

# Sustainable pop-up culture

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## **Abstract**

The pop-up phenomenon is an answer for an instant occasions or events which create a space for temporary use. The cultural events such as expositions, theatres or music stages can also have a pop-up character and appear in different and unexpected places bringing the new values to neighborhood, and interest surprised passers. The pop-up venues which are often disposable should be created with the use of the least environmentally damaging materials which can be later re-used or recycled. The Nomadic Museum by Shigeru Ban, WUST Exhibition Pavilion by the author of this article or the Zbigniew Herbert’s Pavilion by the students of Wrocław University of Science and Technology are just a few examples of pop-up cultural spots where sustainable materials and solutions were used to create a new and added value to existing context.

**Key words:** pop-up, culture, paper in architecture

## **1. Pop-up phenomenon**

In the Cambridge Dictionary “to pop-up” means *to appear or happen, especially suddenly or unexpectedly*. This word is also used to describe *a shop, restaurant, etc. that operates temporarily and only for a short period when it is likely to get a lot of customers* (Cambridge Dictionary, 2019). Similarly like a three dimensional folding object that suddenly pop-ups from the read book and soon after, when the page is turned the object disappears.

The pop-up phenomenon is an answer for an instant occasions or events that create a space and need for temporary use. Those events might have both positive and negative character. On one hand the growing and growing popularity of the pop-up restaurants or shops brings the new opportunities for local communities and small entrepreneurs, on the other hand the instant need for relief in such situation as earthquakes, floods, military conflicts cause a sudden need to deliver emergency shelters

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and to undertake other activities that are associated with emergency situation. Unfortunately the last ones, even if are designed for temporary use, are often prolonged especially in the MENA region, due to the persistent threat and other conditions that do not allow the forcibly displaced people to come back to their homes or other permanent dwelling, and continue relatively normal life. The lack of financial and material support as well as insufficient organizational support results in the fact, that more than 80% of refugee situations last for at least 10 years and 20% last for 20 years or longer (Latka, 2017).

Globally the pop-up movement is connected with temporary use of space or structure that brings a new quality in short period of time. In the urban areas the pop-up installations make a use of abounded plot or unused (or unfinished) buildings, or they complement the urban pattern with new values.

The pop-up architecture is closely related to social, technical and cultural status of the space it occurs in. The idea of the pop-up places seems to be fitted in the flexible societies where people are less and less tight to the concrete place and look for some constantly changing physical and cultural landscape.

In Europe and North America the pop-up places are the avant-garde in commercial, retail and housing services. Those temporary places which are often installed in urban voids or lands without any identity, have strong experimental character where the new concepts can be tested. The limited danger of large investments allows small entrepreneurs to risk and try new ideas, which will be evaluated in real life conditions. The example of highly unemployed younger part of the Greek society which tries a new entrepreneurship in the pop-up restaurants and shops in Athens proves that those temporary solutions can support the growth of the economy (Victoratos, 2013).

The temporary character of the pop-up places makes them exclusive and limited. This goes together with high popularity in a short period of time. The marketing of pop-up places can be arranged by fast messages sent to the potential customers. Therefore the Internet advertisement via web pages and social media, and spreading the information by the word of mouth are the best solutions for instant marketing. The pop-up places can also be advertised by themselves by the means of surprise.

Although the pop-ups make an incredible career in last decade, the history of the idea reaches ancient Rome, where the citizens to circumvent the government opposition to permanent amphitheaters used to build a temporary structures. Those incredible in size objects were used for only few weeks to celebrate the local Roman feasts, festivals or to perform plays. One of the most spectacular pop-up structure which finally became a permanent one was Eiffel Tower. Designed and build for the occasion of 1889 World's Fair, the Exposition Universelle in Paris for 20 years, the structure is today, after 130 years, a symbol of Paris and it is hard to imagine the city landscape without this "radio antenna" (Epstein-Mervis, 2016)

Currently the pop-up initiatives work very well for different economic activities such as shops, bars, restaurants, accommodation and cultural places. More and more famous pop-up restaurants, known also as underground restaurants allows the common people to serve the food, often quite sophisticated as the pop-up restaurants can rely only on their public opinions and create income of the owners by their passion. On the other hand pop-up restaurants such as Food Facility in Amsterdam or Macha Bar W.A.R. in Helsinki, both created by Spanish designer Marti Guixé were a big commercial successes filled with innovative and experimental approaches to the idea of feeding facilities (Aglieri Rinella et al. 2017). Increasing global tourism opens new demands for accommodation. The urban neo-nomads search for temporary places to stay, which can be arranged even at the parking lots, as it happened in USA where one third of the city space is dedicated to car parking (Rebecca Burns, 2014). The other examples of pop-up housing were Public Camping arranged under highway in 2011 in Milan or pop-up hotel created in one of the Manhattan office building by Danish-based international architectural collective Pink Cloud. The idea based on temporary intervention in the abounded office building, which by the means of modular wall systems and furnishing transferred the open space office into the hotel with accompanying facilities (Aglieri Rinella et al. 2017). The important part of the new forms of touristic accommodation is a social component. Not only the accommodation but also the relation between the traveler and the host plays a crucial role. The social media and web pages such as trip

advisor ([www.tripadvisor.com](http://www.tripadvisor.com)), couch surfing ([www.couchsurfing.com](http://www.couchsurfing.com)), Airbnb ([www.airbnb.com](http://www.airbnb.com)) plays important role in the alternative hospitality. Both the internet and local hosts enhance the promoting of the temporary – pop-up – venues.

## **2. Pop-up cultural venues**

The cultural pop-up venues can have a form of exhibitions, fairs, concert stages, festivals etc. All of them are built for a short period of time, in which the certain event take place and later is moved to another location or disappear from the public domain.

In order to keep the pop-up places (or situations) reasonable and sustainable the specific materials and structures should be used. On one hand they can be re-usable and transportable such as scaffolding or shipping containers which are produced in standardized sizes, and which can be found and adopted everywhere in the World. On the other hand the materials used for structure and interior of pop-up place should be easy to re-set or recycle. Taking into account the short life cycle of the pop-up venues the recycling of the used material should be a matter of importance. One of such materials is paper and its derivatives.

The following examples show how paper based products can be implemented in the pop-up cultural structures.

### **2.1. The Nomadic Museum**

The Nomadic Museum designed by arch. Shigeru Ban, was created in 2005 to exhibit a large scale photography installation *Ashes and Snow* by Canadian artist Gregory Colbert. The size of the artist's works which were approximately 2,5 x 3,5m required large space where the photos and movies could be exposed and seen from a proper distance. More over the exhibition area was planned to be portable. After the first opening in abandoned Pier 54 on the Hudson River in New York, the exhibition was planned to be moved to another locations. Shigeru Ban decided to use ISO shipping containers as a building blocks of the exhibition venue. The containers are present in every part of the globe and thanks to the standardized sizes it is possible to create the same space with locally rented containers. 148 shipping containers were stacked one on another in a grid like pattern and constitute the side walls of the exhibition space. Next the 10 m long paper tubes were placed in between the containers in two rows creating a space which remained the nave of the church. The pathway between the two rows of paper tubes was covered with recycled wooden planks. The paper tubes acted as a pillars which supported triangular roof structure made out of paper tubes and metal rafters. The roof was covered by tensioned PVC membrane. After four months in New York the exhibition was dismantled and only 14 of the ISO containers containing the artwork, lighting and structural elements were sent further. The Nomadic Museum was built again in Santa Monica, California and Tokyo with the use of locally available containers. In the second edition the form of the approximately 4200 m<sup>2</sup> area of the exhibition was changed for better circulation from single 200 meters long nave into two shorter ones, placed next to each other and flanking the movie and shop space between. The exhibition was visited by over 10 million people, making it the most attended exhibition of the living artist in history.



**Photo 01** – Interior of Nomadic Museum in New York, photo by Michael Moran, source: by courtesy of Shigeru Ban Architects, 2005

## **2.2. Wrocław University of Science and Technology Exhibition Pavilion**

In 2015 there was 70<sup>th</sup> anniversary of Wrocław University of Science and Technology in Poland. For this occasion the university's authority proposed to the author of this article to design and build a pavilion which would expose the 70 year history of the University. From the three previously prepared conceptual designs the one which was chosen to be built was a hybrid structure of timber and paper. The pavilion consisted of six components from which everyone was composed out of six timber laminated arches and paper tubes. The paper tubes were positioned perpendicular to the geometrical center of the arches. Thanks to that, the pavilion got a hedgehog – like shape. And it was named as such. There were 498 paper tubes with the inner diameter of 275 mm, 10,5 mm thick wall and 600 mm length. Each of the paper tubes was lit by full RGB light with separated controller. The tubes were enclosed with translucent milk Plexiglas circles. Thanks to that, the pavilion glowed with changing in time colorful light. Some of the Plexiglas circles on the inner side of the pavilion were used as exhibition boards. The pavilion had a tunnel-like shape and the visitors could get know the history of the University in several different roots. The lower exhibition boards were designed for kids with games, riddles and quizzes while the upper ones provided information and facts. The pavilion was designed and built in cooperation with students from five student scientific organizations. Also the group of students from TU Delft arrived to give a hand during the production. The total area of the pavilion was 11,5 x 6,2 m. The six components were pre-fabricated in production hall, next they were transported into the city center of Wrocław and mounted together at the Solny Square (a square congruent to the main square of the city of Wrocław). The pavilion was opened to the public in the beginning of May 2015 and after two weeks was moved to the campus of Wrocław University of Science and Technology. After another several weeks the pavilion was dismantled, the paper tubes were discarded while the wooden arches were preserved for another experimental project. The Pavilion was the best presented at night, when the colorful light glowed and thus created an unique

space in the center of Wrocław. This temporary intervention in the city center became a special place for groups of tourists and couples, which often walked in there, hugged and kissed. This brought to mind the slogan of the city: “Wrocław the meeting place”. The Wrocław University of Science and Technology Exhibition Pavilion became for a short period of time the meeting spot in the meeting place.



**Photo 02** – Wrocław University of Science and Technology Exhibition Pavilion, photo by Jerzy Łątka, 2015

### **2.3. Zbigniew Herbert’s Pavilion**

The students of the newly released course called “ProtoLAB” at the Faculty of Architecture Wrocław University of Science and Technology were asked in the year 2018 to design an exhibition pavilion of one of the most famous Polish poet Zbigniew Herbert. The year 2018 was devoted to Herbert therefore the pavilion was a good occasion to commemorate the artist. The ProtoLAB course was established for the master students, whose task was to design and later build the whole structure. The building materials possible to use were paper and timber based materials. During the first weeks of the semester there were seven propositions created by the students under the supervision of prof. Romuald Tarczewski and the author of this article. Next the students voted for the best pavilion and the chosen concept was further developed and engineered in order to be built. Another few months the students spent on the overall design, material tests, ideas of the exhibition, preparation of the technical drawing and managing the whole process from the first concept to the executive project. The last part of the course was a three week building workshops during which the pavilion was materialized.

During the design process it was decided that the pavilion will be built in the courtyard of the main building of the university. The courtyard was refurbished few years before and all the attractions such as trees, bushes, benches were removed. The new face of the courtyard was a large empty space clad with stones with two squared ponds, four little trees and resounding echo. The students discussed the idea with the administration staff from the university which rooms opened onto the courtyard. The most frequent requirement was a pavilion containing some greenery as the courtyard was lacking almost any of it.

The concept of the pavilion which was chosen for realization based on the metaphor of a forest – a frequent element in the poetry of Herbert. The form of the pavilion was a cuboid with the dimensions of 3 x 5m which was cut in two halves by the horizontal, organic surface. The bottom part made out of wooden elements such as beams, OSB boards and plywood was formed into two hills filled with specially designed greenery. Between those hills there was a path that guide through the exhibition

elements. Ten paper tubes were attached into the base in vertical and diagonal way. The paper tubes with the diameter of 100 mm and 10 mm thickness of the wall symbolized the tree trunks and they carried the roof structure. The roof was made out of interlocking ribs made out of several layers of corrugated cardboard strengthened in some places with OSB boards. From the roof structure there were geodesic paper strips suspended, which symbolized the leaves. The roof was covered with chamber polycarbonate plates. The paper tubes were coated with urethane base varnish, while the corrugated roof structure remained untouched. The fragments of Herbert's poetry were printed on the geodesic paper stripes and additional information about the poet were placed in the fields of the roof grid. The paper stripes made a noise similar to leaves or turning book pages on the wind, which refers to the main topic of the pavilion – the poetry. The pavilion was opened to the public in half July 2018 and despite its temporary character which was achieved by not impregnated hence easy to recycle parts of the structure, by the date of writing this article it is still standing in the courtyard of the A-1 building of WUST.

The Pavilion of Zbigniew Herbert brought new quality in the empty space of the courtyard of the main university's building. This intervention showed that temporary structure can change the reception of the place and perhaps it started a new sequence of events in the courtyard. In the next move the roof and pillars will be removed, but the green hills will remain. There are already some plans for new activities such as outdoor exhibitions in the courtyard planned by the university employees.



**Photo 03** – Zbigniew Herbert's Pavilion, photo by Jerzy Łątka, 2018

### 3. Conclusions

The pop-up structures can enhance the experimental character of architecture which fulfill the demands of contemporary society. The new generations from all over the world are very well connected by the means of the Internet and social networks. Internet and social media are one of the most common providers of the new type of advertisement for tourists in both accommodation and cultural activities. Dynamics of the Internet go along with the dynamics of the pop-up places. The neo-

nomads, globetrotters who live in the era of fluent modernity seek for new forms of dwelling and cultural activities such as eating, exhibitions, concerts, festivals and cultural exchange. The instant appearances of the cultural spots which use abounded plots or buildings and have a temporary character become a new layer of the touristic map of the cities. Those pinpoints of the discovered (or re-discovered) unique places establish the city acupuncture which is not planned by the authorities but created by local communities or individuals in the form of bottom-up (democratic) approach. The pop-up cultural venues realized for limited life-span should be designed and built in accordance to their ephemeral character. In order to follow the idea of temporarily the structures should be re-usable or recyclable. However some of the temporary interventions have such a strong footprint on the surrounding that it become permanent as it happened with Eiffel Tower in Paris. Nevertheless the sustainable pop-up structures should wisely use the possible material and structural solutions. Paper and its derivatives is one of the most suitable material for temporary structures and spatial interventions. The example of Nomadic Museum, where shipping containers and paper tubes were used as a disposable and transportable building blocks and materials as well as the Wrocław University of Science and Technology Pavilion and Zbigniew Herbert's Pavilion are just few examples that prove that use of paper as a building materials for pop-up cultural (and commercial) venues enhance their sustainability.

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