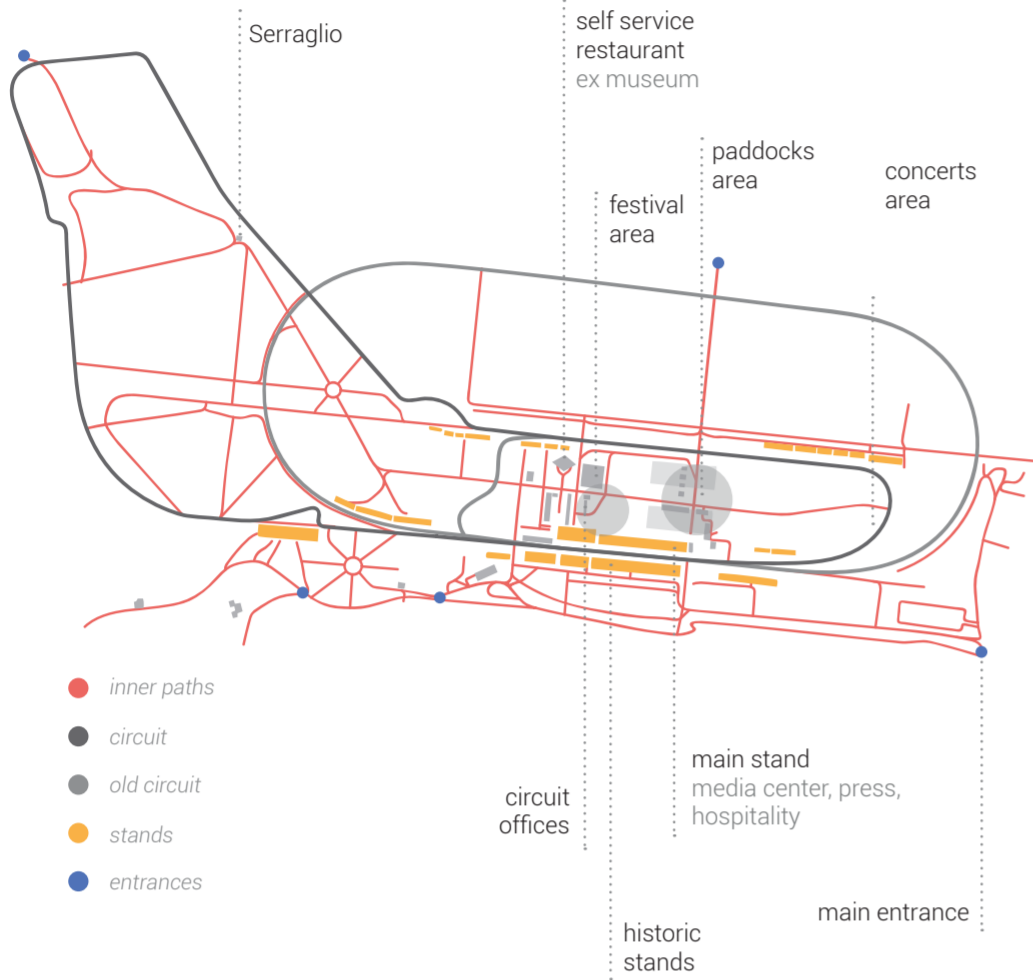


versatile system: reconfigure through space and time

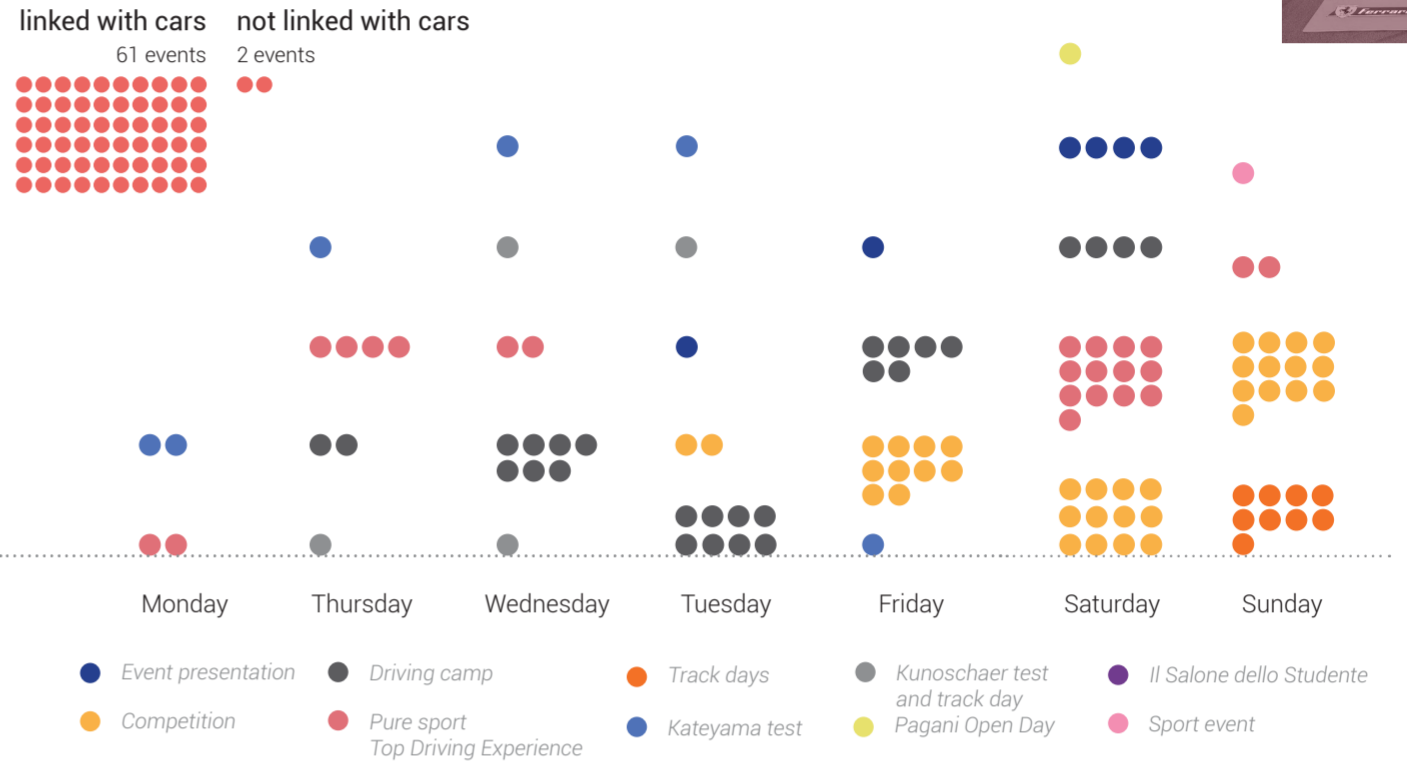
A research about how a versatile system can be applied in Autodromo Nazionale di Monza to put in evidence its peculiarities and improve its functions.

1 exploration

intervention area



2 system of events



synthesis research

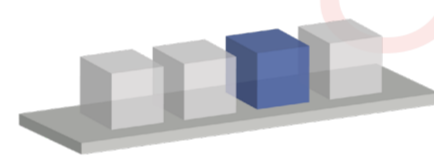
5 creation

How could the Autodromo become a versatile space?

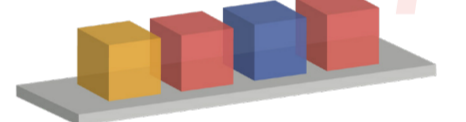
Looking at the weaknesses of the space, the idea is to create **flexible spaces** that ensure **adaptability** to different situations, which are configurable and also attractive.

The idea is to create a **versatile system**, which has to be movable and could change shape and disposition. **Different layouts** will be created and **different activities**, events and functions will be hosted, always maintaining the same basic elements and, above all, in the same spaces.

SPACE moments



MULTIFUNCTIONAL SPACE moments



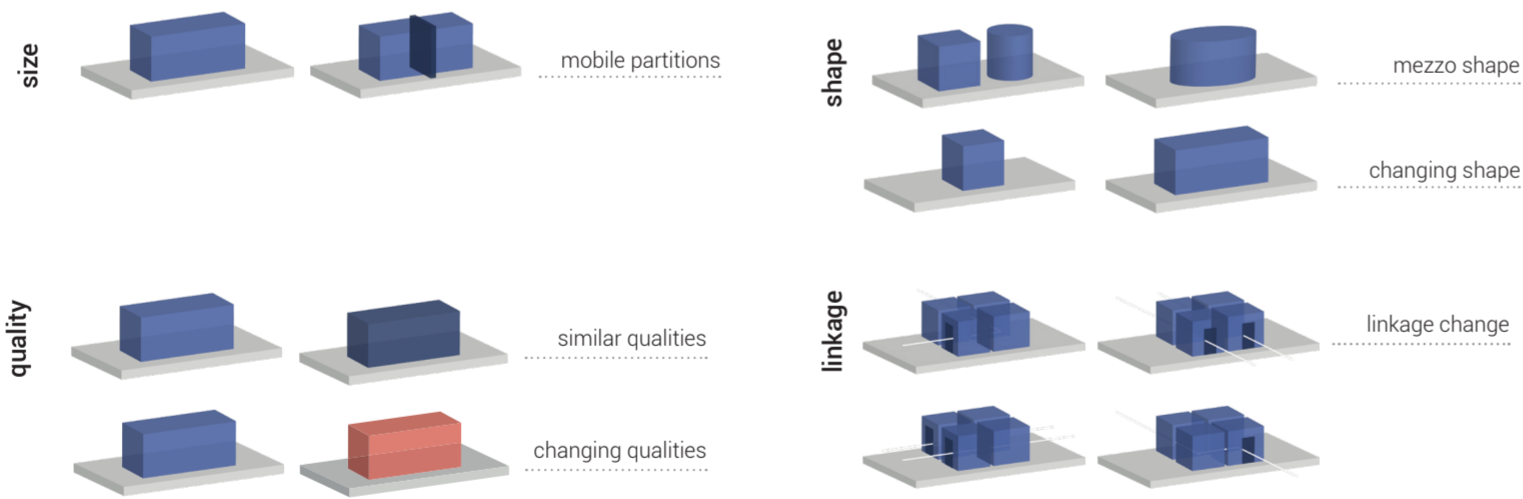
empty moments

new activities

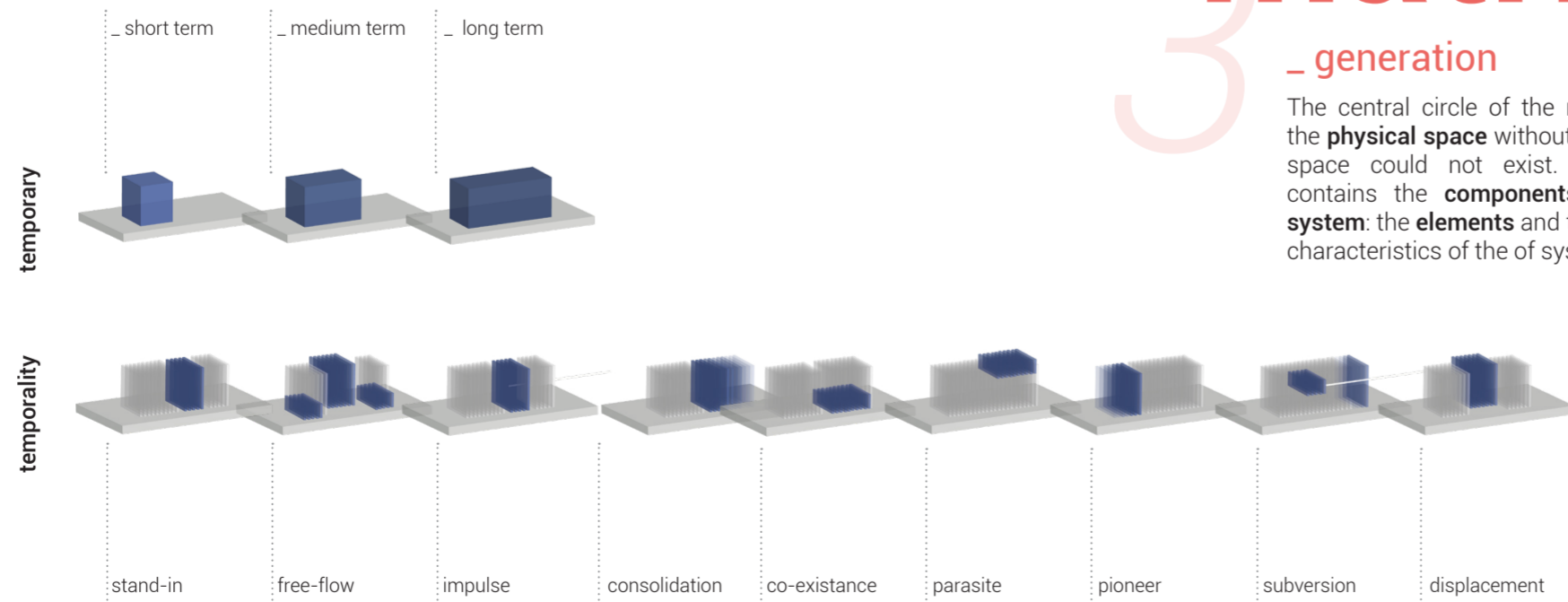
new users

synthesis brief

versatile system elements



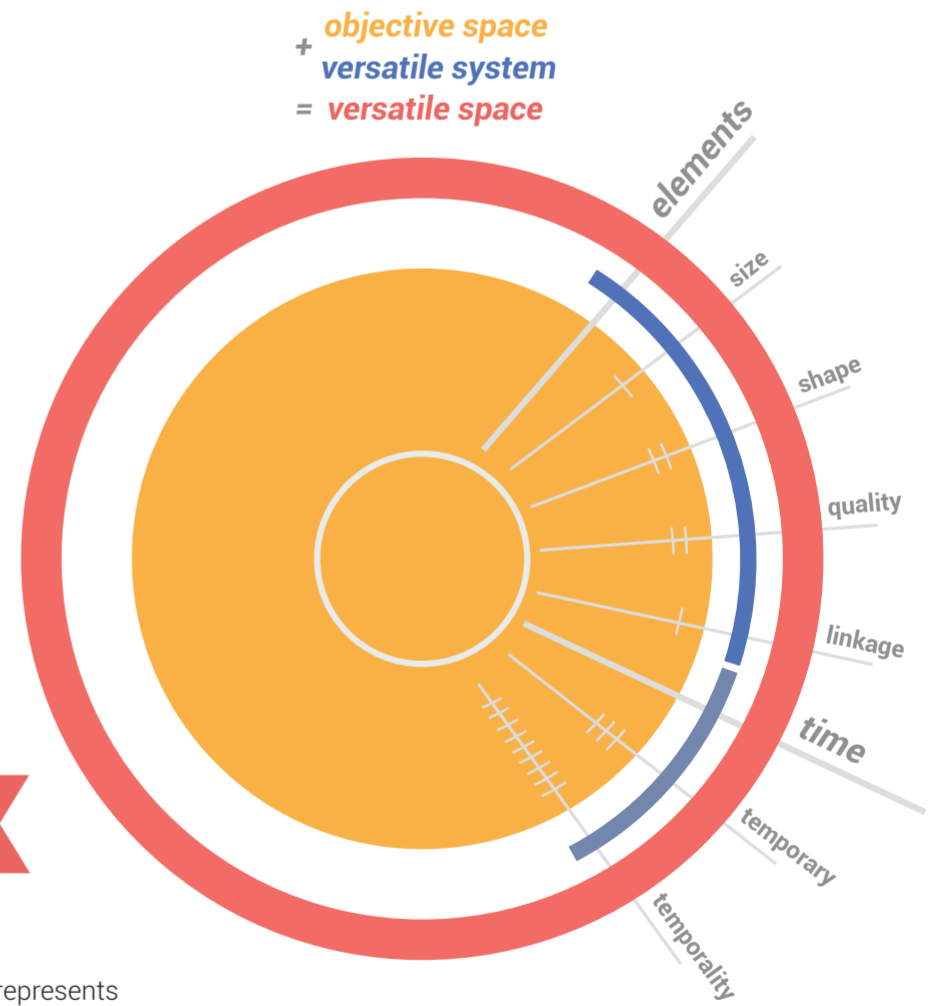
versatile system time



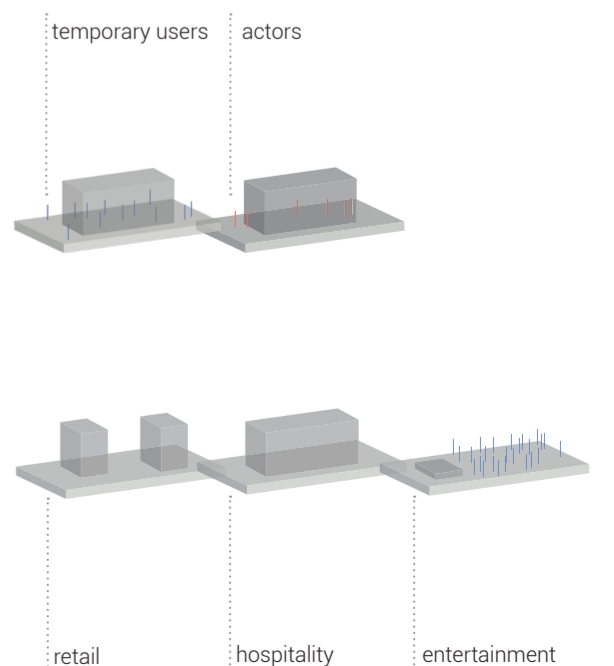
3 matrix

_ generation

The central circle of the matrix represents the **physical space** without which a versatile space could not exist. The semi-circle contains the **components of a versatile system**: the **elements** and the **time**, the main characteristics of the system.



+ users + functions



Nicole Chmet #915482
Versatile system:
reconfigure through space and time
Supervisor: Giovanna Piccinno



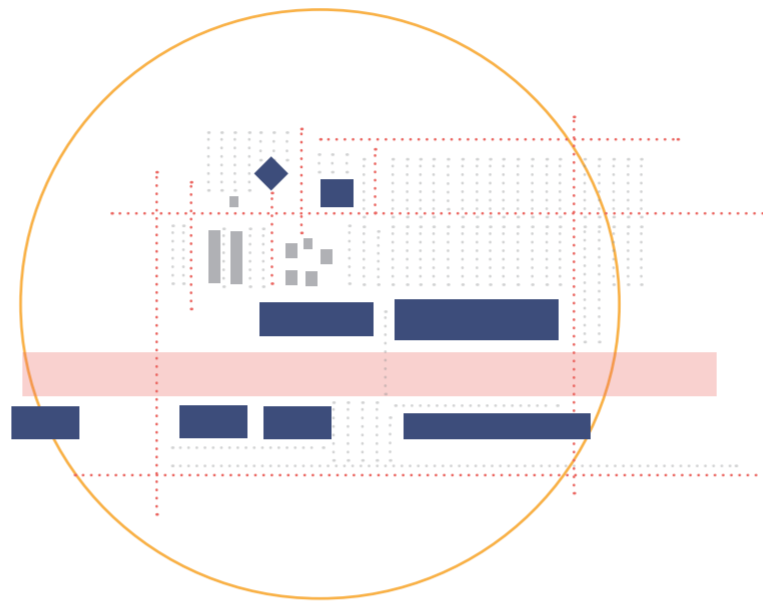
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elements

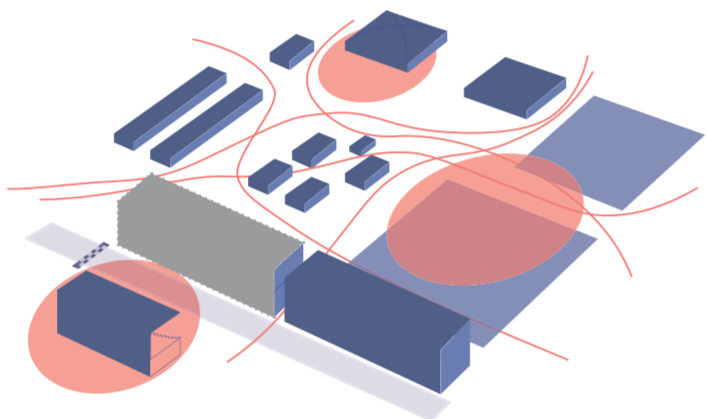
1 system of connections



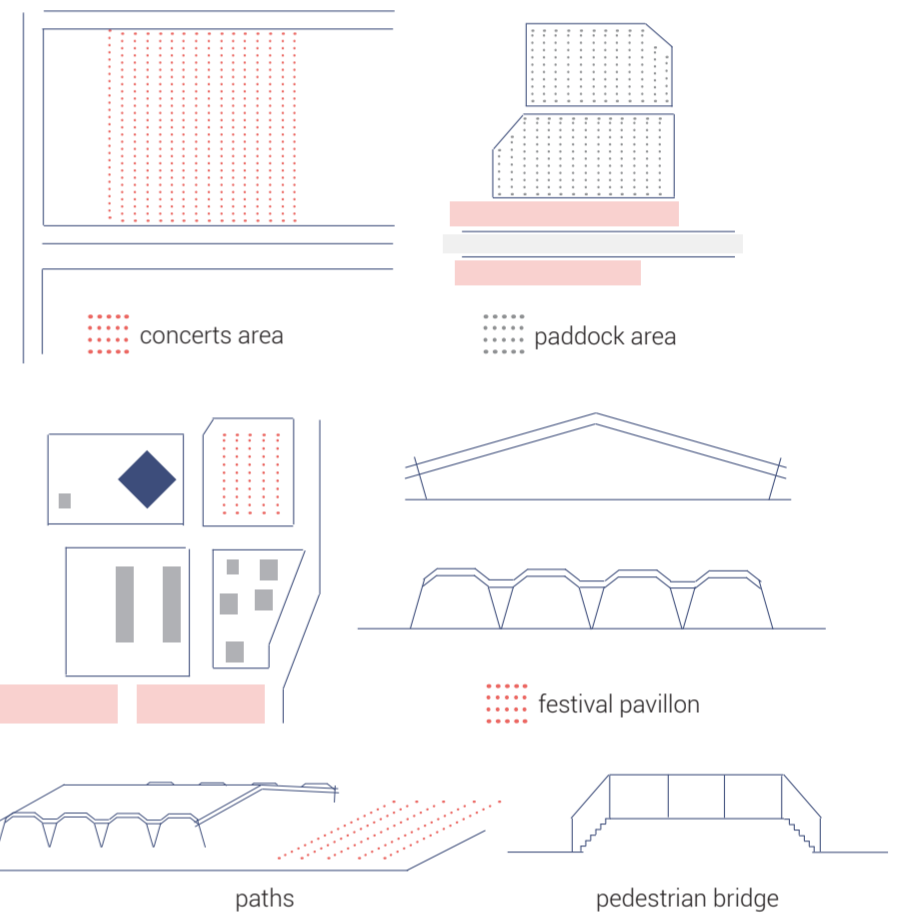
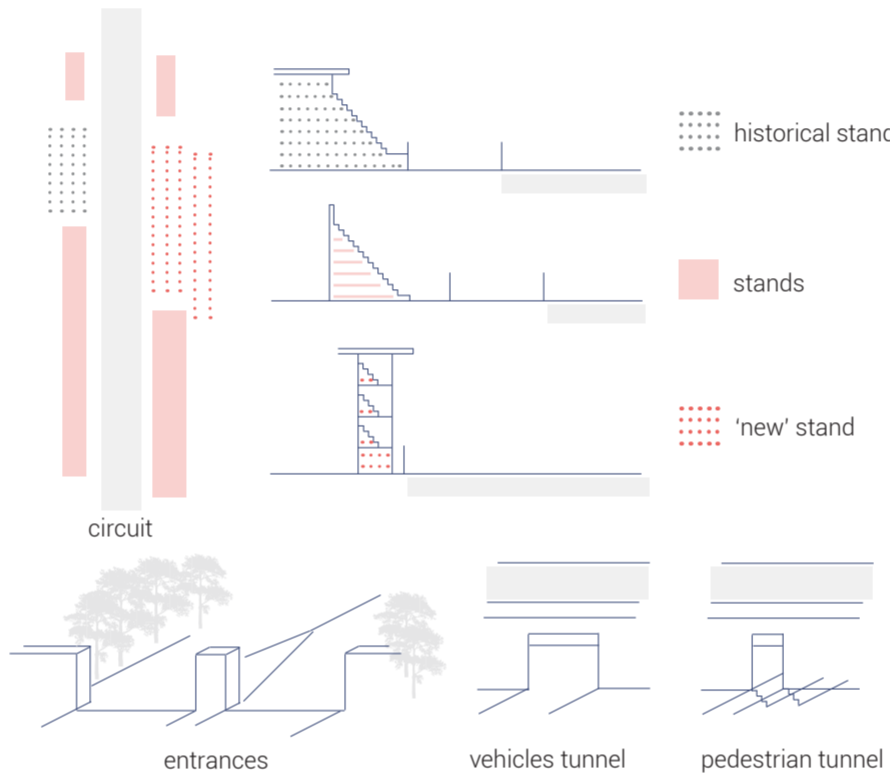
_ flow analysis

- vehicle paths
- pedestrian paths
- circuit

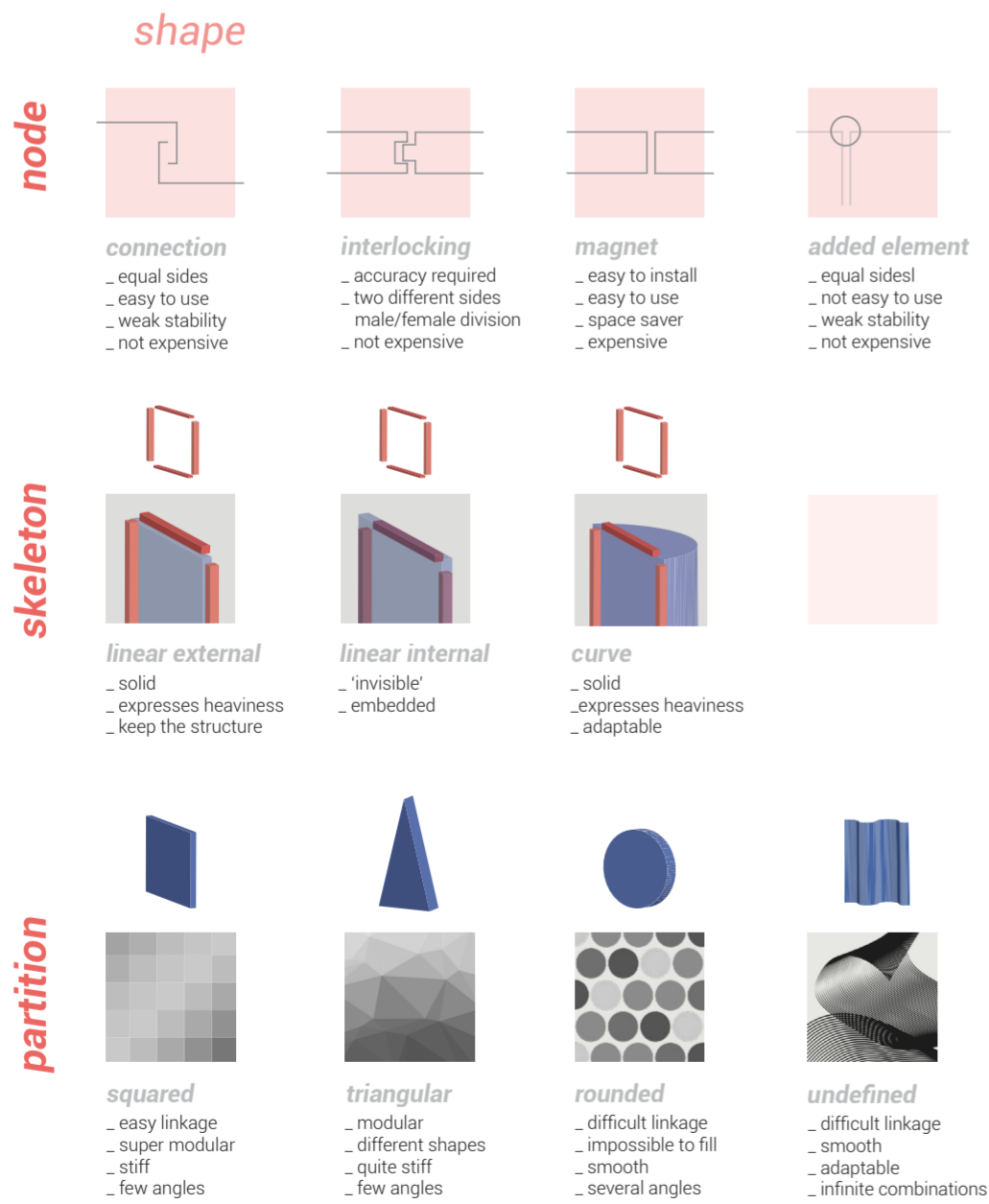
2 system of interlinking spaces



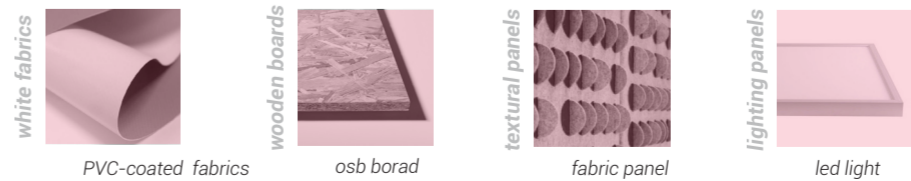
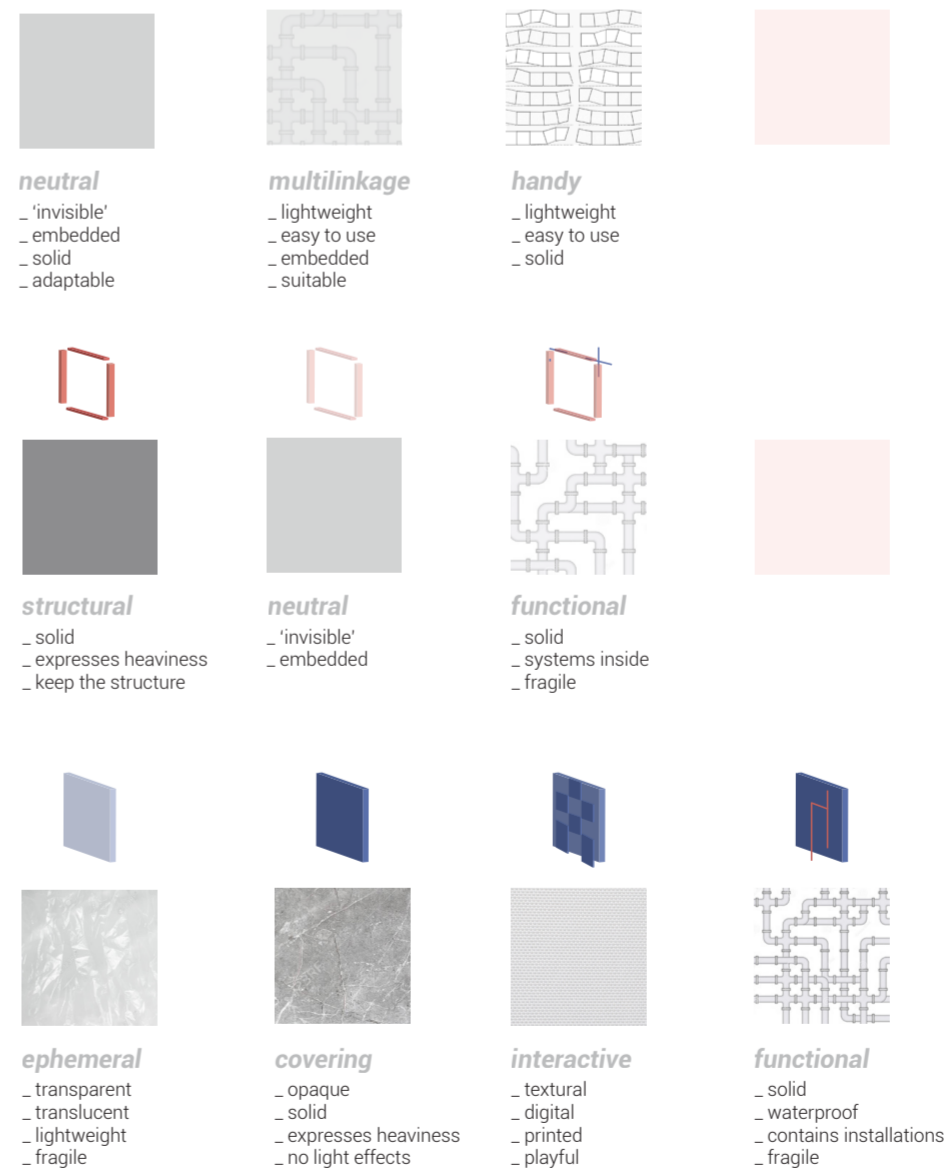
exploitable spaces



3 system of detachable units



qualities



project prefiguration



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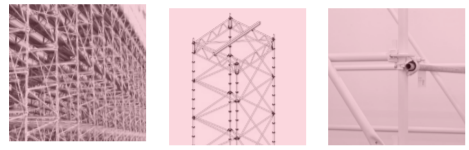
A research about how a versatile system can be applied in Autodromo Nazionale di Monza to put in evidence its peculiarities and improve its functions.

system

_ proposal

The main idea is to create a **linear and light skeleton** which could change its configuration. As partition different **skins** will be studied, with different materials in order to convey different feelings.

Multidirectional scaffolding system.



- light
- easy to handle
- multiple shapes

deployable
different dimensions

variable component

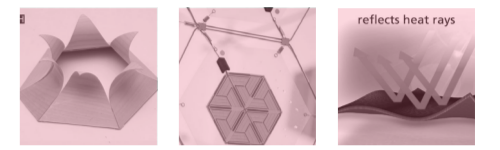
skeleton
+
skin

joint

variable layers
different properties

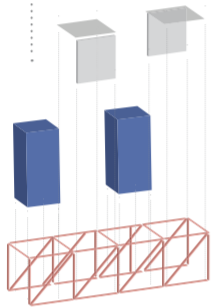
- esthetical
- technological
- functional

Skins will convey different feelings.



+ functions

1 installation as a container



- Temporary use of a **shared space**
- Contain certain **functions**

The installations assume value in relation to the functions that carry out and to the relation with the space in which they are.

- _ food and beverage
 - _ shop
 - _ toilette
- functions**

incremented during car events

temporary structures needed pollution problem

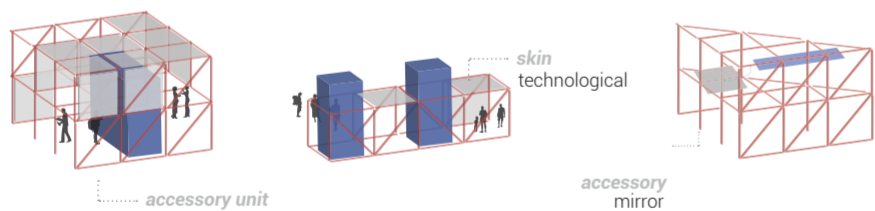
skeleton
joint

temporary structures that absorb pollution

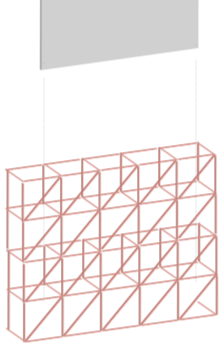
+

service units

skin



2 installation as a show



- The installations have a **meaning itself**, and not in relationship to the functions that hosts
- They allow to temporarily live a space, **giving value** to it and **changing the meaning**

The installation assumes value when lived by people, that activate it. It is the main function of entertainment installations.

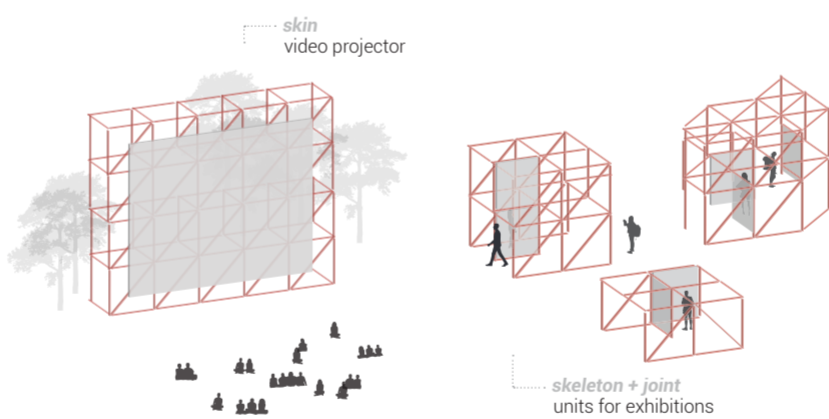
- _ concerts
 - _ drive-in
 - _ exhibitions
- functions**

crowd of people wide spaces displays needed

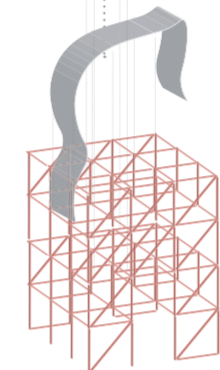
skeleton
joint

temporary structures that project images

skin



3 installation as a curtain



- Temporary construction in which there are **no functions inside**
- Usually in correspondence of an **existing building or area**

The installation usually is the setting up of advertising or directional panels.

- _ advertisements
 - _ wayfinding
 - _ interstitial spaces
- functions**

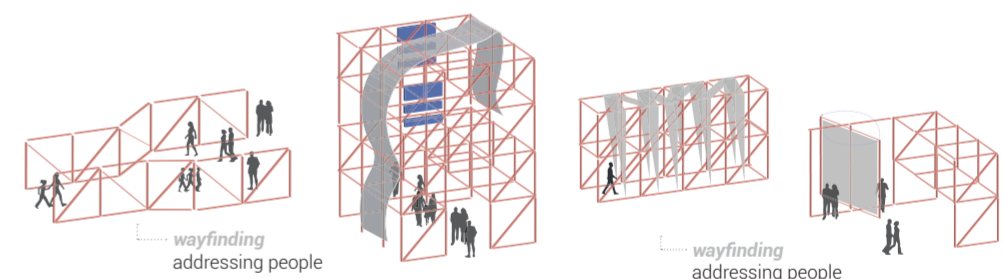
incremented during events

no covering needed good looking easily to see

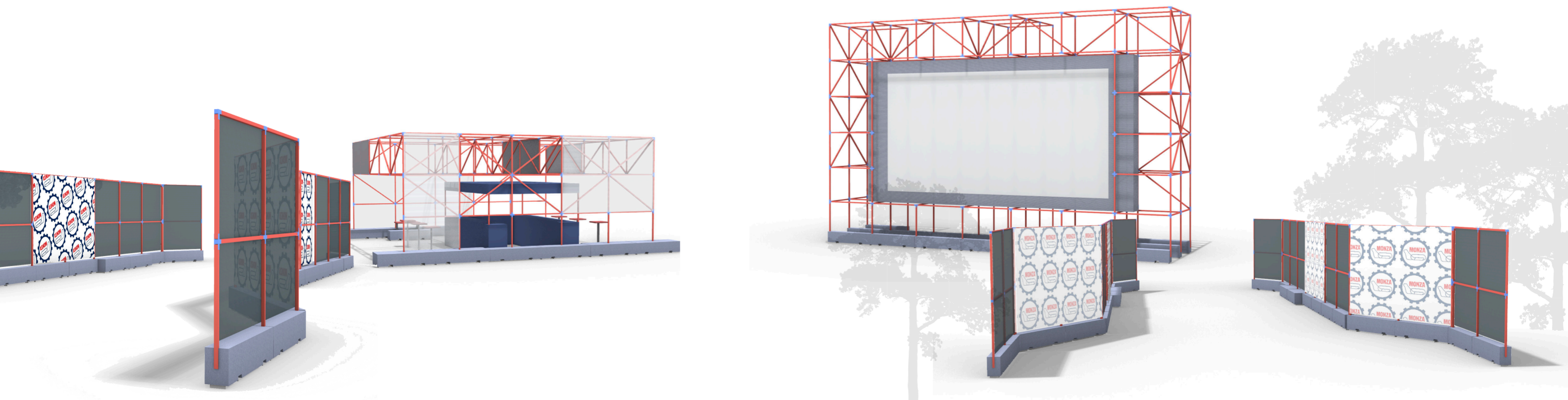
skeleton
joint

temporary structures that drive people

skin



project development



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reconfigure through space and time
Supervisor: Giovanna Piccinno

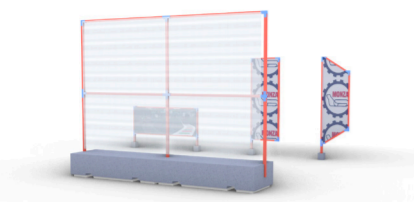


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project development



S

dimension

size S
simple structures,
vertically developed,
small size

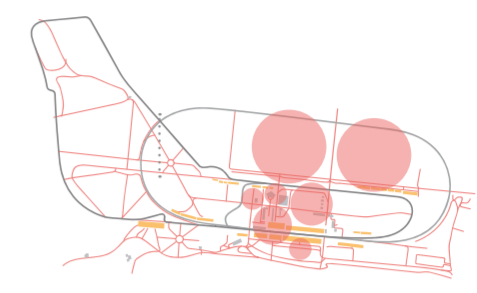
spazial [m²] until 3m²

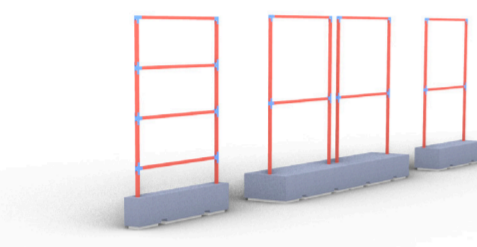
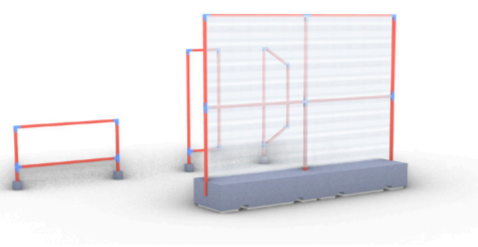
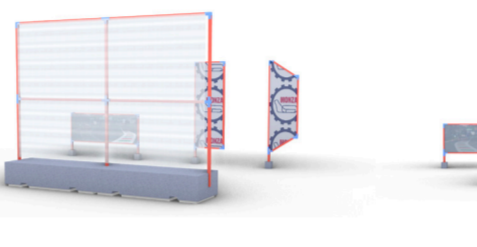
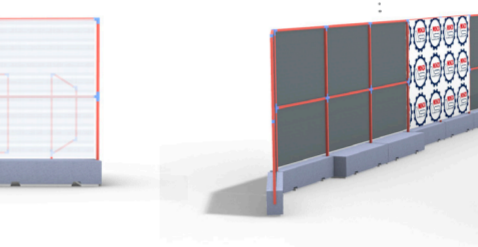
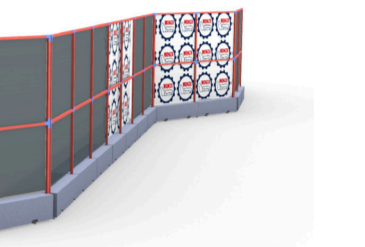
quantity
[joint] 4 - 15
[skeleton] 4 - 20

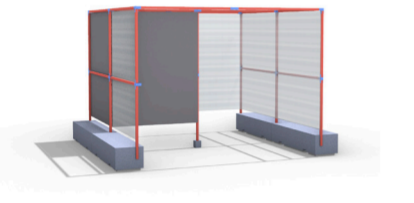
functions

- _ advertisement
- _ signage and wayfinding
- _ spaces and areas division
- _ flows directionality

positioning in the space






m

size M
medium complexity structures,
horizontal cover-up,
medium size

spazial [m²] from 3m² to 25m²

quantity
[joint] 15 - 30
[skeleton] 20 - 50




peculiarities

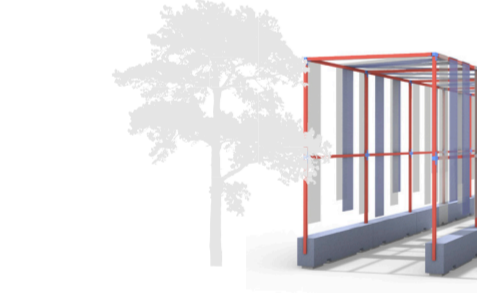
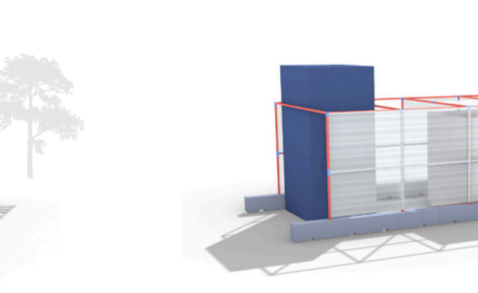
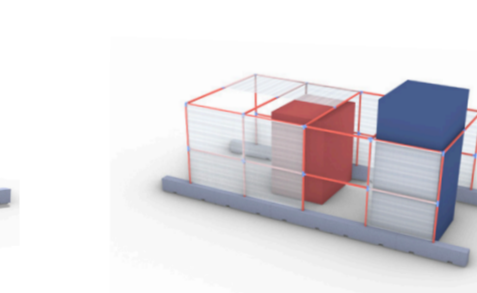
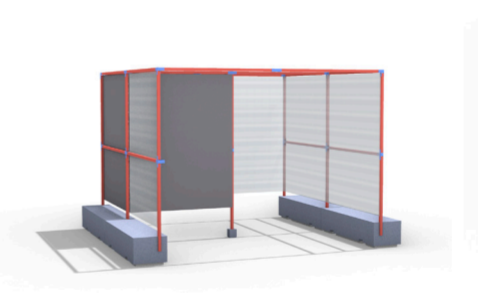
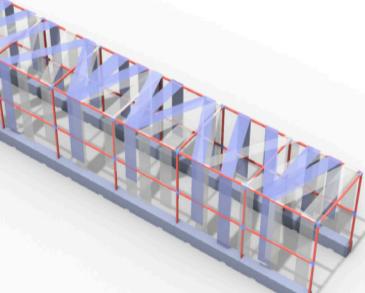


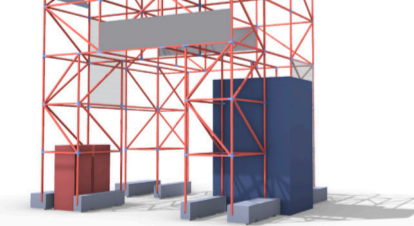
functions

- _ toilets and hygienic services
- _ small covers and tunnels
- _ shelters and entrances
- _ single and temporary stands
- _ food trucks

positioning in the space



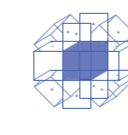
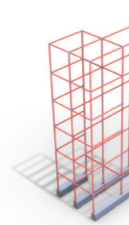
L

size L
complex structures,
horizontal cover-up,
high heights

spazial [m²] more than 25m²

quantity
[joint] 30 - x
[skeleton] 50 - x




peculiarities

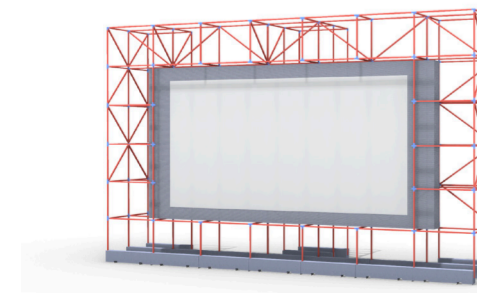
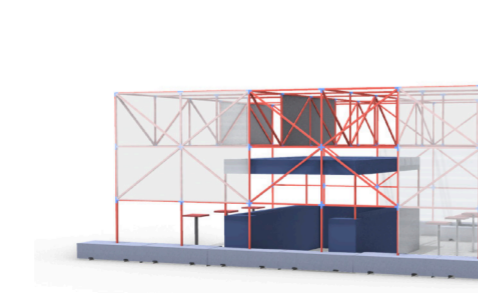
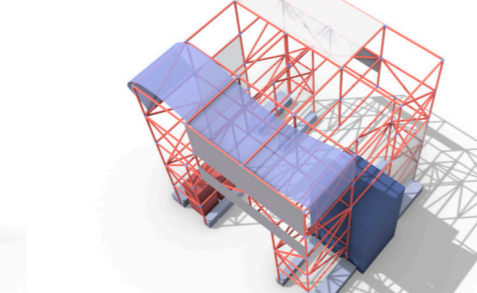
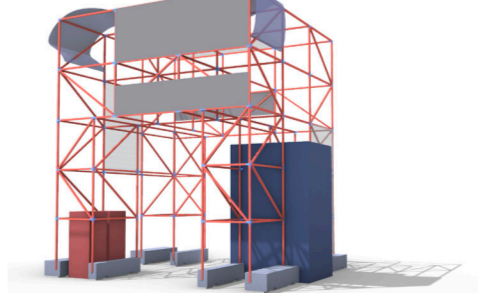
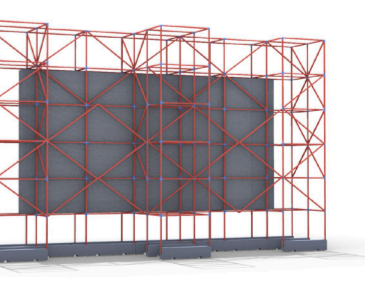



functions

- _ entertainment structures
- . drive-in cinema
- . cinema (screen + accessories)
- . concerts (stage + accessories)
- _ restoration structures (on-site consumption)
- _ pavilions

positioning in the space

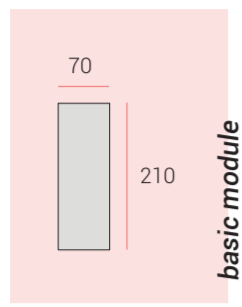






versatile system: reconfigure through space and time

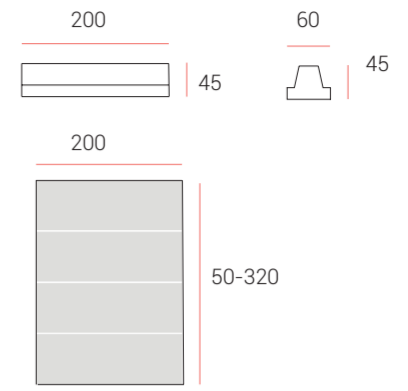
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project development

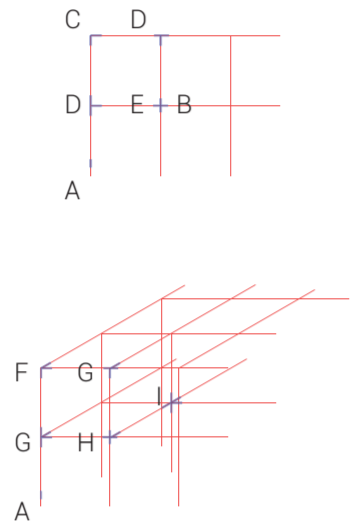
general dimensions (cm)



break-away barriers



joints



_ three-dimensional connections

interlocking knots -> additional forces in the rods due to "shear" and "moment" during the lowering of the structure due to accidental loads.

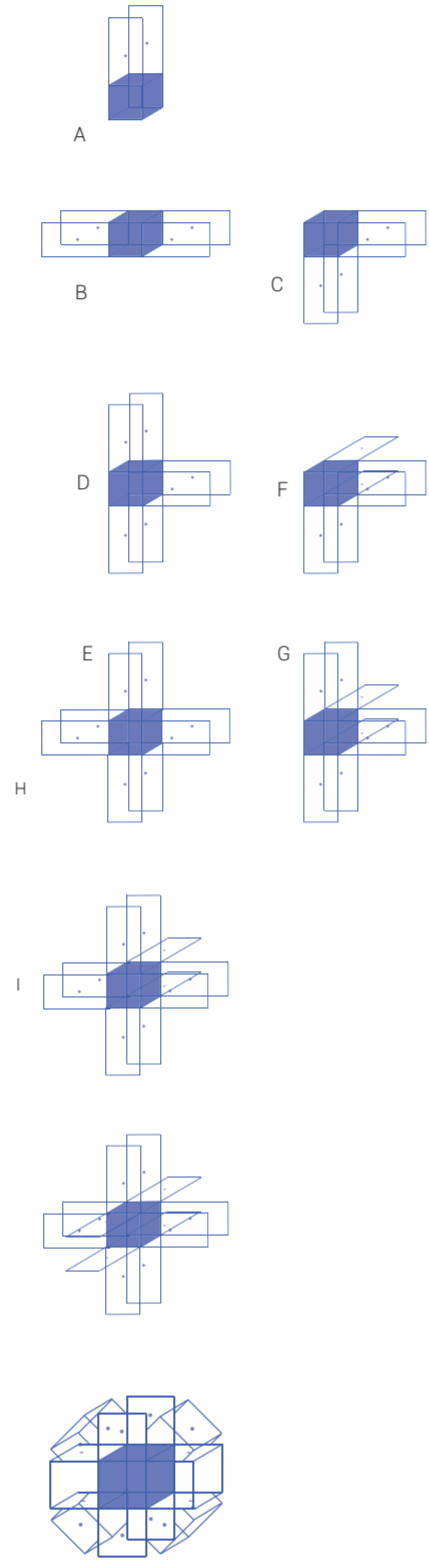
hinge -> have the ability to rotate in space.

The rotation and the adjustability of the rods makes it possible to realize any type of geometry, including irregular, only using the standard node.

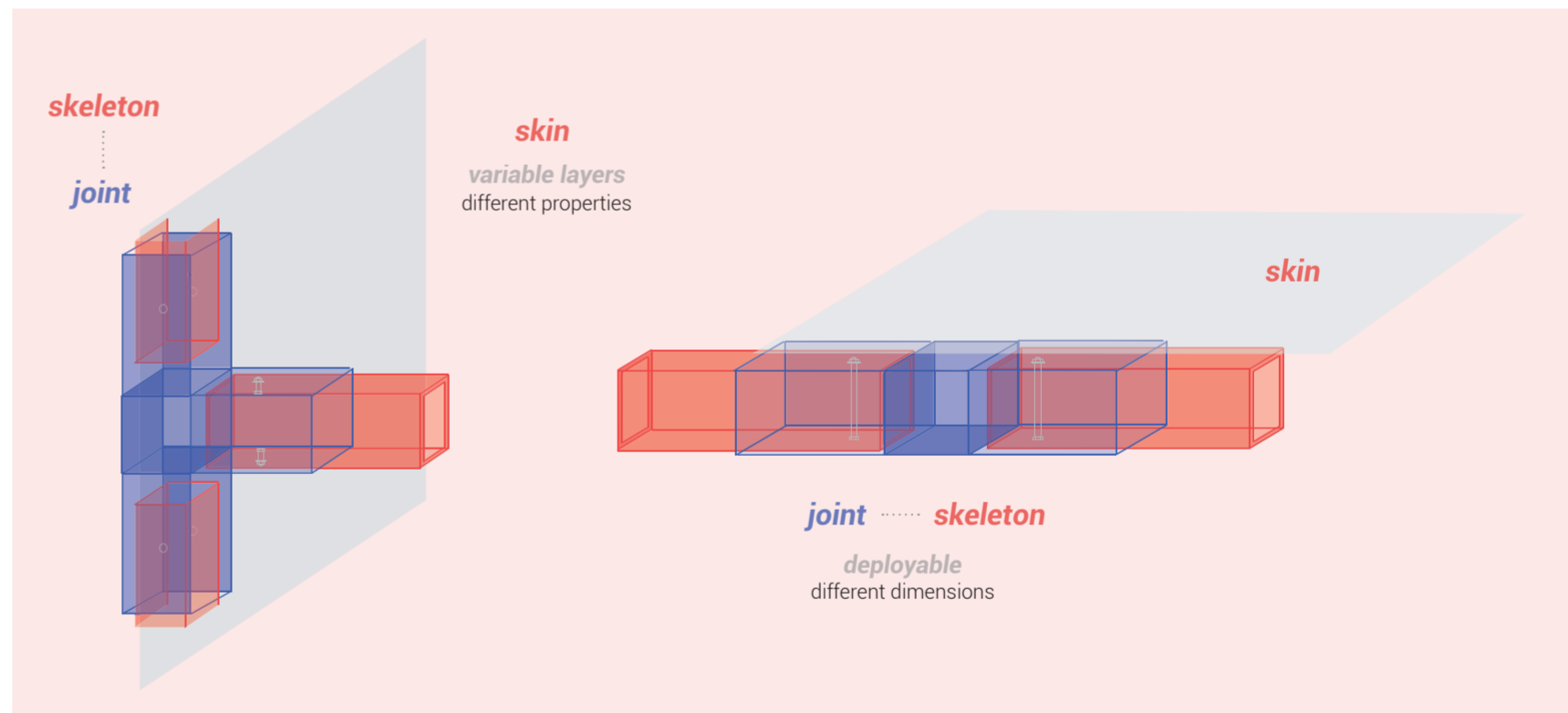
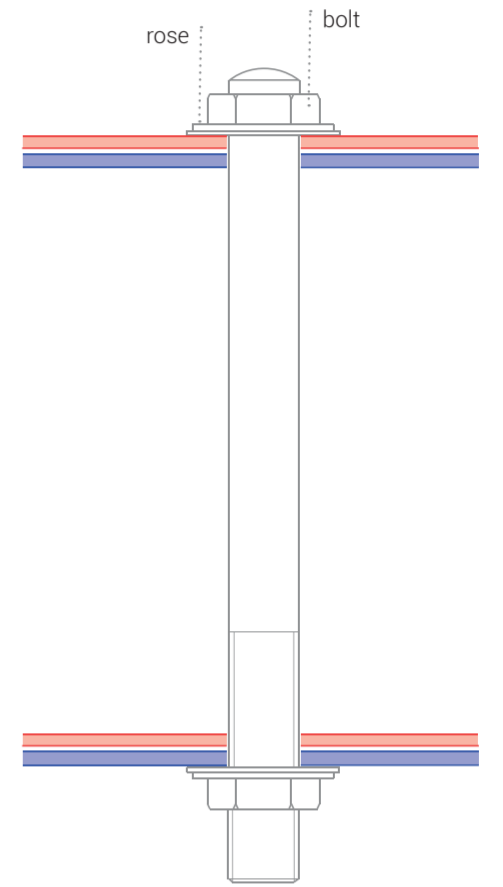
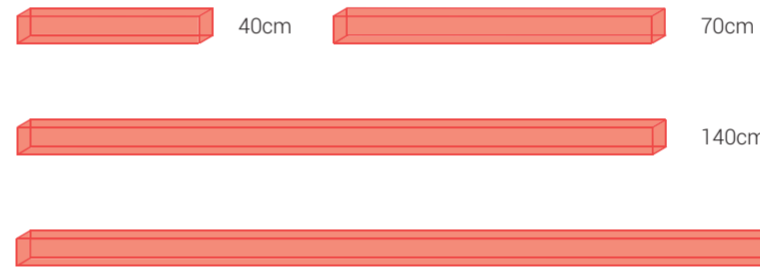
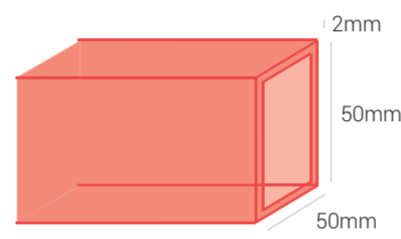
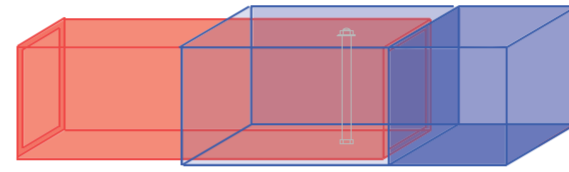
The assembly of all the components of the system takes place without the use of welding: the connection of the terminal to the rod takes place through the rose and bolt connection.

* ALU4Expo

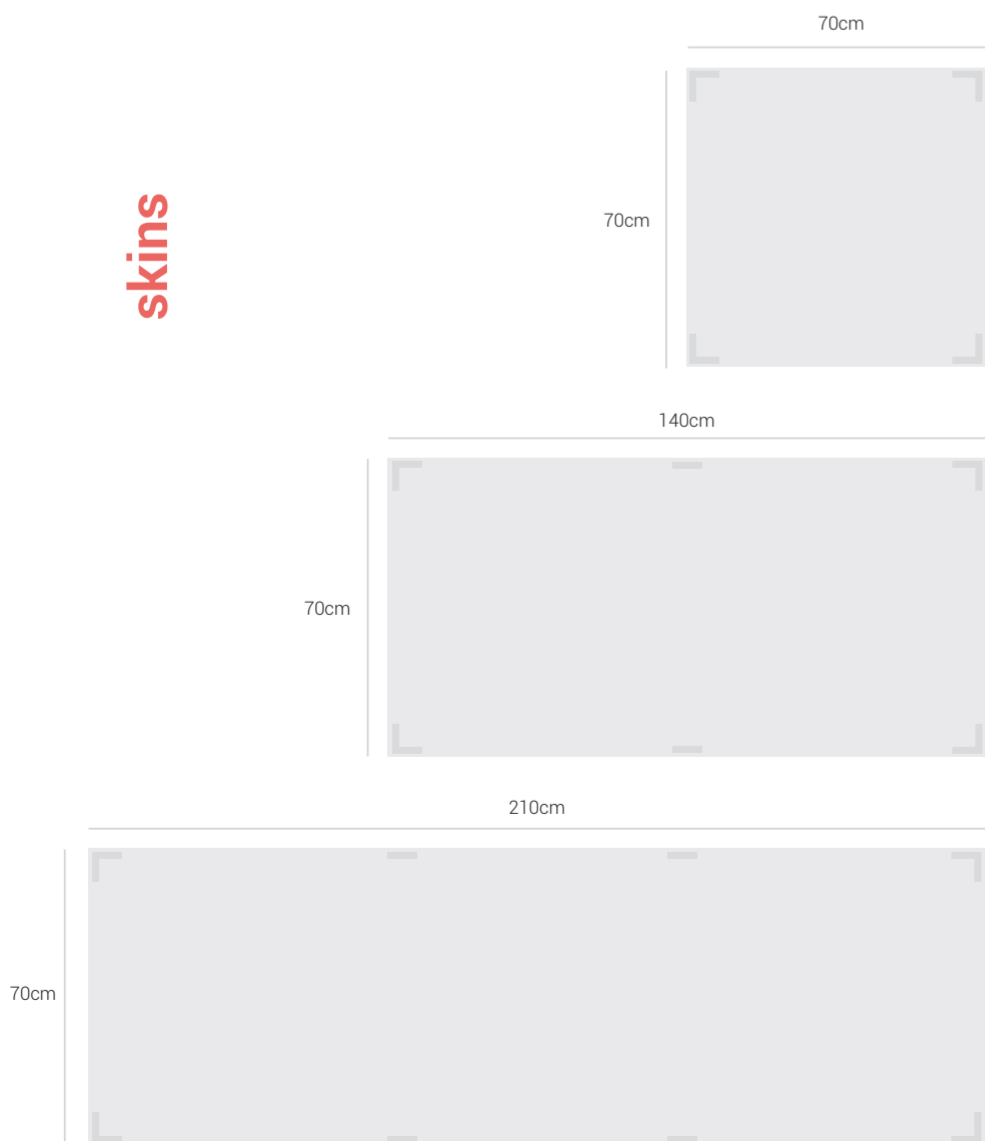
ALU4Expo produces modular aluminum structures. The anodized extruded bars are designed for quick and easy assembly. Through the wide range of accessories, it is possible to create light and resistant metal structures. Thanks to the versatility of the different profiles, it is possible to make the most of the different digital printing techniques on textile and rigid support, creating customized and functional solutions.



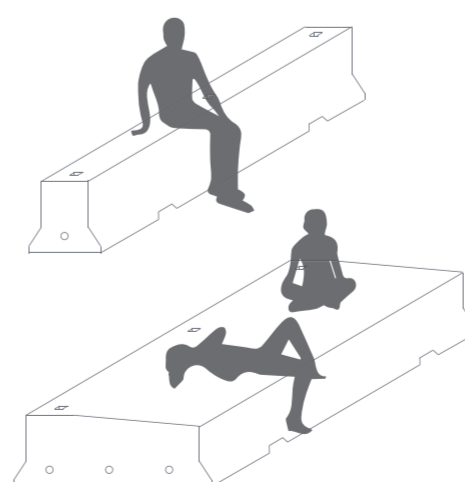
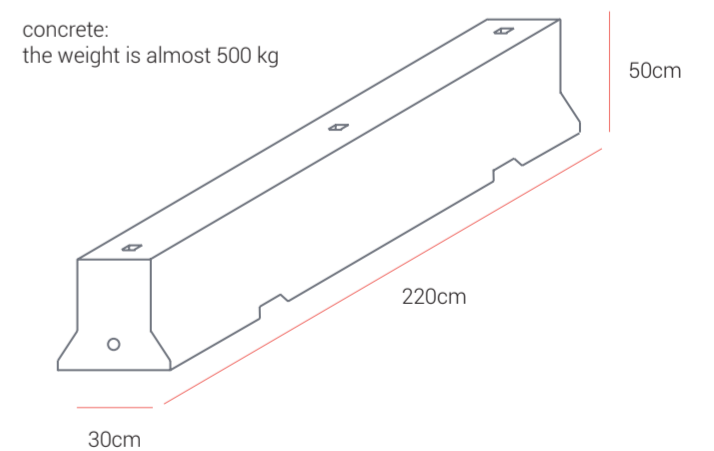
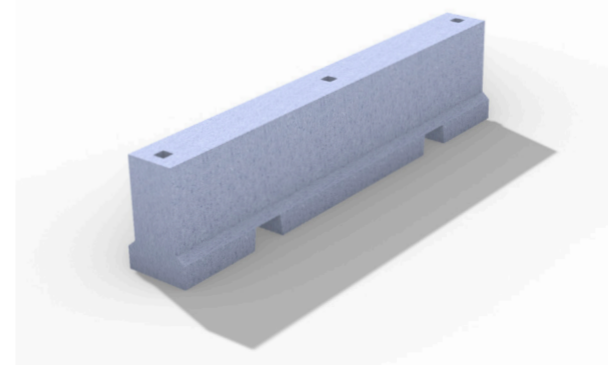
skeleton



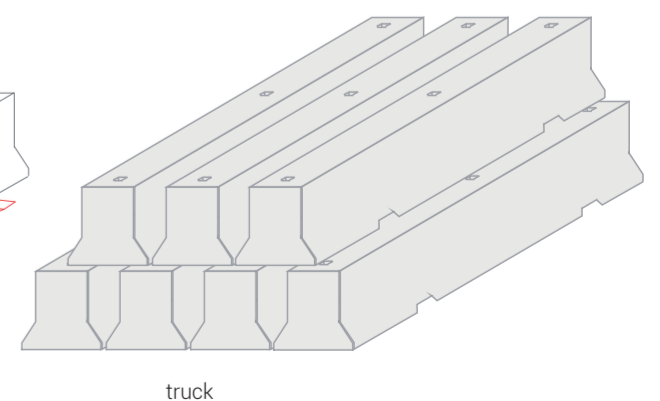
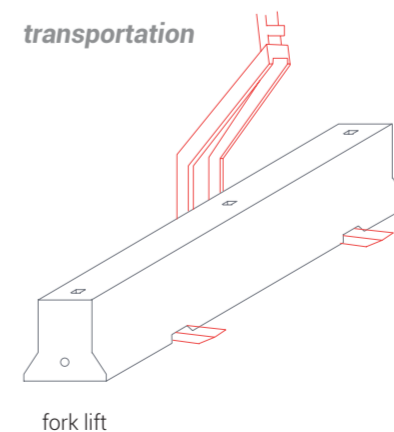
skins



_ anti-overturning Jersey



transportation



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project development - entertainment

_ analysis of some types of possible entertainment events :

- _ drive-in cinema
- _ concert
- _ theatre event /music festival (tanti piccoli separati)

- + the shape and dimension
- + the sub-spaces that they need

A - drive-in cinema _ physical elements

structures

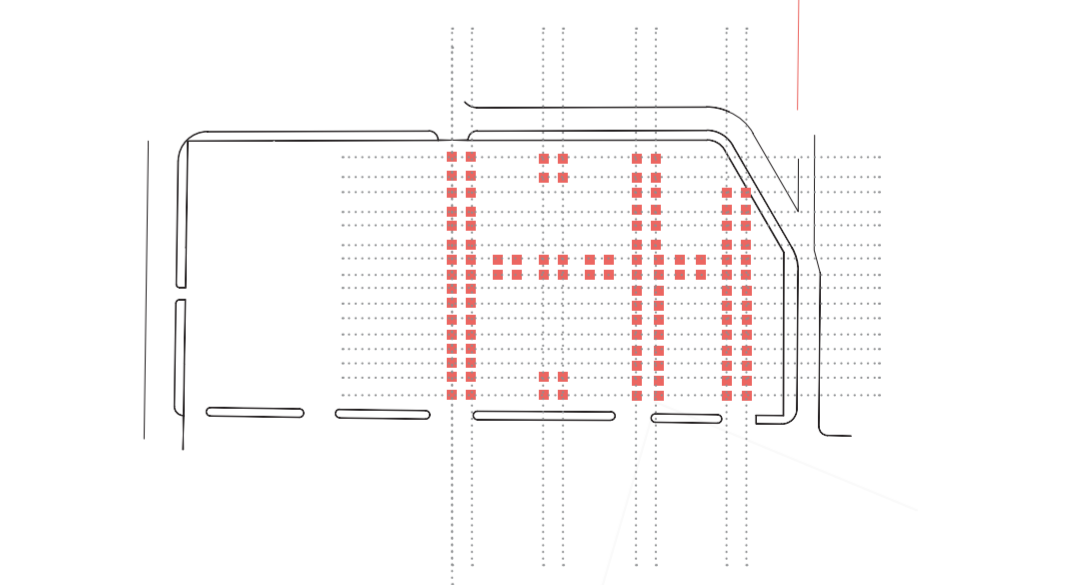
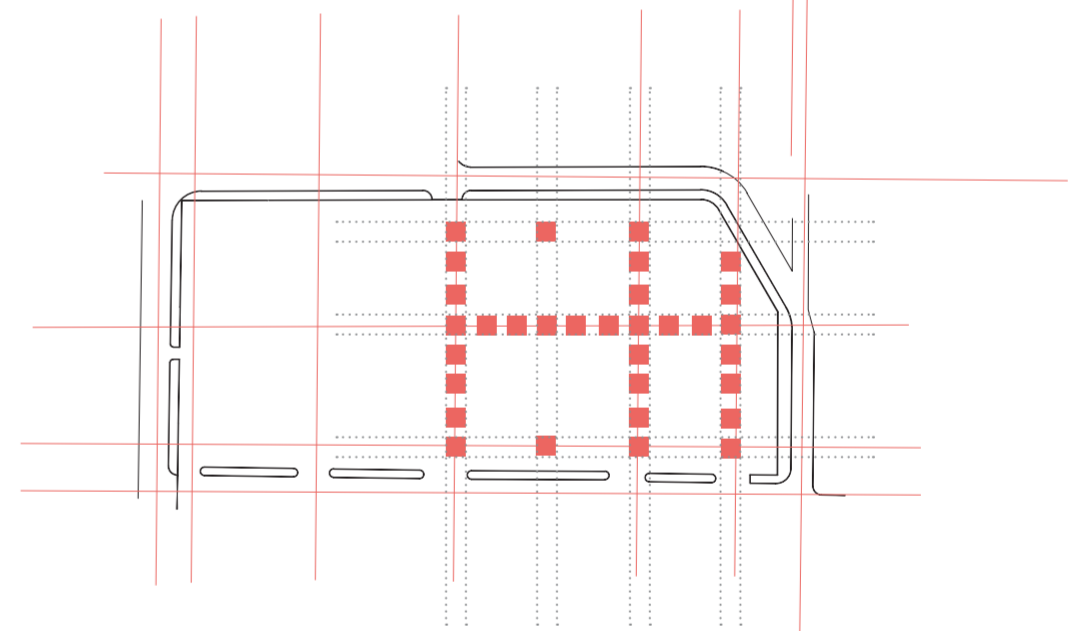
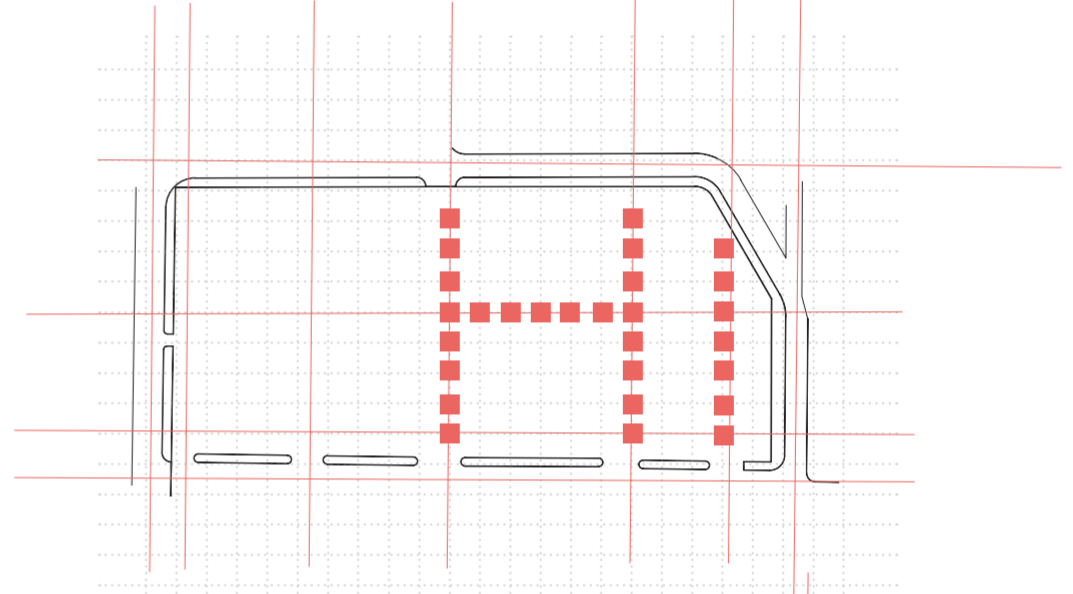
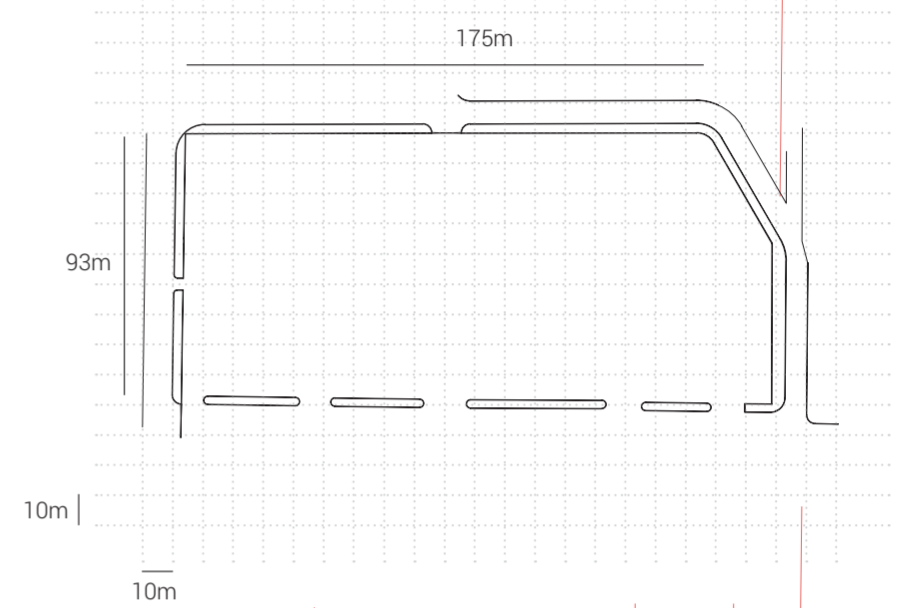
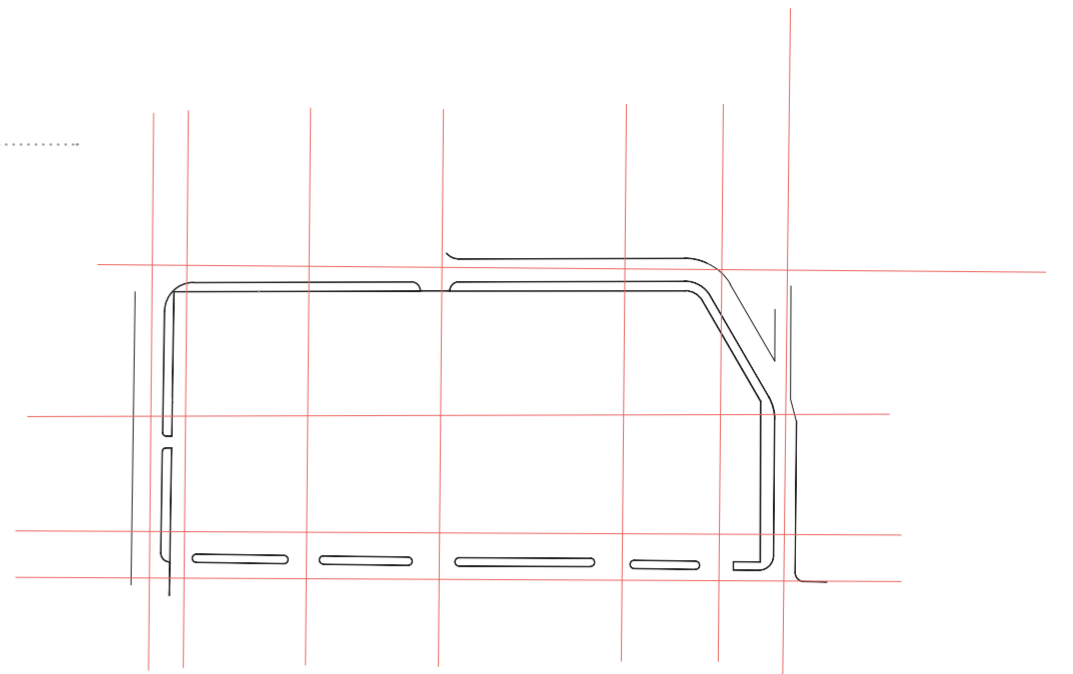
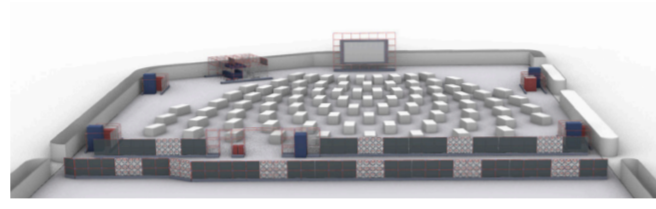
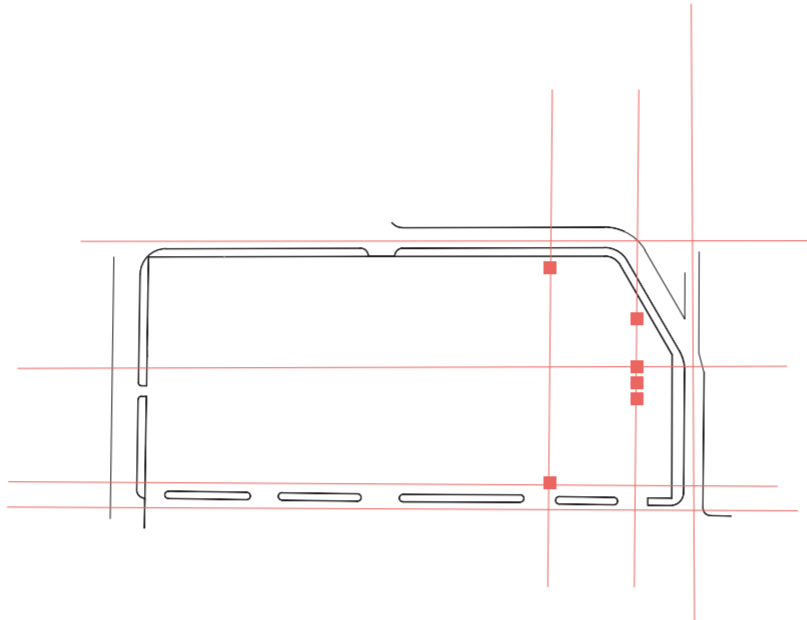
- _ screen
- _ directing (movie, lights,etc)
- _ speakers and light supports

sub-structures

- _ entrance
- _ ticket office
- _ cafe (track + eating area)
- _ toilets
- _ division from the other paddock area
- _ barriers
- _ break away barriers

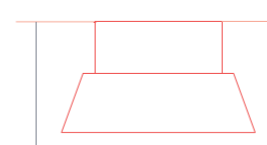
_ requirements

- _ hosting about 100 cars
- _ every person in the car has to clearly see the screen
- _ cars need to enter and go out easily
- _ consider people basic services

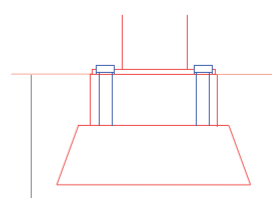


_ fixing points

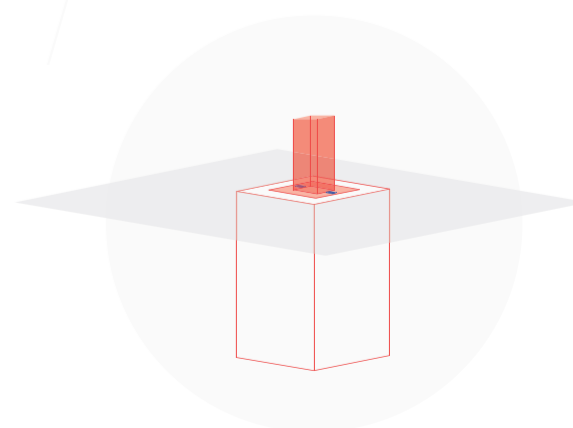
The skeleton of the system could be fixed directly in the ground, without any anti-overtourning Jersey, in which there are established points where the foundations could be hidden in the ground, opened and used when there is the necessity.



normal conditions



structures fixing



Stalls foundations hidden by a pit, used when the assembly of a temporary structure is required.

B - concert area _ physical elements

structures

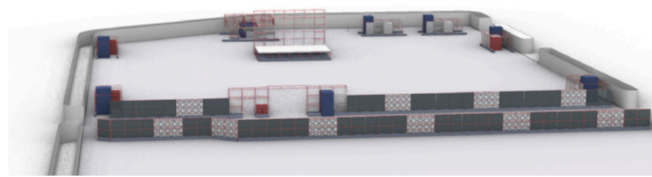
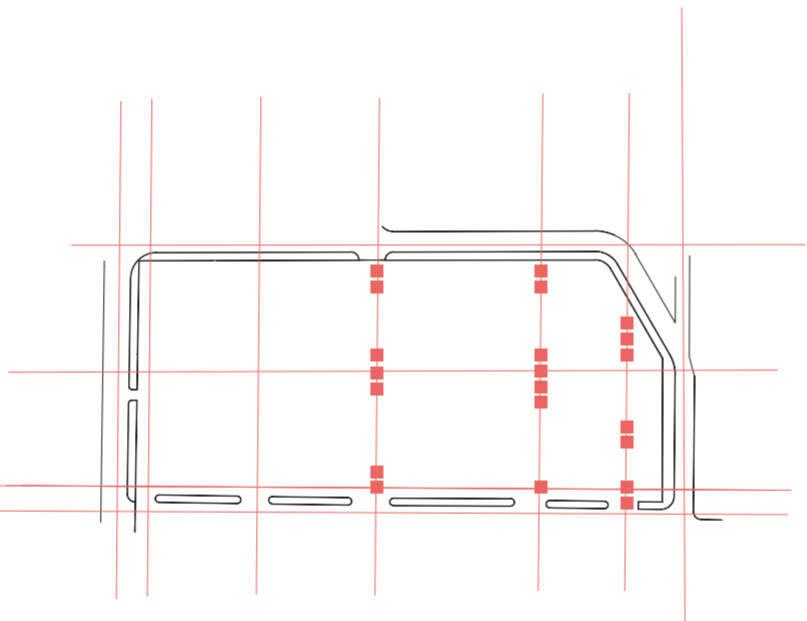
- _ stage
- _ speakers and light supports
- _ elements which delimit the area
- _ barriers
- _ break away barriers

sub-structures

- _ entrance
- _ cafe (track + eating area)
- _ toilets

_ requirements

- _ hosting about 5000 people
- _ every person needs their own space around
- _ people need to enter and go out easily and in a safe way
- _ consider people basic services



C - open air cinema (multi movie) _ physical elements

structures

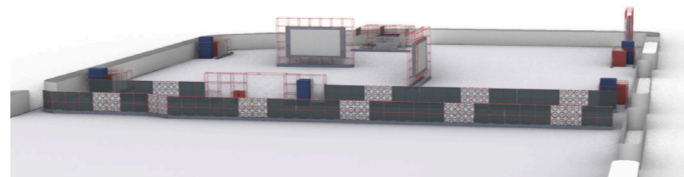
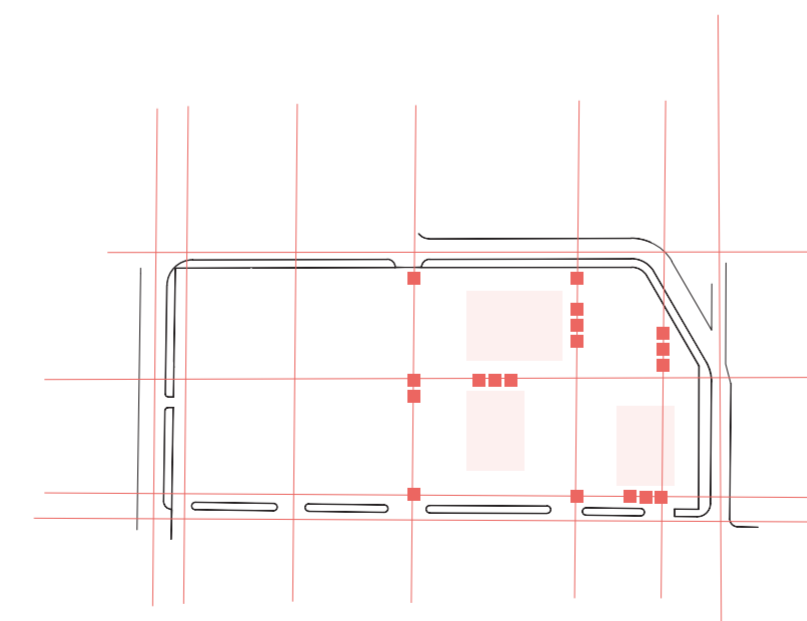
- _ 3 screens
- _ directing (movie, lights,etc)
- _ speakers and light supports
- _ elements which delimit the different areas and divide from the other paddock
- _ barriers
- _ break away barriers

sub-structures

- _ entrance
- _ ticket office
- _ cafe (track + eating area)
- _ toilets

_ requirements

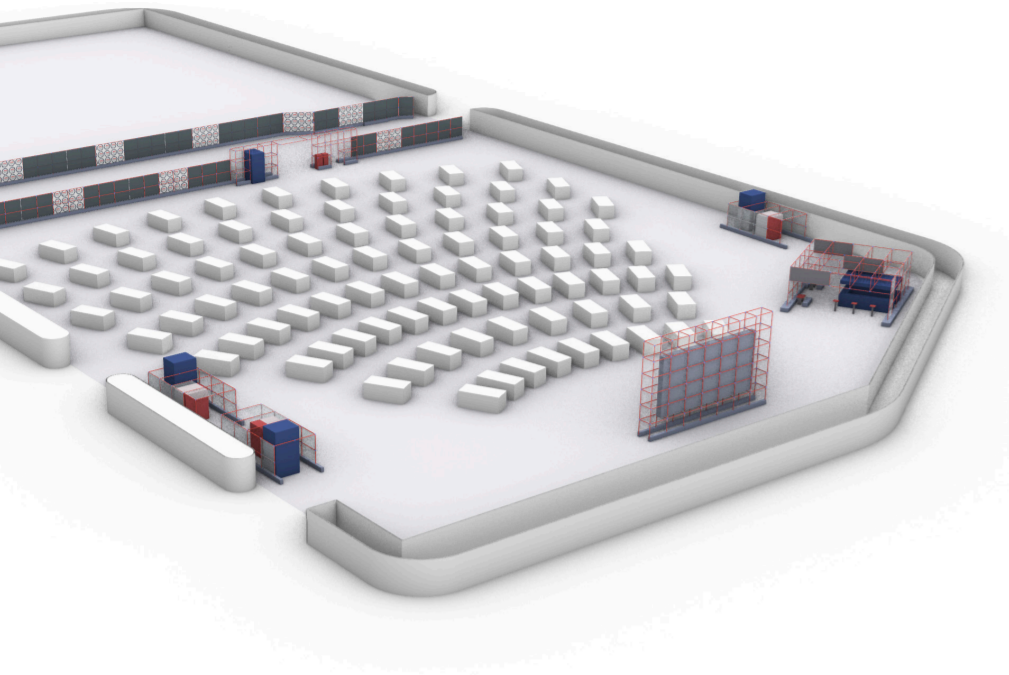
- _ hosting about 500 people (100 / screen)
- _ every person needs their own space around and their own chair
- _ people need to enter and go out easily and in a safe way
- _ consider people basic services



versatile system: reconfigure through space and time

A research about how a versatile system can be applied in Autodromo Nazionale di Monza to put in evidence its peculiarities and improve its functions.

project development



Autodromo di Monza

the automobile's temple

this place is related only to the **automobile**, and its **function**, which are the **starting point** and the **aim** of that.

VS

the architecture is related to the **automobile beyond the functionality** of transportation

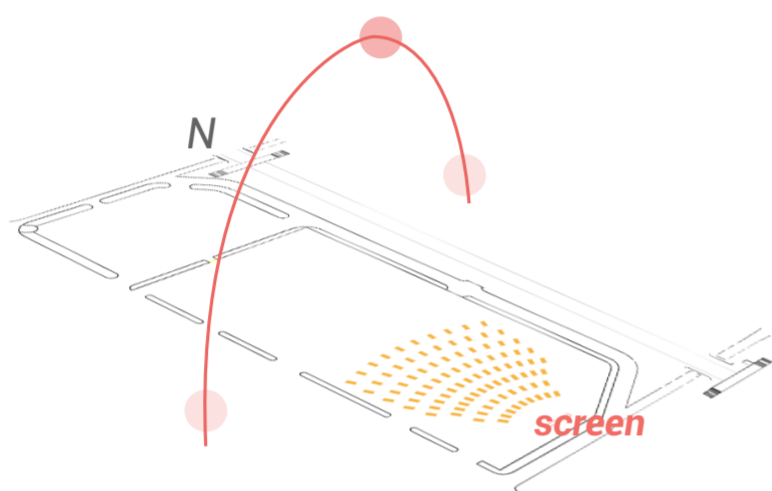
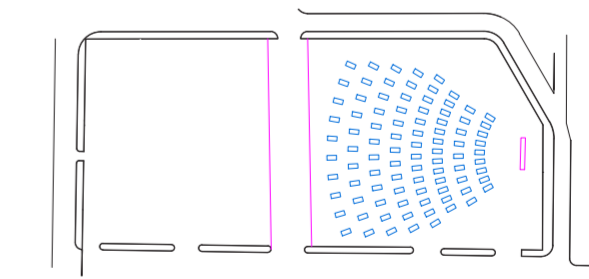
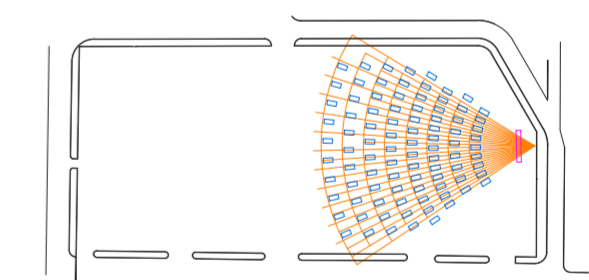
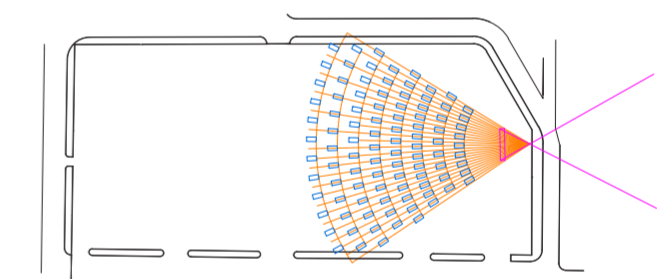
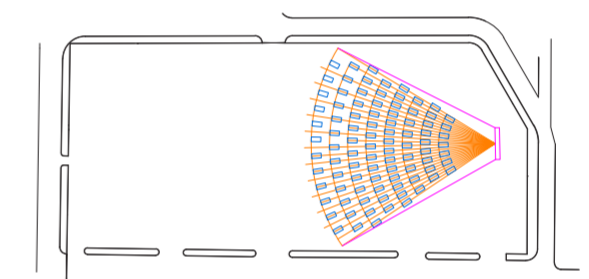
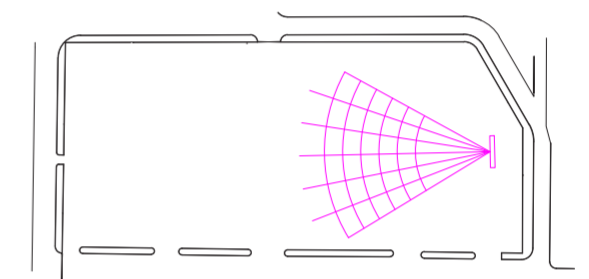
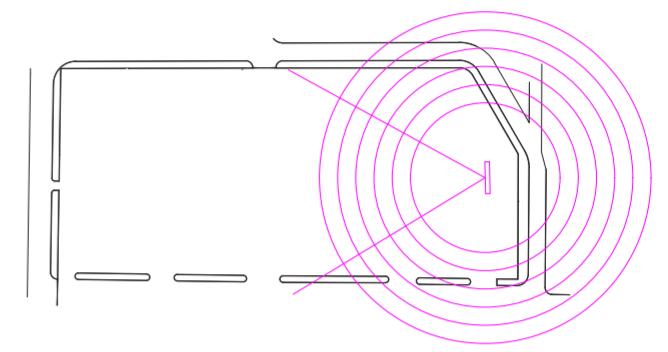
movie structure + parking area

automobile as a **social bubble**

drive-in cinema

social distancing issues

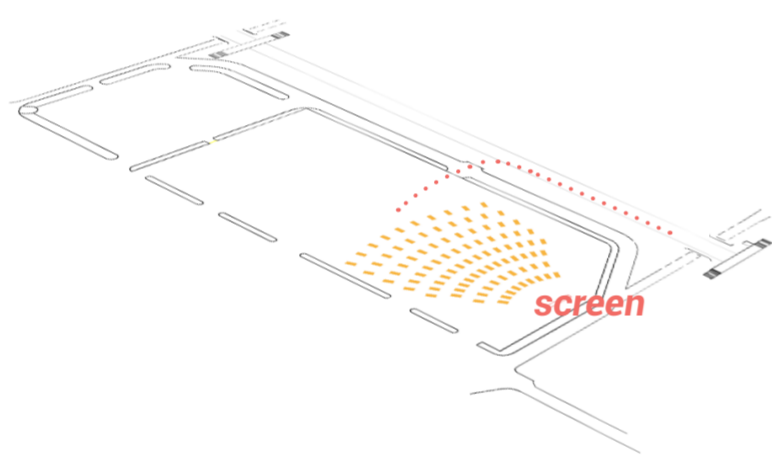
Covid-19 pandemic



_ screen position in the paddock

_ Sun's sidereal rotation

In order not to have the reflection on the screen in the sunset, the screen is located on the right side of the paddock.



_ back second-use

Another advantage of this location is that in this way the back of the screen could be used for the advertisement, clearly visible from the entrance, exactly like drive-in cinemas did in the past. Infact, they were located close to the highways in order to be visible when passing by and attract people, who actually where driving an automobile, the mean necessary to go in that place.

_ screen

Airscreen

inflatable -> disposed inside the structure through straps permanent high pressure inflation

visibility : 100 cars
screen dimensions : 10 x 5m (16:9)
frame : 14 x 9.2m
straps (20m x 5cm)

shipping dimensions : 2 pallets (120 x 100 + 120 x 80cm)



cafe

toilets

screen

entrance

toilets

barriers
break-away barriers

_ elements (physical elements)

- _ entrance
- _ ticket office
- _ cafe (track + eating area)
- _ toilets
- _ screen
- _ directing (movie, lights,etc)
- _ speakers and light supports
- _ division from the paddock area
 - . barriers
 - . break away barriers



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reconfigure through space and time
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