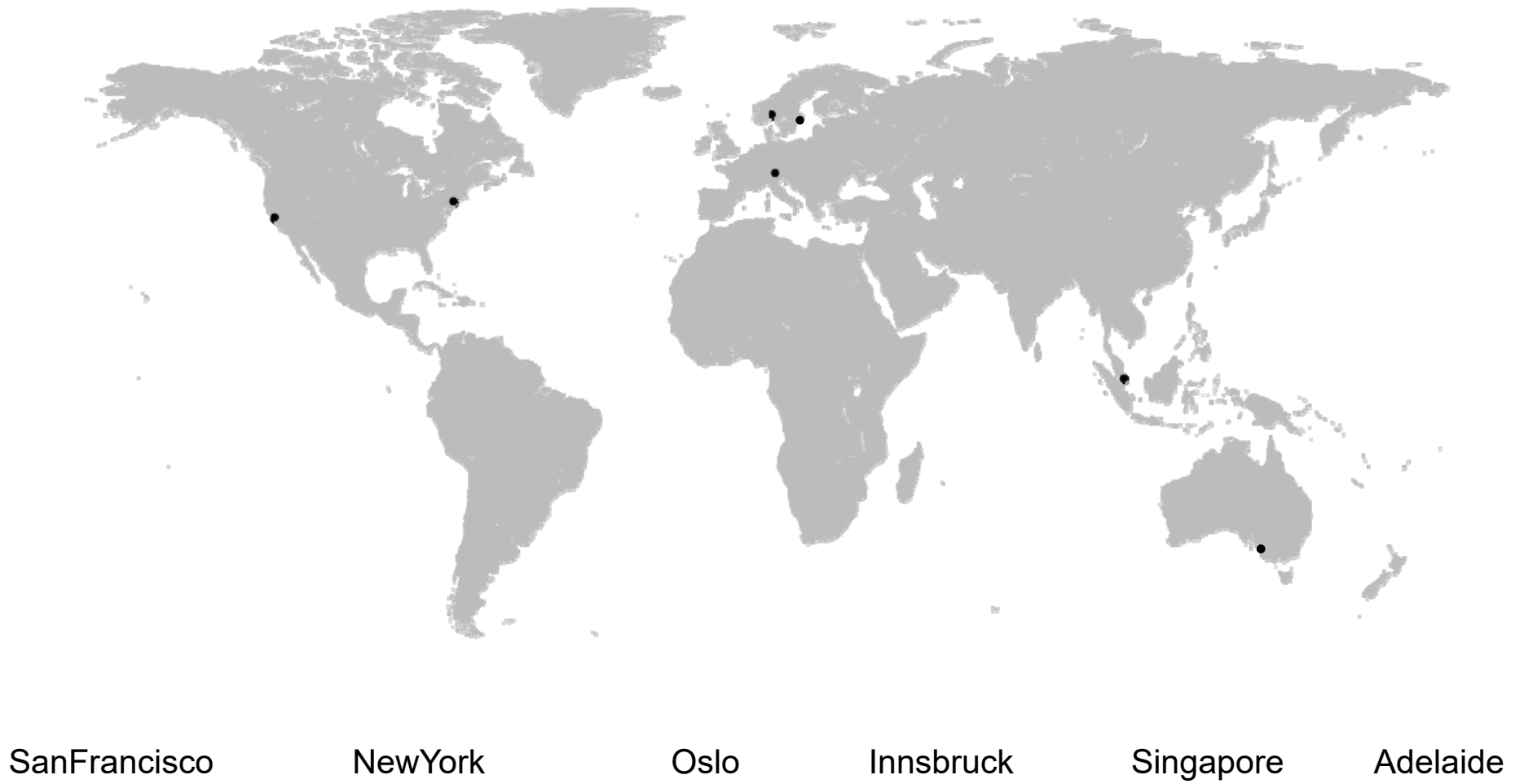


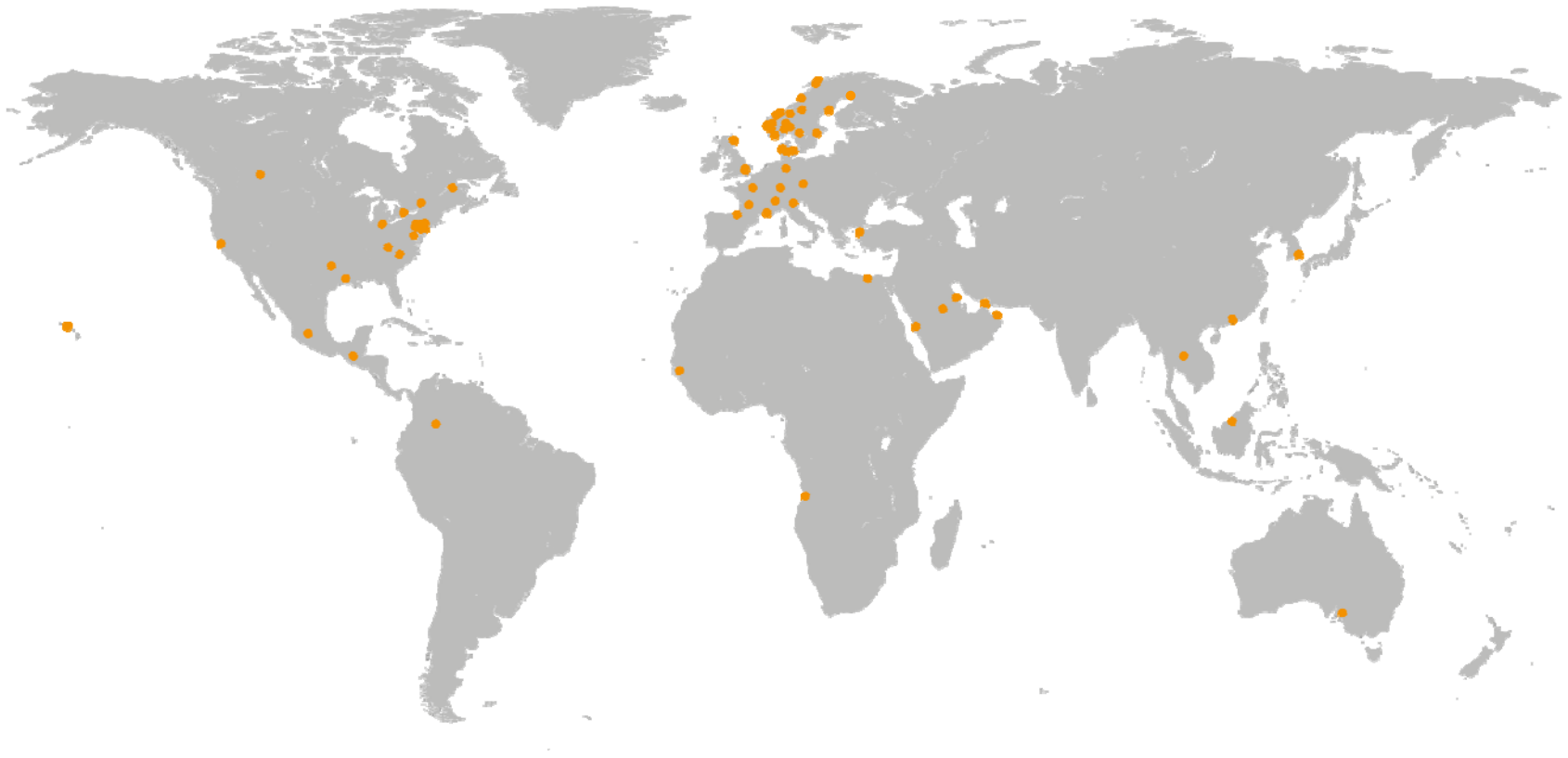


Snøhetta 

PEOPLE PROCESS PROJECTS

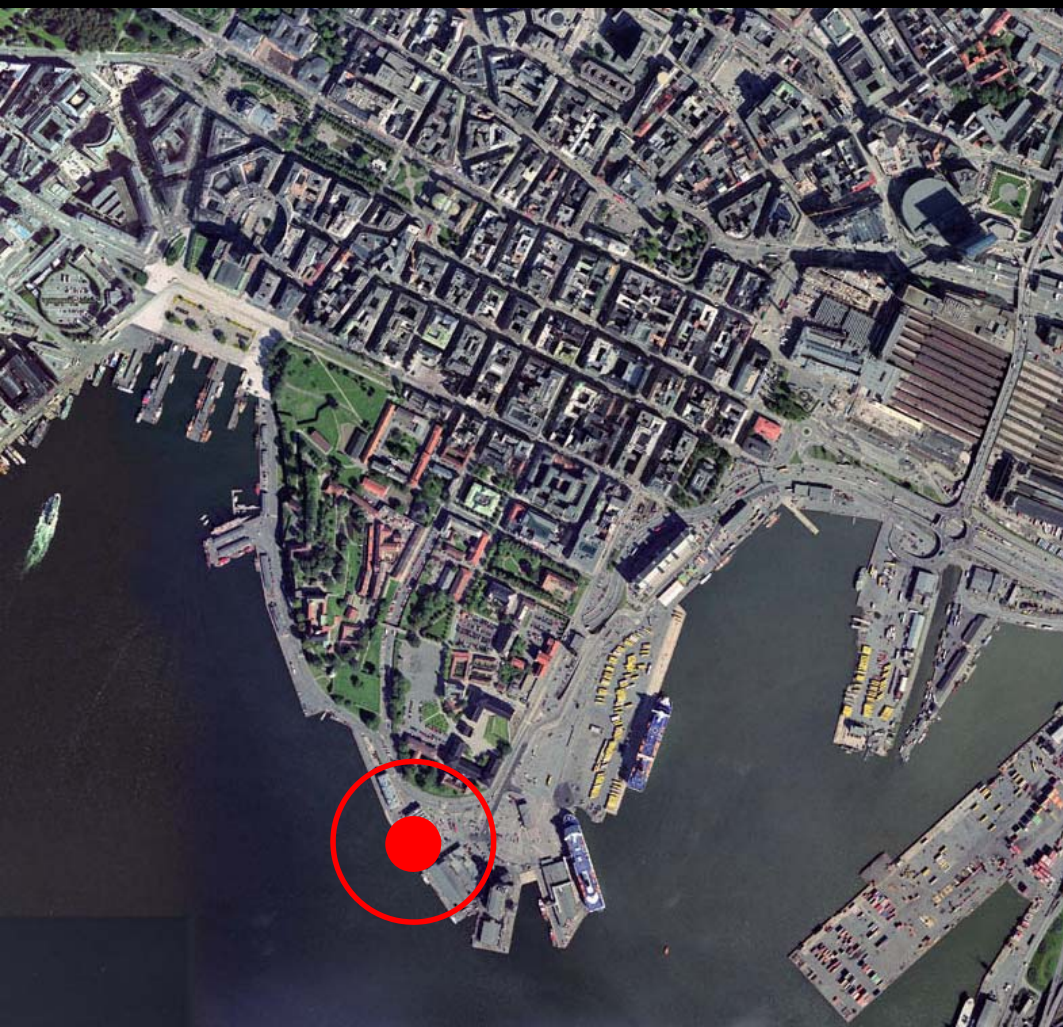
KIRA-foorumi 2017 14:11:17





Projects

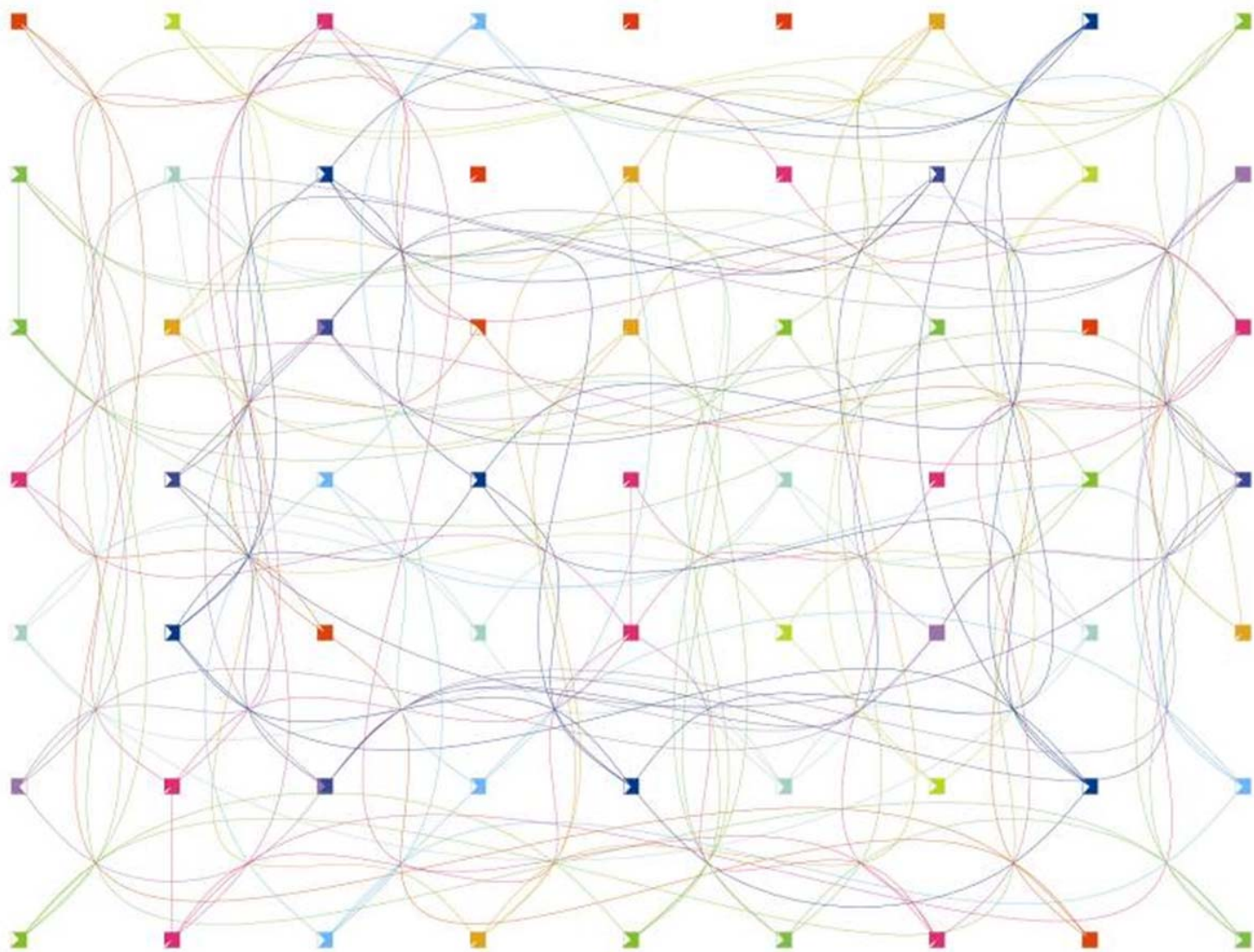
OSLO



NEW YORK

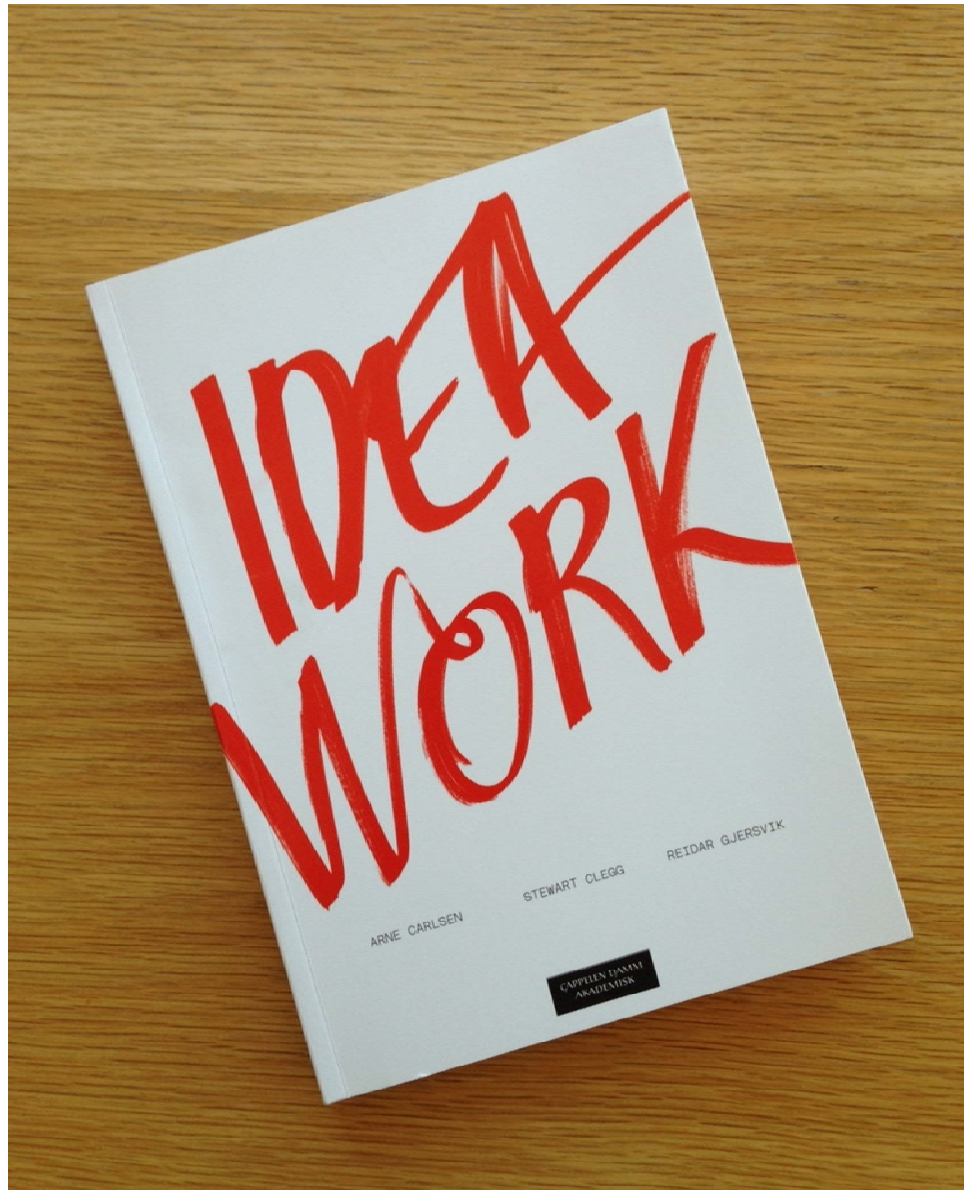








transposition



**STATOIL
LAWYER FIRM THOMMESSEN
THOMSON REUTERS POINT CARBON
SPAREBANK 1
A-MAGASINET
SNØHETTA**

IDÉARBEID ER

SAMMENVEVD

EMOSJONELT

FYSISK

KONTROVERSIELT

Navn på kvalitet

Gjøre det fysisk

Definisjon

Arbeidsformer som innebærer at man fjerner seg fra ensidig avhengighet til elektroniske medier og *tar* på ideer, *skisserer* og *materialiserer* ideer i artefakter, *gestikulerer* omkring ideer og *beveger* seg alene eller sammen under idéarbeidet.

Prototyping

En arbeidsform der man hurtig produserer, tester og forbedrer halvferdige ideer og utfordrer løsningsrommet, slik at ideer blir delt og styrket i en tidlig fase.

Frigjørende latter

Prosesser for energigivende samskaping gjennom hverdagslig spøk, uhøytidelig kappestrid, små former for lek og humor som bygger sosiale bånd, opphever begrensninger i tenkning og oppmuntrer til originale kombinasjoner av kunnskap.

Skapende motstand

Å behandle tvil, friksjon, motsetninger og kritikk aktivt som redskap for å stille spørsmål ved vedtatte sannheter og skape bedre ideer, og ikke som støy som man søker å unngå.

Punk

Bruk av fandenivoldskhet og direkte, selvinitiert handling for å mobilisere mot det etablerte (sannheter, praksis, autoriteter), åpne opp for og realisere ideer med høy originalitet og verdi.





contextualized
concept

b e g e n e r o u s

ALEXANDRIA LIBRARY, EGYPT 1989-2002



THE 7TH LARGEST LIBRARY IN THE WORLD

It will contain 8 million media when the collection is completed

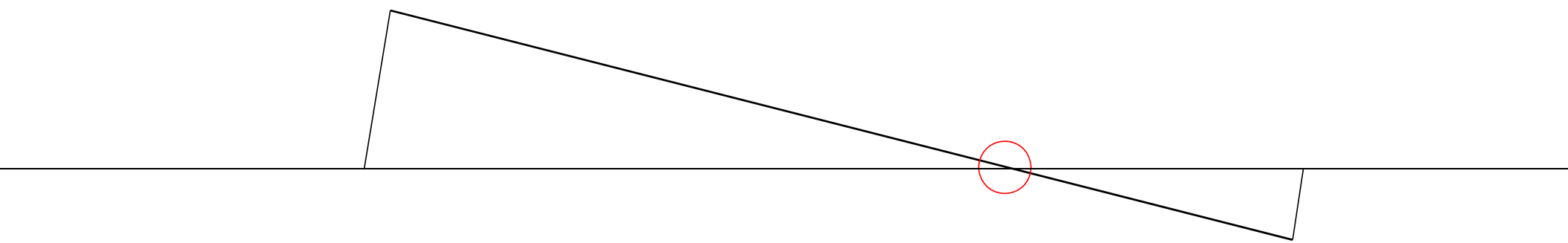
Primary Functions in addition to the collection:

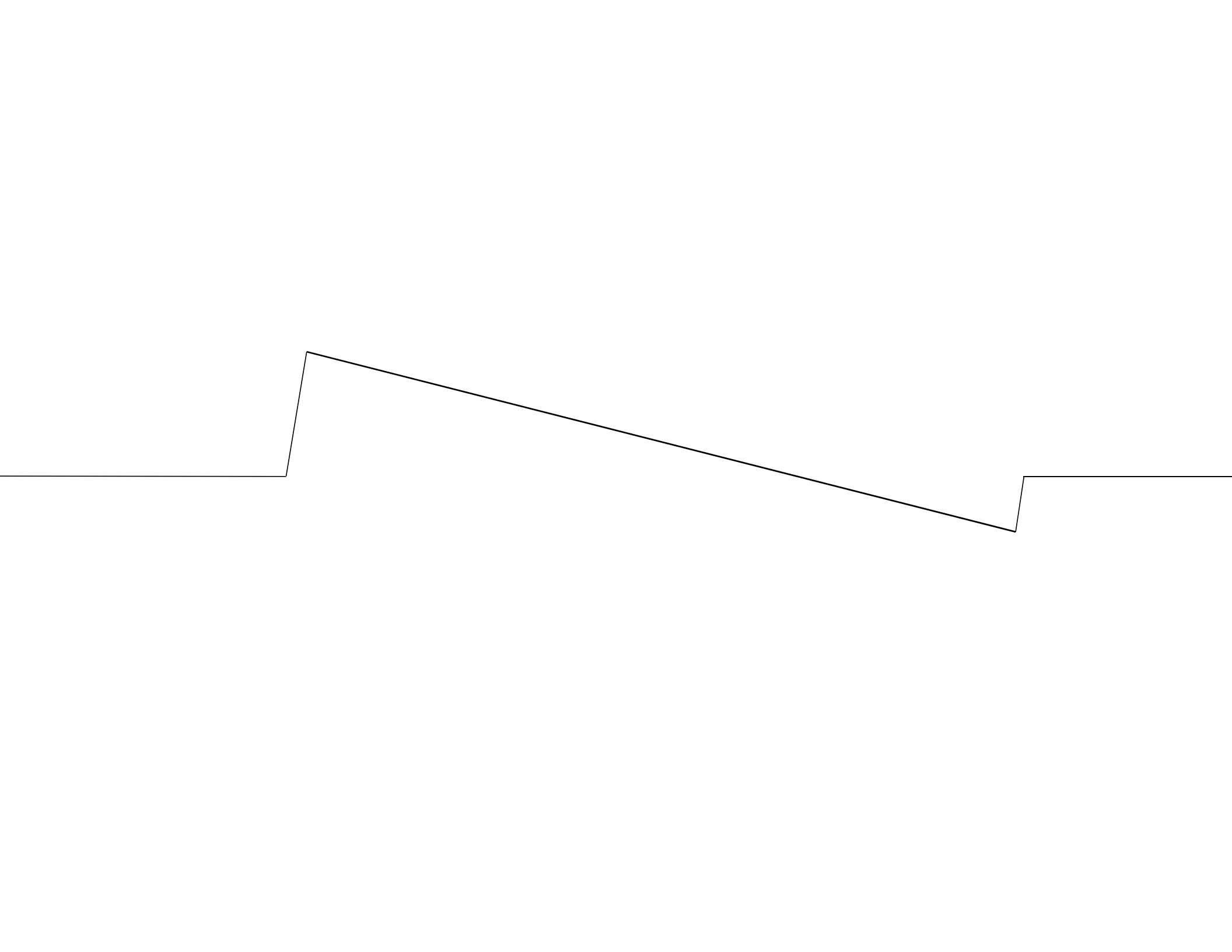
Children's Library
International School for Information Studies
Centre for Old Manuscripts
Science Museum
Museum of Calligraphy
Modern Meeting Facilities
E-max Cinema
Planetarium
Café

Some numbers:

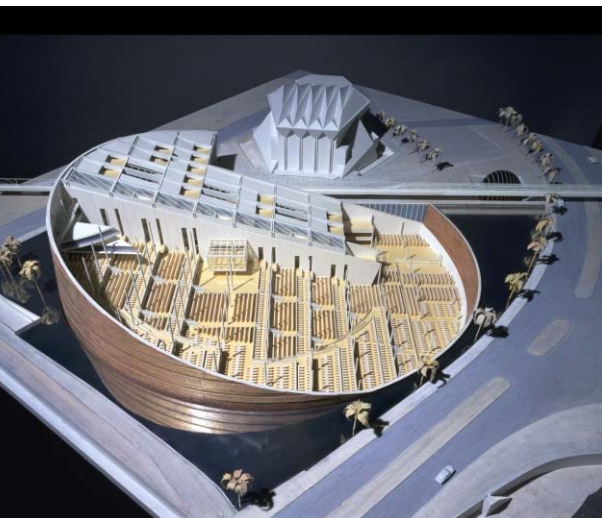
- 1 160 meter in diameter
- 2 32 meter above ground
- 3 12 meter under ground
- 4 85,000 m² – gross
- 5 20,000 m² – open collections
- 6 18,000 m² – closed collections
- 7 2000 reading places
- 8 6000 m² engraved granite blocks

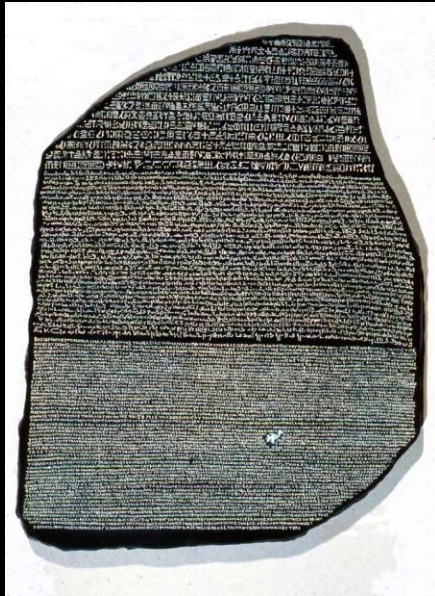
OFFICIALLY OPENED IN 2002





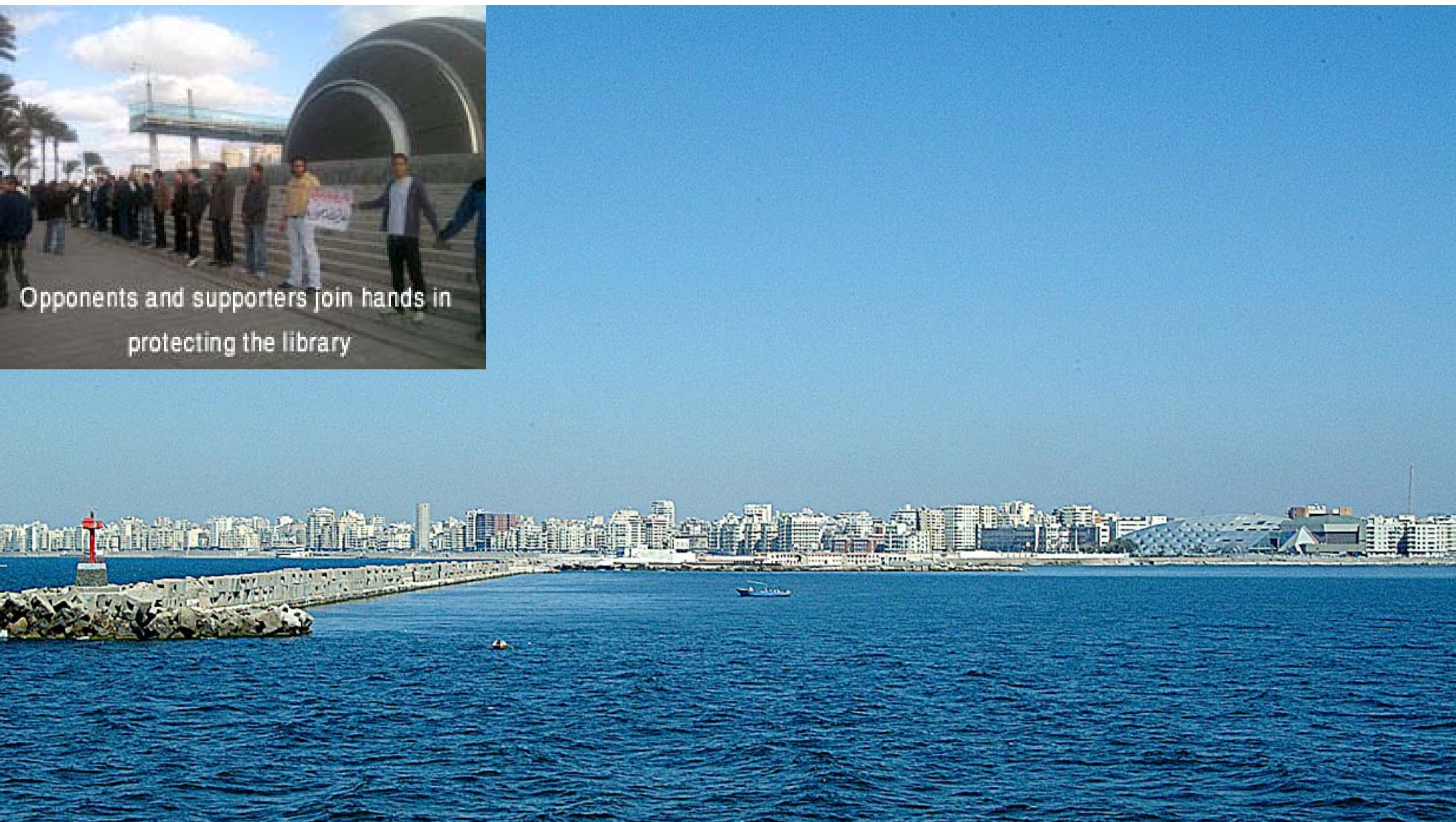








Opponents and supporters join hands in protecting the library

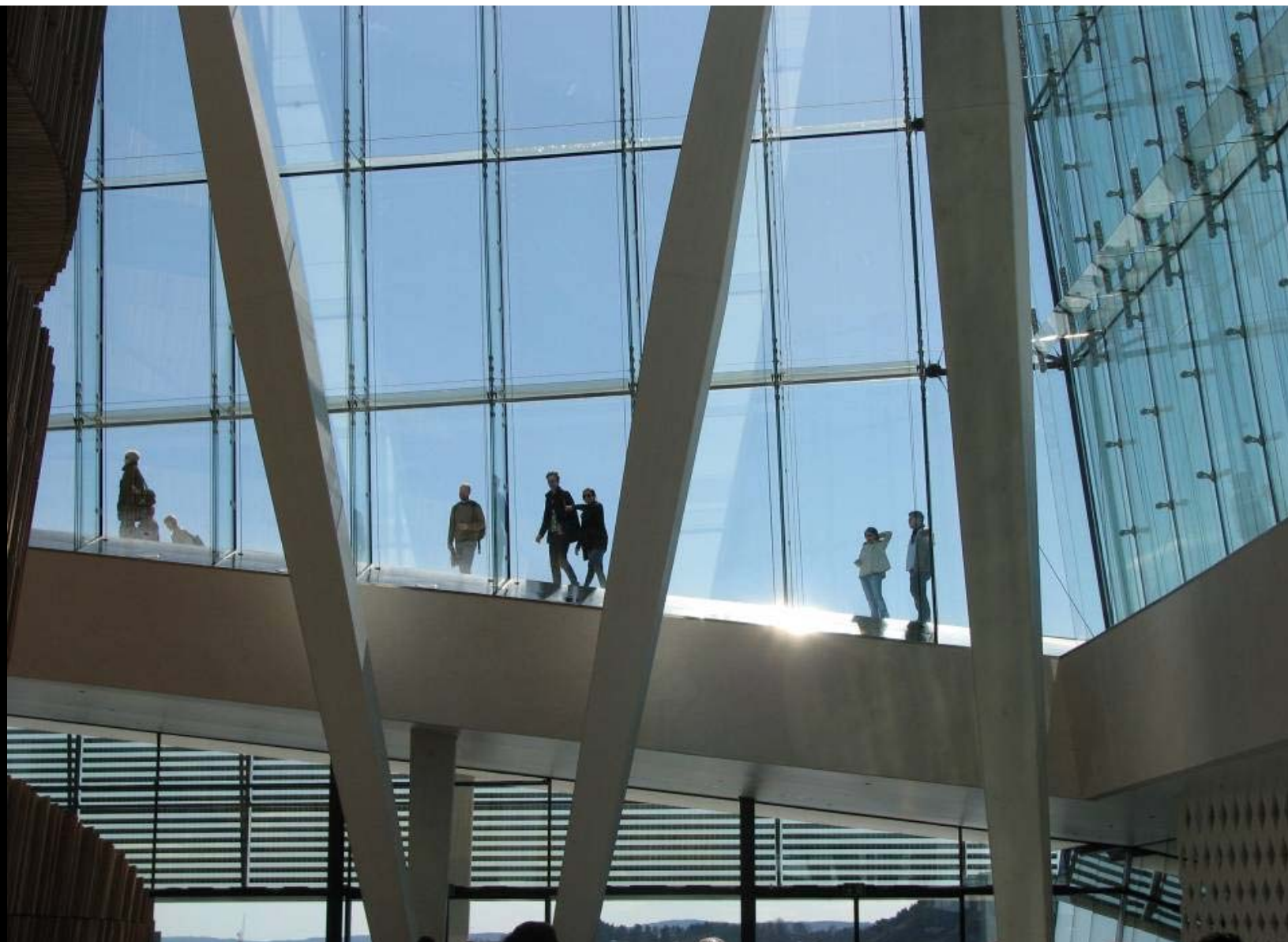


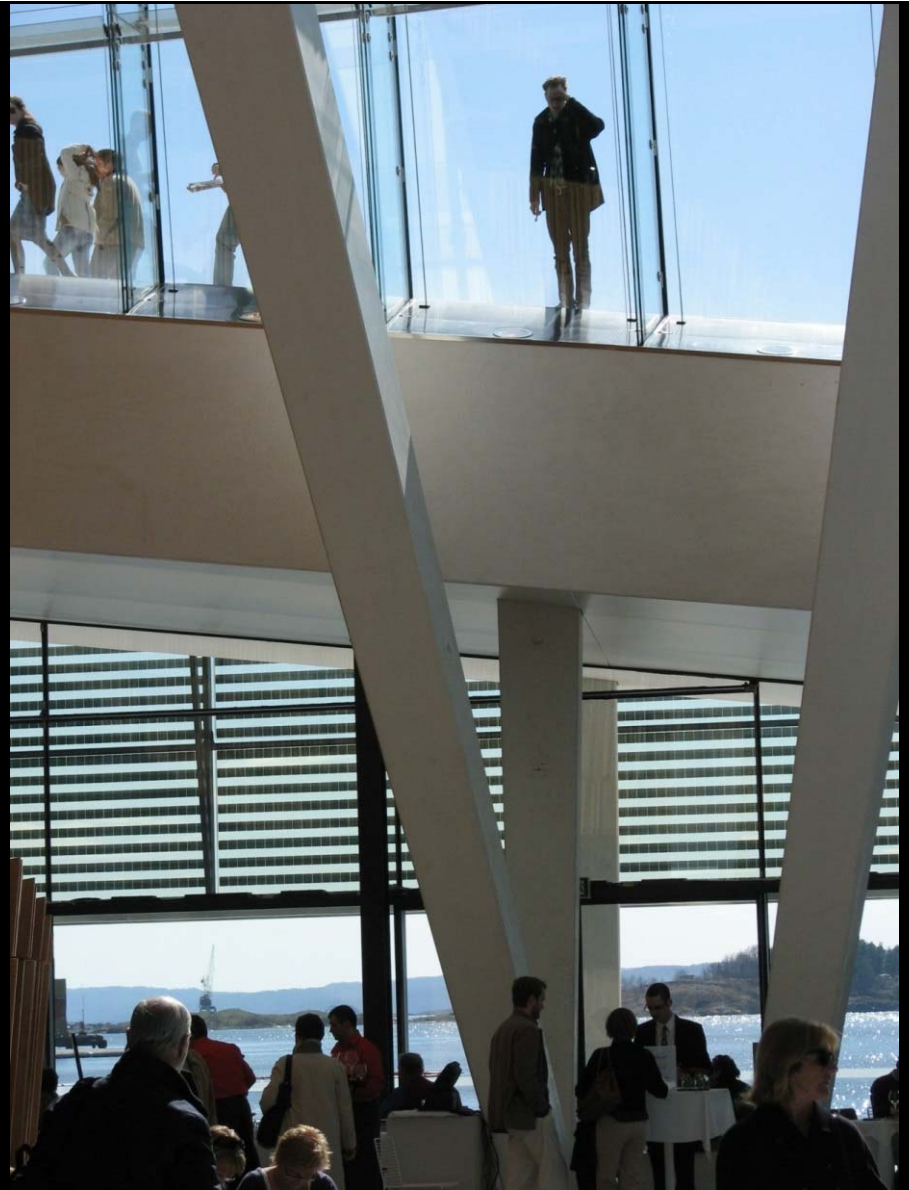
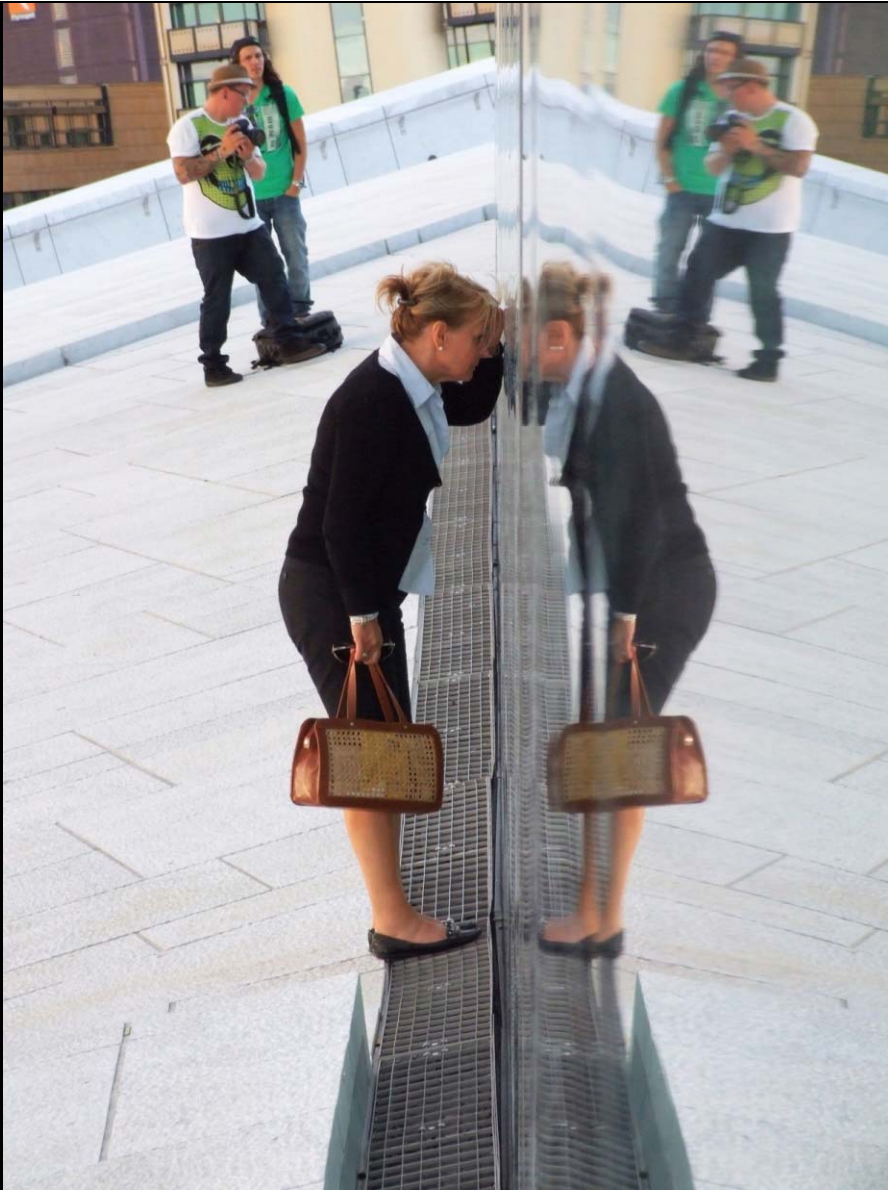
THE NORWEGIAN OPERA AND BALLET IN OSLO, BJØRVIKA















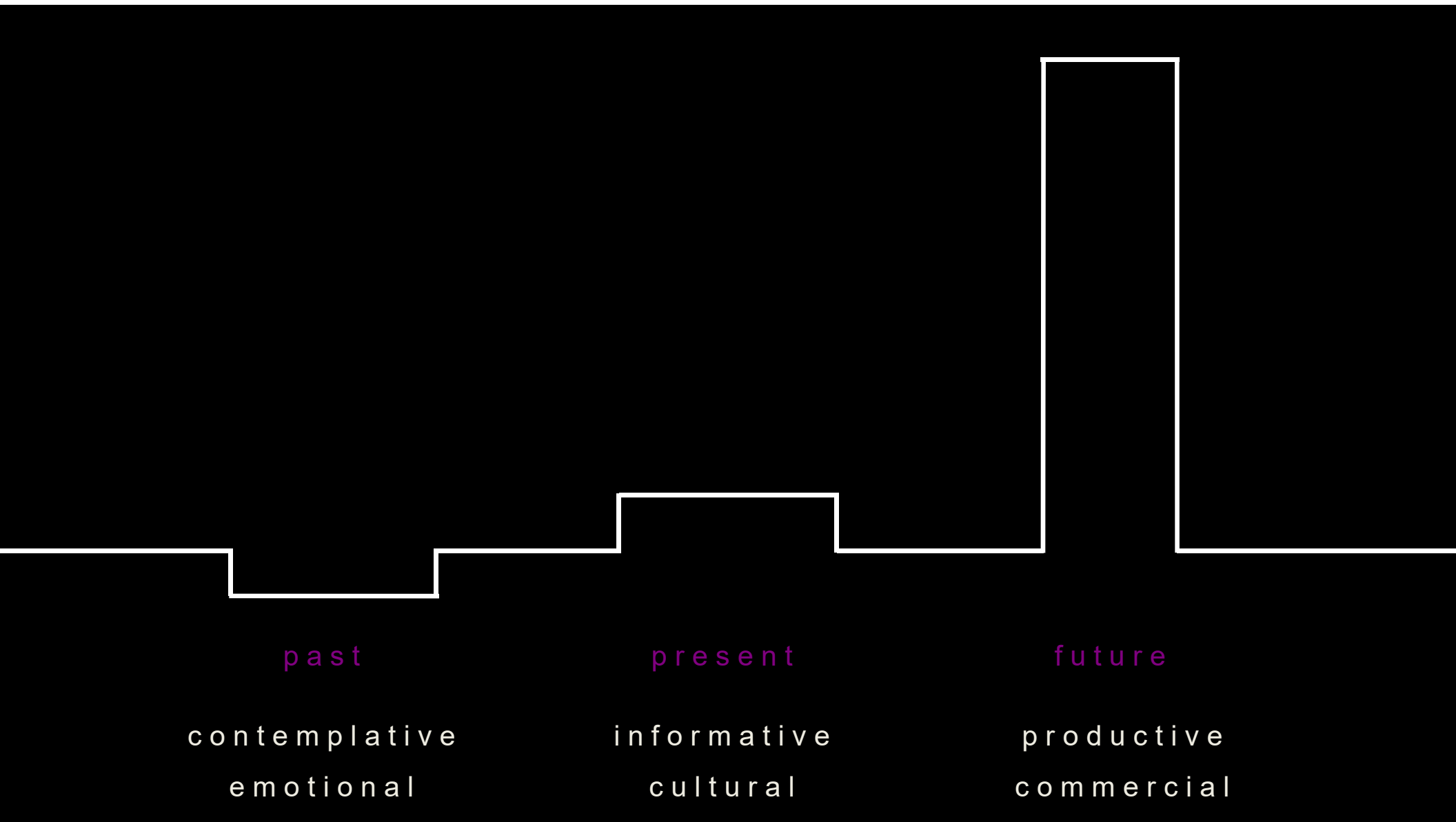


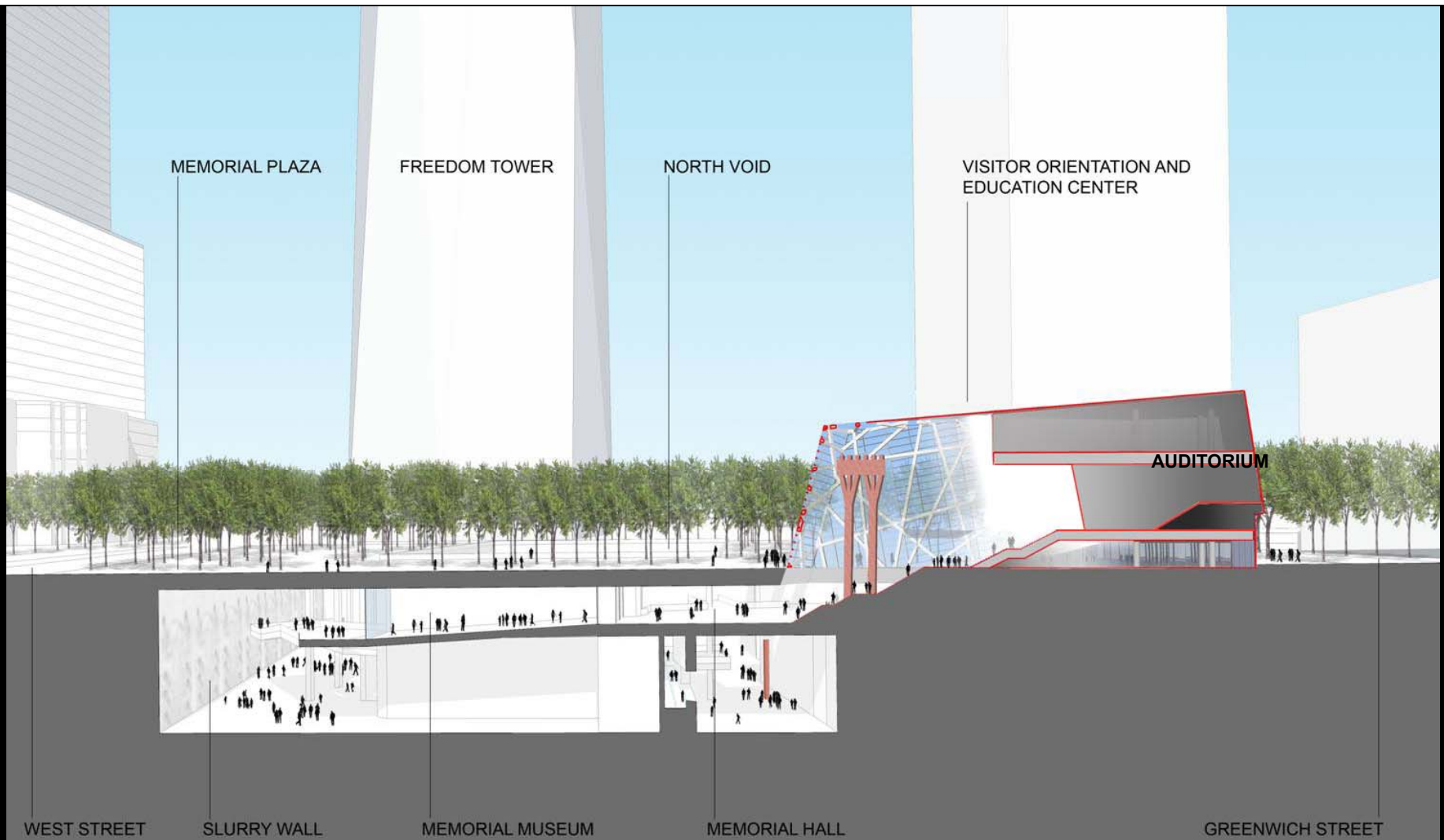
cityscape
for people



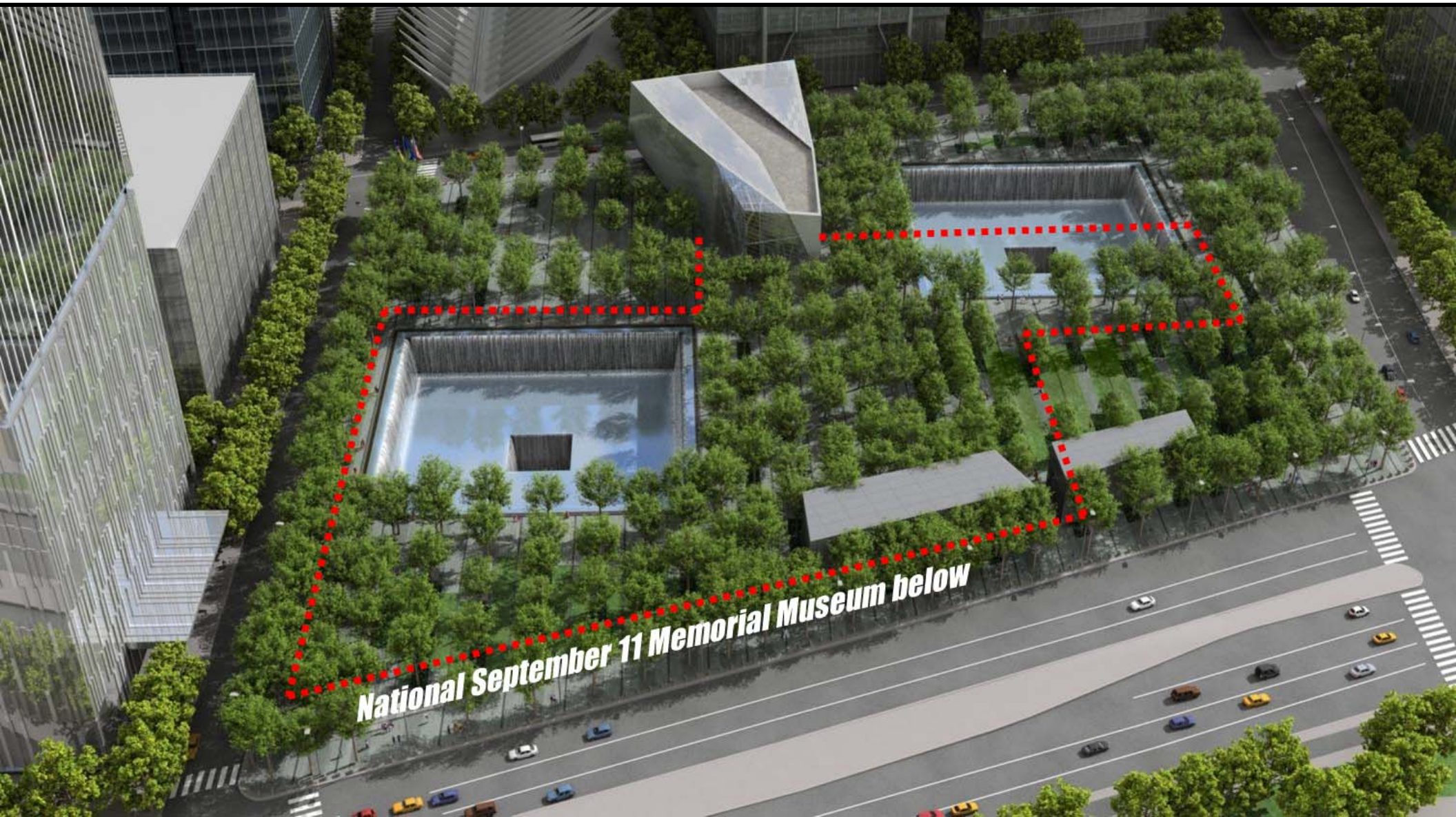
The World Trade Center site, Manhattan: Ground Zero







The National September 11th Museum at the World Trade Center in New York



National September 11 Memorial Museum below















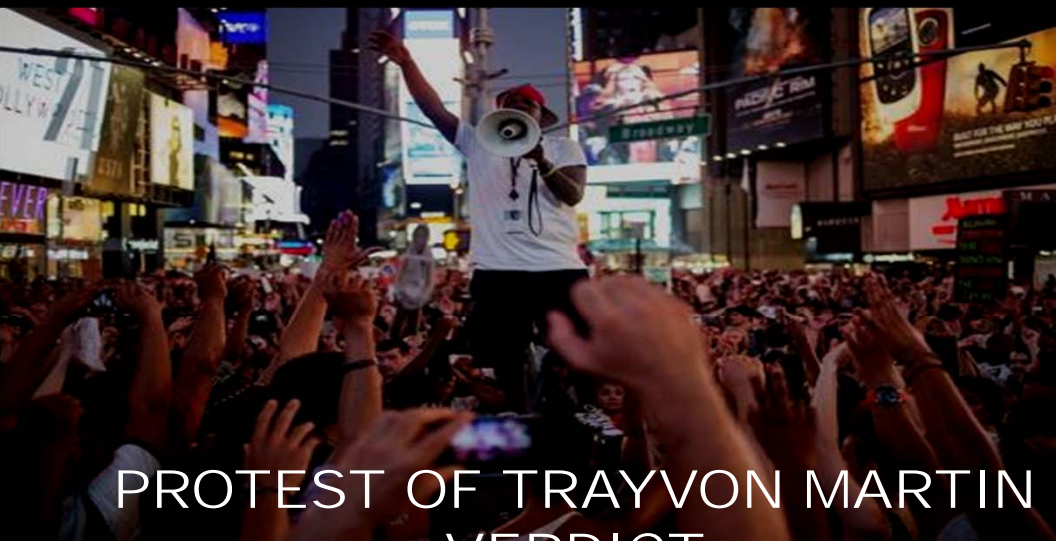




OCCUPY



PROTEST AGAINST SYRIA
STRIKE

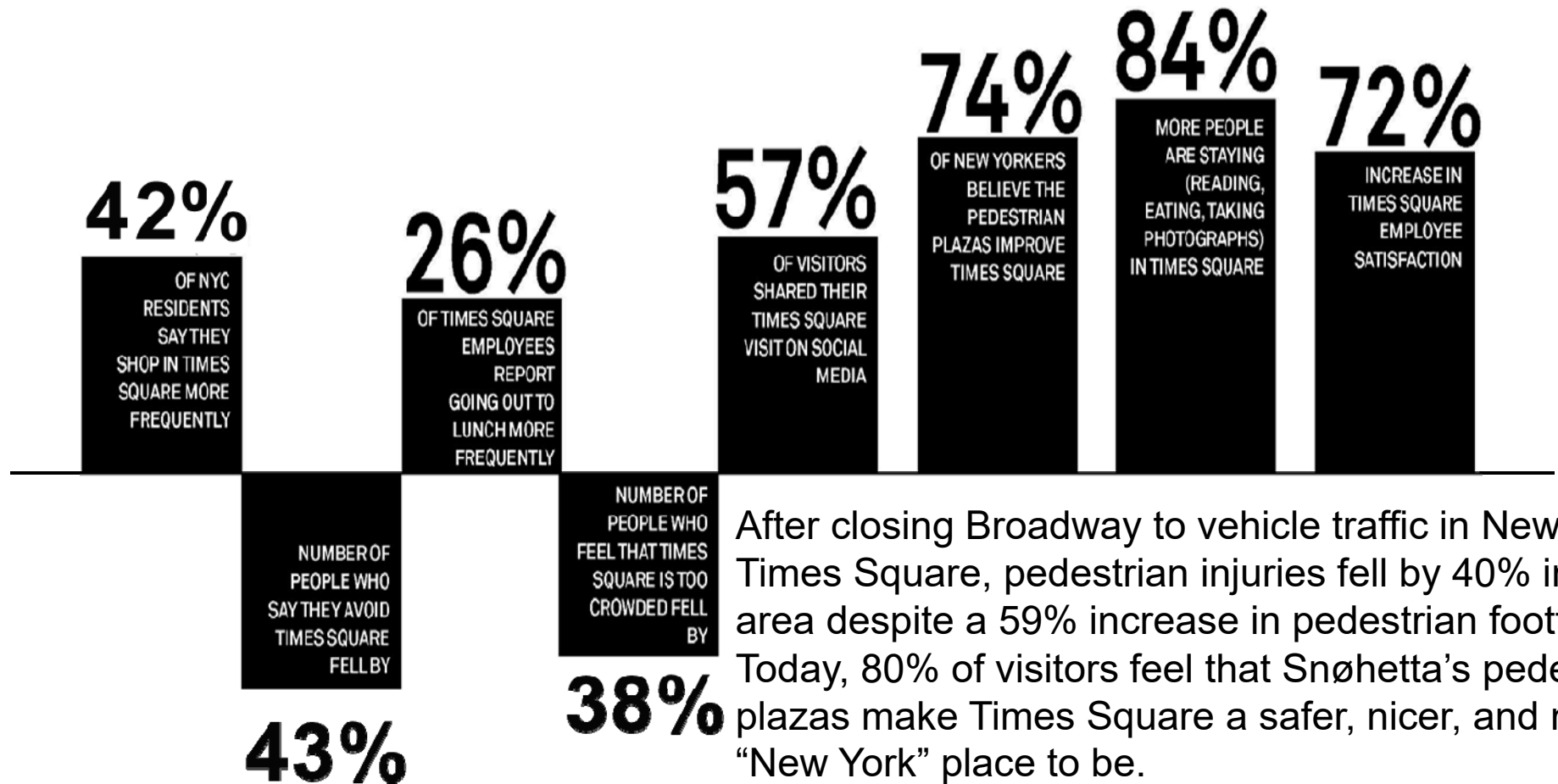


PROTEST OF TRAYVON MARTIN
VERDICT



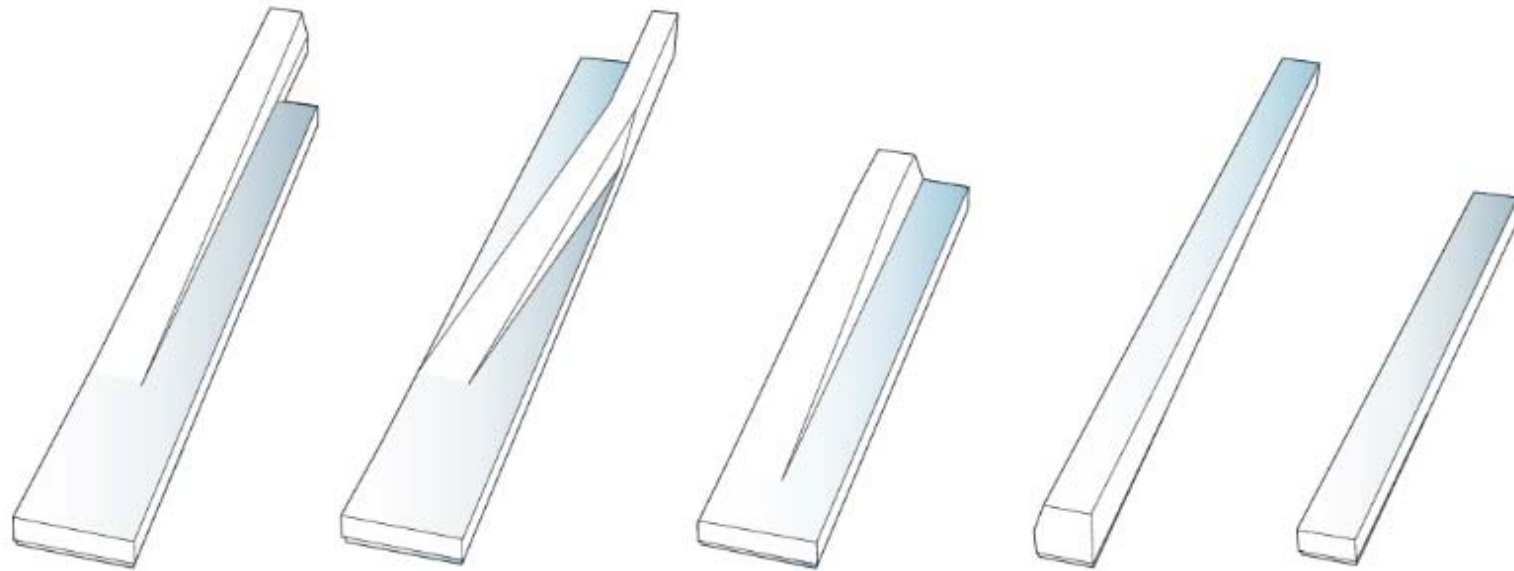
ARMENIAN GENOCIDE
COMMEMORATION

Since opening the pedestrian plazas in 2009 ...



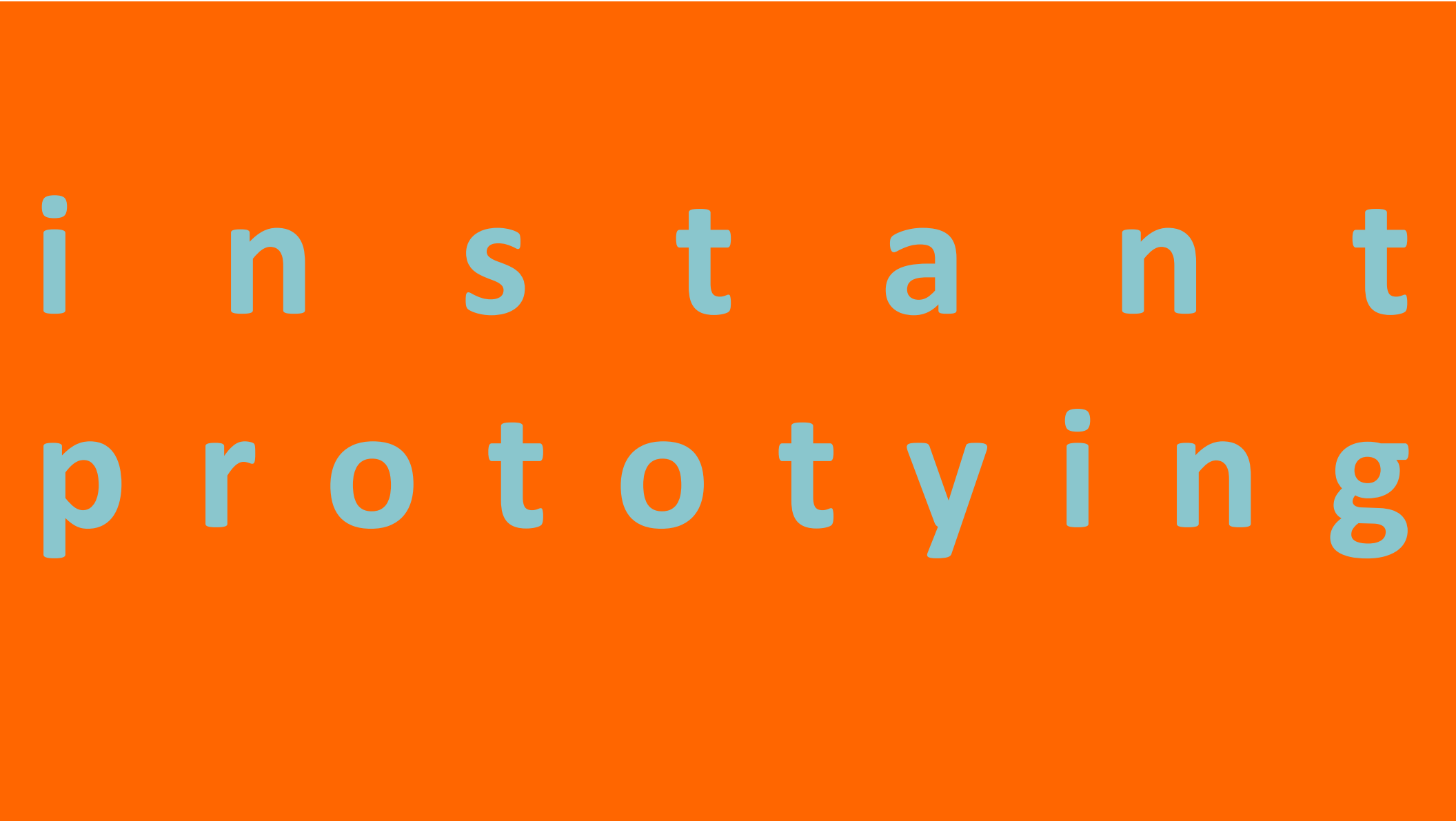
After closing Broadway to vehicle traffic in New York's Times Square, pedestrian injuries fell by 40% in the area despite a 59% increase in pedestrian foottraffic. Today, 80% of visitors feel that Snøhetta's pedestrian plazas make Times Square a safer, nicer, and more "New York" place to be.

Behavior, Quality and Perception Statistics from 2010 Greenlight Report & 2014 TSA Report & update dstatistics from 2016

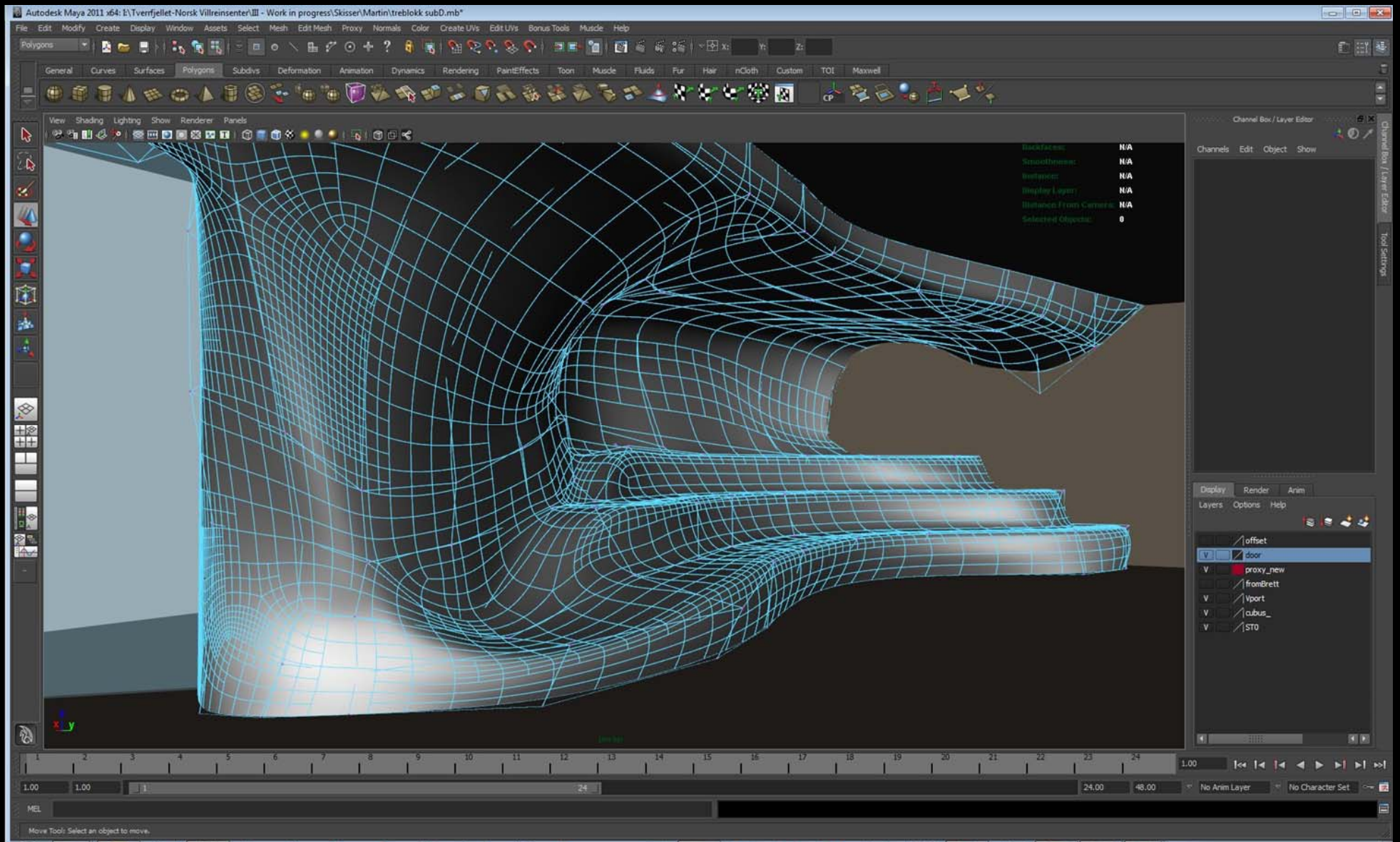


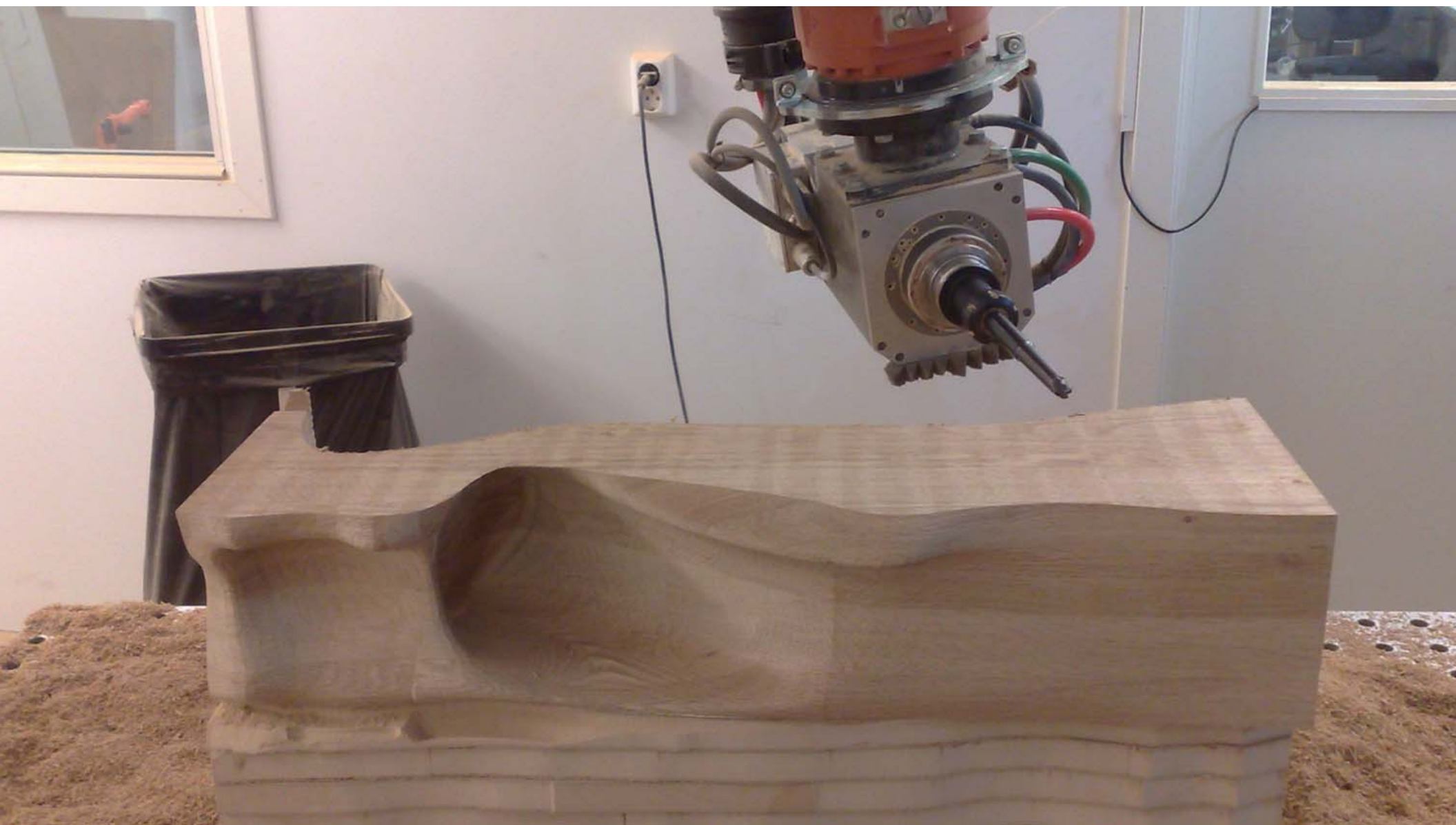






i n s t a n t
p r o t o t y i n g













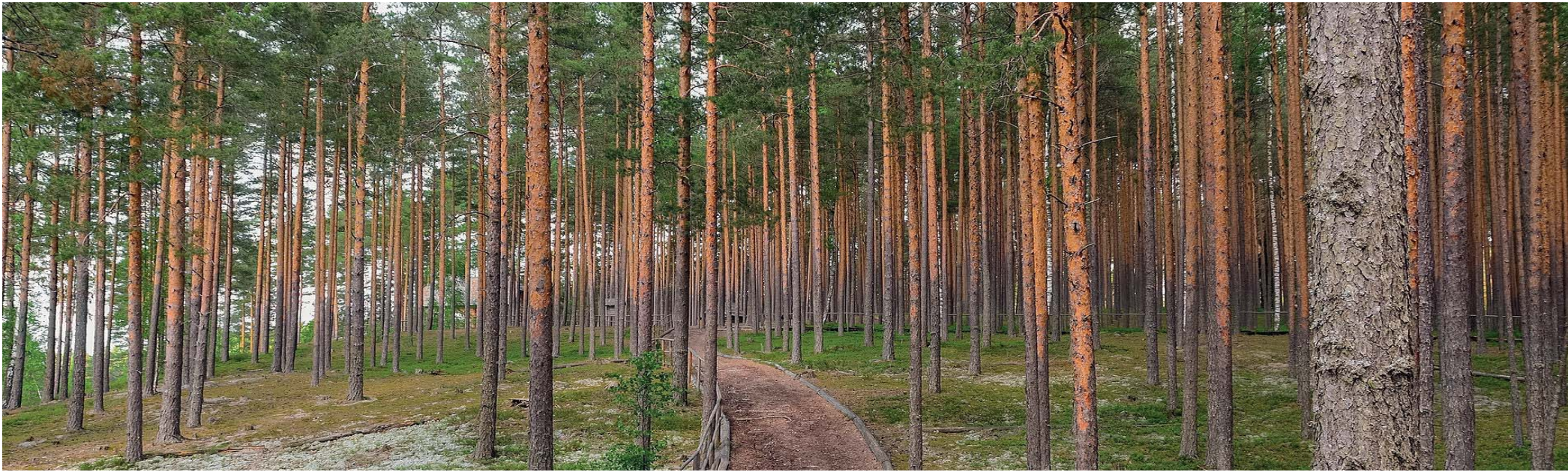


l o c a l

g l o b a l

The 7th room

Snøhetta + Treehotel



Treehotel

Harads, Swedish Lapland



Kent & Britta



+30 -40



Forest



Northern light

EXISTING TREE ROOMS



"The Blue cone" av: Sandellsandberg



"The Cabin" av: Cyrén & Cyrén



"The Mirrorcube" av: Tham & Videgård



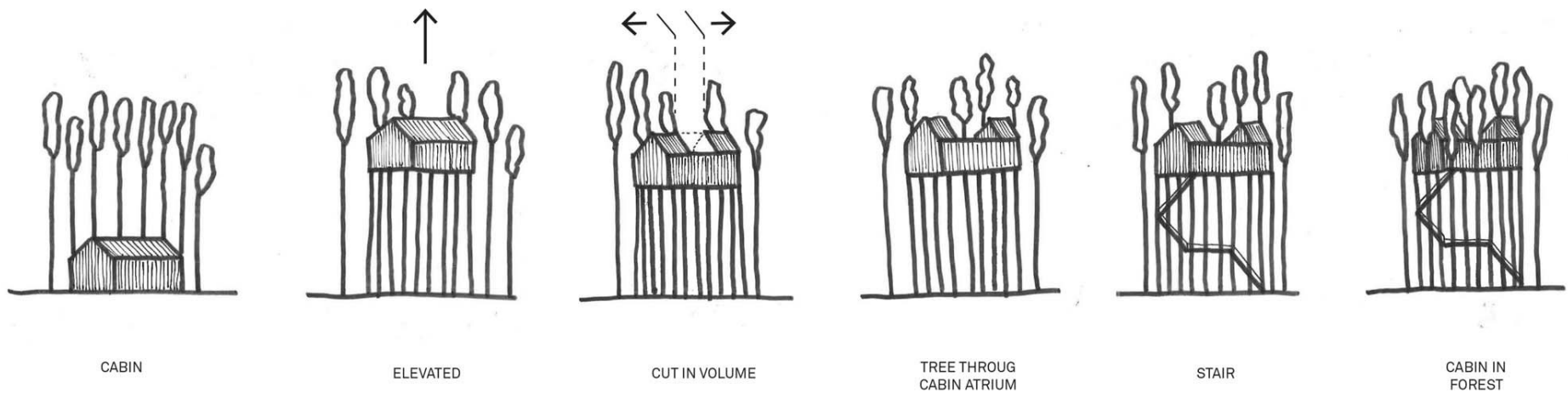
"The Dragonfly" av: Rintala Eggertsson Architects



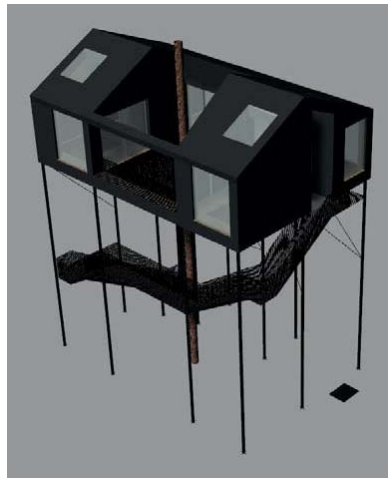
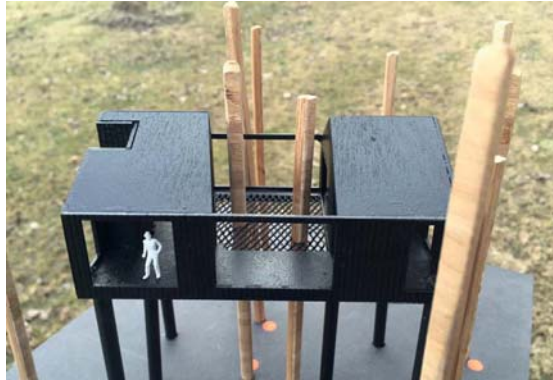
"The Bird's nest" av: Inredningsgruppen Bertil Harström



"UFO" av: Inredningsgruppen Bertil Harström



DESIGN STRATEGY – FOREST FIRST



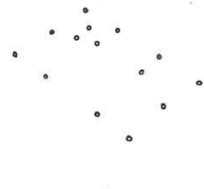
3D & Modell

The 7th room with



75m2 cabin incl. 5 beds, bath and separate toilet + 32m2 atrium net. Pine tree growing through the atrium + 6th facade standing on 14 columns, 120mm Ø. 10m tall stair to get to the entry

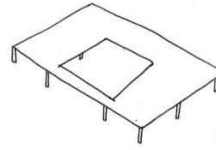
CONSTRUCTION STEP BY STEP: AUGUST – DECEMBER 2016



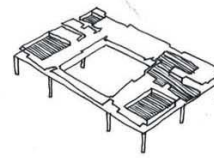
SITE



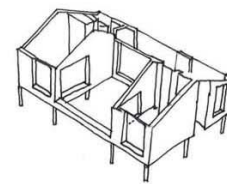
FUNDATION/COLUMNS



6TH FACADE



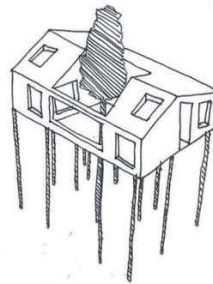
FLOOR



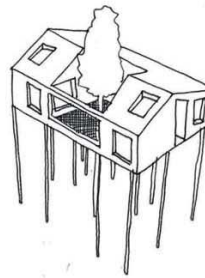
WALLS



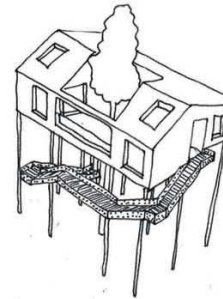
ROOF



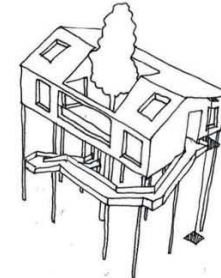
ELEVATED+
TREE IN ATRIUM SPACE



ATRIUM NET



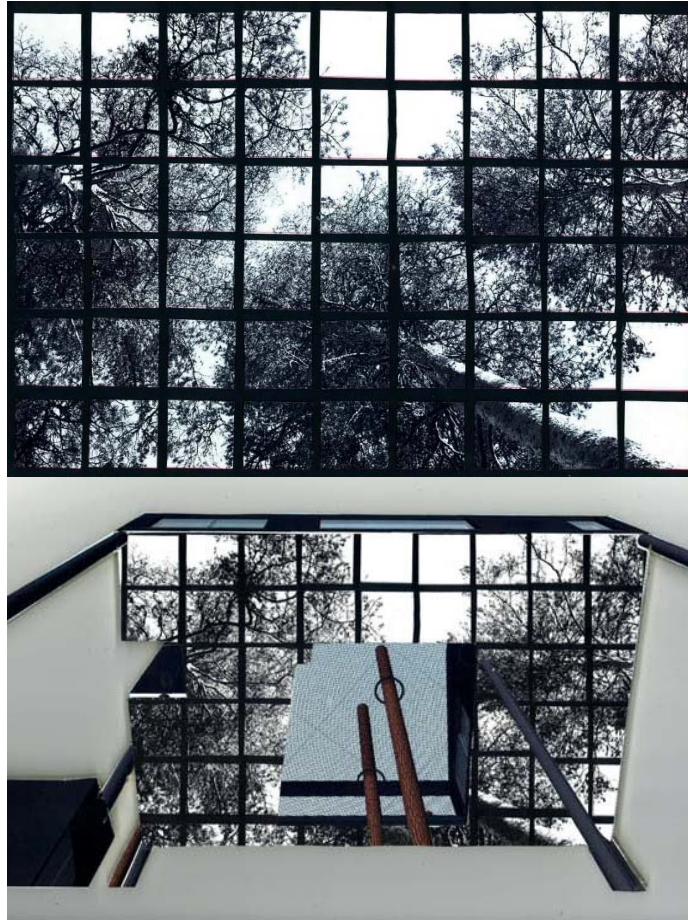
STAIR

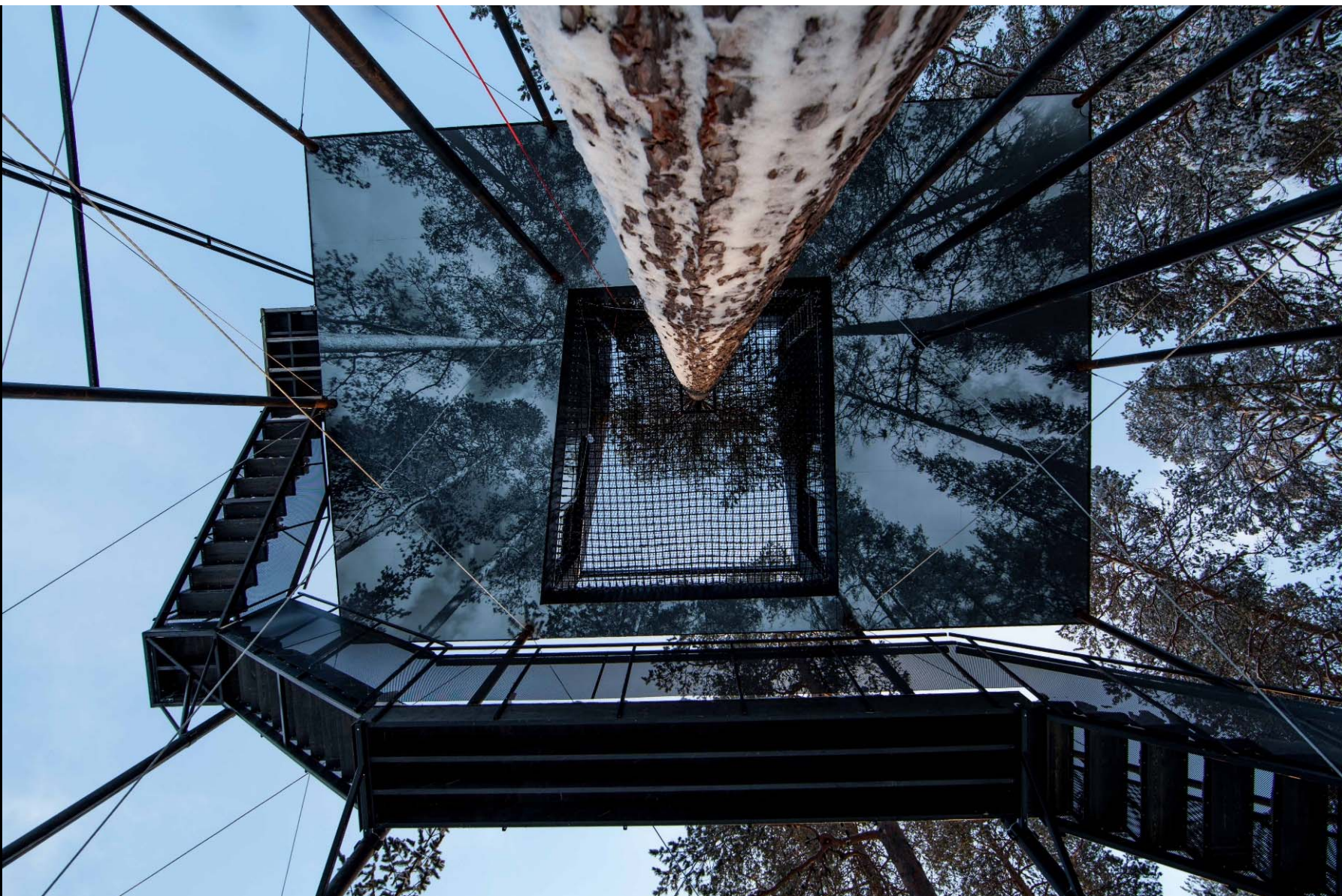


LUGGAGE ELEVATOR



The 6th facade





The Atrium net



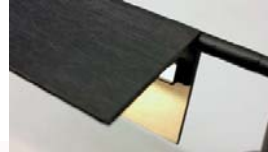
1.layer net: 120 mm grid 2 .layer net: 40mm grid 900 kg m²





Atelje Lyktan + Snøhetta

Prototyping









p e o p l e
p r o c e s s

**KING ABDULLAH AZIZ
CULTURAL CENTER: DHARAN, SAUDI ARABIA**



PROCESS: OSLO - DHAHRAN

©2010 Google - Imagery ©2010 TerraMetrics, NASA, Map data ©2010 AND, Europa Technologies, Geocentre Consulting, INEGI, Tele Atlas - Terms of Use





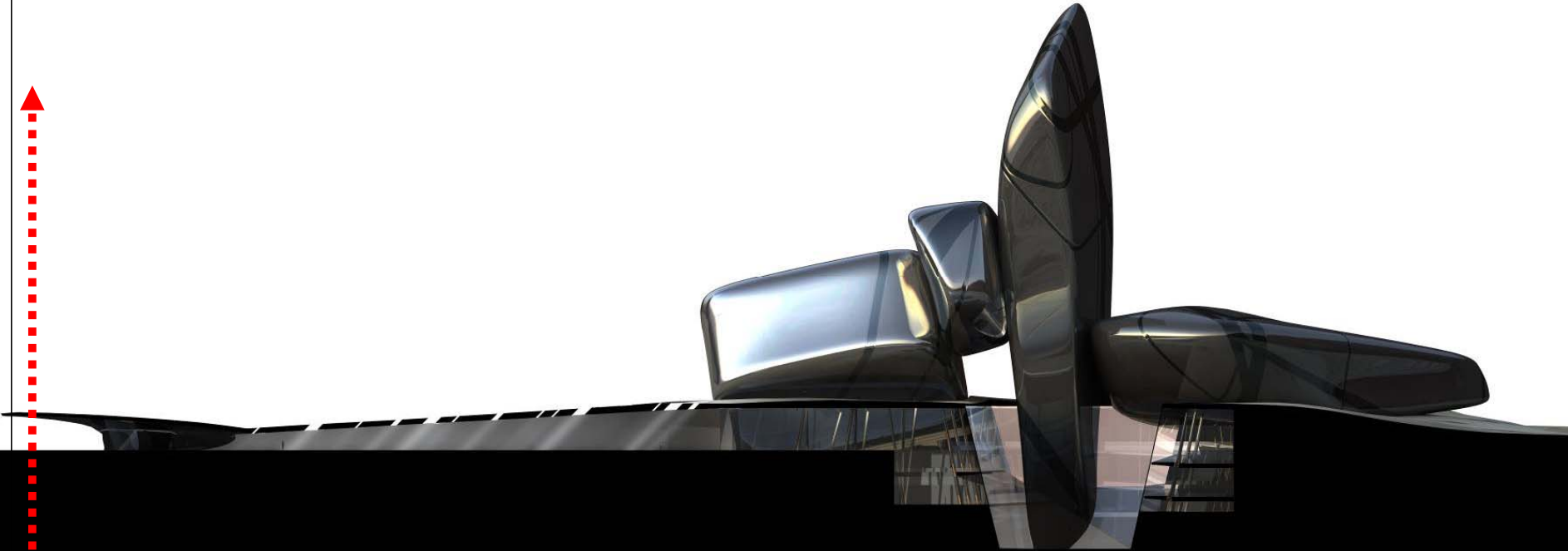


Natural pebbles - Keystone

Keystone locking the formation in place, channeling the forces of gravity.

No one component can be removed. All are interdependent and rely upon each other. The resulting composition is an expression of team work. Each part can be endlessly adjusted to suit the individual and specific needs. This form for flexibility is not general or universal but specific and individual.

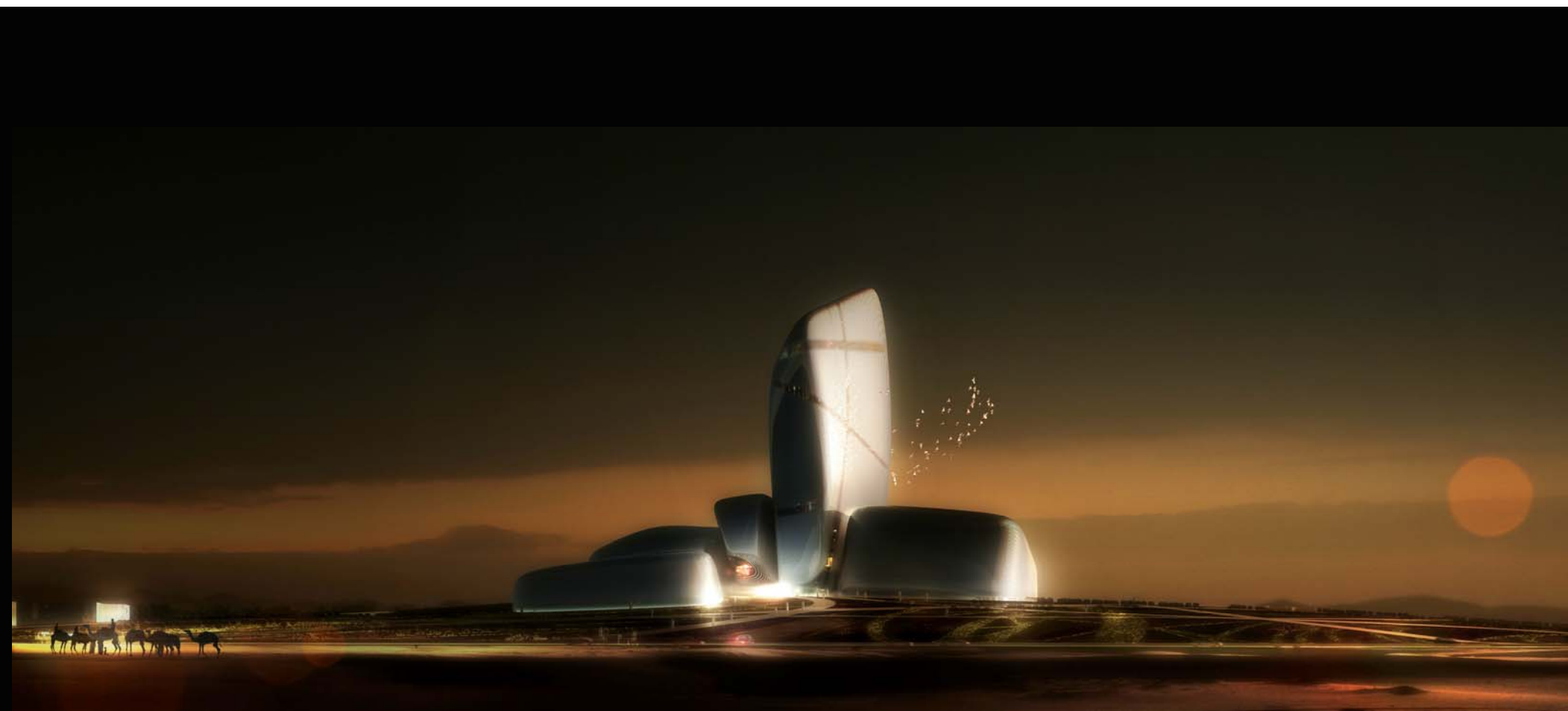
TIME AXIS



P A S T - Repository of accumulated knowledge and experience

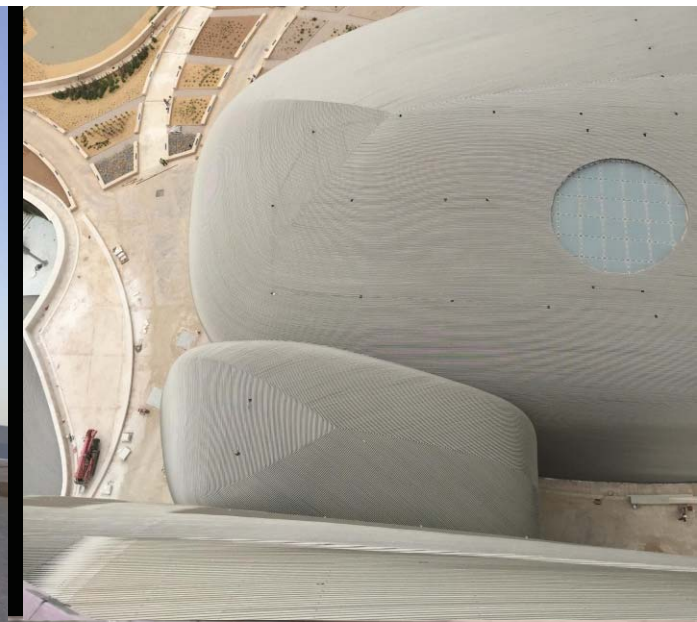
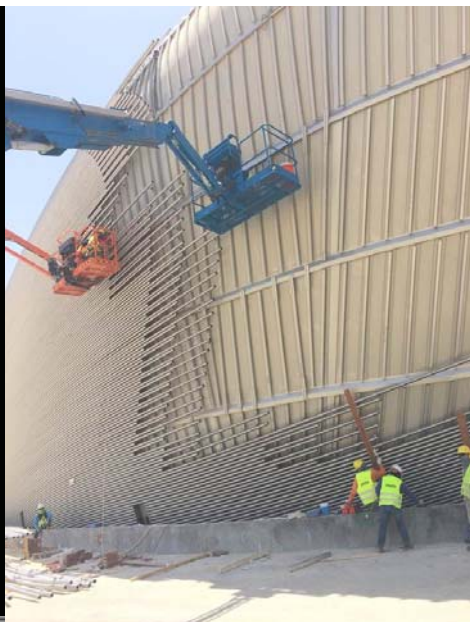
P R E S E N T – Technology – Interaction – Dialogue - Exchange

F U T U R E – Education – Learning – Exploration – New Horizons and Fields of Venture



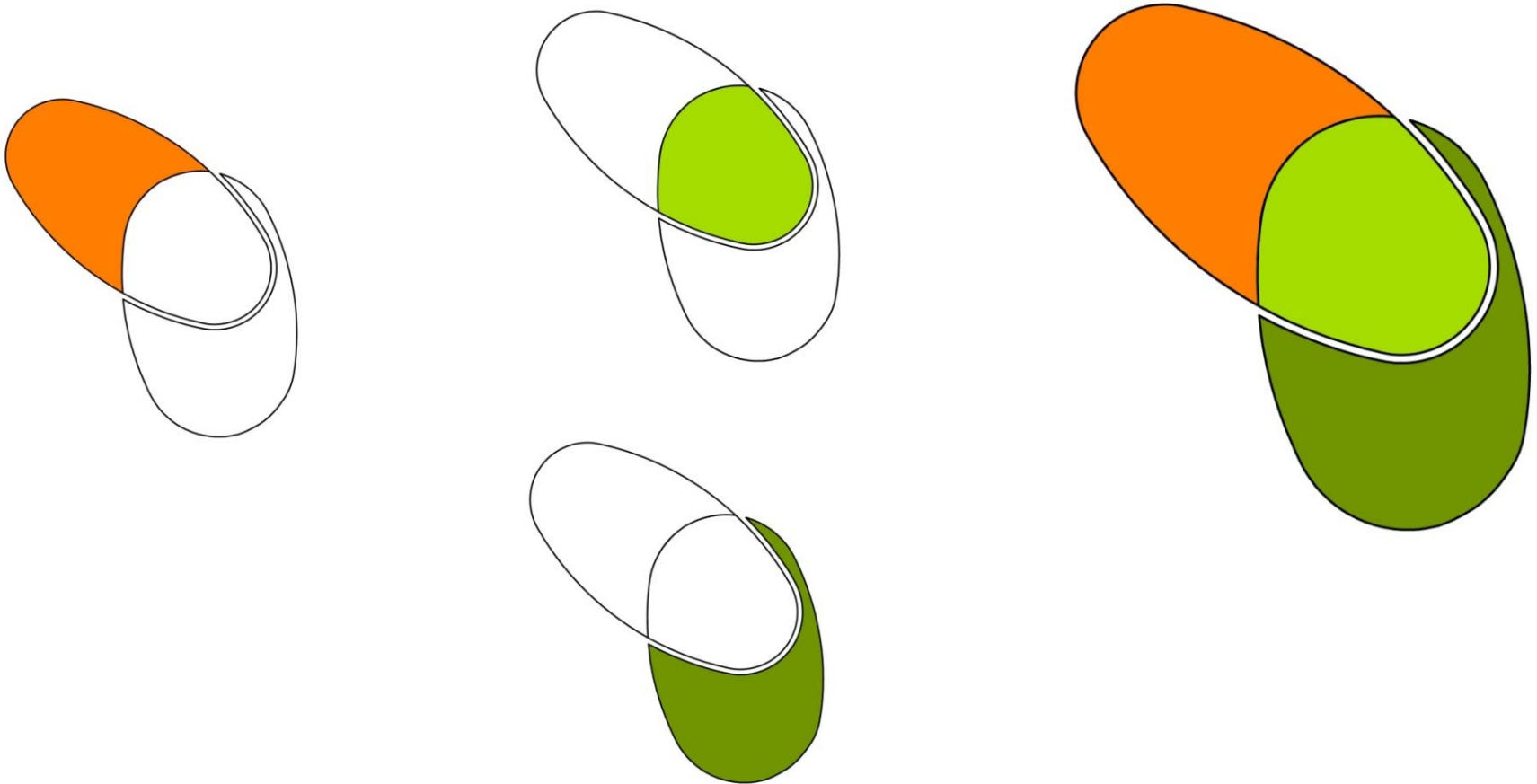








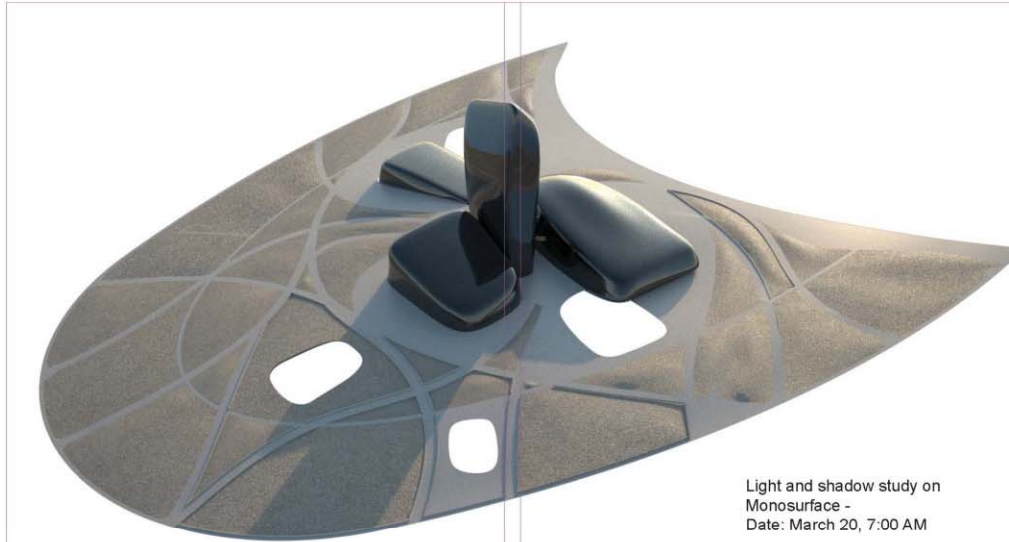
Landscape and learning arena:
Monosurface and the Lush garden



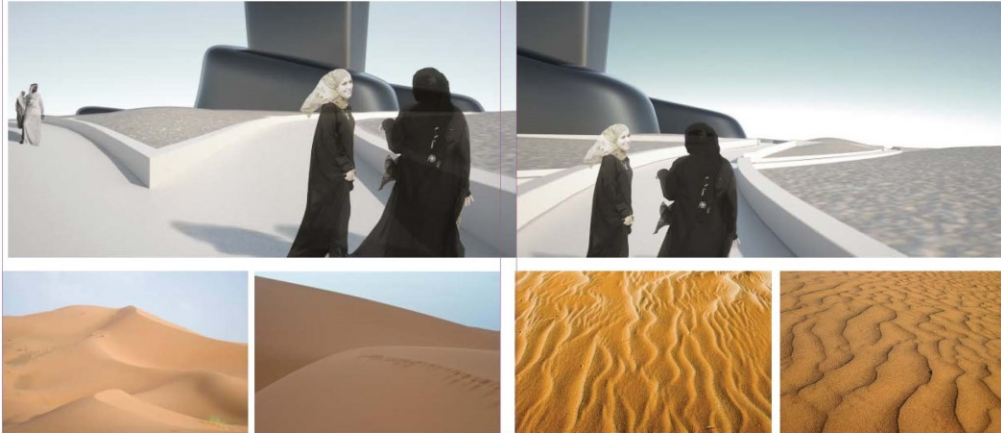


The Lush Garden

The Monosurface



Light and shadow study on Monosurface -
Date: March 20, 7:00 AM



GEOLOGY + SURFACES = MOVEMENT

Approach: Use the movement in the sand dunes as pattern inspiration to create a dynamic surface pattern of the Monosurface land form.

The shaping of the Monosurface surface is inspired by the movement of the sand in the desert. The move of the sands in the desert landscape creates a flow and a dynamic pattern that is the image of the Monosurface.

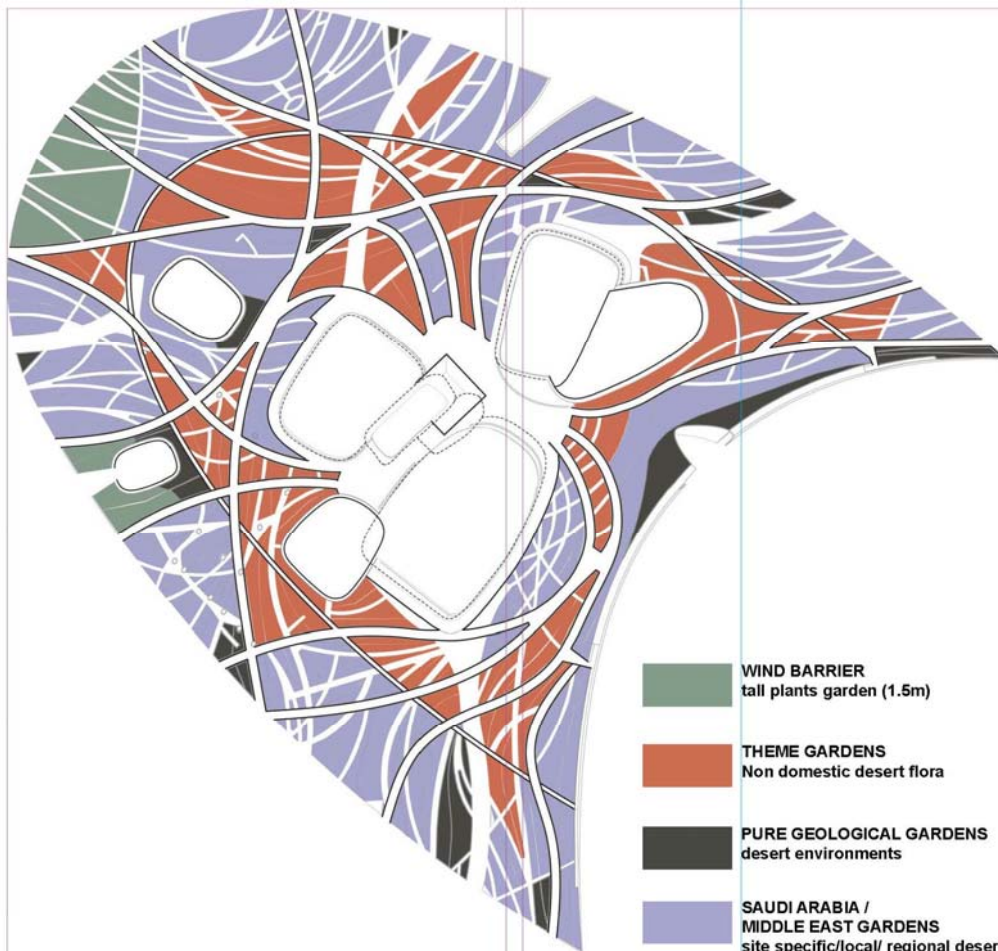
In the desert landscape the sand is strongly effected by the wind which creates patterns in the sand dunes. These patterns often have a steeper slope and a more gentle slope based on the wind direction.

The walkways is the symbolic flow of the wind that leads the visitors through the landscape. The shape of the flow sand pattern together with the flow diagram of the walkways will be used to divide the Monosurface into segments which will be covered with regional gravel, sand and stones and planted with vegetation.

The dynamic design of the surface of the Monosurface will always be the "carpet" under the Ithra Cultural Center. This means that the "sand dunes" never will be more than max 1.5m tall. The large scale of the pattern and surfaces, will get a more human scale by adding low vegetation on the sloping surfaces.

To emphasize the shape of the "dunes", we will avoid to plant on the ridges - and the ridges will be soft shaped to make a calmer and softer landscape. The "dunes" and sand patches will be framed by paved areas and low walls and curbs.

Material: All the surface material on the Monosurface will be stone, gravel and sands from different regions of the geological layers in Saudi Arabia.



- WIND BARRIER**
tall plants garden (1.5m)
- THEME GARDENS**
Non domestic desert flora
- PURE GEOLOGICAL GARDENS**
desert environments
- SAUDI ARABIA /
MIDDLE EAST GARDENS**
site specific/local/ regional desert
flora and geology

PLANTING CONCEPT

Approach: All plants on Monosurface will be selected in the overall concept of Xeriscape and the belonging in the desert landscape. Xeriscape refers to low water conservation through creative landscaping. The Monosurface will be a pedagogic, learning garden as a new way of looking into a botanical garden.

All the patches of the Monosurface will be a combination of plant, gravel and pathways through the designed landscape.

The fundamental element of a Xeriscape design is water consumption; to reduce the total water applied and maximize the use of natural precipitation. It is important to consider soil improvement to make sure it stores the water.

It is also important to select suitable plants. We believe that the plant selection should both reflect the traditional plants from arid areas of Saudi Arabia together with other drought tolerant plants.

To establish a base of ASaudi Arabian plants, it is important to identify all the existing plants on the site that can be removed from areas that will be remodelled. These plants will be planted in a "transit" garden on site. The "transit" garden has to be maintained as long as the building process is active, and replanted on the Monosurface. To make this happen, the action has to be taken when the building process start.

To widen the palette, we introduce different "themes" for the different patches in the pattern. We suggest more theme gardens that can represent different plant material such as: succulents garden with plants selected through leaf and/ or flower color. Cactus gardens, ornamental grasses and also geographical gardens such as America desert garden, Australian desert garden, Agave garden and Aloe garden. Introducing non domestic plants has to be done carefully and it would be good to contact botanical gardens for cooperation.

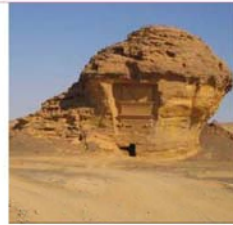
Low maintenance is also one of the benefits of Xeriscape. This means that the control of the irrigation system and the use of mulch will be important. The maintenance will also be very important to keep a good looking landscape that changes throughout the seasons.

For the areas close to the plaza around the Source we want to reduce the amount of plants but the area will include seating and railing situations.

It will be important to make the planned nurseries operative as early as possible to be able to produce the different local species.



Example of rammed earth wall that also will be used in the Entrance Arcade and indoors framing the Plaza.



Example of tuff-clay surfaces and colours for paved areas and under production.



Example of tuff-clay surfaces and colours for paved areas.

PAVED AREAS ON MONOSURFACE

Approach: All the paved areas, low walls and curbs on the Monosurface will be of rammed earth, made from the sand on site.

Rammed earth, also known as pisé de terre or simply pisé, is a type of construction material. It is an age old building method that has seen a revival in recent years as people seek low-impact building materials and natural building methods. Traditionally rammed earth is used in arid regions where other building materials can be hard to find.

For the Monosurface's paved walkways we want to use a very similar technique that is suitable for paved areas "trasston" which translates into "tuff-clay". This technique is developed by our sub consultant: artist Martin Rauch. See web site: www.erden.at.

A bedding made of tuff-clay will be 90% as strong as a in situ concrete pavement, and can hold loads for vehicles up to 40 tons. The thickness of the paving will be 120mm.

Before the building process it is necessary to investigate the existing material to use for tuff-clay in order to find out what material to use, sample making and full scale 1:1 mock-up.

This has to be described in the specification The contractor need to provide:

1. geological report – for the existing sand/gravel and stones on site and for other regions in Saudi Arabia where ingredients will be taken from.
2. small samples with different material (gravel, sand from site, other places (see point 1), to test different recipes of mixture. (can be done by Martin R in Austria)
3. larger mock-ups for the different areas to see colour, roughness, structure and to test out different surface to decide and agree upon standard that will be a pilot for the making of the tuff-clay.

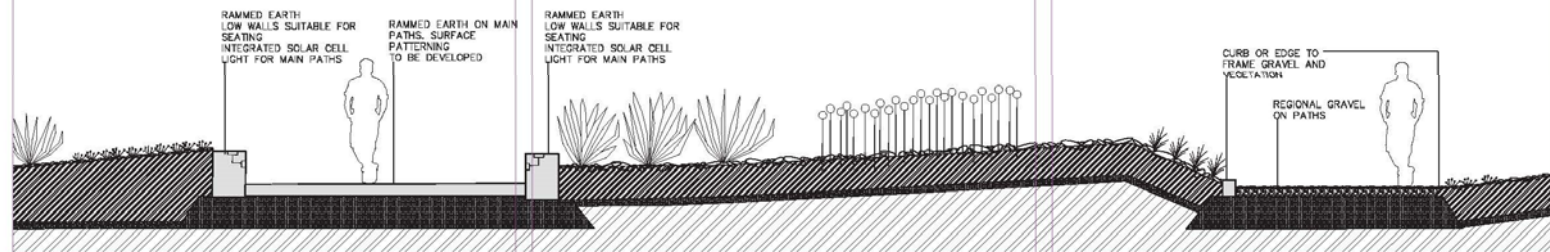
In selected areas we suggest that the surface will be made in different colours that will create pattern on the surface. This will also show the different geological areas of Saudi Arabia. This will be developed together with our sub consultant, artist Martin Rauch.

The tuff-clay is a joint-free, self-binding paving consisting of 60% local material (suitable gravel from site) + 40 % lime (50%)/ tuff (50%) + added water. The earth mixture has to be used within 7 hours after it is made – and it has a consistency as asphalt. Up to 800m² can be laid as road paving in on day, 240 m² for manually constructed plazas. It can easily be laid in pattern where one colour stripe will be laid at 1 PM, the next colour stripe 3 pm and so on. To make a more anti-slip surface, or just for the aesthetics, the top surface can be added with river stones, gravel with colour and shapes that will be rammed into the surface.

The build up has to be very smooth and stable in the same way as a build up for natural stone/in situ concrete. To lay paved areas, the lay out is almost the same as for an asphalt, seamless/ without joints as long as there is no joints in the build up. Snøhetta has to look into if there needs to be joints where different structures below grade have joints that can effect or create cracks in the paved top surface. For smaller cracks, the trasston will be self-healing.

The tuff-clay is much harder than asphalt in a hot climate, and will obtain ca 90 % of the strength of a normal concrete.

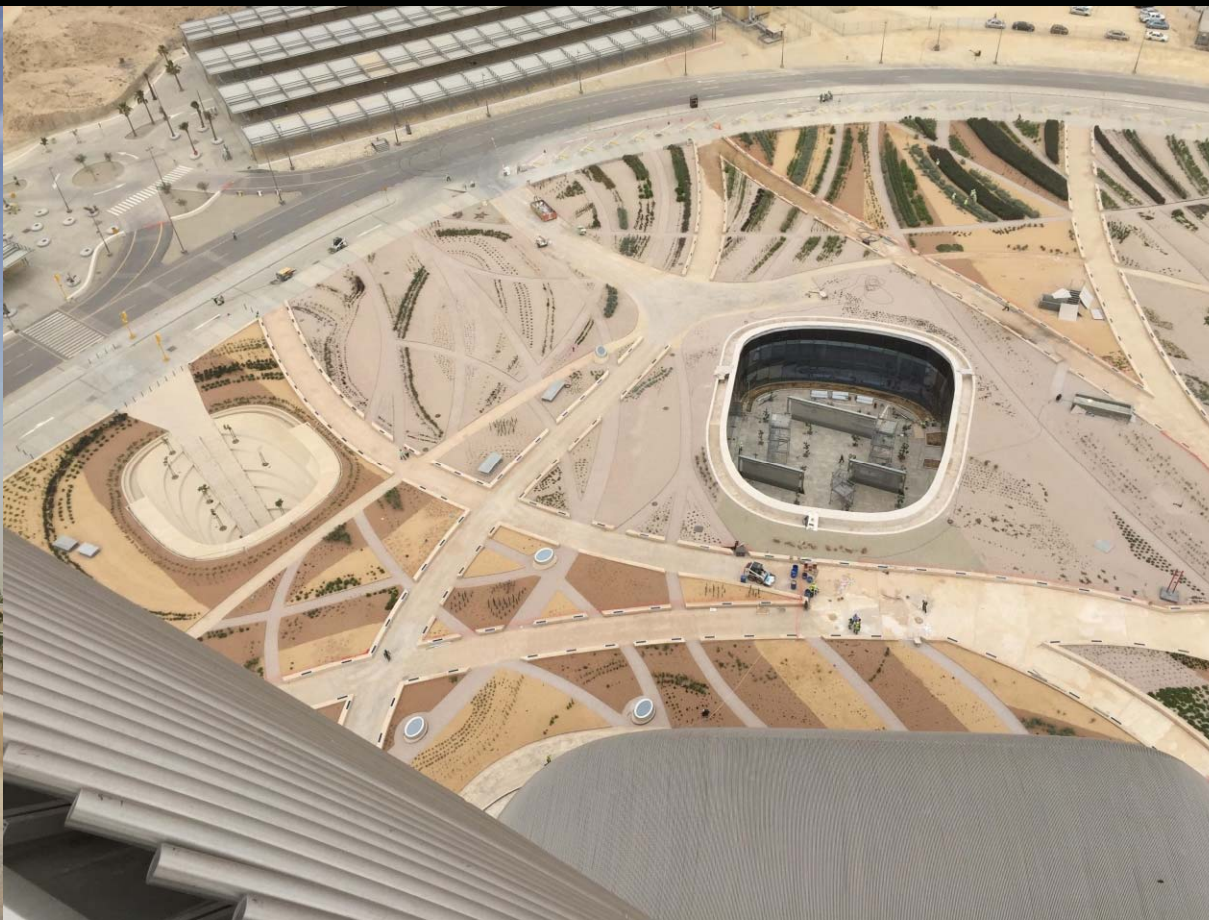
We want to frame the main walkways by 500mm tuff-clay walls. These walls can also function as seating. To make low walls in tuff-clay, there is a need for shuttering (formwork). Along the paved pathways, there will be low walls with recessed lights/solar panels. The low walls will be made in 450mm width which also allows to use the larger equipment instead of doing it by hand. The shuttering can be demolished one day after the tuff-clay is poured and rammed. The surface will be "sealed" with a natural coating like "sugar melasse", and the coating will also work as a retarder, and will be washed away the following day. After producing the walls, the paving will be filled in the gap between the walls.













Lindesnes “UNDER”

- Existing situation













www.snohetta.com