

Press Release

University of Houston Gerald D. Hines College of Architecture and Design

CITY OF REFUGEES

Four Utopian Cities on Four Continents



Switchback City in Southeast Europe, a refugee city where the inhabitants build their own houses with local materials in the cove of a river. © Zweig + Borden

Exhibition: 31 October 2020 - 7 January 2021

Venue: Aedes Architecture Forum, Christinenstr. 18-19, 10119 Berlin

Opening hours: Tue-Fri 11am-6.30pm, Sun-Mon 1-5pm and Sat, 31 October 2020, 1-5pm

Of the 7.8 billion people on the planet, more than 70 million are now refugees and asylum seekers. With few countries willing to receive these displaced people, many refugees are restrained in tents, or makeshift cities. These temporary solutions often become permanent, which come with significant challenges. *City of Refugees* – a three-year research by the University of Houston College of Architecture and Design under the direction of the studio professors, Peter J. Zweig and Gail P. Borden – offers a provocative approach to the discussion of new solutions: Four imaginary cities on four continents were designed as prototypes for the accommodation of migrants providing facilities to meet their immediate needs and long-term opportunities for their self-empowerment. The exhibition at Aedes not only gives insights into the diverse aspects of these utopias, but also chronicles the plight and journeys of refugees in contemporary society.

The current global geopolitical landscape is indelibly marked by rising national and international conflicts creating multiple regions and countries beset by massive migrations. Likewise, the consequences of climate change and man-made environmental damage are forcing people to leave their homes. Many refugees are caught between borders because fewer countries are accepting the growing numbers. This often leads to them being trapped in refugee camps: Although these expanding settlements were intended as temporary tent communities, in reality they have become increasingly permanent.

Worth mentioning is the Kutupalong refugee camp in Bangladesh, which has existed since 1991. It has grown to become the largest of its kind in the world, with more than 600,000 people living in an area of just 13 square kilometres, stretching infrastructure and services to their limits. A more recent example of a permanent settlement is the Zaatari camp in Jordan where people have found refuge from the civil war in Syria since 2012. With an estimated 80,000 inhabitants, a main street with market stalls and shops, kindergartens and schools, solar power and a drinking water system, Zataari has become the fourth largest “city” in Jordan. However, the often forgotten, “temporary” communities are most often evolving into haphazard, ill-equipped, permanent locations that are in need of and reliant upon humanitarian support.

City of Refugees

A three-year intensive sequence of design studios at the University of Houston, Gerald D. Hines College of Architecture and Design, under the direction of Peter Jay Zweig, FAIA and Gail Peter Borden, FAIA has developed a provocative approach to proposing four prototypical *Cities of Refugees* of varying sizes on four continents, ranging from 50,000 to 500,000 people:

- **BRIDGE CITY** in South America
- **gRADIANT CITY** in Africa
- **SWITCHBACK CITY** in Southeast Europe
- **UPCYCLE CITY** in South Asia

Each city is conceived as being universal in its architectural principles, yet by contrast, relies heavily upon local traditions whereby the residents of the *City of Refugees* are able to build their own homes: Thus combining universal and vernacular ideas can redefine the very origins of the contemporary city.

The Process: Developing a Utopia

Before developing the urban design of these fictional places, the students analysed the annual U.S. military defence spending, which amounts to 700 billion USD. Professor Peter Zweig states: “By reallocating a minor portion of defence spending – less than 'one-quarter' of one percent of the military budget – a *City of Refugees* can be funded. For example, we propose that the construction of one submarine be delayed for one year to build out one entire city.”

It is within the framework of a reinterpretation of Thomas More’s 1516 book, *Utopia*, that the *City of Refugees* represents a place transcending the fate of those who have been displaced from their homeland. It is a concept for a city in a new context that welcomes migrants looking for a place to be free and act independently. As a U.N. sponsored, free economic zone, the four proposed cities would create a platform for a new multi-ethnic society based upon justice, tolerance and an economically viable, net zero environment.

These cities redefine the concepts of streets by eliminating the need for cars, rethinking sustainable technologies and engaging an architecture that is both vernacular and universal. Multiple areas around the world were proposed as possible sites for investigation in addition to

the four prototype locations that were designed, such as: on the border of the United States of America and Mexico between the cities of El Paso, Texas and Ciudad Juarez on the Isla de Cordoba. This site, called “No Man’s Land” represented a place that could accommodate the rise in population of displaced people along the southern border of the United States and Mexico.

To quote Peter Jay Zweig: “The blending of local and social customs with the imported influx of refugees creates an environment that is committed to the idea of a ‘pledge’ given upon arrival to the city, for social acceptance through community volunteer programs, self-empowerment, education, shared communal kitchens and work spaces. Appropriate infrastructure eliminates the need for cars as the primary means of transportation: All points of the city are accessible within ten minutes. Alternative energy, water collection and locally available food become the primary source of sustenance and power for the city, while waste is innovatively recycled and self-contained toilets eliminate the need for sewage systems. The *City of Refugees* is a proposition to solve a problem that exists not only for refugees, but as a possible solution to climate change, the waste of natural resources and a commitment to rethink the origins of urbanism, while responding to the current global challenges.”

Exhibition

In the exhibition and book, *City of Refugees: A Real Utopia* (AR+D publishers 2020 by Zweig + Borden) the contemporary global migration flows of those displaced is documented using a variety of maps and data and opens up a view on the profusely illustrated, innovative concepts of four prototype cities. The immersive exhibition at Aedes encompasses two simultaneous formats: one of physical models and drawings and the other in an augmented reality that coexists with the physical exhibition.

Directors

Peter Jay Zweig is a Professor and Curator of International Exhibitions at the Gerald D Hines College of Architecture and Design at the University of Houston. He is principal of the award-winning Peter Jay Zweig Architects and an author of publications such as: *Alternative Architecture*, *Risky Habit[at]*, *Houston Genetic City*, *City of Refugees: A Real Utopia*. As an exhibition designer, he has curated 15 major U.S. and international exhibitions. He has also received 80 worldwide patents for innovative building systems and materials for affordable housing built on six continents.

Gail Peter Borden is a Professor and Director of Graduate Programs at the Gerald D. Hines College of Architecture and Design at the University of Houston. As principal of Borden Partnership, his design work has won numerous recognitions. His books include: *Material Precedent*; *Matter*; *Principia*; *Process*; *Lineament* and *New Essentialism*. As an architect, designer, artist, theoretician and practitioner, his work focuses on the role of materiality and architecture in contemporary culture.

The exhibition is part of the ANCB programme *Borders and Territories: Identity in Place*, which examines new spatial, geopolitical and cultural possibilities related to nations and people on our globe. Together with *City of Refugees*, the exhibition *Purgatory* by Ai Weiwei will be shown at Aedes Architecture Forum during the same period. Both exhibitions conclude the 40-years Aedes programme of 2020.

Further information:
www.aedes-arc.de

We would like to thank the Aedes cooperation partners

Zumtobel, Cemex, Camerich, Carpet Concept

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For more images and information, please contact

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Description of the Four Utopian Cities

BRIDGE CITY

South America | 50,000 people

Local Conditions:

The city is located on the Rio Santiago in Ecuador near the Peruvian border just south of the equator. The location runs along a major Ecuadorian highway and is located within two miles of an airstrip. The location is ideal for a self-sustaining city. The resources are abundant for inhabitants to create and sustain a net zero city. The Sol LeWitt inspired structure acts as a bridge for the inhabitants across the Rio Santiago river, while creating local opportunities in industries such as: aqua-culture and a wharf for water markets. The Rio Santiago region is ideal for producing honey, fruit, vegetables and flower cultivation. Traditionally the local culture produces palm weaving and clay pottery, which can now be used in the construction of the homes for the city.

Architecture of the City:

The architectural infrastructure is composed of a 30 x 30 x 30 foot grid, which bridges a populated river that is used for fishing, trade and commercial movement. The structural field has been eroded through light and wind apertures that allow for concentrated volumes to emerge within the regular geometry. Activated top and bottom through climatic and programmatic responses, the structure arches over the river and creates a performative rooftop landscape for solar and food production in park-like spaces. The infrastructure is free to take advantage of its location on the equator through hydroponics, recycled waste, water capture systems, and passive and solar energy production.

gRADIANT CITY

Africa | 100,000 people

Local Conditions:

The city is located on east side of the Democratic Republic of the Congo (DRC), on the edge of Lake Edward and on the border between DRC and Uganda. The unique site is composed of a very pronounced slope that allows the city design to be based upon the temperature differential of the mountain. As a hillside waterfront city, the urban form of the *gRadiant City* takes advantage of both the hill and the water through two linear structures. One structure that ascends the topography perpendicular to the adjacent body of water and another that parallels the waters' edge. The slope generates a significant temperature gradient as one ascends in elevation.

Architecture of the City:

The city is organised as a linear figure that ascends the topography perpendicular to the adjacent body of water. The ascending urban structure allows for temperature differentiations to determine the optimal position for crops. The line also exists as a gradient from the water's edge with dissipating density from urban to suburban and, ultimately, rural as the city transforms from a water-based economy to a land economy. By combining a utopian typology with the local traditions of the vernacular, a unique architecture is produced. As a horizontal skyscraper that hovers over the landscape, the embedded and levitating programmes create shade and a unifying layer underneath the structural, performative roof.

SWITCHBACK CITY

Southeast Europe | 250,000 people

Local Conditions:

The city is located on the border between Serbia and Romania along the Danube River near the city of Tekija, Serbia. The location runs along a Serbian highway and is built inside of the cove along the river. The location is ideal for a self-sustaining city. The resources are abundant for creating and sustaining a net zero city, as well as an economy that can develop from the local lumberyards. The structure of the city allows for a symbiotic relationship between the inhabitants of the Serbian region, while also creating opportunities in industries such as: aquaculture and lumber for the fabrication of building material products and supplies. The area is ideal for terraced farming, homesteading and fishing.

Architecture of the City:

Located in a cove on the river, the city is composed of embedded terraced landscapes that are linked through an ascending field of switchback streets. This unique urban pattern with six-storey buildings (in an organised three units up and three down) allows for a horizontally accessible vertical city. Using the wooded hillside as both an economy derived from the existing timber resources and as the material for the construction of the city proper, the wedge development along the cove allows for a sequentially phased evolution to the city. The position on the river allows for the wood products sustainably harvested to also invigorate the trade with nearby cities. Gondolas provide transportation without cars and make the city accessible within ten minutes in any direction.

UPCYCLE CITY

South Asia | 500,000 people

Local Conditions:

The city is located on the Coast of Bengal in Bangladesh near the border to Myanmar. The coast of Bengal is a ship graveyard where many unusable ships are stranded. *Upcycle City* will dismantle the unusable ships and re-innovate shipping containers into warm living units for refugees. Furthermore, the city will take advantage of the existing dam as a part of the infrastructure system. The city is divided into three zones: Sea, Land + Sea, and Land. The sea area consists of unused oil rigs intended as future agricultural centres. The shore will become an industrial zone used to dismantle and repurpose the big ships. The land area will be where most of the population will be living. The refugees will maintain their own free market, strengthened by the various skills of the individual inhabitants.

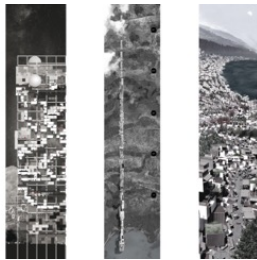
Architecture of the City:

Founded upon the discarded technologies of the oil rig, freighter and the shipping container industry, *Upcycle City* develops both its economy and its tectonic morphology from these abandoned resources. Occupying the fluctuating waters' edge between the flooded tidal plains, a railroad, an important highway and an existing dam, *Upcycle City* is divided into three zones: One is located on the water (oil rigs), the second on the beached edge (ship-breaking) and the third is fully on land (stacked and arrayed shipping containers), which are all arranged to create a collection of neighbourhoods and districts that organise the city. The city contains: circle crops, gondola's crisscrossing main street in order to make the city accessible, containers enlisted for structural foundations, innovative infrastructural systems that approach net zero and a scaffolding circulation system all contribute to the unique architecture of *Upcycle City*.

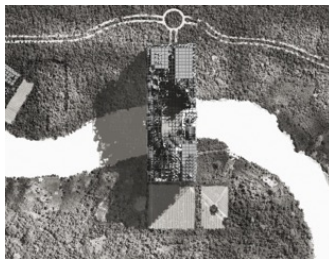
Press Pictures



Combinatory maps of the global context. © Zweig + Borden



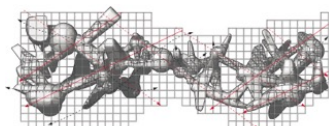
(1) Bridge City section (2) gRadiant City plan (3) Switchback City aerial perspective. © Zweig + Borden



Bridge City site plan. © Zweig + Borden



Bridge City section over the river. © Zweig + Borden



Bridge City: Public spaces defined by the paths of the sun, wind and rain. © Zweig + Borden



Bridge City river perspective. © Zweig + Borden



Bridge City interior perspective. © Zweig + Borden



Bridge City interior perspective. © Zweig + Borden



gRadiant City perspective view from the water. © Zweig + Borden



gRadiant City perspective view from the water. © Zweig + Borden



gRadiant City perspective at water's edge. © Zweig + Borden



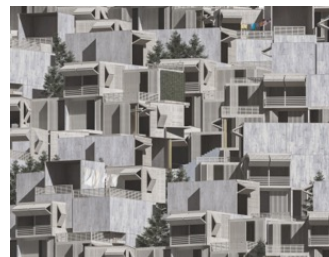
Switchback City plan. © Zweig + Borden



Switchback City aerial perspective. © Zweig + Borden



Switchback City section. © Zweig + Borden



Switchback City perspective of layered housing units. © Zweig + Borden

Aedes



Switchback City aerial perspective. © Zweig + Borden



Exhibition of the *City of Refugees* physical and augmented reality models. © Zweig + Borden



Switchback City street view. © Zweig + Borden



Augmented reality model of a refugee's journey. © Zweig + Borden



Upcycle City aerial perspective. © Zweig + Borden



Upcycle City aerial detail. © Zweig + Borden



Upcycle City perspective. © Zweig + Borden