How can we actively shape transformation? How do we want to live and conduct research in the future? How can we make free spaces possible in the everyday lives of designers and planners in training? What possibilities emerge from teaching outside of academic spaces? What are the challenges ahead? And how can we recognise them? How can we teach our students to create multidimensional mental images and ways of thinking? And how can these questions be translated into spaces?
1.0 PROVISIONAL SOLUTIONS IN ARCHITECTURE AND TEACHING, INSIGHTS GAINED

→ Provisional solutions mediate between reality and vision and offer the opportunity to actively intervene in the urban space.

→ Provisional solutions provide an intuitive and playful gateway to concrete design questions and make low-threshold spatial qualities visible. These can be used to derive the relevant concepts and details necessary for translation into long-term solutions.

→ Provisional solutions, through their open, unfinished, and fragmentary design, allow users to connect with them, to get involved, and to have real spatial experiences.

→ Experimenting with provisional solutions in the public space creates a transdisciplinary, open discursive space for discussing the city and society. It makes the complexity of actual places and spaces perceptible.

→ Provisional solutions offer the opportunity to determine the qualities of the architecture and urban spaces in design via their usage.

→ Urbanism can be experienced via provisional architecture on a 1:1 scale.

Insights for Teaching

→ The university opens up, becomes an urban school and a space of learning and socialisation for city-dwellers and for the future training of designers and planners.

→ Drafting via provisional architecture enables students to link their discipline-specific drafting and design practice with societally-relevant topics. At the same time, it can serve as an aid in formulating and finding answers to questions about the urban space, mediating between vision and reality.

→ Through intensive negotiations in real spaces, the students acquire new tools and modes of expression to communicate between disciplines, actors, interest groups, and within their own teams.
The drafting, design and subsequent construction provides students a playful way to learn manual skills and builds an understanding for the connections between the skilled crafts and trades, architecture, city planning, politics, and civil society. Skilled crafts in this context include architectural craft, and not only technical skills. City planning can be experienced in this way on a 1:1 scale.

Teaching formats that work with real-world designs require time and financial resources, working spaces, and workshops staffed by trained leaders in order to successfully implement projects.

By permanently embedding these teaching formats in university teaching, we can continuously negotiate and try out our spatial coexistence with civil society. We call this the Institute for Transformation.

2.0 PRACTICAL URBANISM

"Can we still allow ourselves the luxury of simply viewing the world, rather than creating it?"¹

Otl Aicher posed us this question in 1991. And now, 30 years and many crises later, we face challenges that will threaten humankind and our planet itself should we fail to produce and enact new visions and strategies.

Climate change, aging societies, and globalization are challenges that we face not only societally, but in physical spaces—especially in cities. It’s not enough to simply analyse our present predicament. We need forward-looking visions, ideas, and concepts that address not only the present, but also anticipate the needs of far future generations. How can we, as a society, actively shape our environment? We will need to enact changes and adopt approaches that work simultaneously on many levels and from many different angles.

We need to adopt an integrative approach that crosses disciplinary boundaries: urbanism. We can’t simply generate solutions to contrived problems. Rather, we need to ask questions and figure out the deeper issues while actively designing an alternative future. Human needs, individual and societal, must guide us as we critically apply this approach to kick off urgently needed processes of creative transformation.

This creativity involves imagining how things could be, inspired by Georg Christoph Lichtenberg, visualising a spectrum of possibilities.² This means not only practically envisioning some future state, but also grappling with and trying out new orders, relationships, and spatial qualities. These shape human perceptions of and interactions with both one another and the spaces produced. Our path to that result is a winding process of critical reflection and engagement with theory, models, and practical implementation.

Temporarily implementing these visions even in small-scale interventions makes longer-term processes tangible while creating a space for further discussion and creativity. This is what we refer

to as practical urbanism. Such experiential spaces help students and practitioners of urbanism, as well as urban citizens themselves, to actively engage with the spaces and with the process of transforming them. As Otl Aicher put it, “[w]e must shift from thinking to doing, and in doing learn to think anew.”

This approach breaks through the long-term, often abstract nature of planning and urban transformation processes that too often produce generic spaces. By joining visions of the future with everyday life, practical urbanism allows citizens to begin actively shaping their environments even as the planning process is ongoing. This is an approach to planning that generates new social, cultural, and political opportunities and possibilities—as well as a new resonance between people and the spaces they inhabit.

The temporary interventions must be embedded in a broader strategy to realise their full, sustainable potential. This also requires a transparent and healthy culture of communication as well as high quality architecture and craftsmanship that are at the heart of practical urbanism. Therefore, it relies on city planners, architects, and landscape architects as “trained designers” with the skills to realise even temporary interventions of the highest quality. “Design-build” projects such as the Realexperimente provide designers in training the chance to gain the skills they need to do so.


3.0 PROVISIONAL ARCHITECTURE

In everyday language, provisional solutions are by definition temporary, often makeshift stop-gaps on the way to an as yet undefined final state, though often lack any clear time horizons or schedule for replacement.

Laurids Ortner, an architect and member of the artists’ group Haus-Rucker-Co., contributed the ‘provisional’ to the architectural discourse with his 1973 article “Provisorische Architektur. Medium der Stadtgestaltung”. For him, the focus of provisional solutions was on the concept, and not on the perfection of details. This open approach allows city-dwellers participation in the transformation of urban spaces, selecting, testing, and fine-tuning models and concepts in use, providing designers with immediate feedback in the form of the behaviour of the urban resident.

3.1 PROVISIONAL ARCHITECTURE AS A RESEARCHING-DESIGNING TOOL OF PRACTICAL URBANISM

The unfinished, processual, and conceptual character of provisional architecture is more relevant than ever for the disciplines practicing and researching urbanism. It allows for experimentation and correction, thus transcending the limits of classical methods and standard forms of public participation.

Our cities are complex systems that will face ever more unpredictable situations in the future, challenging traditional planning. Provisional architecture helps by keeping these planning processes open, testing concepts and designs in active use. Their status as ‘open building sites’ allows third-parties to contribute their experiences with the urban spaces and their

ideas, thus allowing people who would otherwise not get involved in planning to become productive participants in the process. Provisional architecture allows city-dwellers to question the status quo, fostering cooperation between them and urban designers.9

The use of provisional architecture transforms the planner’s design from a completed end-product to a dynamic process. The planners and designers’ role is thus transformed from that of a rational individual to a situated and moderating community of practitioners. Provisional architecture thus becomes a researching-designing tool of practical urbanism and an active mediator between reality and vision.

3.2 DESIGNING VIA ACTIVE RESEARCH

Provisional architecture flows from the idea of transformative research, providing new forms of knowledge creation and sharing while spurring transformations in the built environment. Its real experiments in the urban space create an open discursive space that spans disciplines and fosters a public exchange between academia, politics, urban administrations, and civil society, thus delivering fodder for planning decisions. They provide practical testing for concepts and designs, while making city planning spatially visible.

Provisional architecture does not provide finished solutions, but rather allows for adjustment and continued development. As a test usage, it can be used to ascertain formal aesthetic and structural engineering insights. It unites students, teachers, and practitioners in real-world spaces, allowing the draft design to serve as a way to acquire knowledge step by step, working out concrete answers to complex urban design and planning questions via experimentation through use.10, 11 The provisional architecture and the questions guiding the experiment are refined through this process, offering a way to both understand and design concrete solutions through real-world experimentation.12 At the same time, this approach anchors spaces for thinking and experiential learning in the urban landscape, transforming the fictional, two-dimensional space of the planner’s design into a physical space of learning and socialising of the future.

3.3 PROVISIONAL SOLUTIONS AS AN OPEN LEARNING PROCESS

Anyone can independently develop and implement provisional urban solutions. They “don’t demand perfection, the gods don’t rest in the details, but in the conception.”13 They provide as many people as possible easy access to the process of designing their own living environment—a sort of learning by doing.14 The interplay between self-designed and built provisional architecture and social interactions can thus become a didactic tool of urbanism at a time when the limits of traditional means have become clearer than ever.15 They allow the designers in training the space to concentrate on the most urgent questions, without having to rise to the standard of built eternity.

9 see: Alexander, Christopher; Silverstein, Murray; Angel, Shlomo; Ishikawa, Sara; Abrams, Denny (1975): The Oregon Experiment. New York: Oxford University Press, p. 41.
12 see: Schäpke, Niko; Stelzer, Franziska; Bergmann, Matthias; Singer-Brodowski, Mandy; Wanner, Matthias; Caniglia, Guido; Lang, Daniel J. (2017): Reallabore im Kontext trans- formativer Forschung. Ansatzpunkte zur Konzeption und Einbettung in den internationalen Forschungsstand. Lüneburg: Institut für Ethik und Transdisziplinäre Nachhaltigkeitsfor- schung, p. 9–17.
4.0 EXPERIMENTAL TEACHING FORMATS IN THE TRAINING OF PLANNERS AND DESIGNERS

How can we conduct research through design in order to positively influence future processes of transformation? This is a question that is facing not only the Reallabor, but also critical researchers, planners, and activists the world over seeking new approaches to urbanist education and practice.

Our environment is subject to ever more fundamental and complex processes of transformation, while anthropogenic global crises are leading to social and ecological upheaval. Growing conflicts relating to climate change, migration, transportation, and questions of housing and land demand holistic analyses and broadly-negotiated and designed solutions. The current practice of universities is struggling to provide answers and stands in opposition to the culture of teaching in architecture and city planning and the didactic format of the (provisional architecture) design process. This process, at least in terms of teaching, is well-served by freeing itself of all notions of efficiency. As a teaching format, provisional architecture encourages planners and designers in training to grapple with their roles and responsibilities while actively contributing to solving urban solutions with their designs.

4.0.1 MEDIATING THE CITY

The Reallabor approach can help mediate the complex socio-technical transformations of our environment. Understanding them and appreciating their relevance is central to sustainability research and helps bring variety to the often highly-specific tasks that belong to the everyday life of urbanism students.

The complex system that is the city must be prepared for increasingly unpredictable situations. An open approach that lets in all senses seems a good strategy for meeting these challenges. Realexperimente (real experiments), temporary urban experiments embedded in social, ecological, and technical design processes, can help in dealing with uncertainty and in finding solutions for the future. This approach also serves as a framework for promising new teaching formats. The new spaces and realities it opens in the real world shake up old paradigms and hierarchies—the university becomes an urban school for specialists and citizens alike, a space in which thinking turns to doing while accounting for the complexity of the world.

4.0.2 PROVISIONAL ARCHITECTURE AS A TEACHING FORMAT

The approach allowed students to work with the teaching team in developing and executing real-world solutions to urban problems. By implementing their designs in real urban spaces, they gained an experiential view into the big questions and challenges facing urbanism students and practitioners, while generating new insights and experiences that furthered the discourse in their fields. The teaching format served as a hybrid mediator between academia, politics, culture, the city administration, and civil society while incubating trans-disciplinary collaboration between students, teachers, and researchers. In that way, it blazed new trails for transforming the way architecture and urbanism are taught, while usefully contributing to city planning.

4.0.3 MOBILITY

In the provisional architecture teaching format, mobility was a prime example of the challenges we will have to address differently in the years to come. Mobility represents freedom and self-determination, although we are increasingly reliant on buses, trains, e-scooters, and our phones and computers to bridge distances. City planning must face the social, ecological, and economic questions that accompany increasing mobility in our cities. We can no longer reduce spaces for mobility to their simple function as traffic arteries, but must recognise them as complex spaces rife for transformation. The students made use of such spaces in the heart of Stuttgart to grapple with mobility, using provisional architecture to enter a physical dialogue with a broader range of actors and interests, allowing them to pursue talents and potentials that would have gone untapped in traditional academic spaces.

The activating teaching format was topically embedded in the Reallabor für nachhaltige Mobilitätskultur (Real Lab for Sustainable Mobility Culture) and was organized by the Chair for Urban Planning and Design, Städtebau-Institut and the Centre for Interdisciplinary Risk and Innovation Research at the University of Stuttgart in cooperation with the non-profit PRACTICAL URBANISM & PROVISIONAL ARCHITECTURE – ACTIVELY SHAPING TRANSFORMATION.
association Stadtlücken e. V.. The project involved cross-
university and trans-disciplinary thinking and research on urban
issues with students from the University of Stuttgart,
Department of Architecture and Urban Planning, as well as from
the University of Applied Sciences, Department of Interior
Design. This collaborate made it possible to implement the
designs at Österreicher Platz, a traffic structure and prime
element of the car-friendly city in the heart of Stuttgart. The
collaboration with Stadtlücken provided the students access to
a digital and analogue network of civil society actors,
who provided their local knowledge and expertise. The project
allowed university knowledge to become urban reality.

4.1 CONSTRUCTION AND FORMATS
The “design and build” teaching format based on ideas from
Haus Rucker-Cos provided students the opportunity to acquire
new concepts, tools, and media via exercises in construction.\(^{18}\)
Using Stuttgart as their case study, the students worked in
groups to develop strategic and spatial design concepts for
more sustainable mobility. This interaction with each other, with
other urban actors, and with the city around them unleashed
new potentials to develop innovative approaches able to meet
the challenge of ever more complex planning processes and
tasks.

The teaching unit included two seminars and a design studio,
and was accompanied with a discursive lecture series,
workshops, external presentations, walks around the city,
discussions, a public exhibition, the implementation of real
experiments in public spaces, as well as an analysis of the
experiments. Nineteen designs were developed during the
winter semester 2018/2019, with three chosen for execution in
the summer semester 2019: the performative mobility
demonstration “How do you roll?” for a diversity culture of
mobility, the \textit{Stuttgarter Luftbahn} (Airtrain) addressing past
visions of the futures, and the \textit{StadtRegal} (City Shelf), a real
experiment addressing social justice in the public space. (See
Zine C)

4.1.1 PHOTO SAFARI—EXPLORING AND OBSERVING THE
CITY
The learning goal of the first task was to experience the city in all
its complexity and via all five senses. It employed the earliest
form of perceiving the world: going for a walk.\(^{19}\) The photo safari
took the students on a journey of discovery through Stuttgart,
which brought together students from different institutions
to grapple with provisional architecture and mobility culture
in teams. They were equipped with cameras and encouraged to
have a look at provisional architecture on their daily routes
and to record situations and scenarios that reflect our current
culture of mobility—not only concrete realities, but also
examples of Lucius Burckhardt’s “invisible design”.\(^{20}\) The
resulting photo series served as sources of inspiration for the
coming semester and were exhibited and collectively assessed in the seminar rooms of the University of Stuttgart.

4.1.2 AGILITY, NOT HIERARCHY
Non-hierarchical discussion sessions between researching
students and studying researchers helped to spark a co-creative
design process in which design decisions were made
cooperatively as a group. The design work was buttressed by
input presentations focussing on provisional architecture and
real experiments, a methods workshop, and a lecture on
architects as activists. Students had the opportunity to
voluntarily present their drafts at weekly design workshops in
which they worked with teaching staff as equals. Four internal
exhibitions in the course of the semester provided a temporal
and spatial framework in which students and teaching staff
could refine and discuss the research questions. This
confrontation with real-word challenges opened a trans-
disciplinary discursive space on the city, society, and the future
education of practitioners of urbanism.

\(^{18}\) Ortner, Laurids (11.1977):
Provisorische Architektur — Medium der
Stadtgestaltung. Kunstforum International,
Vol.19, p. 5

\(^{19}\) see Burckhardt, Lucius (01.2004): Wer
plant die Planung? Architektur, Politik und
Mensch. Berlin: Schmitz Verlag, p. 10.

\(^{20}\) Burckhardt, Lucius (1981): Design ist
unsichtbar. In: Ausstellungskatalog — Design
ist unsichtbar. Vienna: Löcker Verlag,
p. 13.
4.1.3 ACCOMPANYING PUBLIC DISCUSSION FORMATS
“Mediation is communication. This fact makes mediation a social undertaking.”21 The Reallabor thus held a variety of events to ensure a continuous exchange between the academic side and the public, city administration, and civil society actors. These allowed for an often informal exchange of everyday, experiential knowledge and research-based insights and ideas. The participants thus gained new tools, sharpening their communication skills and building synergistic networks at the same time. The Reallabor team made special efforts to plan these events and create physical atmospheres conducive to a productive exchange, for example at the Württembergischer Kunstverein, Stuttgart bewegt sich.—Impulse für eine nachhaltige Mobilitätskultur, a debate on housing with the student group Adapter e. V. at the Österreichischer Platz, as well as the monthly discussion and exhibitions held at the StadtPalais: Provisional Architecture—New Real Experiments for Stuttgart.

4.1.4 EXHIBITION AND JURY
The exhibition Provisional Architecture—New Real Experiments for Stuttgart of the team’s draft designs gave the public a chance to consider possible future mobility scenarios in the form of experiments that simulated possible changes to the urban space in Stuttgart. The provisional nature of the designs allowed for more space for individual interpretation. The exhibition space within the StadtPalais—Museum for Stuttgart was similarly provisional, consisting of scaffolding elements designed and built by the students themselves to inspire an open discourse on sustainable mobility.

A jury consisting of representatives from the citizenry, city administration, arts, and the university selected three works to be displayed in a public opening in January 2019, with an introduction by Prof. Dr. Martina Baum and the museum’s director, Dr. Torben Giese. The works were then implemented in Stuttgart during the following summer semester and evaluated by academic advisors.

4.1.5 CRITICAL CONFRONTATION—REAL EXPERIMENTS
In order to get to know the different perspectives on real experiments, but also to initiate a critical discussion about the format, the Reallabor organised an open discussion in cooperation with the StadtPalais. Representatives from the university, city administration and politics were part of the discussion: Dr. Torben Giese, Museum Director, Prof. Dr. Martina Baum, Head of the Urban Planning Institute at the University of Stuttgart, Susanne Scherz, Head of the Road Traffic Authority of the City of Stuttgart, Andreas Hofer, Director of the IBA’27, Cristina Estanislao, architecture student, and Michael Schneider, Head of the Wood Workshop at the University of Stuttgart, as well as the Reallabor team.

4.2 COLLABORATION, COOPERATION, MAKE POSSIBLE, INSPIRATION
Breaking architectural instruction free from the ivory tower meant expanded roles and responsibilities for the Reallabor team—as mediators, strategists, and curators. These roles were essential to allow the students and actors involved the greatest possible scope for designing action. Over time, the team took on ever more planning, economic, legal, communication, and organisational responsibilities to make the real experiments possible with a range of actors and organisations. These naturally included city agencies and district councils (Zine C). It was also necessary to coordinate with all the academic institutions involved to ensure the students could fully participate in all events, meetings, etc. while receiving full academic credit for doing so. The dual-semester course on Provisional Architecture was complemented by further formats in other disciplines and organisations, including the International Center for Cultural and Technological Studies (IZKT) and the Stuttgart Wissenschaftsfestival Smart und clever.

4.3 TESTING, IMAGINING, AND RESEARCHING-DESIGNING ON A 1:1 SCALE
The teaching format “Provisional Architecture” showed that testing, imagining, and experiencing on a 1:1 scale offers future designers the chance to learn skilled crafts and gain an understanding for the connections between the skilled crafts and trades, architecture, city planning, politics, and civil society. The designer has always also been an academic and artist, as Vittorio Magnago Lampugnani writes, presenting the architectural design as a craft in itself.22 The task is therefore to train designers who can think and act for themselves, to bring together theory and practice, channelling knowledge into action. The application of learned skill, tools, and techniques also rewards the students with a connection to an immediate,


experiential reality and a new respect for their own work. This also increases their appreciation for all those involved in building and construction. This form of learning by doing, provisional architecture, demonstrates new ways of understanding and acting, providing a possible path for collaboratively creating the future city.

The Reallabor and real experiments offered the opportunity for even more intensive design interventions and exchange with many different actors, with construction, and with experimentation in the real urban space.

5.0 GLOSSARY

While this does not represent an exhaustive list of the terms used here, nor does it purport to provide definitive definitions for them. We would nevertheless like to explain what they mean to us and why we use them as we do.

**Design-Build** — “(…) describes an action-oriented learning method in which the direct, practical implementation of a concrete planning and construction task forms the starting point of a learning process. In addition to the acquisition of subject-specific knowledge, this active confrontation with real conditions can, in particular, promote supra-disciplinary knowledge and skills.”

**Design interventions** — describe architectural/artistic interventions. Design interventions, in the artistic sense, represent the attempt to either intervene in design itself, or to use design to intervene in the environment.

**Evaluation** — describes a component of empirical social research. In an evaluation, measures or interventions (of techniques, methods, goals, projects, systems, or research) are assessed. Of central importance are criteria that ensure a systematic approach as practiced in empirical social research.

**Experiment** — is a planned form of gaining knowledge, carried out according to explicit rules. “Every experiment is a question to nature, which nature is forced to answer. But the question contains a hidden judgment a priori; every experiment, which is an experiment, is a prophecy; the experimenting itself calls forth the appearance.”

**Explorative approach** — “(…) describes the method of the art of discovering the (research) object via touch and experiment. It assumes that the object of research or the material has a “self-will” that can show new paths and discover new possibilities. News insights can be gained and discovered without preconceived notions and on the basis of one’s own action, observation, and performance.”

**Improvisation** — “In general usage, improvisation implies the spontaneous, practical use of creativity to solve emerging problems. (…) it is the constructive handling of disorder in community. This means the transference of learned rules and practices in an anticipatory concept that does not dispense with planning or framing, but rather seeks to creatively transcend them.”


30 see: Döring/Bortz 2016.

31 Stark, Wolfgang; Dell, Christopher; Schmidhuber, Holger (2017): Improvisation und Organisation. Muster zur Innovation
**Inter- or trans-disciplinary:** “It means entering into a discussion with different disciplines. Interdisciplinarity is thus understood as a type of cooperation or interplay between various disciplines, whereas transdisciplinarity emphasises the overarching critique of and reflection upon academic work.”

**Cooperation** — “Cooperation is a form of participation with a high degree of involvement in decision-making and a high degree of responsibility. A cooperation requires the more powerful cooperation partners to be willing to share their power. This is only possible when politics and the bureaucracy acknowledge that proposal and initiatives from civil society make an important contribution to the implementation of urban development projects.”

**Users** — are people who use the real experiments or participate in them. These can be coincidental passers-by, area residents, or people who work nearby and who participate in the real experiment through some action.

**Practical urbanism** — refers to the immediate reality. Designs, researches, and develops spatial situations with various actors. Interventions in the urban space such as provisional architecture and real experiments are tools for making complex visions of the future immediately visible and able to be experienced even in the midst of long planning processes. Practical urbanism does not replace planning or urban development strategies, but rather sees itself as an embedded aspect.

**Realabor — or real laboratory,** “(...) refers to the societal context in which researchers conduct interventions in the sense of ‘real experiments’ to learn about social dynamics and processes. The idea of the Reallabor transposes the term ‘laboratory’ from the natural sciences to the analysis of societal and political processes. It is tied to the experimental turn in the social and economic sciences. It is closely connected to concepts from field and action research”.

**Transformation** — is understood as the process of change from the current status quo to a goal state in the near future. A transformation represents a fundamental and permanent change.

---


34 Schneidewind, Uwe (2014): Urbane Reallabore — ein Blick in die aktuelle Forschungswerkstatt. PNDonline — ein Magazin mit Texten und Diskussionen zur Entwicklung von Stadt und Region, p. 3.