommodating to needs of the population and offer space for community gatherings [Pranab & Bansal, 2022].

Practical implication

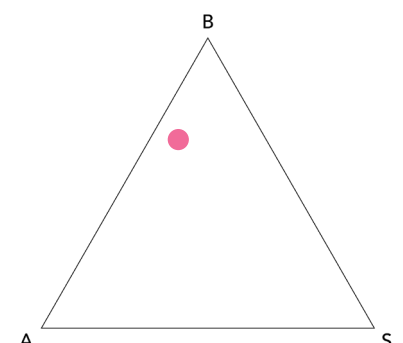
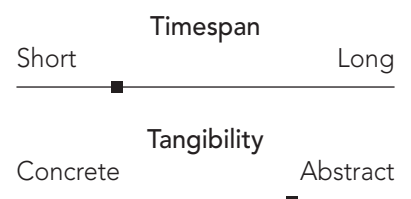
- Combination of functions in one space, for example a water playground can be added to the water point
- Open spaces in the camp fabric can accommodate different activities

Relates to:

C.5 Welcome to the Club!
R.4 Communal Cooking
R.17 I Like to Move It
R.22 Rise to the Heights

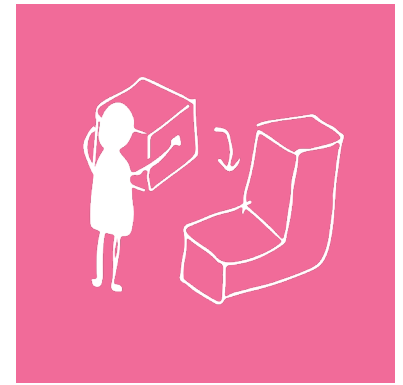


Outdoor cinema in courtyard of volunteer homes [own photo, 2024]



R.17 I Like to Move It

Moveable urban furniture adapts to the needs of different users.



Field research

The facilities in camp are fixed and built to prevent molestation. For example the water points have concrete seats, one person can not move it in the space.

Theoretical back-up

When urban furniture is moveable, it can adjust to different user needs and preferences. It enables users to modify spaces and combine functions, enhancing accessibility and usability for a diversity of people. Flexible urban furniture answers to a diverse and changing population [Siu & Wong, 2015].

Practical implication

- Permanent structures with moveable elements, for example a steel pavilion with cloths
- Moveable chairs or sitting blocks

Relates to:

C.14 I Like to Move It

R.16 Use for All

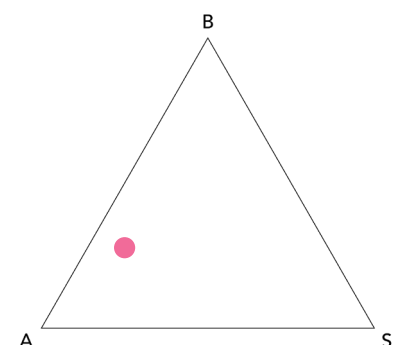
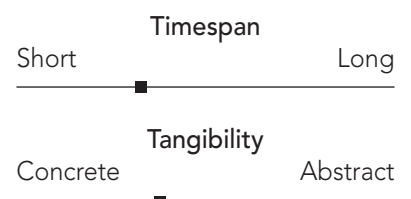
R.23 Seasonal Weather Wishes

R.25 Lovely Landscape

R.27 Move my Home

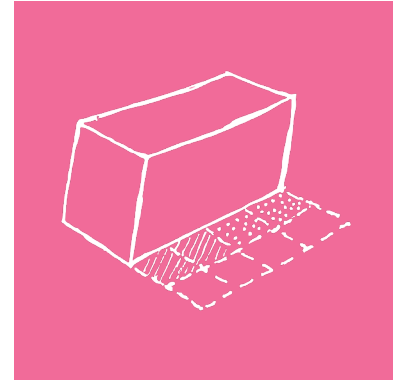


Seating for Socializing [2018]



R.18 Areas of Appropriation

Appropriation of space promotes a sense of agency and belonging.



Field research

Residents appropriate the few metres in front of their homes as a type of front garden, by leaving belongings, building canopies or drinking tea on a bench [see photo].

Theoretical back-up

When people can appropriate space, they feel a sense of agency. They can make the space their own, to feel like home. Residents in refugee camps should have the right to appropriate, to make them dwellers of the space, instead of refugees in shelters [Dalal, 2022].

Practical implication

- Space to appropriate between road and house, indicated by material or structure

Relates to:

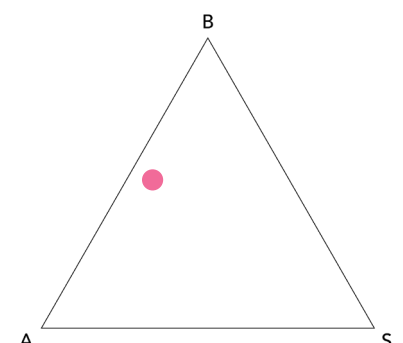
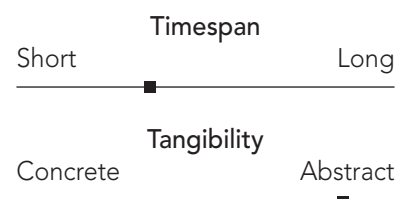
R.14 Steps to your Home

R.15 Live on the Rainbow

O.4 Belonging through the Scales

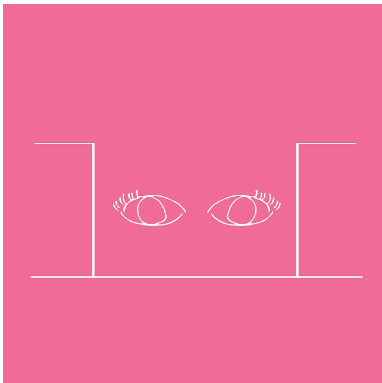


Self-Built canopy aside RHU [Eurorelief, 2024]



R.19 Eye See You!

Eyes on the street promote a sense of safety for passers-by.



Field research

The isoboxes only have one open facade, with a window and door. The facilities, such as toilets, are not located amidst housing. Thus, the streets leading there lack social eyes, increasing feelings of unsafety at night.

Theoretical back-up

Places that have eyes on the street are safer, as they have an informal surveillance. Buildings should be open towards the street and not have blind façades [Jane Jacobs, 1961]

Practical implication

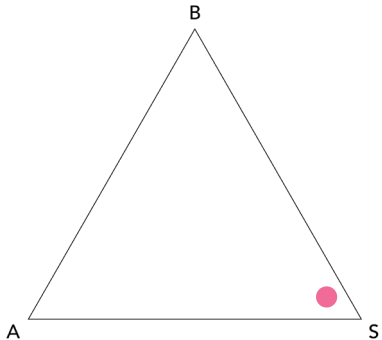
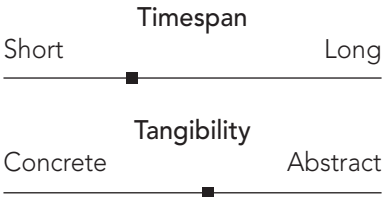
- Housing façades are open to the street
- Facilities and housing are located side-by-side along streets

Relates to:

- C.15 People to Watch
- R.20 Light up the Night
- R.24 Steps to Sanitary
- R.26 Meet in the Middle

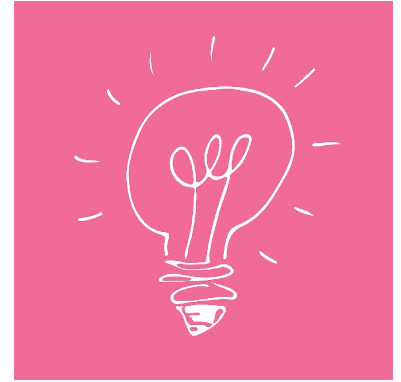


Men watching passersby in Agiasos [own photo,2024]



R.20 Light up the Night

Sufficient lighting promotes safety and can give ambiance.



Field research

During the night residents sometimes feel unsafe to go to the sanitary facilities as they are not visible walking there. There are some lampposts, they are bright and tall.

Theoretical back-up

Sufficient street lighting can decrease crime and promote a sense of safety for pedestrians at night. A well-designed lighting system can create a positive ambiance that encourages social interaction and a sense of community, while poor lighting can lead to feelings of anxiety and discomfort. By implementing sensing technologies, lighting can be dimmed when no one is around to decrease energy use [Rijswijk et al, 2012].

Practical implication

- All camp roads are lit or light up with a sensor through motion
- Lighting is warm-toned and has a human scale

Relates to:

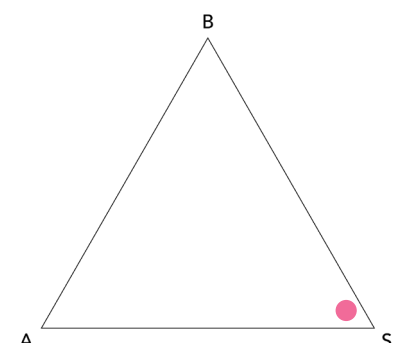
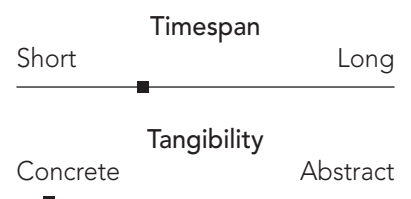
C.11 Guide the Way

R.19 Eye See You!

R.24 Steps to Sanitary

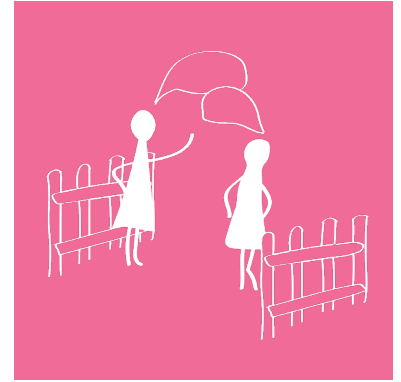


Lighting in the harbor of Panagiouda [own photo, 2024]



R.21 Let's Meet at the Fence

Permeable borders are spaces of connection instead of segregation.



Field research

The current camp border is restrictive, without a visible connection from the road. There is no pleasant place to stay at the border.

Theoretical back-up

Borders segregate communities, they do not have the same opportunities, increasing inequality. When borders are less restrictive, these can become places of sharing, for example through shared languages, art, music, and cuisine. By transforming them into destinations rather than barriers, they encourage cooperation and community, creating engaging environments for positive relationships among diverse groups [Abousleiman, 2023].

Practical implication

- The border consists of an in-between space that is accessible to residents and locals
- A visible connection between camp and the road exists, the concrete wall is removed

Relates to:

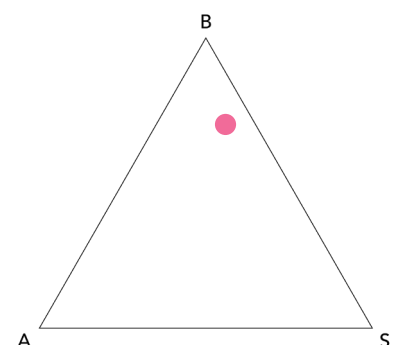
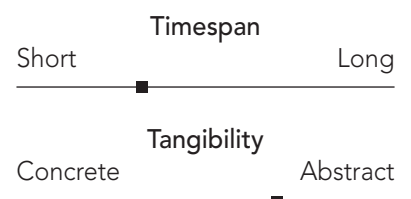
R.5 I'm in Sales

R.6 Sport to Connect

R.26 Meet in the Middle

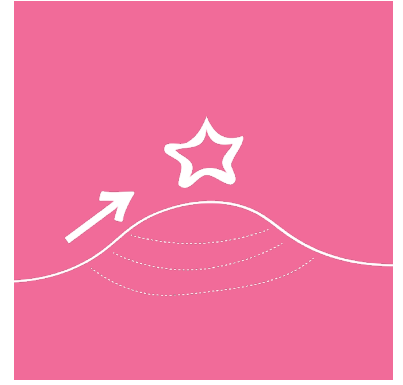


Visible connection at fence in Panagiouda [own photo, 2024]



R.22 Rise to the Heights

When the opportunities and facilities of the hillside are accessible to everyone, equality is ensured.



Field research

Some facilities are located on the hillside, like women's community centre and the free shops, on top of the hill there are sports fields. For people with physical disabilities accessibility to these opportunities is minimized. The majority of the hill in Mavrovouni is empty and unknown by residents, even though it has beautiful views. In contrast, the kasbah on the hill in Aleppo is an important place for inhabitants, giving a sense of identity.

Theoretical back-up

Equitable access to facilities is a key indicator of effective social infrastructure planning. Improved accessibility reduces spatial inequalities, enabling better service provision and fostering equality among residents by minimizing the distance to essential service [Li, 2016].

Practical implication

- Facilities are primarily located in the flat areas of camp.
- The roads leading up the hill are improved in terms of the ground surface as well as the addition of guiding rails
- The hill is designed as a highlight in camp

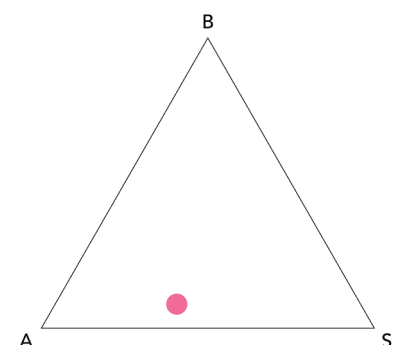
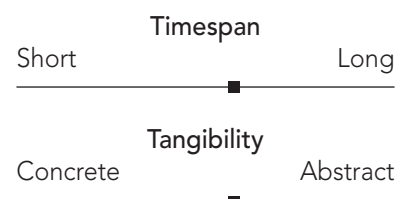


Paved road leading up the hill in Agiasos [own photo, 2024]

Relates to:

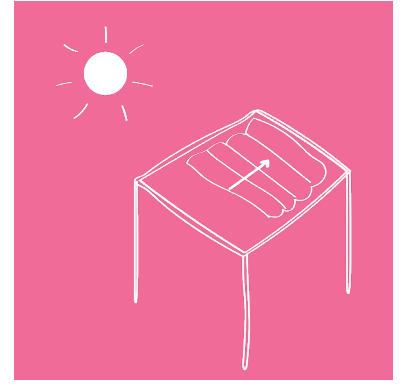
R.16 Use for All

O.9 Join the Gang!



R.23 Seasonal Weather Wishes

Designing the thermal environment through the seasons is vital for well-being of residents.



Field research

In the Greek summer, shade is vital, resulting in residents building canopies in front of their homes. In winter the warmth of the sun is appreciated. Similarly, the sea wind or a rain shower is appreciated in summer, but too cold in the winter.

Theoretical back-up

The thermal characteristics of the outdoor living environment directly influence residents' quality of life and physical and mental health. Thus, evaluating and designing for the thermal environment is vital to improve living comfort. Strategies relate to urban geometry, vegetation, surface materials, and the incorporation of water bodies [Liu et al, 2023].

Practical implication

- Permanent structures with adaptable shading, rain or wind shields
- Plant trees as a canopy
- Incorporate vegetation and water bodies for moderating temperatures
- Choice of surface materials based on thermal comfort

Relates to:

C.12 Climbing the Trees

R.17 I Like to Move It

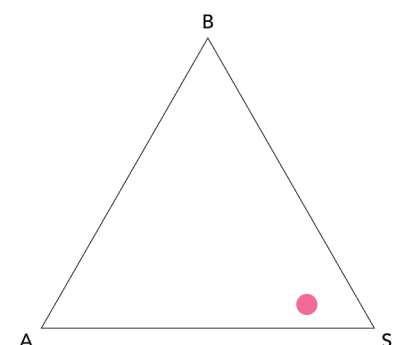
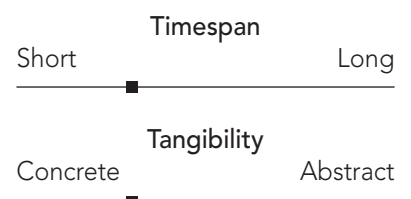
R.25 Lovely Landscape

O.5 Line up the Rhythms

O.7 Adapt to the Season



Sunshade at a shop in Panagiouda [own photo, 2024].



R.24 Steps to Sanitary

Few steps to sanitary make it accessible and safe any moment of the day.



Field research

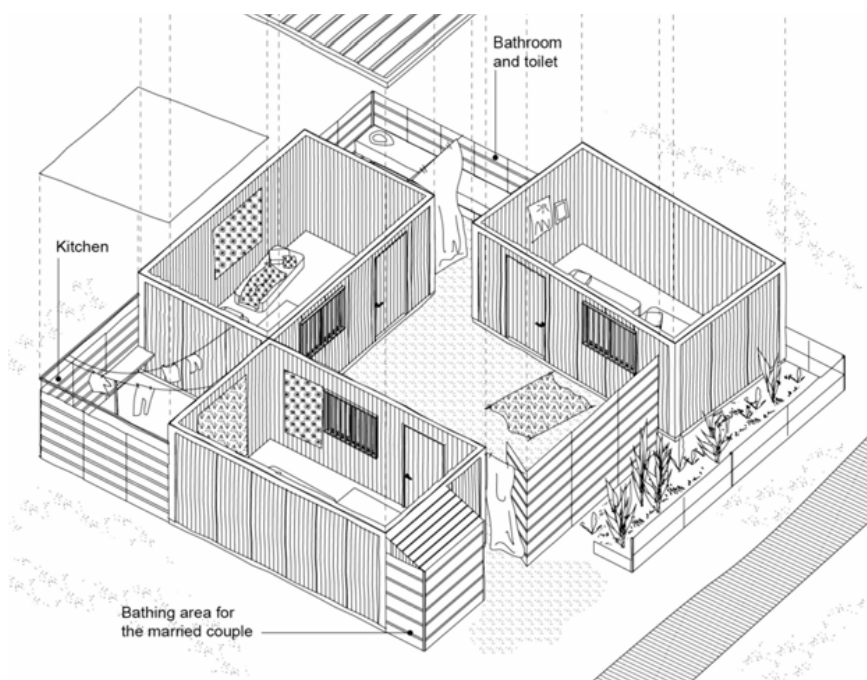
Sanitary facilities are located on the edges of living areas. Especially with disabilities it can be a struggle to reach these places in time.

Theoretical back-up

Sanitary facilities should be prioritised in refugee camps, to provide dignity and prevent disease transmission. Latrines in protracted contexts should prioritize accessibility, dignity, and include vulnerable groups such as children, elderly and people with special needs. Key factors influencing use acceptance included gender segregation, adequate lighting, good maintenance, cleanliness, user-friendly design, and proximity to the household [Domini, 2022].

Practical implication

- The distance to toilets is maximum 20 metres, measured from any home
- Sanitary facilities are shared with a maximum of 10 households



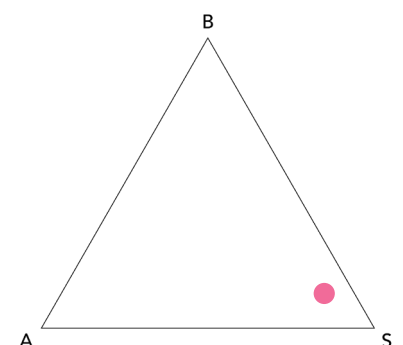
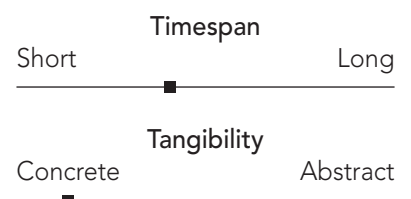
Residence in Zaatari, need for 2 bathrooms for one family [Dalal, 2022]

Relates to:

R.19 Eye See You!

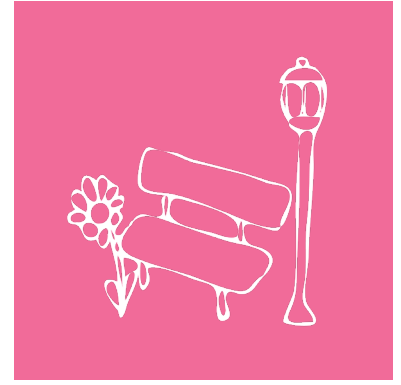
R.20 Light up the Night

R.26 Meet in the Middle



R.25 Lovely Landscape

A visually appealing living environment enhances residents' physical and mental well-being and promotes greater use and social interaction.



Field research

Currently the camp lacks landscaping elements, like vegetation and public furniture. Only the concrete gutters give structure to the public space.

Theoretical back-up

Urban design significantly influences mental health and well-being in residential areas. Access to parks and green spaces promotes relaxation, while street layouts, framed by buildings or vegetation, enhance safety and comfort. This can positively impact mental health by reducing stress and anxiety. Environments that encourage walking, provide gathering spaces, and ensure accessibility, can foster social connections among resident [Salsabila & Navitas, 2024].

Practical implication

- A thoughtfully designed landscape is implemented at the camp
- Natural elements, water and vegetation, are present in residential areas
- Public furniture like benches and picnic tables promotes interaction

Relates to:

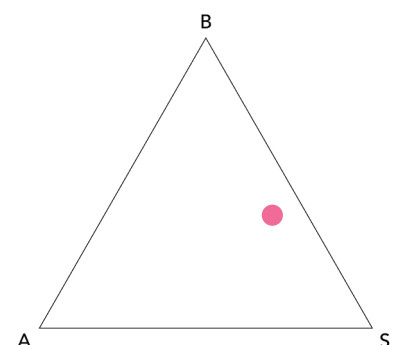
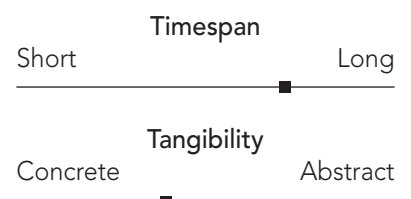
C.12 Climbing the Trees

R.17 I Like to Move It

R.23 Seasonal Weather Wishes

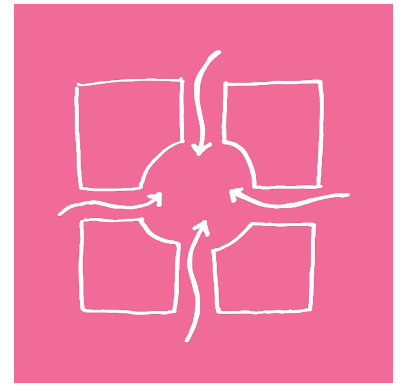


Small public garden in Panagiouda [own photo, 2024].



R.26 Meet in the Middle

Facilities located amidst housing increases their use and resident interaction.



Field research

Most facilities are located on hillside in camp, away from the housing areas. Residents do not know of all available facilities, like the community centres.

Theoretical back-up

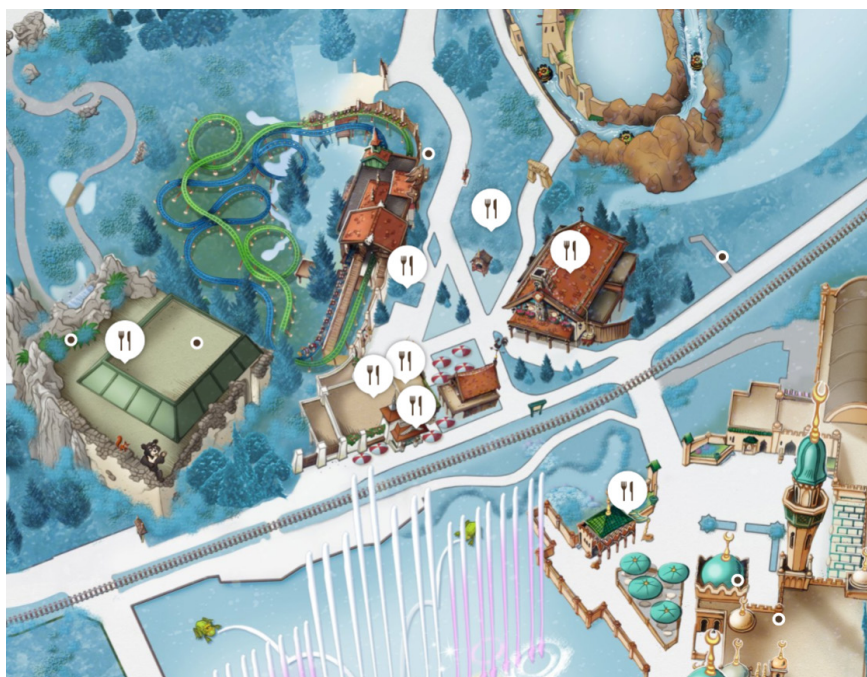
People are naturally drawn to areas where other people gather. Locating facilities in the middle of residential zones, will make people pass-by often. These spaces will become more social spaces, stimulating a feeling of community [Whyte, 1980].

Inspiration

In theme parks, the facilities like sanitary and food stalls are often located on central squares, making them places to gather.

Practical implication

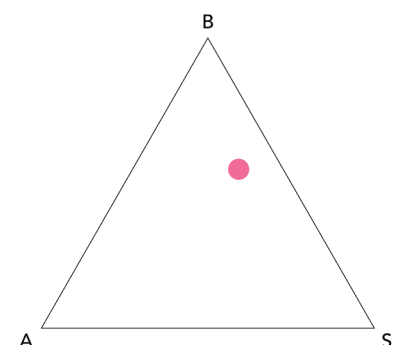
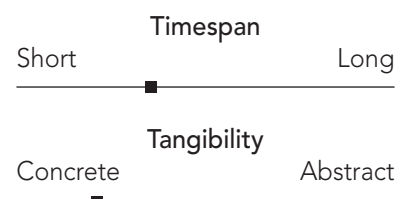
- Facilities are located amidst housing zones
- Facilities are located along a central road
- Some housing is built at the hillside



Square with food facilities in theme park [Efteling, 2024]

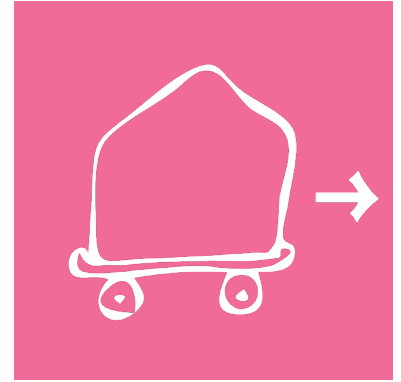
Relates to:

C.15 People to Watch
C.20 Play in the Middle
R.4 Communal Cooking
R.12 Online Opportunity
R.14 Steps to your Home
R.19 Eye See You!
R.21 Let's Meet at the Fence
R.24 Steps to Sanitary
O.11 Meet in the Middle



R.27 Move my Home

When I can move my house, I can build my own neighbourhood, that feels like home.



Field research

Currently the homes are positioned in a grid structure, this disciplinary layout reminds of the site being a former military shooting range. The morphology is said to be related to fire safety, which importance is emphasized by the fire in former camp Moria.

Theoretical back-up

All around the world refugee camps are structured quite the same, based on the guidelines of UNHCR. This does not take into account cultural differences and dwelling preferences. The layout of the physical environment can frustrate the residents. By thinking of refugees as architects, they are given agency. They know what they want and how to shape their environment. This shaping of dwelling is seen in the Zaatari refugee camp in Jordan, which houses a lot of Syrians as well [Dalal, 2022].

Practical implication

- Tools are available to move your homes, for example with cart structures or forklifts
- Guidelines for the layout of the homes for safety

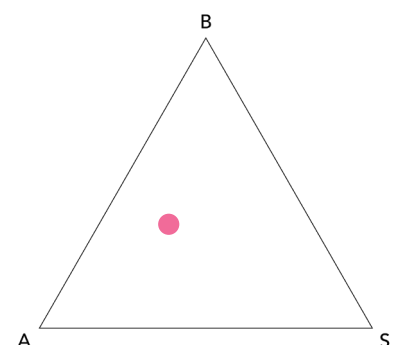
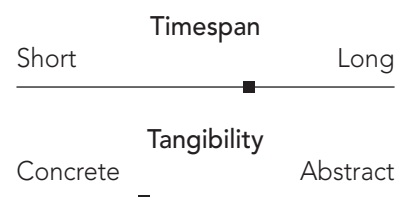


Refugees moving their home with wheels in Zaatari [Dalal, 2022]

Relates to:

R.17 I Like to Move It

O.12 Chosen Configurations



O.1 Sport to Connect

Sporting together with camp residents stimulates social connection and cohesion.



Field research

There are some organisations in camp that sport with residents regularly, playing football or volleyball. Volunteers and residents enjoy being active together. Every week there is a sport night for volunteers [see photo].

Theoretical back-up

Sport tournaments contribute to feelings of social cohesion, it has potential to unite disparate people and communities. Several projects have been implemented to overcome social, cultural and ethnic divides [Schulenkorf, 2012].

Practical implication

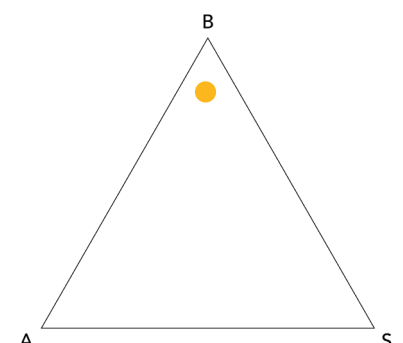
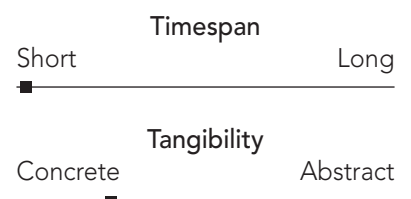
- Weekly sport trainings open to residents and volunteers
- Monthly sport tournaments
- Sport facilities in camp are accessible for volunteers as well

Relates to:

R.6 Sport to Connect



Eurorelief Sport Night [Own photo, 2024]



O.2 Daily Diversity

Boredom is reduced by organising different activities each day.



Field research

Camp residents do not have a lot of obligations during the day, resulting in boredom. They merely wait for their passport and do not have a daily purpose. Every day looks the same, the only obligation is foodline.

Theoretical back-up

A greater diversity of daily activities provides more opportunities to experience rich and balanced emotions, known as emodiversity, which is linked to improved health and well-being. Additionally, activity diversity is associated with enhanced psychological well-being and cognitive functioning. These findings highlight the importance of incorporating varied activities into daily routines to support overall well-being [Lee et al., 2021].

Practical implication

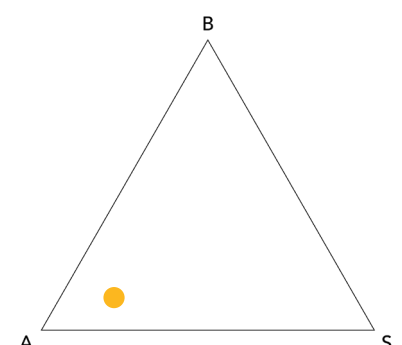
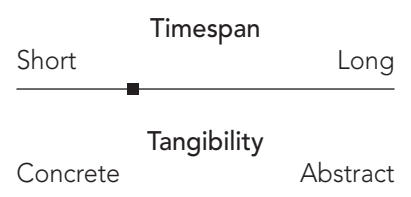
- Every day of the week different activities are scheduled
- Activities for fun or with a purpose are available

Relates to:

- R.1 Eat your Veggies!
- R.2 Trash to Treasure
- R.3 Sea the Opportunities
- R.4 Communal Cooking
- R.5 I'm in Sales
- R.7 Ap-Art
- R.9 From Tools to Tables
- R.11 Jobbortunity to Parenting
- R.12 Online Opportunity
- O.3 Open your Ears



Schedule Womens Community Centre [Own photo, 2024]



O.3 Open your Ears

Active asking for feedback of residents and carefully listening to their opinions, improves camp organisation.



Field research

Camp is controlled top-down, Greek authorities make decisions about the daily living situation. Within Eurorelief the social care team connects with residents and listens to their stories and needs [see photo].

Theoretical back-up

UNHCR [2024] stimulates a people-centred approach of camp organisation that enables self-reliance of communities. By embracing citizen participation, camp can become a more inclusive and culturally sensitive environment [Williams, 2005].

Practical implication

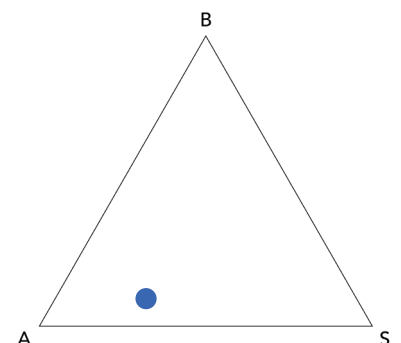
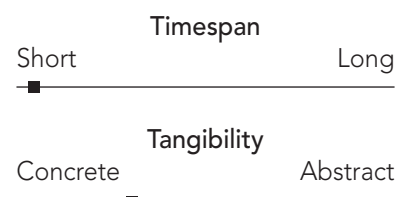
- Every community is included in camp decisions
- Camp organisation asks for feedback, for example with questionnaires
- Participatory activities, like serious games, are organised regularly to include opinions of residents in decision-making

Relates to:

C.9 Little Voice, Big Impact
R.10 Raise your Voice!
O.2 Daily Diversity
O.6 Trusted Transparency



Social Care teammember listening to resident [Eurorelief, 2024].



O.4 Belonging through the Scales

A community of smaller communities will benefit stability, agency and belonging in camp.



Field research

Camp is currently organised in 4 zones. People have left their home community behind. Different cultures live alongside each other, in some cases this leads to conflicts.

Theoretical back-up

People naturally organise themselves in different scales of community, with a multiplication factor of 3 [Zhou et al, 2005].

UNHCR advises a tailor-made modular approach in the organisation of the camp. This gives structure for the management and fosters familiarity for the displaced people. Hereby cultural characteristics and social structures should be taken into account. This will benefit the satisfaction, sense of ownership and community feeling of the residents [2024]. Thus, scalarity of communities provides structure in camp, giving a sense of safety as well as belonging.

Practical implication

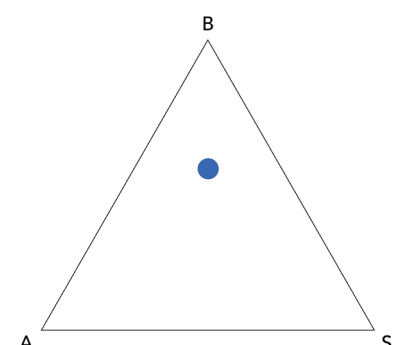
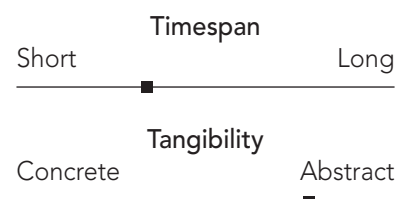
- Camp is organised in groups of 10 households, scaling with a factor 3 in several steps to the current 4 zones.
- Physical layout of camp reflects the group formation



Refugee Settlement Chad in 2009 [UNHCR, 2019]

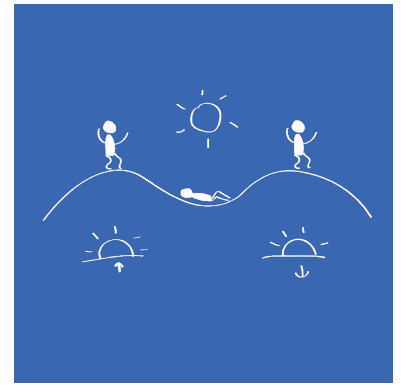
Relates to:

- C.13 Small to Big
- C.20 Play in the Middle
- O.10 Size the Site
- O.11 Meet in the Middle
- O.12 Chosen Configurations



O.5 Line up the Rhythms

Participation in activities is increased by aligning them with daily reoccurring appointments and the daily temperature cycle.



Field research

The afternoons in Greek summers are hot, residents as well as locals do not want to be active during these hours. Additionally, the foodline is a crucial appointment in the daily life of every camp resident.

Theoretical back-up

Participation in activities can be increased by scheduling them during cooler parts of the day, such as early mornings or evenings, when temperatures are more favourable, thereby reducing the negative impact of heat on physical activity levels [Obradovich en Fowler, 2017].

Inspiration

In the theme park Efteling a water show is planned at the end of the day, this takes place near the exit of the park and is a great finale of the visit.

Practical implication

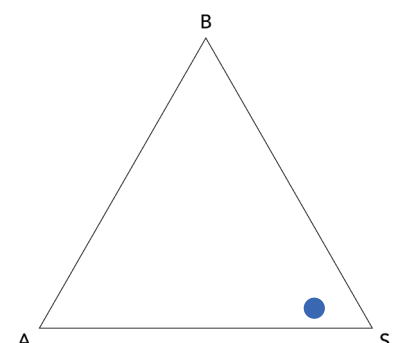
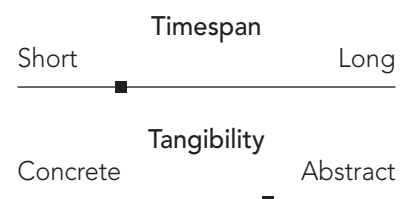
- Planning of activities is aligned with the daily temperature cycle
- Activities are combined in the daily schedule

Relates to:

R.23 Seasonal Weather Wishes
O.7 Adapt to the Season



Aquanura-show at the end of a day in Efteling [own photo, 2024]



O.6 Trusted Transparency

A clear and trustworthy organisation will stimulate resident engagement in camp.



Field research

Eurorelief has as rule that volunteers may never promise things to residents that they can not make true for sure. For example when distributing goods, volunteers should not promise to be back the next day for the neighbours. [see photo].

Theoretical back-up

Authentically engaging community residents requires acknowledging their lived experiences in planning and decision-making. Trustworthy organizations foster open communication and follow through on commitments, which are essential for stimulating resident engagement and ensuring the sustainability of community initiatives [Money et al, 2020].

Practical implication

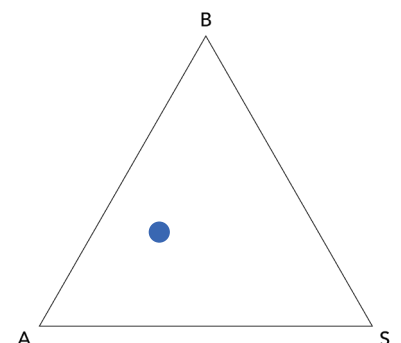
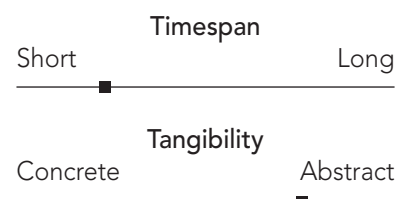
- Transparent communication channels help residents stay informed about decisions
- Organisation sticks to commitments
- Equal treatment of residents
- Camp organisation collaborates with residents, and uses their initiatives

Relates to:

O.3 Open your Ears
O.8 My Own Pattern

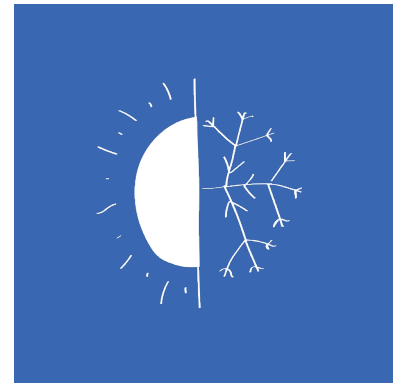


No promises on the hygiene products distribution [own photo, 2024]



O.7 Adapt to the Season

Adaptable camp structures meet residents' needs in different seasons.



Field research

In camp the weather seasons as well as arrival seasons impact the living conditions strongly.

Theoretical back-up

The adaptation of physiology and behaviour to seasonal changes in the environment is crucial for the survival of many organisms. Even humans, who predominantly inhabit environments with minimal seasonal influences, exhibit annual physiological rhythms [Michel & Kervezee, 2023]. In RIC Mavrovouni the seasons affect the living environment more than average, emphasizing the need for adaptability to different seasonal circumstances.

Inspiration

Theme parks adapt to seasons as well, during the Winter Efteling the park is transformed with a.o. an ice skating ring and snow on the fairy tales.

Practical implication

- Awareness of changing needs of the population by inquiry
- Adaptability of housing and facilities



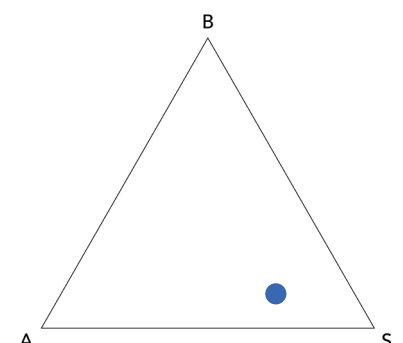
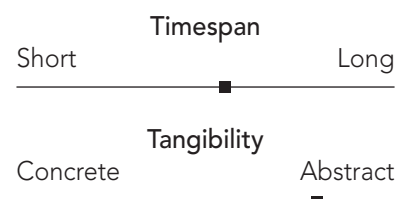
Ice skating ring during Winter Efteling [Efteling 2023]

Relates to:

R.23 Seasonal Weather Wishes

O.5 Line up the Rhythms

O.10 Size the Site



O.8 My Own Pattern

The combination of expertise and diversity in organisations stimulates creativity, benefiting development of new patterns.



Field research

The organisation of camp works for a large part with volunteers. This is a group with diverse ages, backgrounds and education.

Theoretical back-up

Greater diversity among people enhances creativity and leads to unique solutions, as varied perspectives and experiences are brought together. Diversity can challenge existing paradigms, leading to innovative problem-solving and the development of new ideas [Gholidoust, 2024].

Practical implication

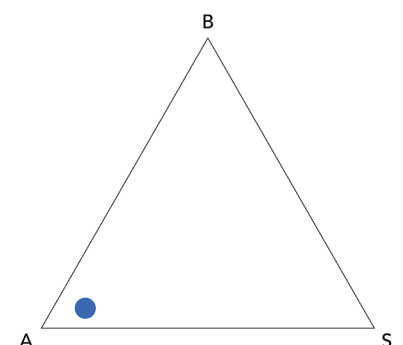
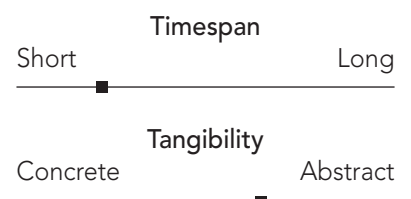
- Regular brainstorm activities with volunteers
- Idea box for volunteers

Relates to:

O.6 Trusted Transparency

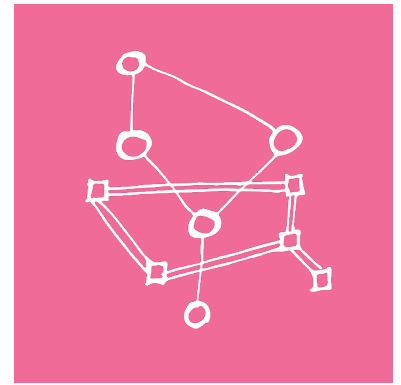


A musically skilled volunteer leading a class [Eurorelief, 2024]



O.9 Join the Gang!

Functions for one target group are more accessible when they are part of the same network.



Field research

Facilities targeted at children are located far from each other, especially from a child's perspective. This discourages children to go to play spaces or school on their own.

Theoretical back-up

For children and their parents, strong pedestrian connections make moving from one facility to another safe and easy [Doumpa et al, 2018].

Inspiration

One network in theme park Efteling connects the different attractions showcasing a fairy tale. This network is visible by the musical mushrooms along the route.

Practical implication

- Direct paths between functions aimed at one target group
- Guiding elements in one visual language along the route

Relates to:

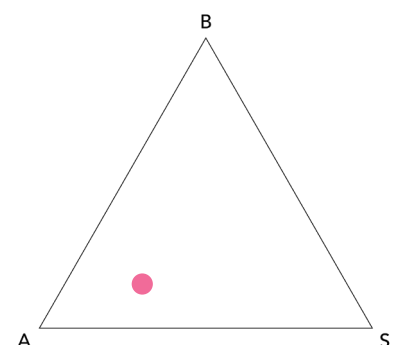
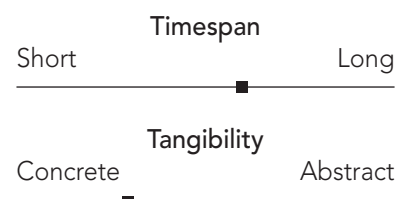
C.11 Guide the Way

C.17 Safe to Play, Made to Move

R.22 Rise to the Heights

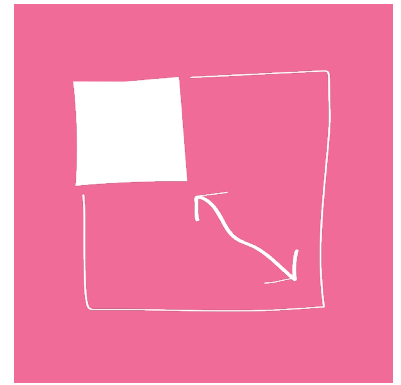


Musical Mushrooms in Efteling connect the fairy tales [Eftepedia, n.d.



O.10 Size the Site

Sizing the camp site according to the fluctuating population, will benefit feeling of community.



Field research

Camp population fluctuates, thus sometimes more space for housing is needed. During the field trip, two zones were [nearly] empty. In some of the camp 'streets' only few houses were inhabited.

Theoretical back-up

According to UNHCR [2024], settlement designs should be adaptable, able to respond to changes of the crisis situation. Additionally, camps should be limited in size, to minimize environmental impact, enhance effective camp management and foster social cohesion between residents. This benefits the safety of camp residents and gives them a sense of belonging in a community UNHCR [2024].

Practical implication

Population fluctuations are reflected in camp layout:

- Open spaces can house diverse functions
- Flexible infrastructure, such as roads, pipes and cables

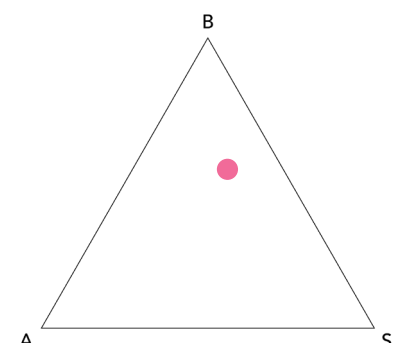
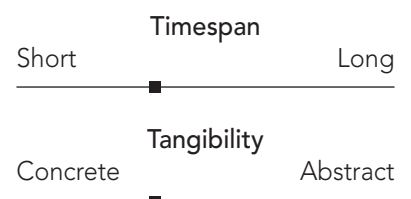
Relates to:

O.4 Belonging through the Scales

O.7 Adapt to the Season

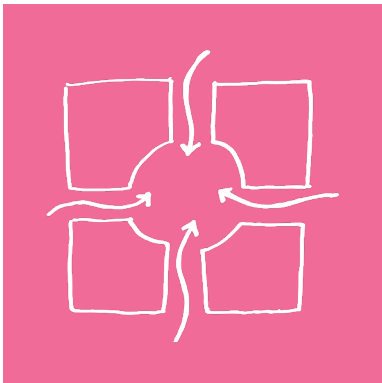


Festival terrain of Lowlands in the Netherlands [ANP, 2019]



O.11 Meet in the Middle

Facilities located amidst housing increases their use and resident interaction.



Field research

Most facilities are located on hillside in camp, away from the housing areas. Residents do not know of all available facilities, like the community centres.

Residents meet and chat at the basic facilities like water points.

In theme parks, the facilities like sanitary and food stalls are often located on central squares, making them places to gather.

Theoretical back-up

People are naturally drawn to areas where other people gather. Locating facilities in the middle of residential zones, will make people pass-by often. These spaces will become more social spaces, stimulating a feeling of community [Whyte, 1980].

Practical implication

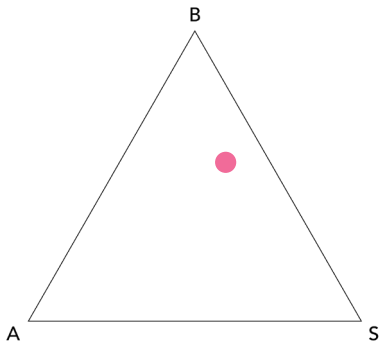
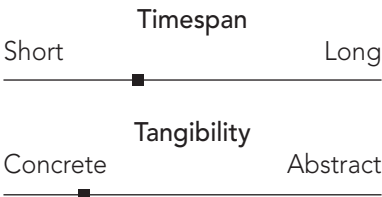
- Facilities are located amidst housing zones
- Facilities are located along a central road
- Some housing is built at the hillside

Relates to:

C.20 Play in the Middle
R.26 Meet in the Middle
O.4 Belonging through the Scales

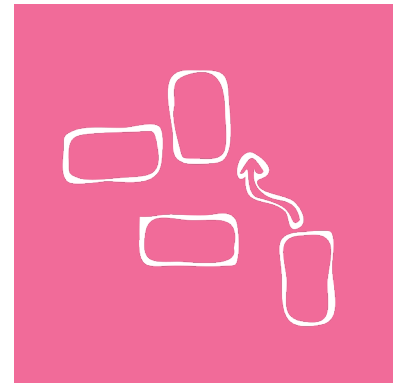


Small grocery shop in residential street Panagioda [own photo, 2024]



O.12 Chosen Configurations

When residents can choose the configuration of their homes, they will feel more safe and part of a community.



Field research

Currently the homes are positioned in a grid structure, this disciplinary layout reminds of the site being a former military shooting range. The morphology is said to be related to fire safety, which importance is emphasized by the fire in former camp Moria.

Theoretical back-up

All around the world refugee camps are structured quite the same, based on the guidelines of UNHCR. This does not take into account cultural differences and dwelling preferences. The layout of the physical environment can frustrate the residents. By thinking of refugees as architects, they are given agency. They know what they want and how to shape their environment. This shaping of dwelling is seen in the Zaatari refugee camp in Jordan, which houses a lot of Syrians as well [Dalal, 2022].

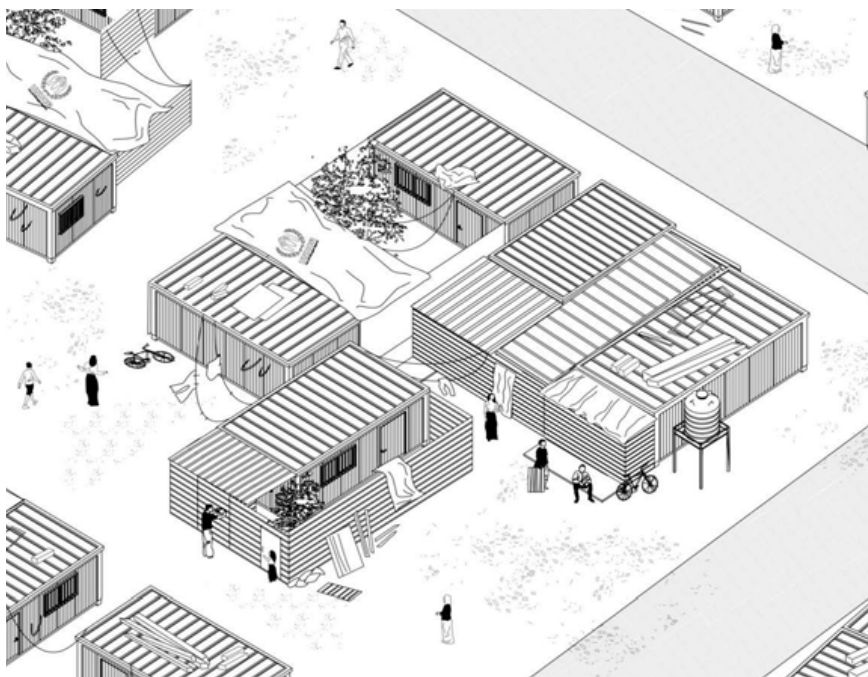
Practical implication

- A framework of rules for the house configurations to maintain safety

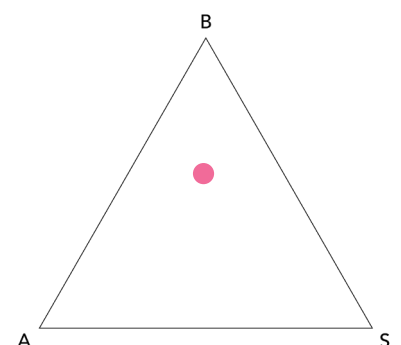
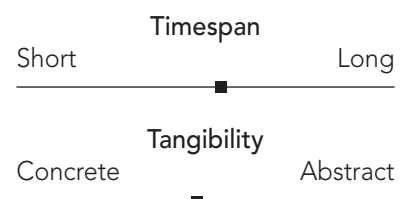
Relates to:

R.27 Move my Home

O.4 Belonging through the Scales



Perspective of urban fabric in Zaatari camp [Dalal, 2022]



Developing the Pattern Language

During the design more patterns came up, which were included in the second iteration of this booklet. More ideas came up in the final phase of visualizing the vision and design of the nostopia and during the pilot game. These ideas can be included in a later version of the pattern language.

Ideas:

- A barber or hairdresser; they already exist in the community centres, but not regularly.
- A beauty salon; the women's community centre organises spa or nail hours every week, this could be expanded.
- A Majlis for every community; the typical Syrian sitting room to welcome guests.
- Naming zones, blocks, streets and maybe even houses to give identity and belonging.
- A sewing place for clothes, curtains or else; there is already a sewing machine in the women's community centre.
- Small animal farm; children love the, as the workshop showed, and animals can relieve stress, benefiting well-being.
- Make residences stackable, reduces pressure on space and can give a sense of intimacy and familiarity to the former living situation, improving a sense of belonging.
- Volunteers in roles such as education or social care remain consistent over time, allowing them to build trust and strengthen relationships. This continuity enhances the quality and impact of their support within the community.

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