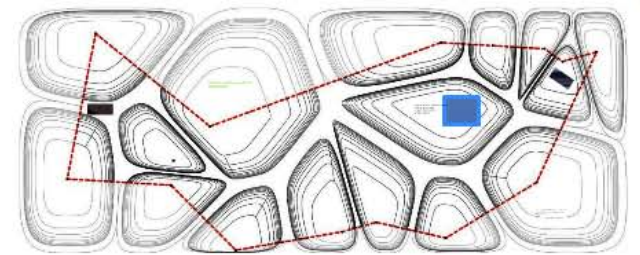
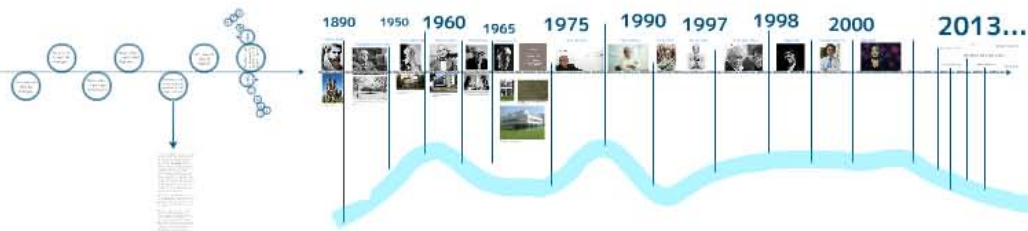


Disecciones



Te toca hablar en general mucho contenido de
fabritectura.

-Sobre el cambio de paradigma de los sistemas
de representación y su evolución.

-Su relación con el diseño, la representación y
el proyecto.

-Porqué no es una herramienta de
representación y es una herramienta de diseño.

-Hablar de Ghery, de su proceso (lo que hay en
Fabritectura) Catia, Ghery Technologies, etc.

-Y puedes terminar con uno o dos proyectos
(como en Fabritectura).

Disecciones

Proyectuales

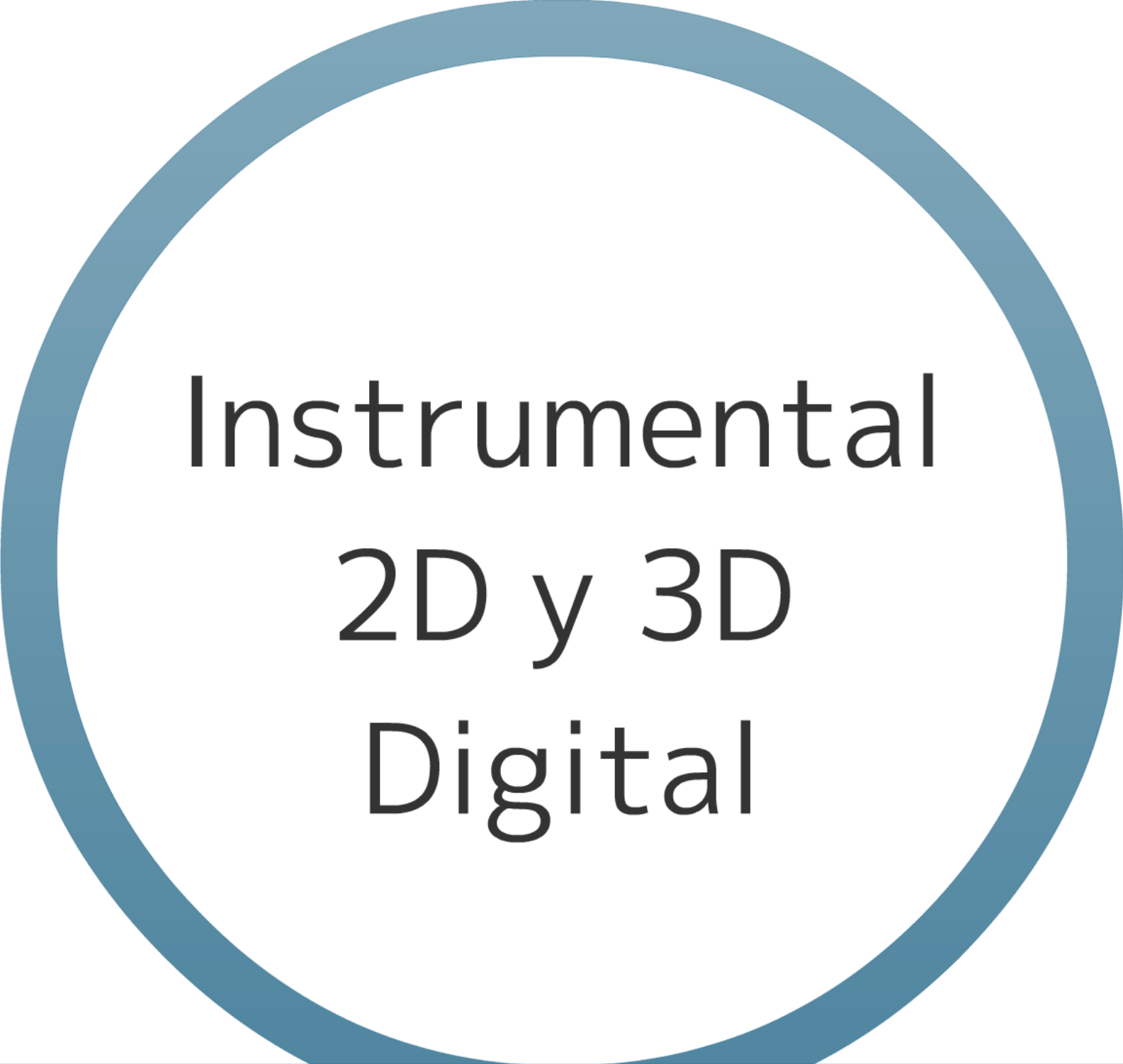
Instrumental 2D y 3D Analogico

Repertorio Proyectual Analogico

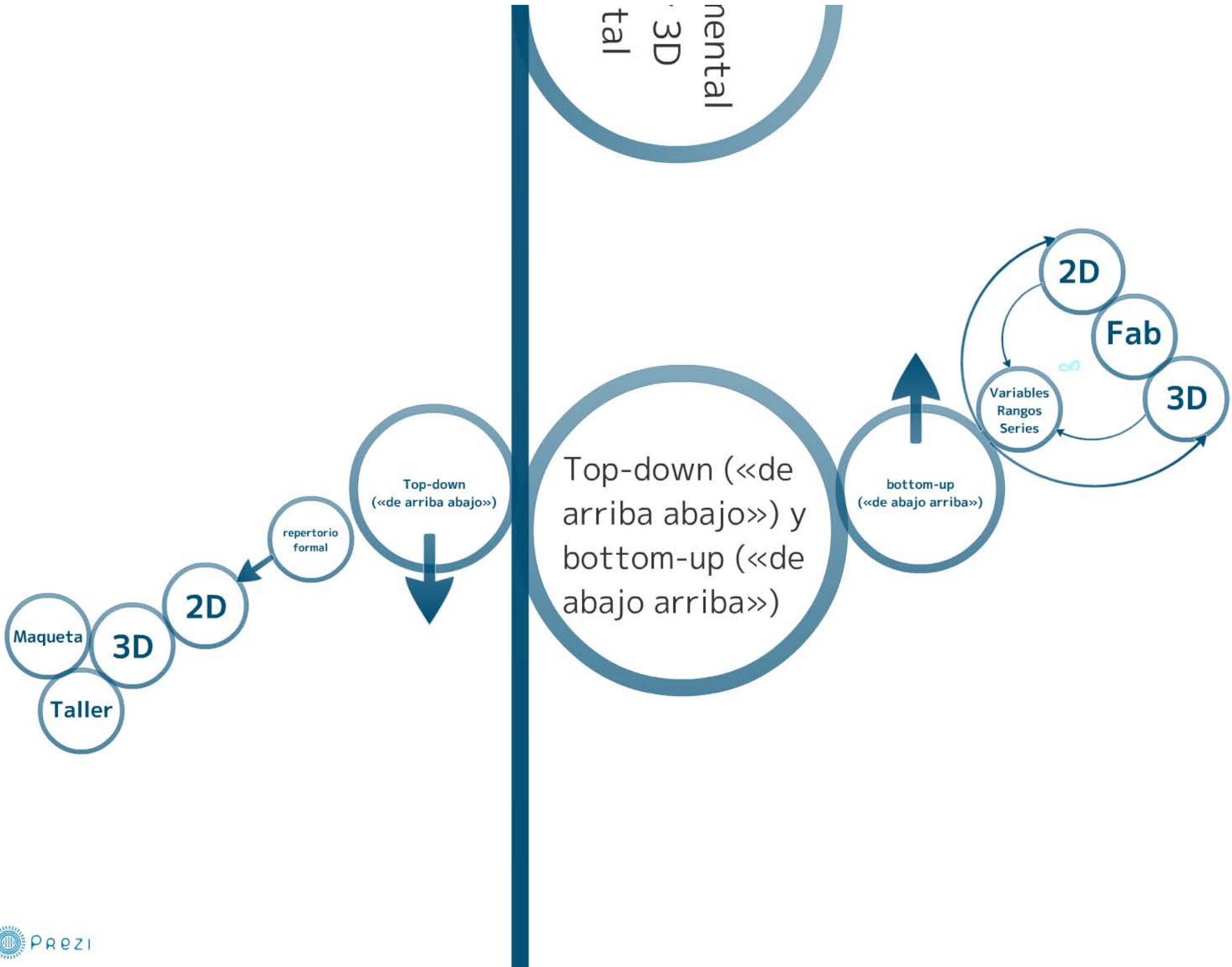
Desarrollos proyectuales Genius Locci

Desarrollos proyectuales Digitales

Top-down (<<de
arriba abajo>>) y
bottom-up (<<de
abajo arriba>>)



Instrumental 2D y 3D Digital



1890

1950

1960

1975

Oscar Niemeyer

1990

1997

Norman Foster

1998

|

2000

Santiago Calatrava



Zaha Hadid



2013...

Responsivo

Componentes Generativos

Parametricismo

Arquitectura Genetica

Espacio Virtual

Fabricacion Digital

Adaptativo

fabritectura

arquitectura | fabricación
paramétrica | digital

Paralelo historico



Una gran época acaba de comenzar.
Existe un espíritu nuevo.
Existe una multitud que se encuentran,
especialmente, en la producción industrial.

La arquitectura se ahoga con las costumbres.
Los “estilos” son una mentira.
El estilo es una unidad de principio que anima todas las obras
de una época,
y que resulta de un espíritu caracterizado.
Nuestra época fija cada día su estilo.
Nuestros ojos, desgraciadamente, no saben discernirlo aún.

Hay un espíritu nuevo: un espíritu de construcción y de síntesis,
guiado por una clara Concepción.

Piénsese lo que se quiera,
pero hoy anima la mayor parte de la actividad humana.

UNA GRAN EPOCA ACABA DE COMENZAR
Programa del “Esprit Nouveau”, N° 1, octubre de 1920



Pasado clasico



Presente moderno



Futuro genético

Cronología

...hasta el siglo XIX

siglo XX(y hasta hoy)

desde el siglo XXI

Sistema formal

verticalizante

horizontalizante

organicizante

Sistema estructural

estructuras a compresión

estructuras a tracción

estructuras vivas(naturales y/o digitales)

Sistema material

piedra, ladrillo, madera

hormigón,acero, plastico

ADN natural (vegetal, carne y hueso) y/o software digital

Sistema de producción

producción a mano una a una de piezas todas distintas

producción a máquina automatizada en series de piezas iguales

crecimiento natural y/o producción a máquina robotizada de piezas distinta

(1) Diagrama de las tres edades de la arquitectura de Alberto Estévez



(2) Iglesia Atlantida. Construcción tradicional.
Eladio Dieste.



(3) Pabellon Suizo. Robot Arm. Gramazio & Kohler



4) Clase del curso preparatorio de Josef Albers en la Bauhaus



 Prezi (3) Mies Van der Rohe en la cubierta de un rascacielos en Chicago.



(6) (7) Vistas de la pedrera o casa Mila del arquitecto catalan Antonio Gaudi.



(9) Pabellón Blob Wall, Grea Lynn.



(5) La Walking City (ciudad caminante) fue una idea propuesta por el arquitecto británico Ron Herron del grupo Archigram en 1964.



(10) Opera de Sidney, Jom Utzom



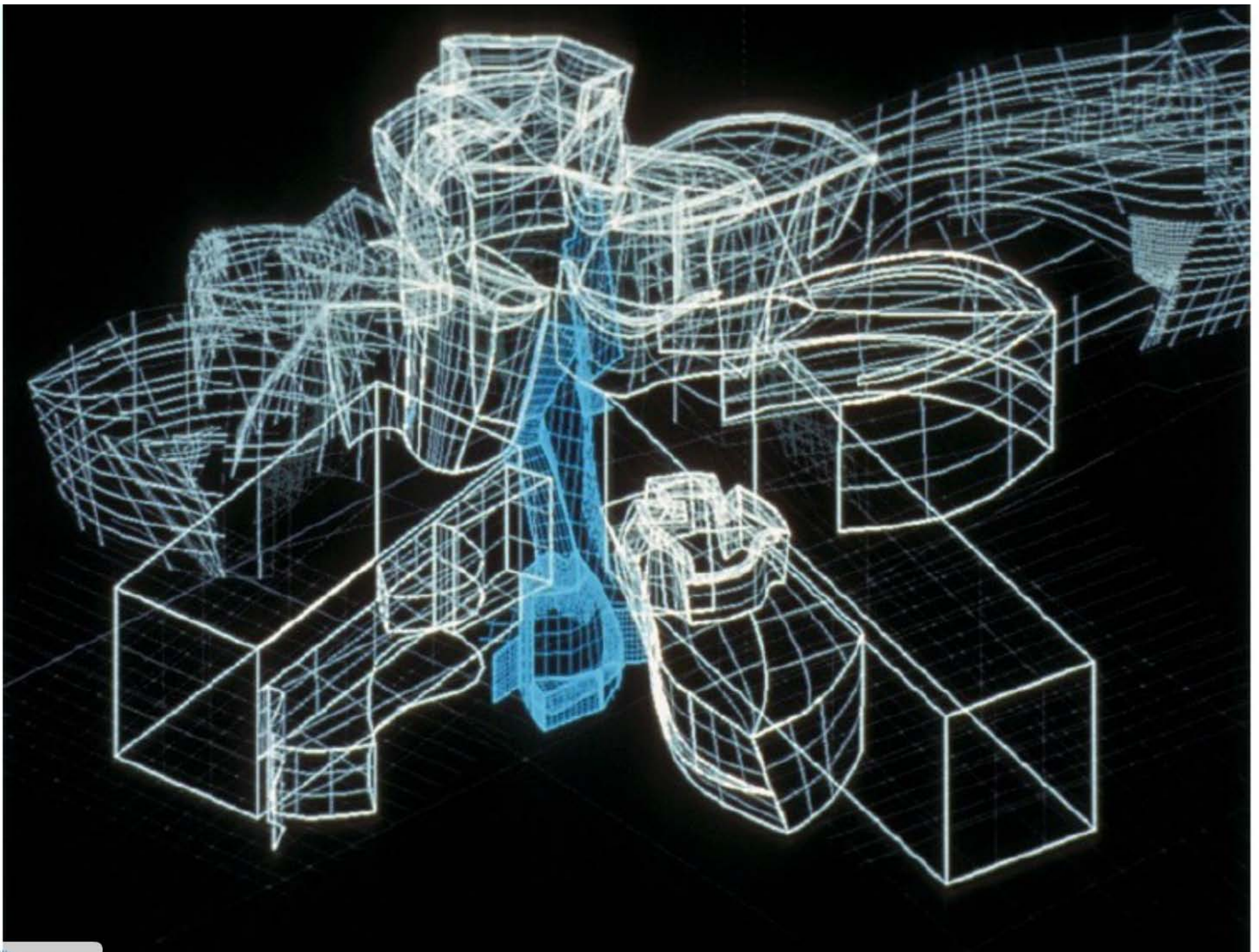
(11) Museo Guggenheim de Bilbao, Frank Guer

Sistemas de Representacion EVOLUCION



(14) Fablab Amsterdam







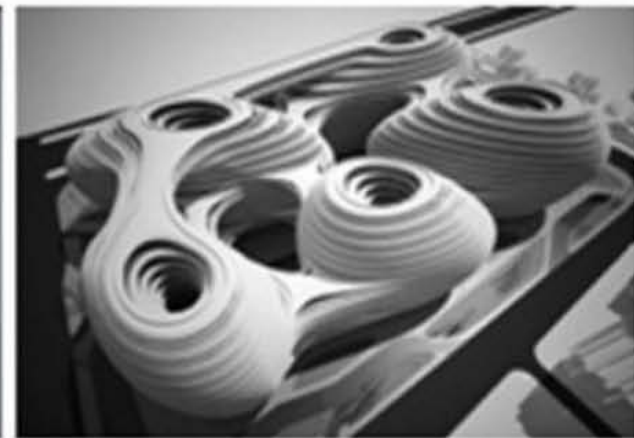
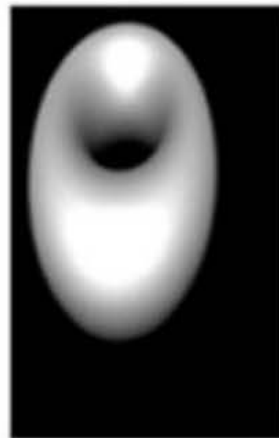
Cambios en la Instrumentalizacion
Cambios en el Diseño.
Cambios en el Proyecto.
Ayudar a Pensar.

ion





(17) Centro de la Ciencia Phaeno. Zaha Hadid



(18) Clásico / Ontología modernista de Le Corbusier - Parametricismo Ontológico, Zaha Hadid

Catia, Ghery Technologies + Zaha Hadid
y Patrick Shumacher y Algoritmos y
Programacion



/ Ontología modernista de Le Corbusier - Parametricismo Ontológico, Zaha Hadid

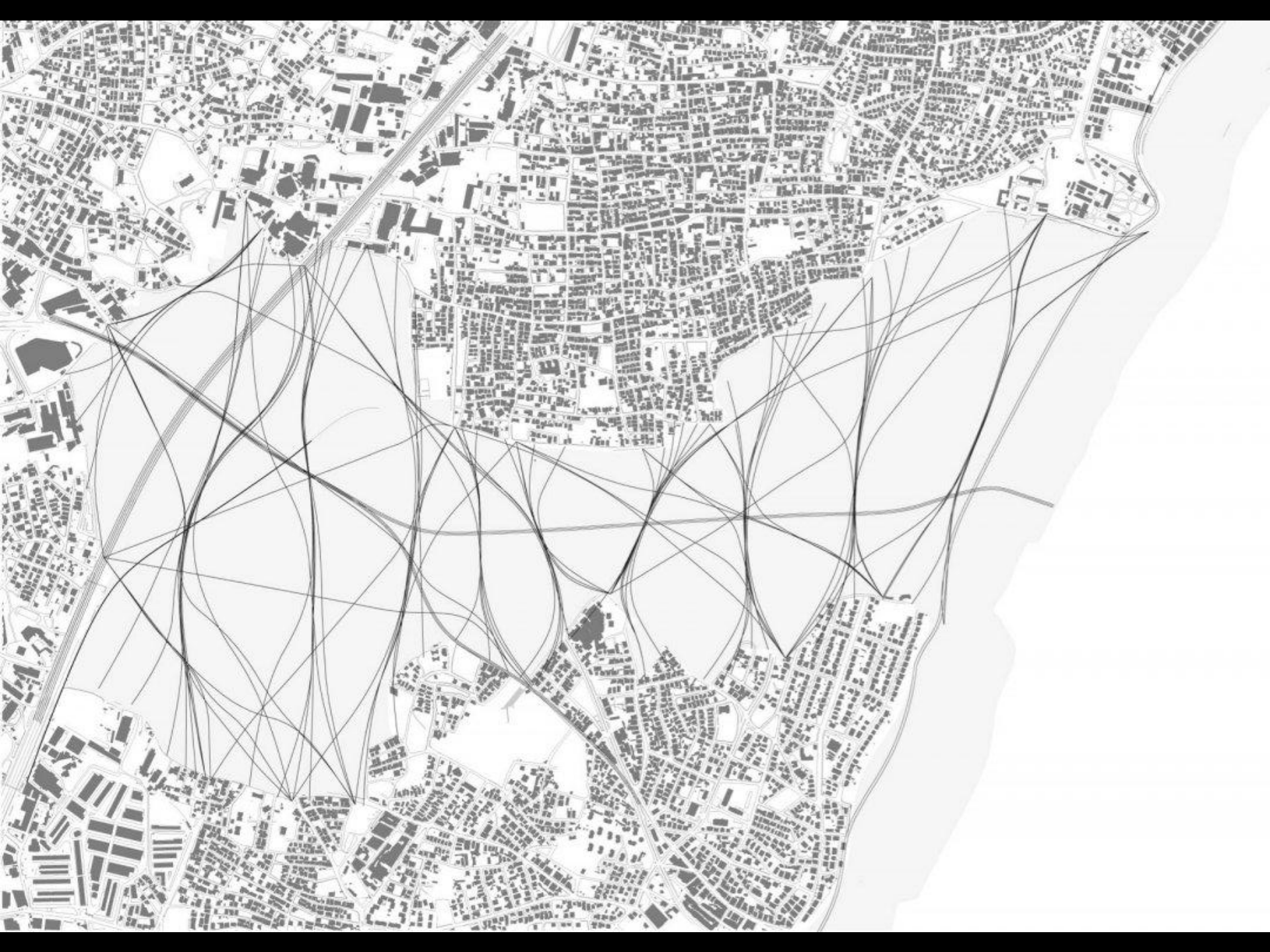
Catia, Ghery Technologies + Zaha Hadid
y Patrick Shumacher y Algoritmos y
Programacion

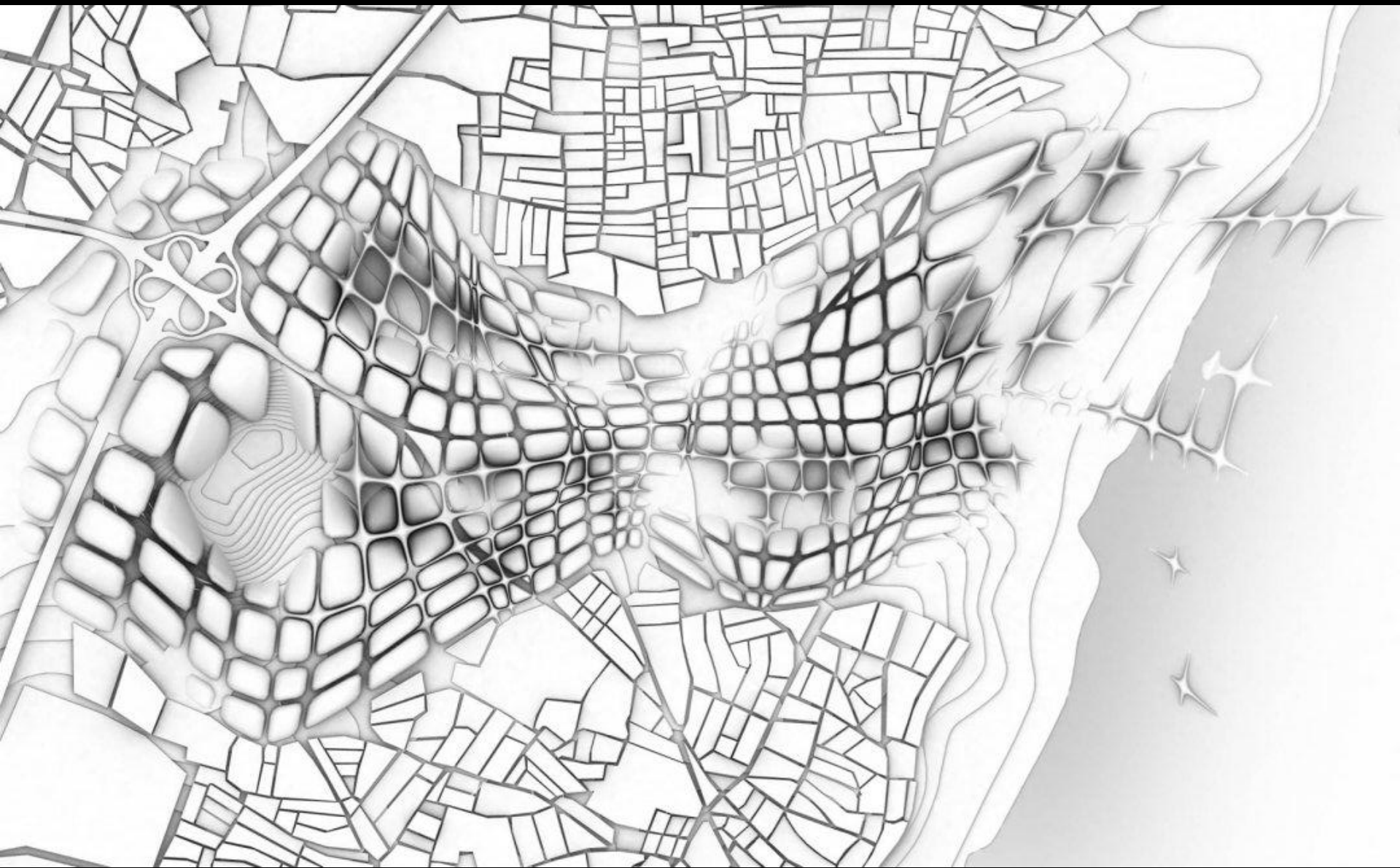


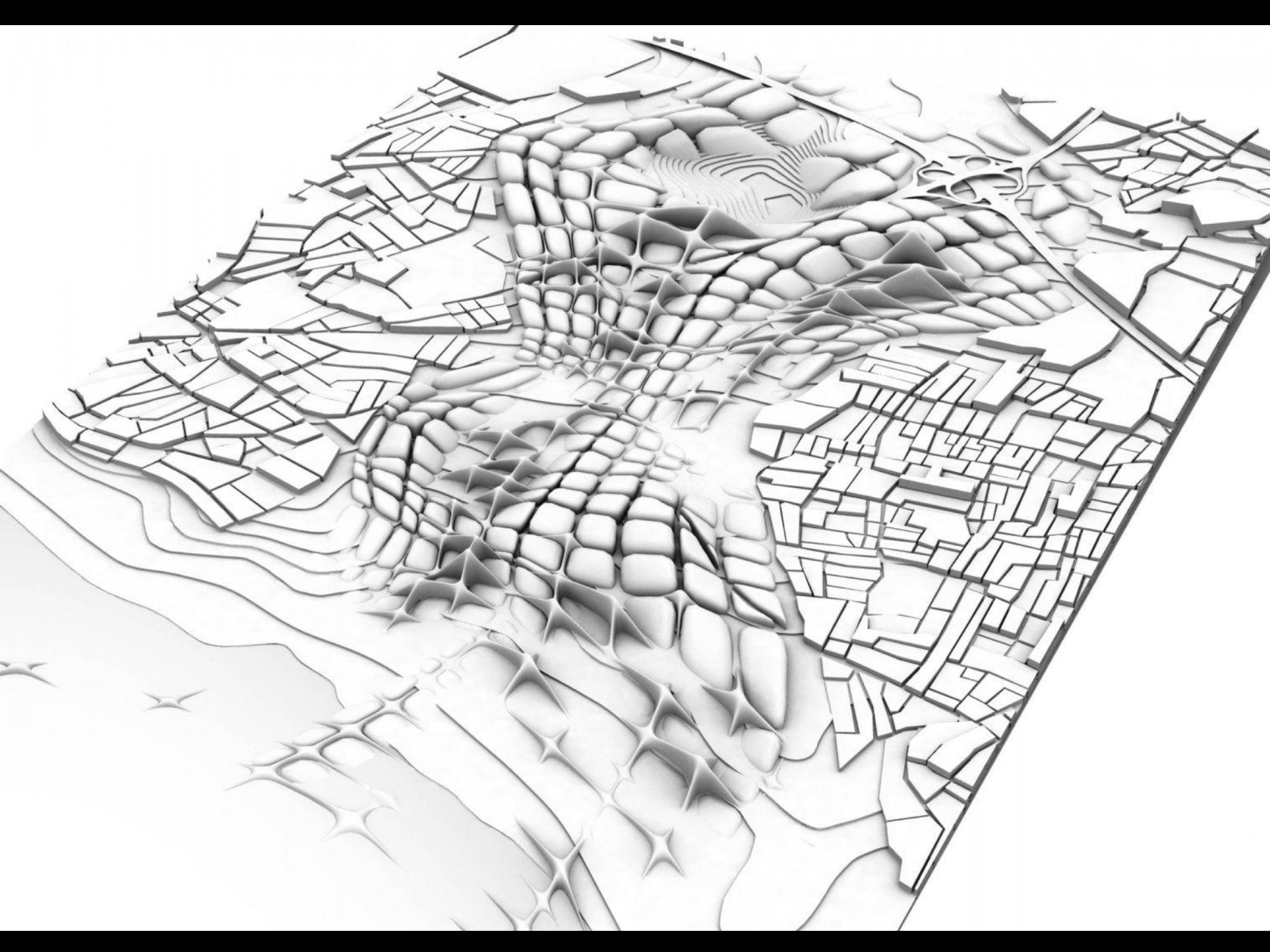
Disecciones

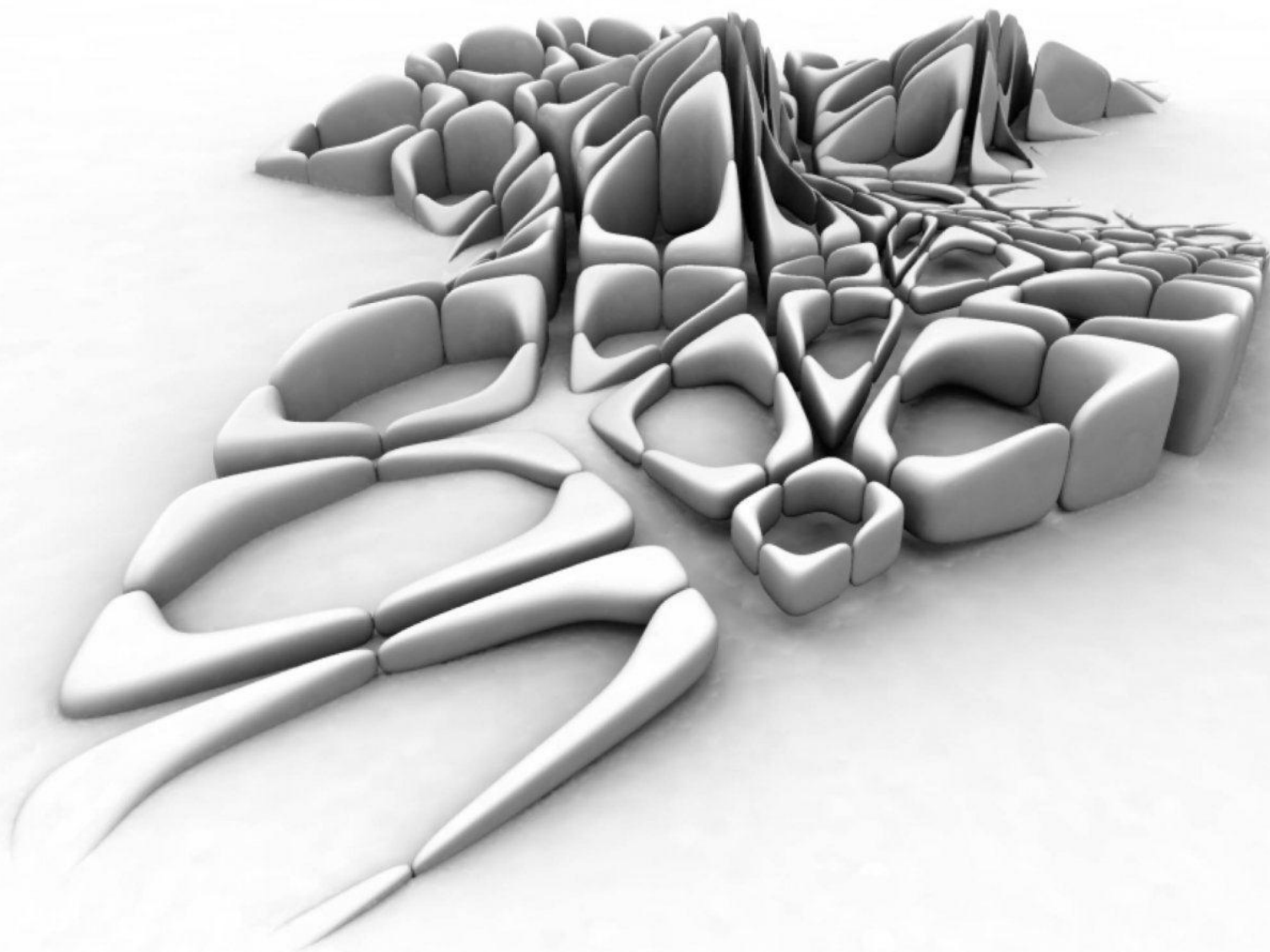
Proyectuales

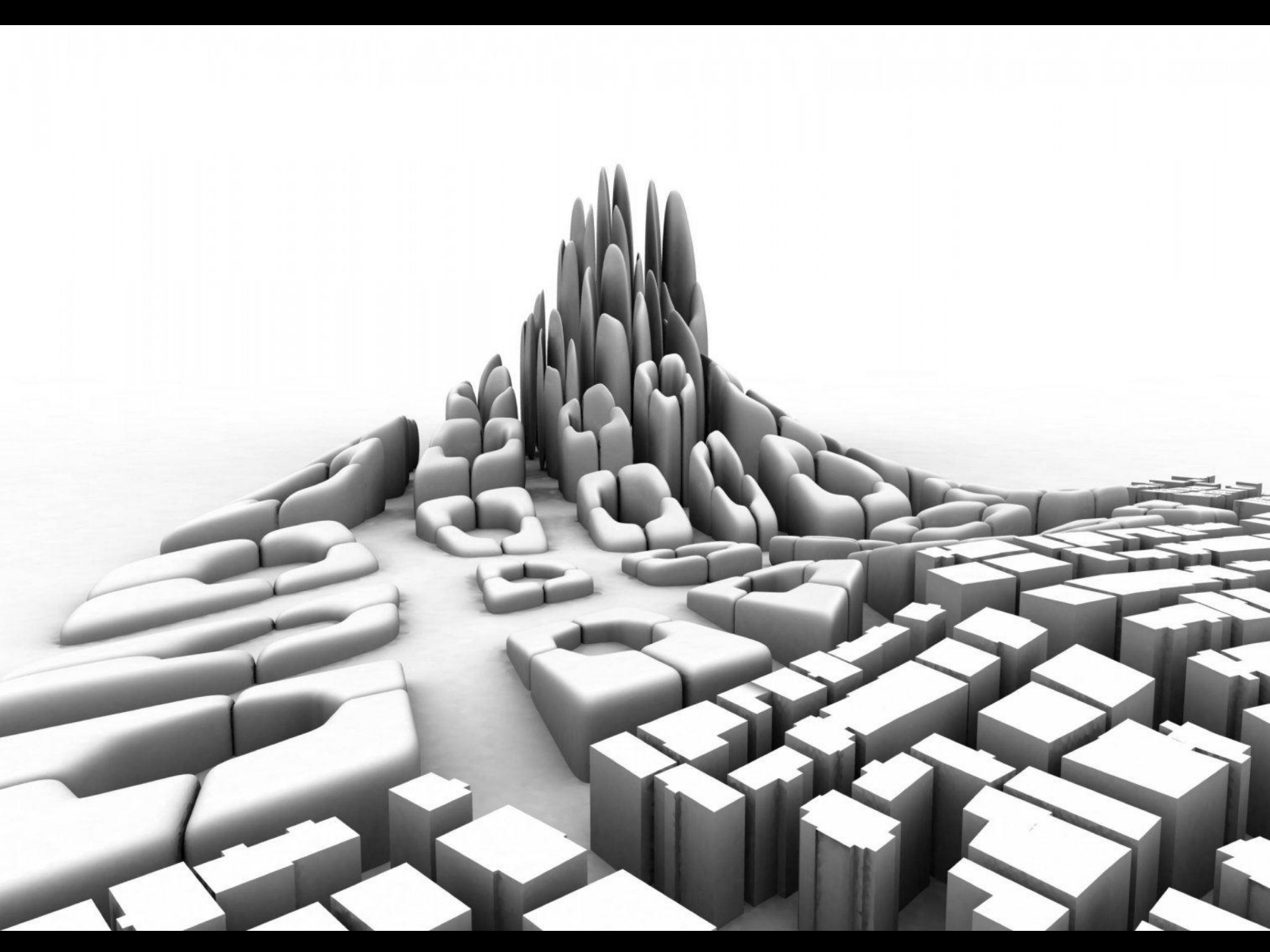
KARTAL PENDIK MASTERPLAN – ESTANBUL, TURQUÍA.
ZAHA HADID ARCHITECTS.

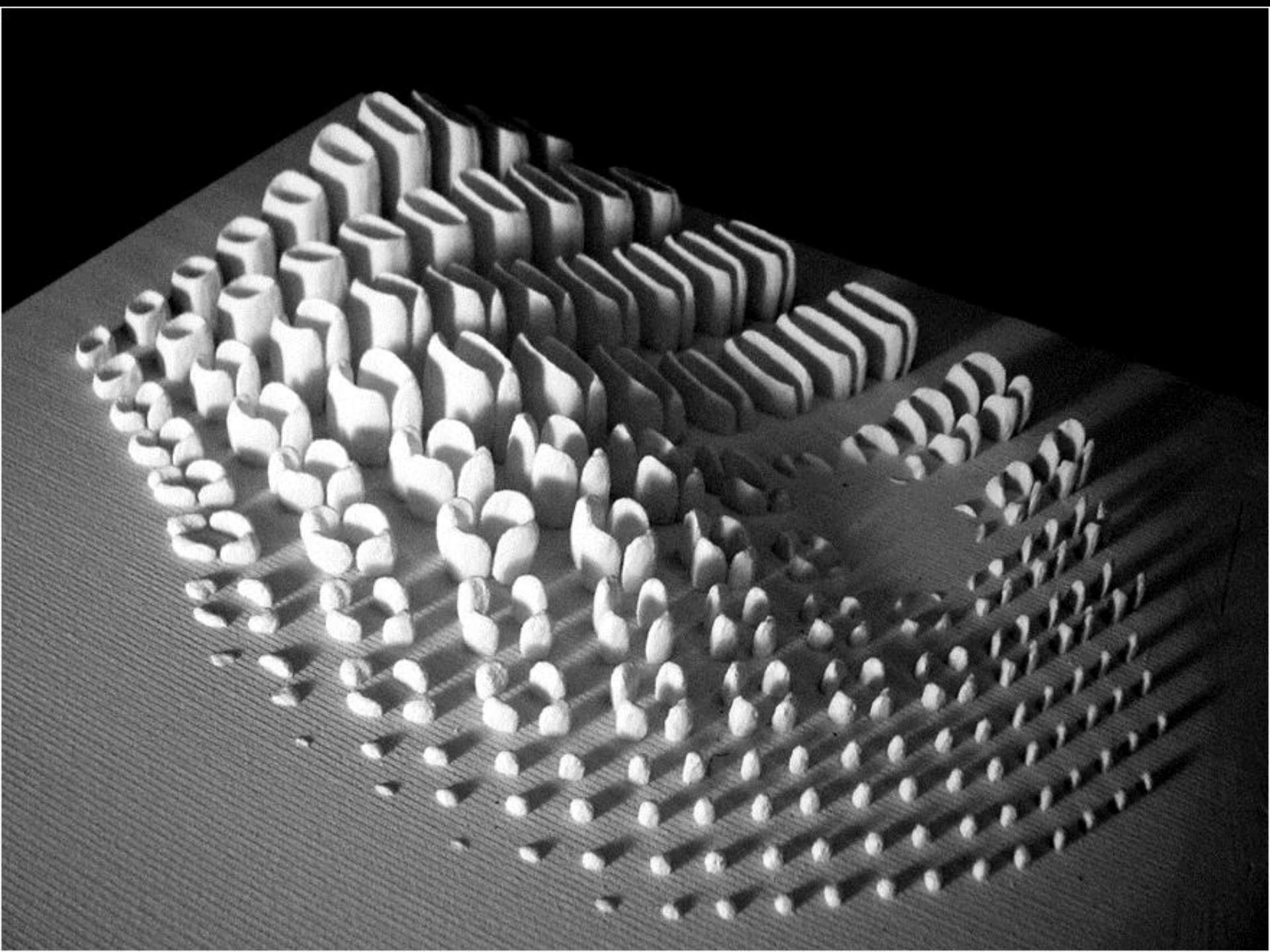


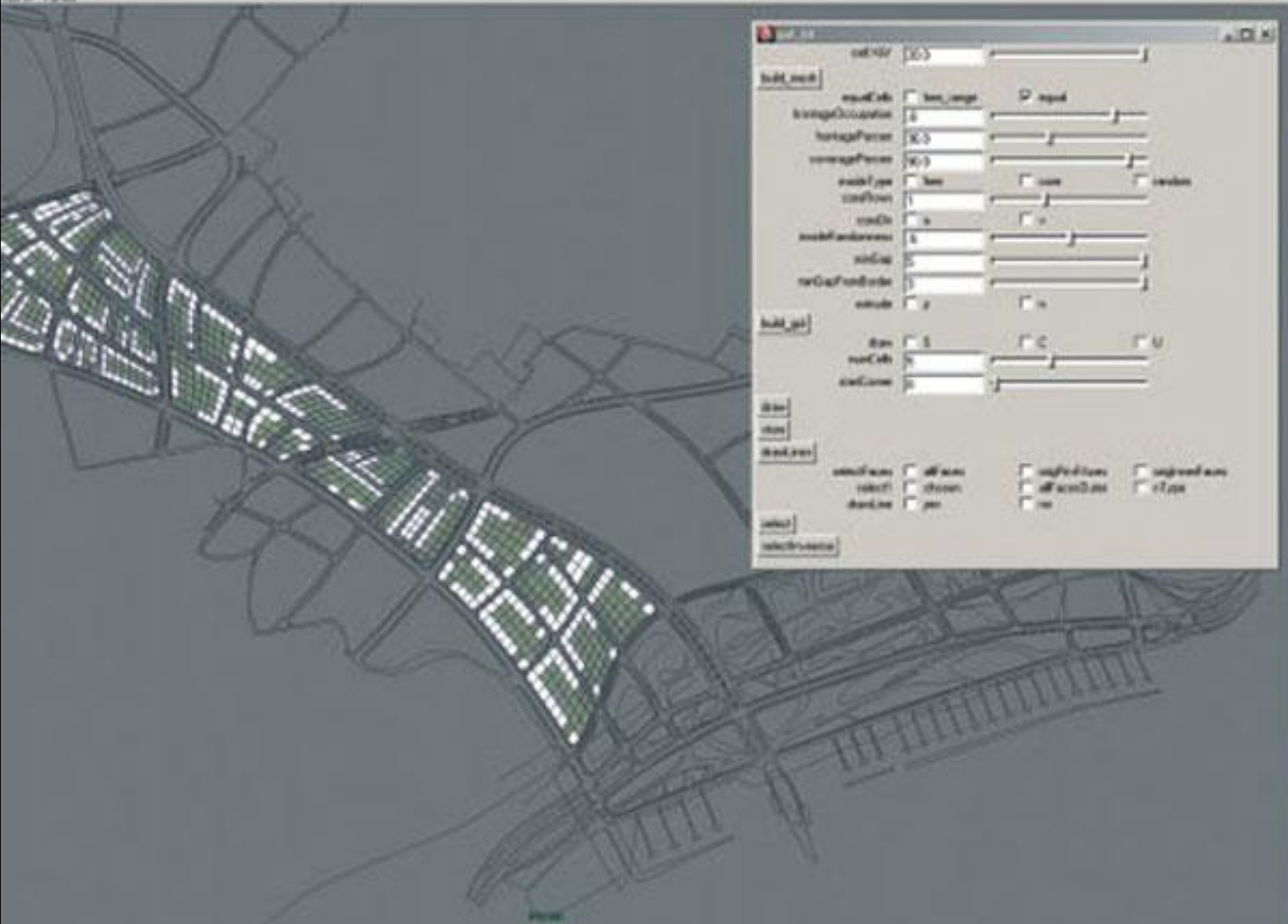


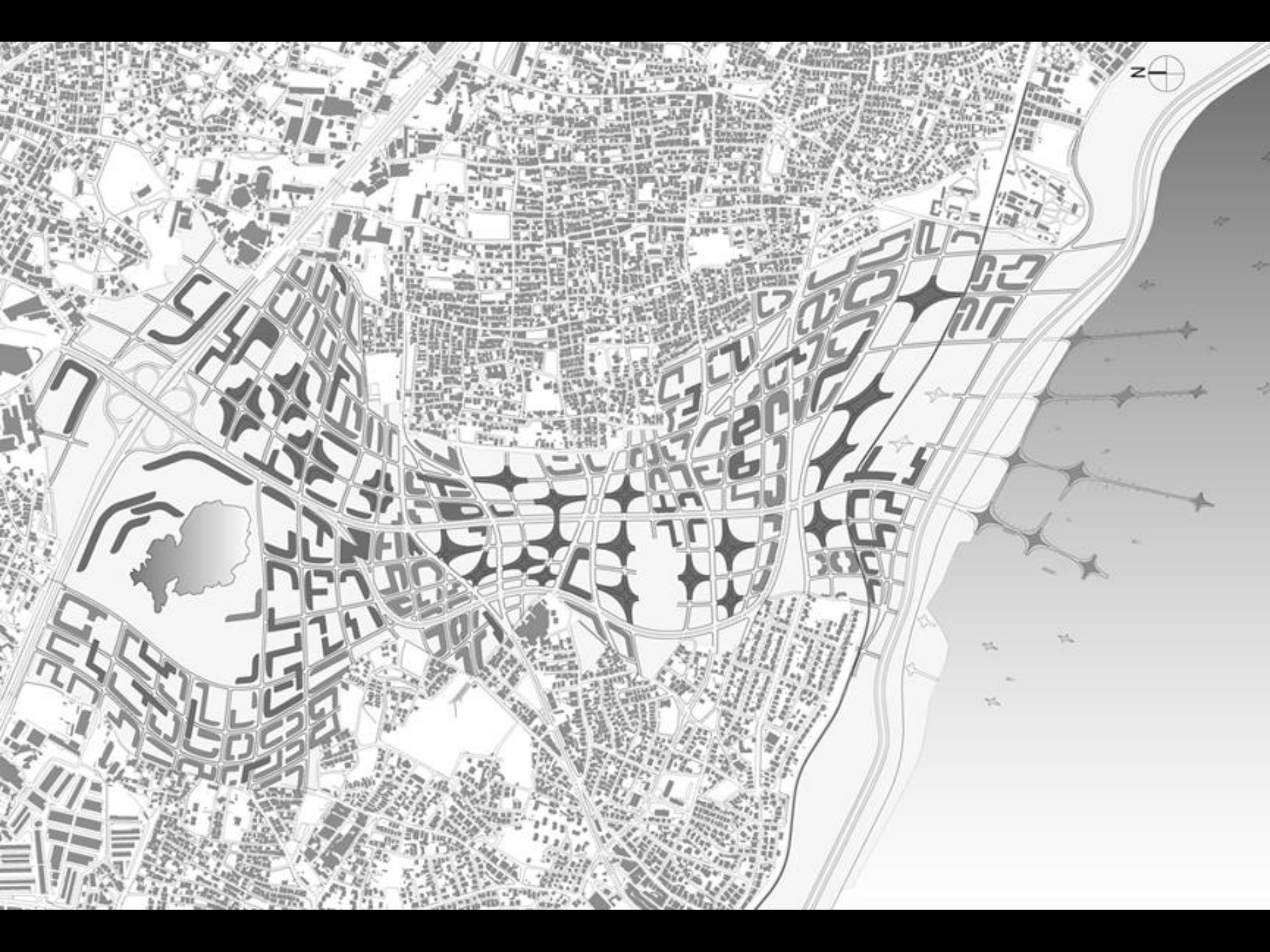


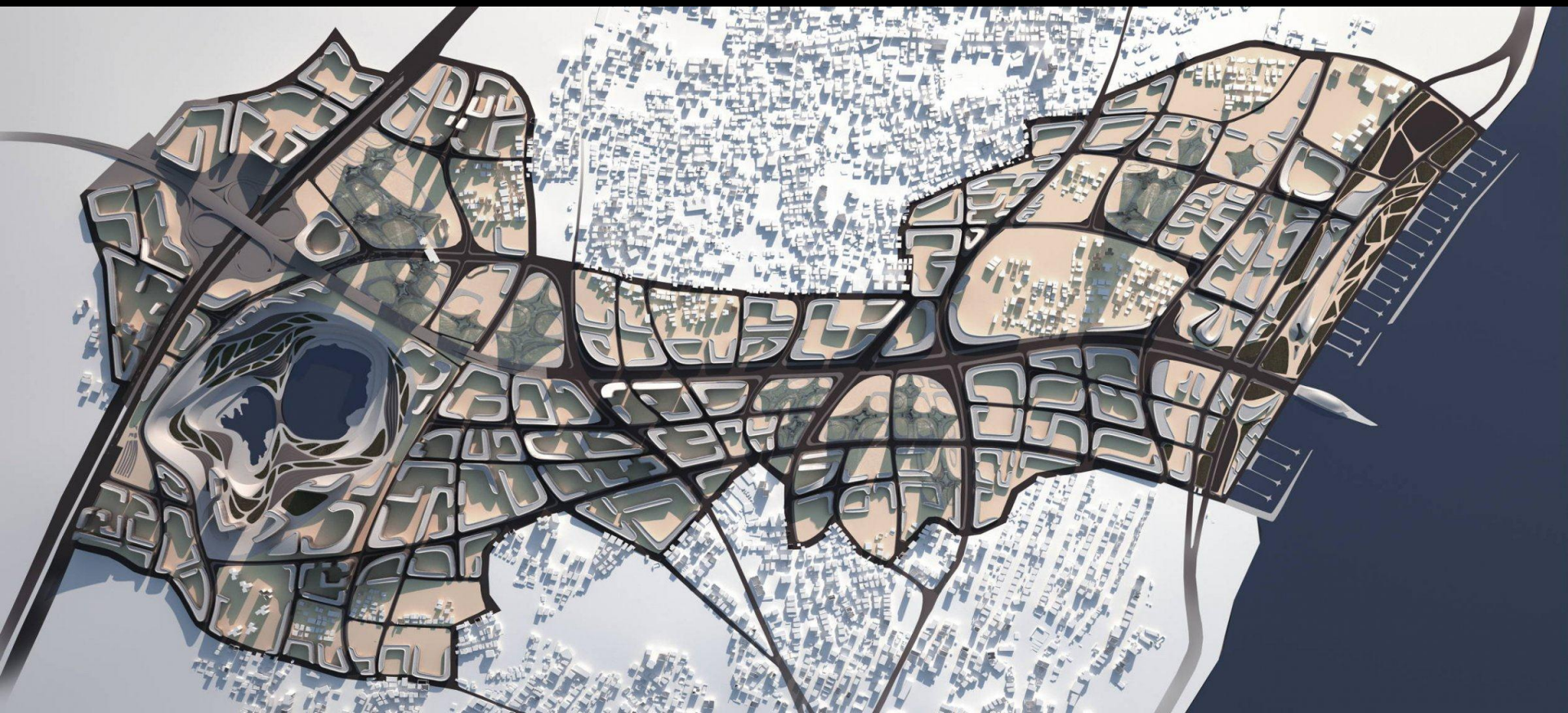


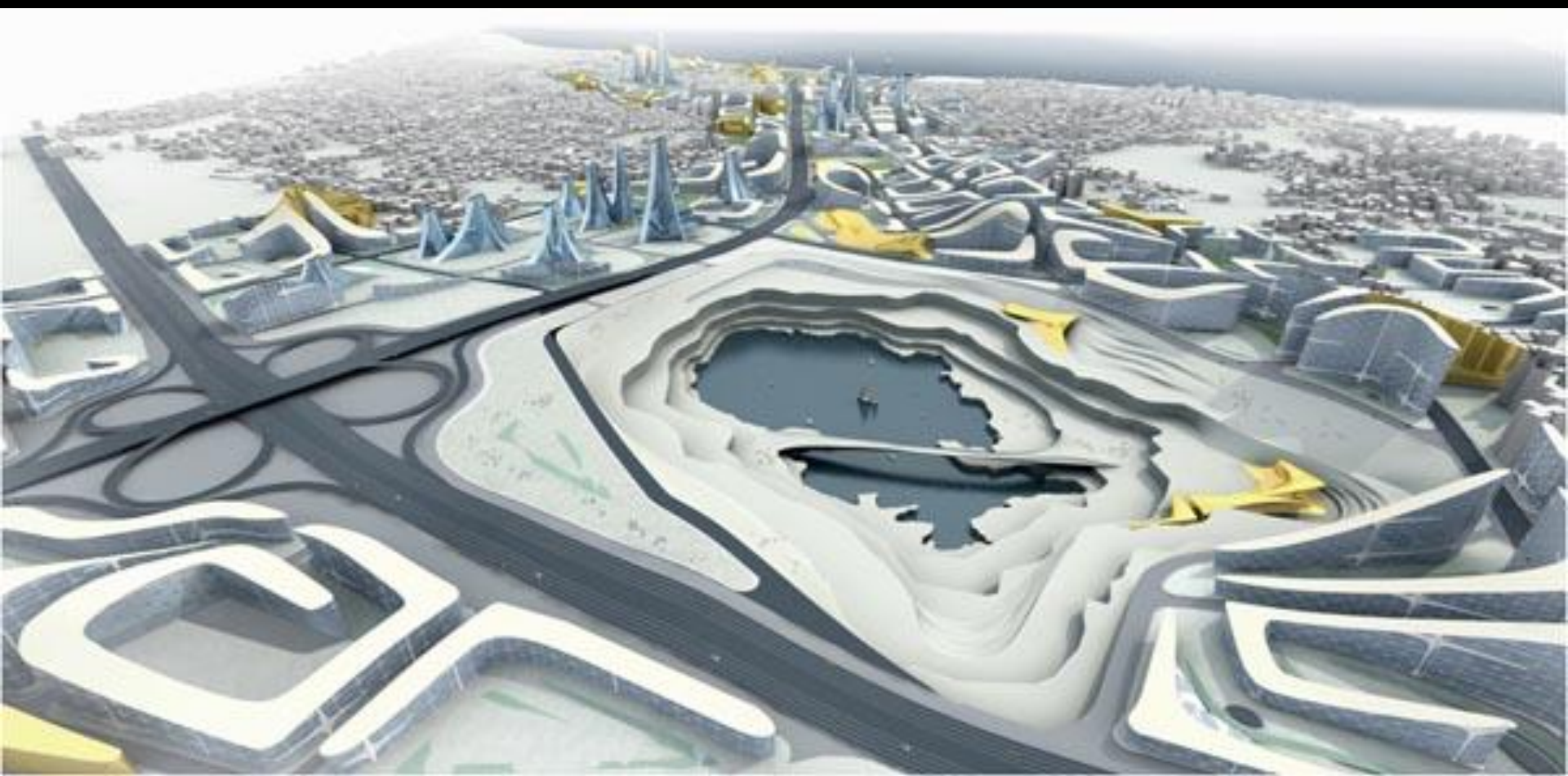


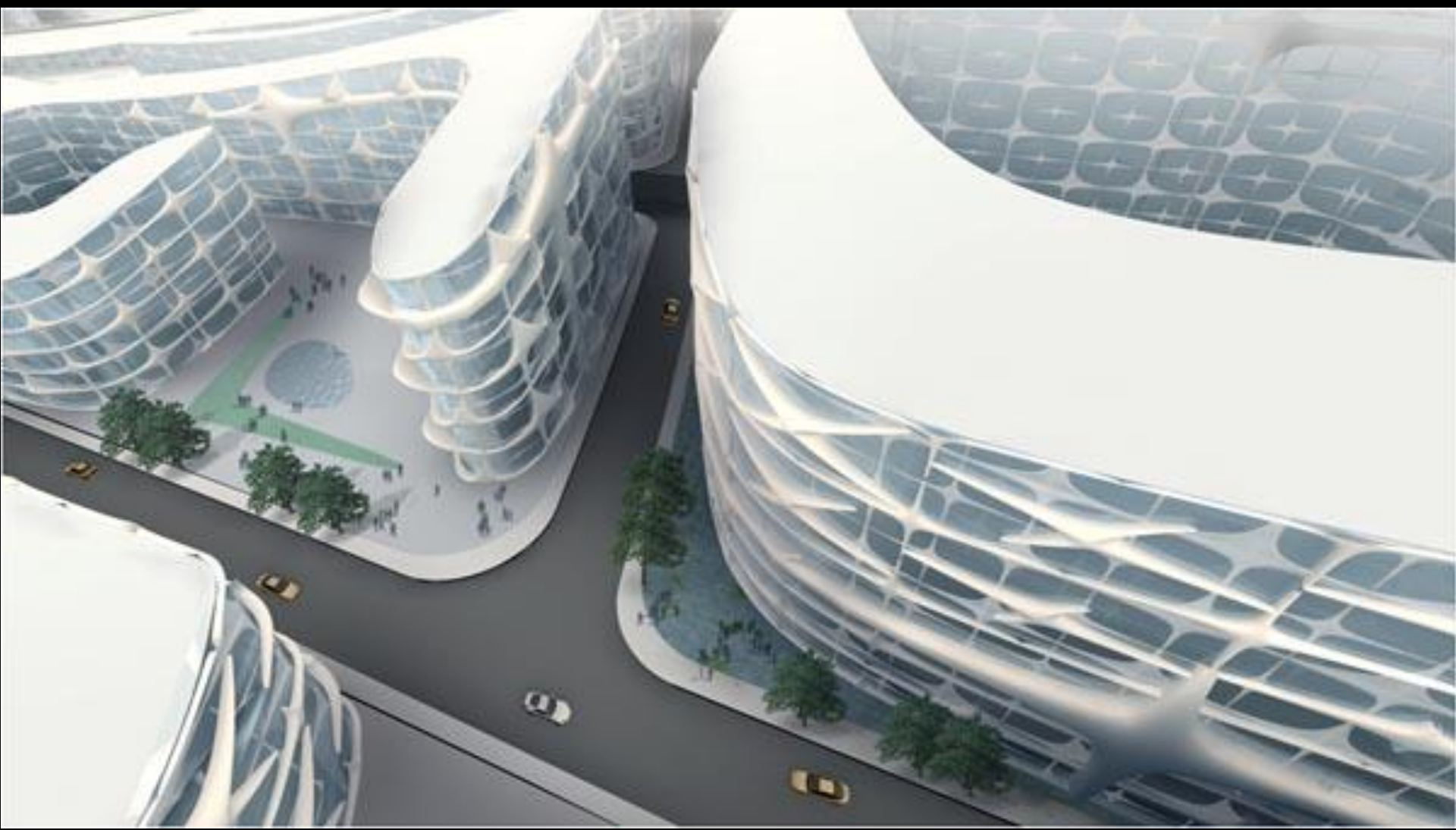






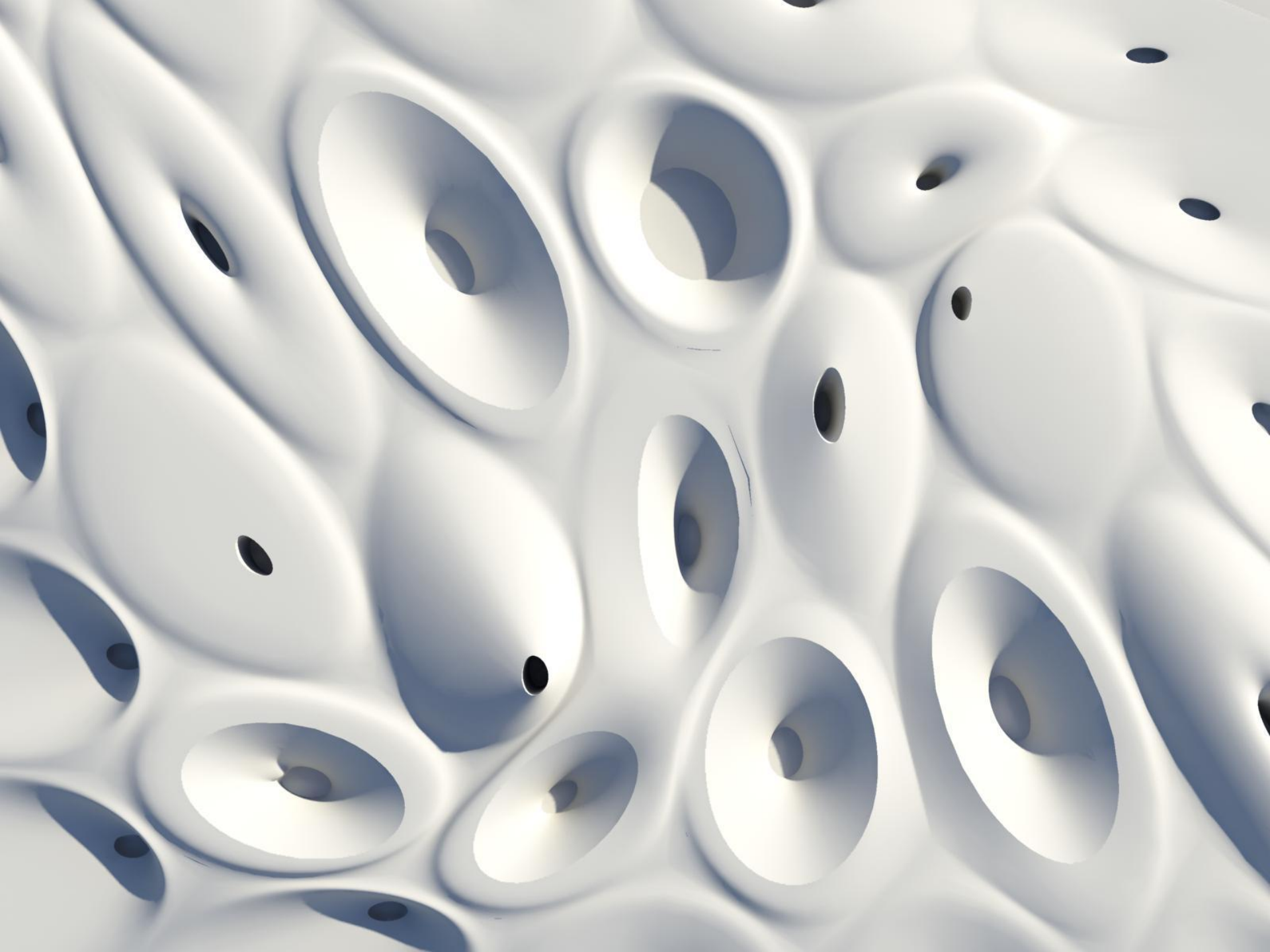


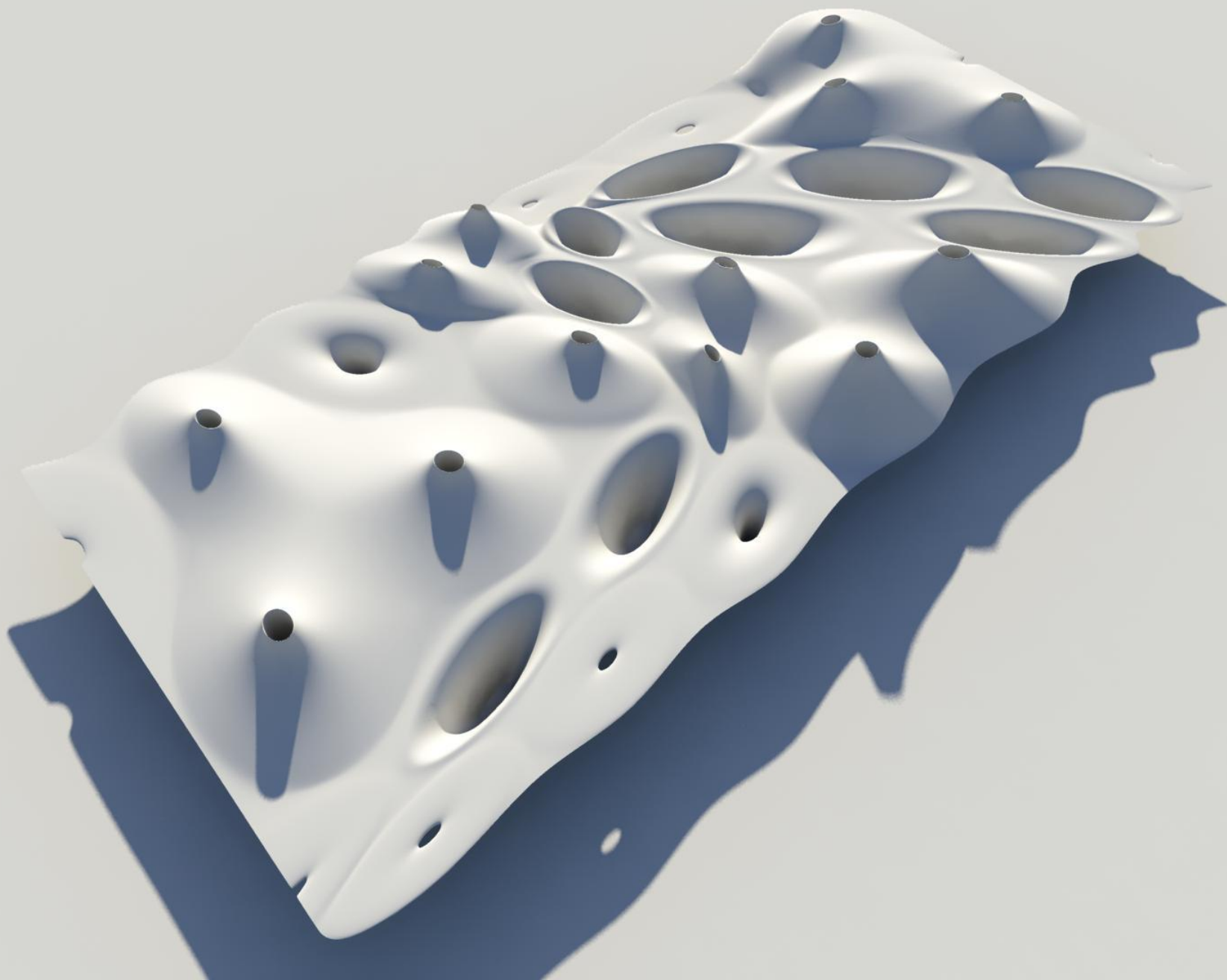


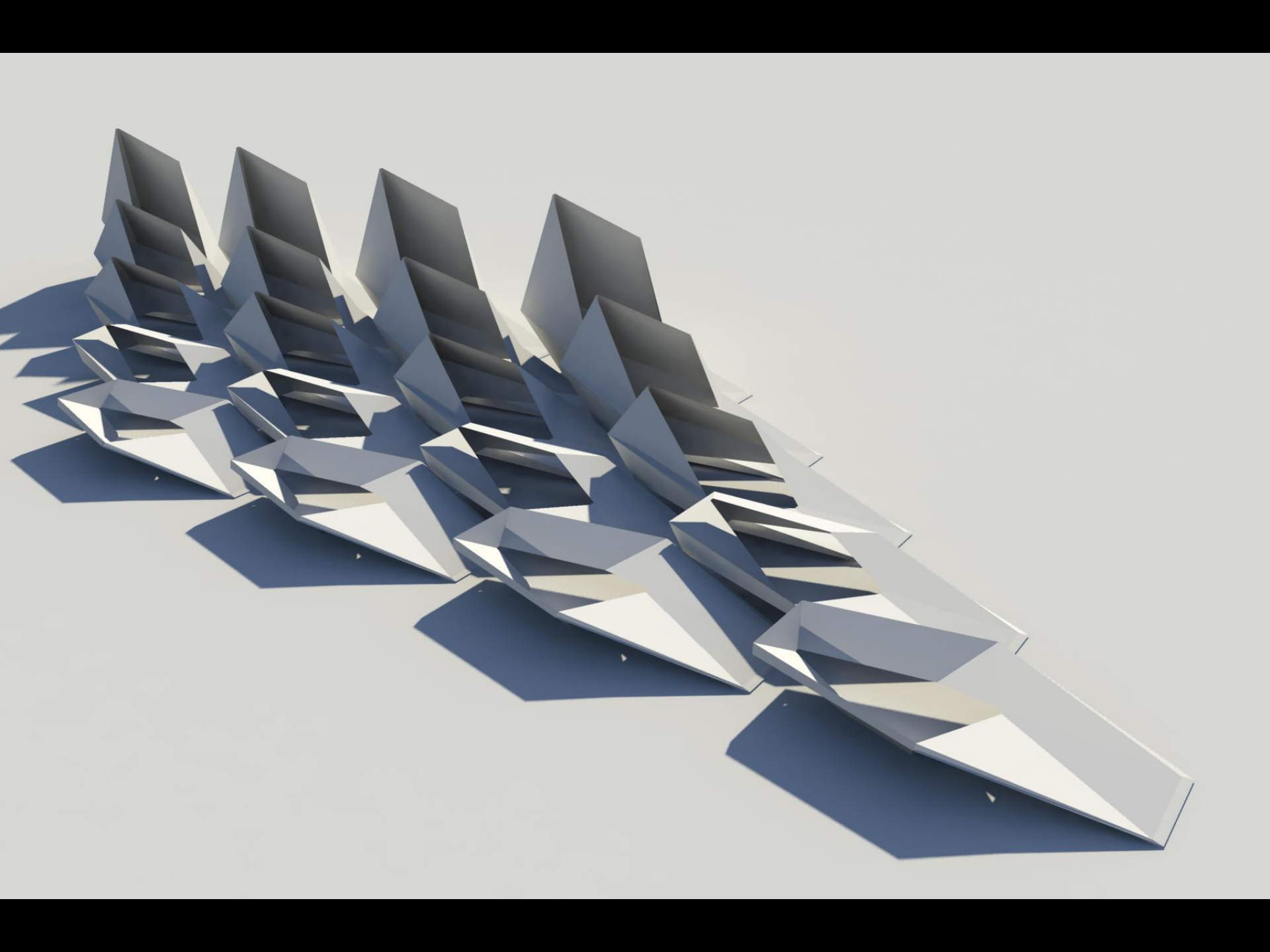


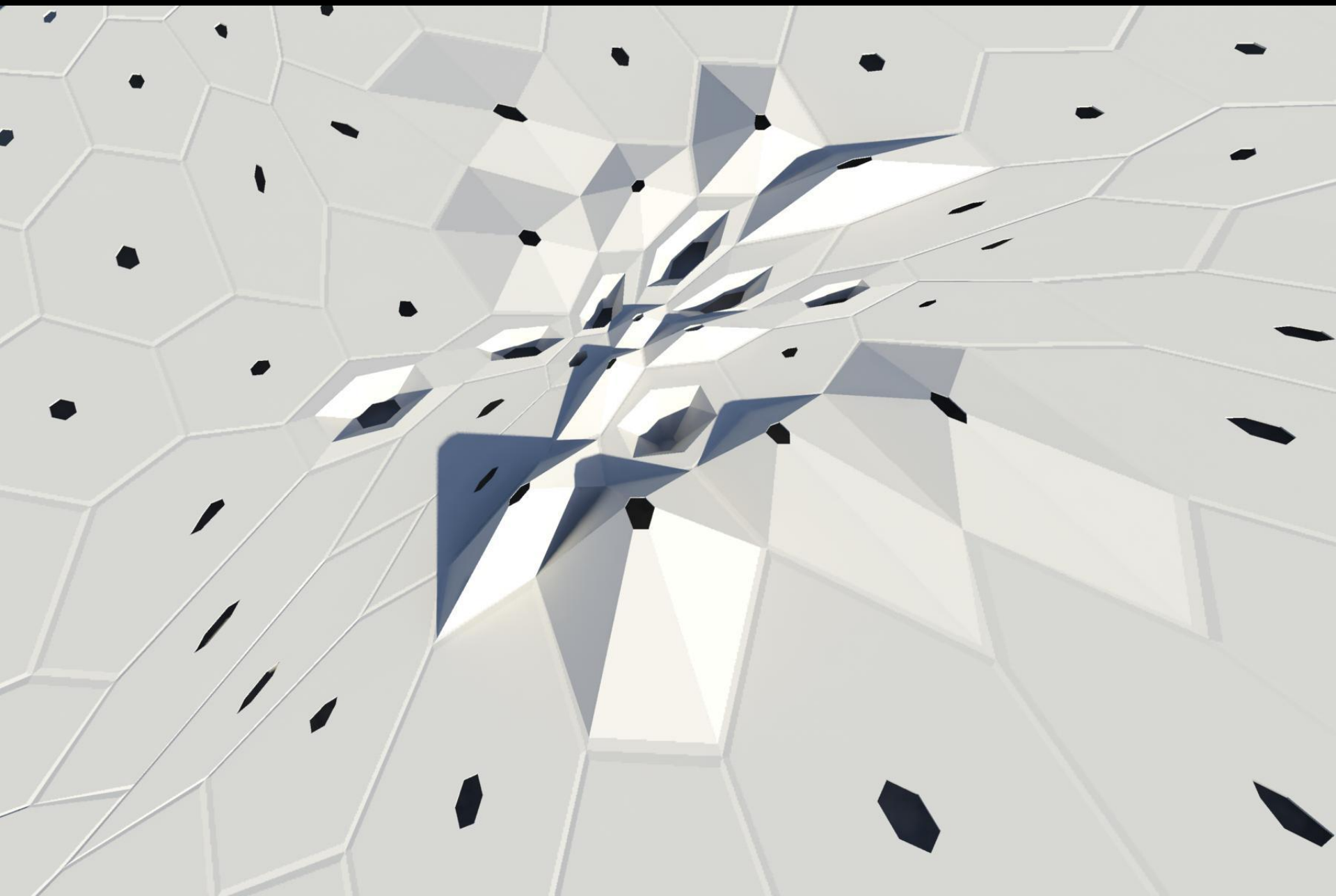


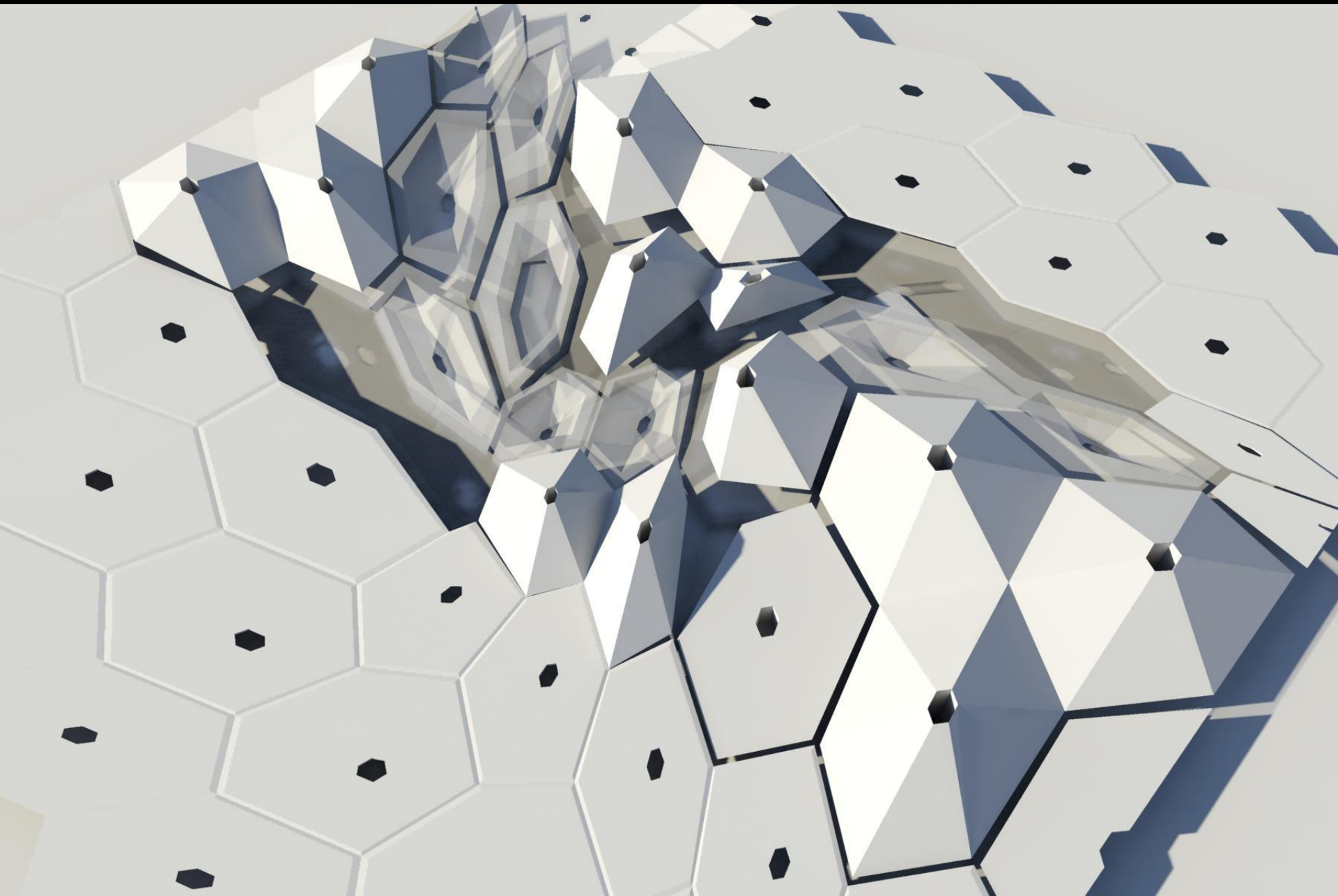
PETROLEUM STUDIES AND RESEARCH CENTER – RIYADH, SAUDI ARABIA.
ZAHA HADID ARCHITECTS.

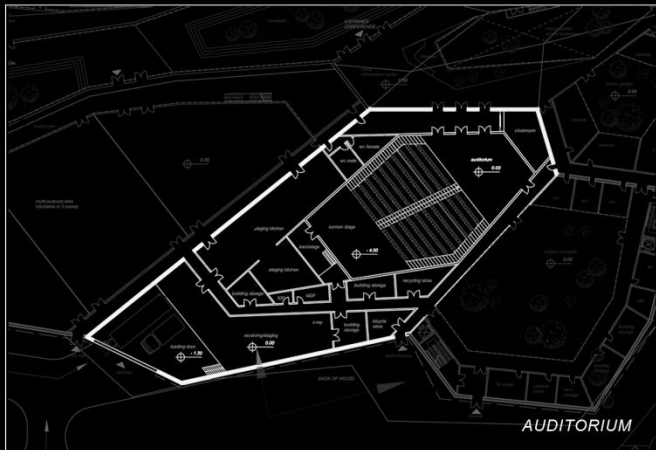
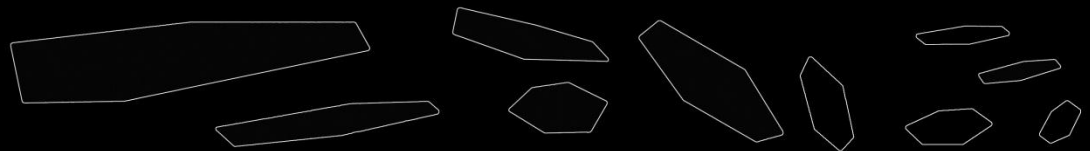
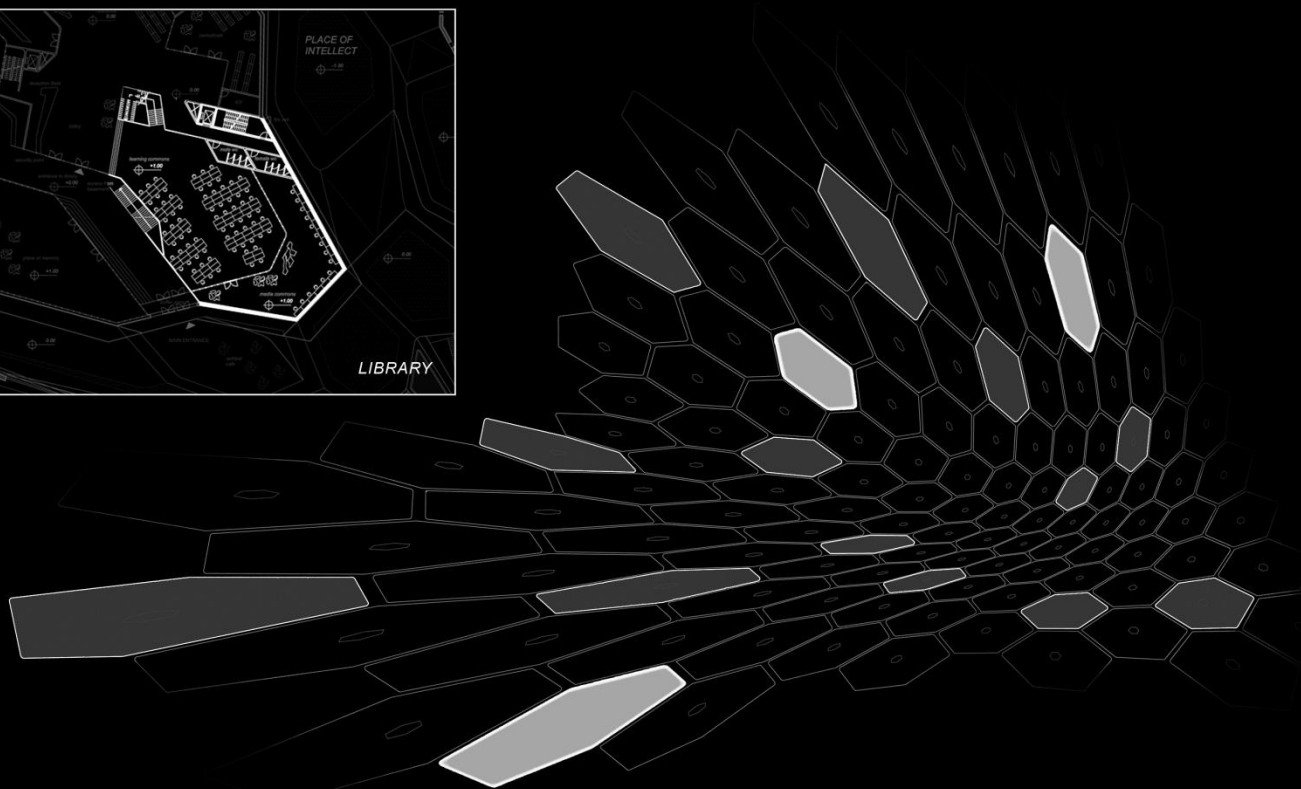
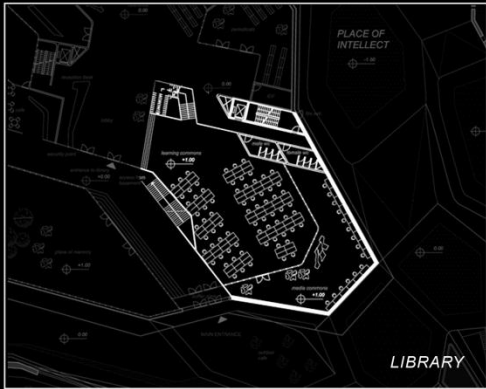


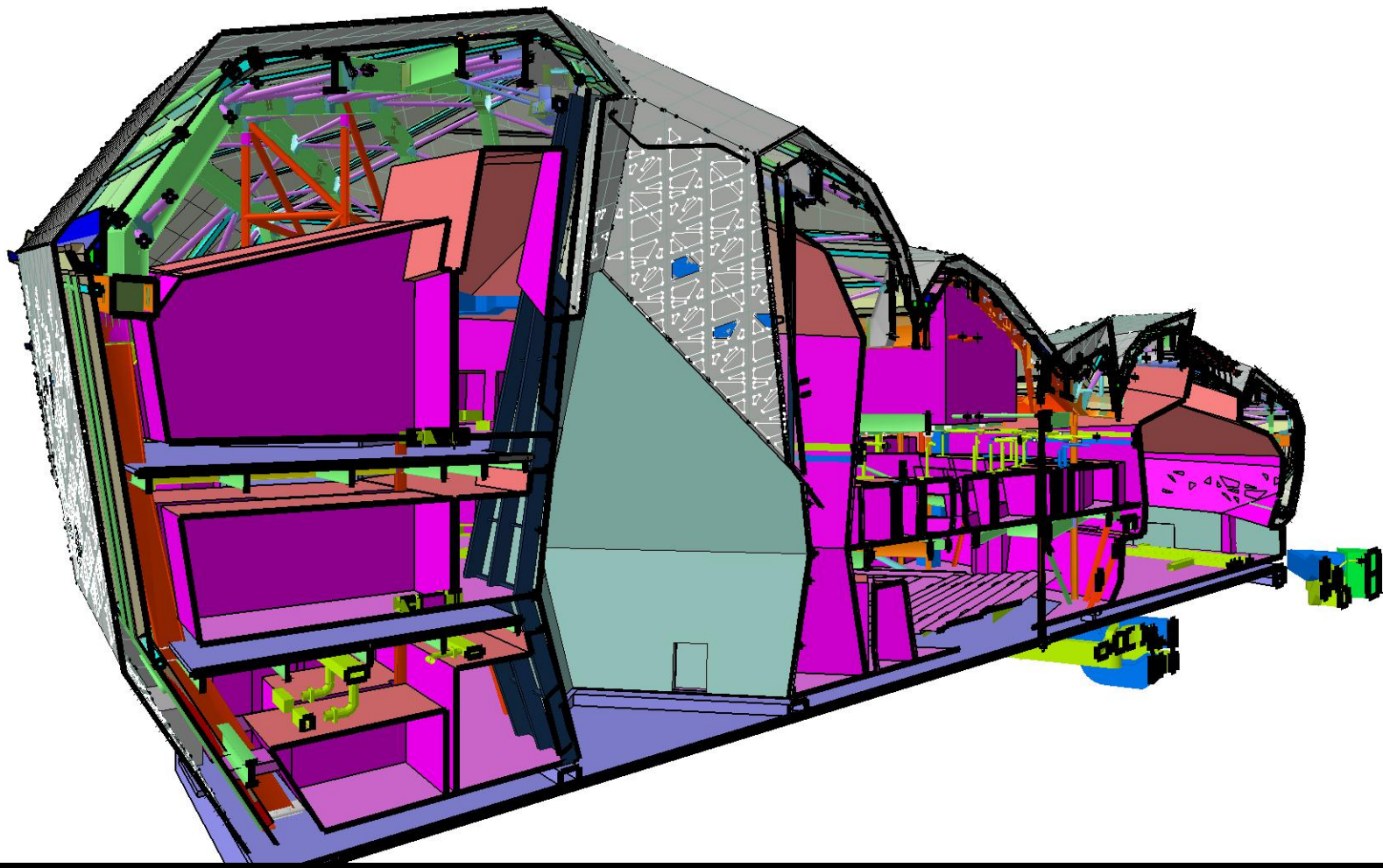


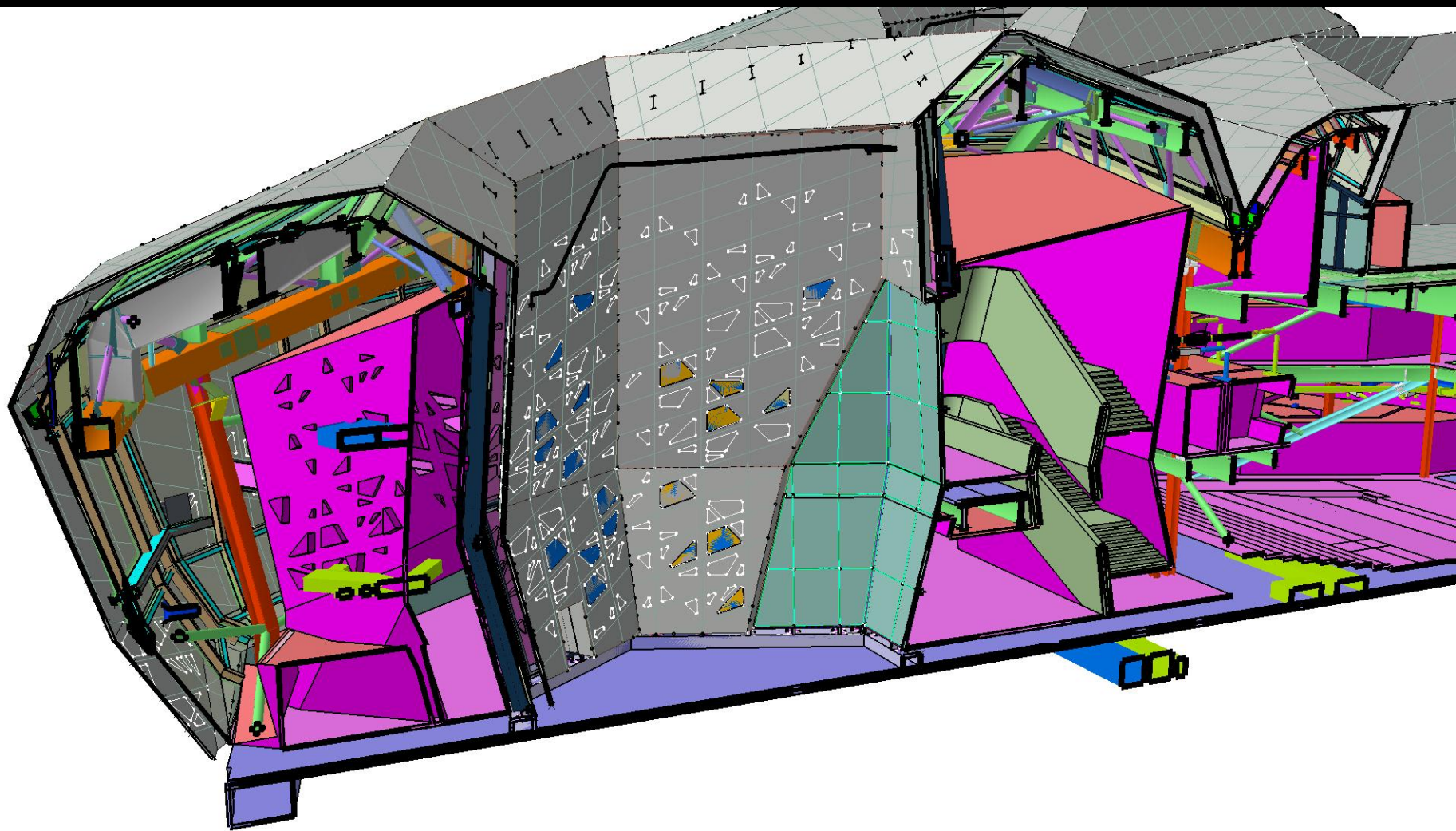


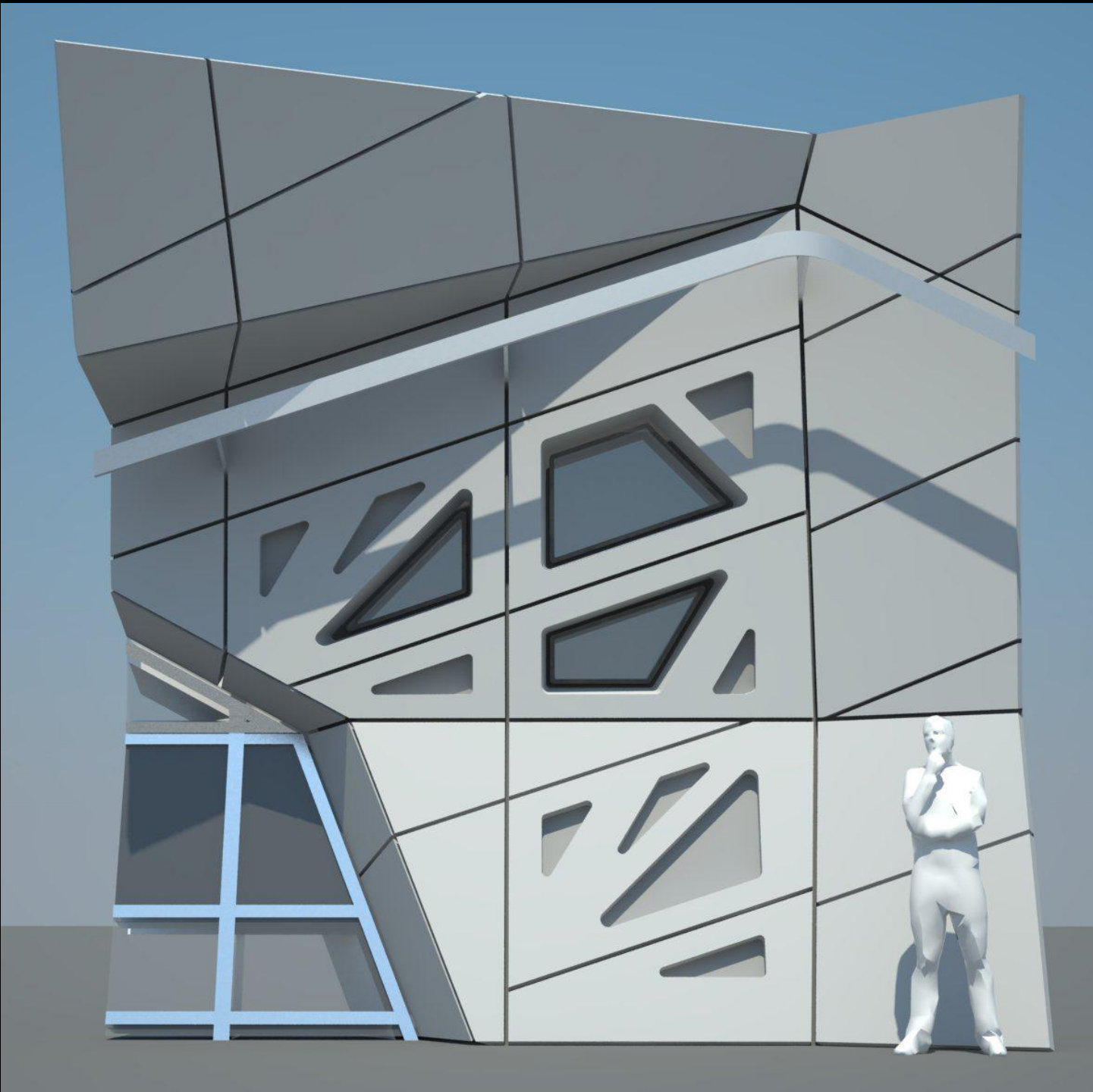




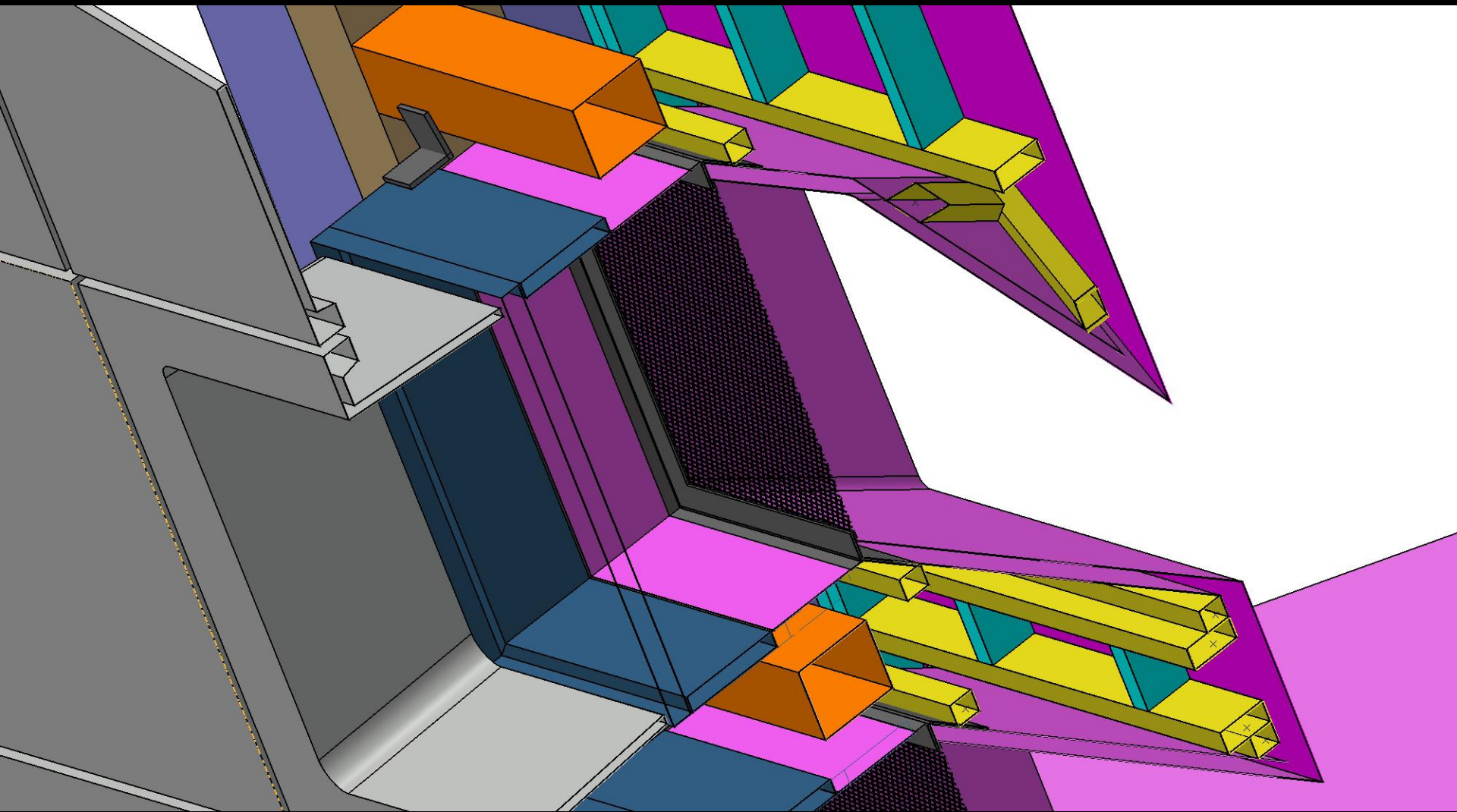


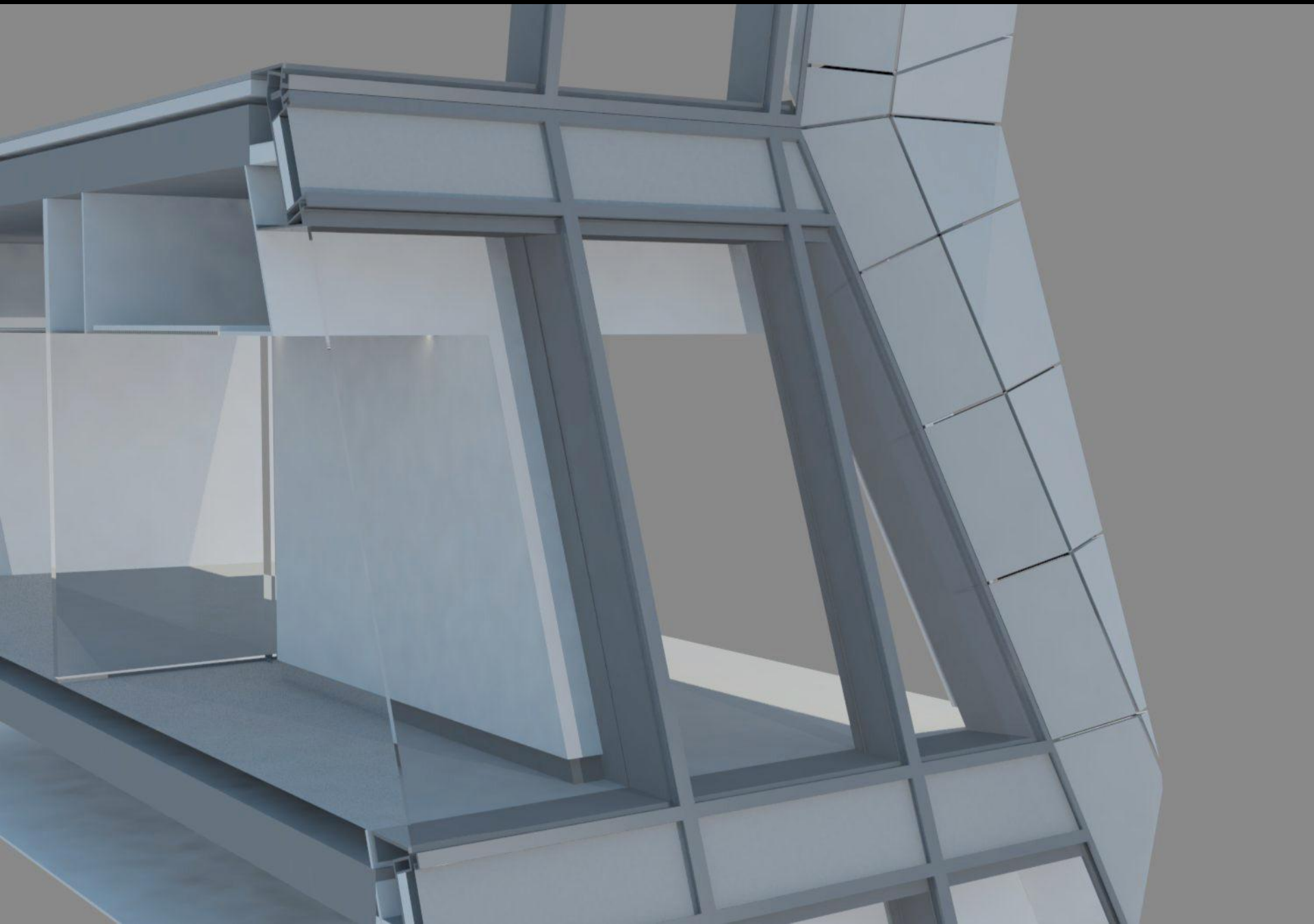




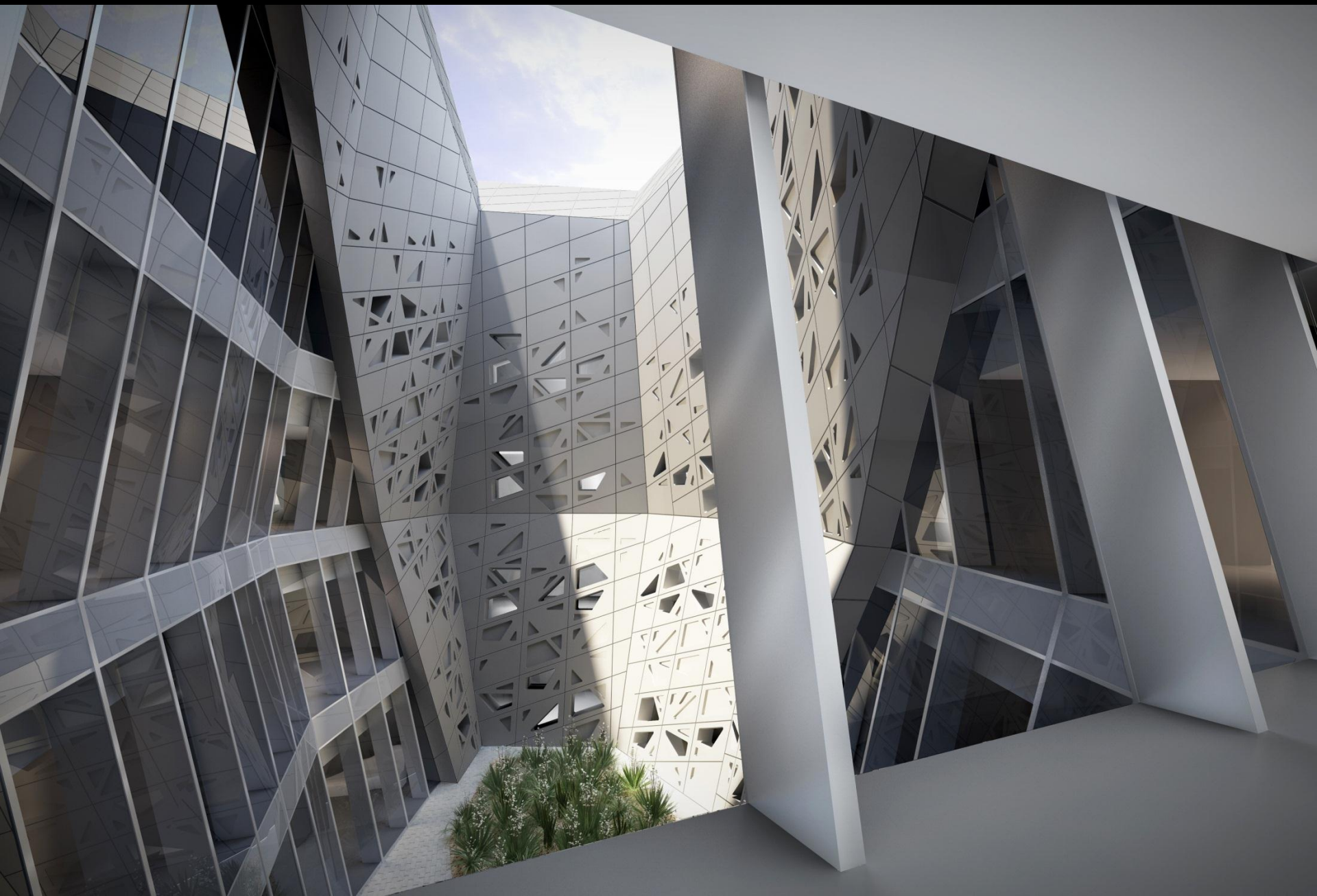


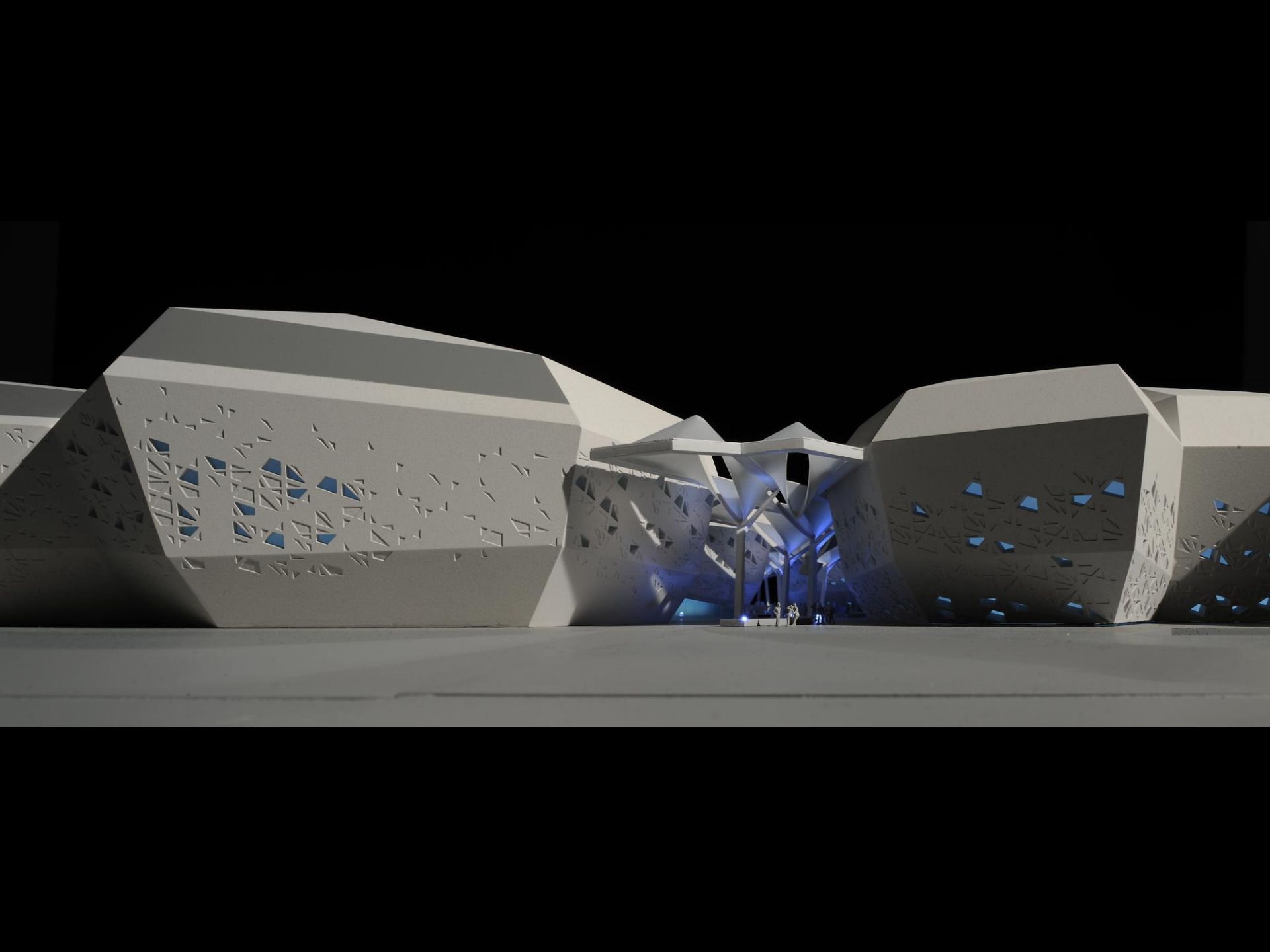


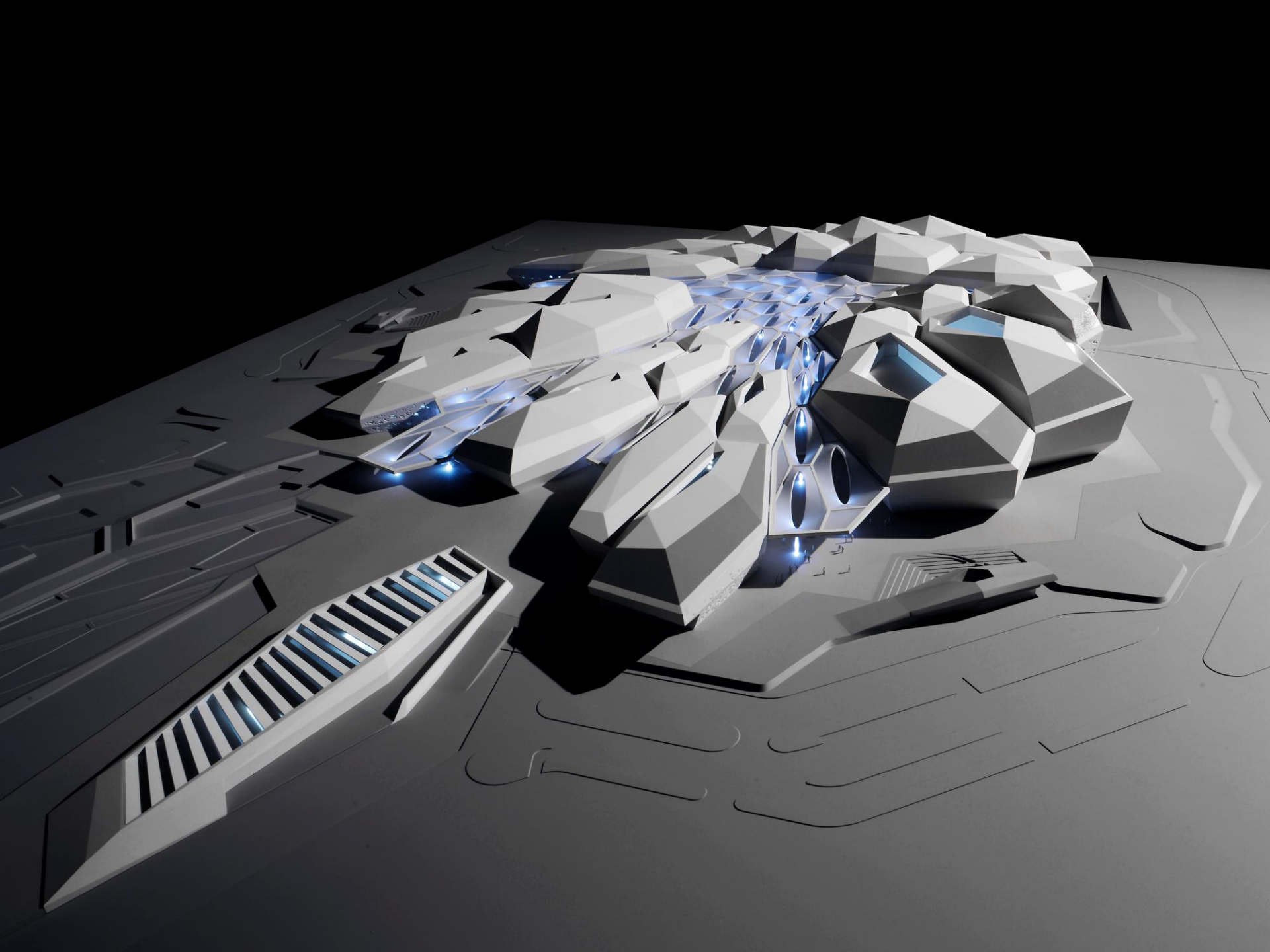














PRIZMA – BUDVA MONTENEGRO.
BIOTHING.

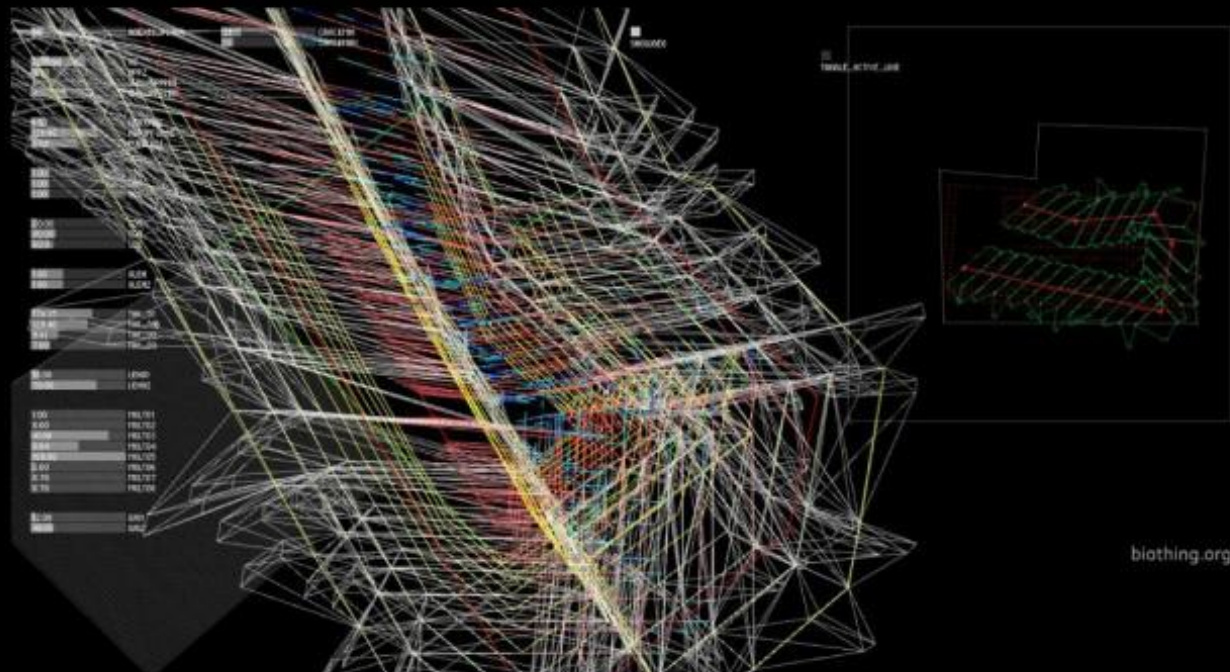
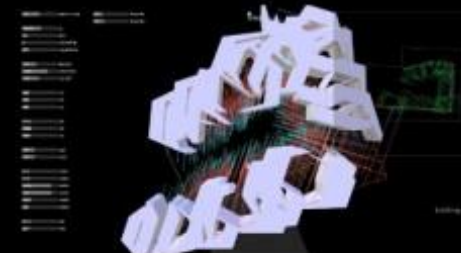
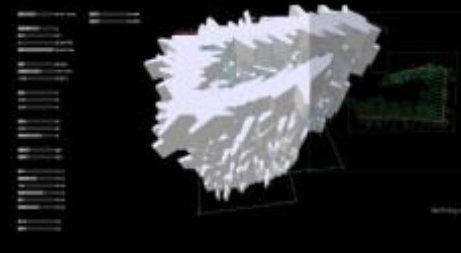
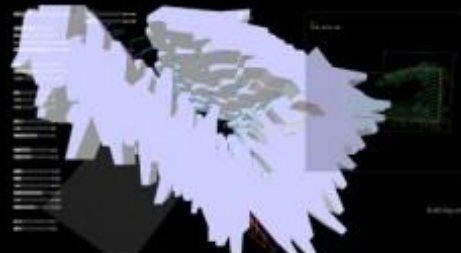
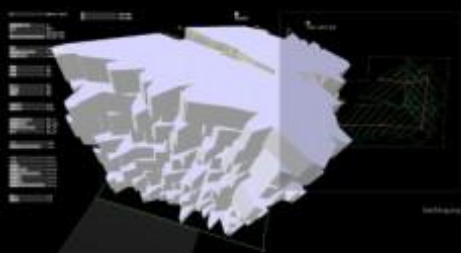
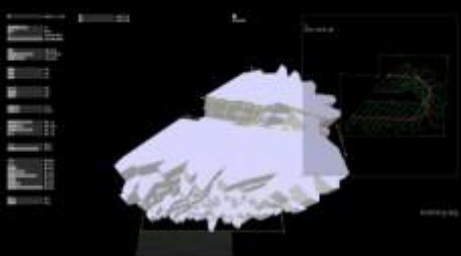
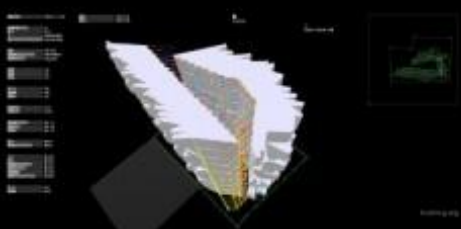
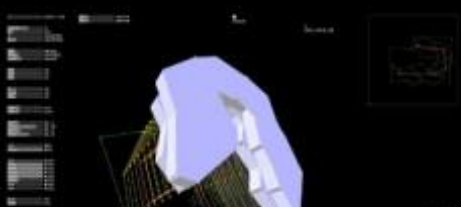
Agent Vectors
Photosensitivity

Agent Density
Adaptation to Views

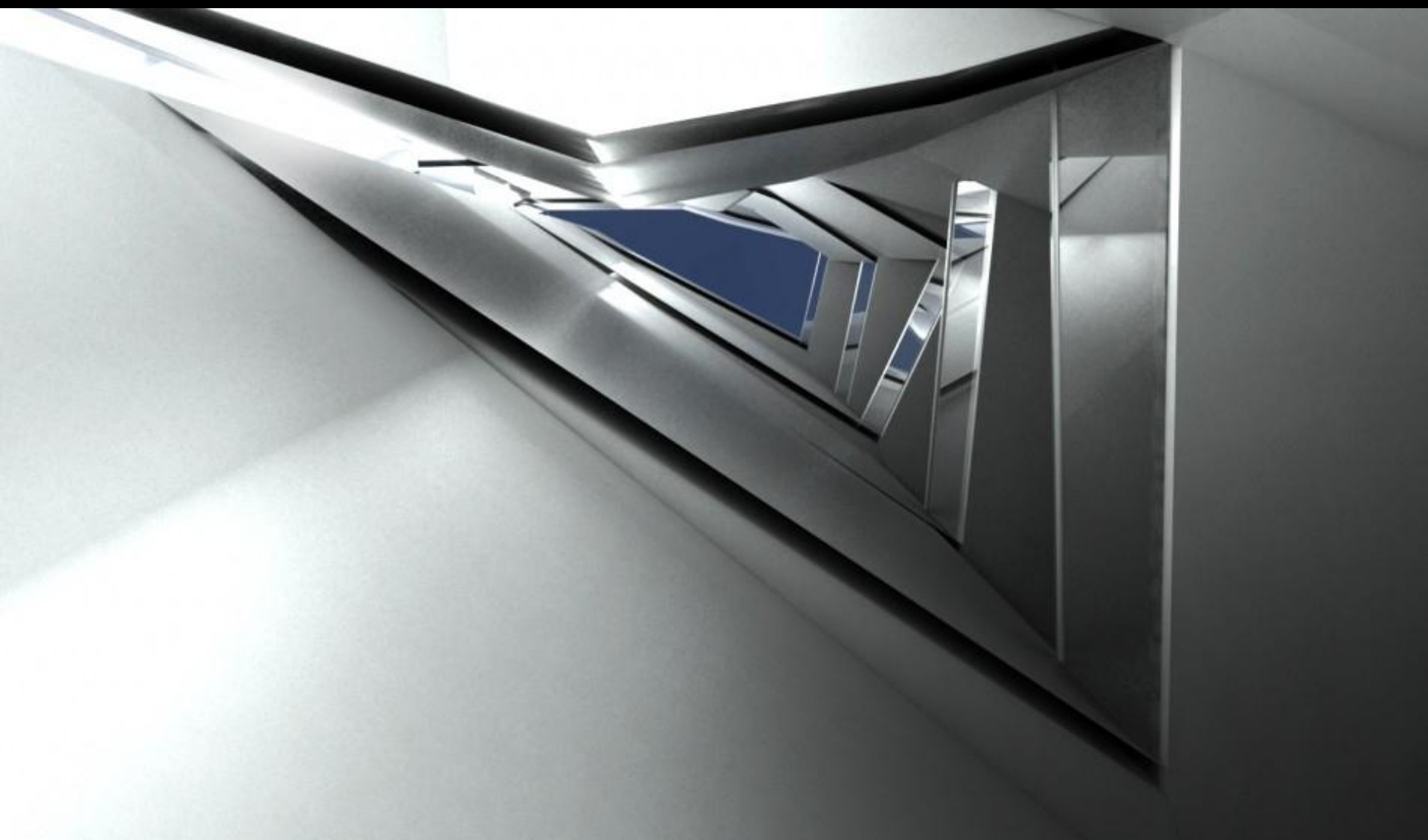
Agent Vectors
Adaptation to Views

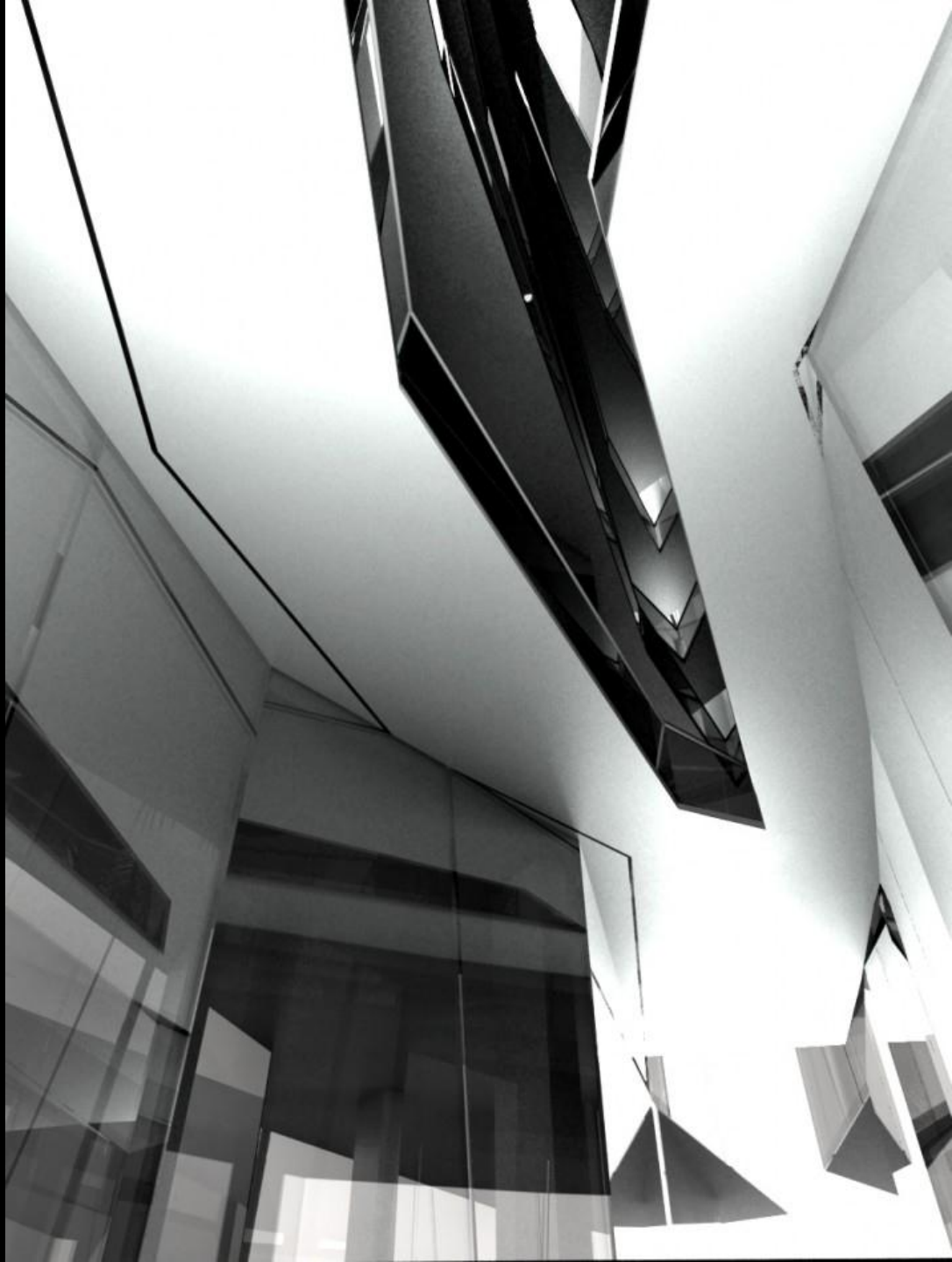
Slab Setback
Exterior Console Threshold

Slab Setback
Interior Gallery Threshold

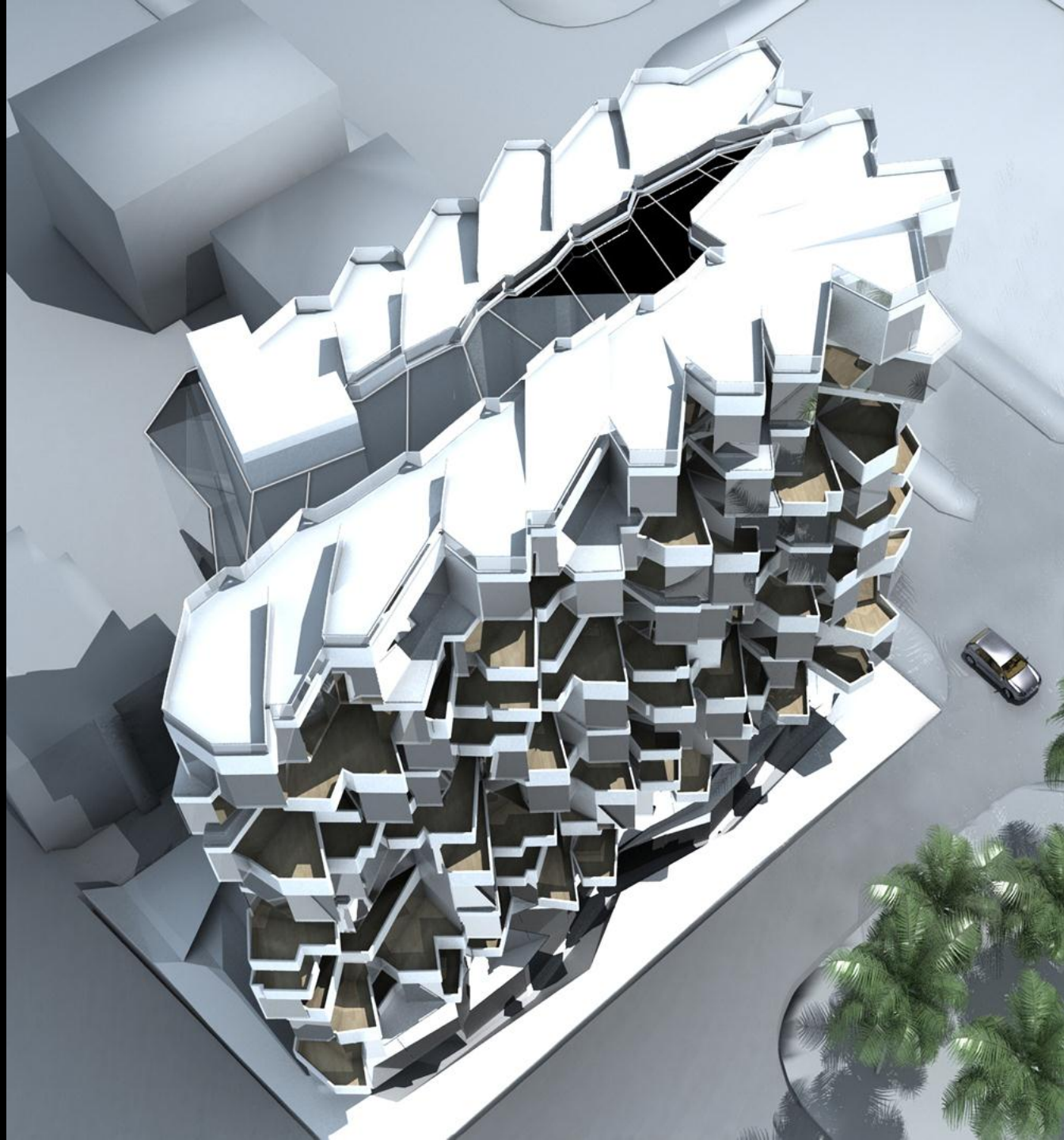




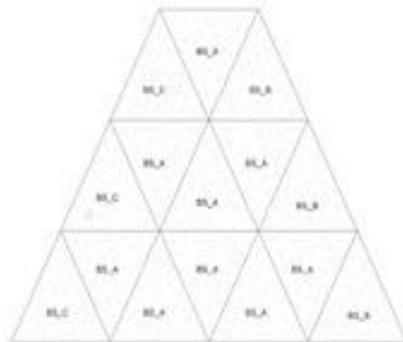
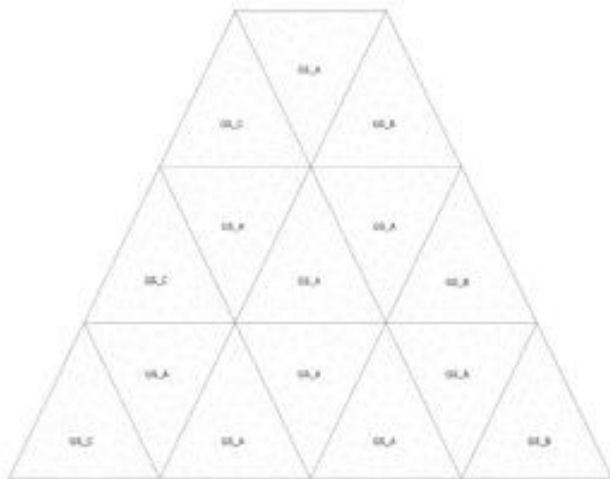


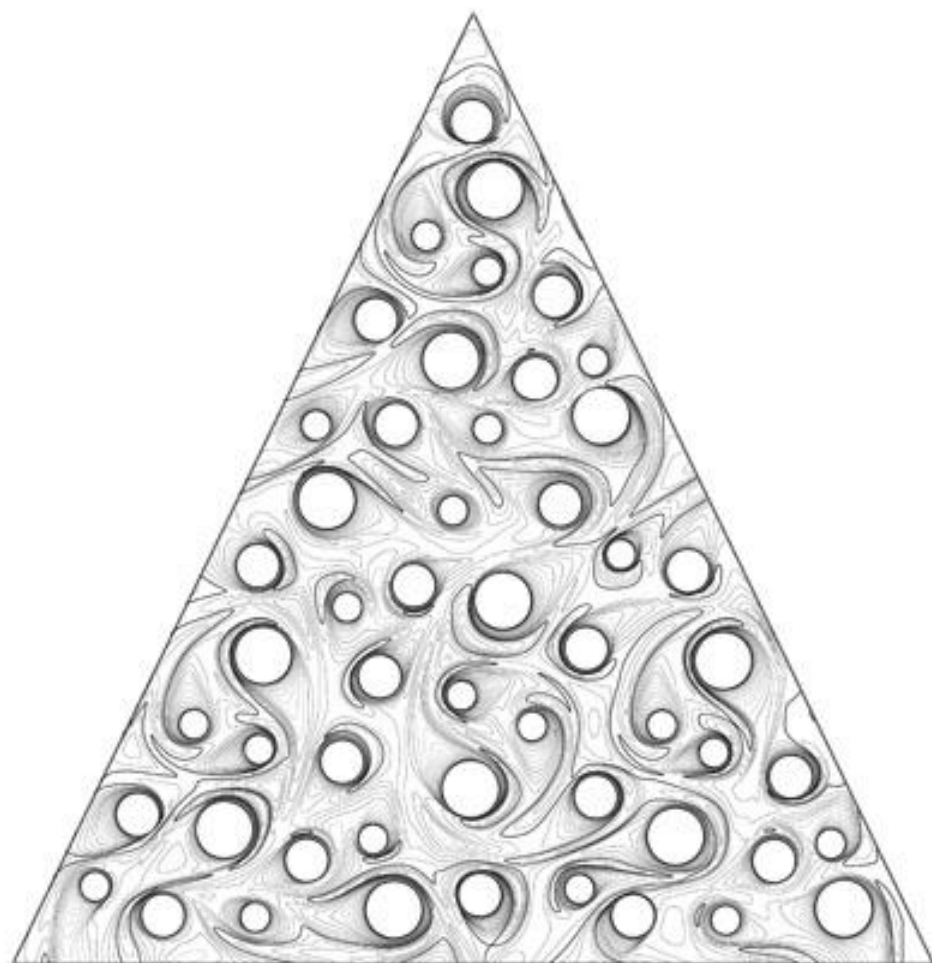


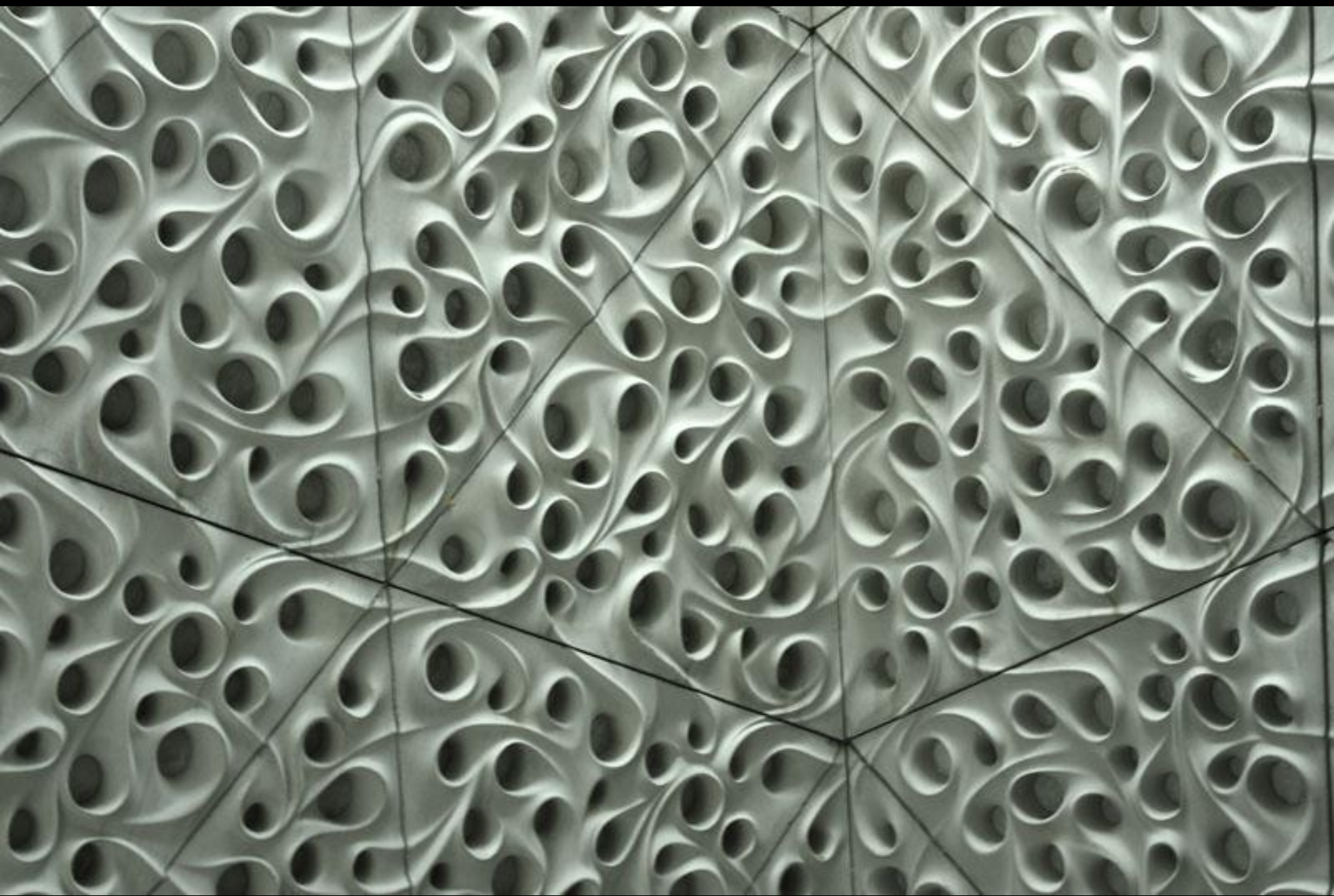




INNER FACADE FEDERAL COURT – BELLINZONA, SWITZERLAND.
GRAMAZIO & KOHLER









[C]SPACE PAVILION – LONDON, UNITED KINGDOM
DRL – ARCHITECTURAL ASSOCIATION.



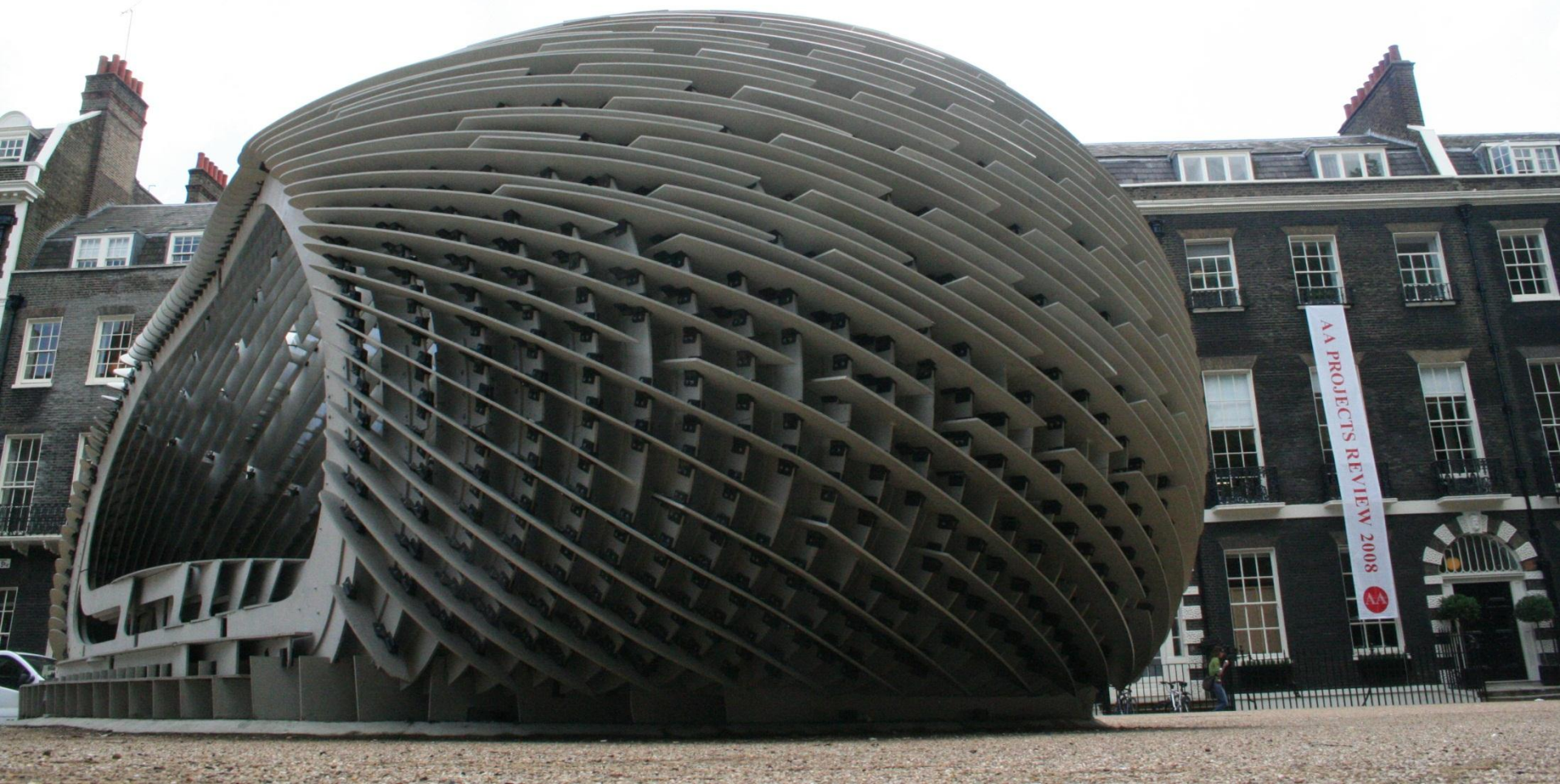














NOTES

DRAWINGS SHOW INDICATIVE ASSEMBLY SEQUENCE ONLY. REFER TO MAIN CONTRACTORS METHOD STATEMENTS FOR DETAILED CONSTRUCTION PROCEDURES

PEICE NUMBERS:

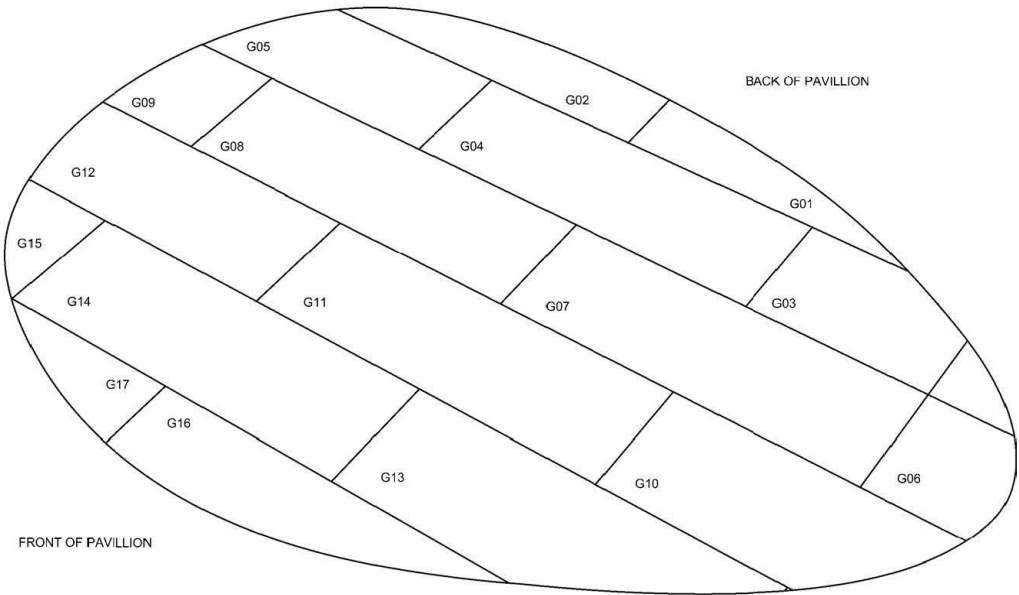
G01
G02
G03
G04
G05
G06
G07
G08
G09
G10
G11
G12
G13
G14
G15
G16

ASSEMBLY SEQUENCE:

LEVEL SITE WITH SAND BLINDING BEFORE LAYING GROUND MAT

REFER TO DWG GA 01 02 FOR LOCATION AND SET OUT OF PAVILLION BASE ON SITE

LAYOUT PIECES IN ARRANGEMENT SHOWN



LAYOUT VIEW

REV	DATE	DESCRIPTION	REV	DATE	DESCRIPTION	REV	DATE	DESCRIPTION
00	03.02.08	CONSTRUCTION						

ALAN DEMPSEY & ALVIN HUANG				DRAWN AD CHECKED AD			
AADRL10 RIEDER PAVILLION				NTS @ A3			
ASSEMBLY SEQUENCE STAGE 01				CONSTRUCTION			
ISSUE DATE 03.02.2008				A 01 01 REV 0			

NOTES

DRAWINGS SHOW INDICATIVE ASSEMBLY SEQUENCE ONLY. REFER TO MAIN CONTRACTORS METHOD STATEMENTS FOR DETAILED CONSTRUCTION PROCEDURES

PEICE NUMBERS:

GC01 (steel)		
GC02 (steel)		
GC03 (steel)		
GC04		
GC05a	GC36	GC05b
GC06a	GC37	GC06b
GC07a	GC38	GC07b
GC08a	GC39	GC08b
GC09a	GC40	GC09b
GC10a	GC41	GC10b
GC11a	GC42	GC11b
GC12a	GC43	GC12b
GC13a	GC44	GC13b
GC14a	GC45	GC14b
GC15a	GC46	GC15b
GC16a	GC47	GC16b
GC17a	GC48	GC17b
GC18a	GC49	GC18b
GC19a	GC50	GC19b
GC20a	GC51	GC20b
GC21a	GC52	GC21b
GC22a	GC53	GC22b
GC23a	GC54	GC23b
GC24a	GC55	GC24b
GC25a	GC56	GC25b
GC26a	GC57	GC26b
GC27a	GC58	GC27b
GC28a	GC59	GC28b
GC29a	GC60	GC29b
GC30a	GC61	GC30b
GC31a	GC62	GC31b
GC32a	GC63	GC32b
GC33a	GC64	GC33b
GC34a (steel)	GC65	GC34a (steel)
GC35 (steel)	GC66 (steel)	GC35 (steel)

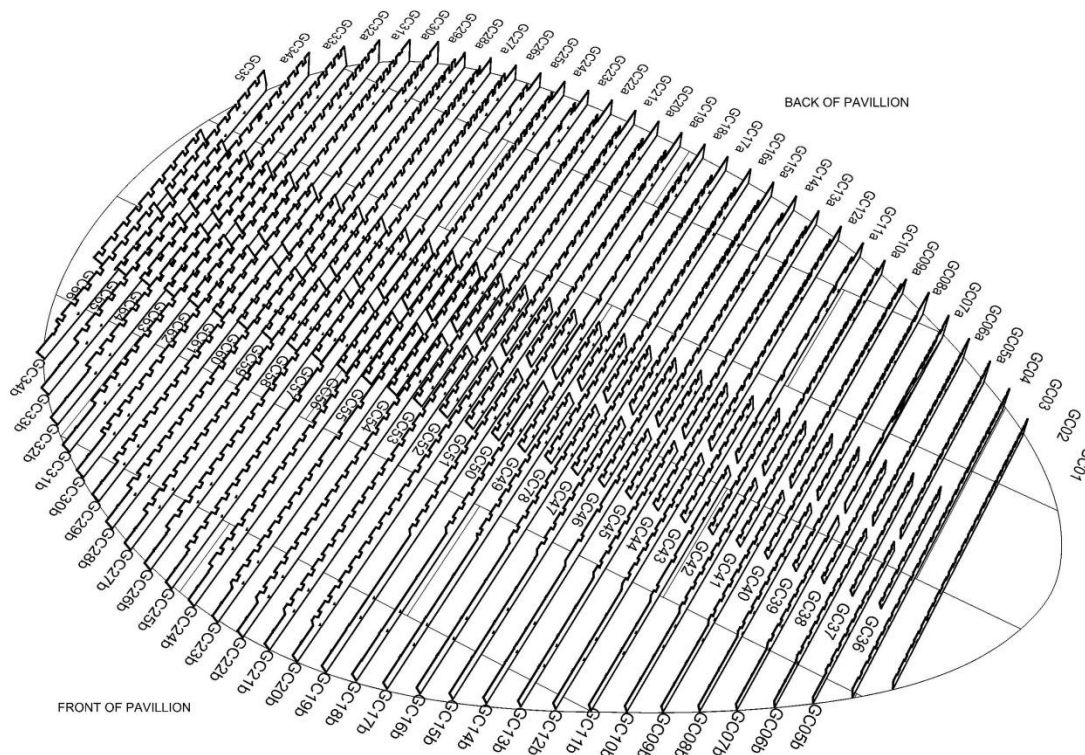
FOR SET OUT OF CROSS PROFILES REFER TO DRAWING GA 02 02

ASSEMBLY SEQUENCE:

ASSEMBLE FLOOR CROSS PROFILES TOGETHER WITH SPACING BLOCK AND BOLT TOGETHER WITH M8 BOLTS

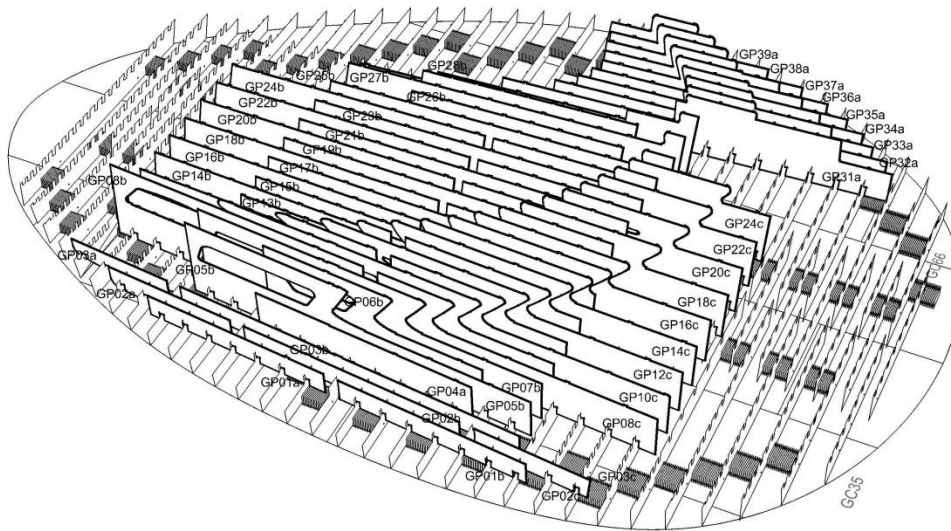
GA01A EPDM GASKET PADS TO BE BONDED TO CONCRETE CROSS ELEMENTS PRIOR TO ASSEMBLING ELEMENTS.
REFER TO DRAWING ?? FOR GLUING DETAILS

LAYOUT VIEW

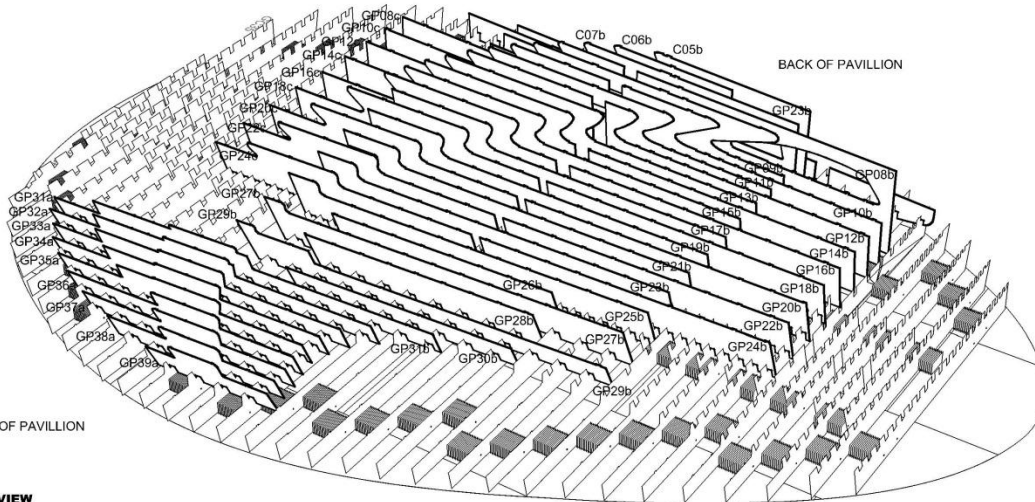


REV	DATE	DESCRIPTION	REV	DATE	DESCRIPTION	REV	DATE	DESCRIPTION
01	03.02.08	CONSTRUCTION						

ALAN DEMPSEY & ALVIN HUANG				DRAWN AD CHECKED AD			
AADR10 RIEDER PAVILLION				NTS @ A3			
ASSEMBLY SEQUENCE STAGE 01				CONSTRUCTION			
ISSUE DATE: 03.02.2008				A 02 01 REV 0			



REAR LAYOUT VIEW



FRONT LAYOUT VIEW

NOTES

DRAWINGS SHOW INDICATIVE ASSEMBLY SEQUENCE ONLY. REFER TO MAIN CONTRACTORS METHOD STATEMENTS FOR DETAILED CONSTRUCTION PROCEDURES

PIECE NUMBERS:

PRIMARY DIRECTION
GP01A GP01B
GP02A GP02B GP02C
GP03A GP03B GP03C
GP04B
GP05B
GP06B
GP07B
GP08B GP08C
GP09B
GP10B GP10C
GP11B
GP12B GP12C
GP13B
GP14B GP14C
GP15B
GP16B GP16C
GP17B
GP18B GP18C
GP19B
GP20B GP20C
GP21B
GP22B GP22C
GP23B
GP24B GP24C
GP25B
GP26B
GP27B
GP28B
GP29B
GP30B
GP31A GP31B
GP32A
GP33A
GP34A
GP35A
GP36A
GP37A
GP38A
GP39A

ASSEMBLY SEQUENCE:

INSERT CENTRAL PRIMARY PROFILES INTO FLOOR CROSS PROFILES

GA01A EPDM GASKET PADS TO BE BONDED TO CONCRETE PRIOR TO INSERTING ELEMENTS. REFER TO DRAWING ?? FOR GLUING DETAILS

REV	DATE	DESCRIPTION	REV	DATE	DESCRIPTION	REV	DATE	DESCRIPTION
01	03.02.08	CONSTRUCTION						

ALAN DEMPSEY & ALVIN HUANG			DRAWN AD CHECKED AD		
AADRL10 RIEDER PAVILLION			1:50 @ A3		
ASSEMBLY SEQUENCE STAGE 03			03.02.2008		
CONSTRUCTION			A 03 01 REV 0		

NOTES

DRAWINGS SHOW INDICATIVE ASSEMBLY SEQUENCE ONLY. REFER TO MAIN CONTRACTORS METHOD STATEMENTS FOR DETAILED CONSTRUCTION PROCEDURES

PIECE NUMBERS:

STEEL STABILITY FRAME REPLACES FIBRE-C
PIECE NUMBERS

PRIMARY DIRECTION	CROSS DIRECTION
GP14A	C09b
GP14D	C12b
GP14E	C15b
GP14F	C18b
GP14G	C21b
GP14H	C24b
GP14I	C27b
	C30b
GP17A	C33b
GP17C	C36b
GP17D	C39b
GP17E	C42b
GP17F	C45b
GP17G	C48b
GP17H	C51b
	C54b
GP20A	C57b
GP20D	C60b
GP20E	C63b
GP20F	C66b
GP20G	C69b
GP20H	C72b
GP20I	C75b
	C78b
	C81b
	C85b
	C88b

PRIMARY BRACES:

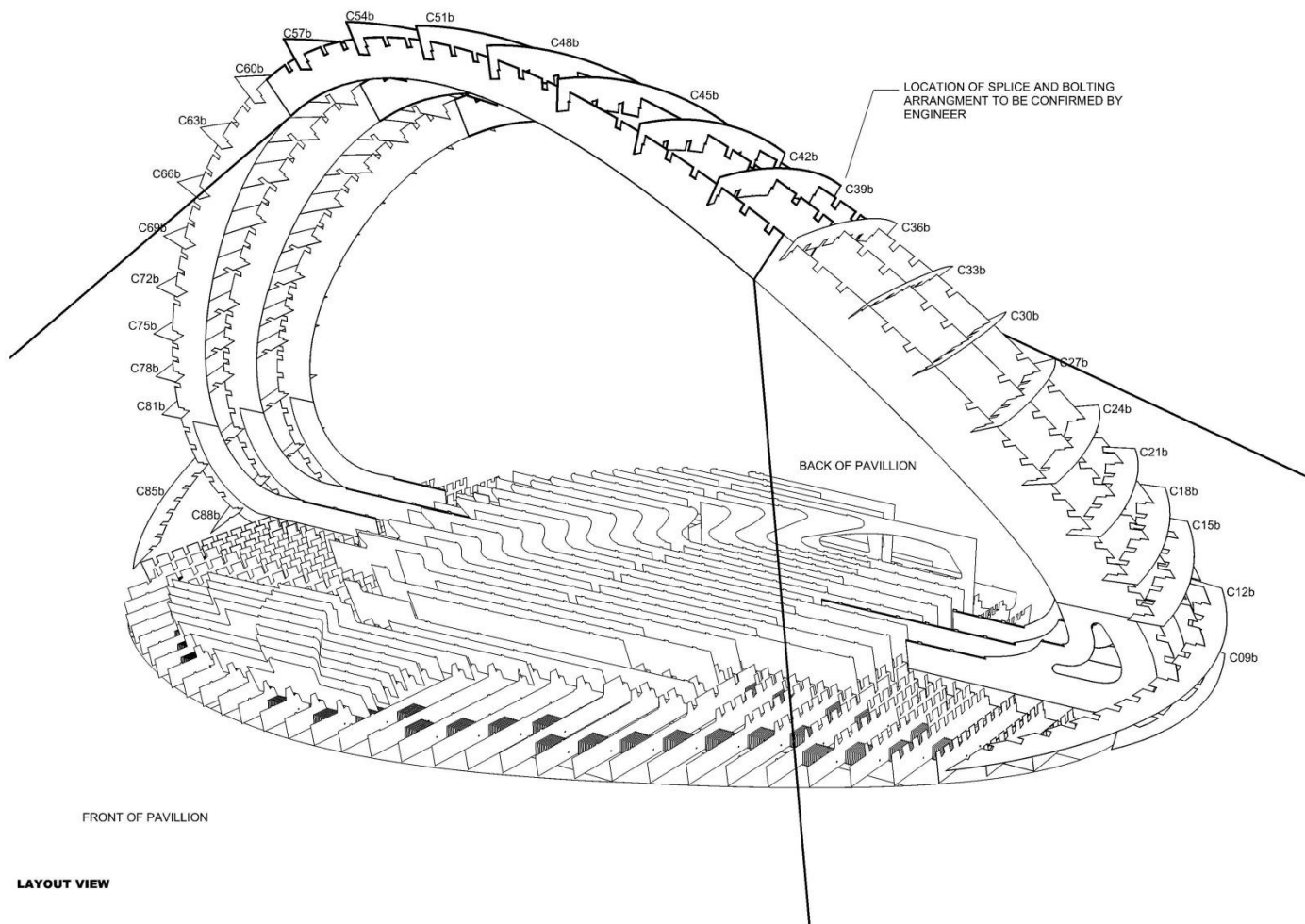
GP14A	
GP14D	
GP14A	TOTAL REPLACEMENT
GP14D	60 PIECES
GP17A	
GP17C	
GP17A	
GP17C	
GP20A	
GP20D	
GP20A	
GP20D	

ASSEMBLY SEQUENCE:

LIFT STEEL ASSEMBLY 3 INTO POSITION
AND BOLT SPLICE TO ASSEMBLIES 1 AND 2

STEEL ASSEMBLIES TO BE TEMPORARILY
RESTRAINED WITH CABLE TIES IN CORRECT
POSITION

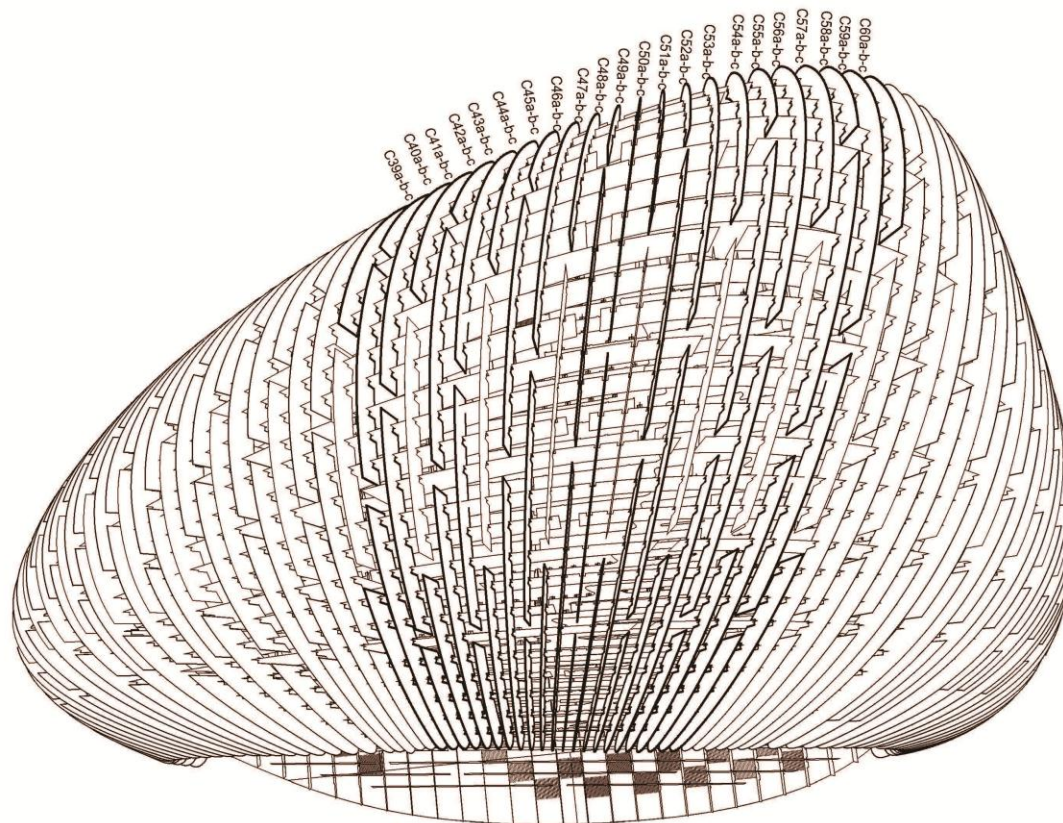
FOR SET OUT CHECKING OF STEEL FRAME REFER
TO DRAWING ??



LAYOUT VIEW

REV	DATE	DESCRIPTION	REV	DATE	DESCRIPTION	REV	DATE	DESCRIPTION
01	03.02.08	CONSTRUCTION						

ALAN DEMPSEY & ALVIN HUANG			
ADRL10 RIEDER PAVILLION		DRAWN	AD
ASSEMBLY SEQUENCE STAGE 05		CHECKED	AD
CONSTRUCTION		ISSUE DATE	03.02.2008
		SCALE	1:50 @ A3
		REV	0



TEMPORARY WORKS PLATFORM HIDDEN FOR CLARITY. PLATFORM TO BE DESIGNED AND ERECTED BY MAIN CONTRACTOR

EXACT LEVEL TO BE CONFIRMED BY CONTRACTOR

NOTES

DRAWINGS SHOW INDICATIVE ASSEMBLY SEQUENCE ONLY. REFER TO MAIN CONTRACTORS METHOD STATEMENTS FOR DETAILED CONSTRUCTION PROCEDURES

PROFILES ARE NUMBERED FROM WEST TO EAST
PROFILES ARE LETTERED FROM SOUTH TO NORTH

PIECE NUMBERS:

C39A STEEL C39C
C40A C40B C40C
C41A C41B C41C
C42A STEEL C42C
C43A C43B C43C
C44A C44B C44C
C45A STEEL C45C
C46A C46B C46C
C47A C47B C47C
C48A STEEL C48C
C49A C49B C49C
C50A C50B C50C
C51A STEEL C51C
C52A C52B C52C
C53A C53B C53C
C54A STEEL C54C
C55A C55B C55C
C56A C56B C56C
C57A STEEL C57C
C58A C58B C58C
C59A C59B C59C
C60A STEEL C60C

ASSEMBLY SEQUENCE:

PRE DRILL CROSS PROFILE WITH 2NO. 8MM DIA. HOLES FOR EACH GASKET.

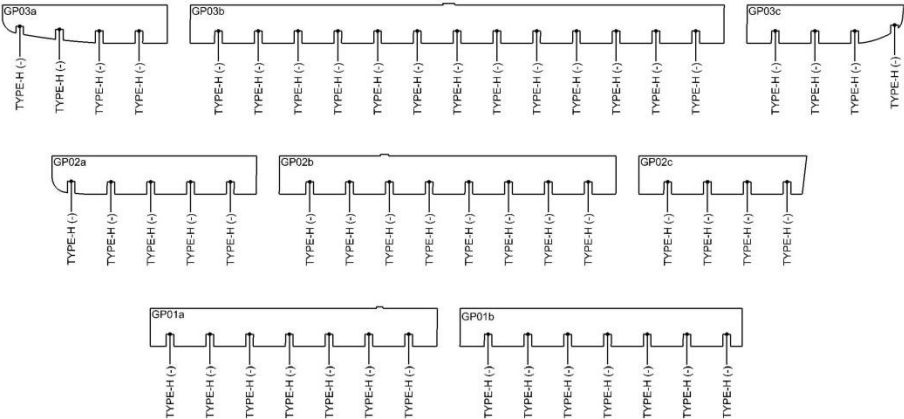
REFER TO GASKET ARRANGEMENT DRAWINGS
???? FOR NUMBER AND TYPE OF GASKETS ON EACH PROFILE

INSERT CROSS PROFILES INTO PRIMARY PROFILES
AND INSERT 2NO. GASKETS INTO EACH JOINT TO LOCK IN PLACE

INSERT BOLTS AND TIGHTEN

REV	DATE	DESCRIPTION	REV	DATE	DESCRIPTION	REV	DATE	DESCRIPTION
01	23.02.08	CONSTRUCTION						
A	03.02.08	PIECE NUMBERS ADDED						

ALAN DEMPSEY & ALVIN HUANG			ADRL10 RIEDER PAVILLION		
ADRL10 RIEDER PAVILLION			DRAWN AD CHECKED AD		
ASSEMBLY SEQUENCE STAGE 13			1:50 @ A3		
CONSTRUCTION			A 13 01 REV A		



GLOBAL PROFILES 01-03

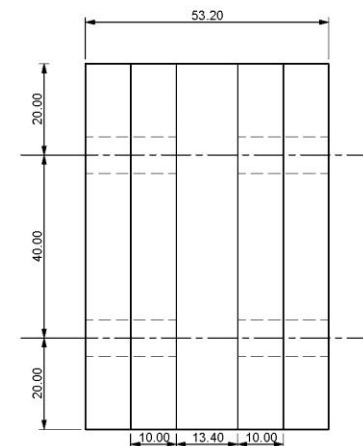
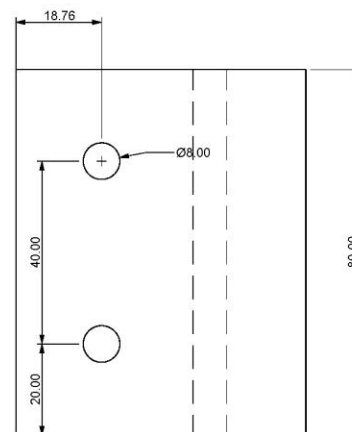
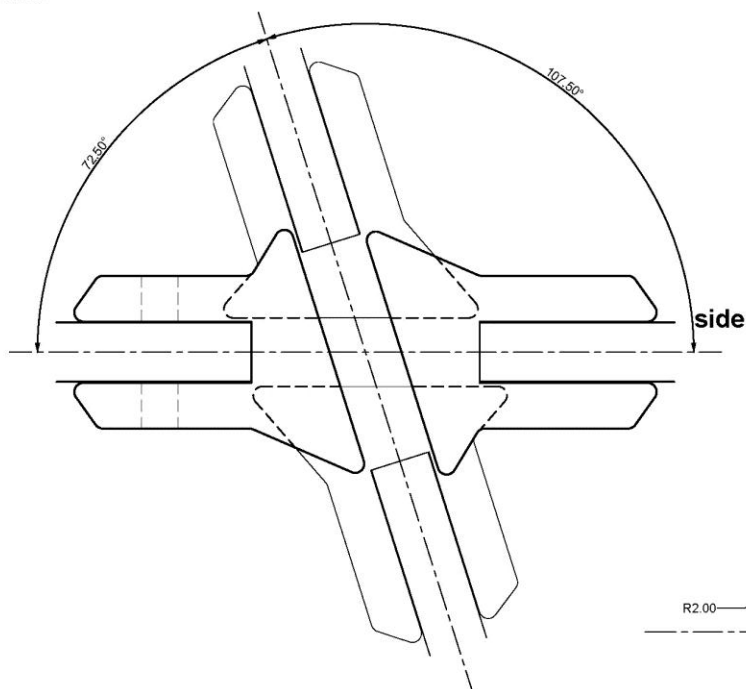
REV	DATE	DESCRIPTION	REV	DATE	DESCRIPTION	REV	DATE	DESCRIPTION
01	03.02.08	CONSTRUCTION						

ALAN DEMPSEY & ALVIN HUANG			DRAWN: AH			CHECKED: AH		
AADRL10 RIEDER PAVILLION			GASKET SCHEDULE : GLOBAL PROFILES 01 - 03			1:30 @ A3		
CONSTRUCTION			ISSUE DATE: 03.02.2008			GA 01 01 REV 0		

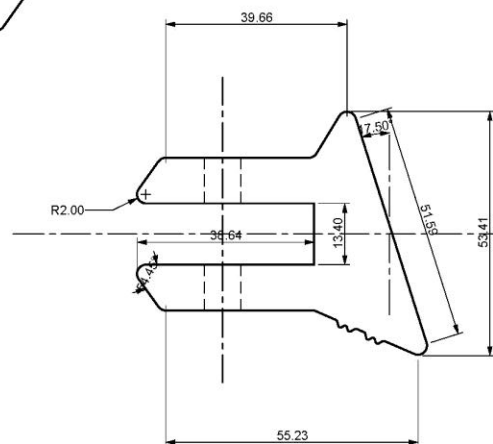
NOTES

- FOR ALL CONCRETE TO CONCRETE CONNECTIONS:
- GASKETS ON GLOBAL PROFILE TO BE PRE-GLUED PRIOR TO ASSEMBLY
- GASKETS ON CROSS PROFILE TO BE BOLTED DURING ASSEMBLY
- REFER TO SHEET GA 05 09 FOR ASSEMBLY PROCEDURES
- FOR ALL CONCRETE (GLOBAL PROFILE) TO STEEL (CROSS PROFILE) CONNECTIONS:
- GASKETS ON STEEL (CROSS PROFILE) TO BE PRE-GLUED PRIOR TO ASSEMBLY
- GASKETS ON CONCRETE (GLOBAL PROFILE) TO BE BOLTED DURING ASSEMBLY
- REFER TO SHEET GA 05 10 FOR ASSEMBLY PROCEDURES
- FOR ALL STEEL (GLOBAL PROFILE) TO CONCRETE (CROSS PROFILE) CONNECTIONS:
- GASKETS ON STEEL (GLOBAL PROFILE) TO BE PRE-GLUED PRIOR TO ASSEMBLY
- GASKETS ON CONCRETE (CROSS PROFILE) TO BE BOLTED DURING ASSEMBLY
- REFER TO SHEET GA 05 11 FOR ASSEMBLY PROCEDURES
- REFER TO GA 05 09 - GA 05 11 FOR GASKET ASSEMBLY PROCEDURES
- REFER TO GASKET SCHEDULES GA 04 01 - GA 04 30 FOR GASKET ORIENTATION

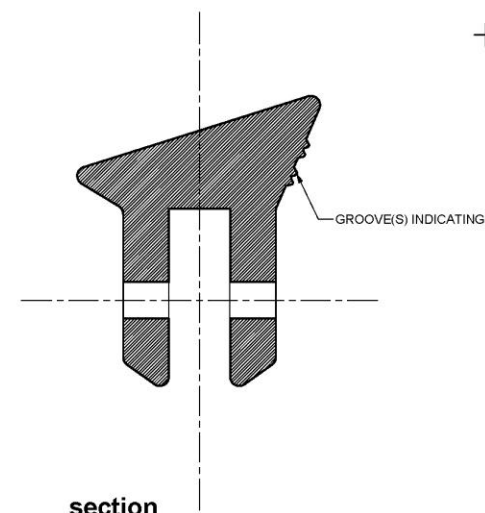
TYPE-4 (17.5°) x930no.



back



plan



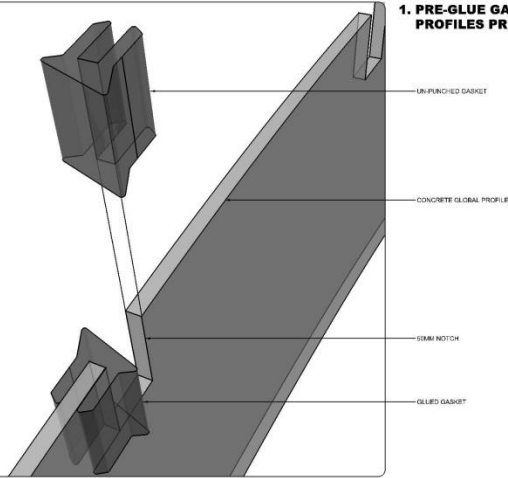
section

GASKET DETAIL - TYPE 4

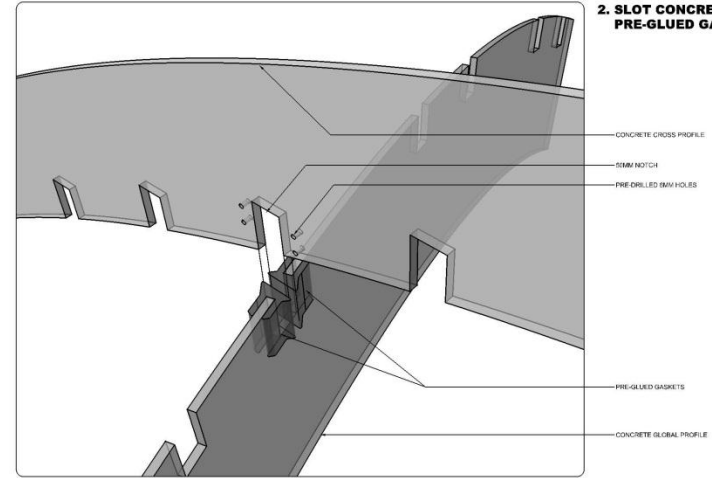
REV	DATE	DESCRIPTION	REV	DATE	DESCRIPTION	REV	DATE	DESCRIPTION
01	03.02.08	CONSTRUCTION						

ALAN DEMPSEY & ALVIN HUANG				DRAWN: AH CHECKED: AH			
AARL10 RIEDER PAVILLION				1:1 @ A3			
GASKET DETAIL - TYPE 4				GA 05 04 REV 0			
CONSTRUCTION				ISSUE DATE: 03.02.2008			

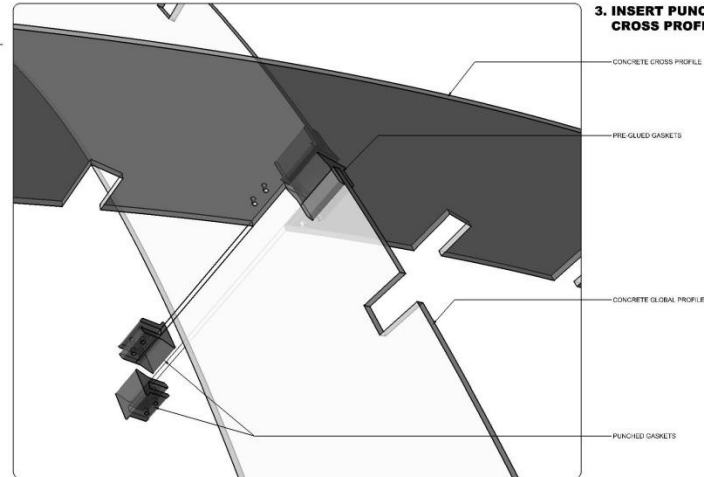
1. PRE-GLUE GASKETS TO STEEL GLOBAL PROFILES PRIOR TO ASSEMBLY.



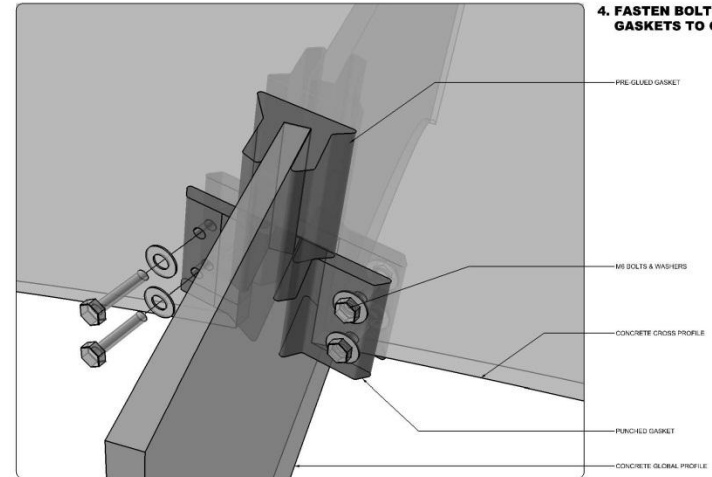
2. SLOT CONCRETE CROSS PROFILE INTO PRE-GLUED GASKET ASSEMBLY.



3. INSERT PUNCHED GASKETS ON TO CONCRETE CROSS PROFILE NOTCHES FROM BELOW.



4. FASTEN BOLTS TO FIX SECOND SET OF GASKETS TO CROSS PROFILE.



GASKET ASSEMBLY - CONDITION C: STEEL (GLOBAL) ON CONCRETE (CROSS)

REV	DATE	DESCRIPTION	REV	DATE	DESCRIPTION	REV	DATE	DESCRIPTION
01	03.02.08	CONSTRUCTION						

ALAN DEMPSEY & ALVIN HUANG			DRAWN AH CHECKED AH		
AADR10 RIEDER PAVILLION			1:30 @ A3		
GASKET ASSEMBLY - CONDITION C			ISSUE DATE 03.02.2008		
CONSTRUCTION			GA 01 01 REV 0		

¿CÓMO PODEMOS DISEÑAR ALGO QUE NO
PODEMOS IMAGINAR?



FABLAB
UNAL medellín

un
UNIVERSIDAD NACIONAL DE COLOMBIA
SEDE MEDELLÍN
FACULTAD DE ARQUITECTURA



<http://vimeo.com/12768578>



LIKE



LATER



SHARE



04:45

HD



Full Printed

from **nueveojos** PLUS 2 years ago NOT YET RATED



FABLAB

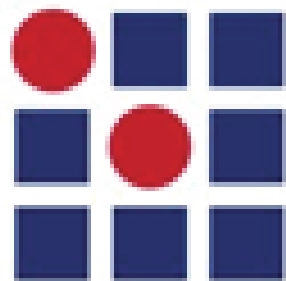
=

acrónimo en inglés
que significa:

Fabrication Laboratory

Laboratorio de Fabricación

Creador FabLabs = Neil Gershenfeld



THE CENTER FOR
BITS AND ATOMS
Massachusetts Institute of Technology



FABLAB =

son una red global de laboratorios
locales que favorecen la creatividad
proporcionando a los individuos
herramientas de fabricación digital.



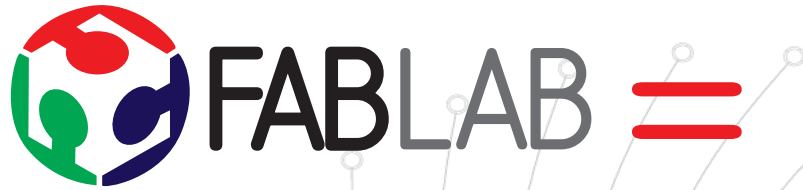
FABLAB = un lugar para fabricar
(casi) lo que sea

"HOW TO MAKE (ALMOST) ANYTHING"



FABLAB =

cualquier persona puede usar el
Fab lab debe aprender a hacerlo por
si solo o compartir el uso del
laboratorio con otros usuarios



la enseñanza en el Fab lab se basa sobre proyectos en progreso y aprendizaje en equipo; los usuarios deben contribuir tanto a la documentación como a la instrucción



¿porque un fablab es diferente de cualquier otro laboratorio?

conceptos que marcan la diferencia...



red global



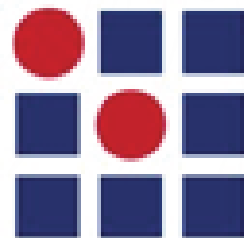
= hace parte directa de una red global
de laborarorios de fabricación digital



y acompañados directamente por:



FAB
FOUNDATION



THE CENTER FOR
BITS AND ATOMS
Massachusetts Institute of Technology



FAB LAB
BARCELONA



FABLABLIMA





herramientas de fabricación



cortadoras laser

fresadora cnc 3 ejes grande

fresadora cnc 5 ejes

fresadora cnc pequeña

dream team

cortadora vinilo

impresora plastico 3D



acceso abierto



bloque 25 salon 211 segundo piso

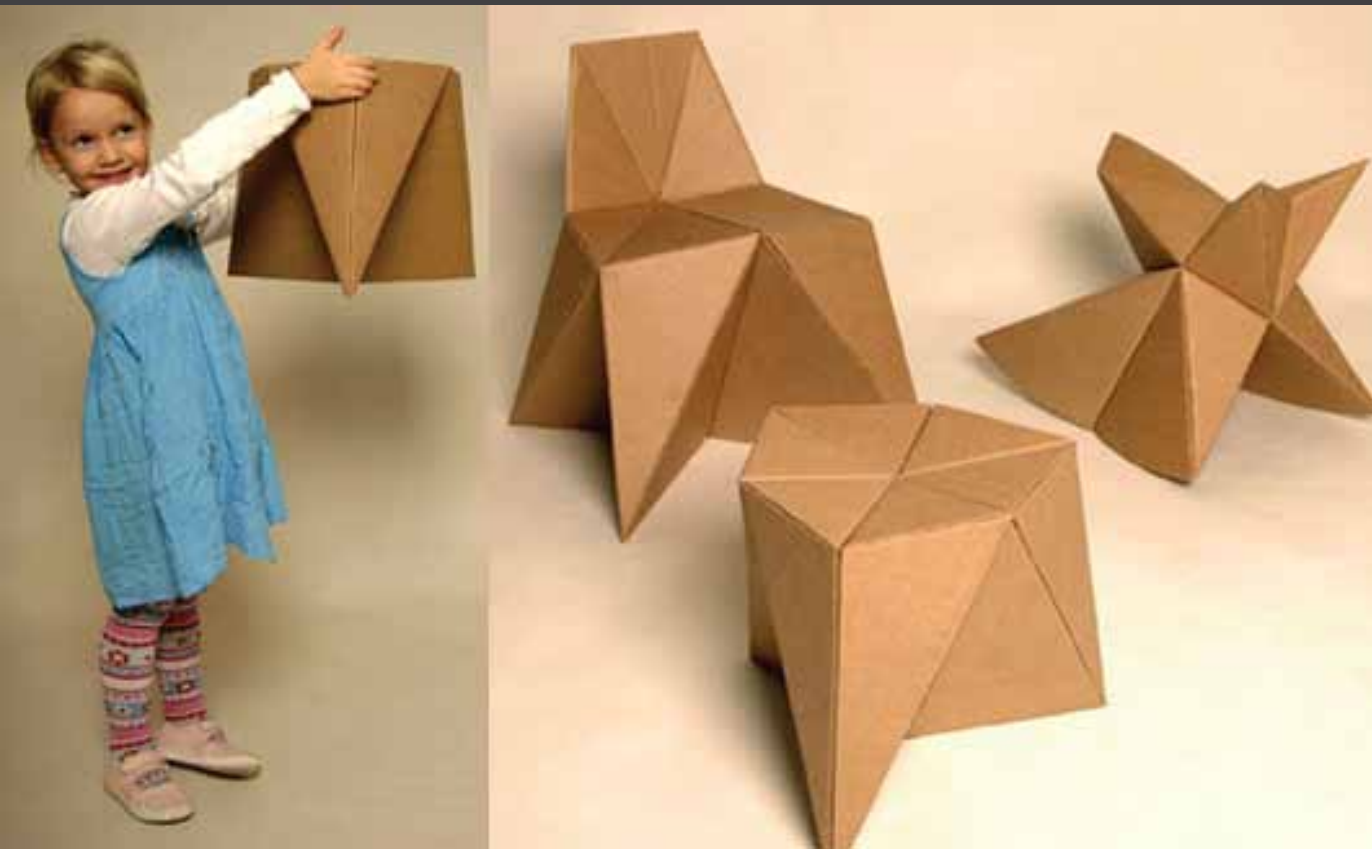


compartir el conocimiento



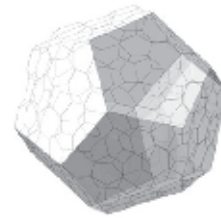
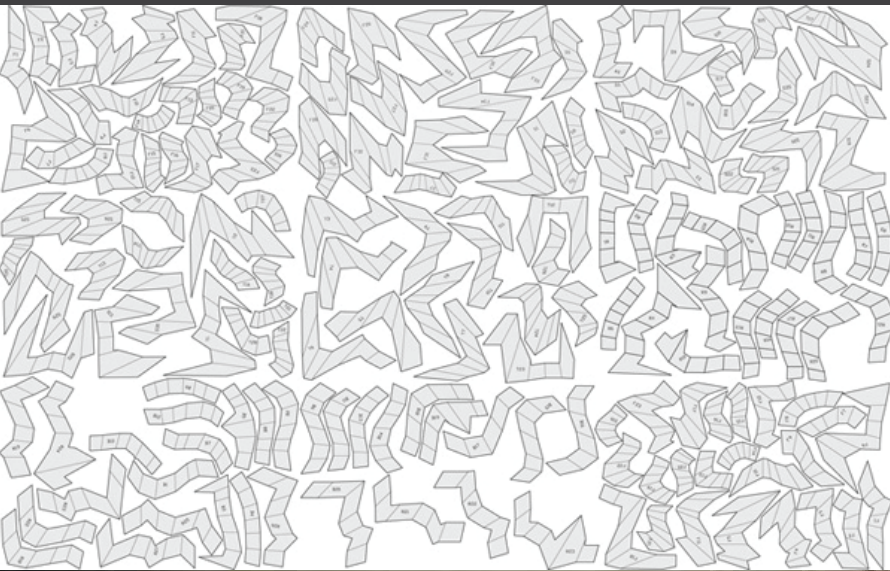


codigo abierto – open source

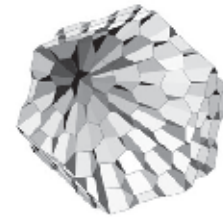




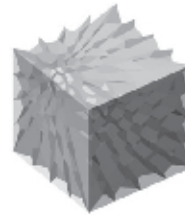
diseño libre – open design



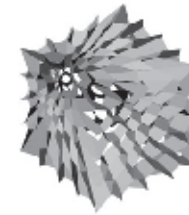
1. Geodesic sphere grid



2. Extrude grid to point



3. Thin extrusion with cubes



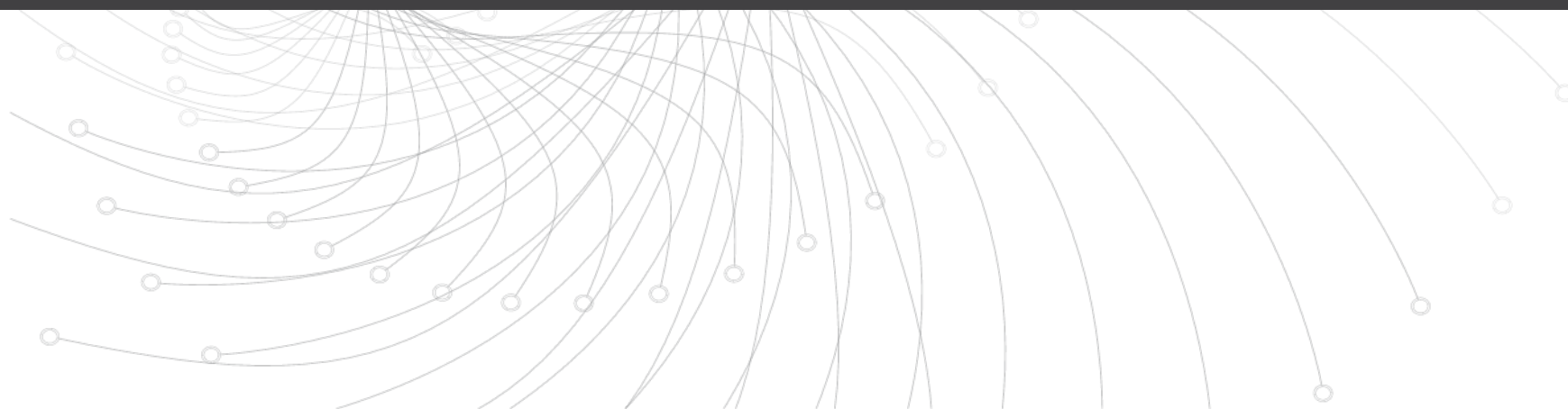
4. Final pavilion form

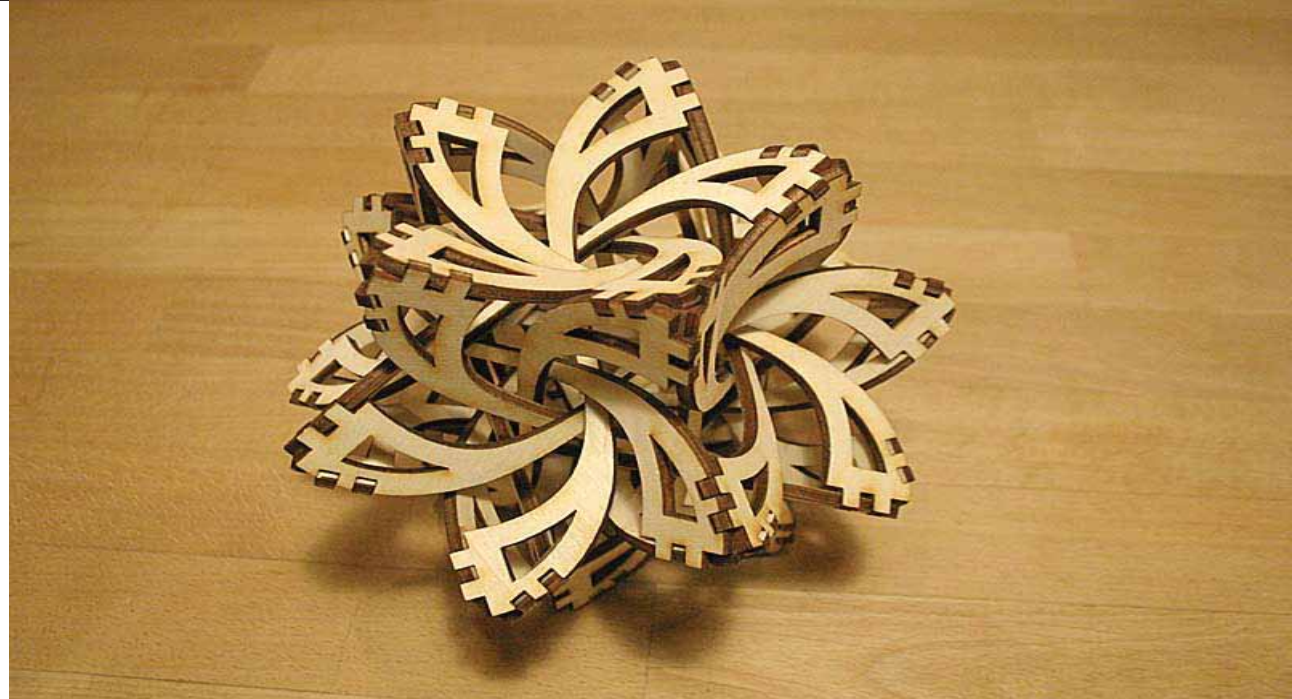
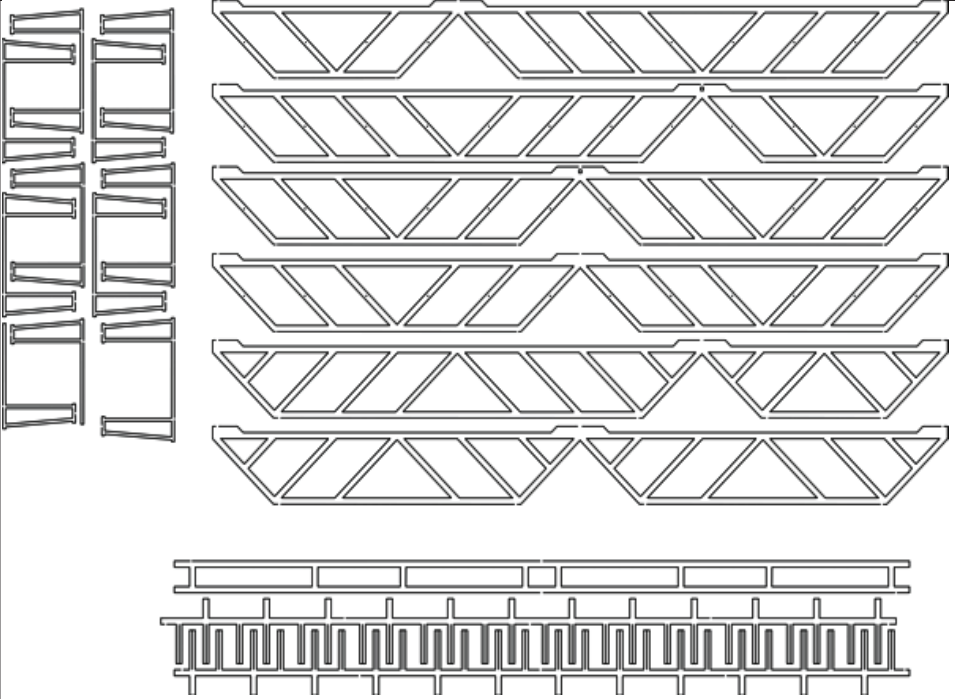




fablab

máquinas Fab Lab Unal – alcance...







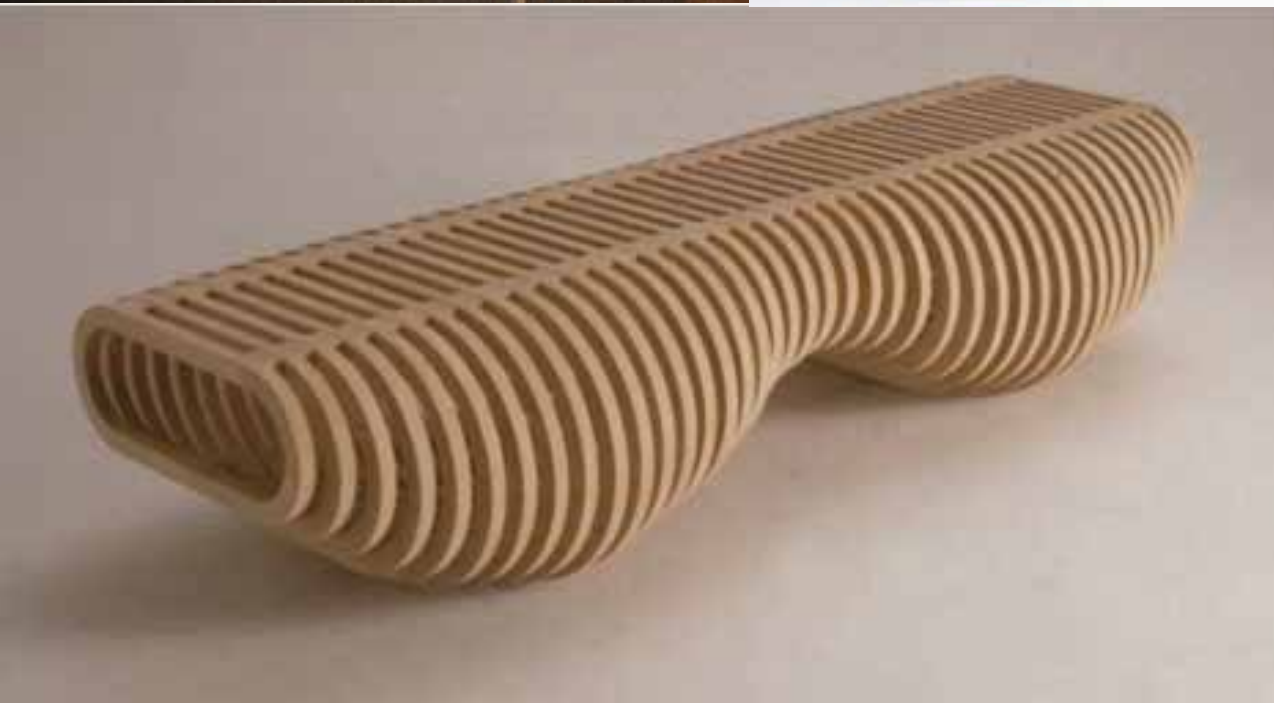




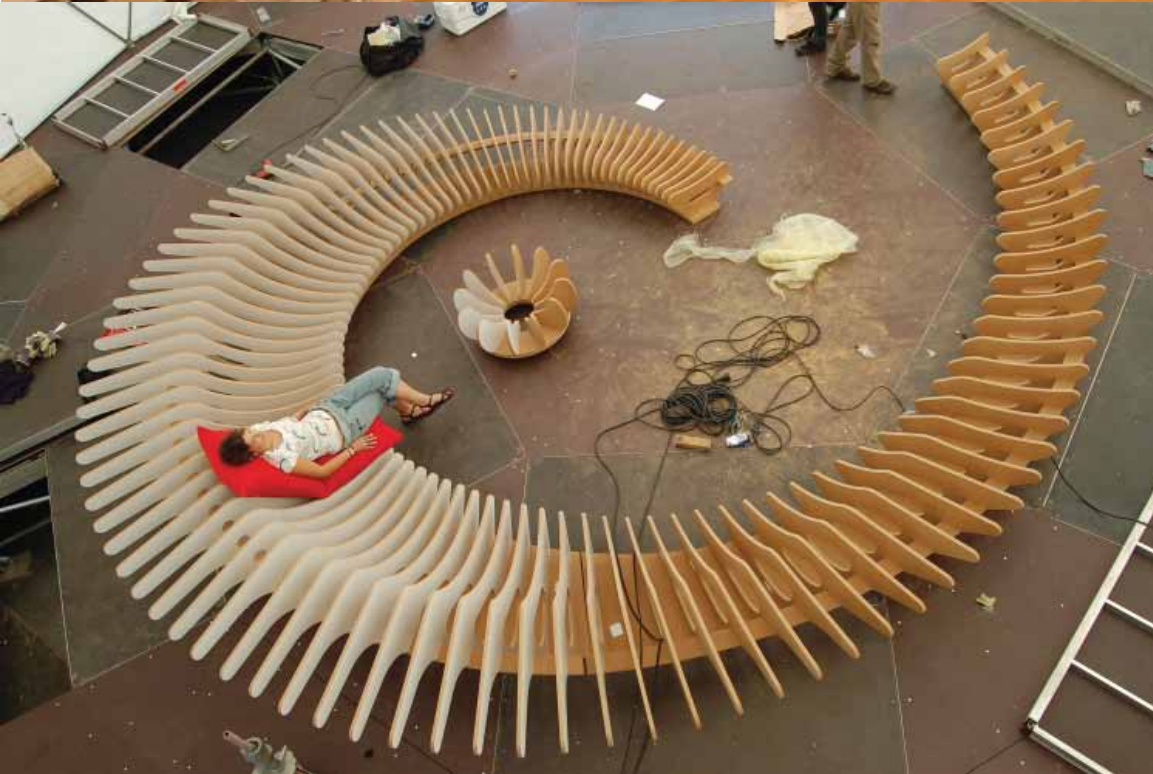
















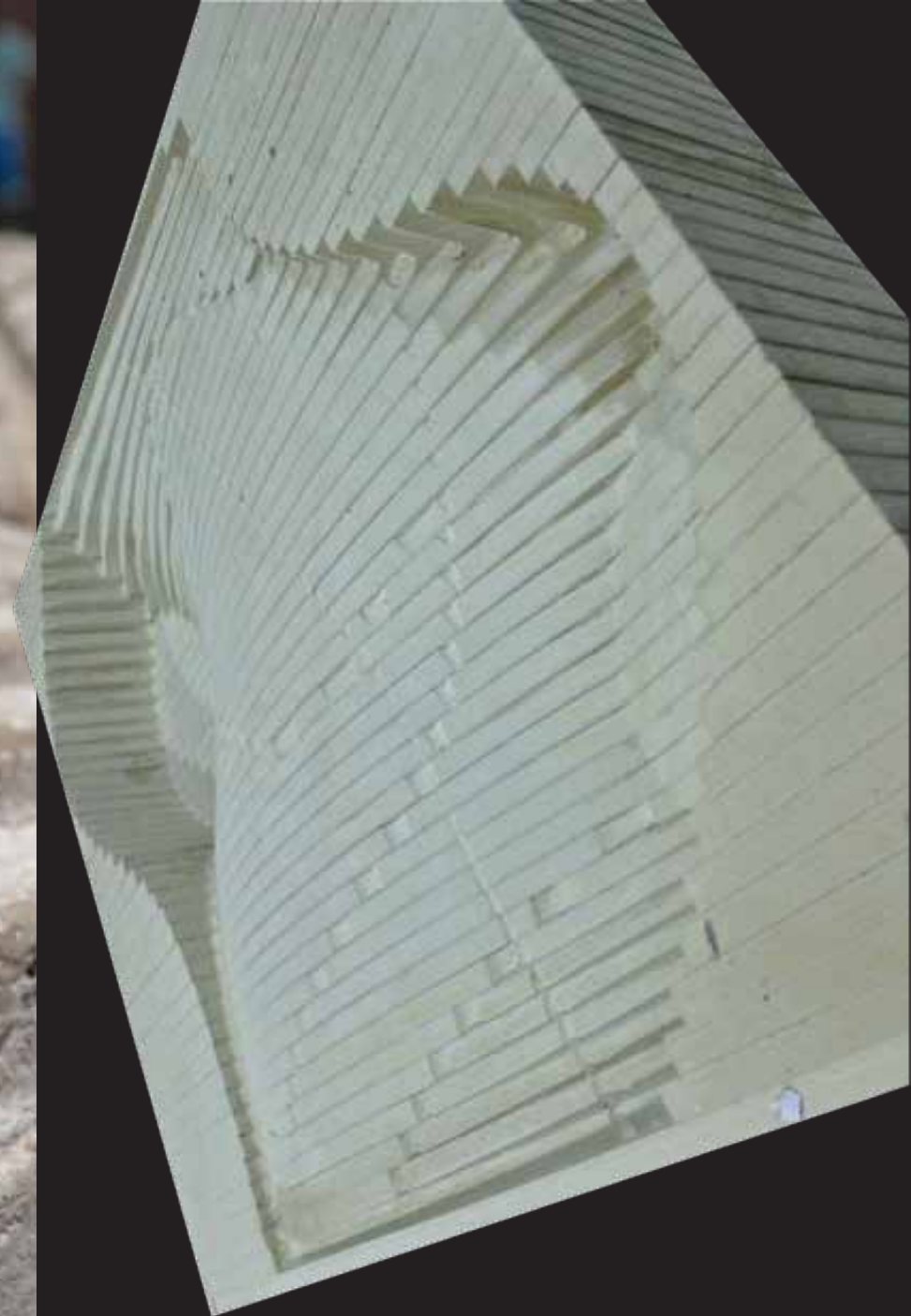














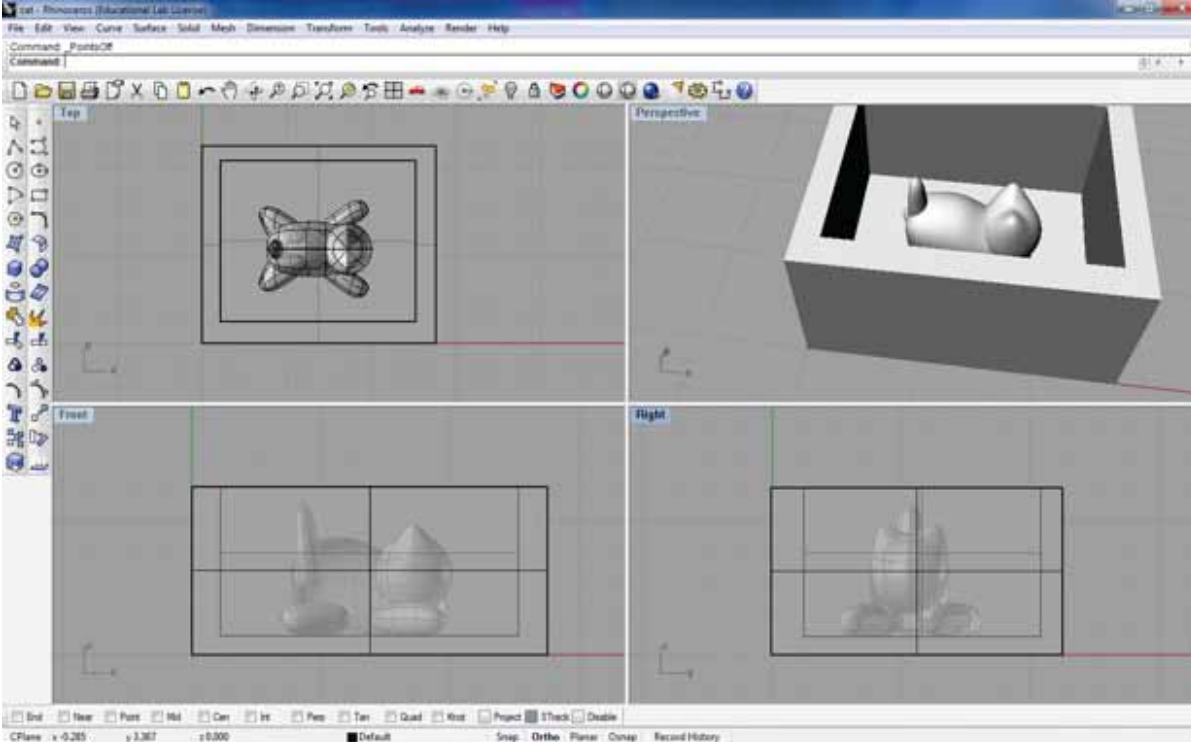




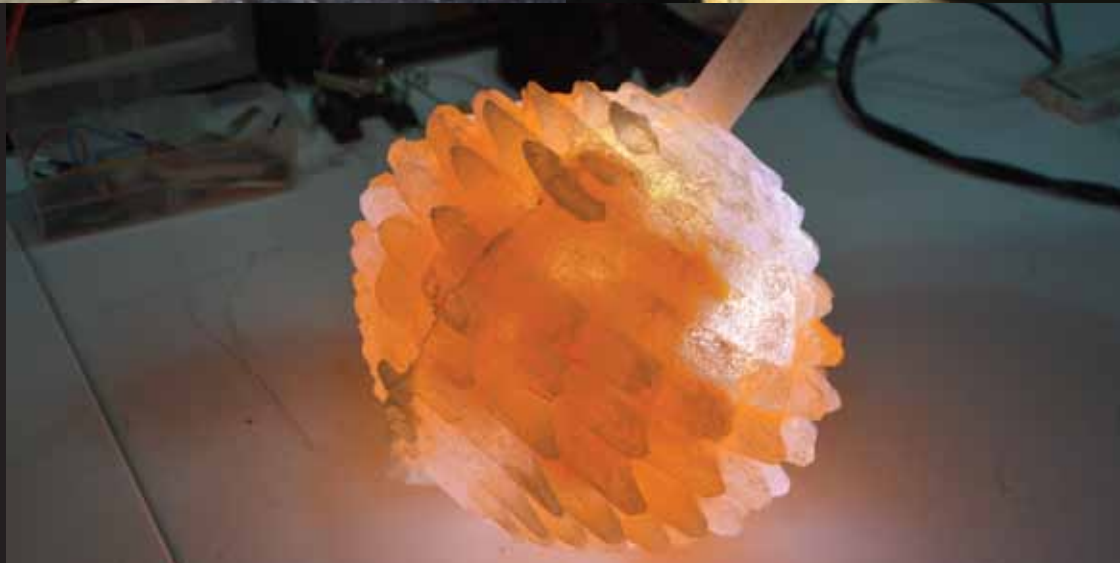
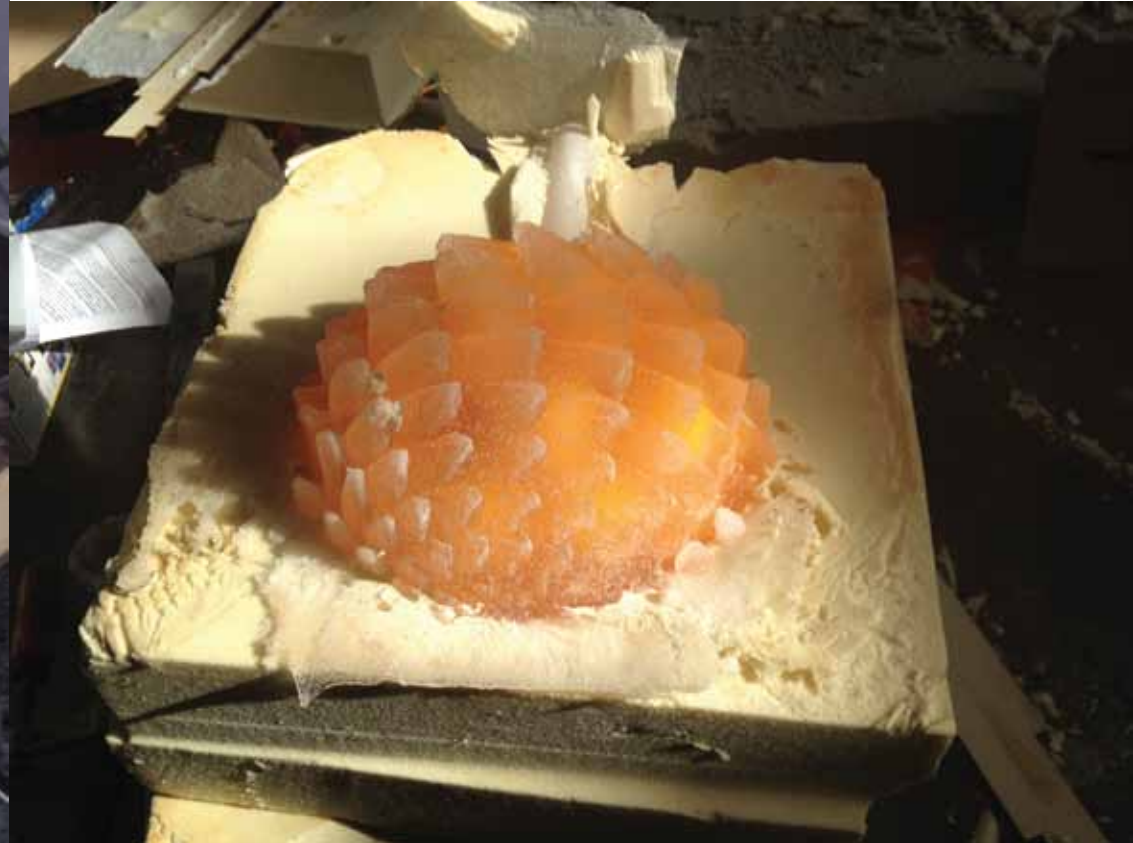
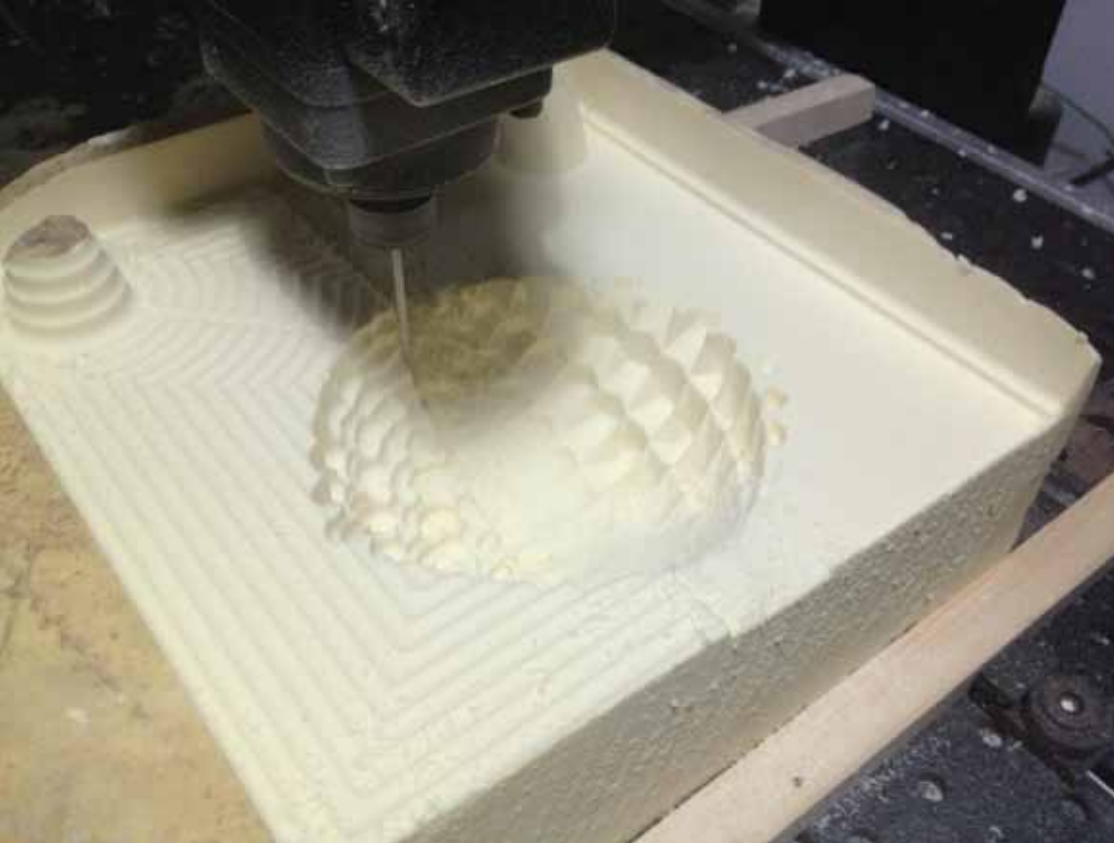


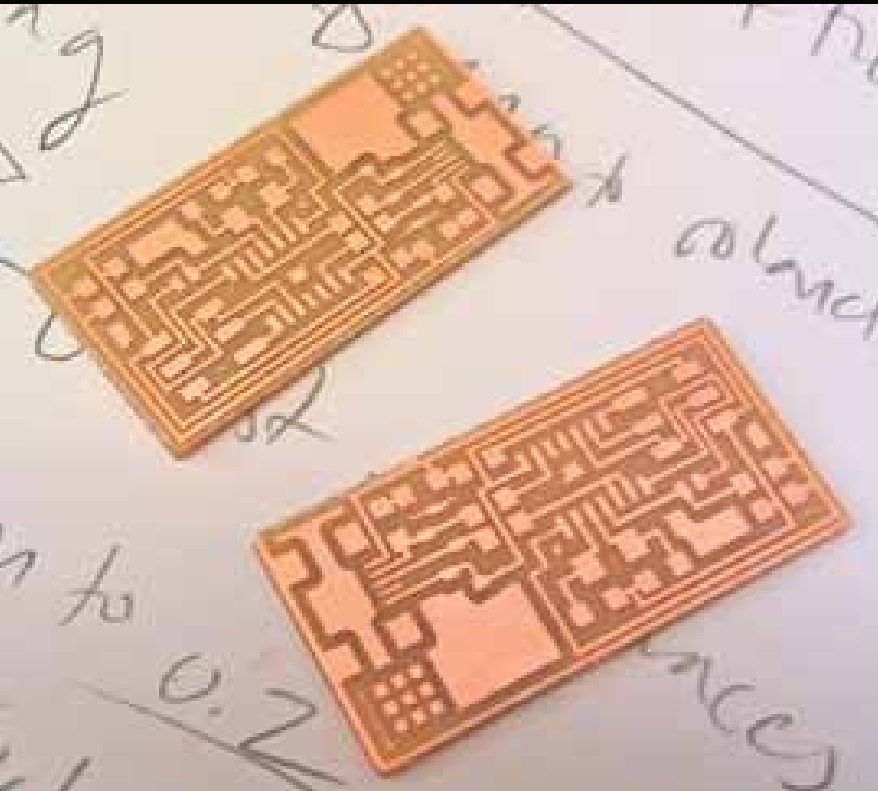


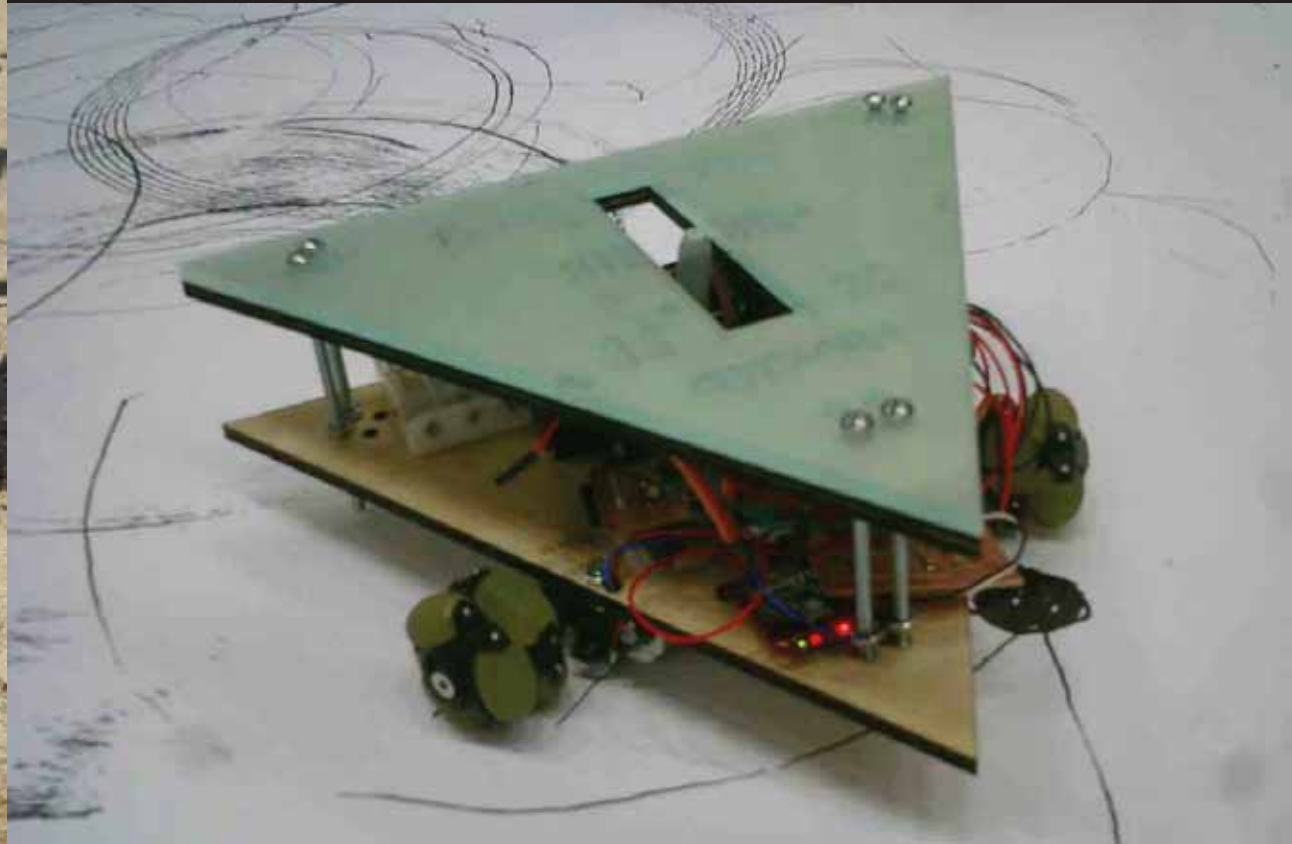
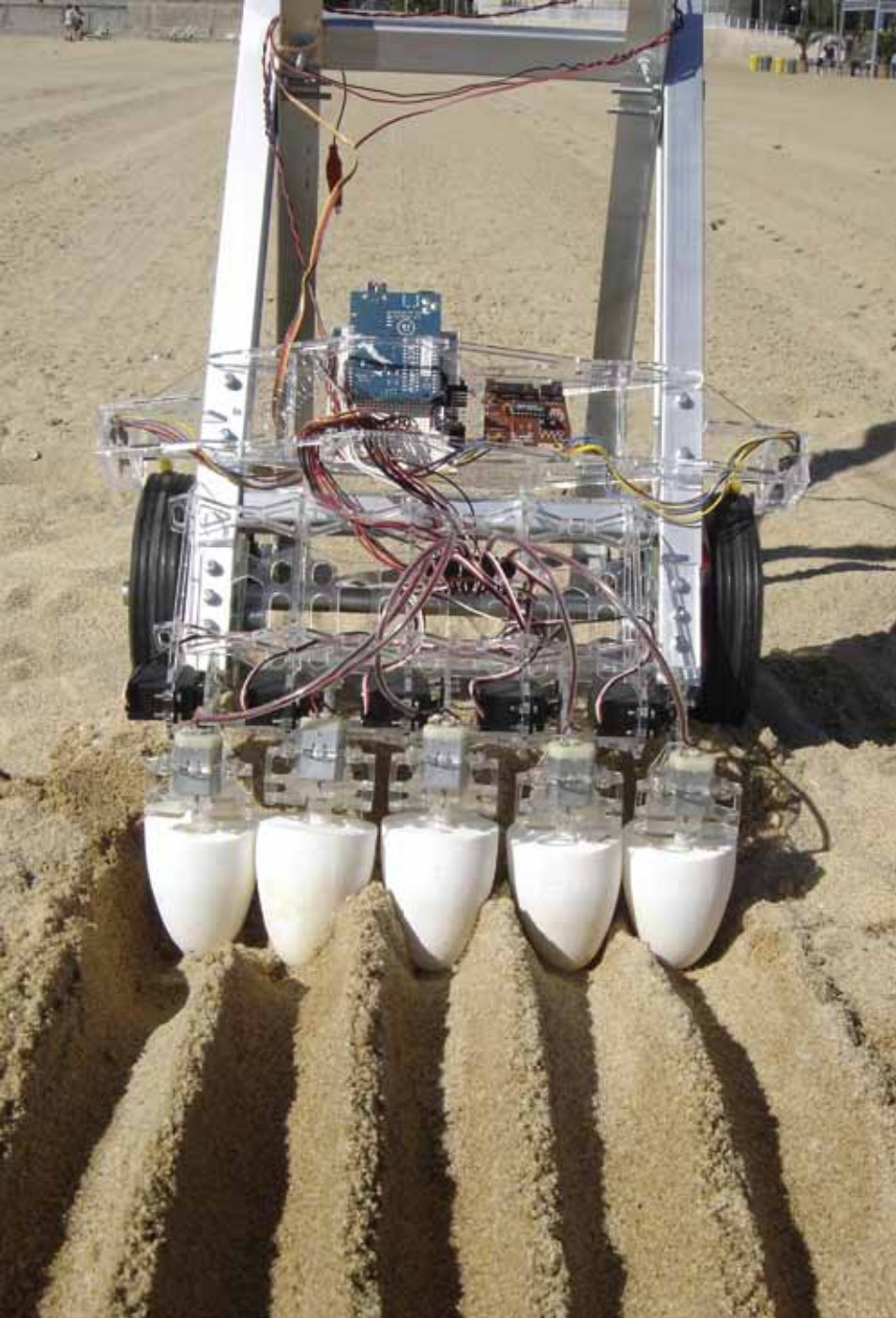


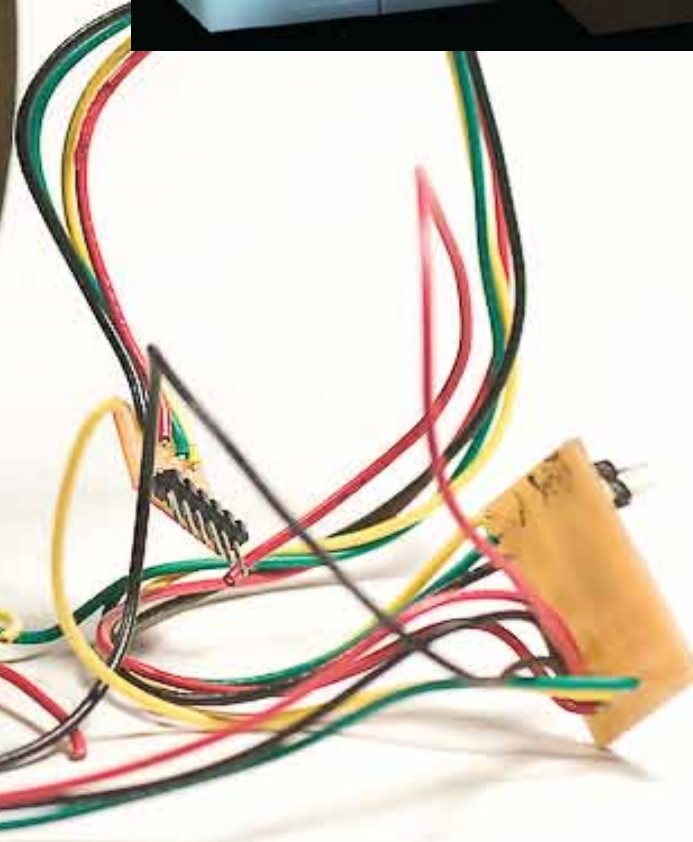
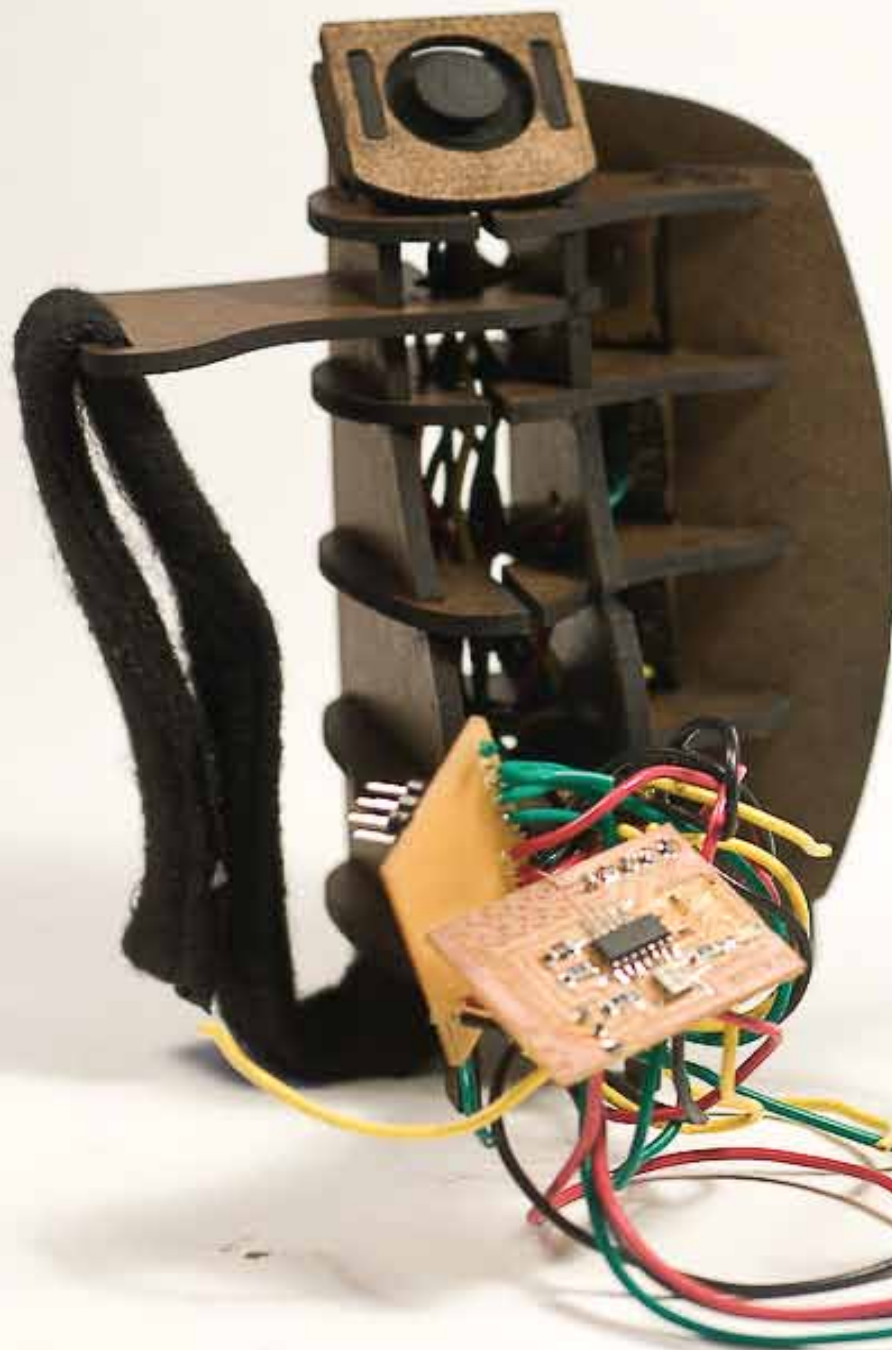






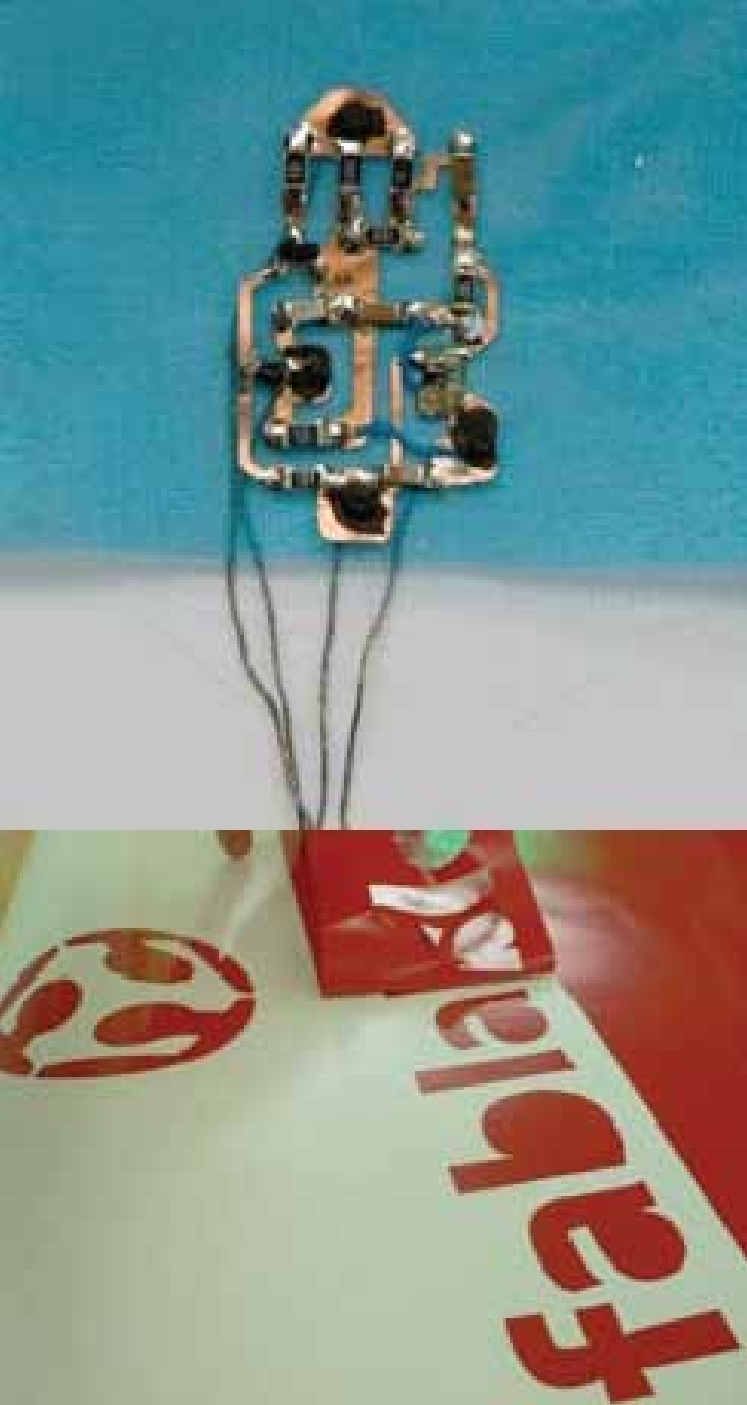




















Adrian Bowyer

