

# “HAVE WE BREACHED THE LIMIT?”

## *SKYSCRAPER* (THE BRUGES WHALE)

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- *Skyscraper*, the Bruges Whale, by [StudioKCA](#), is made from recovered ocean plastic with a steel support structure, totaling 5 tonnes, sourced from the Pacific Ocean
  - 4,000 sqft surface area covered in plastic
  - 11 meters tall, almost 11m span from fin to fin
- The sculpture was artists Jason Klimoski and Lesley Chang's (StudioKCA) interpretation of the theme "liquid city" for the 2018 Bruges Triennial event
  - Concept defines the city as an ever-changing set of consumer transactions, as cities become connected to one another through globalization

- A breaching whale was chosen, as whales are the largest mammals on earth
  - Its size and complexity of objects that make up the body help to show the scope and scale of the issue that plastic pollution brings to our communities and environment
  - The use of plastic waste, and the breaching action of the whale, potentially hindered and harmed by plastic, begs the question: “Have we Breached the Limit” in how much plastic we put into the environment on a daily basis which is not properly recovered.
- The ***Skyscraper*** was made as a reminder of the tens of millions of tons of plastic waste that has entered our ocean in the last five decades
  - It is estimated that over four million tons of plastic are added each year
    - There is now more plastic in the ocean (by weight and volume), than all of the whales put together
  - “***Skyscraper*** is a physical example of why we need to change how we use and dispose of plastic in the world today” – Lesley Chang, Principal at StudioKCA in New York
- Making of ***Skyscraper***
  - StudioKCA and a team of Volunteers collected as much plastic waste as possible over 4 months
    - Sourced from beaches of Hawaii with help of volunteers from the Hawaii Wildlife Fund and the Surfrider Foundation
  - The plastic was cleaned and sorted by Jason, Lesley and their team in their workshop in New York
  - They then designed, engineered, and fabricated the aluminum and steel frame that would support the plastic would attach to.
- Challenges faced in construction

- Plastic waste
  - Plastic waste in the ocean varies in sizes, types and how much it has been degraded by the sun and waves
  - Plastic that has been in the sun and ocean is more brittle (delicate), and hard to work with
  - Colors of blue and white had to be collected and sorted in order to give color similarities to the dark bodies and light bellies of humpback whales
- **Skyscraper's** Structure
  - Double curved set of aluminum panels, that attach to a steel inner tree-like structure, cantilevered off a 1.8m base
    - The skeleton of the whale had to be engineered to be strong, safe and able to withstand wind and its own weight, as it's breaching (arching) shape means that its weight is spread over a larger area than just the base where its tail is anchored
    - The whale had to be built so that it could travel as a kit of parts (Skyscraper breaks down into a set of 16 panels, and support components)
      - Engineering and installation design had to consider weather patterns in different locations
- Reasons to Care, and to visit the **Skyscraper**
  - Plastic pollution is one of the biggest environmental challenges of our time, due to the complexity of the material, with tens of thousands of types, colors and variations, making it hard to "reorganize" and recover for recycling
  - The size of the whale is inspiring, impressive, and draws curiosity from all ages

- The Skyscraper brings a message of “wonder, creativity and concern,” using public art to deliver a visual spectacle with a variety of educational opportunities (environment, pollution, recycling, materials, sculptures, public art, ecosystems, whales, health and solutions)
- Studiokca
  - STUDIOKCA is an award-winning art, architecture, and design firm led by Jason Klimoski and Lesley Chang based in Brooklyn, New York with projects ranging in scale and complexity from lighting fixtures, to large scale sculptures and buildings.
  - Their practice explores the ways in which context and locality offer opportunities to create objects and spaces that respond directly to the demands of their programs and site-specific environmental conditions. With each project, they are interested in how materials can be crafted or purposed to tell a story
  - They have been honored with design awards including an American Institute of Architects National Small Project Award, AIA California Council Design Honor Award, AIA New York Design Merit Award, AIA Brooklyn Design Merit Award, AIA New York City of Dreams Winner, SARA Design Award of Excellence, two Chicago Athenaeum American Architecture Awards, three Interior Design Magazine Best of Year Award Honors, two Architizer A+ Award Finalists, and The Architect’s Newspaper Best of Young Architects Award Honorable Mention.
  - The firm's has been exhibited around the world, including The Exploratorium Museum, The Intrepid Sea, Air & Space Museum, The Huntington Library, Art Collection, and Botanical Gardens, Governors Island, Brooklyn Bridge Park, the Center For Architecture, the AIA National Convention, the World Science Festival, Jan Van Eyck Square in Bruges,

Belgium, Jockey Club de Sao Paulo Brazil, and the Whale Building in Utrecht, Netherlands

- Ocean Recovery Alliance
  - The Skyscraper’s Asia tour has been organized by the Hong Kong-based NGO, Ocean Recovery Alliance
  - Over 10 years of work on global plastic pollution programs, including work with the World Bank, UN Environment and Clinton Global Initiative
  - Environmental entrepreneurship to bring awareness, education, innovations and solutions in creative ways, which can be replicated across communities in any country
  - Winner of the 2018 Prince’s Award from Prince Albert of Monaco for its work for the ocean across a broad spectrum of users, from youth, to companies and governments
  
- Solutions to “slowing the flow” of plastic in our ocean
  - Global Alert app/platform
    - Allowing community reporting of trash hotspots anywhere in the world’s waterways and coastlines
      - Track the location of plastic pollution to give greater knowledge for prevention and cleanup programs in the world’s watersheds
      - “See – Share – Solve” with Global Alert to inspire local and international change, and a focus to prevent plastic from flowing in our waters
  - Plastic Disclosure Project (PDP)
    - Similar to that of carbon or water reporting, the PDP enables manufacturers, services and municipalities to understand their baseline of plastic use and waste creation

- Without measurement, you can't manage, and the goal here is to reduce one's plastic footprint, by reducing materials where possible, while increasing recovery and recycled content use, as well as the use of new bio-based materials
  - Powerful tool for municipalities to allow them to better understand their plastic waste streams, and which solutions to deploy in order to create value from 2<sup>nd</sup>-life plastic, creating jobs, and improving the environment along the way
- Plasticity Forum
  - Business conference solely focused on plastic solutions and innovations for second-life plastic, and a world without waste
  - Launched at the Rio+20 Earth Summit, with over 13 global events
  - Introduction of entrepreneurs and innovators with solutions for different sizes and scales which can be used in communities around the world
- Water Caretakers of Tomorrow
  - Five unit course for water systems, from the mountains to the ocean, for 10-13yr-old students. Currently in English and Chinese, with the objective of being localized per country which would like to use it
- "Uncle Roo – the Recycling Rooster"
  - Engaging theater play or puppet show on recycling and waste management for youth and adults, now in seven languages, using "Uncle Roo," the wise rooster, and eco-repetition, to spread his message of recycling and

water appreciation to villages and communities around the world.

- Water Falling and Water Rising Festivals
  - Tonle Sap Lake, Cambodia, where the water rises and falls 6m each six months with the rainy season.
  - Engagement with village communities and fishermen to help prevent plastic in their waters.

- Making of the [Bruge Whale - Video by StudioKCA](#)

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Sources:

<https://www.kickstarter.com/projects/studiokca/skyscraper-the-bruges-whale>  
<https://www.yatzer.com/skyscraper-studiokca>