

e1nszu e1ns

architecture as social design
a documentation



Universität Stuttgart
ARCHITEKTUR & STADTPLANUNG

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Preface

a Platform for socially committed planning and building

The platform e1nszu1ns at the University of Stuttgart initiates, connects, advises and supports socially engaged design-build projects and labs. In the sense of socially committed building the projects can benefit from acquired knowledge and make a lasting contribution to change, through the exchange of experiences and critical discussion.

Being confronted with social questions on a global scale the projects or labs require the inclusion of interdisciplinary and participatory approaches. Teachers, students, experts are jointly designing and realizing them in cooperation with civil society partners on site in order to reach the highest possible level of sustainability in the projects and to aim at a sustainable engagement regarding the respective social, economic and cultural conditions.

This documentation is a reflective summary of the experiences of the last years. The first part of the documentation is dedicated to design-build as a teaching and research method, the project cycle and sustainability. Through experience reports of former students and colleagues, one can learn about their motivation, challenges and development opportunities in an exemplary manner. The whole range of student projects being implemented in the last years, is presented in the second part.

We would like to thank everyone involved in design build projects for their valuable commitment and inspiring cooperation.

Brief

What does e1nszu1ns mean?

"Planning and building"

The planning is being directly implemented into reality on a scale of 1:1. Therefore a well thought-out design of the building, to make something better and to experimentally arrive at innovative solutions, is the aim.

"At eye level"

The projects are planned, developed and realised at "eye level" with all cooperation partners; NGOs, students and users. Only when the process of building is understood as a collaborative project, which leads to a stronger perception of self-efficacy of the local population, we can speak of an added value on site.

Motivation and Understanding

Working on projects with the potential of making a difference

Working in interdisciplinary project groups

Offering a research and teaching space for context-specific and participatory construction and platform for networking and support of project initiatives

Stakeholders

Students design projects that deserve to be built. They play a crucial role in the construction process as well. On the building sites they provide practical help with other **Volunteers** so that their ideas become reality.

Teachers and experts support the planning all the way to implementation, from cultural conditions and local building materials to economics and structural engineering.

Local NGO's and future users give an insight into what is really needed on site. They approach us with their own project ideas, share their local knowledge and provide us with valuable contacts. Together with them planning, financing and realisation concepts can be developed.

Sponsors support the project with financial and material donations. They are important **Promoters** of sustainable ideas.

Set up

Platform e1nszu1ns (1zu1) was founded in spring 2015, initiated by Prof. Antje Stokman and financed by the University of Stuttgart as a "Knowledge-Transfer-Project". The main goal was to create a sustainable knowledge base that covers existing socially engaged student projects at the University of Stuttgart and supports future projects by creating a transfer of knowledge and resources that support socially relevant projects in their development, realisation and thereby facilitate their implementation.

Social relevance in architecture is characterized by the projects agenda to provide answers to current social challenges and makes a significant contribution to positive social development. However, contemporary architecture has increasingly detached itself from social interests and serves primarily to maximise the profits of international investors, property developers and the construction industry.

Current debates, publications, exhibitions and projects show a change in thinking as well as an active turn towards the social dimension of building with and for society. It has also found its way into teaching and research of the Faculty of Architecture and Urban Planning at the University of Stuttgart. In recent years, socially committed projects or "design-build" projects have been increasingly conceived, designed and realised at various institutes on the basis of a sustainable examination of the respective social, economic and cultural conditions on site. All these projects, which are carried out as study projects from the 5th semester onwards as well as within the framework of bachelor and master theses, have in common that they refer to a concrete spatial and social context and at the same time are oriented towards global social issues.

Creating a broader platform for cooperation, information exchange and communication this network has led to further joint projects between the branches of research, teaching and practice. As part of the call for proposals "Science, learn and teach" (WILLE) of the Baden-Württemberg Ministry of Science, Research and the Arts (MWK), the platform e1nszu1ns was one of the initiators for the universities application: "Stuttgarter Change Labs". After the launch of the project in November 2016, many projects and project-related teaching and learning initiatives, have been completed at the entire University of Stuttgart.

Approach

Intentions of the network

Practice - The students and teaching staff receive content-related and organisational-administrative support. At the Workshops of the faculty sponsored tools can be borrowed.

Network - Platform 1zu1 connects different target groups of social design/build architecture, such as students, architects, NGOs and initiatives. The interdisciplinary knowledge transfer is based on a cooperation of different chairs and institutes from the faculties of architecture and urban planning, building and construction, environmental engineering as well as economic and social sciences at the University of Stuttgart.

Documentation - Already realised design-build projects at the University of Stuttgart are recorded and documented on the project website or in form of booklets.

Student manual - In 2017 the 1zu1 guideline "How to plan and realise socially engaged projects?" was developed. This tool serves as a guide for planning and realisation of socially committed self-build projects. Students receive a first insight in the basic requirements of such a project and are guided step by step. The project sequence is divided into 7 phases: idea/request; advanced site analysis, research and sustainability; definition of the main question; planning; project implementation; documentation and presentation; reflection. Concrete examples illustrate the phases.

Research - The platform offers research and learning space for a context-specific and participatory construction. While the platform e1nszue1ns aims to facilitate the exchange of practical knowledge during the development phase, it is to be expanded into a learning platform during the validation phase. Within the framework of the university's internal knowledge transfer project "Learning by building" (2020-2021), an attempt will be made, by means of inter- and transdisciplinary analysis, to identify the success factors and learning processes that influence the course and design of design-build projects in their impact and sustainability. Based on this, a practical guide will be developed.



1 zu 1

Architecture as social design

A major focus of architecture as social design lies on planning and building with and for people. The task is to work with architectural as well as planning solutions to ensure that people are treated more humanely and to improve their living conditions. This concerns both people in favelas, slums and informal settlements in distant countries, as well as people in refugee accommodation or socially disadvantaged quarters in Stuttgart, Germany and Europe.

The social dimension of design and construction is crucial. Socially committed architecture has a direct relation to social reality, as a reflection on the meaningfulness of the design ideas through discussion with the users. In order to broaden the scope of this claim, local partners are needed to ensure that a project is not implemented in a way that ignores social reality but is anchored in and legitimised by local conditions.

Participation of local people, i.e. the later users, in the process of planning and partially also in the process of building itself, is another important factor to facilitate acceptance by the designated users and to create a local identity of the projects. Architecture can serve as a catalyst for social action and archi-

tects should see themselves as initiators of social processes with large impact. For example, building a school can provide a place for education in an african country, a meeting space in Stuttgart can create a place for communication between different culture or interventions in public space can promote social debate.

Participatory workshops, the collective search for locations and materials, involvement and the training of workers in the construction process are important factors in planning and building with the community on the basis of their cultural identity.

This involves the use of local available materials. The later users should be able to maintain, repair and if needed to extend the object.



The cooperation with local universities, industries and communities, with local craftsmen as well as with local authorities is crucial for the sustainability of the projects. The sponsorship for the development of projects is carried out by associations, NGOs, development aid organisations or citizens' initiatives, who are involved in the conception, financing, implementation and sustainment of the projects.

All in all, design-build projects are not simply technology transfer by universally applicable solutions but rather an exchange of knowledge in the sense of developing and implementing site-specific solutions that are culturally, socially, economically and ecologically justifiable.

Design-Build as a teaching method

an overview

"Tell me and I'll forget. Show me and I'll remember. Let me do it and I'll understand." (Confucius)

The university has always represented a place where new ideas have been spun, where criticism of what is already known is voiced and habits are questioned. It is therefore not surprising that it's the students who increasingly wish to achieve something outside of the lecture halls during their studies. Reflecting their future roll as architects and their wish to contribute to a critical discourse on society leads to action.

The implementation of a 1zu1 project is often linked to the students' wish to use their knowledge to find solutions for problems of the real world. Knowing about the importance of the project for the local population encourages many students to leave their personal comfort zone and realise a 1zu1 project in home towns or even in an international context. Initiatives for such projects therefore often come from the students themselves, but can also be part of a project within a faculty institute.



Project planning and, in some cases, the implementation are included as a study courses. The method of design-build projects at the Universities is merging architecture's public responsibilities with students creative, experimental and interdisciplinary surrounding. Socially engaged architecture, born out of humanitarian and socio-political issues, tries to improve the living situation with a low budget and lots of creativity.

The main principals and intentions of design-build projects are:

Collaboration - Including non-governmental organisations, associations, citizens' action committees, community, city administration

Understanding context - Confrontation with environmental and societal questions on a global scale

Design research - Adaptation to local traditions, resources, materials and construction methods, sustainable building technology and modern approaches of design

Teamwork - Working together with all partners using participatory approaches

Empathy and Ethics - Respect of cultural traditions and beliefs, rituals, ideas

Implementation - Transforming ideas into sustainable solutions, simple to construct, use and maintain;

Impact - The project is economically and socially viable, feasible, desirable and aiming for a change in society.

The structure of teaching design can vary in its form. It could be a seminar, design studio or a final thesis. In bigger design studios several strategies can be pursued. Students can develop independent projects in smaller teams, which then compete with each other in a "competition procedure" until a certain point. Another possibility is to start with several projects, then "merge" them at each successive phase, so that in the end a joint project is created. After the presentation of the project, all project partners involved decide on the architectural design to be realised. This final version is then further elaborated by the students with the result of a detailed implementation plan.

Relation between theory and practice

Students are engaged in so called "hybrid workspace", they work both in a university setting in their work spaces, but also in a real context. The phases are constantly disrupted by the intermingling of the two worlds. During the three phases, analysis, design and realisation, the constant practical relevance plays a crucial role, because it allows a permanent check of the project's realisation possibilities and requires a continuous flexibility and adaptability on the part of the students with regard to finding solutions. Transforming an idea into an architectural design, communicating it and then being able to realise it completes the learning process of each student.

Process oriented working

In the case of 1zu1, the whole process of each project gains an important role. It is not just about the final result, the completed project, but rather "how do we achieve this outcome? It is not only about the elaboration of an architectural design, but also about the question of how each step, from the analysis, to the design, to the construction site can be realised and carried out. Due to the inherent dynamics of each project (as each has different prerequisites, project participants, needs, etc.) there is often more than one right way to go, that can lead to the same goal. The task of the students is to explore these paths.

Student skills

The pedagogical value of design-build projects is multilayered. The students engage in problem solving, critical thinking and decision making. In addition to these, students also acquire other soft skills like organisational talent, negotiation techniques and empathy for the interests and needs of all project participants as well as flexibility and adaptability with regard to cultural differences or unexpected situations. The students also learn to deal with parameters such as time management, budget, public presentation and also handling technical and professional tools.

Difficulties and challenges

This teaching method can raise a number of difficulties. The biggest challenges are e.g. the risk of generating unrealistically high expectations among the project participants, "dissatisfaction" with one's own performance and an increased workload to adapt the project to the expectations of all project participants. The feedback from teachers, cooperation partners and later users can be much more critical than in "regular courses", as the feasibility and impact of the project must be strictly evaluated. It is important to define, from the very beginning, what is relevant for the project evaluation in the course. In this way, the evaluation criteria may differ from the criteria used for the project implementation on site. One has to ask oneself how the examination situation has to be organised so that the achievement of learning achievements as well as the construction can be assessed.

Due to the complexity of the projects, both teachers and students face new challenges. Both must be prepared for the new responsibilities in the courses. Teachers not only have to provide the professional knowledge, but are also active partners in the coordination with cooperation partners, with the community and in the implementation of projects. They must also be able to react at short notice if the general conditions change or the group dynamics require intervention.

The students find themselves in unknown situations, as they typically operate in a new environment and they have to deal with issues multi-dimensionally and from several perspectives, but at the same time they are motivated to deal with new topics and concepts and to work in a team. In that way they learn and study architecture on the basis of real tasks and project processes, which prepare them for the professional everyday life of an architect.

Design-Build and Research

Research-based learning or research-related teaching

Students can be integrated into larger research projects with a 1zu1 project. In this case the partial section should be precisely defined and the students should have the opportunity to go through the entire research process: Selection of the research problem, theoretical background, range of methods and forms of investigation, choice of the area of investigation, data collection and acquisition, analysis and publication.

In the field of architecture, research takes place as 'research by design', in which the research questions and methods are derived from the design. Since ideally several disciplines are involved in a 1zu1 project, research can also take place in accompanying disciplines using their own methods, such as sociology. A transdisciplinary research project represents a challenge on its own.

1zu1 projects also conduct practice-oriented research due to their direct relevance to reality. The written treatise of the design project and its processes can also focus on components, such as "trying out" and "testing". The role of collaborative participation with all involved parties (neighbourhood, associations, public bodies and institutions, etc.) on the design project can be one of the main topics of research. Investigating a collaborative process of brainstorming and its influence on the architectural design can provide revealing insights for research. The same goes for close examination of the actual implementation and the collaborative building process on the construction site.

Systematic research of design-build projects

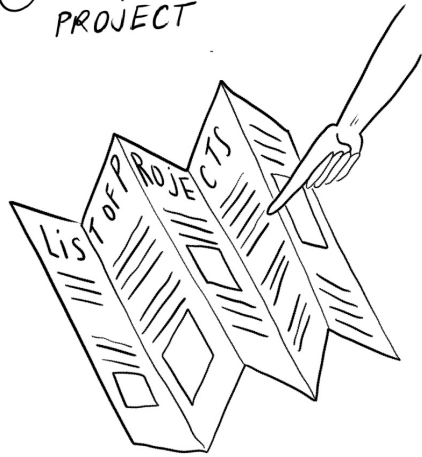
There are many publications, exhibitions and reports about individual design-build projects and teaching programmes, but there is still a lack of a systematic, scientific view of the project development and the teaching methodology as a whole. Design-build projects need to be examined from the perspectives of teaching, practice and research. The interactions between different project phases, actors involved, working processes, diverse contexts and learning loops should be systematically identified.

There is a lack of documentation of innovations in construction methods and materials as well as social processes. Social innovations that arise during the projects and are subsequently practised by the project partners - in the sense of socially committed architecture - have to be documented in order to make the project results usable in the future projects.

Due to the time component of 1zu1 teaching projects, quantitative and qualitative long-term studies on the use of built projects and their long-term effects are still missing. The impact of 1zu1 projects can be determined, for example, through changes in the willingness to use it and the activities implemented by users. Further criteria to measure and identify the impact of the design build projects have to be developed.

While the platform e1nsue1ns aimed at connecting practical knowledge during the start-up phase, it is to be expanded into a learning platform during the validation phase. Within the framework of the university's internal knowledge transfer project "Learning by building" (2020-2021), an attempt will be made, by means of inter- and transdisciplinary analysis, to identify success factors and learning processes that influence the course and design of design-build projects in their impact and sustainability. Based on this, a practical guideline will be developed.

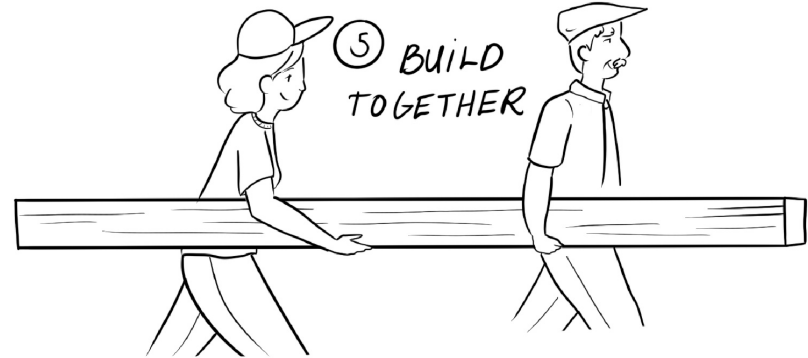
① CHOOSE A PROJECT



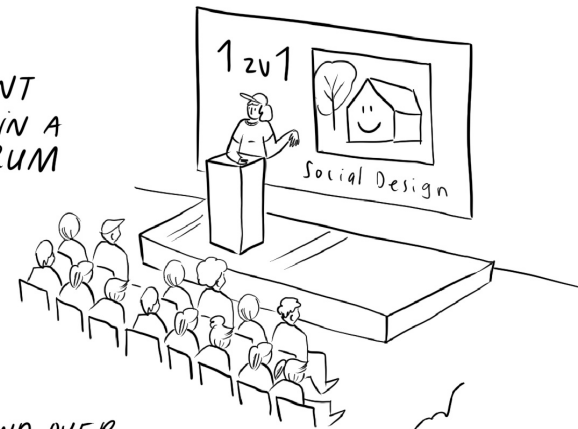
② IDENTIFY AND INVESTIGATE A SYSTEM IN A REAL-LIFE CONTEXT



⑤ BUILD TOGETHER



⑥ PRESENT THE PROJECT IN A PUBLIC FORUM



③ WORK WITH THE COMMUNITY



④ DESIGN WITHIN CONTEXT



⑦ HAND OVER THE BUILDING AND STAY IN TOUCH!



Design-Build Project Cycle

Choose a project

At the beginning of every 1zu1 project, students and teachers are confronted with the following questions: Who are the project participants and how does each individual contribute to the project? Which phases does the project involve? What permits does it require? How can the construction be financed? And who will ultimately build and maintain the facility? (see guide 1zu1 projects) In order to find answers and solutions to these questions, students need to acquire a variety of skills to help them implement the project.

Thorough preparation for a design-build project is crucial for a successful implementation. Previous experience and the knowledge gained can support this. The first important question is, is there a real need? If this question can be answered with yes, reliable partners, universities and NGOs should be sought. Together with the cooperation partners the objectives, time and budget plan as well as an approach should be defined.

Students and teachers must not see the project as an opportunity for self-realisation. The aim should not be to export their own big ideas and simply implement new concepts. From the very beginning, students and teachers should define framework conditions for all those involved and be particularly sensitive and responsible in examining and defining the expected results so that projects can achieve a deep social impact. Since every architectural action has a social impact, 1zu1 projects should not become a space for selfish experimentation. The aim should not be to export own big ideas und simply implement new concepts.

Identify and investigate a system in a real-world context

Naturally, the best way to get to know a place is to be able to travel there. An excellent example is an organised summer school in cooperation with local universities. However, current experiences of limitations in travel and the consideration of the ecological effects of long distance travel should also be seen as an opportunity and to reflect on possible alternatives. Greater integration of the digital components may well offer some opportunities. A close relationship with the cooperation partners, universities and NGOs, will become even more important to achieve a constant and qualitative exchange. Students can take on new roles in international teams - they act as "planning externals" on the one hand, and as "experts on site" on the other - and thus gain new experience. The learning effect occurs on both sides and has socially relevant effects. The use of alternative research methods such as study of literary works, films or music can be taken into consideration. The remote ethnography could be integrated as a tool for context and atmosphere studies. Experiencing the daily life of the people, "feeling" the atmosphere and tracking down the problems and potentials can be achieved through studying the urban context.

The analysis and research work means first and foremost the confrontation with the physical context in terms of local building methods and materials. The materiality, the arrangement of buildings and furnishings provide a framework in which the social interactions can be experienced.

In order to be able to assess the impact of a project and avoid conflicts, it is essential to understand the social complexity of the context. Therefore, it is necessary to consider the political processes in the respective country and to determine the circumstances that led to a crisis or the action it required. A question of equally importance is how societies function. To this end, sociological research methods can be used to identify social groups and their behaviour patterns and to examine the relationship between a society's capacity to act and its structure.

Recently, insights of architectural psychology have also been used in planning. Above all, this provides information on how people experience space and how they behave in the built environment. Knowledge of perception, meaning and emotions can help to understand how the symbolic space component in particular can be determined. It can also provide information on how people define and judge the term 'aesthetics'.

Work with the community

Well-planned participatory processes that are integrated into the project are not only the prerequisite for need-based and integrative planning, but also provide important information on how people use and develop technologies as well as the built environment.

Sustainable are those projects that balance the ecological, social and economic components of a project. In order to achieve these aims, it is essential to structure all three project phases (analysis, design, implementation) through participatory processes, which represent democratic participation and allow for an early integration of all participants in the planning and design process and can thus counteract conflicts, ensure identification with the project and strengthen cohesion.

Already in the 70s, Giancarlo De Carlo pleaded for building with the users and not for the users. Dialogue was seen as the most important means of process-oriented and contextual planning. In the interactive and participatory workshops, needs and wishes of future users and participants can be identified and necessary measures can be determined. These ultimately define the task,

the framework conditions and a spatial programme for the subsequent design. A transparent communication of objectives and resources (time, budget, work capacities, legal framework) is another crucial element of working with another and for a community .



How participatory processes should be designed is covered in numerous publications. At this point, only a few important points are highlighted, which need to be taken into account when planning:

Forms of participation - How is information gathered? Interview, workshop, storytelling etc.

Making settings transparent - When are the participatory elements planned and useful? Who should participate? Where will the meetings take place? How is exchange of information between the project partners organised?

Participants - What is the role of the participants in the community, in the organisation? Relationships of dependence need to be clarified.

Interpretation of information and use of outputs - How is the information interpreted, translated into architectural terms? Cultural and communicative differences should be taken into account.

Communication with the "non-architects" - How are the architectural ideas presented? How can models and drawings be "translated"?

Decision-making process - Which ideas are implemented or rejected, and how? How are this process and the implementations communicated to the cooperation partners and later users?

Design within the context

The question that arises is how to achieve a symbiosis between regional identity-providing traditions, local characteristics and at the same time global modernity. This interaction between a local cultural heritage, universal civilisation and globalised culture requires processes of adaptation and negotiation.

Based on the research and analysis, the first ideas are developed and different points of view and scales of a building volume in the design area, in relation to the direct context and urban studies, are analysed. After defining an urban development strategy, suitable architectural options for the jointly selected location are elaborated in the so-called main design phase. The collaboratively defined spatial programme hereby serves as the basis for the architectural design.

There are various factors that influence the architectural design, such as climatic and geographical conditions, which provide information about the materiality and construction methods. One might think that 1zu1 projects are exposed to more difficult circumstances, as they often have less funding and a limited time to plan and implement the project. Nevertheless, these difficult conditions often lead to creative and innovative ideas. Many students make a virtue out

of necessity and develop strategies in their 1zu1 projects which, for example, optimise the construction process or exploit local resources and integrate them into their design.

At this point a discussion on the relation between regionalism and modernism should be considered. The main question is how to plan the projects in accordance with regional traditions, like materials, shapes, colours and respecting the wish and aspirations for so-called global modernity.

Some of the following strategies were used in past projects.



Use of locally available building materials - This strategy also contributes to an environmental friendly understanding and use of local materials. It also optimises costs, by eliminating high transport costs while supporting the local economy.

Combining traditional and modern construction methods - This strategy sets the pace for innovative design, as it is based on the identity provided by local materials and construction methods and combines them with modern approaches. This often results in an efficient learning process for the students as well as for the local population.

Creative and constructive simplicity - Due to the high degree of involvement on the building site, many students develop strategies for construction principles in their 1zu1 projects, which they can then implement independently. The innovation here lies in the development of clever and simple design and construction principles, which can even be carried out by laymen.

Use of modular construction and prefabrication of components - If the architectural design has a modular logic, it is easy to produce the elements on site and then put them together. The advantage of modular construction is that students can optimise their practice from component to component. This saves valuable time and optimises the quality of execution.

Developing of specific architectural aesthetics - The question of beauty is not only a matter of architecture but also of everyday life. As Loytard stressed, Aesthetics is "more than just the pure representation of forms". With using available resources, the attempt is made to design an environment (building, garden, room) in which people feel good, comfortable and also perceive it as beautiful. Ideally, the "good" and the "beautiful" should manifest themselves in the built environment, relying on context-sensitivity. People design with what they have available, and through that show who they are and what they want to be. Therefore it is important to take a close look at the available aesthetics on site and how they can be implemented in the design.

Affordable maintenance - With regard to the sustainability it is essential that the future users can afford the building. All efforts, especially on a larger scale, to redevelop a district with costly new buildings and upgrades are of little use if this causes even greater financial difficulties for the residents.

Build together

In a subsequent working phase, the final design will be adapted to the regional format of an implementation plan in cooperation with local partners in order to be able to submit a building permit application to the local city administration. By this time at the latest, all regulations and legal requirements should have been clarified, the time schedule coordinated and the budget or materials obtained.

In order to strengthen the connection between the user and the project, the construction process is generally carried out in a participatory manner, with the future users becoming part of the construction and working on the building site themselves. This is often due to the fact that the students are responsible for the construction site on their own and can use all kinds of professional and extra-curricular support.

This collaborative work reinforces the identification process of the users with the future building. In many 1zu1 projects, if the user is integrated into the planning and construction process at an early stage and identifies with the building and architecture, this can have a positive effect on the overall dynamic.

As the 1zu1 projects are real construction projects, it is possible that their realisation may take longer than a semester planing at the university. As a project depends on various factors and participants, it is not always possible to determine an exact time frame, and it is even more difficult if it is a project in an international context. With regard to the factor "time", flexibility is necessary on the part of the students as well as on the part of the faculty.

Present the project in a public forum

The project should be presented in an appropriate presentation formats for a target audience. A presentation is not only important as a contribution to the teaching programme, but also for the supporters, sponsors and cooperation partners.

There are many companies and foundations that are interested in supporting social design-build projects, but cannot always understand their extent, as they usually accompany the process as external cooperation partners. By communicating the results, the potential and debate about design-build projects in general can be promoted.

Hand over and stay in contact

Every completed project requires a dignified conclusion with all involved parties. The step of "celebrating together" is especially important in participatory building processes in order to appreciate the achievements of each participant. In the best case, the building, park or similar is then ceremonially turned over to the users and/or the responsible NGOs or social or cultural organisations. The responsibility for the future use and maintenance of the project is handed over completely. However, longlife friendships and other opportunities to get involved remain.

Sustainability and limits of architecture

1zu1 means planning and building "at eye level". The process of building has to be understood as a community project, which leads to a stronger perception of self-efficiency and empowerment of the local population. The direct contact with social reality and the reflection on the meaningfulness of design ideas through discussion with future users is essential for the sustainability of the project. Learning from one another must be experienced and transferred into future projects and networks.

Every architectural and structural intervention, every punctual solution has an impact on the spatial and social environment. In order to ensure the integration and sustainability of 1zu1 projects, it is important to take a comprehensive look at the possible effects from the very beginning. This is the only way to steer and adapt the project course in the desired direction in a timely manner, if necessary. This mechanism enables us to constantly reflect on our actions and learn from our mistakes. Not only do we improve our work, but the motivation of all those involved can be maintained over a longer period of time. Recognising and naming limits is another factor that plays a major role during the implementation.



The positive aspects will certainly be tried to be reproduced by the community in the area in which the project is set. But still, although a bit reluctantly, one must accept that even with an aesthetically and functionally attractive building, the appearance of an entire district is not automatically changed. The neighbourhoods are to be considered as a complex entity. The processes that lead to a significant change need time and have to integrate themselves in masterplans on a bigger scale. An interdisciplinary approach should be adopted even for projects that seem small at first. There is nothing worse than a planning process that completely bypasses reality.

If operational difficulties are identified during the planning or implementation process, it is advisable to look for support. Local associations and organisations that have worked with the affected groups of people can be of help. It is also advisable to work with interdisciplinary planning teams, supplemented, for instance, by sociologists or social workers.

Further external circumstances can influence the course of the 1zu1 projects. For instance latent conflicts in future user groups. This makes it difficult to reach a consensus on design, planning, use or maintenance. Political unrest, corruption, unstable circumstances, can occur during a project, making it difficult to continue.

However, both the university and the partners from society must develop their competences and shape the learning processes in such a way that they can contribute to sustainable effects. The best possible integration of the project into the local structures must take place. Learning and understanding on all sides should be the ultimate goal.

Evaluation

- of the architectural design and project organisation

Design-build projects have to be evaluated in all their complexity. Not only the quality of the concept, creativity of the design solution and the outcome should be considered. Grading the work of a transdisciplinary project must include the process, i.e. how and what has been done. In terms of project management, all phases - initiating, planning, steering, controlling and completing - should be evaluated at the end of the development, which in this case is "handing over to the users". Parameters such as time, budget, resources, design of participation and communication methods including documentation should be evaluated.

- of the implementation

The 1zu1 projects are characterised by the implementation and realisation phase. Here, feasibility plays an important role. A constant review and evaluation of this feasibility by comparing the available resources (financing, materials, knowledge, etc.) and the time available is necessary. In theory, we can make many hypotheses and assume that things will turn out the way we expect them to. However, if we connect an architectural design with the reality in which it is to be implemented, there may be a dissonance between theory and practice. Students must have a high capacity for adaptability, problem-solving and perseverance to realise the project.

The finished building will be evaluated with criteria such as material, construction, aesthetics and integration into the context. This can be done by the teachers, users, cooperation partners and students.

- of usability and impact

To identify a significant social change influenced by the design-build projects long term studies are needed. Due to their cultural and social character, many 1zu1 projects aim to improve the life situation of a specific user group and to change or encourage certain activities and behaviour of the users through their spatial interventions. The extent to which this spatial change can promote an improvement in the lives of the users must be examined. Respective methods and tools have to be developed. In the context of long term studies foremost the usability of a project can be studied. The findings can be of help for planning and developing future projects. It is highly interesting to research how the building is being used through time. Often the indicator of usage shows whether the building is being accepted, valued and actively used by the community. If the user is not completely satisfied with the project, it is possible that independent changes will be made as soon as the project is finished. This does not always have to be seen as something negative, but rather shows that a real need was not identified in the process. The shift of usage over time can also occur if environmental and social changes have taken place.

Summary

The design-build projects are conceived, designed and realised on the basis of a sustainable examination of the respective social, economic and cultural conditions on site. The common factor for all projects is that they are highly context-related and react according to the local situation. Due to the complexity and numerous correlations between the project phases, participants, processes, contexts, which are strengthened by inter- and transdisciplinary co-operation, design-build projects should be conceived as a joint task.

These projects promote socio-political commitment. Students and teachers are being sensitised in a learning environment to the tasks and roles they have to fulfil as practising architects in an international context in the future.

A sound knowledge management system of design-build projects is an important basis for sustainable knowledge transfer with the help of planning and implementing projects that make a difference.

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„Aprender haciendo“ - Learning approaches based on practice Hannah Klug, Intuy Lab

Design-Build projects in the informal Latin American urban context

IntuyLab was established in the year 2015 as a Peruvian student collective, based on the idea of analysing and improving a specific part of the Peruvian capital Lima, through architectural interventions in public or community spaces, that had not received a lot of attention on academic level until that moment, named the "informal city". At the same time, the interest of foreign students and universities, mostly from the global North, in studying and working on the phenomenon of the informal city through academic projects grew remarkably.

Based on this growing interest, we, in IntuyLab have brought together numerous students from Peru and various other countries in the context of international workshops, where we explore collectively and critically examine specific questions regarding sustainable and social urban development.

Due to the high diversity and local dynamics that can be identified in Lima's informal urban areas, we adapt our working methods to each context, each community and each challenge we identify.

The human scale plays an important role for us and we act on the basis of its understanding. During our work, we like to confront our students with the following questions: " How can we improve our cities so that they become places of opportunity? What responsibility and role do we have as architects in this context? And how can we achieve these goals as a collective and society?"

Our work in IntuyLab has taught us that there is not always a single way to ensure the success of a DesignBuild project in the informal context. Each project represents a complex and dynamic process in which we confront different contexts (cultural, historical, social, economic and political), needs and opinions. Each context comes along with its own dynamics and each cooperation partner has its own needs to which the DesignBuild project should respond.

In order to understand the complexity and impact of a DesignBuild project, it is important to take a closer look at the geographical and social context the project will be implemented in - in our words the „territory and its inhabitants“.

The Territory - the informal city

The main context of our work is the Peruvian capital Lima. The challenges many Latin American cities, such as Lima are facing are for example the lack of a unified urban vision or a political system that does not „prevent“, rather than "extinguish fires".

Both mentioned aspects lead to a constant overstraining and aimlessness of the public sector, which does not succeed in satisfying the demands of the city. Citizens respond by beginning to seek their own "informal" solutions; informal human settlements or informal ways of transportation are emerging. Those developments are not always negative, but they have prevailed and brought a certain chaos to the city.

Given this context, the role of the architect in Peru has increasingly been in a precarious situation in the recent years, in which the work of the architect was mostly concentrated on the needs of the privileged social groups rather than on the crucial conflicts and needs of the city and society. Therefore, more and more architecture students claimed through public demonstrations or their work in independent collectives to be actively involved in the improve-

ment of the city. In our workshops we offer students the platform and the opportunity to critically examine and question the mentioned urban challenges and the reality we are living in and to explore, based on their own capacities, new possibilities and design strategies that can effectively respond to the problems and potentials of the territory. As the informal city represents a dynamic and uncertain environment full of surprises, wins and frustrations we as architects have to be prepared to constantly adapt our design strategies to every situation we face.



The Inhabitants - our project partners

The local Community - is one of the main partners in our projects. The majority of Lima's informal settlements and neighbourhoods were built by its own inhabitants. Therefore each family and neighbour has its own history within the „barrio“ and a personal relationship to their plot and house. During our work with communities in socially deprived urban areas we could identify precarious housing conditions, a high crime rate, drug abuse, domestic violence, social inequality as well as a lack of labour and educational opportunities. In addition, heterogeneous conditions within the community in terms of cultural and socio-economic differences can cause internal conflicts. Therefore it is important to recognize that every community has its own social dynamics, problems and potentials which need to be resolved or strengthened by determined social programs and planning strategies.

The local government - its involvement into a collaborative DesignBuild project is probably the greatest challenge, but it also represents the basis for a long-term maintenance and the sustainability of the project. As the administrative structures of the local government are often complex, many organisations prefer to implement the project in the "informal way“ and to „formalize“ it afterwards. Sometimes also political interests or conflicts impede the cooperation with local authorities and generate a lack of trust among neighbours. Although DesignBuild projects are often realized in underdeveloped urban areas all participants should aim for a formal planning process and take all time-related factors into account.

Local non-profit associations and NGOs - to assure the integration of a DesignBuild project into the local social and urban dynamics of a neighbourhood a local NGO or Association focusing on social work should be involved into the process to generate the connection between neighbours and architects. Moreover important information and data can be shared in terms of the identified needs of the neighborhood. Furthermore, it should be the task of the NGO to accompany the realized DesignBuild project through future activities or social programs.

The Students - who participate in our workshops often come from a variety of social backgrounds in Peru; in case of international workshops, even from different countries and cultures.

Our learning approach- the IntuyLab method

Despite of the varying motivations of our students, we ask them to acquire a detailed knowledge and a deep understanding of the local context and social dynamics, which will allow them to develop a sustainable, sensible and potent DesignBuild proposal.

During our workshops we generate a sensitization process through different participatory methods such as interactive mapping, „deriva urbana“ (urban drifting), tactical urbanism and temporal artistic activations in public space. Different planning obstacles and uncertainties require a high degree of flexibility and adaptability on the part of the students.

The complexity of any DesignBuild project in an informal context is therefore made up of two components: the challenges and conditions of the context, and the interests and opportunities of each project participant.

Due to the dynamics of both components, we cannot always count on linear planning and implementation processes, as they depend on many social, economic and political factors that can facilitate, complicate or even stop the project at any time.



We believe that architecture can become a tool of social development processes in which local conflicts, tensions and needs can be resolved. Participatory planning can help to generate a collective vision among all involved participants.

In the past few years, our projects have led us to define a number of principles based on our empirical experience, as guidelines for DesignBuild projects in informal urban contexts:

1. analysis of territory and people

The first step in every project is the analysis of territory and people. Only through an intensive study of the local conditions, which is largely carried out through an accompanying participatory process with the neighbourhood, we can identify deep-seated problems and conflicts, as well as long-term potentials, in order to subsequently plan strategies that can react to the respective situation and strengthen it.

2. every neighbourhood has its own rhythm

The participatory planning process varies in time and intensity for each community. The individual dynamics must be respected, if the future project aims to have a positive and long-term impact. It is therefore important to actively involve the neighbourhood in every phase of the process. The monitoring of this process can only be carried out on site, as the dynamics of the neighbourhood often require quick reactions on part of the planners.

3. the "learning by doing" method

The efficiency of the teaching method "Learning by Doing" was already illustrated by a study developed by the National Training Laboratories Institute in the early 1960s. According to that study, we humans learn 10% from what we read, 20% from what we hear and 75% by what we do (Bethel, Maine, 1971). "Aprender haciendo" represents one of the main ways of thinking and working at IntuyLab. Through different methods such as DesignBuild, Placemaking or Tactical Urbanism, we have been intervening in urban spaces over recent years. Our strategies of community engagement always start with a collective "learning and doing" experience between all project participants: neighbourhood, students, associations and local institutions.

4. recognise our own limits

Apart from the participatory design process, IntuyLab trusts in the potential of interdisciplinary work between for instance architects and social scientists. Architects and urban planners can often be pushed during DesignBuild projects to their professional limits due to e.g. conflict situations on society scale. In this case, the own professional limits should be recognised and complemented for instance through social workers.

5. transforming our territory into a resource for people

Ultimately and by integrating the mentioned principals into the DesignBuild process we are convinced that every territory can be collectively transformed into a resource for every persons that allows us to live in more human, inclusive and oportune environments.



About the author:

Hannah Klug graduated and completed her architecture studies at the University of Stuttgart in 2016. During her studies she developed a keen interest for the DesignBuild teaching method and participated as a student in the Ukuqala 2 project in South Africa and as an academic assistant in the project Atsipatari in the Peruvian rainforest. After completing her studies, she joined 2016 the Association of IntuyLab in Lima, Peru where she is now collaborative partner beside the architects Walter Soto, José Cepero and Giancarlo Pava. The Association IntuyLab focus on alternative research and teaching methods in architecture, trying to generate a direct connection between academia and society. In addition, she is a leading teacher at the University UCAL, Universidad de Ciencias y Artes de América Latina in Lima since 2016, where she is teaching in the Design Studio of AlBorde-UCAL, which focus on the DesignBuild method in the informal urban context of Lima.

The QR-Code contains the Video: "The alternative way to educate" - in which the process and the applied teaching methodology of a collaborative project are summarised and reflected.

the first design-build project of the University of Stuttgart

"Ukuqala" started with a guideline for sustainable building and introduction of hands-on building as part of the theoretical studies program. Since then, over 70 students have been in South Africa to build for the NGO Thembalitsha in Grabouw, a neighbouring township of Cape Town. Thembalitsha is an independent South African non-profit organisation that helps children who are directly or indirectly affected by HIV. Over the years, the "iöb" institute at the University of Stuttgart, together with their students, has developed a master plan for the Village of Hope and gradually built three houses and a kindergarten for children in need as well as volunteers.

Following the guideline "build together, learn together", the construction of the houses has to be seen as a joint effort of students of the University of Stuttgart and inhabitants of Grabouw. The buildings were not being randomly placed, but were intended to help the inhabitants of Grabouw and even inspire them to discover new building elements and techniques that could eventually be used in the construction of their own houses. The curriculum of ukuqala^{1,2} and ³ included one semester of theoretical planning in Stuttgart and two months of hands-on building in South Africa. Throughout the whole process, each student was part of a specialised team, such as "structure", "walls", "windows", etc., and bore full responsibility up to the scale of 1:1.

Leslie Koch and Ulrike Perlmann presented ukuqala as their thesis in 2010. Since then Leslie has worked for University, developing other design-build programs and helping individual students to start their own hands-on designs.

To get an idea of the individual experiences at ukuqala projects on site, we have interviewed Leslie (L), project leader of ukuqala, Tim (T), project leader of Village of Hope, Heiner (H), student of ukuqala¹, Florian (F), student of ukuqala² and Kristina (K), student of ukuqala³.

Interviewee: Leslie Koch

Ukuqala means „beginning/ start“ in Zulu, one of the 11 official languages in South Africa. What kind of (personal) start do you associate with ukuqala?

(L) ukuqala has been a starting point for me in various ways. Ulrike and I were searching for a topic for our diploma thesis, when the horrible earthquake in Haiti happened. All of a sudden, sitting in our workspace until very late, working on models and drawings for a nice design, didn't make sense anymore. I was questioning the sense of our work and profession and wanted to change something in my behaviour and work by using the tools I had learned for the past 6 years to do something socially beneficial.

Since then my way of working and my designs have changed completely, of course. I am still very glad about everything I learned during these projects. ukuqala1 has also been my very first teaching job. I never thought, that I would ever work in education, but after ukuqala I stayed with it for almost 7 years afterwards.



The first project of ukuqala is already almost 10 years old. What are your feelings thinking back?

(L) Even though the job was very demanding, I am very proud what we all managed to realise: collecting money, organising a construction site in a foreign country with non skilled workers, organising a students group of 20 young and wild ones without having anyone hurt and last but not least building 3 proper houses for people in need. I am very thankful that I had the opportunity to be part of all that, meeting all these amazing people and making all these good memories.

The country of South Africa- within the project you got a little glimpse of it - are there any memories you still remember or profit from?

(L) South Africa is my first love country. I've always felt welcome and supported. The overall experience, spending a very long time in this culture helped me to never forget to appreciate little things.

What is your best memory of ukuqala?

(L) of course there is not only this one best memory, but the sum of all these little and big things which still warm my heart. The little boy Lifa who always went shopping with me and made me realise why we were doing the project; the student who grew up in Capetown but was thankful to see the other side of his town through the project; our topping-out ceremonies; seeing the students taking over responsibility and having this endless passion to finish the project; the collaboration with the community workers, how they developed and the exchange with our students; the housemums with all their love taking care of the children and also brighten our days with their hugs and songs; the big firms and also every single individual who believed in us and was willing to donate; meeting all teammembers and develop new friendships, which last until today.

Social Architecture/ building for the other 99%, what impact has had the project on your life and the path you have chosen professionally?

(L) Because with the start of ukuqala I have also started my professional career, the impact has been immense. 2010-2017 I have been working a lot in social Architecture/ design-build projects. Together with colleagues I also founded 1zu1- a network to transfer knowledge developed during design-build-projects at University of Stuttgart.

In 2017 , me and my partner founded our architecture office with a focus on sustainable building - of course one result of all these years working with natural materials and having the prove that it works out perfectly.

Interviewee: Tim Walker

Ukuqala means „beginning/ start“ in Zulu, one of the 11 official languages in South Africa. What kind of (personal) start do you associate with ukuqala?

(T) For me each of the three projects were new starts for many reasons, firstly a new relationship with the university, secondly each set of students that came to give something of themselves and thirdly each building provided us with the next step or beginning of another phase of the development of the Village of Hope.

Ukuqala- why and how have you become part of it?

(T) Out of the blue I received some communication from Leslie who was looking for a project to partner in South Africa, I was overseeing the Thembalitsha Projects in Grabouw, our Village of Hope with it's children unit, the sports outreach into the community as well as Thembacare our palliative care unit for adults suffering from HIV/AIDS. Leslie told me that they would come and build a structure for us, my response was 'wonderful but we don't have any time or

money to undertake that, but we do have the space and the need for new buildings', Leslie responded to the effect that they didn't have space/land but did have skills and the means

The first project of ukuqala is already almost 10 years old. What are your feelings thinking back?

(T) Wow I have very mixed feelings, I can hardly believe where that time has gone and what was achieved by the students during their short trips to work with us, I hope that they enjoyed their time with us and that they learnt a little more about themselves and the big wide world around them. It were stressful but happy times,



each day brought its own challenges, which on top of the day to day running of the project was taxing at times but we managed to get through and the results that were produced by the students were amazing and so very much appreciated.

Three skills you gained during ukuqala?

- (T)**
- a, Working with students from a culture and mindset different from mine
 - b, Making even more time for others and having patients as we worked through things together.
 - c, Many physical skills as we finished off some of the items that couldn't have been completed by the students due to their limited timescales.

What is your best memory of ukuqala?

(T) I loved meeting the students, making good friendships and helping them see the life of the poor and needy in South Africa. The 'Topping out' ceremonies were always good fun, putting up a tree, drinking beer and having a braai together. The buildings that were created were awesome and that brings back great memories too.

Interviewee: Heiner

Ukuqala means „beginning/ start“ in Zulu, one of the 11 official languages in South Africa. What kind of (personal) start do you associate with ukuqala?

(H) Ukuqala“ was the beginning of a great experience, a big adventure and important friendships.

Ukuqala- why and how have you become part of it?

(H) I have always been looking for design-build projects and I was interested in travelling. When I first read of Ukuqala in the course schedule I knew I would do everything to become part of this project.

The first project of ukuqala is already almost 10 years old. What are your feelings thinking back?

(H) When I think back to the intense weeks I spent in SA, I always have a smile on my face. Even though it was the most exhausting time I've had so far in my life, I don't regret a single day.



The country of South Africa- within the project you got a little glimpse of it - are there any memories you still remember or profit from?

(H) The first time I heard the saying “TIA - This is Africa” was when we arrived on site with a big folder of static calculations. As a trained carpenter I was part of the construction team. Back in Germany we spent long evenings at the Institute of Building Structures and Structural design (ITKE) with the great Gerhard Meisner to calculate the statics of the building.

When we arrived on site, we saw nothing of this would help us here. The foundation that a first team had built was completely different to the system we prepared for, so we had to adapt and improvise. Looking back, I would say, the final construction, that was based on local skills, was way more practical for the further course, easier to imitate and simply better than the things we had prepared.

Three skills you gained during ukuqala?

(H)

1. cultural competence
2. teamwork
3. improvisation skills

What is your best memory of ukuqala?

(H) It's difficult to pick the best memory out of 10 weeks of great memories. To choose one, I would describe the moment after we nearly finished the first project. Most of the team members had left and me and a few friends stayed to finish the last works and make pictures. We stayed on site, slept in the great house that we had built and enjoyed the starry sky at a campfire. The incredible pressure and tension of the weeks before calmed down and we were the most happy, tired, and proudest guys on earth.

Social Architecture/ building for the other 99%, what impact has had the project on your life and the path you have chosen professionally?

(H) After Ukuqala I really wanted to do more projects like this. During my further studies I was part of several similar projects. After finishing my education at the university of Stuttgart, I was part of a team that created the platform einzueins. A university-based collection and contact point for students who want to do design-build projects. I still benefit of the experiences, friendships and skills in my everyday life, both at work and in private.

Interviewee: Florian Kaiser

Ukuqala means „beginning/ start“ in Zulu, one of the 11 official languages in South Africa. What kind of (personal) start do you associate with ukuqala?

(F) The Ukuqala kindergarten was the first project that I was involved with from first sketch to completion on the construction site. As such, it represents a defining moment in my personal career as an architect. I still remember the overwhelming moment of seeing the finished building for the first time. The great memories of this project also encouraged me to open my own architecture firm some years later.

The first project of ukuqala is already nearly 10 years old. What are your feelings thinking back?

(F) It makes me really happy that, after Ukuqala, many projects were realised all around the world by students of the University of Stuttgart. To me, that really underscores the success of following a design studio from first sketch to realisation.



The country of South Africa- within the project you got a little glimpse of it - are there any memories you still remember or profit from?

(F) For me, the most special experiences happened with the local workers that collaborated with us. With one of them, his name is Boyjie, I've developed a friendship that lasts until today. Even five years after the completion of the projects, he generously hosted me at his house in the township for a visit.

Three skills you gained during ukuqala?

- (F)**
1. dealing with construction tolerances
 2. constructing a self-made bubble level
 3. pronouncing the word „Xhosa“

What is your best memory of ukuqala?

(F) My best memory by far is the celebration of the completion of the building with the workers and the children from the kindergarten.

Social Architecture/ building for the other 99%, what impact has had the project on your life and the path you have chosen professionally?

(F) Ukuqala 2 was a very important project for me. It was not only the first time that I was confronted with social architecture, but also my first construction site, which gave me critical insights for my future career decisions and considerations when starting my own firm.

Interviewee: Kristina Egbers

Ukuqala means „beginning/ start“ in Zulu, one of the 11 official languages in South Africa. What kind of (personal) start do you associate with ukuqala?

(K) Ukuqala was the beginning of my part-time work that I've been doing for over 7 years now: Building a school in Zimbabwe. With ukuqala I was not only able to turn my interest in building in Africa into reality, but was also able to seamlessly start building the school building in Zimbabwe.

The first project of ukuqala is already almost 10 years old. What are your feelings thinking back?

(K) The time in South Africa was a very intense time. Never before had I worked on a project where it was so important that you have to work in a team and that the goal can only be achieved through collegiality. What was special about it was that working together also allowed you to grow together privately in such a way that it feels like a little bubble afterwards. A completely new everyday life in a new context (culture, nature) with new work and many interpersonal relationships. Back in Germany, everyone gradually returned to their everyday life.

The country of South Africa- within the project you got a little glimpse of it - are there any memories you still remember or profit from?

(K) I remember very well the beautiful landscape that surrounded our construction site. Driving through the hilly apple orchard and wine landscape every morning with the first warm rays of the sun made a special start of the day. But I also quickly realised that this is a privilege. That, together with the experience I have now gained in Zimbabwe, has made me question my own lifestyle a lot.



Three skills you gained during ukuqala?

- (K)**
1. self-confidence
 2. staying power
 3. building with timber

Social Architecture/ building for the other 99%, what impact has had the project on your life and the path you have chosen professionally?

(K) Through ukuqala I got the connection to a school building project in Zimbabwe and started to work immediately afterwards. That has now become part of my (professional) life. Always on a voluntary basis alongside my actual main job in architectural offices, but with all my heart and soul. I have even won some architecture awards with it.

About the interviewpartner:

Leslie Koch, trained at University of Stuttgart and Melbourne, started the first design-build project "ukuqala" as her diploma thesis with Ulrike Perlmann in 2010. Since then she has been engaged in these kind of projects as a teacher and researcher at the Faculty of Architecture and Urban Planning until 2017. Since 2017 she runs the architecture office 'studiolokt' with her partner. Currently she lives in Portugal with her family.

Tim Walker - Joint Project Manager of The Village of Hope and Area Director of Thembalitsha Grabouw. After living in South Africa for nearly seven years, he now travels around the world, mainly Africa, sharing an amazing leadership programme into some of the most vulnerable communities with his wife Maz.

Heiner Wolfsberger, originally trained as Carpenter, studied Architecture at University of Stuttgart and took part in ukuqala1 and 3. He currently lives with his family in Stuttgart and works for Plus+bauplanung, an office which is engaged in hands-on projects.

Florian Kaiser studied Architecture and Urban Planning at the University of Stuttgart. After graduating, he worked for Herzog & de Meuron in Basel. From 2016 to 2020, Florian joined Prof. Jens Ludloff as an academic researcher at the Department ibk3 at the University of Stuttgart. Today, he works as a founding partner of Atelier Kaiser Shen in Stuttgart, which he established with Guobin Shen in 2017.

Kristina Egbers studied architecture at the University of Stuttgart. After ukuqala3 she finished her diploma thesis with the design of a primary school in Zimbabwe, which is under construction for over 4 years now and is not yet completed. As part of the NGO Engineers Without Borders she has had the opportunity to be on construction site for several months in addition to her main work in architectural offices in Germany. She currently lives in Berlin and is waiting to fly back to Zimbabwe soon.



Architectural design as a method of action research

As architects and urban planners, we usually project our ideas into an unknown, complex future, while at the same time influencing the world we live in. In order to design with and for reality, as well as finding sustainable answers to social questions of our time, it is necessary to examine, interpret and design the living realities on site. The built environment, as something subjectively experienced, requires subjective research of the found environment to produce reliable conclusions.

Dealing with this challenge during a semester project at the Institute of Urban Planning and Design led us to establish the non-profit organization Adapter. As Adapter we investigate how new forms of communal living can look like, while integrating the needs of the inhabitants and offering new design possibilities. The main goal is to gain insights through residential interim-use-projects. These temporary projects - so-called „Reallabore“ - serve as laboratories of reality and work like an urban action research. Because of the close interaction of knowledge application and knowledge production they offer the chance to confront one's own designs with reality and integrate participant- and site-specific insights into the design process.

Due to the temporary character, innovative approaches can be tested and experienced in a short period of time with a low risk and authentic conditions. These results can then lead to recommendations in construction and planning. When designing urban interventions it is essential to develop methods to be multipliable and scalable, to achieve a useful knowledge base. With Adapter we carry out investigations on all scales. We organize shorter test phases and impulse projects, build 1:1 mock-ups or develop hands-on workshops. This way, we encourage people to question their own living habits in order to redefine their needs and personal ideas about housing. At the same time different methods can be tested for reliable intermediate use projects and research what "new living" is.

A strategic approach, continuous documentation and reflection of the process, as well as one's own understanding as an architect or urban planner become fundamental components of the design process. These projects grow from exchange with all those involved in the urban context, confrontations, surprises, errors and mistakes. It requires perseverance for discussion, allowing new questions and reorganizing the approach based on the evaluation of test phases, as well as a lot of trust from students and teachers. The university can provide a productive environment for this kind of projects and at the same time act as a driver of social innovation in the city.

Begegnungsraum

Tina Pal



Establishing a place of interaction

Idealism plays an important role in the realisation of social building projects - but you never know how the building will be acknowledged, how long it will be used for or how and by whom it will be occupied. Of course there is always great hope that the building will be accepted, but besides one's own efforts it strongly depends on its integration into the community, the acceptance of the citizens and other factors.

After completion in October 2017, thanks to the efforts of numerous volunteers, the cooperation partners initiated first events such as the Women's Breakfast, learning aids and Chai Time. The latter is an event initiated by the team of Begegnungsraum and enables 'talking - playing - laughing' with each other over a cup of Chai Tea in a casual atmosphere. Over the years the Begegnungsraum has established itself not only as a place of learning but also as a meeting spot. The space invites everyone living in Stuttgart, who is looking for cultural exchange, onto a neutral ground, whether refugees, migrants, students or long-term citizens. The project has now reached a point of being perceived as such a neutral space and is used regularly by the refugees' own initiatives in cooperation with Stuttgart citizens and students of the University of Stuttgart.

The space thrives on the interaction and commitment of volunteers and is supported by the University of Stuttgart, the City of Stuttgart, DAAD "Welcome" Project and EVA Stuttgart. Today, the room is used for several events every day and is coordinated by a constant team. Similar to the realisation of the building, the space offers fugitives the opportunity to actively participate in the shaping of their everyday lives. They are invited to carry out activities they have pursued in their home country and to share them with citizens of Stuttgart. Through the connection with existing and emerging initiatives, a cultural exchange is created through dialogue. It developed into a "place of opportunity" in which numerous meeting, teaching, exchange and information formats take place.

The Begegnungsraum is currently in a consolidation phase and will be supported and continued by its own association structure. This is another example of the integrative nature of the organisation: both the volunteers and the refugees assume responsibility on the Board. This structure gives everyone the same voting rights so that all plans and decisions are made together. This step is another proof of the exciting development and is still closely connected to all participants of the Begegnungsraum, whose greatest philosophy is exchange: encounter in urban space - open community as a self-conception - space on neutral ground for open exchange with friends and strangers.

Schützenplatz

Team Casa Schützenplatz e.V.



Context of the project and the toolkit

The project "Schützenplatz-Nachbarschaft Selbstgemacht" was established through an initiative of neighbors willing to incorporate a temporary transformation in a public space in Stuttgart. The project already started to drag some political and academic attention with a Parklet, filling only one parking slot, in 2016. Rethinking how to use 17 parking slots in the center of one of the most automobile culture oriented cities in Germany, is not possible without opening debates on mobility, urban greening and sense of community.

Its chaotic development with unknown bureaucratic paths and design bifurcations allowed a community to consolidate by making use of a (public) space that was only meant for transit. Also, through trying to adjust and introduce a city design that is non linear into existing rules and guideline, the city administration and its reaction-capacities have been tested. Likewise the project itself required dealing with different scenarios and the lessons learned by the people who contributed.

For instance, far from the 'traditional' role of an architect, tasks along the way shifted between technical, legal matters and dimensions of participative leadership and non formal learning, e.g. how to encourage people that might have never questioned their right to the city or might feel powerless about it. For us the challenge was creating a space as flexible as possible to include all the anticipated uses, while reacting to the statutes of a city administration aiming to support and monitor the project.

At this stage of the project our contribution as an interdisciplinary team can be resumed in two topics: (1) a guideline for process between 2018 till 2019 and (2) the outcome including existing and new built elements on the square (Status, 2020). That's how the idea of a toolkit arised. It summarises the efforts of communication, mediation, design, implementation and management that we have been able to observe at Schützenplatz. Avoiding prescriptive instructions, it is designed as a source of practical knowledge that exemplifies relevant dimensions of action and reflection through our project. It can support other communities to navigate their local challenges by viewing their public space through the lens of general factors that can be important to take into consideration as well as provide city administrations with argumentation lines that can help trusting in public space development done by citizens. In this regard, our contribution seeks to work as a transparent and accessible tool of shared know-how, that allows a wide range of people to get an insight of the experience in collaboration work and open perspectives on interventions in public space.

Broader perspective

Public space is an accumulation of complexities, in the most positive sense. Although we try to make a professional reading of it (it doesn't matter if we are sociologists, architects, anthropologists, urban planners, etc.), our diagnostic will never be complete.

Likewise, it is interesting that the variety of uses, activities and relationships that is generated by users of a public space, contrasts their lesser ability to describe that complexity.

For this reason, we understand that a working methodology in the public space can not be a rigid system of consecutive actions that will always give us the same result. On the contrary, as can be seen in our toolkit, we are only attempting to describe a series of issues that we consider essential to take into account. But each of these issues should be addressed and developed with the widest possible arsenal of methodological tools, since what works in one place does not necessarily work in another, be it for cultural reasons, lack of time or for not having chosen the right moment of the project to apply this methodology, among other reasons.



As professionals who approach a community that is active in its immediate public space, our objective is to reveal the conflict or situation that underlies that space and turn it into an engine for collaborative construction and the production of actions that lead to a strengthening of social cohesion and a collective transformation of the space.



Learning and leadership perspective

Concerning the role of the project team, the course of the project has shown the importance of a balanced orientation towards openness and structure, in order to achieve results. This was met by a leadership style that is rather cooperative and interactive. Through an attitude that sees all participants as potential experts, and through an explorative communication approach, that seeks to reveal these resources, an atmosphere of co-creation can emerge and bring about synergies. From a pedagogic perspective, the project offers a variety of stimulating tasks and situations that offer learning opportunities on cognitive, motoric, emotional and social levels and therefore allowed very diverse groups and individuals (e.g. in terms of age, gender, cultural identities and professions) to connect. Whereas the project team is responsible to provide certain planning structures as orientation, the openness to include new ideas was a guiding principle. In conclusion, speaking about our experiences, we want to emphasize and convey that the project has made us grow personally, reflect significantly on the dimensions of public space and understand the interconnections between them better, as well as that working collaboratively offers many moments of joy and humor. We hope to have contributed to the idea that participative urban development is an asset for cities and would like to encourage other initiatives to explore their local contexts with confidence and a positive mentality that urban design lies in our hands.



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Bamboo Education

an elementary school for Rempek



Project Location	Lombok, Indonesia
Teaching format	design build project
Operational time	since 2019
Status	in process
Institute	Prof. Jens Ludloff Institute of Building Construction
Project supervisor	IBK 3
Cooperations	Institut Teknologi Sepuluh Nopember, Universität Nahdatul Ulama, eff studio
Students:	students of the university of Stuttgart



In August 2018, the Indonesian island of Lombok was hit by a series of earthquakes and numerous buildings were destroyed. The school SD Islam Terpadu Al Hijrah in Rempek at the foot of the Rinjani volcano was located at the epicentre of the earthquakes and was completely destroyed. Teaching is mainly carried out in emergency tents. We want to construct a new school made of bamboo for Rempek.

Bamboo as a building material has a long tradition in Indonesia, which has led to climate-specific spatial structures and material-specific supporting structures. Considering the seismographic conditions of the volcanic island of Lombok, bamboo as a building material offers ideal conditions for earthquake-proof construction. In the course of several workshops with students from the University of Stuttgart, knowledge of materials and construction was acquired in



the summer term 2019. We met with Indonesian partner organisations on site to clarify the programme and technical aspects. On this basis, design projects were developed in the 2019 summer term, and the best work was selected for further processing and realisation. In the context of the seminar Bamboo Education II, design and build with bamboo, construction on Lombok began in the winter term 2019/20. In cooperation with the Institute Teknologi Sepuluh Nopember in Surabaya and the University of Nahdatul Ulama NTB as local partners we realised the construction of the school in Rempek.

The project gave the students the opportunity to gain construction experience as well as seeing the design through to realisation. The work planning developed during the winter semester was implemented at the end of the semester, from mid-January 2020, in a first construction phase together with Indonesian students on Lombok.



BauRaum Africa

Construction of a kindergarten



Project Location	Strand, South Africa
Teaching format	independent project
Operational time	since 2019
Status	built
Institute	Prof. Markus Allmann Institute of Conception of Space and Principles of Design
Project supervisor	Merle Hölter, Isabelle Oswald, Tamara Speil
Cooperations	Golden Sunbeams e.V.
Students:	Merle Hölter, Isabelle Oswald, Tamara Speil



After the construction of the kitchen for the Lekkerbekkies kindergarten in spring 2018, which can also be found in the brochure, the kindergarten needed a new building in order to be able to care for more children in the future.



Until the extension was built, the room for the children was in a small, very dilapidated wooden extension and offered space not more than 10 children. It was directly connected to the private living room of the principal and there were no separate sanitary rooms for the children. Thus, the kindergarten did not meet the guidelines of the Department of Health of the City of Cape Town and should be accordingly renewed, so that it can be recognized as an official kindergarten by the city.

The aim was to create a new building with accommodation rooms and sanitary facilities for up to 30 children, taking into account the spatial requirements of that amount of children. The brick building was completed in a construction process of less than 3 months, with the help of local craftsmen. Painting as well as installing window panes and carpentry was done by the three involved students. Other than that they designed and build the integrated furnitures for the interior spaces.



Biblioteca La Carcova

Buenos Aires



Project Location	San Martín, Provincia de Buenos Aires
Teaching format	design project
Operational time	since 2019
Status	in progress
Institute	Prof. Markus Allmann Institute of Conception of Space and Principles of Design Prof. Dr. Martina Baum Institute of Urban Planning and Design
Teaching team	Bettina Klinge, Sebastian Wockenfuss, Spela Setzen, Markus Vogl
Cooperations	FADU, UBA Buenos Aires UNSAM San Martín „Walter Gropius“ - Chair (UBA,FADU - DAAD)
Students:	Arantxa Pinate, Urška Pignar, Sandra Schlegel, Hirotatsu Ohara, Boris Kadiyski, Nicole Müller, Anna Oexle, Cristina Estanislao Molina, Annika Sieblitz, Marcos Suelves, Anna Dörrig, Malte Didrigkeit, Clara Scherer, Johanna Vogl-Fernheim



Estantería - Malte Didrigkeit, Anna Doerrig

San Martín, with a population density of more than 7.000 inhabitants/km², is the most densely populated municipality in the Metropolitan Area of Buenos Aires (AMBA). A fully built-up carpet of industrial plants, residential areas and informal settlements („Villas Miserias“) sprawls on an area of almost 56 square kilometres.

Although the street grid that characterizes Buenos Aires and its suburbs continues, one encounters a completely fragmented urban landscape, a lack of public space in the neighbourhoods, squalid and polluted territories as the

basin of the Reconquista river and the largest landfill of Argentina.

„un libro es libertad“: a book stands for freedom. This aphorism is painted above the entrance of the „Biblioteca Popular La Carcova“. Waldemar Cubilla, doctorate in sociology and ex-convict, started to build the narrative as well as the physical entity of a library at the edge of one of the most neglected informal settlements and the formal grid of the suburb of J.L.Suarez. Within the last seven years this project became an important social point of attraction for kids, young drug addicts and young women; it became the place of encounter, of education and communication in the “villa“. For many kids in the neighbourhood it is the unique space where they have access to books as well as clean water. With rising popularity and development of more and more activities - reaching from childcare to pottery classes - the need for an extension is urgent.

The contextual conditions for the site of the library could not be more challenging: the edge of the formal grid transitioning into the informal neighbourhood of “la Carcova” and the accompanied industrial strip make it an even more demanding task in planning, projecting as well as in executing. After intensive research and multiple discussions on site, we developed seven multiscale integrative and sustainable design strategies for the „Biblioteca popular“, transforming it into a „Parque Educativo“. All projects proved to have the capacity of realization in consecutive self-build phases. A special focus has been put on the understanding of local methods of construction as well as local material to enable a realisation in the close future.



Centro Cultural
- Annika Sieblitz, Cristina Estanislao Molina



Bajo un mismo techo - Arantxa Pinate, Urska Pignar

The Bamboo Route



Project Location	Indonesia
Teaching format	workshop
Operational time	2019
Status	in progress
Institute	Prof. Jan Dieterle Institute for Landscape Planning and Ecology
Project lead	Leolo Laubinger
Cooperations	NGO Contruye Identidad
Students	Students of the University of Stuttgart



The project explored the rich vernacular architecture and traditions of Indonesia together with architects, artists, engineers and students. It's mainly focused on a collaborative workshop in Weelewo. A group of students will learn methods of working with bamboo as a responsible and sustainable material. The project is mainly focused on a collaborative workshop in Weelewo and a collaboration in a post disaster reconstruction prototype on Sulawesi. The route invites participants to learn how to inhabit our environment in a sustainable way by using local materials.



Indonesia has recently experienced the impacts of environmental disaster as a consequence of climate change. Just 2018 there have been two major earthquakes with death tolls of over 2,000. The vulnerability of this country, as of many other parts of the world, can be eased by sustainable strategies in social development, including the reconstruction efforts through emergency architecture.

Working with native communities that preserve the knowledge of coexisting with nature and strategies to tackle climate change, the project aims to reconnect locals with experts to bridge the existing lack of knowledge.

Indonesia contains more than 70 species of bamboo. At first the group engaged in learning about this natural resource as a flexible, highly resistant, and sustainable material. The group travelled through the islands of Indonesia in order to gather a variety of techniques by studying examples of bamboo buildings. The excursions were accompanied by local professionals like Architect Andrea Fitrianto, who also gave lectures and seminars throughout the journey with an academic and critical focus on climate change and sustainability.

The Participants then reinforced their commitment with the environment and worked highly sensible to ecological reconstruction practices in vulnerable areas. In Weelewo (Sumba), the group engaged with local builders and residents from the community in a workshop for the implementation of a children's learning facility. One part of the workshop included, to design and build a new piece of furniture made of bamboo.



Adapter

Living space in temporary vacancy



Project Location	Stuttgart, Germany
Teaching format	design project Master Thesis
Operational time	2018-2019
Status	tested, in progress
Institute	Prof. Dr. Martina Baum Institute of Urban Planning and Design
Project lead	Elif Kälberer, Christiana Weiß, Verena Vollath, Richard Königsdorfer, Paul Vogt
Cooperations	Social Impact Lab



How do we want to live in our city? And where can we find space for creativity and self-realization?

ADAPTER is a Co-housing project, that is seeking answers to these questions. The project aims at using temporary vacant commercial buildings in order to enable affordable housing on a temporary basis. While creating much needed living space in the city, the project is also addressing the complex social dimensions of housing and is exploring new solutions on how to live in the city. By means of active involvement of residents, owners of vacant buildings, neighbours, and the city administration, concepts for re-activating vacant buildings and to revive the neighbourhood are developed.

The goal of the project is to enable all citizens to take an active role in planning and designing our common city.



Even in tight housing markets such as Stuttgart there are plenty of unused buildings, temporarily vacant for a period of 3 to 5 years because of economic change and dynamics in city development. Just through short research we have found more than 120.000 m² of such vacant space in Stuttgart. In order to activate this great potential, ADAPTER brings together plausible residents, property owners as well as the city administration to negotiate a contract for the use of a building during it's vacant time, that benefits all parties involved.

To realize the redesign of the spaces and make them suitable for living, ADAPTER has developed a modular building system, that allows an easy and quick set up as well as dismantling and can be handled by the residents themselves. Not only the residents benefit from these living spaces, but also the neighbourhood can profit from opportunities to realize creative common spaces in these buildings.



BauRaum Africa

Construction of a kitchen



Project Location	Kapstadt, South Africa
Teaching format	design project Bachelor Thesis
Operational time	2018
Status	built
Institute	Prof. Peter Schürmann, Institute of Building Technology and Design
Project supervisor	Merle Hölter, Isabelle Oswald, Tamara Speil
Cooperations	Golden Sunbeams e.V.



In the townships near Cape Town in South Africa, people live in confined spaces and in poor conditions. For many children, the education ends after the kindergarten. Here, important foundations are created for the children. Promoting and supporting them was the initial motivation to start a project for this purpose.

The small kitchen construction project Bau_Raum_Afrika was implemented in a fortified township in Strand for the already existing Lekkerbekkies kindergarten. In advance, an exemplary kitchen building was planned as part of a seminar, independent of a specific location, which was designed to function as self-sufficient as possible.



The team visited the kindergarten for the first time in February 2018. On the basis of the previously obtained knowledge and local conditions, appropriate plans were made. The focus lied on the feasibility with the given limited financial and mechanical resources. In addition, it was of great importance to design a building concept that uses natural, sustainable resources and mechanisms to enhance thermal comfort inside.

The rooms and their mechanical features were developed in detail in cooperation with local experts, to secure well-functioning processes. The annex was implemented over a period of approximately five weeks with the help of local craftsmen and within the limited financial resources. The students took care of the necessary work in advance, the construction management on site, as well as smaller manual tasks. At the beginning of April the finished kitchen was inaugurated and is since used for the kindergarten staff.



Centro Comunal Alto Peru



Project Location	Lima, Peru
Teaching format	design project, summer school
Operational time	2018
Status	in progress
Institute	Prof. Markus Allmann Institute of Conception of Space and Principles of De- sign
Teaching team	Attila Acs, Kyra Bullert, Spela Setzen, Hannah Klug
Cooperations	UCAL, UPC University of Lima ,Intuylab, AltoPeru
Students:	Moritz Berg, Leonie Ede- rer, Martin Feustel, Valerie Franck, Kristina Kolb, Sus- anne Pardo Spiess, Yannic Schröder, Jialing Wang, Eider Yarritu Inoriza, Marija Zivanovic, Mariana Zollino



The new center for the informal settlement Alto Perú will accommodate much needed public facilities and will create a new central meeting point for the community. The building will activate the use of its surroundings and will provide the children with a safe place to learn and play. But how can an informal settlement be adapted in a sustainable manner into a city that grows in an incalculable rate? And how can the social aspect of architecture be integrated? These questions are essential to the design process.

Due to the ongoing contact with the partners in Lima the base is given to integrate the project carefully into a pre-existing social and urban grid. Moreover, it will strengthen the community through a simultaneous participatory process.



The German design team is working closely with two Lima-based partners: IntuyLab, an architects collective, and Proyecto Alto Perú, an NGO, both of them have been active in the neighbourhood for some years, with the goal to improve the living conditions of those living in the community.

The goal is to design a building that meets the demands of the community. In order to accomplish this, a stakeholder workshop in Lima took place to develop the concept for the general plans and uses of the community center in cooperation with the neighbours. It will be a new place for the community, with a communal kitchen, a child care room and learning facilities. Through an extended study of the existing resources and the local construction methods an innovative and sustainable approach to the architectural design was developed. The building strengthens the identity of the settlement and activates the park as well as the new square by its concept of uses.



Chloroplast Stuttgart



Project Location	Stuttgart, Germany
Teaching format	seminar
Operational time	2018
Status	in progress
Institute	Prof. Jan Dieterle Institute for Landscape Planning and Ecology
Project Supervisor	Aaron Schirrmann
Team	Studenst of the University Stuttgart Member of Chloroplast Stuttgart e.V.



Chloroplast Stuttgart e.V. is a non-profit association in Stuttgart that has transformed a former seed mill in Weilimdorf into an urban gardening area. Furthermore, they created a new social center that integrates social aspects, in which creative ideas can be developed and cultural events can take place.

During the initial analysis of the area the group realised that there is still some potential for strengthening the action and position of chloroplast. As the Chloroplast area includes some buildings, sheds and greenhouses that are scattered throughout the area, an orientation system was developed, which guides through the grounds and provides various information for those interested. It was important to draw up an overview in the form of a site plan, where the most important locations are highlighted. These include, for example, the herbal spiral, the raised beds or the greenhouse with aqua and worm orchards.



Together with the members of Chloroplast e.V., information texts were compiled and summarized in one layout. Whilst in a parallel step, informal signs were designed as CAD drawings, that were then cut out of steel and delivered on site. In a construction workshop, the individual parts were welded together and painted in yellow, to give the signs a strong lead color. In the next step, the information slides are drawn on the signs. In total one will find about 10 signs in different formats.

Another project is the Mobile Kitchen, a mobile station to cook directly on the premises at flexible places. The kitchen block was designed on wheels, which is equipped with a gas stove, a sink, water connection and all sorts of dishes and pots. A generous worktop provides space for preparing food. In order to gain more rainwater for watering the plants, a station with water tanks, of which a large tank can hold up to 1000l, is put. The inclination of the greenhouse roof is used to collect the water.



Hallpa Wasi



Project Location	Huachón, Peru
Teaching format	seminar, workshop
Operational time	2018
Status	Part II in progress
Institute	Prof. Dr.-Ing Jan Dieterle Institute of Landscape Planning and Ecology
Project supervisor	Cinthia Córdor Pineda Lucia Perianes
Cooperations	NGO Construye Identidad universidad catolica pontificia de lima
Students:	Arnoldo Mallma, Melanie Nogales, Mauricio Geld- res, Ender Cicek, Corneli- us Vohl, Leolo Laubinger, Alice Queva, Alice Laura Speziale / Luis Meza, Em- manuel Caballero, Marce- lo Paredes, Xavier Tobar, Carlos Trujillo, Necéforo Yachachin, Peter Puente, Deysi Vasquez, Ana Sanchez



The project Hallpa Wasi (Hallpa: Earth Wasi: House) is about the construction of a guest house in a village in the Peruvian Andes, Huachon. The village is located at about 3300 m altitude in the state of Pasco and has about 2000 inhabitants. From Huachon various hiking tours to the glacier Huaguruncho are starting, which is a tourist attraction due to its snow-capped summit on international climbers. By visiting the village one can notice that the inhabitants do not exploit this potential. There is no infrastructure and almost no guides to accompany the mountaineers. The glacier is threatened by global warming and is subject to constant research by the Peruvian INAIGEM glacier research institute, which has no place to stay for long-term observations and for planning their expeditions.

In addition there is another problem in the remote regions of the Andes. The knowledge of traditional and climate-friendly building is no longer present in large parts of the population.



Until a few decades ago, mainly clay buildings were built in this region, reinforced concrete and masonry increasingly supplanted this type of construction. These materials are less suitable for the region than the traditional clay construction, both from an economical and a building physics point of view.

The construction workshop took place with the local population and students from Stuttgart and Peru. The project partners were the Peruvian NGO „Construye Identidad“, the Clay Research Center of Pontifica, Universidad Catolica, University in Lima „Centro Tierra“ and another expert, the architect Lucia Perianes, who supervised the workshop. The project is helping Huachon residents to better channel the tourism that already exists in the village. It also serves to increase the attractiveness of the village, since it can be used as an event and research center in addition to accommodation. At the same time, awareness can be increased by using traditional construction methods.



Building in the Philippines

A real sustainable manual



Project Location	Negros, Philippines
Teaching format	design project, seminar
Operational time	2017-2018
Status	built
Institute	Prof. Cheret Institute of Building Construction and Design Chair 1
Cooperations	Beloved e.V. Atelier Kaiser Shen
Students:	Simon Grothkopp Rhabanus Kaehler



A large part of the Philippine population lives without electricity and water supply in plain huts away from big cities. Many of these huts are simple bamboo constructions with partly makeshift corrugated iron roofs, which are in danger of being uncovered by the next major storm.

This is where the project team, consisting of students and architects, started and developed a guide to sustainable and cost-effective construction. The project was implemented in cooperation with the non-profit association Beloved e. V., which looks after children on the streets of the Philippines, and the Institute for Building Construction and Design, Chair 1.



Based on the developed instructions, a prototype for disadvantaged families was created in the spring of 2018. The aim was to provide both safe and affordable housing and to break the cycle of poverty and pollution. The research that started the project focused on sustainable and resilient construction. Different areas were covered, from archetypes to resources to architectural history. In an excursion similar projects were visited and analysed in the Philippines. During a second trip in March 2018, the project group, together with local helpers, built the prototype, which is currently in the testing phase and is being evaluated by the residents.

Possible follow-up projects and an improvement of the prototype are planned in the future. The results of the project and reports from the helpers and residents will be summarized in a handbook for recommendations for cost-effective and sustainable construction in the Philippines and made available to the public.



City. House. Philosophy

Hegel in Stuttgart



Project Location	Stuttgart, Germany
Teaching format	interdisciplinary workshop
Operational time	2017-2018
Status	planned
Institute	Prof. Markus Allmann Institute of Conception of Space and Principles of Design
Teaching team	Bettina Klinge, Dr. Sebastian Ostwitsch, Dr. Corina Meyer
Cooperations	Institute of Philosophy Prof. Dr. Catrin Misselhorn Institute of Art History Prof. Dr. Kerstin Thomas Cultural Office Stuttgart Dr. B. Schneider-Bönninger Museum Hegel-Haus Dr. Manfred Schmid Stuttgarter Change Labs
Students	Students of the University of Stuttgart



Hegel in Stuttgart? A museum as a den lab? On the occasion of the 250th birthday of the powerful and Stuttgart-born philosopher Georg Wilhelm Friedrich Hegel in 2020, the existing exhibition in the Hegel-Haus will be creatively redesigned and curated. The aim is to create an open space for ideas and design that will enable to approach Hegel from a variety of perspectives and focus on philosophical and social issues as well as the work and impact of Hegel. The Hegel Museum of the future can become an adaptive and discursive, real and virtual sculpture of thought.

For this purpose, interdisciplinary and transdisciplinary seminar participants in the fields of architecture, art history and philosophy participated in the seminar



„Stadt. House. Philosophy - Hegel in Stuttgart „ to developed creative approaches for exhibition possibilities. The main focus was the question how the philosopher can be re-anchored in the city and in the memory of its citizens. As a prelude, the Stadtmuseum and the Kulturamt organized a public symposium on Hegel.

The students split into interdisciplinary teams and developed five different concepts for the redesign of the Hegelhaus and the visualization of Hegel in Stuttgart. The results were exhibited in the Hegelmuseum from 11.06.-31.08.2018 and served as an inspiration for the design competition in 2018.

The seminar was held in cooperation with the City of Stuttgart's Department of Culture, the Institute for Spatial Conception and Fundamentals of Design, the Institute of Art History and the Institute of Philosophy at the University of Stuttgart, as well as the Stuttgart Change Labs.



Lima - Beyond the park



Project Location	Lima, Peru
Teaching format	seminar, summer school
Operational time	2017
Status	built
Institute	Prof. Markus Allmann, Institute of Conception of Space and Principles of Design
Project supervisor	Kyra Bullert, Leslie Koch Spela Setzen
Cooperations	FAUP University of Porto Prof. Luis M. Urbano
Students:	Teresa Berner, Dipayan Bhowmik, Tillmann Bollow, Louison Döfing, Lukas Gesell, Sarah Jansen, Fran- ca Poos, Bente Rau, Peter Richter, Maximilian Schäfer, Luis Seider, Dessiré Velez Madalena Almeida, Beatriz Branco, Belén Chiappero, Alberto Collet, Francisco Craveiro, Matilde Gouimar, Helder Lima, Marta Manca, Diogo Ferreira, João Morais, Ricardo Monteiro, Afonso Quintã



In 2012 and 2013, the Institute for Landscape Planning and Ecology organized two summerschools in connection with the Lima Water research project (LiWa) in an informal area located in the north of Metropolitan Lima, Perú. This specific area served as a demonstration site for the development and implementation of strategies and measures of water-sensitive urban development in an arid context.

The task of the two summer schools was to develop and implement low-cost, productive water-sensitive urban design solutions that are both functional and beautiful and contribute to a sustainable urban environment.

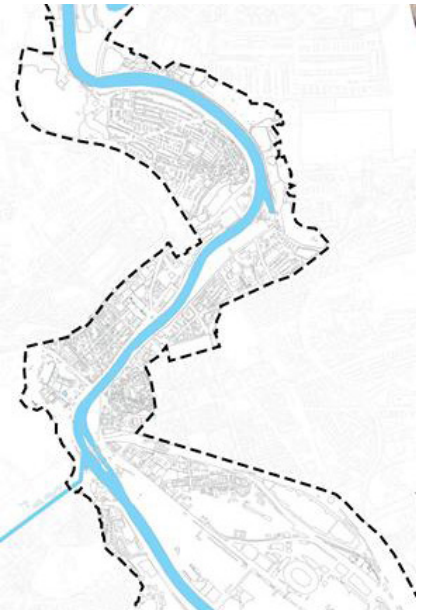


Such solutions should limit the wasteful consumption of potable water and show new approaches to harvesting, saving water, purifying water, reusing nutrients for fertilization or food production and using local or recycled materials.

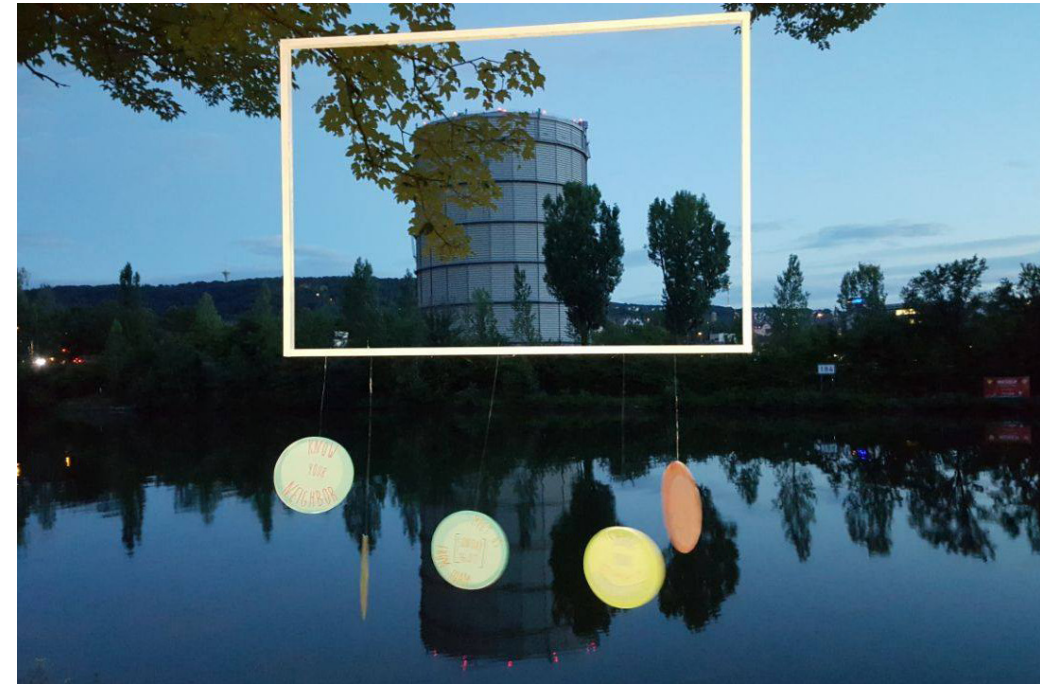
This was accomplished by strategic temporary interventions during the first summer school and semi-permanent installations during the second summer school in the form of design prototypes that would be tested for their viability with both experts and the community. The students were asked not to develop a master plan for the whole site, but rather to propose a minimal strategic intervention that could initiate a chain reaction of improvements. The final proposal had to possess the highest potential to be replicated in other open spaces in the future. Based on the results and experiences from the two summerschools, the LiWa-research team designed and implemented a new park which was opened and handed over to the community in 2014.



Neckar Re-Loaded



Project Location	Stuttgart, Germany
Teaching format	design project
Operational time	2017
Status	built
Institute	Prof. Dr. Astrid Ley Integrated Urbanism and Sustainable Design
Project supervisor	Lenka Vojtová, Dan Teodorovici, Jan Dieterle
Cooperations	ZIRIUS - Zentrum für interdisziplinäre Risiko und Innovationsforschung IER - Institut für Energie-wirtschaft und Rationelle Energieanwendung
Team	Students of the University of Stuttgart Students of MSc Integrated Urbanism and Sustainable Design



The focus of the project „Integrated Urbanism: Neckar Re-Loaded !“ Is the activation and reuse of vacant land along the Neckar in the sense of a future-oriented urban development in context of the energy transition. For this, the 22-member project team deliberately wants to integrate the Neckar and its potential into the city of Stuttgart. Based on a comprehensive identification and analysis of potential areas, the project will develop strategies for their re-use and implement these strategies through temporary interventions in the city of Stuttgart and on the banks of the Neckar. Stuttgart is to become a „city at the river“ again.



Paravento

DAAD - Program : Dialog Southern Europe



Project Location	Sagres, Portugal
Teaching format	seminar
Operational time	2017
Status	built
Institut	Prof. Markus Allmann Institute of Conception of Space and Principles of De- sign
Teaching team	Kyra Bullert, Leslie Koch, Spela Setzen
Cooperations	FAUP University of Porto, Prof. Luis M. Urbano
Students	Teresa Berner, Dipayan Bhowmik, Tillmann Bollow, Louison Döfinger, Lukas Ge- sell, Sarah Jansen, Franca Poos, Bente Rau, Peter Richter, Maximilian Schäfer, Luis Seider, Dessiré Velez Madalena Almeida, Beatriz Branco, Belén Chiappero, Alberto Collet, Francisco Craveiro, Matilde Gouimar, Helder Lima, Marta Manca, Diogo Ferreira, João Morais, Ricardo Monteiro, Afonsa Quintã



According to the motto of the DAAD program "dialogue south Europe" students from the University of Stuttgart and the University of Porto came together in a workshop in Sagres, South Portugal, to deal with the complex issue: how does mass tourism affect small villages (like Sagres) which are seasonally overpopulated or empty? What can be done to positively change the situation of the residents thinking long term? Can tourists be involved? Together with the inhabitants, the students tried to find answers to these questions and implemented a small intervention in a public area in Sagres, an open-air cinema.

The idea of the winning design was to create a flexible structure that could adapt to different urban situations, creating introverted and extroverted spaces and inviting people to stay in. The structure is composed of simple elements and can easily be built, dismantled, adapted by anyone.



The mobility of the structure allows it to be set up again and again in different places, leaving a kind of footprint everywhere.

Only local materials have been used for the construction : wooden boards, rope used by the fishermen, baskets and a steel structure that worked as a central starting point for the construction.

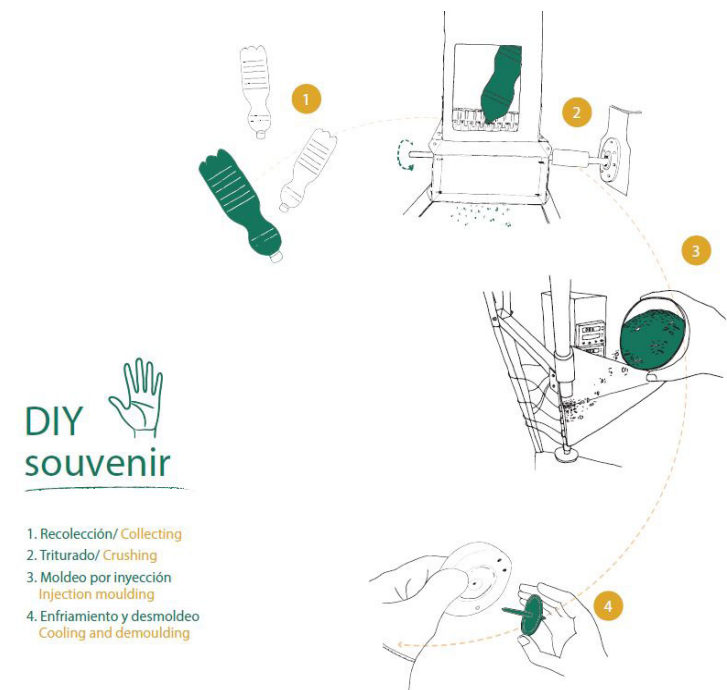
The 2.10m long wood boards were vertically arranged along a curved line, inspired by the „chamber of sound“, work of Ressano Garcia Arquitectos realized at the Fortaleza area of Sagres. Windy weather conditions were the main reason to create a protected interior space. Considering a participatory aspect, the design's flexibility was an important issue since it could adopt different spontaneous uses. The final construction can easily be transported by rolling the wooden boards into ribbons. A cinema or another cultural space can be rebuilt in a new location.



Recycling - awareness in Peru



Project Location	Lima, Peru
Teaching format	workshop
Operational time	2017-2019
Status	built
Institute	Prof. Markus Allmann, Institute of Conception of Space and Principles of Design
Project lead	Dessire Velez Cadillo Jonathan Lapel
Team	Arturo Salazar, Timothy Fuller, Jani Hovan, HobbyHimmel e.V Team





On the 18th and 19th of May 2018, Comas and Stuttgart were synchronized in the framework of the parallel workshop „Responsible Recycling,“ thanks to the support of the University of Stuttgart and the District Municipality of Comas.

This workshop has initiated the exchange of valuable experiences on solid waste management while taking two completely different contexts into account: Stuttgart (Germany) and Comas (Lima, Peru). The event was part of the participatory process of the pilot project „Center for inclusive recycling and education in Comas“, on which Recicla.pe is working.

In Stuttgart, approximately 20 participants including students, designers and engineers from various branches, joined. In Comas, approximately 90 people participated including workers from other municipalities, school teachers, environmental promoters, and neighbours.



Schützenplatz. public.space.making

Neighborhood made by yourself



Project Location	Stuttgart, Germany
Teaching format	seminar, workshop
Operational time	2017-2019
Status	built
Institute	Prof. Antje Stokman Prof. Jan Dieterle Institute of Landscape Planning and Ecology
Project lead	Simon Grothkopp, Dessire Velez
Cooperations	„Casa Schützenplatz e.V.“ „Club International“ Master study programm : „Public Planning an Parti- cipation“
Team	Students of the University of Stuttgart



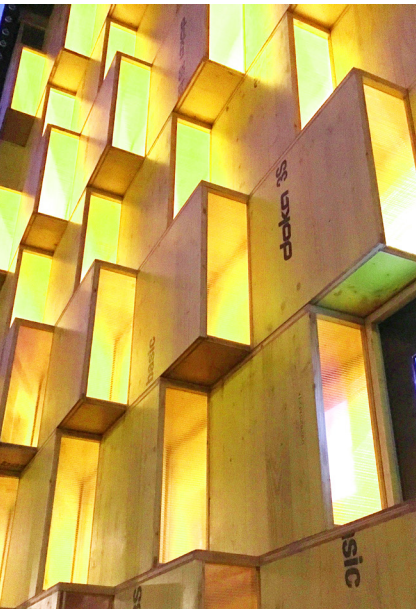
The city of Stuttgart has many parts that are densely built up. Taking away the remaining space with required parking hardly leaves free space for the neighbourhood. With interventions on public parking lots and the associated re-use of street space, in the summer term 2016 students had set themselves the goal with the experiment „Parklets for Stuttgart“ to create new awareness of urban space and initiate a public discussion. The association founded in 2016, Casa Schützenplatz e. V. organized the rebuilding of the original Parklet in 2017. The project was supported and endorsed by the neighbourhood. As a part of the seminar „Lokal Schützenplatz“, the project group „public.space.making - Schützenplatz“ was created. The aim was to realize the reuse through interventions on the Schützenplatz and to strengthen participatory thoughts.



The group, consisting of students of architecture and urban planning and committed residents, developed ideas and concepts for designing and using the space. Two concepts were then implemented in a construction workshop: the „Mobile Living Room“ and „Urban Garden Tetris“. Both projects were planned and built on a modular basis in order to be able to flexibly design the later use. The „Urban Garden Tetris“ offers raised gardening beds and seating for the residents. As a convertible lounge, the „mobile living room“ can be used differently. In an opening ceremony, the projects were presented and handed over in the neighbourhood. The project draws attention to the sustainable use of urban space and motivates people to refrain from car use. Through the process of „re-capturing“ the place is upgraded to a communal meeting place. The planned temporary intervention has been regularly used in summer 2019 with cultural ,educational offerings and programs of other Stuttgart initiatives.



Übehaus



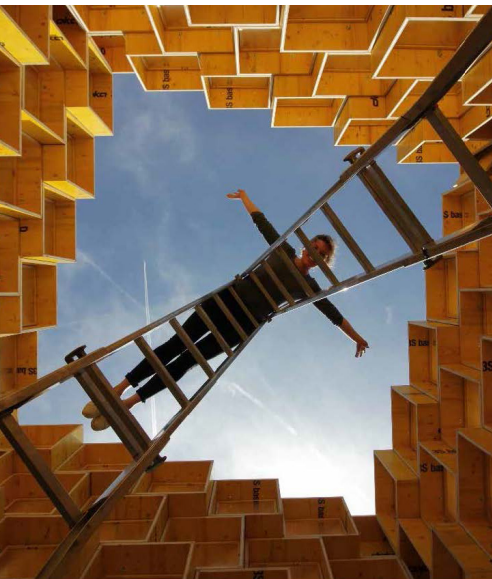
Project Location	Stuttgart, Germany
Teaching format	Master Thesis, seminar
Operational time	2017- 2019
Status	built
Institut	Prof. Peter Cheret Institute of Building Construction and Design Chair 1
Project lead	Nicola Missel
Cooperations	City of Stuttgart, Jazz Club Stuttgart, Philharmonie Stuttgart
Team	Anna Teresa Cipriano, Jonas Fahrenkamp, Luzy Grossmann, Larissa Haas, Hermann Klar, Marco Zardini Lacedelli, Johannes Andreas Rau



What if there were places in the city where music is being created, rehearsed, listened to- music could be lived together?

Professional musicians and amateurs know and feel the problem in equal measure: while practicing their instrument in their own city apartment, the angry neighbours knock against the wall during the very first notes while rehearsal rooms in major cities are in short supply.

With the master thesis of Nicola Missel, the idea of an urban music rehearsal room was born - a place where everyone can make music and meet each other. As a communal and urban rehearsal room, the ÜBEHAUS offers a freely accessible alternative, which brings practicing directly into the public space. Thanks to its special design, the ÜBEHAUS can - and should - be placed in a wide variety of locations.



The house was completed in spring 2017 in cooperation with the Jazzclub BIX, the Stuttgarter Philharmoniker and Plattform e1nszue1ns as a student self-build project at the Institute for Building Construction and Design, Chair 1, under the direction of Prof. Peter Cheret. It consists of yellow wooden boxes and can easily be constructed and de-constructed with the help of a few persons. The modular house can therefore be used flexible and still meet the requirements of musicians. Also lightning is integrated in the ÜBEHAUS and transforms the building into a illuminated object at night.

After Leonhardsplatz, Schwabenplatz in Stuttgart-Vaihingen and Ottilienplatz in Esslingen, the ÜBEHAUS also went to Munich. In cooperation with the Munich Cultural Office, starting in 2019, it offered musicians and all creatives an open interactive rehearsal room in the creative district on Leonrodplatz. In December of 2019 it was again set up in Stuttgart, this time on Wilhelmsplatz.



Zukunfts[T]raum

A school for orphans



Project Location	Tansania, East Africa
Teaching format	Bachelor Thesis
Operational time	2017-2018
Status	built
Institute	Prof. Peter Schürmann Institute of Building Technology and Design
Project lead	Saskia Meier
Cooperations	NGO Dunia ya Heri African Family and Health e.V.
Team	Anne Sauter, Theresa Felber



Every child has the right to education and a carefree childhood. The past of orphans is unchangeable, but we can help to improve their future. Two aspiring architects see this as their social mission. Acting out of social responsibility, they called the project „Future Space“ into being. A school building designed and built by them aims to convey values and education as well as to create space for the personal development of the children.

In Yale Yale Puna, a small village in Tanzania, a primary school has been built as part of a larger campus. This construction project was realized by „Zukunft[s] [T]raum“ in cooperation with „Dunia ya Heri - African Family and Health Care e.V.“, an on-site association that enables a future for the parentless children. The association takes care of the building after its constructive completion .



In an intensive planning phase, the concept of the school building and the organization of the processes on site were developed. In November 2017, a workshop was held with the children on site to identify their needs and to involve them in the construction of the school. The goal was to create a school with fun. In August 2018 construction on site began. Local workers, hired for the project, took over the instructions for individual trades and specialized work. The project thus not only created second-hand jobs and fixed income, but also served to transfer and acquire knowledge about innovative, sustainable and climate-compatible construction. The acquired know-how was compiled in a detailed catalogue. The building consists of two class areas, which are separated from each other by the „heart“ through sliding shelves, which can be moved freely. This allows flexible use of the premises. Learning areas, communication and reading areas, play and seating facilities are united under one roof.



Gambia

a roof for an orphanage in Sinchu Alhajie



Project Location	Stuttgart
Teaching format	design studio
Operational time	2016
Status	built
Institute	Prof. Jens Ludloff Institute of Building Construction
Cooperations	„Les Amis de Gambie“
Students:	Nils Fröhling Yonne-Luca Hack Eric Schanck



The organisation "Les Amis de Gambie" (Friends of Gambia) was founded in 2002. They are involved in various aid projects that work to improve the situation in Gambias community. A special focus is placed on working with and for orphans.

Following the call "Repair our Roof" we decided to fly to Gambia in March 2016, to help with the renovation of the orphanage of "Les Amis de Gambie". An estimated 66,000 orphans are currently living in Gambia. However, there are only four orphanages in total, one of them was founded by "Les Amis de Gambie" in Sinchu Alhajie, where 25 children have found a home. Staff from Gambia, Senegal, Ghana and Sierra Leone try to give the children a home here, provide basic school education and enable them to have a carefree childhood.



During the heavy rain periods the roof of the orphanage began leaking. We wanted to counter this situation with a new and more efficient roof construction. Since the budget was very limited, one of the most interesting tasks was to recycle as much as possible of the given materials.

The roof itself was covered with new monsoon-proof trapezoidal sheet metal, which were cut out on site. In cooperation with Gambian construction workers, we were able learn about termite and monsoon protection and new techniques, such as the production of plaster panels from a banana fibre plaster mixture.

Our help was most effective in solving difficult corner details, which are the main cause for moisture entering the rooms.



Mate Masie Classrooms



© Maria Renner

Project Location	Abetenim, Ghana
Teaching format	workshop, seminar Master Thesis
Operational time	2016 - 2019
Status	built
Institute	Prof. José Luis Moro Institute of Design and Construction
Project supervisor	Maria Renner
Students	Anne-Sophie Birnkammer, Antonia Cruel, Christopher Höllner, Christina Akesson, Claudia Böning, Constantin Kaffenberger, Daniel Voigt, David Goldberg, Irini Evangelidi, Emma Wilisch, Franziska Odametey, Hend- rik Nagel, Johanna Hühn, Leonie Orth, Lisa Mu, Luca Bertoni, Magdalena Allekot- te, Markus Campana, Moritz Finkl, Paul Vogt, Regina Uelses, Sarah Hummel, Simone Vorndran, Sofie Hoyer, Sophia Hannekum, Solange Querinjean, Suna-Maria Knell, Timothy, Kölle, Valerie Franck



© Maria Renner

The small village of Abetenim is located in Ghana, nearby the second largest city Kumasi. The water supply takes place by means of large vessels, which are filled at the watering place of the village and then carried to their homes by women and children. Two daily meals are prepared on an open fire. Neither bathroom facilities nor a reliable power supply exist. Due to an inadequate education 98 % of adults are inexperienced in reading and writing. Often they possess little to no knowledge of the official language English.

Within the scope of the master thesis, a design for a campus of a Secondary School in Ghana was developed in 2016. In 2017 one building was constructed from regional materials. Volunteers from Germany and Switzerland as well as workers from Ghana contributed to the successful implementation. The building ground on the hillside is located a short walk from the center of the village.



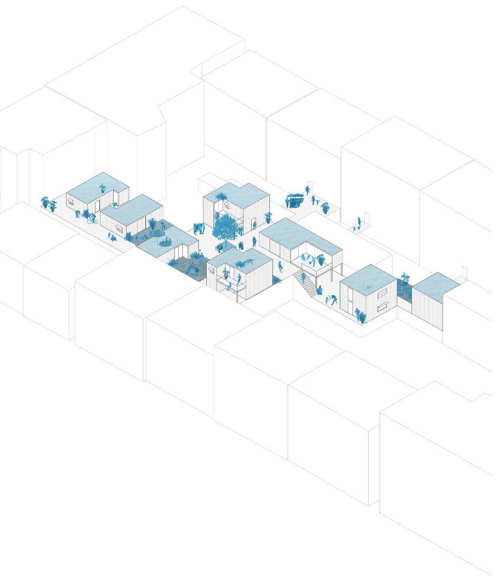
© Maria Renner

In conjunction with other buildings, our building forms a courtyard and is based on the traditional construction of the inward-facing courtyard houses of the Ashanti culture. The design is shaped by the cantilever, 190 m² floor slab and a circulating arcade. The construction includes an elevation of the building of natural stones, which counteracts a flooding of the teaching areas in the rainy season. There is also a ventilation level with suspended panels of fabric. These decimate the strong heat input and cope with acoustic as well as optical aspects. An air circulation above and below the premises is promoted and contributes significantly to a pleasant indoor climate. The short, closed wall panels in direction of west and east form solid elements made of mud blocks. They prevent the direct heat input of the low morning and evening sun. The light, permeable longitudinal sides of a wood-raffia combination represent a contrast to the walls. They allow effective cross-ventilation through the main wind from the southwest.



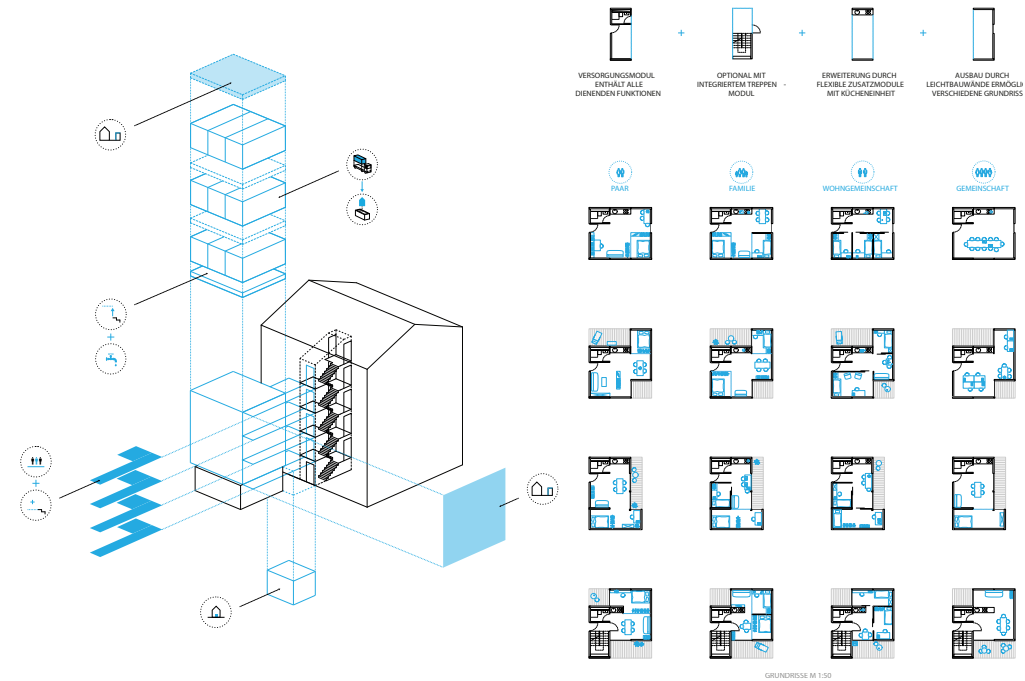
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Germany has become a country of immigration. Now it's our turn to integrate refugees in a sustained manner and to make them feel like they are part of our society. Exiling them into outskirts, fenced-in and isolated from society, promotes conflicts as well as resentment and frustration. Fear and the urge to keep oneself apart grows on the part of the native population. Approaching each other as well as taking the anxiety of the unknown is needed. The aim is to move refugees from peripheral refugee shelters to compartmentalized housing units in the city center. This will provide an integrative environment at the core of society and take the pressure off refugee shelters located in peripheral areas. However, it's not just about housing space for refugees. This project creates affordable residential property in the center of the city. But where do we find buildable space that is in alignment with the typology of this concept of integrated housing?



The majority of inner yards, belonging to the typology of the common perimeter development, are not used as intended anymore. In fact, a lot of them are solely used for parking and storage, serving only the individual, not the society as such. With a sensible addition of small units into backyards, we provide a new and unique living space to an existing neighbourhood. In addition to this, we bring the forgotten and displaced qualities of a community living back to life.

With a joint use of new units, we not only form new qualities, but also enhance existing ones. The variety of living space and common space gives a wide range of different usage scenarios that support the new residents as well as the surrounding community. The idea is to create living space for refugees and integrate them into the neighbourhood community. At the same time, the concept aims at facilitating the daily life of residents and promoting a rich community spirit.



Treehouse Workshop

Solitude under a linden tree



Project Location	Stuttgart
Teaching format	design build project
Operational time	2016
Status	built
Institute	Prof. Markus Allmann Institute of Conception of Space and Principles of Design
Project supervisor	Kyra Bullert, Leslie Koch
Cooperations	ITO - Peter Granser / Bea- trice Theil, frommann-holz- boog Verlag Eckhart Holzboog
Students:	Alp Yilmaz, Iván Camilo Nieto, Lukas Gesell, Maximilian Schäfer, Sofi a Holder, Tara Hariri



Tree house workshop. A collaboration with the Japanese artist Hideaki Idetsuki. Far Eastern art in the Stuttgart area. To be more precise: a retreat on an unused, small plot of land, in which the boundaries between nature and culture, between inside and outside, are to be blurred and opened for everyone with a key. The aim was to create a space within a short time frame with the students, that is based on the Japanese teahouse architecture of the early Edo period (17th century). Through the construction the site is divided into two areas.



The site is divided into two areas, with the building in between. The frontal and longer part serves as the entrance, resembles a walk through the wilderness to then finally reach the retreat. The rear part, which inhabits a rock garden can only be reached via the building. The retreat itself consists of contrasts between outside and inside, old and new. The façade is made from old charred wooden boards. The front entrance consists of sliding, recycled windows. Inside, the visitor will reach a minimalist room with white painted walls, a ground covered with silver foil and openings that create different light settings and allow a view to the outside. Also a possibility for tea preparation is given. The exit at the rear is effected via a hinged hatch, which can be kept low in order to heighten the awe of the situation.



Testfeld.01

Solitude under a linden tree



Project Location	Stuttgart
Teaching format	design studio
Operational time	2016
Status	built
Institute	Prof. Jens Ludloff Institute of Building Construction
Project supervisor	Dipl.-Ing. Wulf Kramer
Cooperations	IZKT, Losberger GmbH
Students:	Odai Al Hashimi, Bardhë Bajraktari, Svenja Christian, Laura Corredor, Niels Fennen, Paul Gemmeke, Tim Goltermann, Agnetha Götz, Anita Kinsel, Johanna Lederer, Morena Meyer Dommert, Raquel Rodríguez Martínez, Mihai Medrea, Hannah Müller, Christoph Nething, Alexia Pavlidis, Sishi Peng, Stephanie Rosenfeld, Gilles Muller von Götz, Larissa Schlecht, Jonas Steinmetz, Carolina Trincado, Angela Diaz Sanchez, Giulia Tucci



In anticipation of the universities plans to strengthen the city campus in the long term, we wanted to develop a site in a scale of 1 to 1: the design-build-campus TESTFELD.01. The students should design a concrete project for a temporary realisation, which, due to its distinctive form and use, would be able to strengthen the current discourse on the connectivity of city and university, but also the social interaction between the faculties and institutes in an exemplary manner. The design and realisation of TESTFELD.01 is part of a research practice. The spatial experiment is to become a prototype that succeeds in being perceived as a place where questions of future social self-understanding can be renegotiated.



The chosen construction and the possible deconstruction specifically address the issues of a sustainable management of our environment. The TESTFELD.01 is a lively place of exchange for the questions of active future design.



Begegnungsraum

Community Building for Refugees and Citizens of Stuttgart



Project Location	Stuttgart, Germany
Teaching format	design studio Master Thesis
Operational time	since 2015
Status	built
Institute	Prof. Peter Cheret Institute of Building Construction and Design Chair 1
Project lead	Meike Hammer, Tine Teiml
Cooperations	City of Stuttgart Voluntary initiatives
Team	Hanna Müller, Theresa Hölz, Mathias Kreuz



The Community Building for Refugees and Citizens of Stuttgart has been built on the property of two new Refugee Accommodations in the City Center of Stuttgart. 140 people have moved into the buildings in August 2017. Besides the shared bedrooms, the buildings don't provide any privacy or the opportunity to spend time in common spaces, do homework, to study or retreat. Begegnungsraum with appr. 100 square meters, involves two rooms and is used as an extended living area for the residents, as a room for cooking, dance events and little concerts. There is a room to gather and rest, offering a place for exchange. It is open to being used as a childcare center in the morning, as a playground in the afternoon and a safe place for young people at night.

Through the profound research of fleeing movements and the arrival process in Germany, numerous Interviews with respective stakeholders, partners and teachers first ideas were developed. The next steps were collaborative workshops with refugees living in accommodations



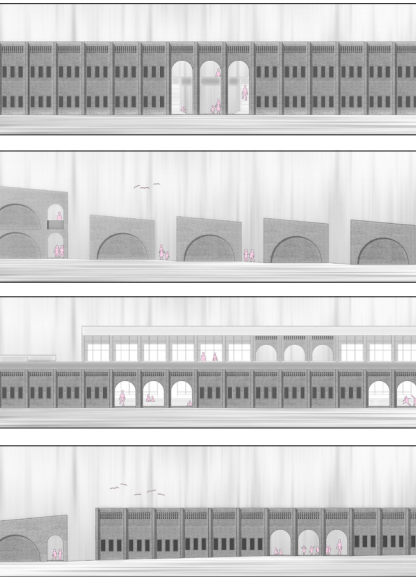
to identify their residing circumstances, needs and challenges. Dialogues with social workers helped to create a base to develop ideas as well as material - and spatial research. Introducing the idea to the City of Stuttgart and choosing the site were to follow. An appreciated part of the networking-process has been a Design-Build-Workshop at the Architecture Biennale in Venice, at which the project was presented. Being an important part in the Begegnungsraum Building History the refugees were given an active role, responsibility and self-determination in their every day life, progress in language, crafting skills and the possibility to comprehend the culture they were placed into. But not only the refugees were the ones to learn, all the participants and the planning team were challenged to take steps towards unknown encounters.

Begegnungsraum has the potential to bring different parties together and change the perception of the citizens, regarding true community with people of different origin and culture.



Hopely Zimbabwe

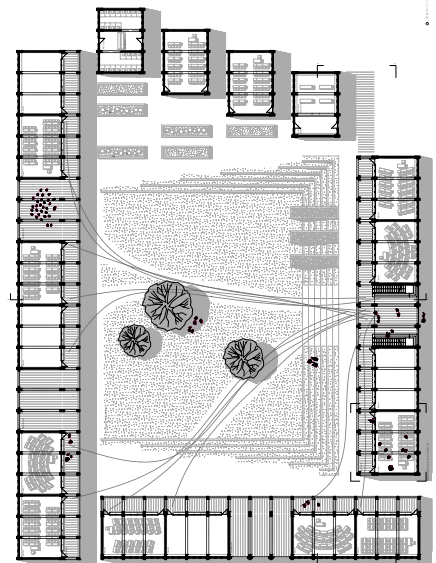
Education without limits



Project Location	Harare, Zimbabwe
Teaching format	Diploma Thesis
Operational time	2014
Status	planned
Institute	Prof. Arno Lederer Institute of Public Building and Design
Project lead	Kristina Egbers
Cooperations	Engineers without bor- ders



By the so-called purge Operation Murambatsvina of the government of Zimbabwe in 2005, many residential buildings of the inhabitants of the capital Harare have been systematically destroyed. Thus, some 300 000 residents have lost their homes. About 25 000 of them have been relocated to Hopley, an informal settlement without running water, electricity and sewage system functioning on the southwestern outskirts of Harare. In addition to the lack of infrastructure, there are no public facilities. The only institution is at a makeshift school, the Rising Star School, consisting solely of shelters made of clay bricks and makeshift structures. These are covered with inadequately attached tarpaulins and cannot stand up to wind and weather, especially not in the rainy season. In addition, the room sizes are measured much too small and the students sit close together on the floor.



For these reasons, a new school is urgently needed in order to provide children with the important opportunity for education. The new school should be able to accommodate up to 1 000 pupil and a staff of 15 teachers and school leaders. Since there are no public facilities in Hopley, the new school will not only be accessible during the day for the children, but also act after the school lessons as a meeting place for the inhabitants. In addition to adult education, the school can establish an institution for parties and events. As a result, it is the center of a new district center. The special feature of the design is the use of materials. Burnt clay bricks form the main structure as arches. By the use of this construction expensive wood structures can substantially be minimized. Due to the brickwork the school becomes an identity creating building. Through the choice of materials the school adapts to the environment, but opens up new possibilities in the local construction method. It also shows new chances for the residents and their own homes.



reUSE



Project Location	Stuttgart, Germany
Teaching format	seminar
Operational time	2014
Status	built
Institute	Prof. Arno Lederer Institute of Public Building and Design
Project supervisor	Leslie Koch
Team	Selina Ahmann, Tobias Becker, Lukas Beer, David Burr, Serge Deisner, Tim Dersch, Hisham El-Hitami, Bianca Fischer Sille, Yaron Ginati, Haro Guillem, Si- mon Huffer, Sofia Holder, Charlotte Mauz, Arantxa Pinate, Paul Schleith, Julia Schloz, Natalie Stricker, Alp Yilmaz



„The object I’m talking about is the idea of use. It’s not about recycling, it’s about reuse. „

Issey Miyake’s sustainable planning and building has become a central theme in architecture. Facing pressing problems, such as climate change, scarcity of resources and the economic crisis, architecture must re-examine its traditional ways and concepts according to new criteria. „Reduce, Reuse, Recycle” - at least since the penultimate Biennale, this slogan is also significant in architecture.



But even if more and more projects are declared as „sustainable”: meaning for the construction of buildings a large part of resources is used. Demolition and construction contribute approximately 60% to the amount of waste. Waste production has impact on society and the environment, as well as the production of new building materials, which leads to even more energy and raw material consumption.

In this seminar, students dealt with the topic of reuse of building materials in form of product recycling. With analysis and research, external lectures and a subsequent written elaboration, the seminar was theoretically fed. With „salvaged” recycled building materials, greenhouses have been built throughout the semester on the property of the Stadttacker at the Wagenhallen in Stuttgart. These were previously developed in group work with an experimental approach. To this day, the greenhouses are used and planted by the association „Stadttacker” and its urban gardeners.



Stuttgart Experiment



Project Location	Stuttgart, Germany
Teaching format	Diploma Thesis
Operational time	2014
Status	built
Institute	Prof. Antje Stokman Institute of Landscape Planning and Ecology
Project lead	Institute of Landscape
Cooperations	Planning and Ecology
Team	Students of the University of Stuttgart



In the process of the diploma project, real experiments emerged, whereby the thesis received the title „The Stuttgart Experiment“ and was divided into the following three subtitles:

The city experiment

Stuttgart is to become „greener“ with the help of the inhabitants.

The garden experiment

The „El Palito“ cultural garden as Action Space.

The Architectural Experiment

As a symbol for change of consciousness and as a place of reflection, a „nest“ will be built in the cultural garden „El Palito“.

The third part of the diploma thesis was mainly about local and practical action. In the cultural garden El Palito an architectural experiment was carried out collectively: A tree house as a symbol for the vision of the „green city“ and a social change of value should be created locally.



The construction was organized as a workshop, which took place with club members and other interested parties. The aim was to specify as few planning frameworks as possible in order to give the participants individual freedom of design and strengthen identification with the „symbol“. Especially with regard to potentially emerging nature experience spaces, such as other cultural gardens in the city, tree houses could emerge as an identifying feature of local action and global thinking. From this concept multi-layered challenges became evident. Minimum planning achieved that the tree house can be rebuilt easily, inexpensively and still promote individual creativity. For these practical reasons, but also to underpin the experimental character and idealistic value of the project, the use of recycled materials was sought. Building should stimulate craft skills and creative processes, which in turn could be useful for other projects. Also communication processes are to be promoted via the medium of „architecture“.



Atsipatari



Project Location	Sondoveni Junin, Peru
Teaching format	seminar
Operational time	2013
Status	built
Institute	Prof. Arno Lederer Institute of Public Building and Design
Project supervisor	Victoria von Gaudecker Dorothee Riedle
Cooperations	Universidad Catolica del Peru
Team lead	Véronique Pavelec, Kristina Safronova, Moritz Hagemeyer, Alberto Norlander Sánchez, Alejandra Elsa Rojas Vera, Gabriela Elizabeth Gamboa Zevallos, José Valdivia
Team	Rossel Carlos, Marcial Silva Mercado, Maria Laura Caballero Pajares, Marianne Christine Trauten Farfán, Melissa Salazar Ramírez, Milagros, Alcántara Segura, Rolando Tafur Vásquez, Walter Juan Pablo, Soto Barrenechea, Giancarlo Pava Durand, Alejandra Rodriguez Lam, Julio Cesar Castro Valverde, Sergio Puch Olivos, Lia Elier, Alarcón Castillo, Cinthia Marañon Salcedo, Melisa Cigüeñas, Juan Villalón, Mika Amano, Marisol Layseca, Nataly Cueto



„Atispatari“ means „together“ or „collectively“ in Asháninka, the language of the citizens of Sondoveni . In this sense, the project „Atispatari“, together with the student group Construyeidentidad of the Pontificia Universidad Católica del Perú in Lima Peru, the aid organization Creciendo and the inhabitants of the village Sondoveni / Junin / Peru was launched. A school building for the secondary school with 6 classrooms, a dining room, also usable as a multi-function room, a library, teacher’s apartment and a sanitary unit was designed. The selected design is divided into two mutually shifted building blocks each with a length of approx. 60 meters. In its center, library and dining room are facing each other, framed by two covered crossings of a courtyard. Underneath the two building roofs are long covered arcades which, even in rainy weather, allow a dry connection of the rooms. At the end of the building is the kitchen facing north and the sanitary unit facing south. The construction is



planned as a simple wooden frame construction supported by point foundations. The walls are covered with wood, bamboo and camona, a cut wood from the rainforest. The windows are designed as wooden flaps, which can be opened for cooling in different stages and thus create a cheerful game in the facade. If required, the library can be opened completely to the courtyard via floor-to-ceiling folding doors. The large stove in the kitchen was built from clay bricks according to the instructions for the „Cocina mejoradas“ in masonry. Via a water pipe to the village, fresh water is being pumped into the new water tank, which is filtered and then supplies the kitchen and sanitary unit. All toilets are used as composting toilets for which an additional composting plant on the lateral embankment with retaining wall and concrete floor slab was built. On March 16, 2014, the villagers, the staff of the aid organization Creciendo and our team of Stuttgart and Peruvian students officially inaugurated the first construction phase of the school in Sondoveni.



Cecotz

Centro Educativo Maya Tzutujil



Project Location	San Pedro la Laguna, Guatemala
Teaching format	design studio Bachelor Thesis
Operational time	2013
Status	built
Institute	Prof. Peter Schürmann Institute of Building Technology and Design
Project lead	Julian Knop, Nina Schaal
Cooperations	NGO „Esperanza e.V.“ NGO „Oyake e.V.“



The building site of the new school „Centro Educativo Comunitario Maya TZ’utujil“ is located in the region Solola, in the central highlands of Guatemala, 1.5 km away from the center of the indigenous village of San Pedro la Laguna, at the foot of the San Pedro volcano. The area directly adjoins the municipal nature reserve „Parque Municipal Regional Volcán San Pedro“.

The architectural design is based on the typical building structure of Guatemalan schools. After an analysis of the existing school complexes, the block structure, a central courtyard with a sports court, an open loggia, as well as adaptation to the terrain were defined as the most important characteristics. In addition to these, a further decisive aspect is the consideration of on-site naturally occurring events and risks. These include the semi-annual rain season, possible landslides because of the strong slope of the site, the risk of earthquakes and the hazard of tropical cyclones.



The objective was, to include all factors in the most cost-effective design. Due to the isolated location on the edge of the nature reserve, an ecological and economic planning with traditional building techniques and materials was specifically important to the planners.

Owing to the imminent risk of earthquakes and the steep slope, the final design was a modular two-story building complex, based on the typical block structure and adapted to the slope. Each building module follows the same design. The ground floor is a massive, earthquake resistant structure built in a traditional clay brick construction technique. The upper floor is built in a flexible design with clay walls and a bamboo bearing structure. An access corridor, detached from the buildings and orientated to the south is used as a covered walk during rain, a buffer zone between schoolyard and classroom on the ground floor and a meeting place. In the interior of the yard are individual levels with different functions and qualities.



Lanka Learning Center



Project Location	Parangiyamadu, Sri Lanka
Teaching format	design project
Operational time	2013-2016
Status	built by "feeat. collective"
Institute	Prof. Markus Allmann Institute of Conception of Space and Principles of Design
Project supervisor	Felix Lupatsch, Valentin Off, Spela Setzen, Noemi Thiele, Felix Yaparsidi
Cooperations	S.T.E.P.S. of Forgiveness e.V.
Students:	Philipp Bauer, Lisa Brinks, Qiuwen Chen, Ilena- Roxana Dan, Eileen Dorer, Ju-Hyung Han, Yun Hou, Christian Kampik, Johanna Köhler, Yuanyaun Li, Yahui Lu, Esther Jiménez Ruiz, Veronika Schuhbach, Heiner Wolfsberger, Long Xu, Yifan Zhang, Juliane Zindel



In cooperation with the aid organization S.T.E.P.S. e.V. from Greifswald and partner organization People Helping People Foundation from Sri Lanka ideas for an education and meeting center were developed.

The aim was to create a place where disadvantaged children of different ethnic and religious affiliations come together and where a better future can be achieved through access to education and common sport activities.

An essential starting point for the development of the center was an interdisciplinary field study with a workshop organized and conducted by the students in Sri Lanka with 80 participants. Here all participants - children & adolescents, parents, teachers, educators and faith leaders from all religions - had the opportunity to express their ideas and aspirations to the Lanka Learning Center in open work groups.



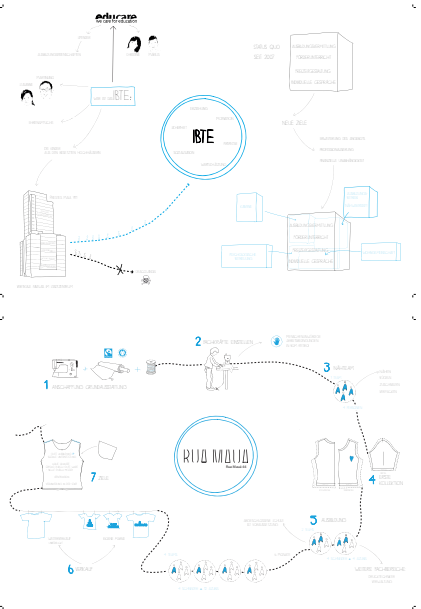
The following spaces and activities should be made possible:

- for children a free offer of special education
- various sports activities
- for young people / young adults certified vocational training & life orientation
- psychological support for parents, widows and single women & continuing high school courses
- for all together: peace work across all social barriers & an annual children's festival with approx. 2500 children for all denominations and ethnicities from all over Sri Lanka.

Eight student projects were developed. Each of them translates the context and wishes of the users into an appropriate architecture. The final project was planned by feat.collective and completed in 2016. The local social, climatic and economic conditions define the choice of building materials, the form of the center and the implementation of the project.



Rua Maua 44



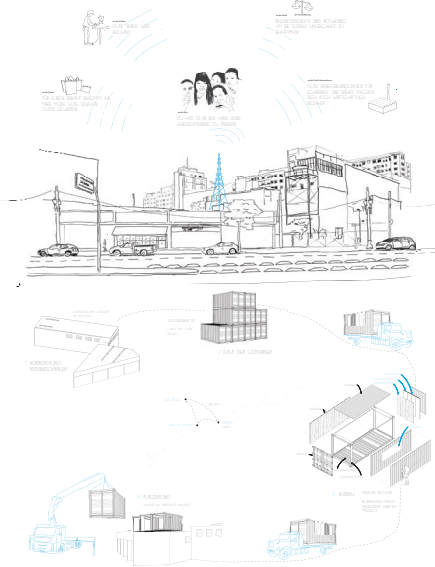
Project Location San Paulo, Brasil
Teaching format seminar
Operational time 2013
Status In progress
Institute Prof. Markus Allmann,
Institute of Conception of
Space and Principles of
Design
Project supervisor Nina Gribat
Students: Heiner Wolfsberger
Juliane Zindel



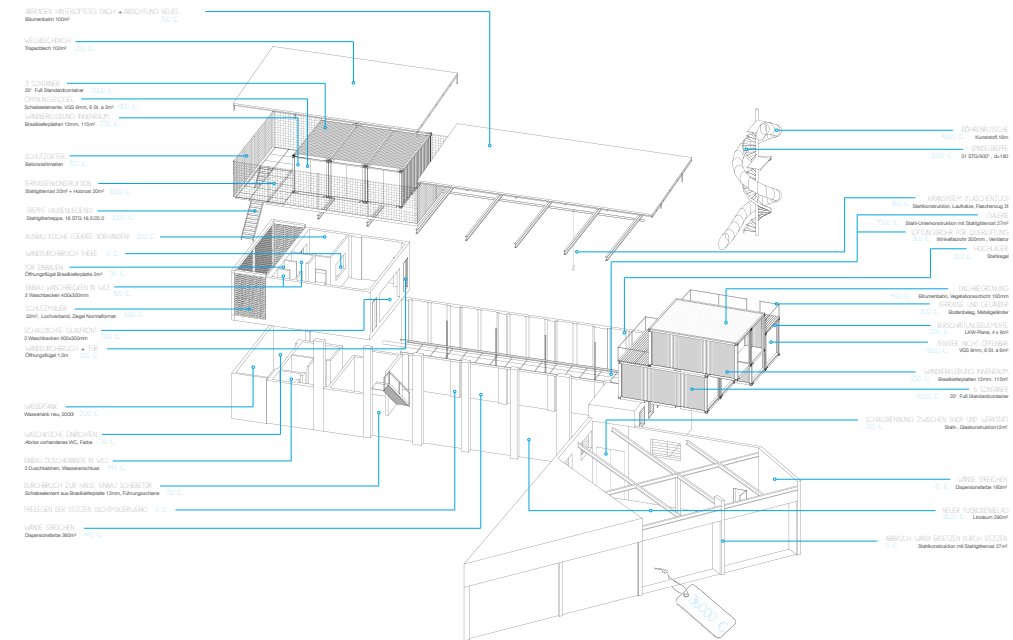
In cooperation with the NGOs Educare and IBTE, the draft for a social and sustainable sewing workshop is being developed in the center of Sao Paulo.

The project includes a comprehensive strategy that addresses social, economic and environmental issues through a flexible and financially sustainable approach, thus providing a long-term concept for the organization. Even if it is just a small wheel that we can turn, it should also serve as a prototype for other, similar projects and thereby multiply.

The IBTE has been working with children and young people from the occupied skyscrapers, the vertical favelas, to offer them a future perspective by motivating and supporting them, above all for learning. Education sponsorships of educare eV. enable a visit a good school and apprenticeship. So far, the IBTE is mainly acting as a mediator, but would like to offer its own jobs in the future.



In the sewing workshop, the kids get the opportunity to complete an apprenticeship with additional social guidance to get optimally prepared for a later job. In addition, the project should draw attention to another local problem, in the adjacent neighbourhoods, Bom Retiro and Bras, clothing is produced under slave-like conditions. „Rua Mauá“ wants to point this out by combining fair working conditions and fair wages with the best quality, thus showing the workers the real value of their work. The building should not only include the workshop with storage areas, but also a sales room, a Canteen with regular meals for children and workers, creative workstations, offices and meeting areas, classrooms, play and sports areas, and living areas. This space should be created by flexible and mobile spaces. In addition, the draft should help to make the organization visible in the city and at the same time creating a green retreat in the middle of the noisy and dirty city for the children and workers.



Stuttgart Super Green



Project Location	Stuttgart, Germany
Teaching format	seminar
Operational time	2013
Status	built
Institute	Prof. Arno Lederer Institute of Public Building and Design
Project supervisor	Victoria von Gaudecker Leslie Koch
Students:	Akgün Basak, Bamberg Lisa, Grazzina Alice, Haker Arlette, Hauser Karin, Kostecka Ewa, Liang Xiaoyan, Lindstedt Timm, Ozdogan, Bora Mehmet, Rabier Anne-Sophie, Riek Nicolas, Schwanitz Jonathan, Schwarzkopf Anna



In the face of increasingly scarce resources, the sparing use of energy and raw materials is one of the most urgent challenges of our time. Energy- and resource-conserving building begins with the planning: The interdependence of construction, building materials and applied technology makes a forward-looking integrated overall planning necessary.

Recyclable designs and the reuse of used components have been experimentally studied in this project. In cooperation with the Kunstverein Wagenhallen and the Kunstakademie Stuttgart, the students built a kitchen, a bar and a residence made of recycled building materials on the property of the Wagenhallen in Stuttgart in 2013.

The infrastructure was used in the subsequent „Recycling Festival“. This is how a think tank for further recycling ideas was created.



Ukuqala 3



Project Location	Grabouw, South Africa
Teaching format	seminar
Operational time	2013
Status	built
Institute	Prof. Arno Lederer Institute of Public Building and Design
Project supervisor	Leslie Koch
Cooperations	„Village of Hope“
Students:	Franziska Bilger, Lena Engelfried, Kristina Egbers, Andreas Greiner, Christian Horbach, Hannes Kalau vom Hofe, Anouk Obermann, Julia Mahler, Dirk Remmert, Marlene Probst, Janina Ruck, Nicolas Riek, Valentin Tomas, Jonathan Schwanitz, Christian Schwär, Christa Szabo, Nghì Tran, Britta Weißinger, Sarah Yaparsidi, Clemens Zembrot



Ukuqala3 marks the end of the ukuqala projects. After the promise of 2010 to create more space for the children in the Village of Hope, 2013 finally this became a reality. After the volunteers moved to the ukuqala1 and ukuqala2 houses, the ukuqala3 team had to renovate the existing old farmhouse. The student team struggled with some obstacles and difficulties inherent to the existing building. A completely new floor slab had to be poured. In addition, new requirements for a medical institution, such as the provision of a quarantine and medical room, had to be implemented as quickly as possible.



In addition, after the renovation, the goal was to create a space for twenty, instead of eight children as usual. For that a 70qm large extension was added, consisted of a pinewood support structure and standard straw bales as an infill of the walls. The straw bales must be slightly tightened, dipped into a mixture of loam and then stacked to a wall. To protect the bales of straw, they were plastered with a clay layer and a two-layered clay-lime plaster. On both sides of the cultivation are storage/garbage chambers, which are formed of concrete blocks, because of the exposed weather conditions. The weather facade is additionally protected with a second facade, as in ukuqala2 against driving rain. In the annex are four bedrooms for the children. Inside they are equipped with loam plaster, floorboards and a wooden ceiling made from sustainably managed agriculture. Each of the four children's rooms has a different door colour. The colourful, child-friendly interior design was also in focus.



Ukuqala 3 sanitary pavilions



Project Location	Grabouw, South Africa
Teaching format	seminar
Operational time	2013
Status	built
Institute	Prof. Arno Lederer Institute of Public Building and Design
Project supervisor	Leslie Koch
Cooperations	„Village of Hope“
Students:	Franziska Bilger, Lena Engelfried, Kristina Egbers, Andreas Greiner, Christian Horbach, Hannes Kalau vom Hofe, Anouk Obermann, Julia Mahler, Dirk Remmert, Marlene Probst, Janina Ruck, Nicolas Riek, Valentin Tomas, Jonathan Schwanitz, Christian Schwär, Christa Szabo, Nghì Tran, Britta Weißinger, Sarah Yaparsidi, Clemens Zembrot



In addition to the conversion and extension project of the children's house, the volunteer house ukuqala2 had to be completed. Three independent pavilions were completed: a laundry pavilion, a lavatory pavilion and a shower pavilion. The three pavilions are arranged around the ukuqala2 house. They are realized in a wooden construction which is covered with a ventilated facade using printing plates. The aluminium plates are no longer needed after printing and are usually melted or thrown away - in the ukuqala3 project, they were recycled.



Thanks to the persistence of the participating students, all printing plates were sponsored by a well-known publishing firm in Cape Town.

The three sanitary pavilions are completely monochrome inside. Decisive here was the colour of the sponsored tiles. The washing pavilion, in purple, includes three sinks and space for two washing machines. Two floor-to-ceiling windows illuminate the interior.

The lavatory pavilion contains two closed toilets, both dominated by the colour blue. A built-in shelf with an integrated window, that opens the view to the green area, makes optimal use of the small space.

The high shower pavilion consists of two closed showers. Their colour scheme is a dark Gray. The water tank is implemented above the anterooms, where the water is heated by a solar system located on the northern facade of the pavilion



Ezbet



Project Location	Cairo, Egypt
Teaching format	design studio, seminar
Operational time	2012-2018
Status	planned, in progress
Institute	Prof. Dr.-Ing. Helmut Bott Institute of Urban Planning and Design
Project supervisor	Dr. Eng. Manal El- Shahat
Cooperations	NGO Alshanek Ya Balady
Students	Students of the University of Stuttgart



Ezbet Abu-Qarn is an informal settlement („slum“) in the heart of ancient Cairo, located behind Africa’s oldest mosque. Like many informal settlements, this neighbourhood is plagued by poverty, lack of infrastructure, poor sanitation and lack of opportunities to participate, which can be traced back to poor education and associated unemployment. Since 2004, the Egyptian NGO Alshaneq Ya Balady (AYB) has been helping the people of EZBET with literacy, occupational and health trainings - but there is no suitable place to carry out these activities. In 2012, the AYB finally asked the University of Stuttgart and the Ain Shams University for help. Together they brought the Ezbet project to life, with the aim to build a community center and to bring together workers and students from Germany and Egypt for educational progress. Egyptian and German experts and students are working with local EZBET workers on locally produced, sustainable recycled materials to build this flagship project for subsequent work.



Ukuqala 2



Project Location	Grabouw, South Africa
Teaching format	seminar
Operational time	2012
Status	built
Institute	Prof. Arno Lederer Institute of Public Building and Design
Project supervisor	Leslie Koch Victoria Von Gaudecker
Cooperations	„Village of Hope“
Students:	Selina Ahmann, Hans-Christian Bäcker, Christoph Dörrig, Marc El- lis, Jonas Gistl, Alexandros Grammatikopoulos, Hannah Klug, Johanna Köhler, Florian Kaiser, Kira Laage, David LaVigne, Andreas Lerchl, Josephine Lüders, Jonas Ruf, Alicia Ruiz Caballero, Nina Schaal, Tilman Schmidt-Föhre, Maximilian Seibert, Benjamin Straub, Oliver Teiml, Tine Teiml, Arianne Trauten, Suryu Um, Maximilian Umbach, Leo- nie Weber, Susanne Wolff



The second project in the ukuqala series started in October 2011 and ended with the completion of the light-clay house in March 2012. The design includes a collection of several two-storey houses, which together form common public areas. In the respective ground floor communal uses such as kitchen, sanitary area or living area are arranged. An outside staircase leads to the private living area. It consists of generously light floorboard area, where two private bedrooms are placed, but can also be used as a living room.

The ukuqala2 team has realized the first of the planned houses with a communal kitchen on the ground floor. The construction method as well as the materials are the same as ukuqala1, a pine wood structure with a light-clay infill.



Recycled wine bottle bottoms form „highlights“ in the façade of the private rooms upstairs. Through the green glass soft light falls into the upper rooms and gives them a special mood. The total of 10 columns are anchored one meter deep in the foundation and are secured by nails standing out of the concrete before lifting. A pliers construction carries the ceiling and the roof. The pliers are connected to each other with bolts. The opaque panels of the windows are given a special picture by fine milled lines. The required window grilles are made of the branches of a particularly tough, native tree („black wattle“), in order to obtain no „barred look“.

In addition to the wooden ceilings on the ground floor and first floor, which were made of self-cut and painted shuttering panels, a wooden floor was laid in the upper floor. In order to protect the straw tamping walls against the strong weather conditions during the rainy season, a second facade was installed on the weather side.



Ukuqala 1



Project Location	Grabouw, South Africa
Teaching format	seminar
Operational time	2011
Status	built
Institute	Prof. Arno Lederer Institute of Public Buildings and Design
Project supervisor	Leslie Koch, Ulrike Perlmann
Cooperations	„Village of Hope“
Students:	Jan Baisch, Johannes Brückner, Torsten Buck, Philipp Burst, Fred Ernst, Franziska Friedrich, Sarah Ischka, Roman Kaupp, Ulrich Kneifl, Simon Köppl, Felix Leitz, Véronique Pavelec, Gerhard Perlmann, Hristina, Safronova, Meike Schlienz, Marianne Trauten, Lea Uhrner, Matthias Vogel, Janosch Welzien, Heiner Wolsberger, Ines Wulfert



Ukuqala means „beginning“ in Xhosa, one of the 11 official languages in South Africa. „The beginning“ was the diploma project of Leslie Koch and Ulrike Perlmann. The pilot project started with a guideline of sustainable building and the introducing of practical building as part of theoretical studies. NGO Thembalitsha helps children, who are directly and indirectly affected by HIV.

The construction of the houses was a joint effort between the students from the University of Stuttgart and local inhabitants of Grabouw. In preparation, the residences were planned meticulously and constantly rethought. Careful consideration for humans and the surrounding environment were included in the process. The house is built with local and sustainable materials, bought max. 20km away from site.

The ukuqala1 house has 2 dormitories for 4 volunteers, facing south-east and south-west, to keep them cool during the hot South African summer.



A continuous corridor separates bedrooms and common areas. The bathroom is made of exposed brickwork and is designed as a multifunctional, load-bearing core with an open fireplace for the living room. The adjoining kitchen is also self-built and opens to the spacious common area. Dining and living room are arranged around the fireplace. A continuous window front forms the transition to the large covered terrace, which is wind-protected by extended side walls. Due to the high temperatures and the strong sunlight a „double roof“ was implemented, to ensure cooling ventilation between the roofs. The lower roof is covered with insulating wool, made from recycled PET bottles, covered with breathable film. A second, inclined corrugated iron roof keeps out the rain, which is especially strong from May to August. The supporting structure and all installed timbers are made of local pinewood. The walls are made of self-made lightweight clay. A solar system on the roof ensures low energy consumption and low running costs.



Alcanzando un Sueno

a dream comes true



Project Location	Chile
Teaching format	diploma project
Operational time	2009
Status	planned
Institute	Prof. Markus Allmann, Institute of Space Concepts and basics of designing
Project lead	Agnes Dransfeld Antonella Pasquale



The project is trying to find answers to the primal architectural challenge: To provide a roof for those who do not have one. For German students it is natural to have a protecting and functional living space. But how can these students contribute to finding a solution for the millions of people on this earth who don't ?



In Chile there are still over 30.000 families living in informal settlements today, so called campamentos. These people live on illegally taken ground, usually without water, electricity or wastewater connection.

About ten years ago, the Chilean Government created a new and progressive social housing programme to give these people a real home.

The challenge was to design a settlement for the people, that are living in a campamento, with 150 housing units according to the governmental social housing programme. The thesis gives a proposition on how to design housing space for people who will live in a legal home for the first time in their life and how their needs and wishes can be implemented in a realistic way. The thesis is composed of an information and analysis part and the design part which includes urban design of the project and the housing units.



Imprint

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