

THE RISE OF TEMPORARY AND POP-UP ARCHITECTURE

TEMPORARY STRUCTURES OFFER AN EXPERIMENTAL MEANS TO LOOK AT DESIGN, CONSTRUCTION TECHNOLOGY, AND USE OF MATERIALS.

Presented by:



Temporary or “pop-up” architecture has been used around the world for centuries to experiment with new construction technology and innovatively use materials such as the painter’s buckets used here in Mexico City for the MEXTRÓPOLI festival. Photo courtesy of: Jaime Navarro

Architecture is most commonly thought of as something permanent, firm, long-lasting, and durable. In order to be justified in its purpose, initially and over time, traditional architecture usually needs to respond to multiple needs for the building owners, occupants, and the general public who may encounter it. Increasingly, however, for a number of projects around the world, permanence is not the goal. Instead, there is a defined need for a structure, display, enclosure, or interactive space that can be temporary, flexible, and adaptable for different people, uses, or times. This temporary architecture, sometimes referred to as “pop-up architecture,” allows for great creativity and potential time and cost savings during the construction process. In this article, we will look

at some of the ways pop-up architecture has been developed, used, and admired around the world.

HISTORICAL PERSPECTIVE

When we think back to the times of the Greek and Roman Empires, we picture stone and masonry buildings, some of which survive to present times. While the Empire (i.e., the government) was the primary force behind the construction of most surviving public and utilitarian buildings, the people living at the time had their own purposes for structures. In particular, they sought venues to stage local plays or celebrate religious festivals. While the Romans are known for building coliseums, circuses, and theaters, not every community had one. Further, there was government

LEARNING OBJECTIVES

After reading this article, you should be able to:

1. Discover the history and motivation behind creating temporary architecture for habitable and non-habitable spaces.
2. Explore the design challenges of innovative approaches to material usage, experimentation, and progressive design solutions.
3. Recognize the positive environmental implications of temporary architecture, including dis-assembling, re-use, and recycling.
4. Identify the ways pop-up architecture concepts are being integrated into permanent and semi-permanent structures in code compliant manners.

CONTINUING EDUCATION

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opposition to permanent amphitheaters unless built by the Romans. All of this prompted the creation of temporary wooden theaters for plays and festivals, making them a bit of a social revolution with anti-establishment ideals. This temporary architecture provided a means for people to gather for a short time with a sense of celebration and community, separate from the restrictions of the government.

A resurgence in temporary architecture occurred during the Renaissance. In one noteworthy example, King Henry II of France was often welcomed in cities and towns by civic groups who hosted festivals that included temporary architecture. A parade route for the King would be created using archways made of painted canvas, sculptures, or ornate

fountains. Viewing platforms would be built, sometimes as an elaborate, adorned addition to an existing building, for notable citizens to see the procession. The temporary and celebratory nature of these structures allowed architects of the time to experiment using their most progressive ideas and designs—most of which would be considered too unconventional or extravagant for traditional architecture.

World's Fairs emerged in the 1800s as ways for cities, regions, or even entire countries to showcase their latest advances in design and technology, marking their leadership in the era of mechanization and improved living. Accordingly, the 1889 Exposition Universelle in Paris showcased France's capabilities in this emerging age. The archway designed as the entrance to this World's Fair was intended to be a temporary structure that would last only 20 years before being dismantled—the Eiffel Tower. While we see it today as one of the most iconic structures in Paris, many Parisians saw it then as an avant-garde eyesore. It likely would have been demolished as planned if radio technology had not emerged in the early 1900s. Suddenly, the capability of using this tall spire as a radio tower gave it a new purpose to continue on as a more permanent structure.

The proliferation of World's Fairs continued into the 1900s with new motivations and intentions. For example, the 1929 Barcelona International Exhibition provided an opportunity for an emerging architect named Ludwig Mies van der Rohe to create Germany's entry for a national pavilion. Now known commonly as the Barcelona Pavilion, it immediately became an emblematic work of the Modern Movement of the 20th Century. As such, it has been exhaustively studied and interpreted and has inspired several generations of architects. Built from glass, steel, and marble, the Barcelona Pavilion was intended to accommodate the official reception presided over by King Alfonso XIII of Spain along with the German authorities. After the closure of the Exhibition, the Pavilion was disassembled in 1930. Fortunately for many lovers of architecture, it was kept in storage, and six and a half decades later, a movement succeeded to have it reconstructed and re-opened on its original site.

Meanwhile, large multi-national corporations joined in to show their thought leadership and forward thinking. Many paid for subsequent World's Fair Pavilion competitions to find the best architects and designers to create sophisticated, memorable structures. Certainly some were

re-purposed or re-used at the end of the Fairs, but others, such as the New York World's Fair of the 1960s, serve as public parks today. Even so, the re-use of the buildings is very limited, testifying to their true temporary nature.

Since the 1960s, countercultural design firms have experimented with mobile structures and temporary buildings using a variety of materials and methods. Many of these have been modern versions of the Roman social revolution, with temporary architecture playing a key role in rock concerts and multi-day festivals, such as "Burning Man" in the Nevada desert.

With this rich history, it is easy to understand the persistence and popularity of temporary buildings and other structures in modern times.

CURRENT IDEAS—"POP-UP ARCHITECTURE"

Today, we see many types of and uses for temporary or "pop-up" architecture. Beyond quick construction, pop-up architecture has also become known for lending itself to experimentation and artistic freedom. This applies to both the general design and the incorporation of new construction technology, including computer based design and modeling, sometimes linked directly to the fabrication and assembly of the pop-up creations. The use of technology for design and fabrication means much of the construction work can be done off site and then transported to the building site. It also applies to new ways of using transitional and non-traditional construction materials to offer progressive and avant-garde solutions expressed in unexpected ways. This has led to a description of pop-up architecture by Allison Arieff, *New York Times* opinion writer and former editor-in-chief of *Dwell*, as "a bold expression of unfettered thinking and creativity."

Such creativity can come from pop-up architecture because it isn't constrained by the demands of building owners, financial backers, or users the way traditional, permanent architecture is. Instead, it can focus on a singular purpose and concentrate its impact on the people who interact with it. In some cases, it can be the catalyst for change in a community by engaging citizens in a project that will benefit all or by demonstrating a communal concept in real-world terms. In other situations, it has enabled multi-day protests and demonstrations around the world. At the same time, temporary architecture still has ongoing value for cultural, public, and political events.

What does pop-up architecture look like? It can take on many forms, including the following singular-purpose types:

- **Art:** Large, interactive, outdoor public art installations have been set up in parks, plazas, squares, and other places that add a new dimension to a location and attract visitors.
- **Theater:** Theater set design has always been temporary in nature and can be part of a larger building or an outdoor setting.
- **Retail:** Retail installations are often temporary, such as kiosk structures in shopping malls set up for a limited time or as a supplement to a more permanent store. Similarly, temporary retail facilities are set up in open air marketplaces, farmers markets, and craft fairs.
- **Music:** Music stages and facilities for concerts, multi-day festivals, and similar events have become common in cities and even on college campuses around the world.
- **Politics:** Events such as the Presidential Inauguration in Washington, D.C. include a ceremony at the U.S. Capitol and a procession to the White House. Substantial temporary structures are built out of wood both at the Capitol Building and along



The Pop-Up-Box by Dittel Artitekten provides an expandable, interactive, and efficient retail display that can be used temporarily in a variety of retail situations. Photos courtesy of: ©DITTEL ARCHITEKTEN GMBH

Pennsylvania Avenue for the inauguration ceremony and parade viewing.

- **Gatherings:** Events can require temporary facilities and buildings on a larger scale. The previously mentioned “Burning Man” event creates a temporary city for several weeks each summer that is then dismantled to restore the land to its original condition. The international “South by Southwest” conference in Austin, Texas and the Venice Biennale combine permanent buildings with temporary installations of art, architecture, technology, and other advanced-thinking activities.
- **Disaster Relief:** Natural disasters and humanitarian situations have produced the need for temporary emergency housing, schools, churches, and other facilities to help people through difficult periods. These have been provided in numerous creative and innovative ways all around the world.

All of these temporary, “pop-up” buildings and facilities typically occur because of the rather singular and focused need to accommodate any one of the forms listed above. Other needs are certainly possible and new ones are emerging as activities and conditions change, but it is clear that there are many reasons and opportunities to create “pop-up” architecture.

INNOVATIVE DESIGN AND CONSTRUCTION PROCESSES

Temporary architecture receives the same level of design thinking and analysis that traditional architecture does, and in some cases maybe even more so. Because of the design freedom provided, analysis and synthesis of pure form and focused function can lead to deeper investigations and broader linkages to time, place, and technology.

This sharper focus on the cause, event, art, or demonstration of ideas can reveal the best makeup of a design team. For example, the team might be limited to a defined group of architects, or a broader, multi-disciplined team of collaborators might be assembled, including traditional design professionals along with computer specialists, information professionals, and community activists. This type of design process can be vibrant, inquisitive, and exciting—reminding many participants why they entered their professions in the first place.

When it comes to envisioning and working out the design options for temporary architecture,

most practitioners already use computer aided design (CAD) and building information modeling (BIM) as their most common design tools. These are equally powerful resources for temporary and pop-up architecture. Because of the experimental but focused nature of these designs, different iterations can be quickly and easily explored in both 2D and 3D, then presented quickly and efficiently for evaluation by the rest of the group. These tools can also be used to communicate a final vision to the general public, when appropriate, and generate support and excitement for a project.

When it comes to the construction of temporary architecture, several common techniques have emerged. The first is to use traditional materials but apply them in creative ways. In this regard, materials like wood, steel, masonry, concrete, glass, and even heavy duty fabrics can be employed in ways that can surprise, inspire, or present an artistic but well-grounded installation.

The second technique is to consider some non-traditional building materials that can be incorporated to create planes, surfaces, or enclosures, particularly if there is little or no structural loading to address. That means materials like plastics, cardboard, composites, alloys, and lightweight fabrics can be quite appropriate for a pop-up installation, particularly for the creation of outdoor, non-enclosed structures. Both of these techniques rely on the traditional construction process of bringing materials and products together



One technique for creating temporary pop-up architecture is to use modular components such as trailers or shipping containers. Photo courtesy of: Christoph Merian Stiftung, Basel

for fitting, shaping, and installation with a construction crew.

A third, and popular, approach is to use modular components, such as trailers or shipping containers, as the “building blocks” of the temporary construction. A series of enclosed spaces can be created by stacking the modules together—either independent from each other or linked in meaningful and organized ways.

Given all of these options, how do temporary architecture projects come together? Lots of different ways of course. It will likely depend as much on the idea or focus of the installation as on the location, use, and life expectancy of the structures. It may also depend on the experience, talent, and willingness of the design team to push the limits of their exploration and the progressiveness of their thought process. The mix of all of these variables swirling around a particular temporary architecture project can prove to be the fun of the whole process.

With all of the above in mind, we have identified four firms that have been engaged in different versions of temporary and pop-up architecture to illustrate real-world examples of how these projects are accomplished. We will next look at each of them with examples of their work.

ONE BUCKET AT A TIME PAVILION BY 5468796 ARCHITECTURE

This Winnipeg, Manitoba-based architecture practice was founded in 2007 and derives its name from its company registration number. As a young, creative, and innovative firm, 5468796 Architecture has earned a reputation for being an influential contributor to progressive design. They have also embraced the ideas of broad collaboration and pop-up architecture, not only in Canada but elsewhere in the world.

One of their celebrated pop-up projects was in Mexico City, Mexico during the four-day international architectural festival known as MEXTRÓPOLI. During this festival, Mexico City turned into a diverse stage for thinking, creating, designing, and enjoying both architecture and the city. As such, MEXTRÓPOLI is known for encouraging creative exercises and critical dialogue between the community, experts, and decision-makers. The event includes conferences, workshops, lectures, pavilions and open-air activities, all intended to showcase some of the most progressive thinking in architecture and urbanism.

The collaborative project that 5468796 Architecture produced for the 2017 MEXTRÓPOLI was designed to highlight the enjoyment of public spaces in Mexico City's unique but somewhat contentious urban environment. The architects learned that 4.5 million of Mexico City's 23 million people are also daily commuters who encounter a severe shortage of parking. The day-to-day experience of driving in Mexico City often includes complex roadway navigation, frequent traffic jams, and public protests before searching for limited parking spaces. This turns the streets into a setting for friction and anxiety for drivers. But an entrepreneurial spirit is alive there, too, in locals referred to as "viene viene" who function outside of government oversight. They are known to bribe the local police and then use common painters' buckets to claim a parking spot on the street. They will then charge hopeful drivers looking for a parking spot with an additional fee in exchange for access to their illegitimate stall. Each viene viene can control one or several city blocks with their buckets, and will threaten anyone who parks without agreeing to pay them.

Seeing the reality of this social situation as inspiration, the architects proposed a project called "One Bucket at a Time." They used the same type of plastic painters' buckets as the viene viene to create an interactive pavilion in an open space just off the street. Their design for this pop-up installation was based on using the bottoms of the tightly spaced buckets as a continuous but malleable surface. By holding and connecting the buckets together using a grid of ropes, the resulting assembly functions like a giant carpet that can be rolled, pulled together, pushed up to a point, or folded along a line to take on different forms. To ensure safety, the firm collaborated with Studio NYL Structural Engineers to work out the tensile and compressive stresses at play in the ropes and buckets. The intent was to create a structure that would encourage the public to freely explore it by sitting, running, playing, standing, lounging, and generally participating in the act of taking back control of the public realm. By using the buckets, which are viewed as a symbol of holding public space hostage, the architects highlighted this pervasive condition and inspired the people of Mexico City to metaphorically assert ownership of their public spaces.



This article continues on <http://go.hw.net/AR062018-1>. Go online to read the rest of the article and complete the corresponding quiz for credit.

QUIZ

- What emerged as ways for cities, regions, or even entire countries to showcase their latest advances in design and technology, marking their leadership in the era of mechanization and improved living?
 - Roman amphitheatres
 - Renaissance parade structures
 - World's Fairs in the 1800s
 - Countercultural designs of the 20th Century
- Which of the following is NOT a good example of pop-up architecture?
 - Retail installations such as kiosk structures or outdoor markets
 - Music and theatrical buildings designed for long term usage and durability
 - International conferences such as "South by Southwest" in Austin, Texas and the Venice Biennale
 - Temporary emergency housing, schools, churches, and other facilities due to natural disasters
- What common design tools for temporary architecture allow different iterations to be quickly and easily explored in both 2D and 3D, then presented quickly and efficiently for evaluation by the rest of the group?
 - Computer aided design (CAD) and building information modeling (BIM)
 - Hand drafting
 - Community charrettes
 - Collaboration with non-design professionals
- What event is a four-day international architectural festival that turns Mexico City into a diverse stage for thinking, creating, designing, and enjoying both architecture and the city?
 - Burning Man
 - MEXTRÓPOLI
 - Venice Biennale
 - South by Southwest
- What innovative material did 5468796 Architecture and Factor Eficiencia use for their 2017 pavilion?
 - Plastic sheets
 - Automobiles
 - Plastic painters' buckets
 - Grass
- Shigeru Ban has become well-known for creating paper-based structures, particularly emergency housing for disaster areas in places like Kobe, Japan; New Orleans, Louisiana; and Rwanda's Byumba Refugee Camp.
 - True
 - False
- Dittel Architekten observes that digitization in architecture is expressed with industry-specific terms such as:
 - BIM
 - Augmented reality
 - Smart architecture
 - All of the above
- With the help of digital tools, the architect can better control factors that influence construction time schedules and cost.
 - True
 - False
- The Rakete project in Basel Switzerland is intended to do all of the following EXCEPT:
 - Use some of the abundantly available shipping containers of this transportation hub area
 - Create an affordable launch pad where young entrepreneurs can come together and thrive
 - Serve as a pilot project for the creative industries of the Basel region that can be replicated at various locations in Dreispitz
 - Be seen as a non-experimental, permanent, and fixed-in-place solution
- In the Rakete project, prefabricated shipping container modules are stacked three high and painted on the outside to create the look of a uniform building.
 - True
 - False

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Image credit: 5468796 Architecture

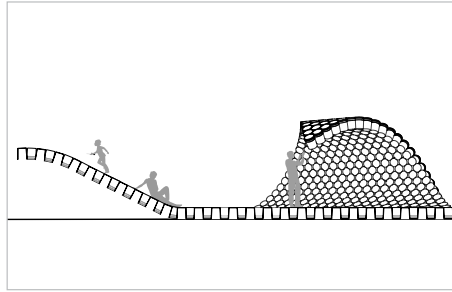


Image credit: 5468796 Architecture



The use of 3D visualization of the One Bucket at a Time Pavilion in Mexico City helped with its successful construction and use by the general public during the 2017 MEXTRÓPOLI festival. Photos courtesy of: Jaime Navarro



This pop-up architecture was constructed by Factor Eficiencia, a local Mexico City firm, who were full collaborators on the project throughout the design process. Grounded in the construction of traditional architectural projects, they have 25 years of experience and a portfolio of built projects for private and public owners. The use of computer imagery and 3D modeling made it easier to communicate the design intentions and construction style for the pavilion, so the construction team could turn the design into a reality.

During the four days that this 100-square-meter (1,076 square feet) installation was in place, it was embraced by adults and children alike. Children could readily climb on and around one part of the buckets while adults could comfortably sit and socialize in another part. In all, the project gained notoriety for its social statement, its creativity, and its success as an interactive element of the larger MEXTRÓPOLI event.

PAPER ARCHITECTURE—SHIGERU BAN ARCHITECTS, TOKYO/PARIS/NEW YORK

Japanese-born architect Shigeru Ban has developed a world-wide reputation for innovative design, which earned him the 2014 Pritzker Prize for Architecture. Celebrated for his inventive work with paper and recycled

cardboard tubes, he has taken the concept of temporary architecture to new heights. Schooled at Tokyo University of the Arts, the Southern California Institute of Architecture, and the Cooper Union School of Architecture in New York City, Shigeru Ban has established a practice that includes exquisite, durable private residences as well as temporary design solutions to house the victims of man-made and natural disasters.

Many themes and techniques found in traditional Japanese architecture have influenced his design aesthetic. He has become well-known for creating paper-based structures, particularly emergency housing for disaster areas in places like Kobe, Japan; New Orleans, Louisiana; and Rwanda's Byumba Refugee Camp. He has also used lessons learned from these experiences to address larger, public buildings with the same paper-based temporary architecture approach.

The Cathedral in Christchurch, New Zealand is an excellent example of his elegant temporary architecture. A magnitude 6.3 earthquake struck this city in February 2011, inflicting dramatic damage on one of the best known symbolic landmark buildings in New Zealand—the Christchurch Cathedral. Ban's firm was engaged to design a new temporary cathedral until the original could be repaired

or re-constructed. Using the basic geometry and planar elements of the original cathedral as inspiration, a new structure was conceived using 20-foot-long paper pipes (cardboard tubes), which could be sourced and installed locally, to form the roofing enclosure with a triangular shape on either end. In deference to the original cathedral design, there is a gradual, angular change in each of the paper tubes to help create the desired geometrical outcome. The completed temporary cathedral has a seating capacity for 700 people for worship services. It can also be used to host events and musical concerts. As a testament to the efficiency and speed of the process, it is worth noting that less than six months after the earthquake, a media conference was held in Christchurch regarding this project.

In April of 2013, Ban's expertise was called upon again following an earthquake in Ya'an City, Sichuan Province, China. The earthquake caused widespread damage affecting housing and, among other buildings, the Miao Miao Nursery School, which was declared uninhabitable. A temporary housing area was created in the town, but it was quickly determined that a temporary replacement nursery school would be needed, too. Ban's firm designed a temporary nursery school made of a paper tube structure. Within a floor plan of six meters by 21 meters (19.6 feet by 68.9 feet), two classrooms were arranged facing each other with a central corridor dividing the two. To create a column-free interior space, a trussed roof was constructed using paper tubes and steel L-angles.

Perhaps as impressive as the ingenuity behind the design is the commitment and volunteer spirit behind the construction. Volunteers came from Southwest Jiaotong University and all throughout China to help create the temporary building. They were aided by students from Shigeru Ban's studio at Kyoto University of Art and Design. The availability of willing, experienced volunteers to create a temporary building reinforced the social aspect of temporary architecture projects like this one.

"POP-UP BOX" BY DITTEL ARCHITEKTEN, STUTTGART, GERMANY

In this innovative architectural office, architects, interior designers, and communication designers all work together to make unique creations a reality. They describe themselves as having "the technical expertise of an engineer and the creativity of an artist." They have a thoughtful,



The Pop-Up-Box by Dittel Architekten provides an expandable, interactive, and efficient retail display that can be used temporarily in a variety of retail situations. Photos courtesy of: ©DITTEL ARCHITEKTEN GMBH



collaborative approach to balancing design, performance, communication, and quality.

A key part of the team's work process and thinking is centered on the use of computers. While they observe that digitization in architecture is expressed with industry-specific terms such as BIM, augmented reality, and smart architecture, applying these very real tools has been instrumental to their ability to pursue new possibilities of creation, realization, and efficiency. Taking leadership to determine structure and form early in the design process, they recognize that the ways of working and communicating among the rest of the project team fundamentally changes when BIM is employed. Instead of relying on sequential tasks passed from one member to another, they recognize that hand-in-hand collaborative work is beneficial from the beginning of the project. Hence, they tend to spend more time in the early, planning stages of a project, which notably streamlines the rest of the design work.

Like many architecture firms, Dittel works with experienced project developers and owners who increasingly request cost-efficient and functional buildings but still place a high value on aesthetics. With the help of digital tools, the architect can better control factors that influence construction time schedules and cost. This comes from an early examination of materials, components, and systems that can be explored for form and aesthetics as well as for cost and constructability. These aspects all lead to earlier understandings of potential issues and conflicts, so the design team can focus on creating effective, successful designs.

A recent project for which this design approach converged with temporary architecture is found in the firm's "Pop-Up-Box" for retail display. This versatile display functioned in a kiosk-style structure and was created for use in the Gerber shopping center in Stuttgart, Germany. Rather

than remain stationary, this convertible retail space can open up to allow shoppers to walk inside the space and interact with the displays. For overnight security, the separate sections can close back up to form a compact cube that can be locked. The architects define it as "Technology, utility and design all coming together in a cube."

A key to the success of the design involves a lifting system integrated into the structure of the modules. This allows the retail staff to separate three of the four individual elements as desired and create a 20- to 30-meter sales area (approximately 215 to 325 square feet). It also allows the modules to be closed back together at night to form a compact footprint of about nine meters (just under 100 square feet). Since there is no need for a raised floor, the floor of the shopping mall is used for the sales space, providing full wheelchair accessibility.

Merchandise can be displayed in several ways. First, each of the modules has common retail display systems on the inside, which allow for flexibility in the presentation of products and goods. Second, two monitors on the outside walls provide visual imagery and information about the products and retailer. Third, when the Pop-Up-Box is closed, perforated metal inserts still allow glimpses of the merchandise from the outside.

For electrical needs, one main module is kept stationary to receive power from an electrical floor outlet box. The other three modules have rechargeable batteries that are replenished overnight when the modules are connected back together, so they can provide electricity during the day. This provides enough energy to power the lights on the ceiling trim of the modules and assures proper lighting of the merchandise.

The aesthetics of the design address both the internal aspect of the display and the surrounding host space. In the Stuttgart installation, brown walnut finishes were used on the exterior to present a sense of quality and naturalness while providing a fitting contrast against the natural stone tiles of the surrounding mall flooring. Inside the modules, bright white finishes made a contrasting statement while providing a neutral setting for merchandise and goods. A black perforated plate provides a location for a corporate logo.

This innovative, flexible, and temporary retail solution has garnered critical acclaim, won a German Design Award in 2017, and an Iconic Award 2016.

RAKETE (ROCKET) PROJECT BY BAUBÜRO IN SITU AG, BASEL, SWITZERLAND

The Dreispitz section of Basel, Switzerland is an industrial area in the midst of transformation. Shaped like a triangle (the meaning of the word dreispitz), the property covers 50,000 square meters (over half a million square feet) and is located close to the main railway station in this north-western edge of Switzerland bordering both Germany and France. While its industrial uses are diminishing, the need for commercial, residential, and governmental space has grown in the surrounding areas creating the opportunity to change this historically low-budget neighborhood into something new. Since 2003, a group of public and private stakeholders have come together to study, plan, and develop this area, employing forward-looking phased, flexible transformation that respects existing companies in the area, and facilitates clear communication between stakeholders and the general public.

The Dreispitz property was historically owned by Christoph Merian (1800–1858), a successful Basel entrepreneur with a strong interest in social progress. Since he and his wife Margaretha (1806–1886) remained childless, they willed their entire fortune to a foundation—the Christoph Merian Stiftung (CMS). The mission of CMS is "to carry out and support pioneering projects in Basel in the fields of social affairs, ecology, city development, and culture." As the current owner of the Dreispitz property, CMS has applied this mission to the concerns of creative artists and start-up business entrepreneurs in Basel. The foundation used the attractive location of the property to initiate a project named Rakete (Rocket), which stands for "the sparkling ideas and the thrust



with which startups in the creative and cultural industries start and advance new businesses.”

With an investment of 2.2 million Swiss Francs (over 2.3 million U.S. Dollars), the foundation acted as the developer of small-scale commercial spaces that were inexpensive to build and thus inexpensive for renters. By using some of the abundantly available shipping containers of this transportation hub, they sought to create an affordable launch



The Rakete (Rocket) project in an industrial area of Basel Switzerland provides temporary space for creative artists and start-up entrepreneurs using shipping containers and scaffolding style stairs and walkways. Photos courtesy of: Christoph Merian Stiftung, Basel

pad where young entrepreneurs could come together and thrive. Rakete was a pilot project for the creative industries of the Basel region that can be replicated at various locations in Dreispitz. It is thus seen as an experimental, temporary, and mobile solution.

The design and construction of Rakete was spearheaded by the architects, Baubüro in situ AG of Basel. The building concept is based on the inherent structural capabilities of using prefabricated shipping container modules. They are stacked three high and painted on the outside to create the look of a uniform building. Access to the upper floors is provided through a scaffolding-type system of walkways and stairs. The interior walls are finished with rough, un-taped plasterboard, and the floor consists of raw, waterproof, glued chipboard. The tenants are free to finish the spaces further as long as, upon return of the container, the walls are intact and the floor coverings are fit for use.

Access, ventilation, and daylight are provided via windowed doors and fixed windows. For functionality, each studio container is equipped with three electrical outlets and an internet connection through an Ethernet network cable. Upgrades are available at the expense of the renter. All of the studios are equipped with hot water radiant heating fed by a central boiler. In all, 39 container modules were assembled and provide 32 office/studio spaces.

The total complex designed by Baubüro in situ AG includes some shared spaces, such as restrooms, an elevator, central mailboxes, and bicycle parking. There is also a parking lot intended more for goods handling than for commuter cars. For larger meetings, retreats, seminars, and presentations, Rakete also offers a common space made from six container modules. This simply designed and functional space is located on the first floor of the facility, and use of the space is free for tenants.

Today, the Dreispitz is more than a business park—it has become a habitat. Here people can shop, eat, work, take a break, enjoy cultural events, and because of the addition of the Rakete, launch a new venture. The location and innovation of this temporary facility benefits from and adds to the transformation underway in this part of the city. It is another notable example of creativity, experimentation, and alternative material usage that is producing real change for people and cities.

CONCLUSION

Temporary, pop-up architecture has been around longer and has had a greater impact on society than most people realize. Because it offers architects the freedom to focus on specific, temporary needs, it fosters experimentation that allows great creativity in design. That creativity spills over to innovation in construction, materials, and methods. The current tool that helps bring all of that together is the use of computer technology for 2D and 3D design, communication of ideas, and interaction with the general public. The examples presented here are but a sampling of the ways temporary architecture has created real impacts around the world. ■