



ZAHA HADID SELECTED WORKS

Zaha Hadid Selected Works

Zaha Hadid Selected Works
is published on the occasion of the exhibition

ZAHA HADID
27 May - 27 November, 2016

Palazzo Franchetti
San Marco 2847 / Campo Santo Stefano
30124 Venice / Italy

This publication was made possible
with the generous support of
Fondazione Berengo, exhibition partner
and sponsor

Contents

Towards a New Digitally Based Architectural Language	9	Nordpark Cable Railway, Innsbruck	80
Selected Works		Mobile Art Chanel Contemporary Art Container, Hong Kong, Tokyo, New York, Paris	83
MAXXI Museum of XXI Century Arts, Rome	15	Zaragoza Bridge Pavilion, Zaragoza	88
Art Centre, Graz	19	The Serpentine Sackler Gallery, London	94
Quebec National Library, Montreal	21	London Aquatics Centre, London	100
One-North Masterplan, Singapore	25	Kartal Pendik Masterpan, Istanbul	106
BMW Central Building, Leipzig	29	Beijing CBD Core Area, Beijing	109
Ice-Storm, Lounging Environment	33	Stone Towers, Cairo	113
Z-Scape, Lounging Furniture	37	Dominion Office Building, Moscow	116
BBC Music Centre and Offices, London	39	Dongdaemun Design Park, Seoul	121
Fine Arts Centre, University of Connecticut	45	Heydar Aliyev Center, Baku	126
High Speed Train Station, Florence	48	1000 Museum, Miami Beach	133
New High Speed Train Station		520 West 28 th Street, New York	137
Napoli-Afragola, Naples	53	Galaxy Soho, Beijing	141
Temporary Tokyo Guggenheim Museum, Tokyo	57	Leeza Soho, Beijing	145
Guggenheim Museum, Taichung	61	Beijing New Airport Terminal Building, Beijing	148
Maritime Terminal, Salerno	67	New National Stadium of Japan, Tokyo	150
Phaeno Science Centre, Wolfsburg	73	Antwerp Port House, Antwerp	152
Guangzhou Opera House, Guangzhou	76	Project Credits	157

The work presented and discussed here is a selection of projects which demonstrate the increasing impact of the new 3D modelling and animation software on the development of a new language for architecture, starting with the seminal winning competition for the MAXXI in Rome and ending with the design for the Antwerp Port House that opens later this year. This string of projects is a quest for an increasingly organic approach to the articulation of architectural space and form. The projects selected are those projects within Zaha Hadid Architects which strongly manifest this ambition towards a new organic language. The author of this book is also the co-designer of the string of projects featured here.

Organic Interarticulation

The analogy of building and organism is as old as the self-conscious discipline of architecture itself. Traditionally the analogy focused on key ordering principles like symmetry and proportion. These principles were seen as integrating the various parts into a whole by means of setting those parts into definite relations. In this conception the organism is approximating an ideal type which implies strict rules of arrangement and proportion for all parts. It also assumes a state of completeness and perfection. The organism is a closed form: nothing can be added or subtracted. The Palladian Villa is perhaps the best example of this idea of the organism as the ideal of perfect order.

Our projects remain incomplete compositions, more akin to the Deleuzian notion of assemblage than to the classical conception of the organism. Our concept of organic

11 integration does not rely on such fixed ideal types. Neither does it presuppose any proportional system, nor does it privilege symmetry. Instead integration is achieved via various modes of spatial interlocking, by formulating soft transitions at the boundaries between parts and by means of morphological affiliation. The parts or subsystems that are brought together to form a larger organic whole do not remain pure and indifferent to each other, but are mutually adapting to each other. The extreme example of organic fusion is perhaps our design for the lounging environment 'Ice-Storm'. Here a series of previously discreet elements are interarticulated by means of morphing them into a larger encompassing structure. In this fashion everything becomes literally continuous – a seamless form that is modulated and transformed to join the exact sectional profile of the embedded furniture pieces or to establish something akin to key-hole relations.

Another example is our design for the Guggenheim Museum in Taichung. Here the two gallery wings are mediated by letting both meld into the central communication space which itself is made continuous with the surrounding park-scape. All transitions are made smooth. Changes in surface material never coincide (reinforce) changes in geometry. There are no add-on parts that could easily be separated out of the overall composition. The ramps and paths are cuts and folds molded into the ground-surface as well as into the envelope of the building. The lattice of the roof bridging across the central public space between the two gallery wings is not a neutral grid but an irregular triangulation that is adapted to the wedge-shaped gap between the two wings. Those structural beams are formally affiliated to the pedestrian bridges that cross this canyon-space

12 below. The glass mullions of the roof glazing are continuing this game of triangulation on a smaller scale. The openings within the building envelope are not punched out as arbitrary shapes. Instead the surface is spliced along its lines of least curvature to create louvered openings akin to gills that are respecting the integrity of the surface.

In the case of the project for a new Music Centre for the BBC in London the openings are created like wormholes by means of turning the surface inside out so that the most inner surface of the very deep wall fuses with the most outer envelope.

In the case of the Florence High Speed Train Station, the openings are as three-dimensional and curvilinear as the overall body of the building itself – and not the imposition of platonic figures on an otherwise organic form.

These various treatments of the problem of articulating openings within an envelope are examples of our concept of organic interarticulation. In each case the attempt is made to avoid an arbitrary interference or interruption of the envelope. Instead the quest is to integrate the openings into the structural and tectonic system of the envelope. In a similar way all compositions are seen as tasks for creative organic interarticulation. A refined organic architecture resists easy decomposition – a measure of its complexity.

Selected Works

MAXXI Museum of XXI Century Arts ROME

MAXXI Museum of XXI Century Arts addresses the question of its urban context not by means of stylistic pastiche but by an assimilation in terms of urban geometry.

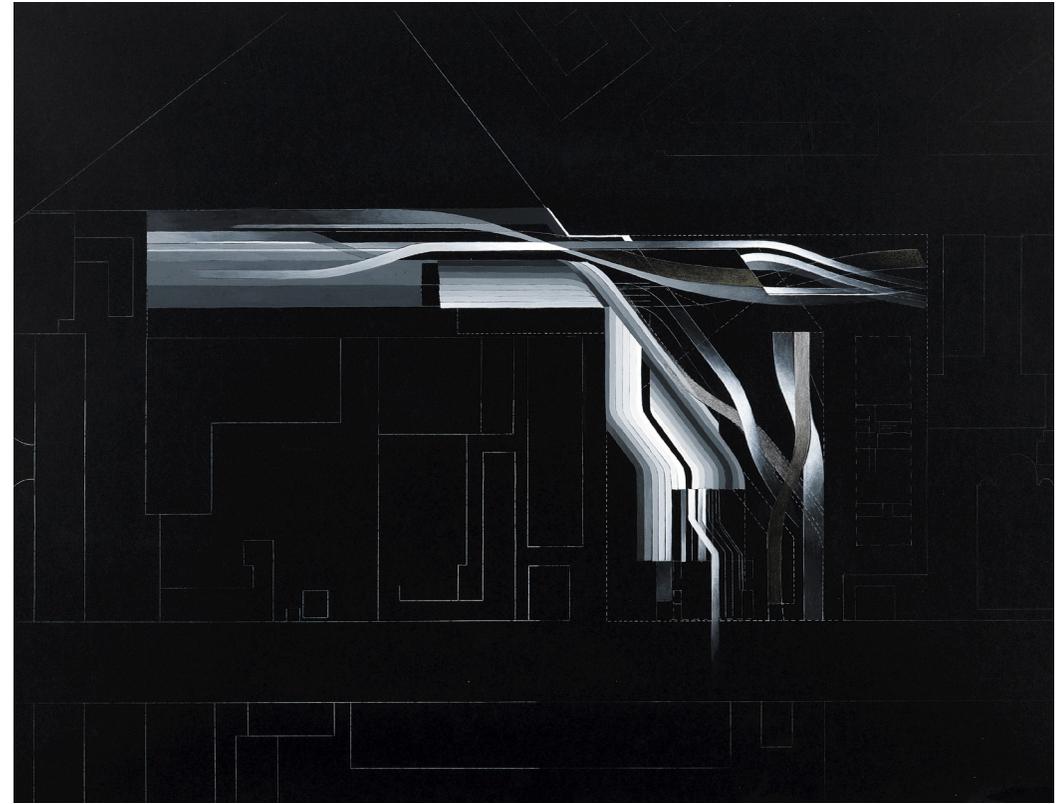
The project appears like an ‘urban graft’, a second skin to the site. The initial design move was to flood the site with streams of parallel walls. Those walls variously converge and dissect, thus generating a pattern of interior and exterior spaces. The next step was to differentiate those walls into those bounding major linear spaces and those inbetween which were lifted to become ribs structuring the roofs and ceilings of the major spaces.

The result offers a quasi-urban field, a “world” to dive into rather than a building as signature object. The campus is organised and navigated on the basis of directional drifts and the distribution of densities rather than key points.

This is indicative of the character of the Museum as a whole: porous, immersive, a field space. An inferred mass is subverted by vectors of circulation. The external as well as internal circulation follows the overall drift of the geometry. Vertical and oblique circulation elements are located at areas of confluence, interference and turbulence.

The premise of the architectural design promotes a disinheriting of the ‘object’ orientated gallery space. Instead, the notion of a ‘drift’ takes on an embodied form. The drifting emerges, therefore, as both architectural motif, and also as a way to navigate experientially through the museum. The ‘signature’ aspect of an institution of this calibre is sublimated into a more pliable and porous organism that promotes several forms of identification at once.

In architectural terms, this is most virulently executed by the figure of the ‘wall’. Against the traditional coding of the ‘wall’ in the museum as the privileged and immutable vertical armature for the display of paintings, or delineating discrete spaces to construct ‘order’ and linear ‘narrative’, we propose a critique of it through its emancipation. The ‘wall’ becomes the versatile engine for the staging of exhibition effects. In its various guises – solid wall, projection screen, canvas, window to the city – the exhibition wall is the primary space-making device. By running extensively across the site, cursively and gesturally, the lines traverse inside and out. Urban space is coincidental with gallery space, exchanging pavilion and court in a continuous oscillation under the same operation. And further deviations from the classical composition of





the wall emerge as incidents where the walls become floor, or twist to become ceiling, or are voided to become a large window looking out. By constantly changing dimension and geometry, they adapt themselves to whatever curatorial role is needed. By setting within the gallery spaces a series of potential partitions that hang from the ceiling ribs, a versatile exhibition system is created. Organisational and spatial invention are thus dealt with simultaneously amidst a rhythm found in the echo of the walls to the structural ribs in the ceiling that also filter the light in varying intensities.

It is important to note that the whole project was initially composed of 2D splines and then crucially lifted into 3D (in 3dsmax) where the integration between the primary levels was elaborated by means of voids, terracing galleries and ramps.



Art Centre GRAZ

The determining factor for the proposal was the desire to project and cantilever the building high over the street towards the riverbank. These considerations lead to the concept of a large canopy (raised 12m over the ground) that covers a tall volume of flexible

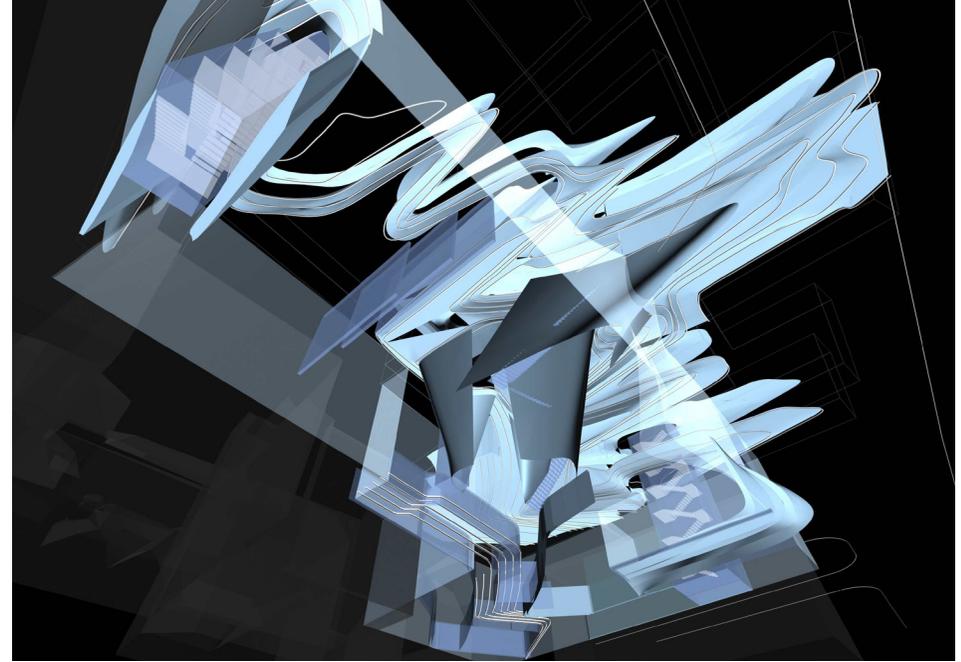
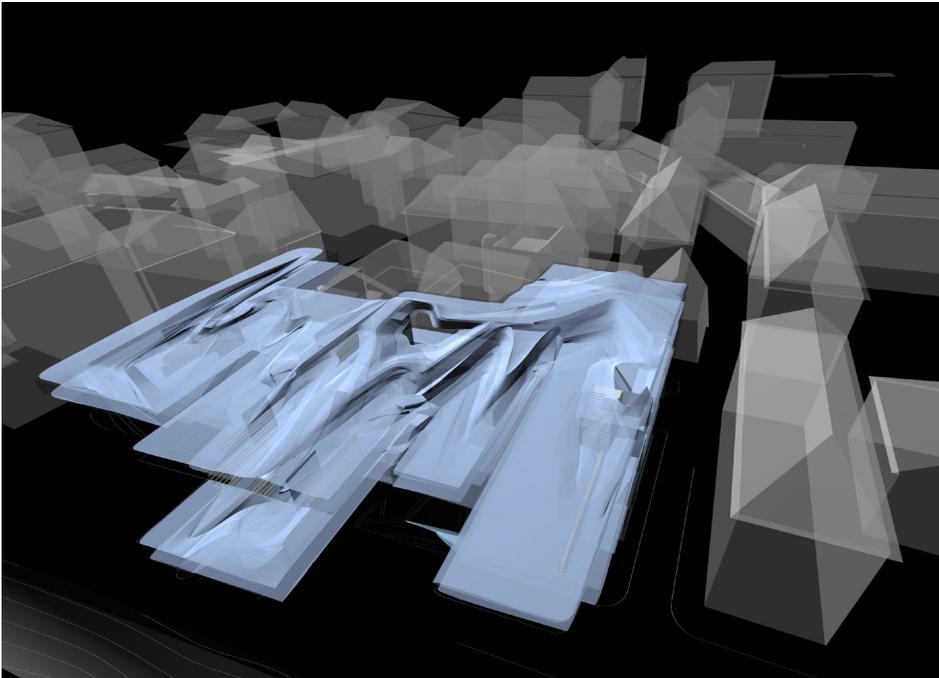


space and acts as a large public room, transparent and inviting.

Arising from a forest of mushrooms the canopy has a depth (height) varying between 3 to 6 metres. The underside is perhaps the strongest feature where the various structural stems bleed into the surface of the cantilevering volume.

The composition was built up from contour lines and has been developed by a game of symmetry and deformation – creating figures of distorted symmetry.

Its morphology is on the one hand derived from the urban context- as it was projecting forward the profile of existing fabric on the back of the site – and on the other it has developed from the structural logic of the tapering mushroom columns. The Art Centre is entered below the strongest cantilever. The main vertical



circulation through the building moves through the hollow stem of the large mushroom.

The volume below the canopy is a clear, open spatial expanse, which offers the lobby, commercial spaces and an exhibition area on the ground floor as well as the flexible exhibition area on a flat level above ground. In contrast the space within the canopy is enclosed, even compressed and highly articulated. It provides for those spaces, which require intimacy, acoustic enclosure and darkness such as lectures and performances, the media centre and the photography forum.

The structure comprises inverted “trumpet forms” and cores organised to act as primary “inhabited” vertical supports. These forms are of reinforced concrete construction with doubly curved surfaces to prevent deformation.

The effect of splaying the fans out at the top allows large hoop tensions at the upper levels of the form giving way to hoop compression at the bottom. The splays also assist in reducing the spans of the horizontal plates.

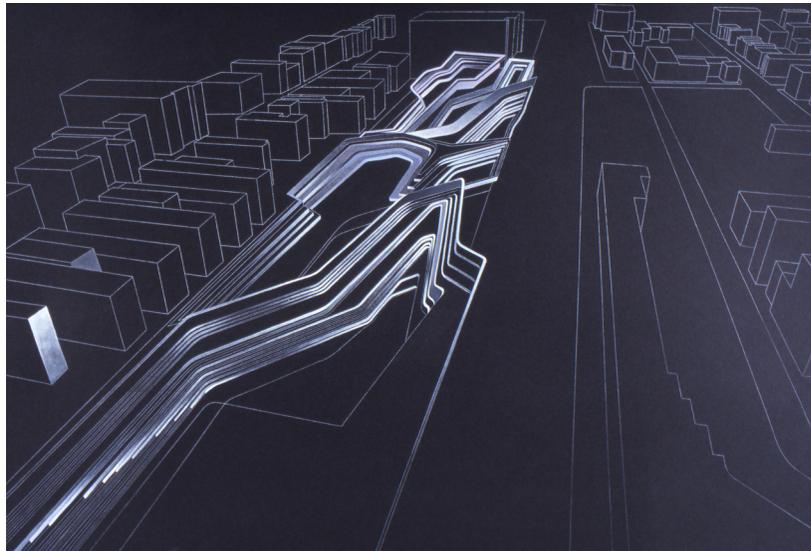
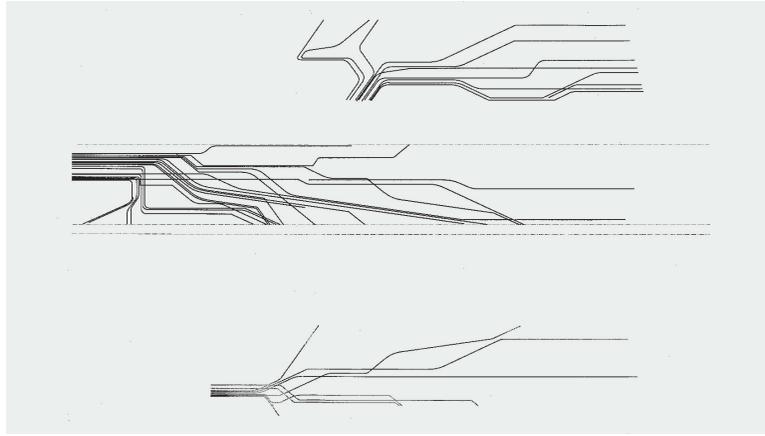
The upper floors are interconnected with walls to allow the formation of a three dimensional “vierendeel” structure with the horizontal plates acting as flanges. Cantilevers over the existing building and road are then made possible. The rigid horizontal form merges into the vertical fans with a seamless junction transferring vertical loads down to the ground.

Quebec National Library MONTREAL

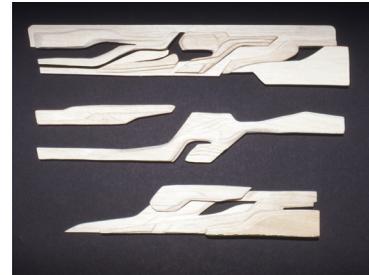
The overall massing proposed fills the urban block while leaving a well sized urban plaza on the corner. The structuring of this mass emphasizes the pattern of public circulation through and within the building. A deep visual penetration of this mass is offered by means of deep cuts and crevices articulating access points as well as internal movements revealing the manifold choreography of public events within the thick skin of the building.

The two bulk heads of the site are articulated as public entrance rooms, piercing deep into the building.

The main architectural concept is based on the articulation of a continuous navigation space that sequentially unfolds the various



bodies of human knowledge contained in the different collections of the library. This navigation space follows the branching logic of successive disciplinary differentiation – the tree of knowledge. The navigation space is architecturally expressed as the veins eroding the solid mass of the building. The actual circulation through



the building traces these voids and crevices allowing for diagonal vistas and good orientation across levels. In this microcosm the various channels of connection between the parts must be an active, catalytic tissue within the library as a whole.

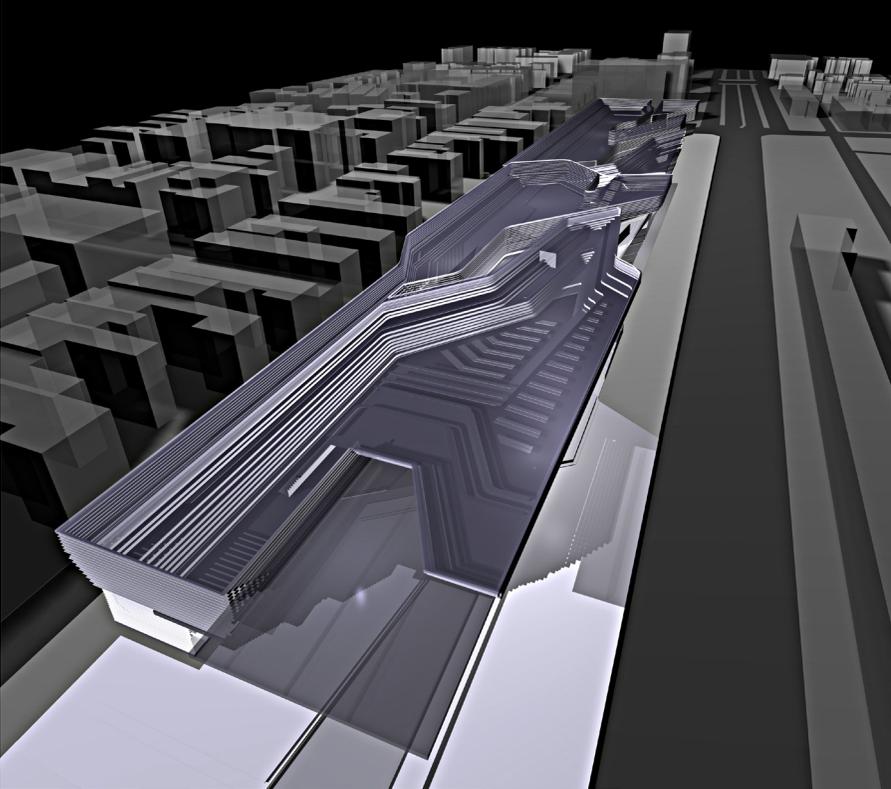
The mass that is withstanding the erosion are the collection spaces filled with books and the reading rooms. The overall formation of

this mass is undercut like an overhanging cliff exposed to view at the main entrance. This way a main public void is created at the front of the building offering the visitor revealing glimpses of the successive strata of the library. The viewer can follow the branching veins upwards before choosing his or her trajectory to the collections and reading rooms. The major collections are shaped like terraced valleys lined with books on the perimeter and the reading areas in the middle. The terracing offers differentiation as well as overall orientation. The reading rooms at the top of the building are taking advantage of the possibility of filtered daylight from above. The predominant interior material here is wood providing intimacy and quietude. Atmospherically these rooms are conceived in analogy with the canopy level of trees.

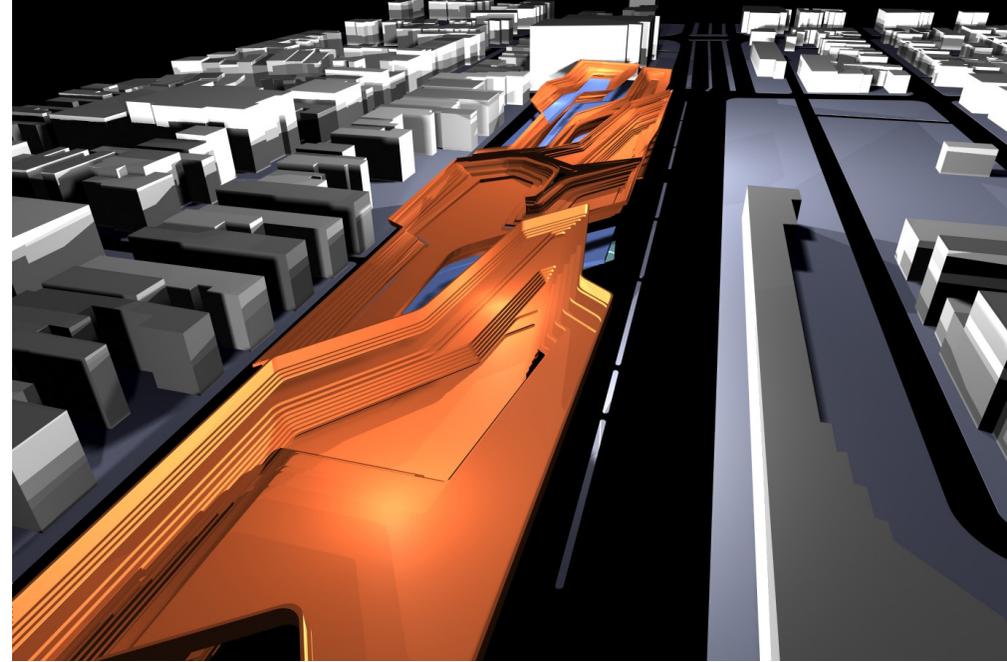
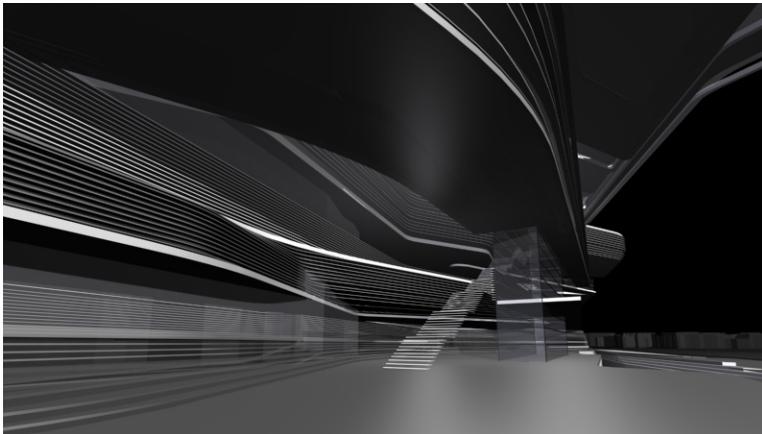
The overall spatial organisation is treated as a three dimensional information design utilizing the ramifying pattern of the classification tree as circulation diagram. The system of paths thus successively bifurcates according to the branches of human knowledge. This is also the path from the general to the particular.

The more general information like the news library and encyclopedias are followed by the major division of human knowledge





into the humanities and arts on the one hand and the hard sciences on the other hand. Each has its own root and trunk on the ground-floor and ramifies upwards into the building like two intertwining trees. The humanities bifurcate into the arts (incl. music and literature) on the one hand and history and the social sciences on the other hand. The hard sciences branch into natural science vs applied



science or technology. The natural sciences are further differentiated into life sciences vs physics, etc. But this linear system of ramification is only the most basic backbone and point of departure for a whole series of overlaps, cross-overs and lateral connections – e.g. economics is an important field of conversion and intersection between the humanities and hard sciences. The system becomes a network of multiple paths which allows for explorative browsing while the primary distinctions give an orienting armature to the increasingly complex labyrinth.

The structure should underline the organisational logic of the library and reinforce the oblique trajectories through the building. Therefore we suggest to utilize the necessary division walls as primary structural elements. These primary elements also orient the flows through the building.

The structure is primarily constituted from interlocking structural walls. These walls do not need to line up vertically but rather they act as transfer beams. These criss cross and brace each other forming a stiff three-dimensional lattice. This allows for the major spans which give the building its sense of generosity. The structural walls are selectively constructed in concrete or steel as appropriate. Concrete dominates in the lower part of the building while steel is introduced as cantilevering increases towards the top.

There is a transition from the heavy base to a lighter top, gaining the benefit of strength to weight ratio offered by steel construction.

One-North Masterplan SINGAPORE

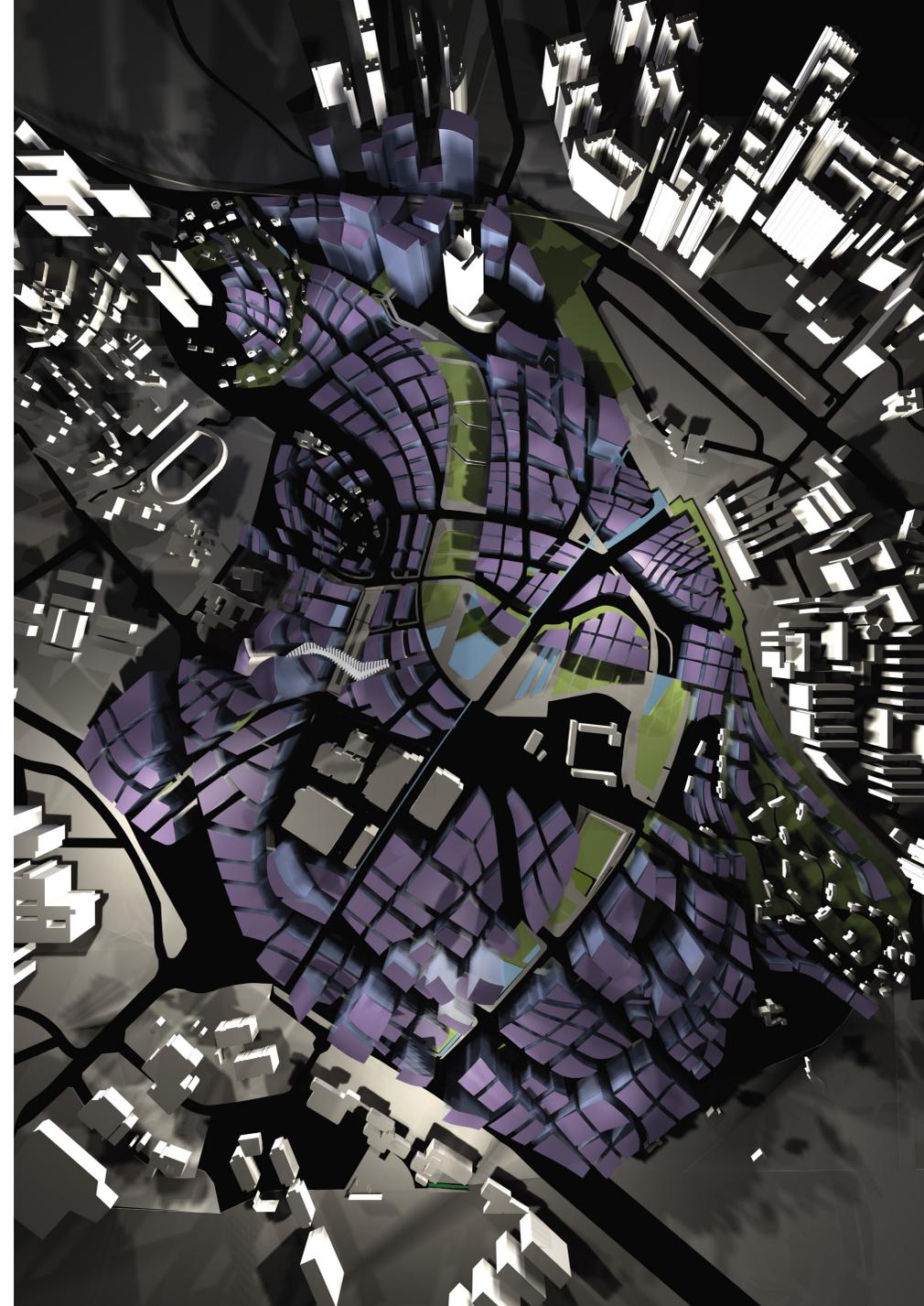
The possibility of an urban architecture that exploits the spatial repertoire and morphology of natural landscape formations has been a consistent theme within the creative career of Zaha Hadid Architects for nearly 20 years. Indeed our first moment of international recognition was already informed by a productive analogy with landscape conditions, here with geological form: the winning competition entry for the Hong Kong Peak in 1982.

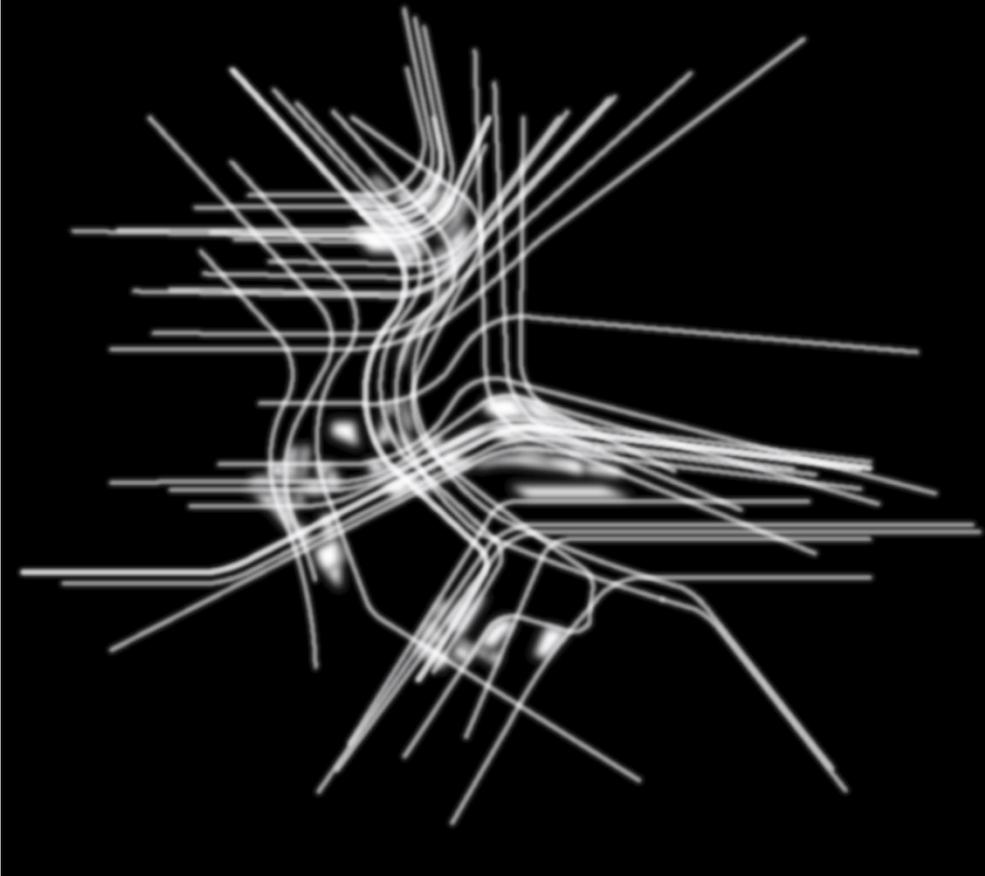
Our proposal for the Vista masterplan – for the first time – applies the concept of artificial landscape formation to the articulation of a whole urban quarter. The advantages of such a bold move are striking: Our scheme offers an original urban skyline and identifiable panorama visible from without as well as from the park in the heart of the new urban quarter. The rich diversity of squares and alleys engenders a unique sense of place within the various micro-environments.

The concept of the gently undulating, dune-like urban mega-form gives a sense of spatial coherence that has become rare in the modern metropolis. The regulation of the building heights is normal planning procedure and easily instituted. The powerful aesthetic potential that lies dormant in this ordinary planning tool has never been exploited before. An unusual degree of aesthetic cohesion and unity is achieved by allowing the roof surfaces to join in the creation of softly modulated surface. At the same time a huge variety of built volumes – tall, low, wide, small – is brought under the spell of two unifying forces: the soft grid and the undulating roofscape.

The softly swaying pattern of lines that defines the streets, paths as well as the built fabric allows the mediation and integration of the various heterogenous urban grids of the adjacent areas. The curvilinear pattern is able to absorb and harmonize all the divergent contextual orientations. It is also a machine to produce a huge diversity of building footprints without giving up on alignment from building to building.

The morphological system allows for infinite variation within the bounds of a strong formal coherence and lawfulness. This is the great advantage of working with a “natural” geometry rather than with a strict platonic geometry. The form is “free” and therefore malleable at any stage of its development while platonic figures (squares, circles, strict axes etc.) are too exacting and therefore vulnerable to corruption and degradation by later adaptations. The





morphology is no less lawful and cohesive than the platonic system; but it is much more pliant and resilient, always able to absorb adaptations into its characteristic and recognisable form – always maintaining its coherence and character.

The idea of an artificial landscape formation occurs not only on the level of the overall urban form. Not only the mega-form but also some of the micro-environments could benefit from the landscape analogy. In particular we are thinking about the hub areas. One of the possibilities of developing the hub areas could be to introduce a raised plaza level about 5 meters above the street level. These raised grounds will be connected to the ground proper through the interiors of the buildings as well as by means of broad staircases and shallow ramps on the exterior.

Within the oeuvre of Zaha Hadid Architects there is a long series of urban schemes which explore various artificial landscapes as a means to sculpt public space and to impregnate it with public



programme. These schemes manipulate and multiply the ground surface by means of sloping, warping, peeling or terracing the ground.

Important advantages may be achieved by such manipulation: The visual orientation within the public realm is enhanced by means of tilting the plane into view and allowing for vistas overlooking the scene from above.

By means of a gentle differentiation of slopes, ridges, terraces etc. the ground plane can be used to choreograph and channel movements across the plane in an unobtrusive and suggestive manner.

The landscaped surface is rich with latent places. Articulations like shallow valleys or hills might give a foothold to gatherings and become receptacles for outdoor events without otherwise pre-termining or obstructing the field.

BMW Central Building LEIPZIG

The Central Building is the active nerve centre or brain of the whole factory complex. All threads of the building's activities gather together and branch out again from here.

This planning strategy applies to the cycles and trajectories of people - workers (arriving in the morning and returning for lunch) and visitors – as well as for the cycle and progress of the production line which traverses this central point – departing and returning again.

This dynamic focal point of the enterprise is made visually evident in the proposed dynamic spatial system that encompasses the whole northern front of the factory and articulates the central building as the point of confluence and culmination of the various converging flows.

It seems as if the whole expanse of this side of the factory is oriented and animated by a force field emanating from the central building. All movement converging on the site is funneled through this compression chamber squeezed between the three main segments of production: Body in White, Paint Shop and Assembly.

The primary organising strategy is the scissor-section that connects groundfloor and first floor into a continuous field. Two sequences of terraced plates – like giant staircases – step up from north to south and from south to north. One commences close to the public lobby passing by overlooking the forum to reach the first floor in the middle of the building. The other cascade starts with the cafeteria at the south end moving up to meet the first cascade then moving all the way up to the space projecting over the entrance. The two cascading sequences capture a long connective void between them. At the bottom of this void is the auditing area as a central focus of everybody's attention. Above the void the half-finished cars are moving along their tracks between the various surrounding production units open to view.

The cascading floor plates are large enough to allow for flexible occupation patterns. The advantage lies in the articulation of recognisable domains within an overall field. Also the global field is opened up to visual communication much more than would be possible on a single flat floorplate.

The close integration of all workers is facilitated by the overall transparency of the internal organisation. The mixing of functions avoids the traditional segregation into status groups that is no longer conducive for a modern workplace.



A whole series of engineering and administrative functions is located within the trajectory of the manual workforce coming in to work or moving in and out of their lunch break. White collar functions are located both on ground and first floor. Equally some of the Blue Collar spaces (lockers and social spaces) are located on the first floor. This way the establishment of exclusive domain is prevented.

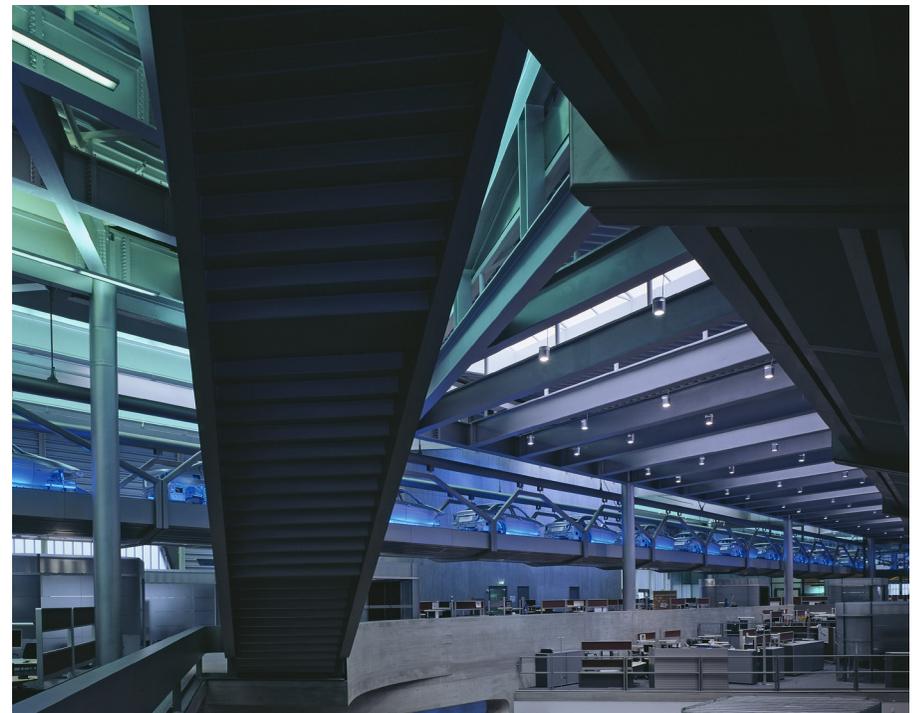
The potential problem of placing a large car park in front of the building had to be turned into an integral architectural feature that carries the scheme by turning it into a dynamic spectacle in its own right. The inherent dynamism of vehicle movement and the 'lively' field of the car bodies is revealed by giving the arrangement of parking lots a twist that lets the whole field move, colour and sparkle. The swooping trajectories across the field culminate within the building.



The architecture we are developing is no longer the architecture of repetition and preconceived forms.

Rather, it is an organic architecture that is able to adapt and mould itself to the peculiarities of the terrain, to orient itself to the various directions of access and to synthesise a complex series of concerns into a seamless and integrated whole. This is made possible by the curvilinear morphology that can incorporate a multitude of forms and directions without fragmentation.

New numerically controlled manufacturing techniques make this quasi-natural process of formal variation possible and affordable. The result is aiming to come closer to the compelling beauty of living organisms.



Ice-Storm, Lounging Environment

MAK, VIENNA

Ice-Storm is an installation that was conceived and created for the Museum of Applied Arts (MAK) in Vienna. It is a built manifesto towards the potential for a new domestic language of architecture, driven by the new digital design and manufacturing capabilities. The installation is suggestive of new types of living/lounging environments. In this respect it is a latent rather than manifest environment. Neither familiar typologies nor any codes of conduct are yet associated with its morphology.

The installation collects and fuses a series of previously designed furniture elements and installations: Glacier, Moraine, Stalactite, Stalagmite, Ice-berg, Z-Play and Domestic Wave including Ice-flow. These divers elements are drawn into a dynamic vortex. In addition, two new hard sofas have been designed to be integrated into the installation.

The semi-abstract, molded surface might be read as an apartment that has been carved from a single continuous mass. The rhythm of folds, niches, recesses and protrusions follows a willful

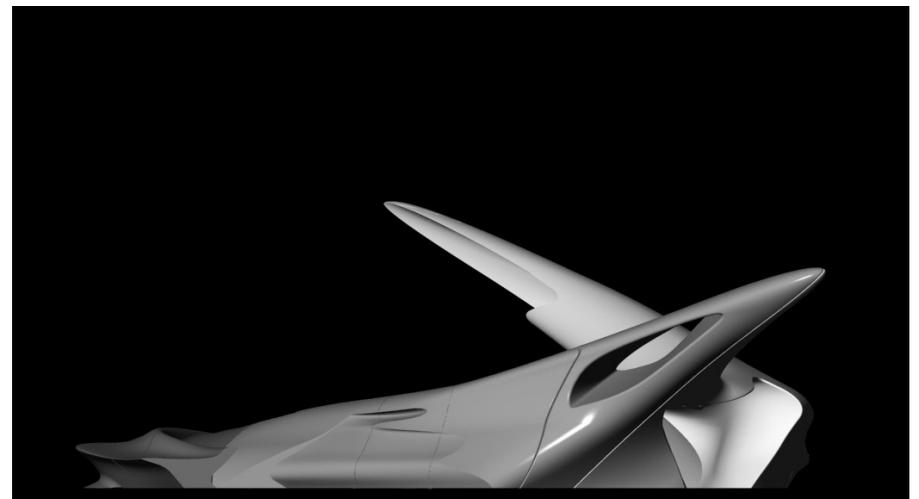




formal logic. This formal dynamic has been triggered by a series of semi-functional insertions which hint towards the potential for sofas, day-bed, desk, tables, etc.

The design language explored here emphasizes complex curve-linearity, seamlessness and the smooth transition between otherwise disparate elements. This formal integration of divers forms has been achieved by the technique of “morphing”. Via this morphing operation the preexisting furniture pieces are embedded within the overall fluid mass of the ensemble and become integrated organs of the overall organism. Those elements which are not contiguous with the overall figure – the Z-Play pieces – are nevertheless morphologically affiliated and appear like loose fragments that drift around the scene at random.

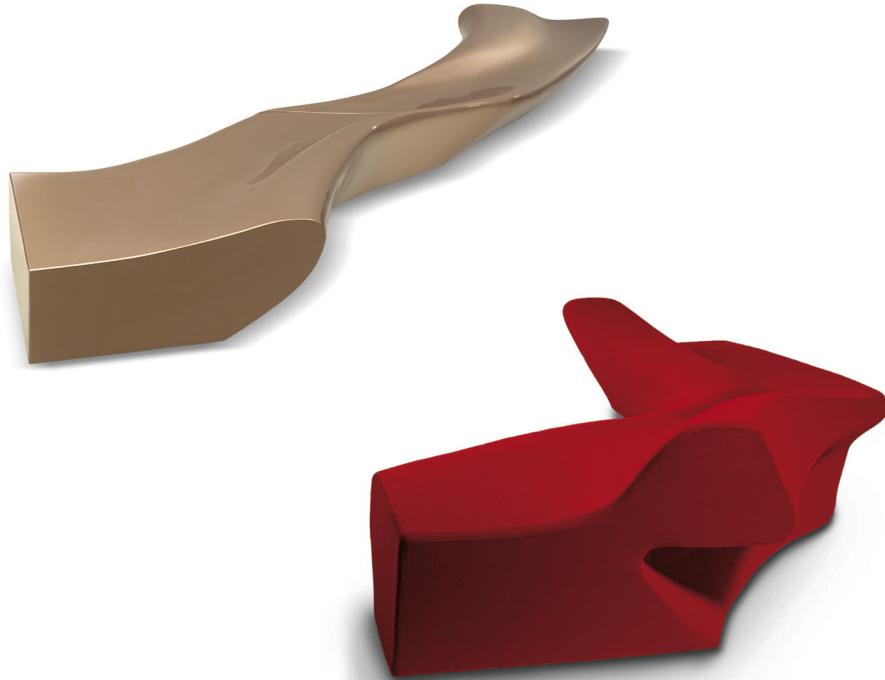
The installation asks the visitors to occupy the structure and to explore for themselves this new open aesthetic which invites us to reinvent ourselves in terms of posture, demeanor and life-style.



Z-Scape is a compact ensemble of lounging furnitures for public and private living rooms.

The formal concept is derived from dynamic landscape formations like glaciers and erosions. The different pieces are constituted as fragments determined by the overall mass and its diagonal veins. Along these veins the block splits offering large splinters for further erosive sculpting. Four pieces emerged so far: stalactite, stalagmite, glacier, moraine. Others are yet to be unearthed.

The pieces thus derived are then further shaped – if rather loosely – by typological, functional and ergonomic considerations. But these further determinations remain secondary and precariously dependent on the overriding formal language. We do *not* want to offer optimized and thus predetermined use-patterns. A margin of strangeness and indeterminacy is desired. Stimulation emerges between abstraction and metaphor.



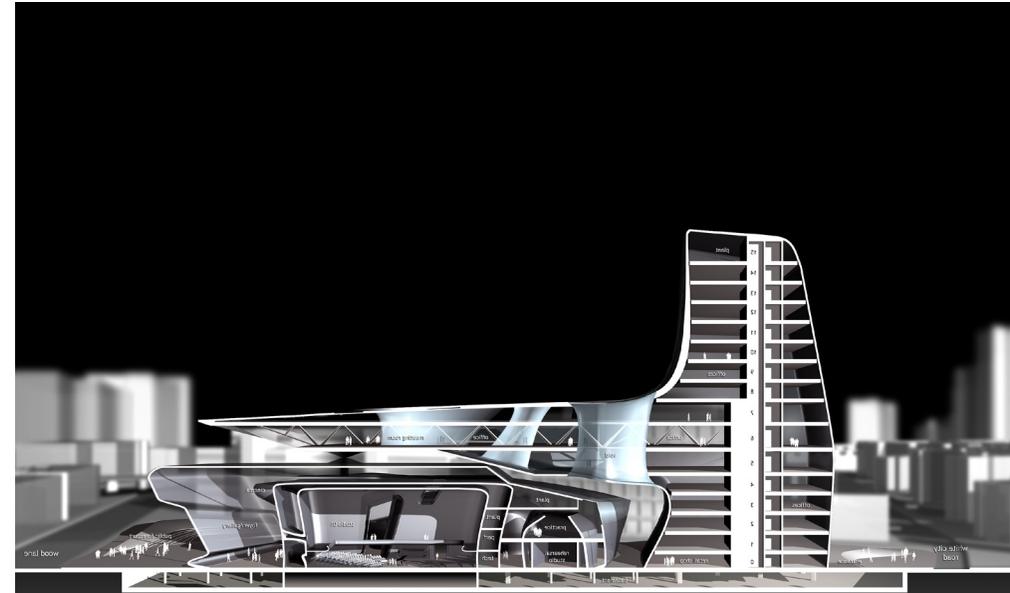
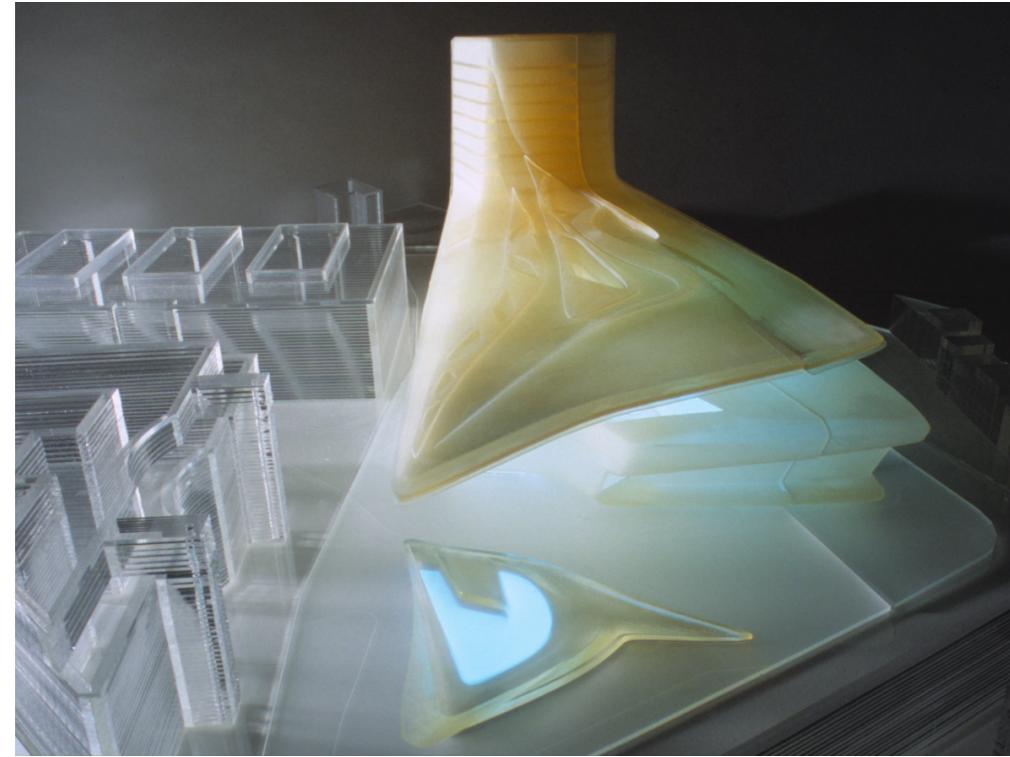
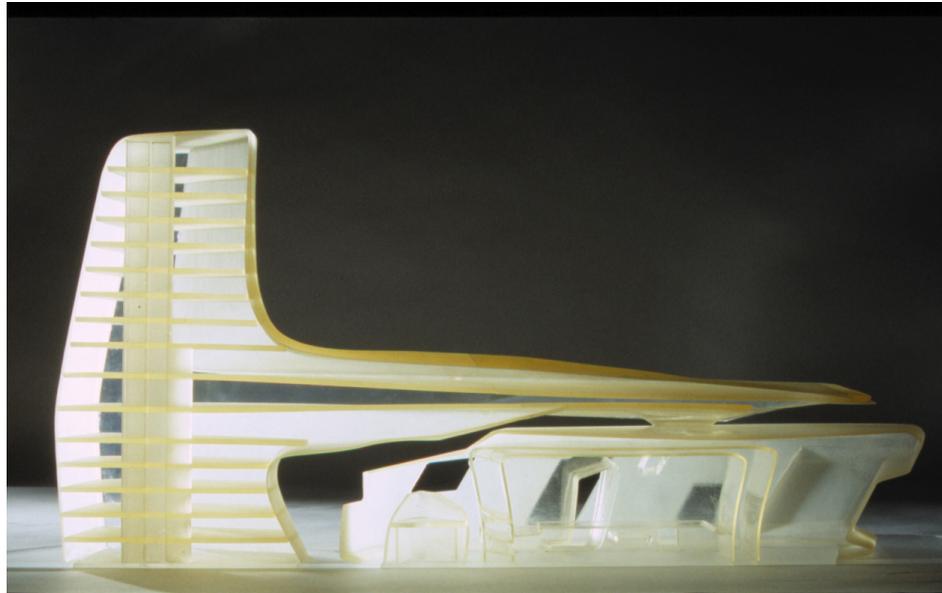
BBC Music Centre and Offices LONDON

The design task is the creation of a powerful landmark building acting as iconic gateway into the BBC White City Campus. The key challenge we face as designers in this respect is the fact that this landmark is to be composed of two separate components with rather different functions: The BBC Music Centre on the one side and an office building – that might or might not be occupied by the BBC itself – on the other side. A further difficulty is that the two components may not be constructed at the same time. Therefore independent successive construction needs to be possible.

Given that the office component is the larger of the two components we think that it needs to participate in the creation of the landmark. We feel that the music centre alone could not fulfil this role against the backdrop of the massive buildings on site.

Therefore we are trying to create a monumental composition whereby the office building frames the music centre enhancing it like a gem in its setting. The office tower projects one floor out over the volume of the music centre. This floor extends further as a large cantilevering canopy. The result is a composition that serves as a single iconic figure.

The large canopy flying over the music centre stretches across the internal street to cover the stage of the outdoor performance

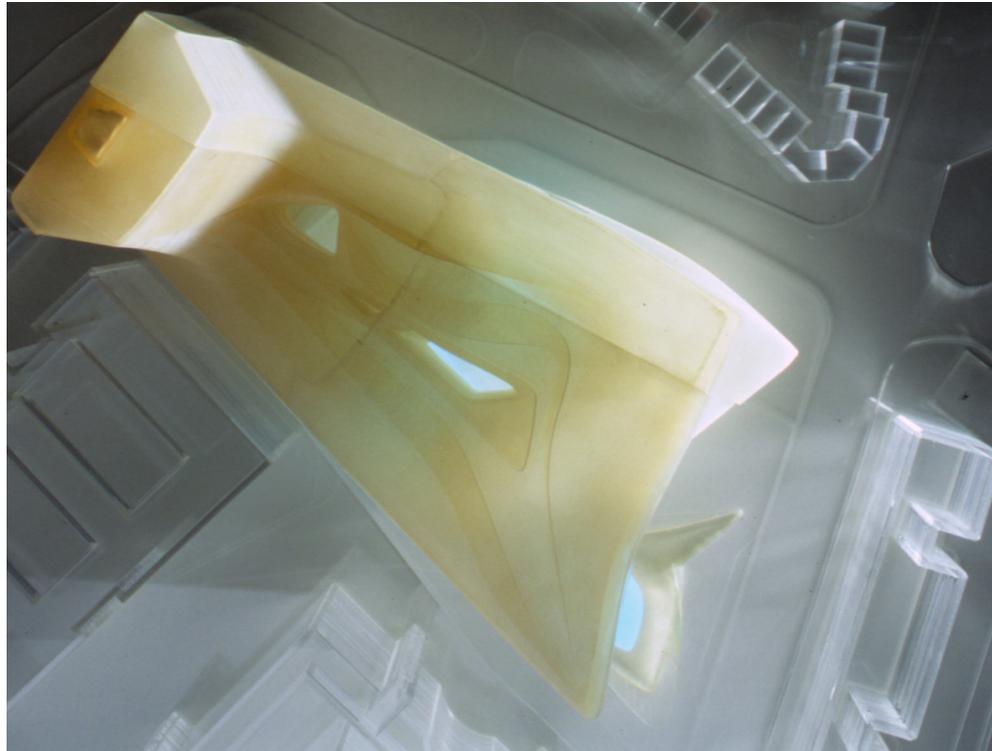


space. This canopy also articulates a soft threshold between urban corner and campus.

The concept for the music centre is the idea of nesting volumes, and an onion-like layering of skins. The overall volume of the music centre contains 4 volumes of similar shape but different size: Studio 1 (for the BBC Symphony Orchestra and BBC Symphony Chorus), Studio 2 (for the BBC Concert Orchestra and the BBC Singers), the cinema and the rehearsal room. Each of these volumes in turn has an inner rectilinear volume and an outer, more curve-linear shell. The space between inner and outer shell is utilised by the belts of ancillary spaces. Deep openings cut through these shells to allow for natural light and views to penetrate the studio spaces.

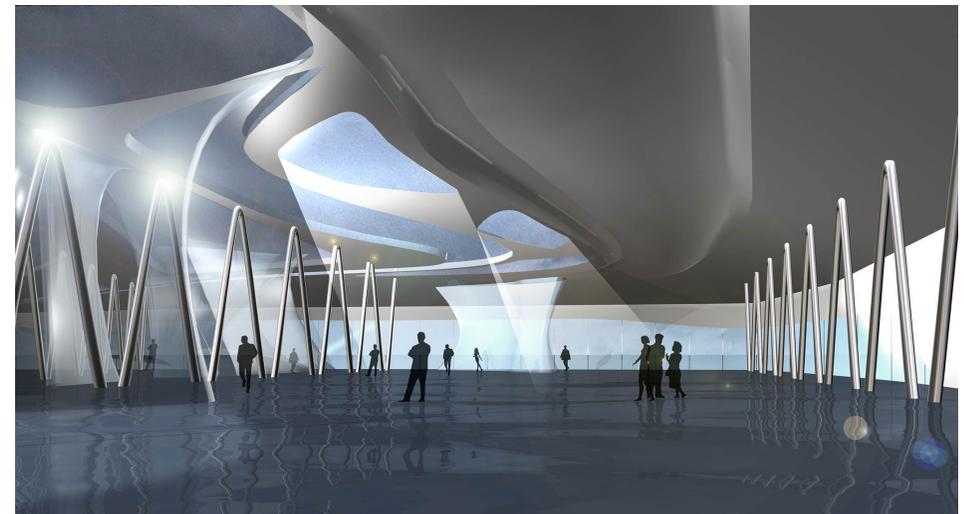
The arrangement of the studio spaces allows for a clear and convenient separation of the public access from the internal circulation of musicians and technicians while maintaining an overall didactic transparency of the spatial composition.

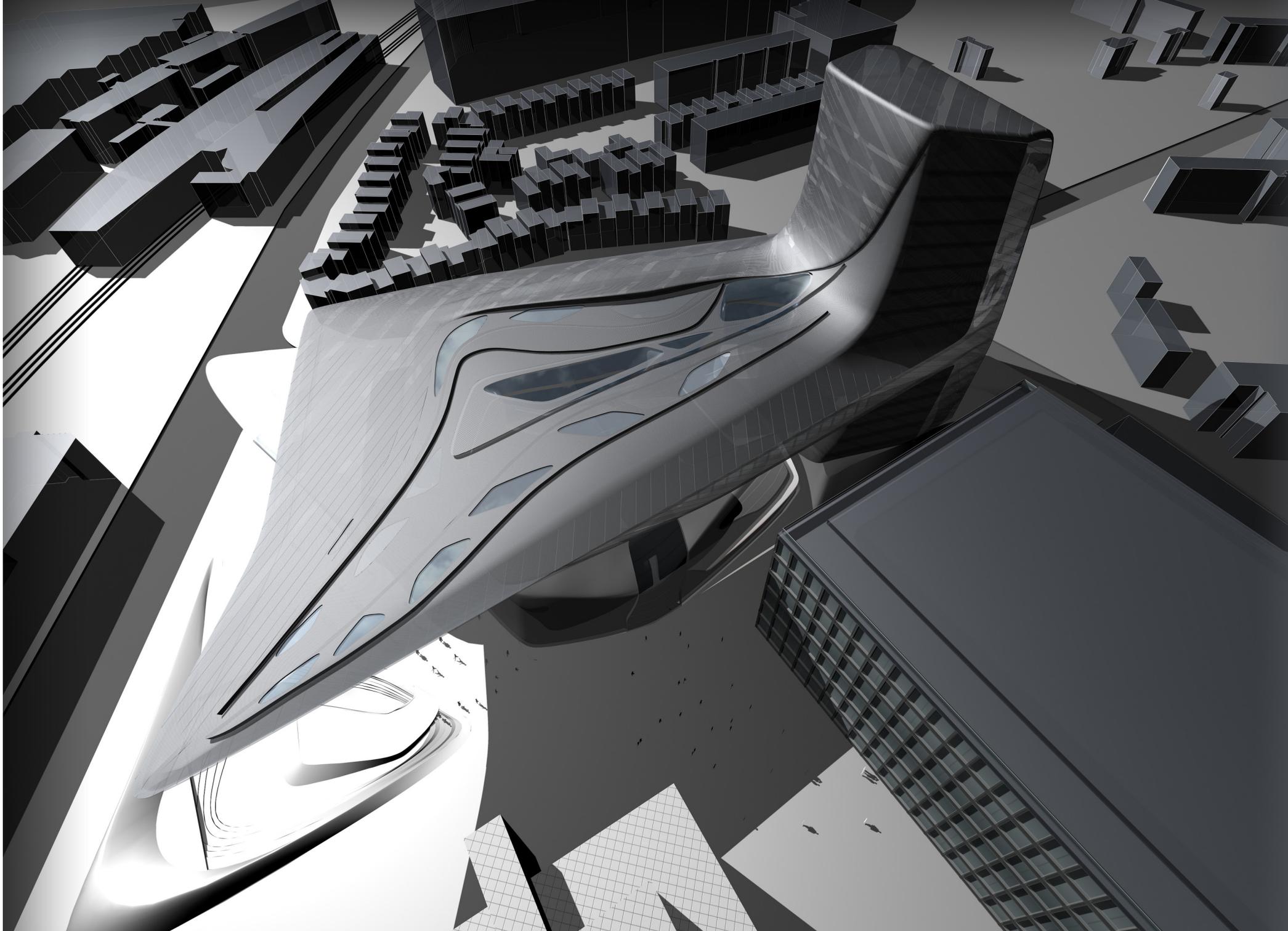
The Foyer space wraps the studio volumes and provides reception, café and exhibition. The tall lobby offers a dramatic view onto



the composition of volumes. The cinema-volume projects into this space from above Studio 2. A mezzanine level stretches between the volumes affording access to the balcony level of Studio 1.

The office building is a tower with central access and service core. The footprint of the tower is 1,400 sqm. On level 5 the floorplate projects out to create a larger floorplate more than double the size. On level 6 the floorplate projects out further and bridges over the music centre. Here we are able to offer a fantastic floorplate of over 6000 sqm. The space is brightly lit by sky-lights and lightwells and affords views down to the urban plaza and across West London. The oblique openings allow glimpses into the studio spaces.



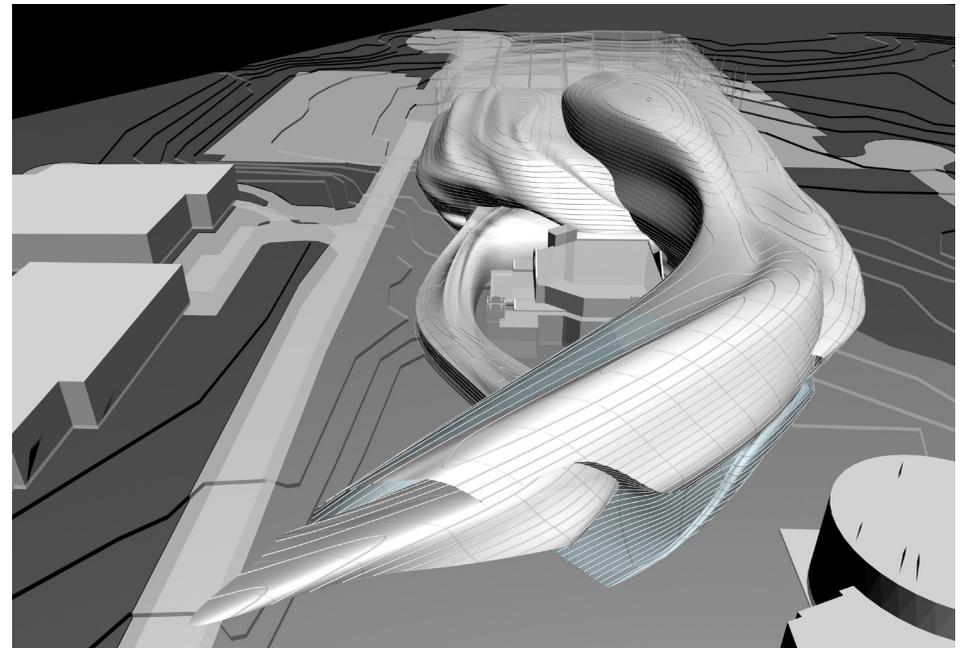
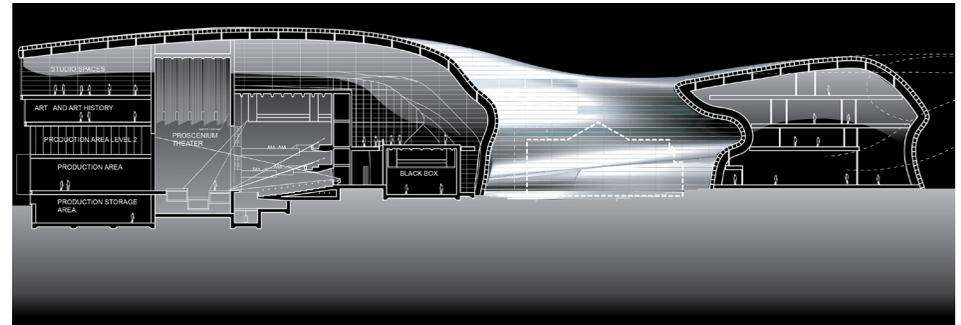
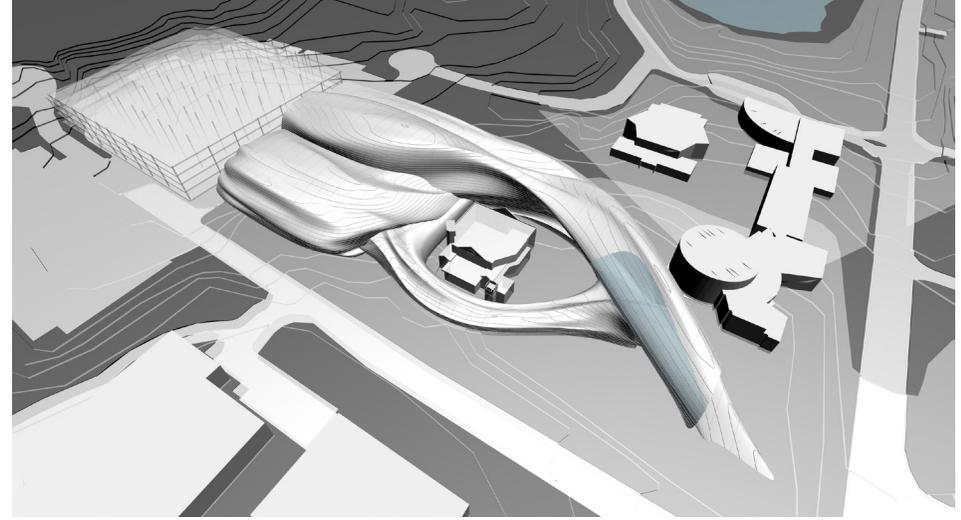
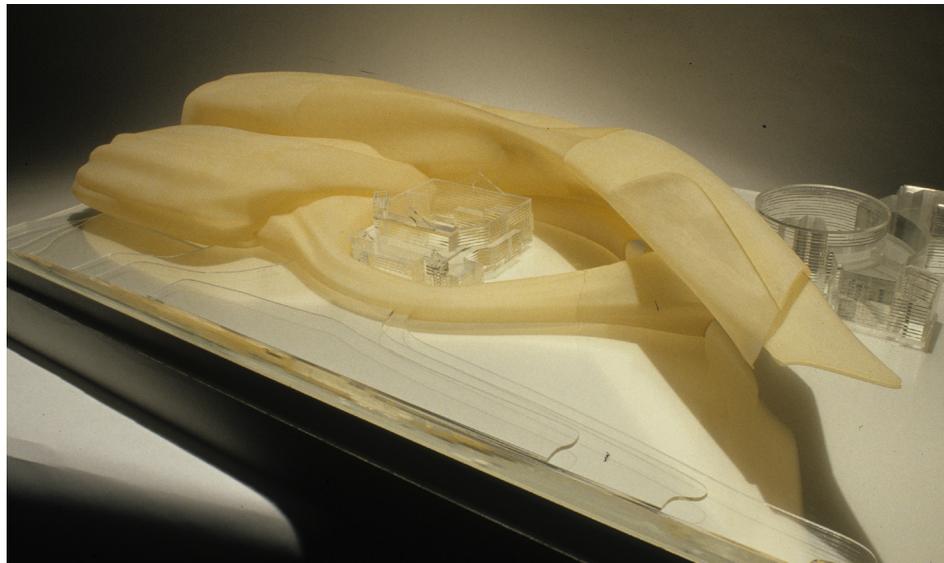


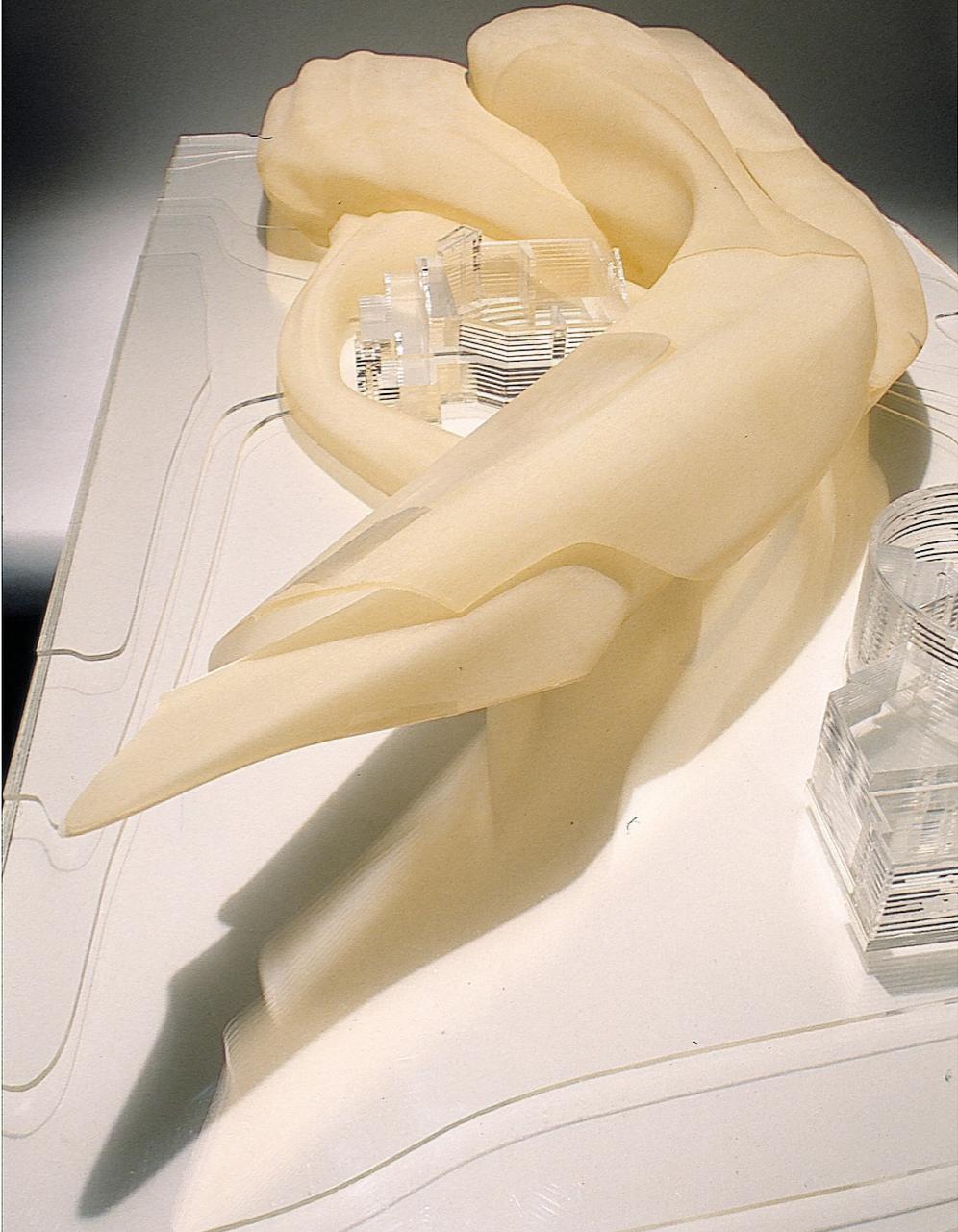
Fine Arts Center UNIVERSITY OF CONNECTICUT

The building we are proposing is a sensation that speaks to all the senses. While all the functionally dedicated spaces required by the brief are laid out and organised in a strictly functional and economic manner, we are using all the lobby and circulation spaces as a fluid mass that flows around and between the function spaces like a stream of lava. The exterior envelope follows the same curve-linear logic, suggestive of the urban, exterior flows that surround and animate the building within its context. It is especially the large performance spaces which define the main body of the building by being wrapped by this fluid film or skin. The small existing theatre is encircled by the fluid forms of the new building like a rock placed into a stream. In this fashion an obstacle has been turned into an architectural event.

The expressive-organic language of architecture gives this new Fine Art Center an unmistakable character. However, this language is neither arbitrary nor idiosyncratic. Rather it represents the fulfilment of a longstanding dream of architecture to gain the fluidity, pliancy and adaptability of natural systems.

The aesthetic proposed here portends the future in as much as this new language of architecture projects the full potential of the new, state of the art digital design and manufacturing capabilities.





High Speed Train Station FLORENCE

The key challenges of the architectural project is to create an urban event space and communication hub which is initiated by a train that is buried 25m under the ground. The task is to give expression to this hidden life-line and to bring this underground event to the urban surface.

This primary task is the point of departure for our concept: to split the ground and reveal the deep interior of the station.

The split is articulated as a tectonic fault-line along which one side lifts up while the other side bulges slightly under the pressure from below.

This tectonic shift is our way of mediating the existing bank of elevated railway lines on the eastern boundary of the site with the lower urban level on the western side (ex Macelli area). Between the two sides a deep canyon opens up, nearly along the full length of the station, connecting the two main entrances. The play with large tectonic gestures also allows for the smooth and natural mediation of the considerable level differences between the northern and southern entrance to the site.

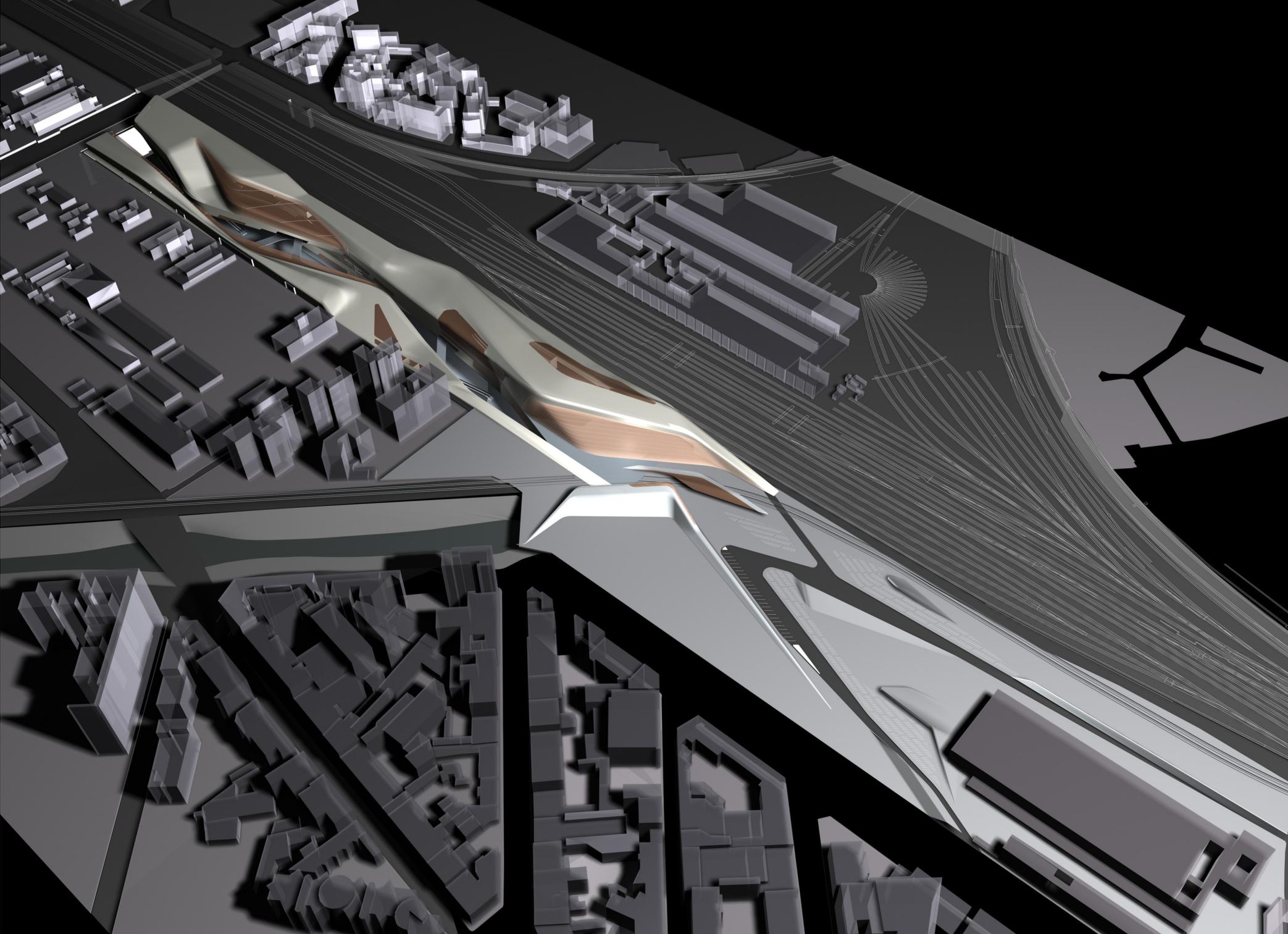
The device of the fault-line/canyon means that all overground structures naturally lead downwards into the heart of the station, unfolding a dramatic “promenade architecturale”. At the same time the canyon offers a spectacular point of arrival for those who arrive in Florence by the new train. Direct glimpses of the sky are offered right as the passenger steps off the train. Also: In both directions the canyon offers an infallible means of orientation – in itself not a trivial matter in a station that measures 450 meters.

The two sides of the canyon lean inwards and – at precise moments – connect. This way no further structure is required to support this grand space.

The digital Design process (account by Maurizio Meossi)

In other words, it is possible to describe the entire creative process of the project describing the evolution of the digital model and the techniques used for its realization.

Differently to what was happening in other projects developed by the office in the same period, the digital model had, in fact, its own development in the formal definition of the Station, almost autonomously from its programmatic definition; therefore the digital model has not been merely a three-dimensional tool to verify “bi-dimensional” intuitions, but it has been the main instrument of formal exploration.

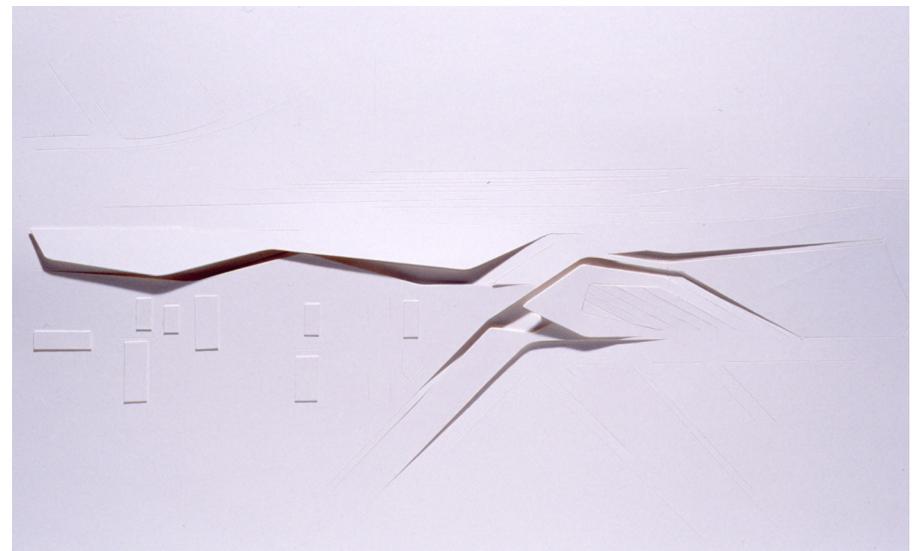


This relative independence made possible to enact a dialectical relationship of continuous input and output between the digital model on one side and plans-sections (bi-dimensional drawings, “traditional” media of the architectural representation) on the other; this reciprocal interaction has gone on till the layout of the final drawings, allowing to push the formal research till the very last minute.

From a strictly technical point of view the modelling has been an application of the “cross-sections\surface” technique, a method that (through the subsequent application of two 3dsMax commands), allows to define a complex surface (mesh) starting with at least two curves (splines) that characterize its main geometry. The software generates the surface through a process of interpolation, leaving the geometrical control on the starting curves, whose vertices become sort of “grips” through which it is possible to “sculpt” and “shape” the resulting surface. This peculiar property of the solid modelling tools of the new generation (3dsMax as well as Maya or Rhino) is due to two basic features: first they operate in a parametric way, meaning that it is possible to control each single operation through numeric values (corresponding for example to coordinates of points movements in space, or height of extrusion of a shape, or function degree used by the geometric interpolation algorithm, etc.) constantly modifiable; second, the software maintains an “historical memory” of the operations made on each single object, so that it is possible to go back and modify the “primitive” geometrical entity (in our case the generative curves) in each moment of the process.

Trying to resume the entire process in its key steps we have:

1. starting curves definition, in this case horizontal slices of the “canyon”, traced on the basis of a preliminary study with physical models; the sequential application of the commands “cross-sections” and “surface” generates the complex surface that represents the first digital study model;
2. digital manipulation of the obtained surface: acting on the vertices of the generative curves it is possible to control accurately the overall geometry, emphasizing the formal aspect of the research;
3. cross sections (in our case at least ten) are extracted from the digital model; the sections become the basis for the structural and programmatic development, with consequent modifications in the horizontal sections (that we can now start to call “proto-plans”);
4. an updated model is built according to the new horizontal sections, giving the start to a reiterative process of the points from two to four, with the aim to obtain simultaneously functional optimisation and satisfying formal results.



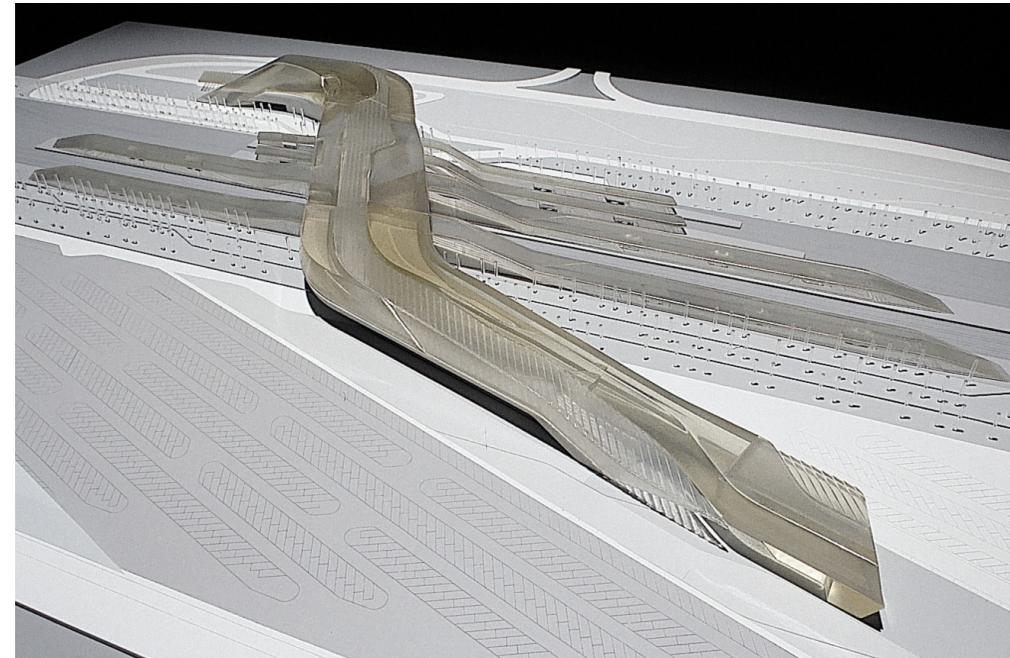
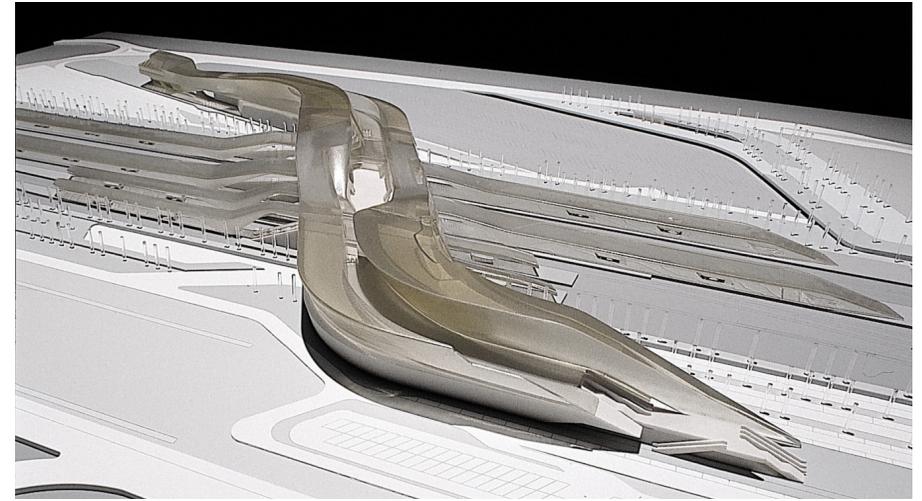
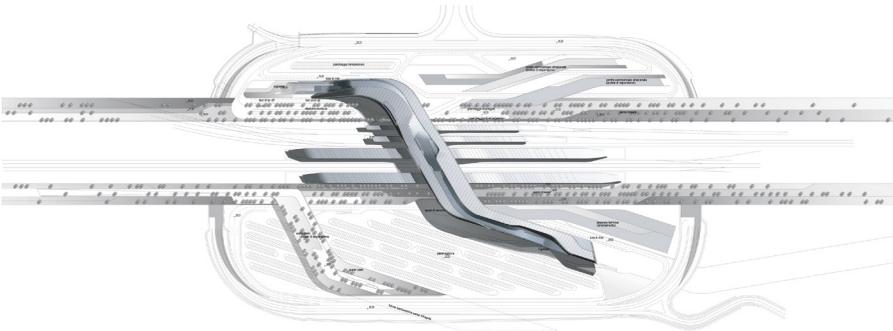
Experimentation on the digital model has been of great importance also for the “materic” study of the Station wrapping: passages from opaque to transparent surfaces are made with “carving” operations on the same complex surface; change of material does not mean geometrical discontinuity.

From representation technique to active designing tool, able to modify the way we think the architectural project: this is the main step represented by the digital modelling.

New High Speed Train Station Napoli-Afragola NAPLES

The key challenge of the architectural project is to create a well organized transport interchange that can simultaneously serve as a new landmark that announces the approach to Naples – a new gateway to the city. This is the first reason why we chose to conceive the new station as a bridge above the tracks.

The task is to give expression to the imposition of a new through-station that can also act as the nucleus of a new business park that will link the various surrounding towns. This is the second reason why we conceived the station as a bridge that provides an urbanized public link across the tracks.

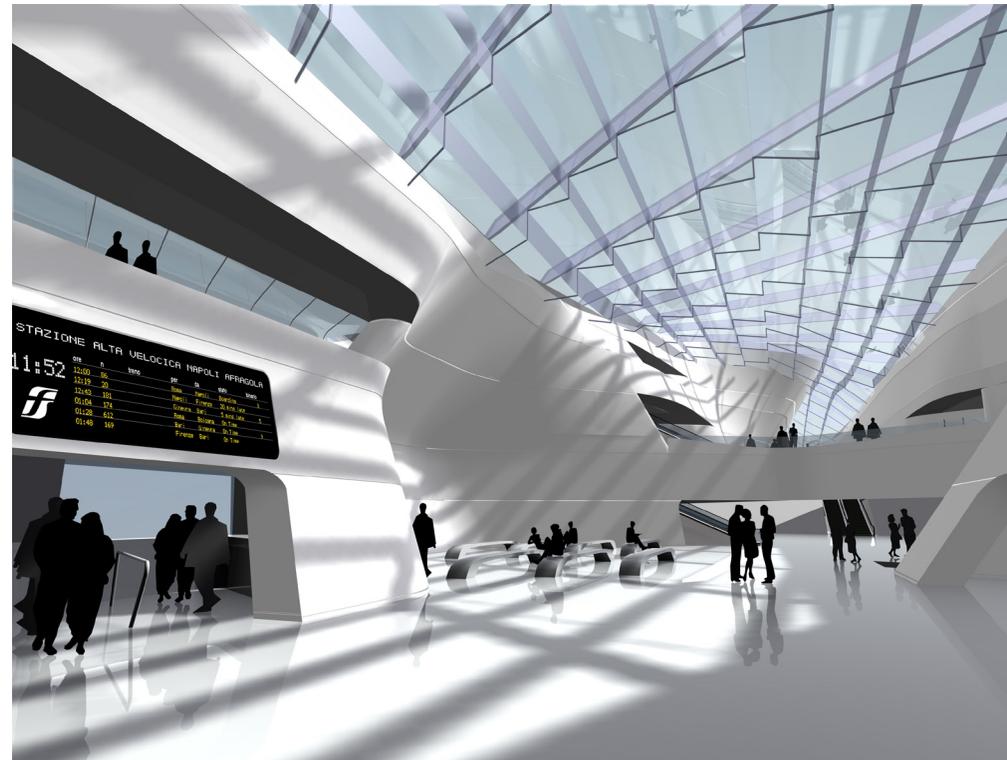
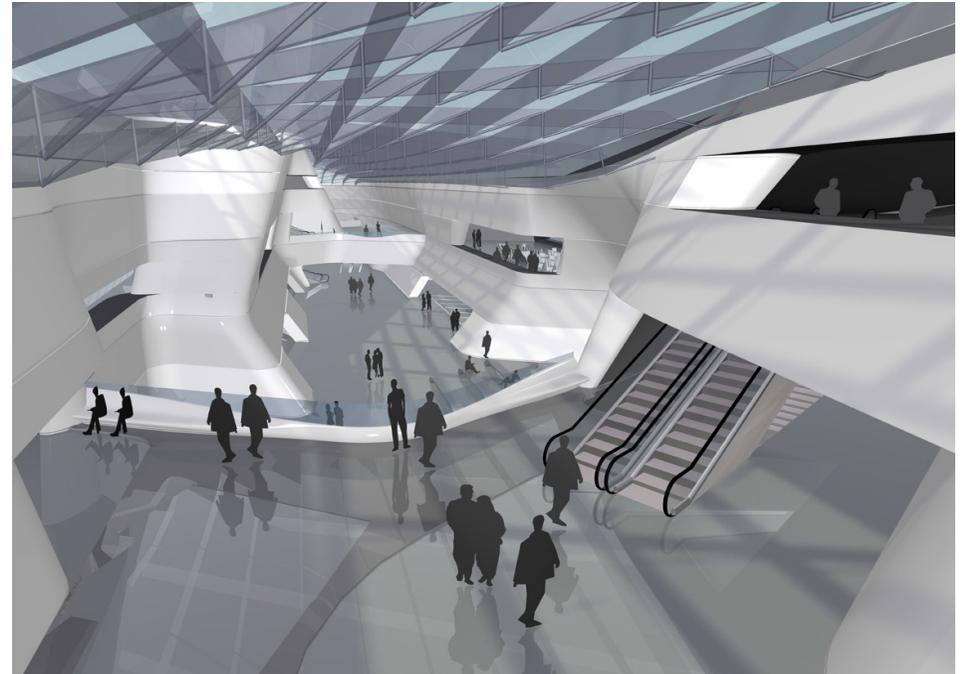
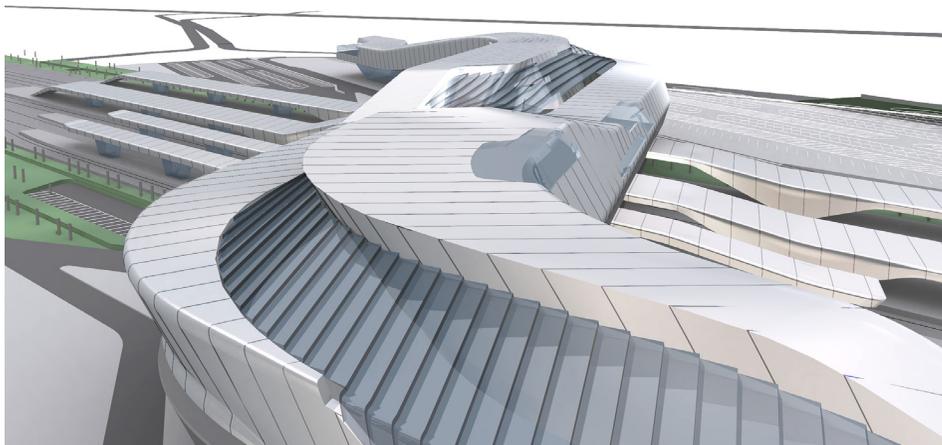
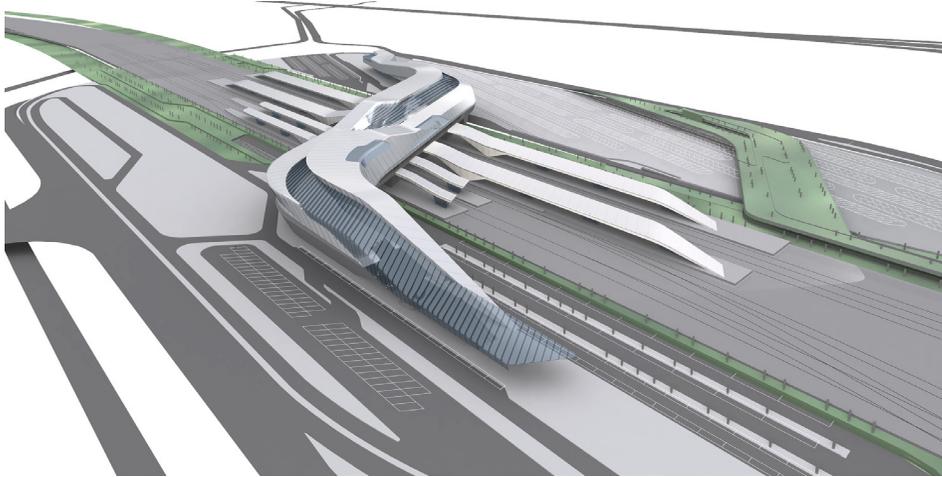


In fact the station is to be approached from two sides. There is no justification in privileging one of these two sides. Therefore the station might have two entrances – one on either side of the tracks. By implication, the central functions and the main visible body of the station should ideally be placed in the center above the tracks, thus equally addressing both sides. This is the third and perhaps

most compelling reason why we think that the station should be designed as a bridge.

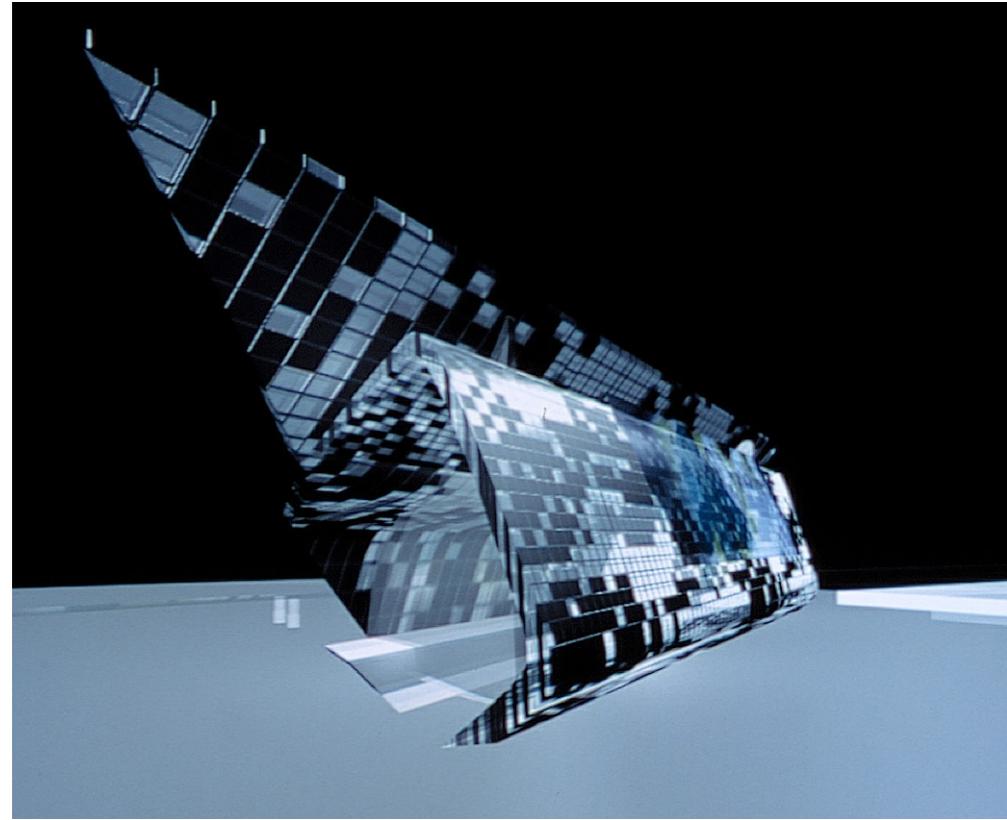
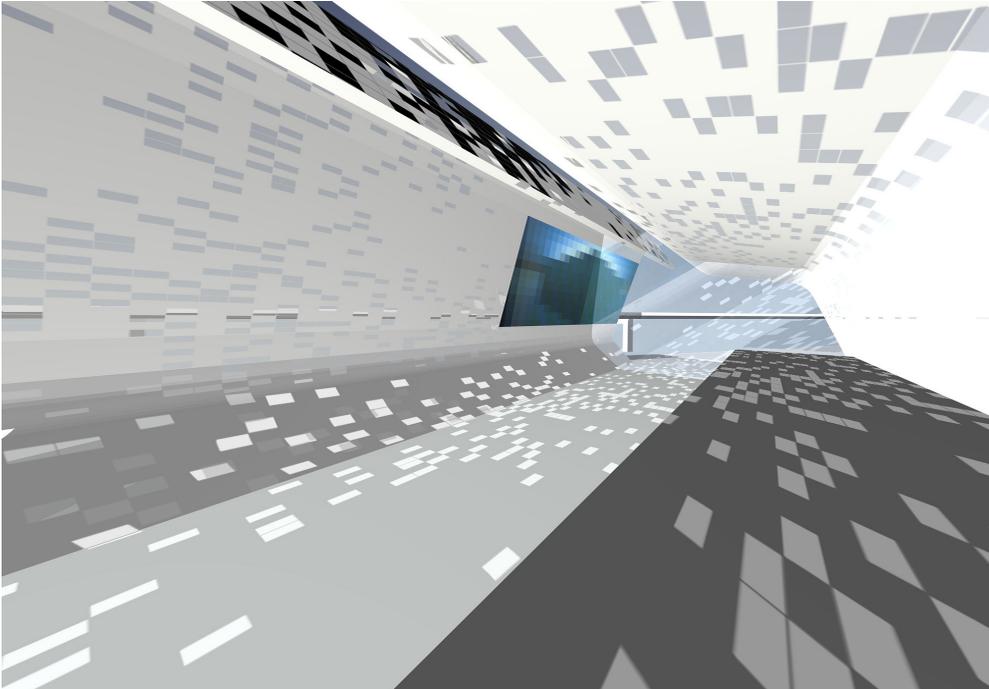
The architectural language proposed is geared towards the articulation of movement and allows for the smooth integration of all the flows and traffic lines that intersect in this new transport interchange. It ties in naturally with the bundle of railway lines, and access roads which characterize this artificial terrain.

This open and dynamic quality of the architectural figure is pursued further within the interior of the building where the trajectories of the travellers determines the geometry of the space. The facilitation of obvious and easy access, as well as the smooth guidance of all movements within, is the fundamental ethos of our design.



Temporary Tokyo Guggenheim Museum TOKYO

Odasiba Island seems a perfect place to establish a site of cultural experimentation. Here emerges a very dynamic urban space, built upon synthetic land and animated by the entrepreneurial spirit of rapid development. In this context the 10 year intervention of the temporary Guggenheim will be an instant cultural hotspot and a catalyst for related activities.



With respect to the architectural iconography the structure should signify the creative employment of state of the art science and technology. As a visitor experience the object has to excite curiosity and desire. A considerable degree of strangeness is indispensable. The project – like any true object of desire – will at first appear mysterious, an unknown territory waiting to be discovered and explored.

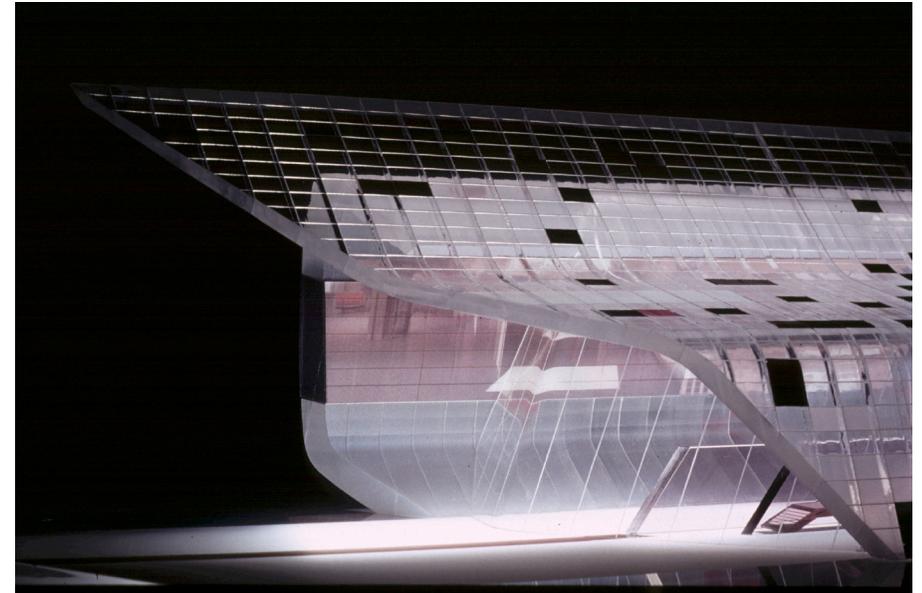
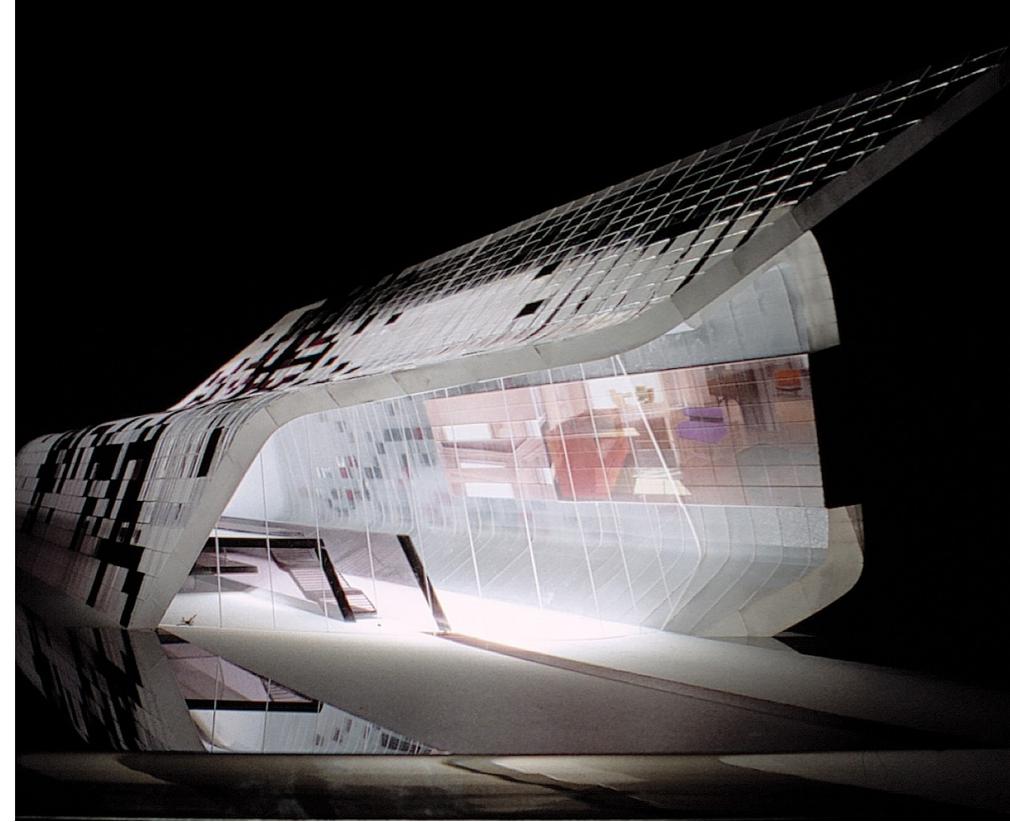
In line with the temporary nature of the structure we are opting for a light weight envelope. A strong signature figure is created as two folded planes – like sheets of paper – lean against each other and encapsulate a generous space. This image of an elegant light weight wrapping seems an appropriate response since a space for changing exhibitions needs to be receptive to constant internal redefinition. However the empty space itself is already its own attraction. Although the spatial concept is extremely simple – in effect the parallel extrusion of three simple sections – the size, level of abstraction and dynamic profile of the folded planes ensure an

exhilarating spatial sensation. The diagonal cleft at the top exerts a dramatic sense of vertigo as the light washes down the tilted plane.

At both ends the three extrusion are cut off at different angles. This simple move effectively articulates the ends and allows us to emphasize the entrance zone with a dramatic gesture.

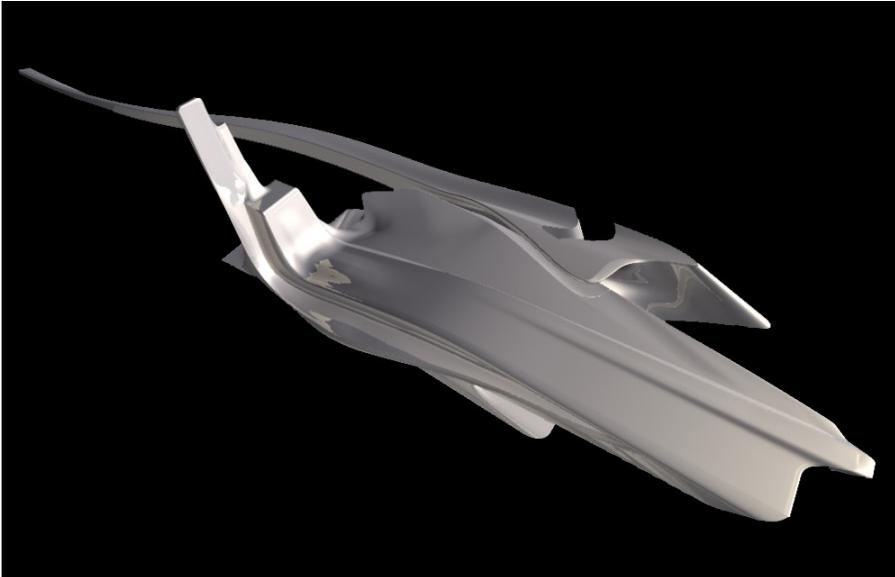
A further aspect to be noted is the quality of the skin. We are proposing a snakeskin-like pixellation that allows the formally coherent integration of various surface performances. The primary cladding material would be large scale ceramic tiles (offering smooth surfaces and brilliant colours). These would be interspersed by light-boxes which allow further daylight to penetrate the space as well as acting an artificial lightsource at night. Further panels would be photo-voltaic elements. Finally we are proposing to embed a large media screen – in the form of honey-comb based “smart slabs”. The media screen would nearly be camouflaged into the overall animation of the skin.

Internally the skin operates according to the same concept but is aesthetically much more muted. Here light, ventilation and heating is incorporated within the pixel logic.



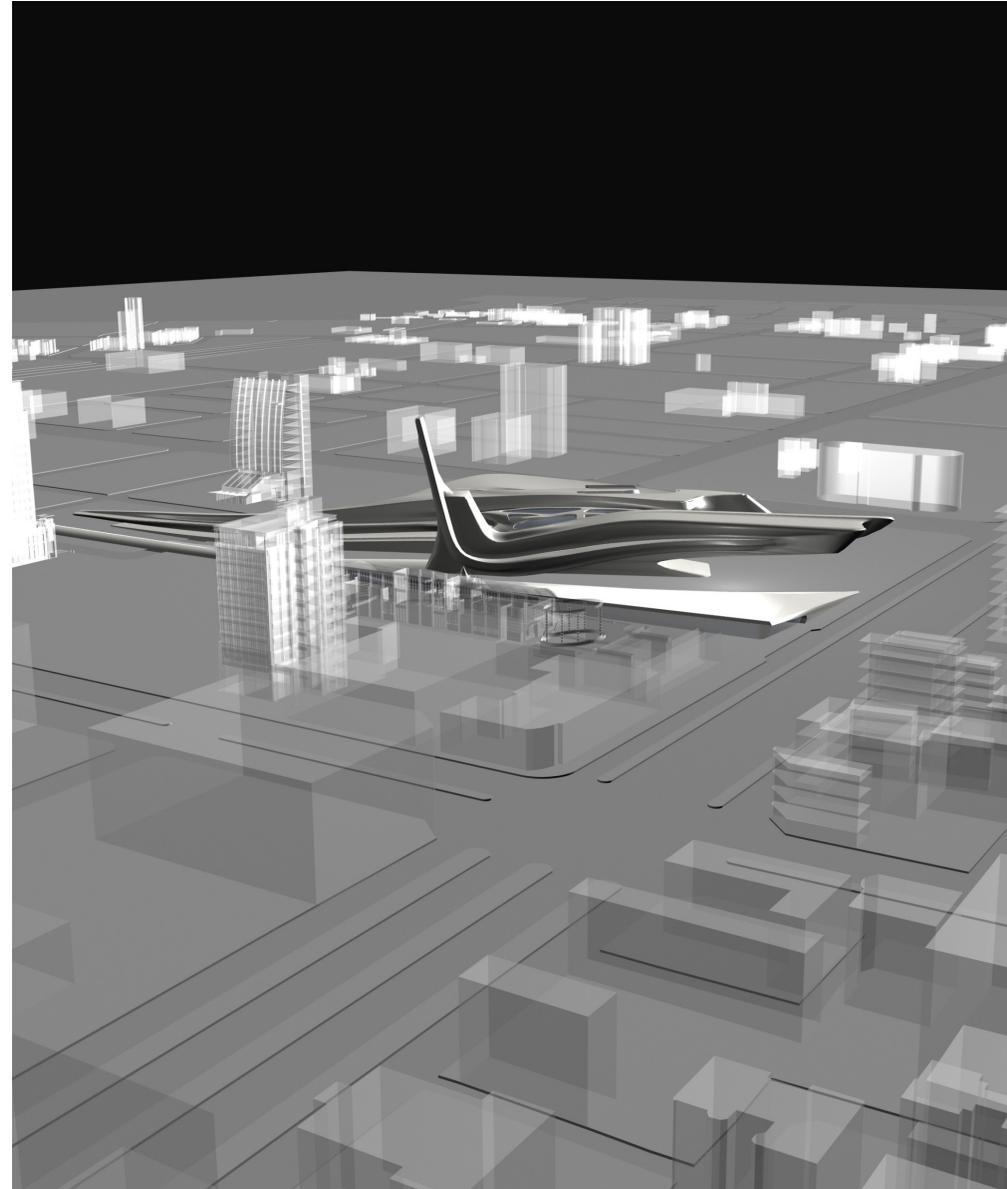
Guggenheim Museum TAICHUNG

The design proposal is based on the concept of the museum as an ever-changing event space. To emphasise the aspect of transformability of the space we would like to explore the possibility to equip the new museum with something like a “stage-machinery”. We devised a series of large-scale kinetic elements that offer the option to radically transform the arrangement of the gallery



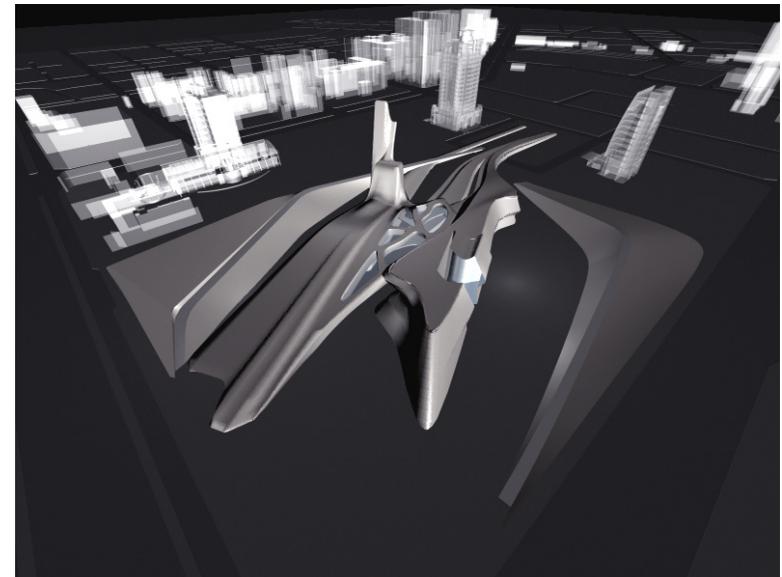
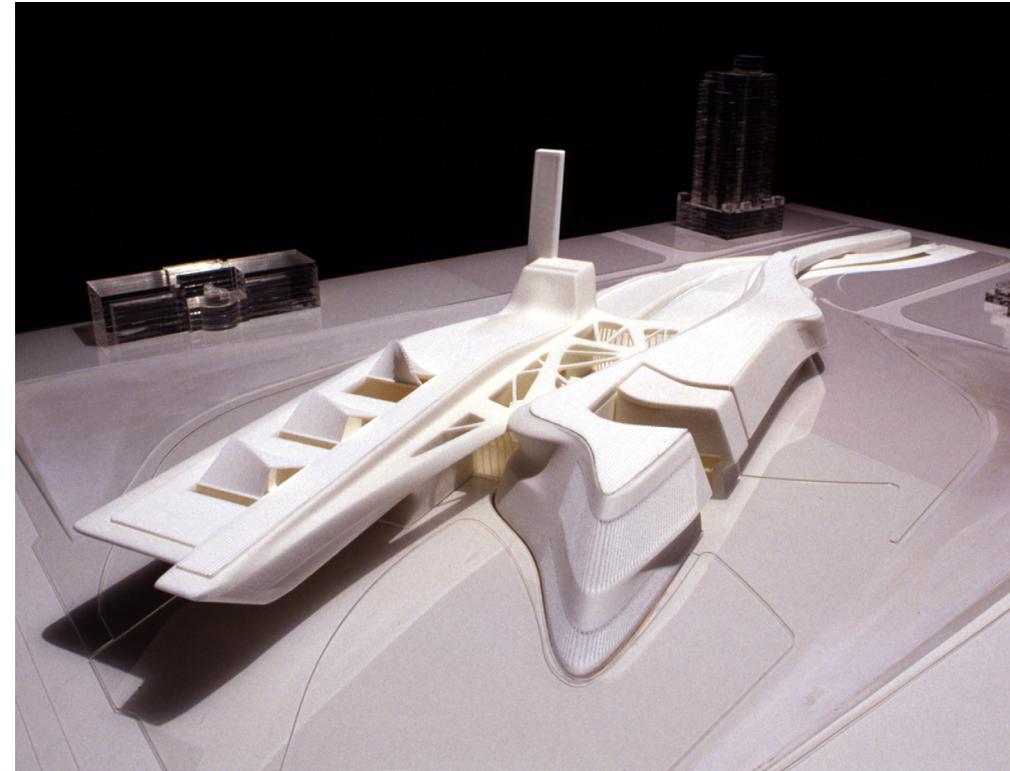
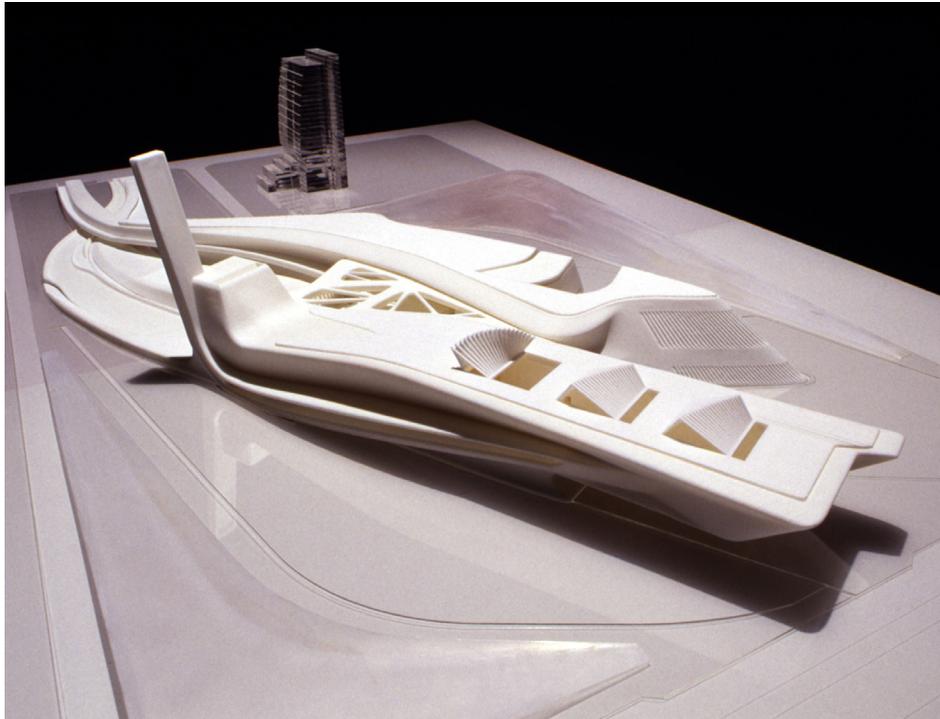
spaces. We would also like to make this dramatic transformation of the space itself a spectacle, visible even on the outside appearance of the building. Thus the internal reconfiguration of the exhibition spaces creates a public sensation within the urban scenery.

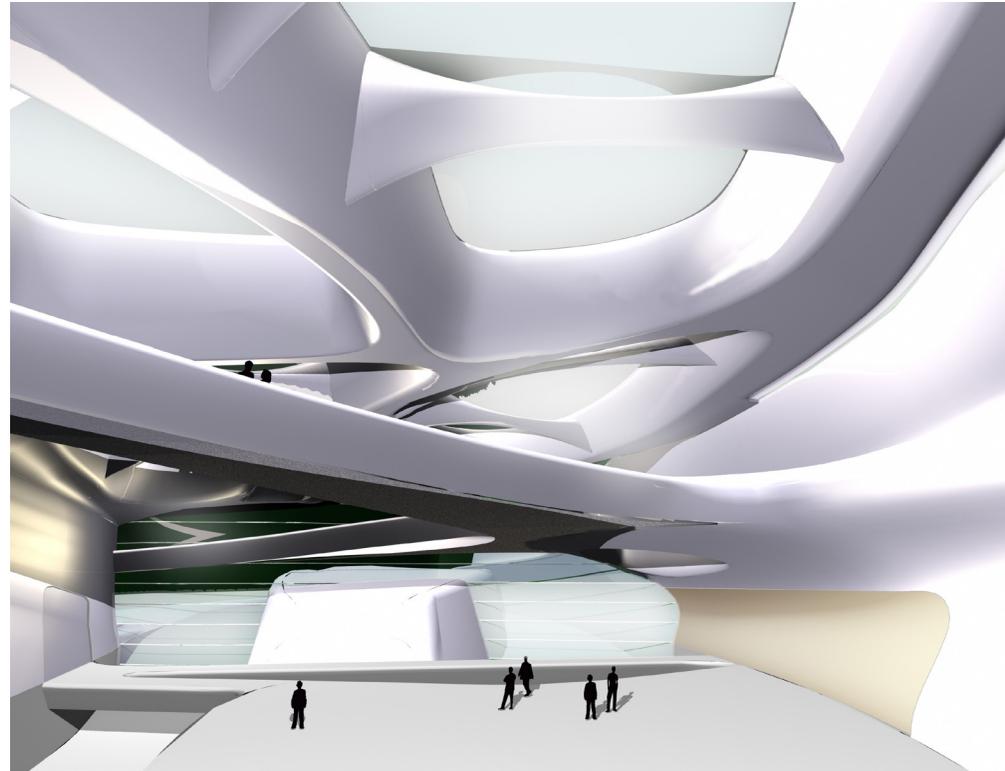
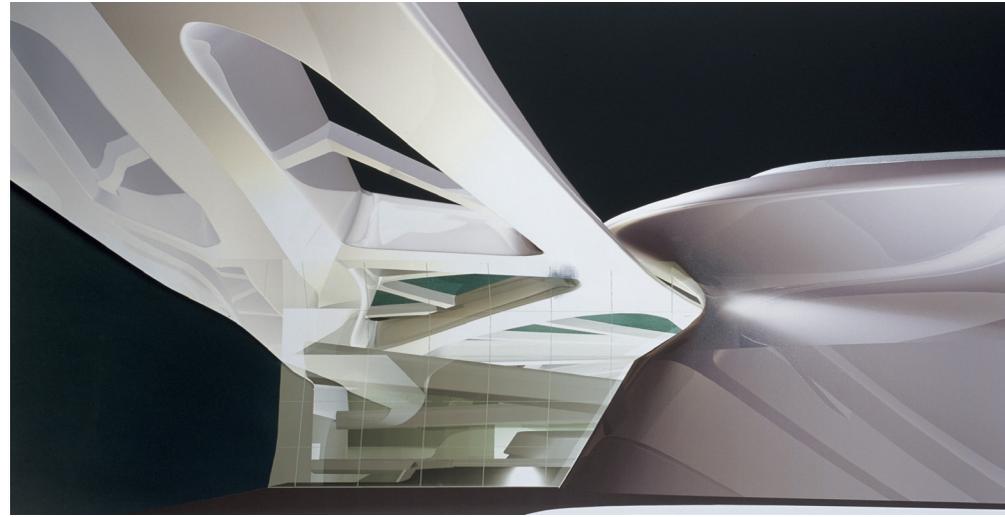
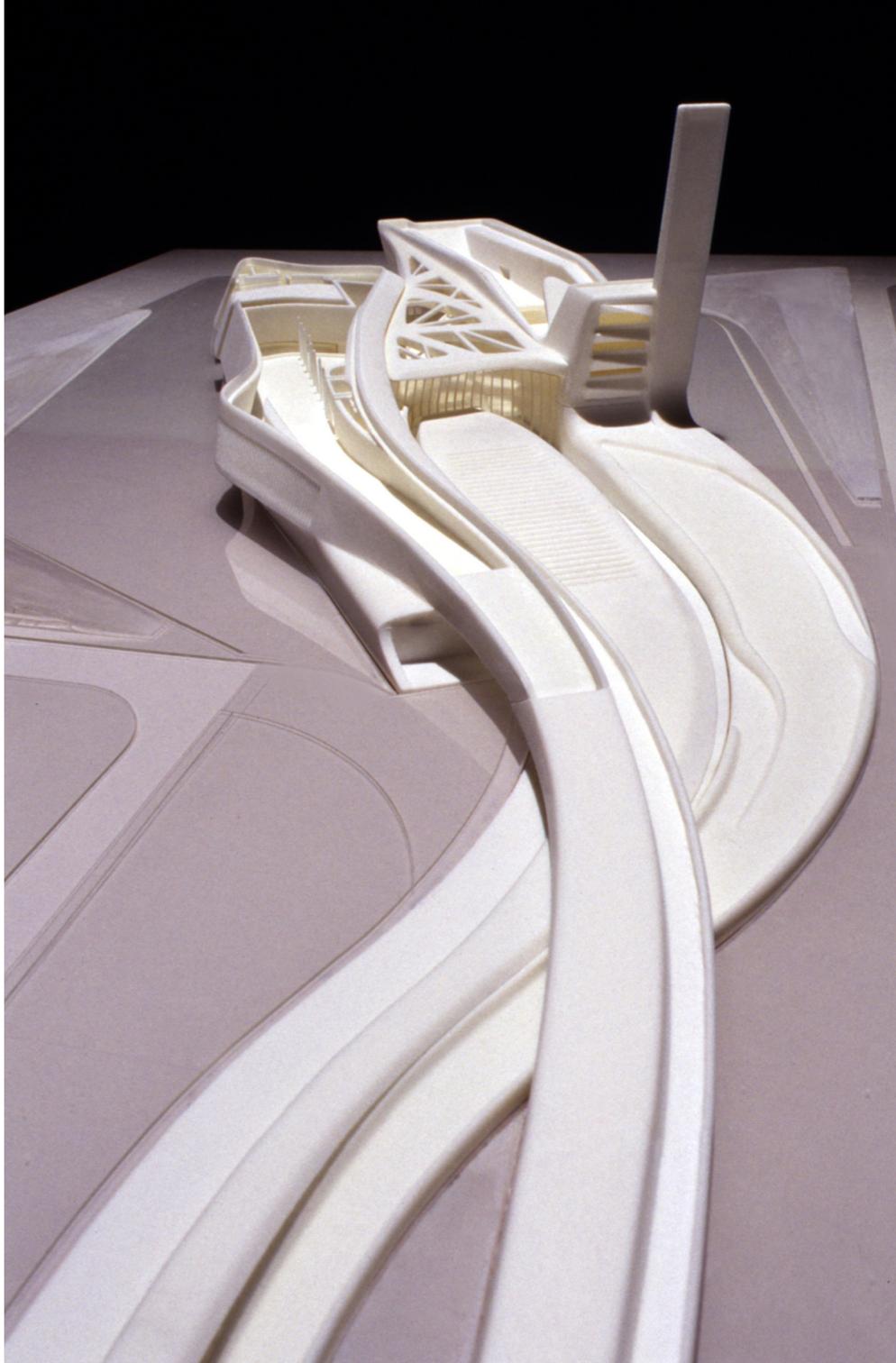
The site is tied into a masterplan of two crossing axes that give an organising structure to the ensemble of four new landmark buildings that shall comprise the Guggenheim Museum, the new town hall, the city assembly and the national opera. This arrangement



implies that the museum will be approached from two main sides. This double orientation leads to the idea of a large lobby space that can be approached from two opposing ends and thus cuts a public path through the museum. Much of the internal organisation of the museum follows from this initial move, motivated by the urban configuration.

The building gradually emerges from a soft landscape formation. The formal language and architectural articulation is premised on the idea that the building bleeds into the open public space of the urban axis. The overall dynamism and fluidity of the elongated form suggests an emphasis of movement through and around the building. Both the public flow through the building as well as the internal circulation through the exhibition spaces is expressed by means of swooping ramps. Although the building can be approached from both ends, these two ends are articulated rather differently. On Taichungkang Road the building offers its urban edge with a severe cantilevering volume which projects towards the Taichungkang Road like a huge canopy. The opposing end facing the future park-space of the new urban ensemble is characterised by curved ramps merging into the building.

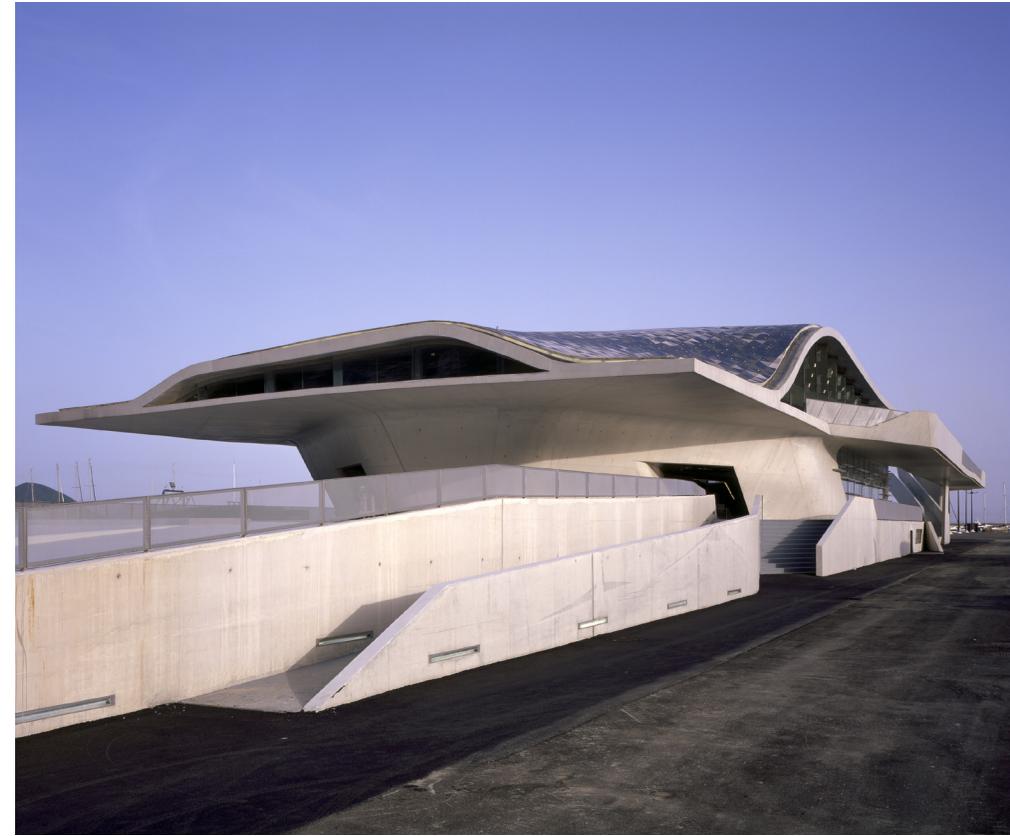
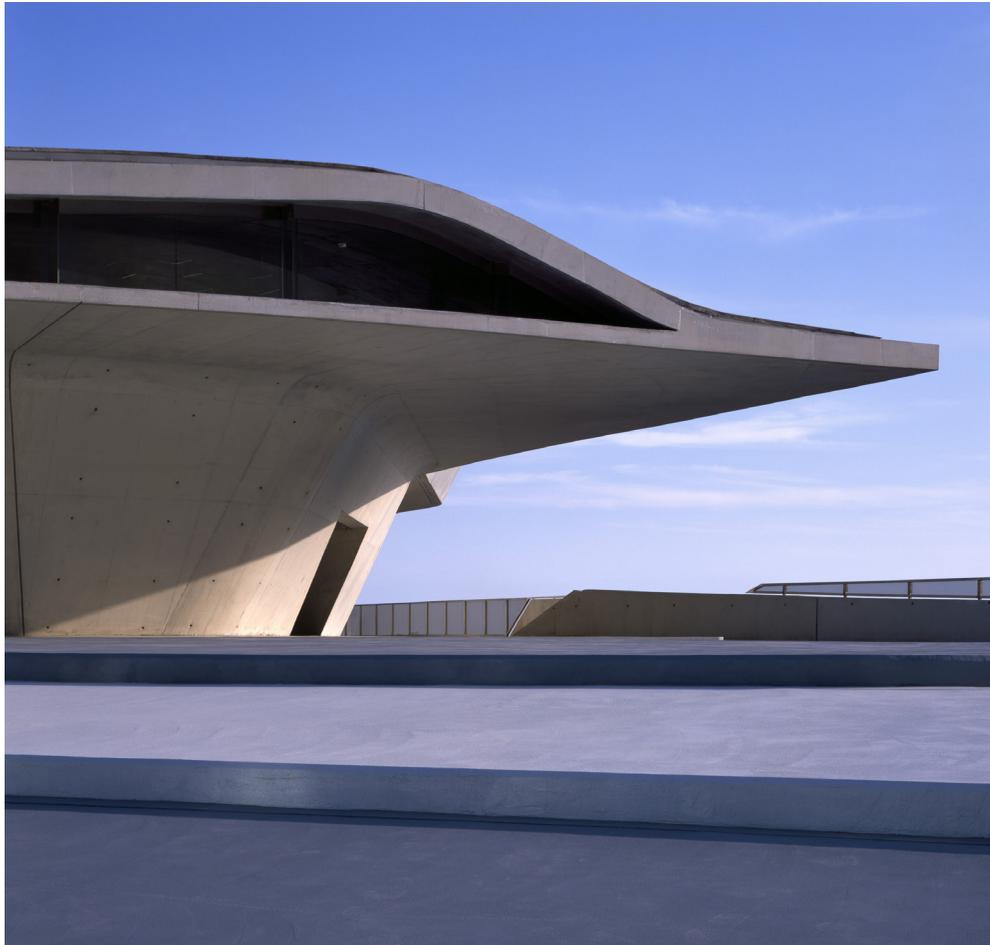




Maritime Terminal SALERNO

The Maritime Terminal forges an innovative, intimate relationship between the City and the Waterfront. Like an oyster, the building has a hard shell that encloses soft, fluid elements within. A 'nerved' roof acts as an extended protection against the intense Mediterranean sun.

When passengers arrive at the Terminal, their drifting begins in dynamic spaces organized around focal points such as the restaurant and the waiting room. The aquatic topography offers insistently differentiated spaces, and experience, whilst providing clear orientation.





The ground is sculpted as a smooth hill upon which the sloped path begins. This whole area is indicatively lit to guide passengers through the length of the building. The idea of the lighting operates at another level too: from the outside, the glow of the Terminal will act like a lighthouse to the port, a symbolic mark on the complex set of traces belonging to its former Norman and Saracen past.

Functionally speaking, the Terminal is composed by three main interlocking elements: the offices for the administrative section; the terminal for the ferries and the terminal for the cruise ships. The daily ferry passengers' movements are fast and intense, and the organization of the plan enhances the speed and efficiency of the visit. Passengers arrive on the ground level, buy their ticket, coffee and newspaper. They then ascend via ramps, to the upper level and reach the vessel entrance.



Phaeno Science Center WOLFSBURG

The Science Center, the first of its kind in Germany, appears as a mysterious object, giving rise to curiosity and discovery. The visitor is faced with a degree of complexity and strangeness, which is ruled however by a very specific system of structural organization.

Located on a very special site in the City of Wolfsburg it is set both as the endpoint of a chain of important cultural buildings (by Aalto, Scharoun and Schweger) as well as being a connecting link to the north bank of the Mittelland Kanal -Volkswagen's Car Town.

Multiple threads of pedestrian and vehicular movement are pulled through the site both on an artificial ground landscape and inside and through the building, effectively composing an interface of movement-paths. Volumetrically, the building is structured in such a way that it maintains a large degree of transparent and porosity on the ground, since the main volume -the Exhibition- is raised thus covering an outdoor public plaza with a variety of commercial and cultural functions which reside in the structural concrete cones. An artificial crater-like landscape is developed inside the open exhibition space allowing diagonal views to the different levels of the exhibition scape, while volumes, which protrude, accommodate other functions of the science center. A glazed public wormhole like extension of the existing bridge flows through the building allowing views to and from the exhibition space.





Guangzhou Opera House GUANGZHOU

Like pebbles in a stream smoothed by erosion, the Guangzhou Opera House sits in perfect harmony with its riverside location. The Opera House is at the heart of Guangzhou's cultural development. Its unique twin-boulder design enhances the city by opening it to the Pearl River, unifying the adjacent cultural buildings with the towers of international finance in Guangzhou's Zhujiang new town.

The 1,800-seat auditorium of the Opera House houses the very latest acoustic technology, and the smaller 400-seat multifunction hall is designed for performance art, opera and concerts in the round.

The design evolved from the concepts of a natural landscape and the fascinating interplay between architecture and nature; engaging with the principles of erosion, geology and topography. The Guangzhou Opera House design has been particularly influenced by river valleys – and the way in which they are transformed by erosion.

Fold lines in this landscape define territories and zones within the Opera House, cutting dramatic interior and exterior canyons for circulation, lobbies and cafes, and allowing natural light to penetrate deep into the building. Smooth transitions between disparate elements and different levels continue this landscape analogy.

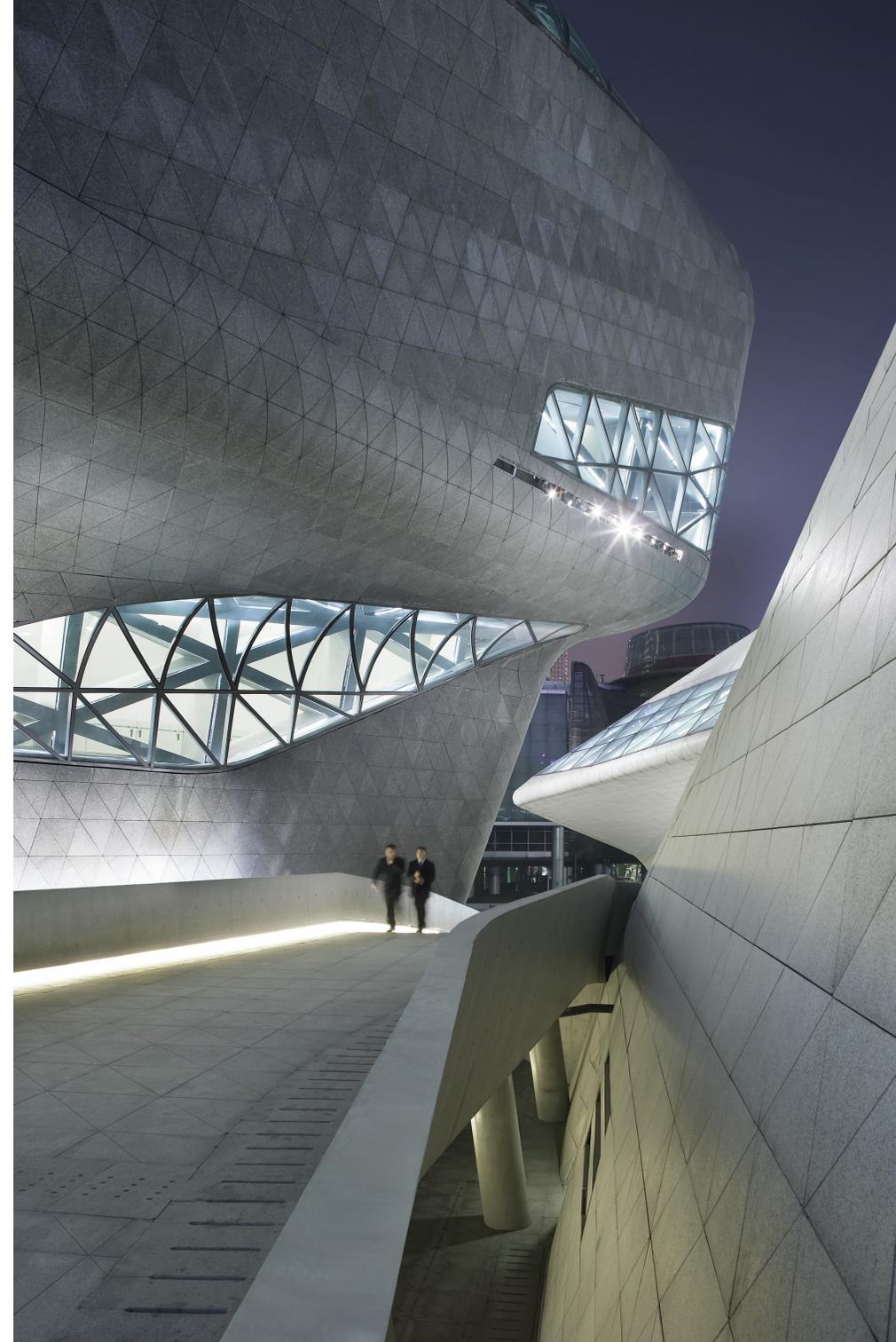


Custom moulded glass-fibre reinforced gypsum (GFRC) units have been used for the interior of the auditorium to continue the architectural language of fluidity and seamlessness.

The Guangzhou Opera House has been the catalyst for the development of cultural facilities in the city including new museums, library and archive. The Opera House design is the latest realization of Zaha Hadid Architects' unique exploration of contextual urban relationships, combining the cultural traditions that have shaped Guangzhou's history, with the ambition and optimism that will create its future.



Guangzhou Opera House



Guangzhou Opera House



Nordpark Cable Railway INNSBRUCK

The project contains the design of four stations along the cable railway tracks leading up to Innsbruck's northern chain of mountains. Adaptation to the specific site conditions in various altitudes while articulating a coherent overall architectural language is critical to this design approach. Two contrasting elements "Shell & Shadow" generate each station's spatial quality. A lightweight organic roof structure floats on top of a concrete plinth. The artificial landscape functions as a relief in which various movements and circulations are inscribed. Looking at the Roof Shell's fluid shapes and soft contours, one might be reminded of natural phenomena such as glacier movements.



New production methods like CNC milling and thermoforming guarantee a very precise and automatic translation of the computer-generated design into the built structure. The resulting aesthetics might be reminiscent of streamlined Industrial Design pieces (Car Bodies, Aeroplane Wings, Yachts etc.). Each station has its context, its topography, its altitude, its movements. The track's



inclination and ratios are dominant technical parameters. A high degree of flexibility enables the shell structures to adjust to these various parameters while still being part of the same formal family. The concept of lightness is explored. Large cantilevers and small touch down areas underline a floating appearance of the shells.

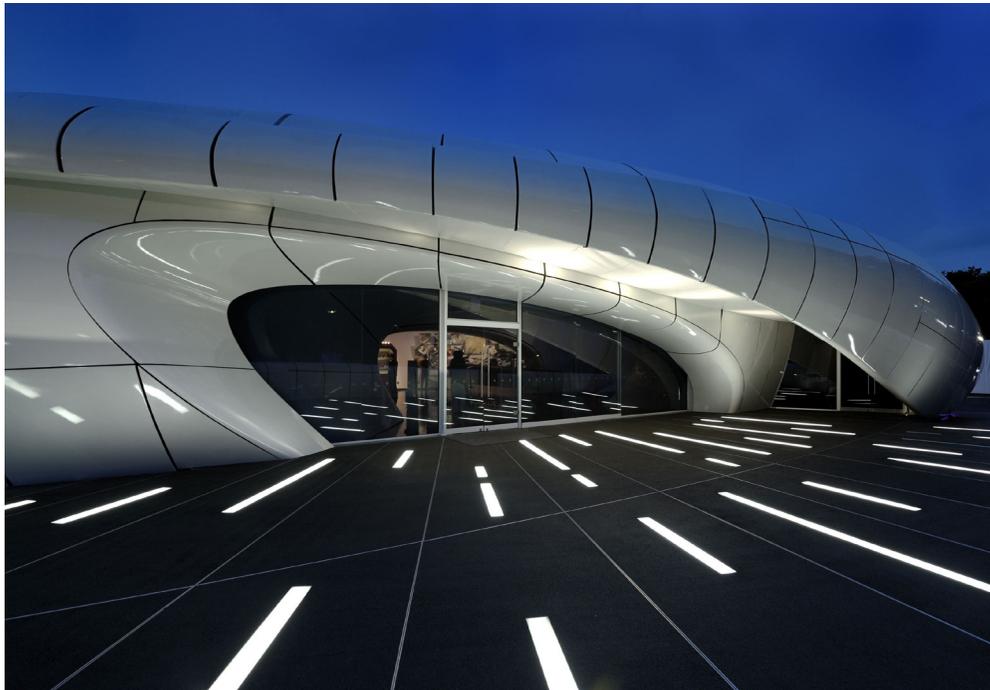


Mobile Art Chanel Contemporary Art Container

HONG KONG, TOKYO, NEW YORK, PARIS

The form of the 700m² Chanel Pavilion is a celebration of the iconic work of Chanel, unmistakable for its smooth layering of exquisite details that together create an elegant, cohesive whole. The resulting functional, and versatile architectural structure of the Pavilion is a series of continuous arch-shaped elements, with a courtyard in its central space. Artificial light behind the translucent ceiling washes the walls to emphasize the “arched” structure, and assists in the creation of a new artificial landscape for art installations. A large roof light opening dramatically floods the entrance in daylight to blur the relationship between interior and exterior. In addition to the lighting and colour effects, the spatial rhythm created by the seams of each segment gives strong perspective views throughout the interior.

The 65m² central courtyard has large transparent openings to the sky above and is designed to host events as well as provide an area for reflection after visiting the exhibition. The courtyard serves as an intermediate space between the exhibition and public area of the Pavilion. In light of the extensive shipping between cities, the steel structure has been designed to be built in under one



week, which is essential for an ephemeral pavilion. With a direct visual connection to the courtyard, the 128m² terrace continues the dialogue between the Pavilion’s exterior and interior. During an event, the two spaces can be linked to become one large event zone. Reflective materials allow the exterior skin to be illuminated with varying colours which can be tailored to the differing programmes of special events in each city. The dichotomy between the powerful sculptural mass of the Chanel Pavilion’s structure and the lightness of its envelope create a bold and enigmatic element. The Pavilion’s exterior develops into a rich variety of interior spaces that maximize the potential to reuse and rethink space due to the innate flexibility of its plan.

The total fluidity of the Chanel Pavilion’s curvilinear geometries is an obvious continuation of Hadid’s 30 years of exploration and research into systems of continuous transformations and smooth transitions. With this repertoire of morphology, Zaha Hadid is able to translate the ephemeral typology of a pavilion into the sensual forms required for this celebration of Chanel’s cultural importance.

Following its acclaimed 2008 tour to Hong Kong, 27 February - 5 April, Tokyo, 31 May - 4 July, and New York, 20 October - 9 November, Chanel generously donated the pavilion to the Institut



du Monde Arabe, IMA, at the end of 2010, giving Mobile Art a permanent home in the heart of Paris. The Pavilion was used to host exhibitions in line with the centre's policy of showcasing talent from Arab countries. "Zaha Hadid, Une Architecture" 29 April - 30 October 2011 - was the inaugural exhibition in the Mobile Art Pavilion installed at the IMA.



Zaragoza Bridge Pavilion

ZARAGOZA

The Zaragoza Bridge Pavilion is organized around four main elements, or "pods", that perform both as structural elements and as spatial enclosures. The Bridge Pavilion design is a result of detailed examination and research into the potential of a diamond shaped section which offers both structural and programming properties. As in the case of space-frame structures, a diamond section can efficiently distribute forces along a surface, whilst underneath the floor plate the resulting triangular pocket space can be used to run services.

The diamond section has also been extruded along a slightly curved path. The extrusion of this rhombus section along different paths has generated the four separate 'pods' of the Bridge Pavilion. The stacking and interlocking of these truss elements (the 'pods') satisfies two specific criteria: optimizing the structural system, and allowing for a natural differentiation of the interiors - where each 'pod' corresponds to a specific exhibition space. By intersecting the trusses/pods, they brace each other and loads are distributed across the four trusses instead of a singular main element, resulting in a reduction in size of loadbearing members.

Located above the main flood level, the Bridge Pavilion connects with each river bank via a smooth inclined terrain. Each pod is located on the same level, except one which is 1.5 meters above this main level and intersects with its adjacent pods. All but one





of the pods include an upper floor, which hangs from the diamond section structure and provides views of the lower level.

All pods are stacked according to precise criteria - aimed at reducing the Bridge Pavilion's section as much as possible where the span is longer (approximately 185m from the island in the middle of the river to the right bank), and enlarging the section where the span is shorter (85m from the island to the Expo riverbank). One long pod spans from the right riverbank to the island, where the other three are grafted into it, spanning from island to left bank.

This interlocking of the pods has given the design many exciting possibilities. Interiors become complex spaces, where visitors move



from pod to pod through small inbetween spaces that act as filters - or buffer zones. These zones diffuse the sound and visual experience from one exhibition space to the next, allowing for a clearer understanding of the content within each pod. The identity of each pod remains evident inside the pavilion, almost performing as a three-dimensional orientation device.

Spatial concern is one of the main drivers of this project. Each zone within the building has its own spatial identity. Their nature varies from completely enclosed interior spaces that focus on the exhibition, to open spaces with strong visual connections to the Ebro River and the Expo.

The design capitalizes on the ambiguous nature of the original brief, maintaining both the aspect of a traditional bridge (open to the environment with the steel structure being the dominant visual element) and that of a more conventional exhibition pavilion where climate and light permeability are controlled.

Two pods housing exhibitions are acclimatized with an entirely enclosed structure. The remaining two pods are clad by a single-layer skin which leaves the grid structure visible from the inside. These two pods include small triangular apertures, with larger openings located at lower levels, allowing for the greatest degree of visual contact with the river and the Expo.

Natural surfaces have been investigated when designing the Pavilion's exterior skin. Shark scales are fascinating paradigms both for their visual appearance and for their performance. Their pattern can easily wrap around complex curvatures with a simple system of rectilinear ridges. For the Bridge Pavilion, this proves to be functional, visually appealing and economical.

The outer skin is split longitudinally into two elements: a low-



er deck made of structural metal plates, and on the higher level, a cladding system of glass-reinforced concrete (GRC) panels in various shades from white to black.

The lower deck follows a free-form geometry allowed for by the flexibility of its constituting material. The curvature of the upper level has been rationalized into sections of cylinders that have been subdivided into 26,500 rectangular panels of equal size. A pattern of triangles has been inscribed into these panels, limiting the variation to 10 inscriptions which, when combined with the chromatic variation to the GRC panels, creates the array of optical patterns visible on the Bridge Pavilion's façade. The bridge's internal skin constitutes of a smooth semigloss surface of plasterboard finished with several layers of polished polyurethane resin.

Construction

At 68.5m the Bridge Pavilion's foundation piles are the deepest ever constructed in Spain. 62,500 steel structural elements have been prefabricated in nine metal-fabrication workshops and subsequently assembled on site. The north portion of the Bridge Pavilion's structure, comprising three pods, weighs 3,500 tons and was constructed in its final location on a temporary peninsula built in the river. The south part, weighing 2,200 tons, was assembled on the south bank of the river. It was pushed into position on the river bed, first on sleds, then by means of a 42 m high pulling tower - a complex manoeuvre due to the asymmetrical geometry of the bridge.



The Serpentine Sackler Gallery LONDON



The Serpentine Sackler Gallery consists of two distinct parts, namely the conversion of a classical 19th century brick structure - the Magazine - and a 21st century tensile structure. The Serpentine Sackler Gallery is thus - after MAXXI in Rome - the second art space where Zaha Hadid Architects have created a synthesis of old and new. The Magazine was designed as a gunpowder store in 1805. It comprises two raw brick barrel vaulted spaces (where the gunpowder was stored) and a lower square-shaped surrounding structure with a frontal colonnade. The building continued to be in military use until 1963. Since then Royal Parks used the building for storage. The Magazine thus remained underutilised until now. Over time, much amendment and alteration has occurred inside the historic building and its surroundings.

Instrumental to the transformation into a public art gallery was the decision to reinstate the historic arrangement of the Magazine building as a free standing pavilion within an enclosure, whereby the former courtyards would be covered and become internal exhibition spaces. In order to reveal the original central spaces, all





nonhistoric partition walls within the former gunpowder stores were removed. The flat gauged arches over the entrances were reinstated whilst the historic timber gantry crane was maintained. Necessary services and lighting were discreetly integrated as to not interfere with “as found” quality of the spaces. These vaults are now part of the sequence of gallery spaces.

The surrounding structure has been clarified and rationalized to become a continuous, open sequence of exhibition spaces looping around the two central powder rooms, thus following the simplicity and clarity of Leo von Klenze’s Glyptothek as an early model for a purpose built gallery. What was a courtyard before, became an interior top-lit gallery space. Longitudinal roof lights deliver natural daylight into the whole gallery sequence surrounding the central vaults and with a fixed louver system they create perfectly lit exhibition spaces. Retractable blinds allow for a complete black-out of the galleries. The continuous skylight makes the vertical protrusion of the central core of the building (containing the two vaults) legible on the inside. These reconstructions and conversions were designed in collaboration with heritage specialist Liam O’Connor and in consultation with English Heritage and Westminster City Council. In addition to the exhibition spaces the restored and converted Magazine also houses the museum shop and offices for the Serpentine’s curatorial team.

The extension contains a generous, open social space that we expect to enliven the Serpentine Sackler Gallery as a new cultural and culinary destination. The extension has been designed to complement the calm and solid classical building with a light, transparent, dynamic and distinctly contemporary space of the 21st century. The synthesis of old and new is thus a synthesis of contrasts. The new extension feels ephemeral, like a temporary structure, although it is a fully functional permanent building. It is our first permanent tensile structure and realization of our current research into curvilinear structural surfaces. The tailored, glass-fibre woven textile membrane is an integral part of the building’s loadbearing structure. It stretches between and connects a perimeter ring beam and a set of five interior columns that articulate the roof’s highpoints. Instead of using perimeter columns, the edge beam - a twisted ladder truss supported on three points - dips down to the supporting ground in front, in the back, and on the free west side. On the east side this edge beam (and thus the roof of the extension) swings above the parapet of the Magazine. A linear strip of glazing gives the appearance that the roof is hovering above the Magazine without touching. The Magazine’s western exterior brick wall thus



becomes an interior wall within the new extension without losing its original function and beauty. This detail is coherent with the overall character of the extension as a 'light touch' intervention.

The envelope is completed by a curved, frameless glass wall that cantilevers from the ground to reach the edge beam and fabric roof. The interior of the new extension is a bright, open space with light pouring in from all sides and through the 5 steel columns that open up as light scoops. The anticlastic curvature of the roof animates the space with its sculptural, organic fluidity. The only fixed elements within the space are the kitchen island and a long smooth bar counter that flows along the Magazine's brick wall. The tables, banquets and chairs are designed as a continuous Voronoi pattern, reminiscent of organic cell structures. Our aim is to create an intense aesthetic experience, an atmosphere that seems to oscillate between being an extension of the delightful beauty of the surrounding nature and of being an alluring invitation into the enigma of contemporary art.

London Aquatics Centre LONDON

Design Concept

The architectural concept of the London Aquatics Centre is inspired by the fluid geometry of water in motion, creating spaces and a surrounding environment in sympathy with the river landscape of the Olympic Park. An undulating roof sweeps up from the ground as a wave - enclosing the pools of the Centre with its unifying gesture of fluidity, whilst also describing the volume of the swimming and diving pools. The London Aquatics Centre is designed to have the flexibility to accommodate the size and capacity of the London 2012 Olympic Games whilst also providing the optimum size and capacity for use in legacy mode after the 2012 Games.





Site Context

The London Aquatics Centre is located at the southeastern edge of Queen Elizabeth Olympic Park on the new Stratford City Bridge giving pedestrian access to the park from the new Stratford City development and public transportation.

Layout

The Aquatics Centre is planned on an orthogonal axis perpendicular to the Stratford City Bridge. Along this axis are laid out the three pools. The training pool is located under the bridge whilst the competition and diving pools are within a large volumetric pool hall. The overall strategy is to frame the base of the pool hall as a podium by surrounding it and connecting it into the bridge.

This podium element allows for the containment of a variety of differentiated and cellular programmatic elements into a single architectural volume which is seen to be completely assimilated with the bridge and the landscape. The podium emerges from the bridge to cascade around the pool hall to the lower level of the canal.

The pool hall is expressed above the podium level by a large roof which arches along the same axis as the pools. Its form is





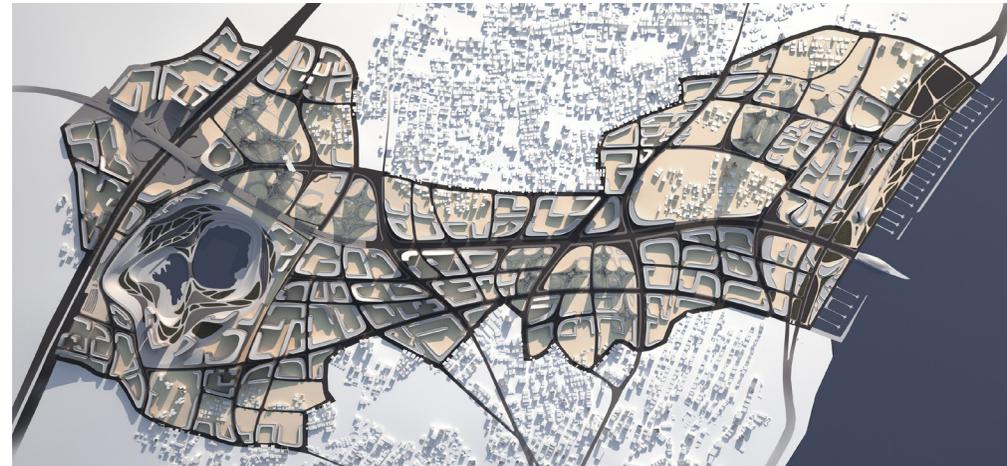
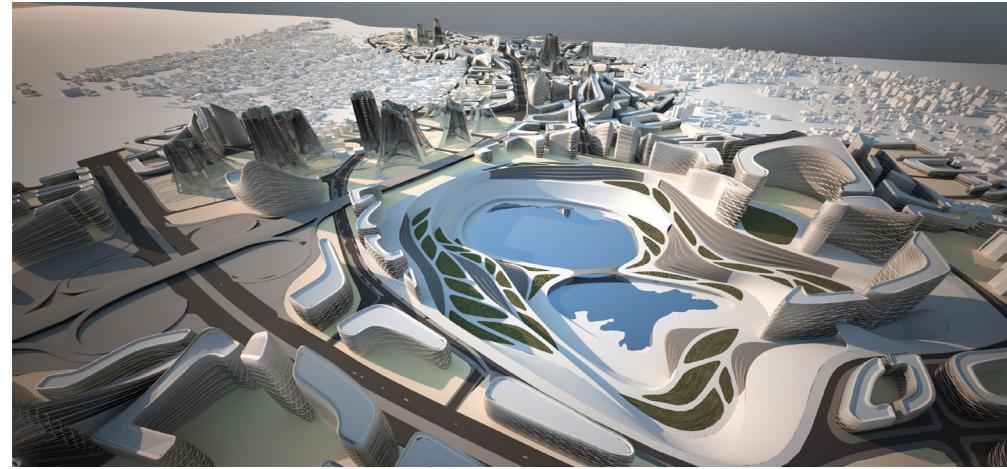
generated by the sightlines for the spectators during the Olympic mode. Double-curvature geometry has been used to create a structure of parabolic arches that define its form. The roof undulates to differentiate the volumes of the competition and diving pools, and extends beyond the pool hall envelope to cover the external areas of the podium and entrance on the bridge.

The roof structure is grounded at three points of the centre (two points at the northwest end on the bridge; and one single point to the south east end). This structural arrangement ensured 7,500 temporary spectator seats could be installed along either side of the pools in Olympic mode (total 15,000 temporary seats) with no structural obstructions. After the 2012 Olympic and Paralympic Games, this temporary seating has been removed and replaced with glazing panels, leaving a capacity of 2,500 seats for community use and future national/international events, with a significantly reduced pool hall volume



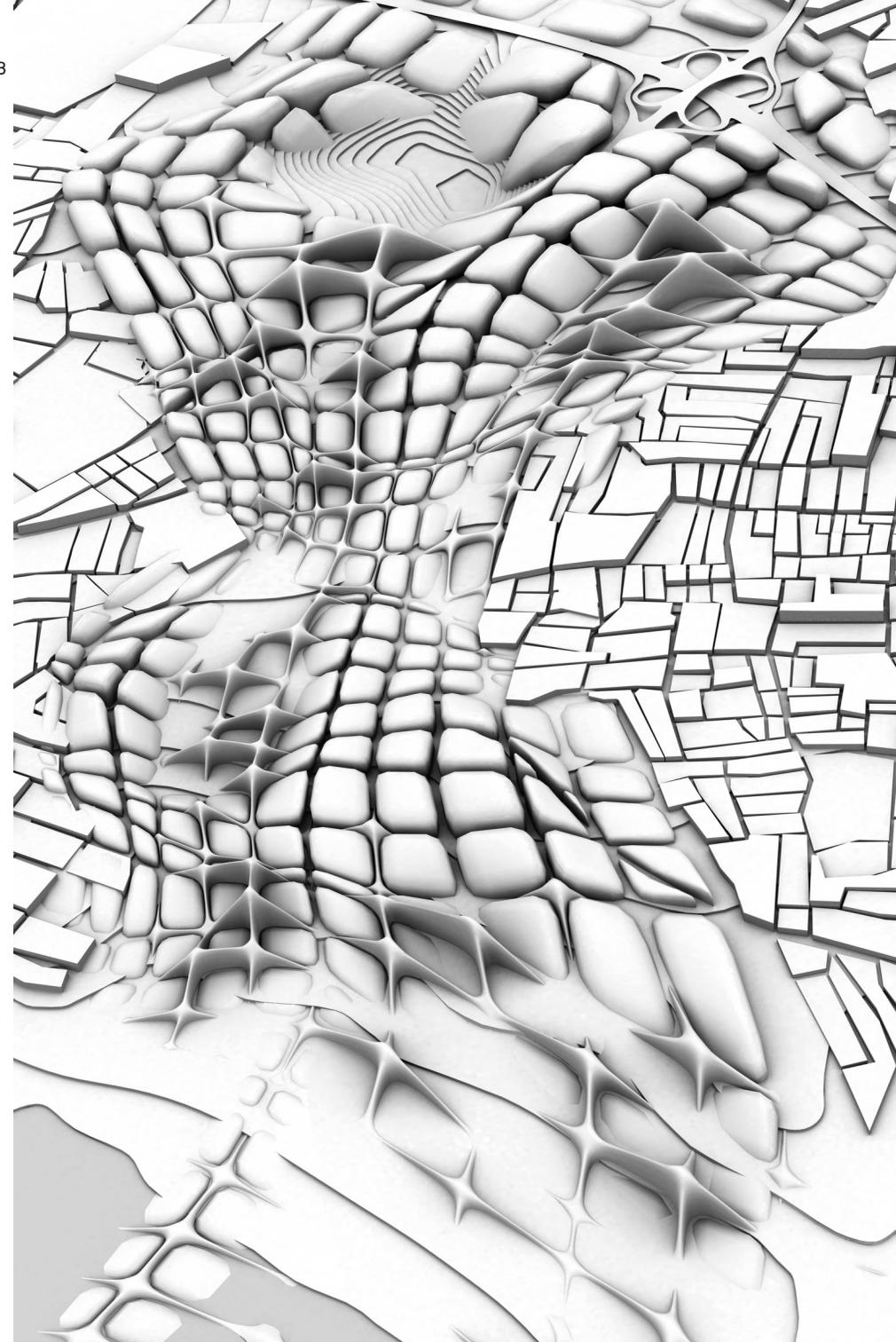
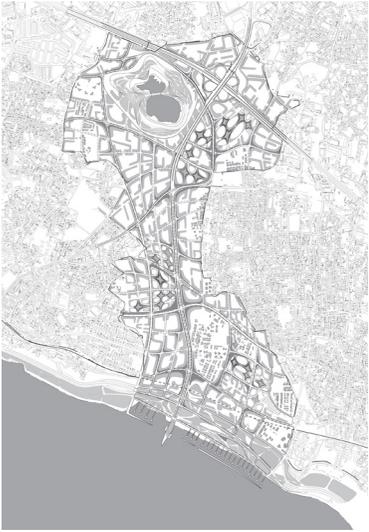
Kartal Pendik Masterplan ISTANBUL

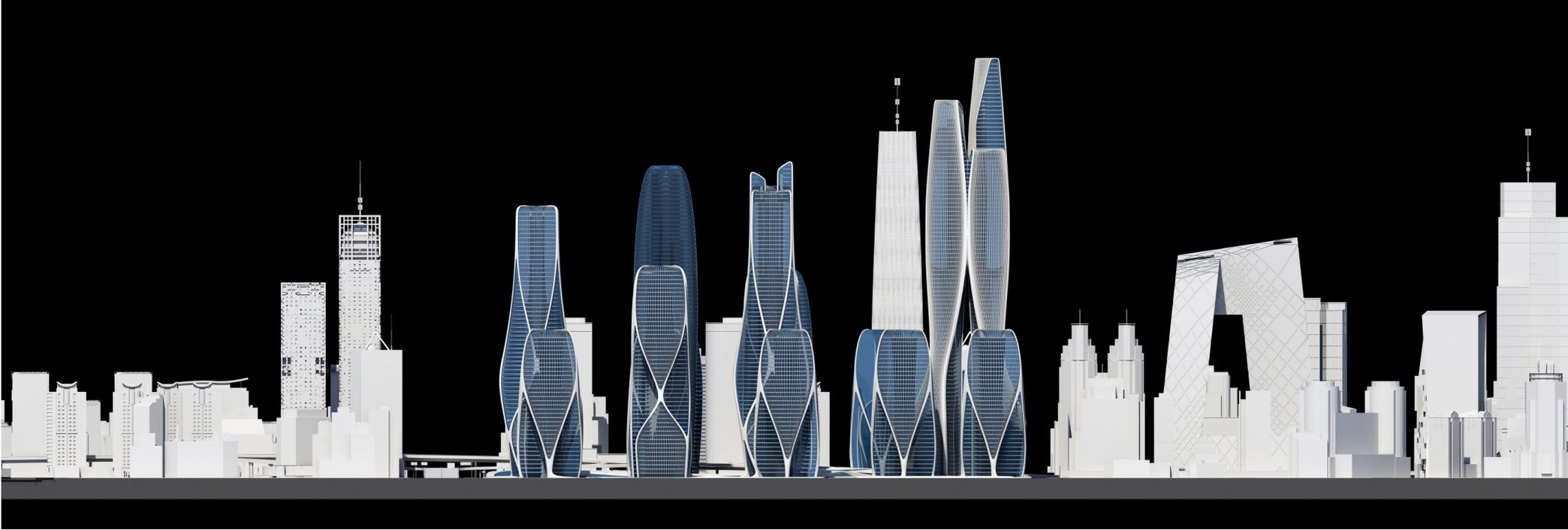
The Kartal-Pendik masterplan is a winning competition proposal for a new city centre on the east bank of Istanbul. It is the redevelopment of an abandoned industrial site into a new sub-centre of Istanbul, complete with a central business district, high-end residential development, cultural facilities such as concert halls, museums, and theatres, and leisure programs including a marina and tourist hotels. The site lies at the confluence of several important infrastructural links, including the major highway connecting Istanbul to Europe and Asia, the coastal highway, sea bus terminals, and heavy and light rail links to the greater metropolitan area.



The project begins by tying together the basic infrastructural and urban context of the surrounding site. Lateral lines stitch together the major road connections emerging from Kartal in the west and Pendik in the east. The integration of these lateral connections with the main longitudinal axis creates a soft grid that forms the underlying framework for the project. The fabric is further articulated by an urban script that generates different typologies of buildings that respond to the different demands of each district. This calligraphic script creates open conditions that can transform from detached

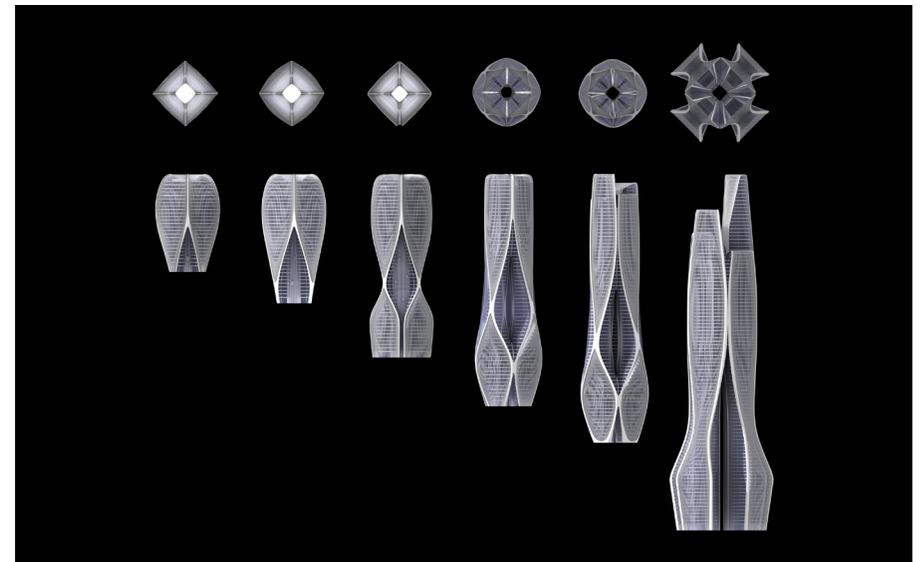
buildings to perimeter blocks, and ultimately into hybrid systems that can create a porous, interconnected network of open spaces that meanders throughout the city.



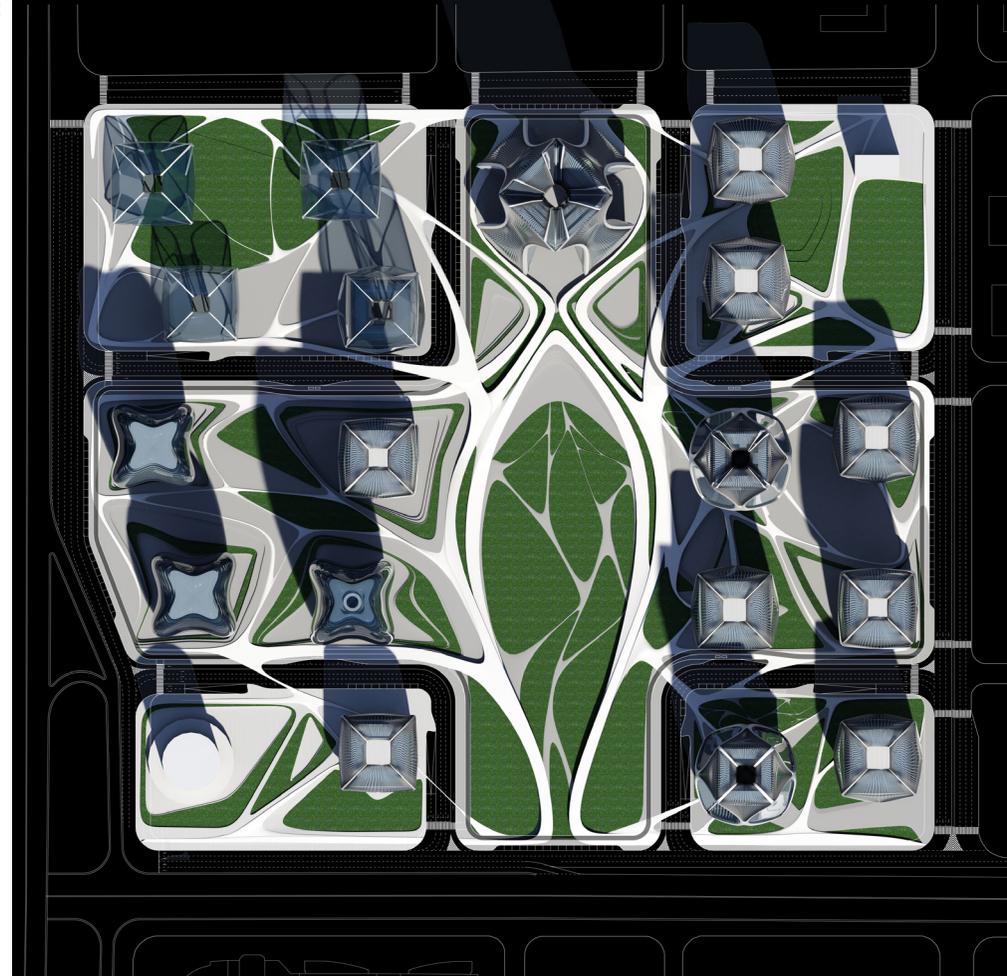
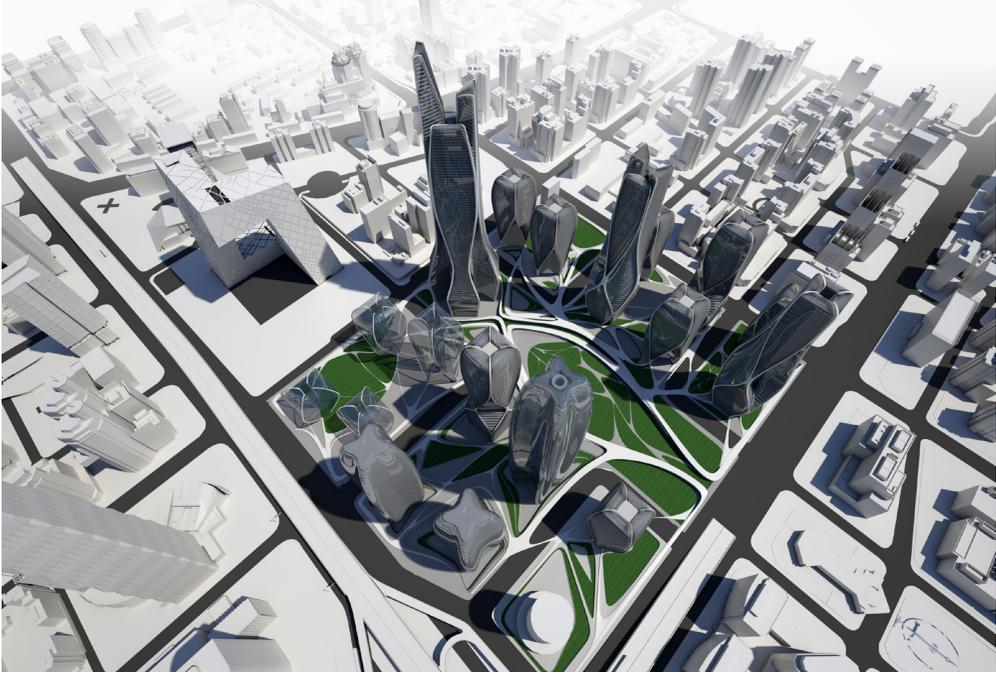


The Beijing CBD Core Area aspired to become one of the world's premier spots for advanced, high value business. A stimulating urban environment is a critical factor in fostering a vibrant business community that provides synergies to all participants. The provision of a critical mass and density of office accommodation is merely the necessary starting point for the development of an effective urban business environment. The planned gross area fulfils this necessary precondition. The planned disposition of the tower volumes creates a variegated urban massing and lively silhouette. The axis described by the main tower together with the linear park gives a clear order and orientation to the whole urban field. However, our design went further in its effort to establish an organic order and elegance that is akin to the beauty found in nature.

The design breaks with the typical tower and podium typology by redefining the ground as a continuous landscape that seamlessly weaves between one tower and the next. This new ground receives the existing surrounding streets and diverts its flows to the different towers and the central park. The proposed concept design doesn't



Beijing CBD Core Area



work like a traditional array of adjacent buildings but rather as a cohesive network of towers that is fully integrated at ground level and coherently developed as it grows in height.

Our proposed Masterplan Concept Design for the CBD Core Area reached far beyond the CBD, aiming at the creation of a new business and civic node for the city of Beijing that embodies values of functionality, elegance and innovation.

Stone Towers

CAIRO

Stone Towers development is part of the wider Stone Park development which derives its name from an ancient petrified tree at the heart of the development. The New Cairo City site optimally positions the Stone Towers to offer state of the art office facilities to a rapidly expanding Cairo.

The programmatic variety of the Stone Towers creates a rich mixed use environment for office tenants. The 525,000 sqm development also includes a five star business hotel with serviced apartments, retail with food and beverage facilities and a central feature landscape referred to as the “Delta”. The design mediates the two distinct edges of the site - the high-speed ring road to the North, and the Stone Park residential component to the South.

With such a large scale project, care must be taken to balance a necessary requirement for repetitive elements while avoiding an uncompromising, repetitive line of static building masses. The architecture of the two bounding edge conditions pursues a rhythm of like, interlocking, yet individually differentiated building forms. Verbatim repetition is instead a series of self similar, yet unique



forms. This is complemented in the plan and section where the building edges visually interlock and merge with the landscape, creating a cohesive composition. Egyptian stonework both ancient and more recent displays a vast array of patterns and textures that, when illuminated by the intense sunlight of the region, creates animated displays of light and shadow. The effect is powerful, direct and inspiring. The pre-cast facades on the north and south elevations of each building edge emulate the effect using a vocabulary of alternating protrusions, recesses and voids.



Dominion Office Building MOSCOW

Located in Moscow's Sharikopodshipnikovskaya Street, next to tram and trolleybus stops and near Dubrovka Station on the Lyublinskaya Line of the Moscow Metro, the Dominion Office Building is among the first of the new projects to be built for the growing creative and IT sectors in this primarily industrial and residential district in the southeast of the city.

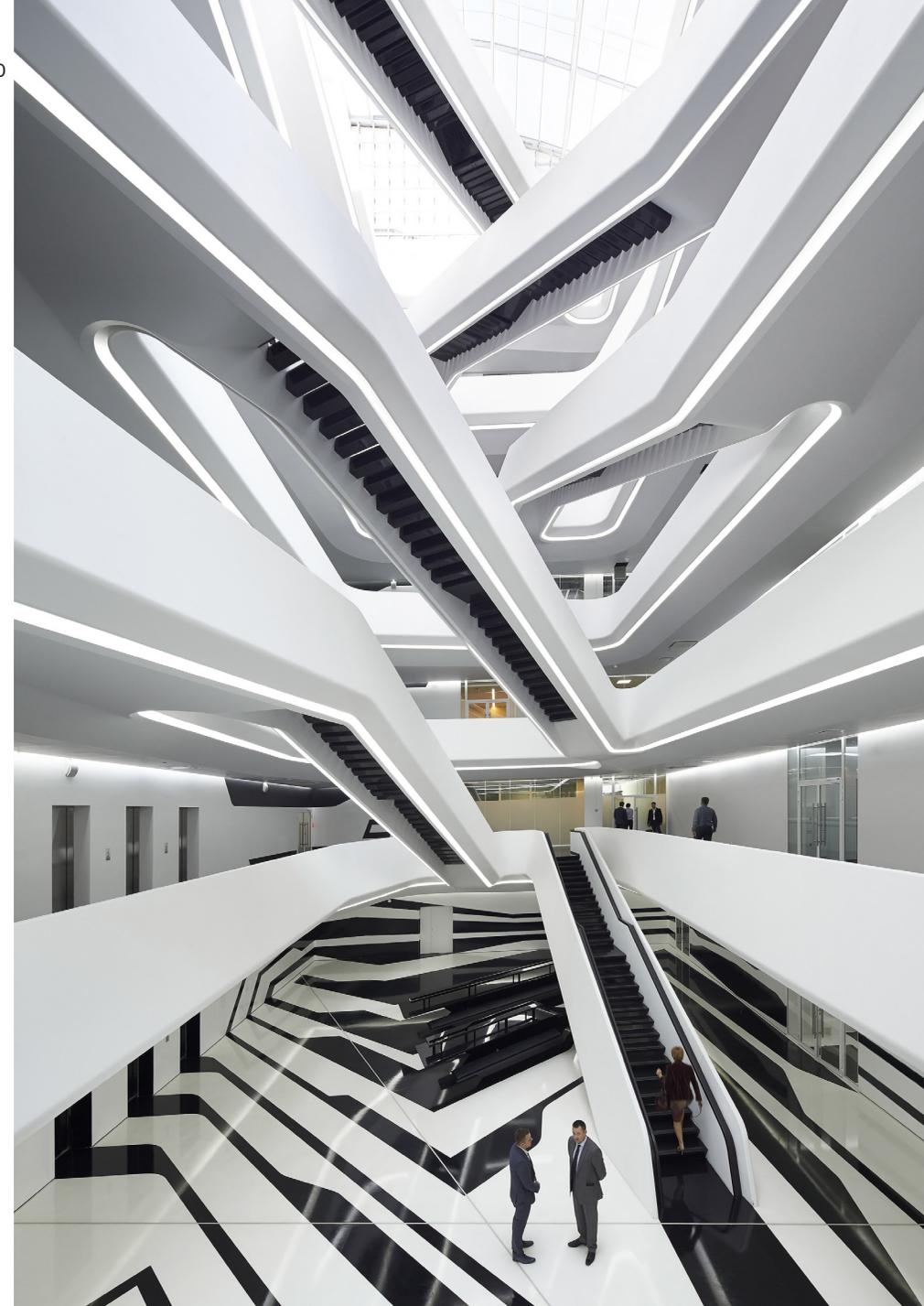
Conceived as a series of vertically stacked plates off-set at each level with connecting curved elements, a central atrium rises through all levels to bring natural light into the centre of the building. Balconies at each level project into the atrium and correspond to the displacement of the outer envelope and a series of staircases interconnect through this central space.





With the ground floor restaurant linking the atrium to the outdoor terrace and Sharikopodshipnikovskaya Street beyond, and coffee/snack areas and relaxation zones on the balconies, the atrium becomes a shared space over many levels that encourages interaction between the employees of the companies within the building. This integration also encourages collaboration between companies of different services and disciplines. Many IT and creative industry start-up companies regard this collective research culture as vital for progress and development, and the design of the Dominion Office Building reinforces this concept with open connectivity throughout the building.

The office spaces are arranged within a system of standard rectangular bays to offer many different possibilities for small, expanding or large companies. Located on the periphery of the atrium and housing the lifts, fire-escapes, washrooms and service shafts, the service cores provide a degree of privacy to the separate office spaces, with gaps in-between these cores giving some transparency and allowing light to penetrate the into the office areas from the central shared atrium space. This service core ring around the atrium, together with an additional bay of columns close to the outer envelope of the building, provides the structure. The off-set floorplates are balanced between the opposite sides of the building. In some zones, columns are removed and replaced with transfer beams to increase the uninterrupted floor space for larger tenants or public programmes.



Dongdaemun Design Park SEOUL

The DDP has been designed as a cultural hub at the centre of one of the busiest and most historic districts of the city. It is a place for people of all ages; a catalyst for the instigation and exchange of ideas and a place for new technologies and media to be explored - presenting an everchanging menu of exhibitions and events that feeds the cultural vitality of the city.

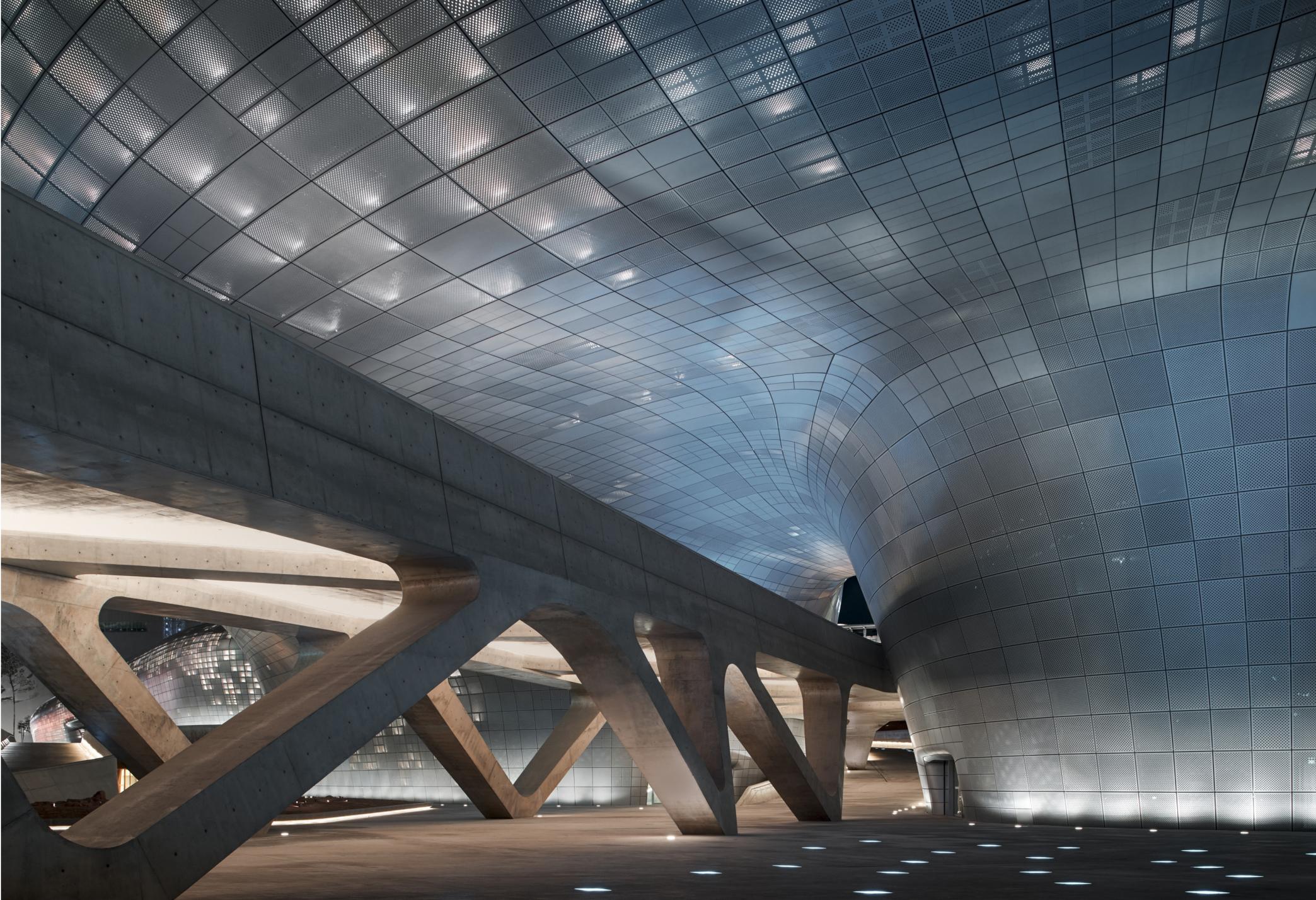
The DDP is an architectural landscape that revolves around the ancient city wall and newly discovered cultural artefacts which form the central element of the composition linking the park and plaza together. The fluid design encourages the greatest degree of interaction between the park and the people of Seoul.

The new DDP park is a place for leisure, relaxation and refuge - a green oasis within the busy urban surroundings of Dongdaemun. The design integrates the park and plaza seamlessly as one, blurring the boundary between architecture and nature in a continuous, fluid landscape that connects the city, park and architecture together. Voids and inflections in the park's surface give visitors glimpses into the innovative world of design below, making the DDP an important link between the city's contemporary culture,



emerging nature and history. The DDP design is the very specific result of how the context, local culture, programmatic requirements and innovative engineering come together - allowing the architecture, city and landscape to seamlessly combine in both form and spatial experience.







Heydar Aliyev Center BAKU

As part of the former Soviet Union, the urbanism and architecture of Baku, the capital of Azerbaijan on the Western coast of the Caspian Sea, was heavily influenced by the planning of that era. Since its independence in 1991, Azerbaijan has invested heavily in modernising and developing Baku's infrastructure and architecture, departing from its legacy of normative Soviet Modernism.

Zaha Hadid Architects was appointed as design architects of the Heydar Aliyev Center following a competition in 2007. The Center, designed to become the primary building for the nation's cultural programs, breaks from the rigid and often monumental Soviet architecture that is so prevalent in Baku, aspiring instead to express the sensibilities of Azeri culture and the optimism of a nation that looks to the future.

Design concept

The design of the Heydar Aliyev Center establishes a continuous, fluid relationship between its surrounding plaza and the building's interior. The plaza, as the ground surface; accessible to all as part of Baku's urban fabric, rises to envelop an equally public interior space and define a sequence of event spaces dedicated to the collective celebration of contemporary and traditional Azeri culture.



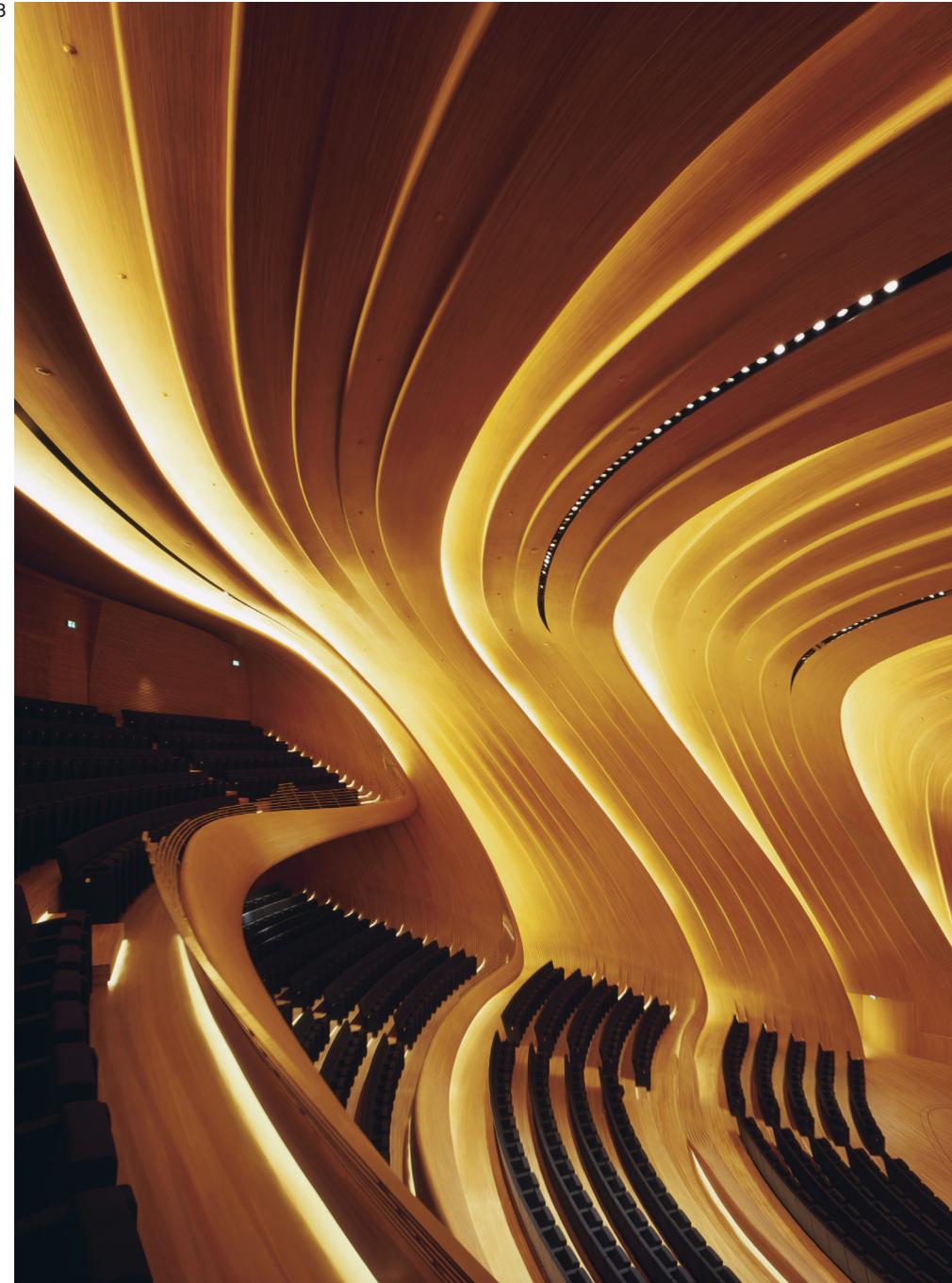
Elaborate formations such as undulations, bifurcations, folds, and inflections modify this plaza surface into an architectural landscape that performs a multitude of functions: welcoming, embracing, and directing visitors through different levels of the interior. With this gesture, the building blurs the conventional differentiation between architectural object and urban landscape, building envelope and urban plaza, figure and ground, interior and exterior.

Fluidity in architecture is not new to this region. In historical Islamic architecture, rows, grids, or sequences of columns flow to infinity like trees in a forest, establishing non-hierarchical space. Continuous calligraphic and ornamental patterns flow from carpets to walls, walls to ceilings, ceilings to domes, establishing seamless relationships and blurring distinctions between architectural elements and the ground they inhabit. Our intention was to relate to that historical understanding of architecture, not through the use of mimicry or a limiting adherence to the iconography of the past, but rather by developing a firmly contemporary interpretation, reflecting a more nuanced understanding.

Responding to the topographic sheer drop that formerly split the site in two, the project introduces a precisely terraced landscape that establishes alternative connections and routes between public plaza, building, and underground parking. This solution avoids additional excavation and landfill, and successfully converts an initial disadvantage of the site into a key design feature.

Geometry, structure, materiality

One of the most critical yet challenging elements of the project was the architectural development of the building's skin. Our ambition to achieve a surface so continuous that it appears homogeneous, required a broad range of different functions, construction logics and technical systems had to be brought together and integrated into the building's envelope. Advanced computing allowed for the continuous control and communication of these complexities among the numerous project participants. The Heydar Aliyev Center principally consists of two collaborating systems: a concrete structure combined with a space frame system. In order to achieve large-scale column-free spaces that allow the visitor to experience the fluidity of the interior, vertical structural elements are absorbed by the envelope and curtain wall system. The particular surface geometry fosters unconventional structural solutions, such as the introduction of curved 'boot columns' to achieve the inverse peel of the surface from the ground to the West of the building, and the





Heydar Aliyev Center

‘dovetail’ tapering of the cantilever beams that support the building envelope to the East of the site.

The space frame system enabled the construction of a free-form structure and saved significant time throughout the construction process, while the substructure was developed to incorporate a flexible relationship between the rigid grid of the space frame and the free-formed exterior cladding seams. These seams were derived from a process of rationalizing the complex geometry, usage, and aesthetics of the project. Glass Fibre Reinforced Concrete (GFRC) and Glass Fibre Reinforced Polyester (GFRP) were chosen as ideal cladding materials, as they allow for the powerful plasticity of the building’s design while responding to very different functional demands related to a variety of situations: plaza, transitional zones and envelope. In this architectural composition, if the surface is the music, then the seams between the panels are the rhythm. Numerous studies were carried out on the surface geometry to rationalize the panels while maintaining continuity throughout the building and landscape. The seams promote a greater understanding of the project’s scale. They emphasize the continual transformation and implied motion of its fluid geometry, offering a pragmatic solution to practical construction issues such as manufacturing, handling, transportation and assembly; and answering technical concerns such as accommodating movement due to deflection, external loads, temperature change, seismic activity and wind loading. To emphasize the continuous relationship between the building’s exterior and interior, the lighting of the Heydar Aliyev Center has been very carefully considered. The lighting design strategy differentiates the day and night reading of the building. During the day, the building’s volume reflects light, constantly altering the Center’s appearance according to the time of day and viewing perspective. The use of semi-reflective glass gives tantalizing glimpses within, arousing curiosity without revealing the fluid trajectory of spaces inside. At night, this character is gradually transformed by means of lighting that washes from the interior onto the exterior surfaces, unfolding the formal composition to reveal its content and maintaining the fluidity between interior and exterior.

The Heydar Aliyev Center’s design evolved from our investigations and research of the site’s topography and the Center’s role within its broader cultural landscape. By employing these articulate contextual relationships, the design is embedded within this context; unfolding the future cultural possibilities for Azerbaijan.



1000 Museum

MIAMI BEACH

For an architect who occupies a Z-dimension all her own, Zaha Hadid, Hon. FAIA, has seldom constructed high along that Z axis. She has built many multi-level and midrise institutional buildings, but very few towers. That is about to change with the on One Thousand Museum, a 66-storey, 83-unit, super-luxury condominium tower on Biscayne Boulevard in Miami, opposite Museum Park, with views across Biscayne Bay to Miami Beach.

The project is no less Zaha at this unprecedented scale. A concrete exoskeleton structures the perimeter of the tower in a web of flowing lines that integrates lateral bracing within the lines of structural support. Columnar lines near the base splay out to meet at the corners, forming a rigid tube highly resistant to Miami's demanding wind loads.

With structure at the perimeter, the interior floor plates are almost column free, allowing maximum variation in floor plans. The bottom two-thirds of the tower has two units per floor, while the upper third boasts units that occupy the entire floor. The moving, curving lines of the exoskeleton mean that each succeeding floor plan is slightly different from the last. On the lower floors, terraces occupy the corners; on the upper floors, the terraces are tucked in from the edges.

A duplex penthouse occupies the last two residential floors. The final floor features an aquatic center, leisure area, and event space. There is commercial space at the base, along with several stories of parking. At grade, the tower is ringed by pools and gardens. Zaha Hadid Architects project director Chris Lepine says that the structure—which appears as if it were eroded from a solid—reads from top to bottom as one continuous liquid frame.

The tower represents a line of research in high-rise construction that explores a fluid architectural expression consistent with engineering for the entire height of the structure. The emphasis is on expressing the dynamism of the structure in an integrated whole that avoids the frequent typology of a tower resting on a base.

Lepine points out that while the architects have worked to express the structure and its beauty within a tall, slender tower, the structure itself is “purposeful” in that it is rigid, stiff, and hurricane resistant. It's not a diagrid structure—but its curving lines allow a diagonal bracketing action. “We had this idea of a fluidity that is both structural and architectural,” Lepine says.

Instead of simply cladding a steel frame, the architects are designing expressive form-work, which can be reused as construction progresses up the tower. The concrete will be painted so that its finished surface is also the architectural finish. “A lot of innovation comes in how we build the form work. We're looking at several solutions,” continues Lepine. Behind the exoskeleton, the architects



have created a folded, faceted, crystal like façade to contrast with the solidity of the exoskeleton. The dependable Miami sun will create plays of light on the glass within the structural frame.

“What you see is literally structure getting thicker and thinner, as needed,” Lepine says. “There’s a continuity between the disciplines, between the architecture and engineering, to create that impression.”

Developers Gregg Covin and Louis Birdman of One Thousand Museum Limited commissioned Hadid to do the design, in association with the local architect of record, O’Donnell Dannwolf

Partners Architects. Hadid started One Thousand Museum after being commissioned to design Collins Park Garage, a combination parking garage and public plaza now also in working drawings. There will soon be two notable Hadid structures in Miami as Hadid finally breaks into large-scale construction in the United States.



520 West 28th NEW YORK

520 West 28th's design captures the richness of its vibrant and historic urban context. A fascinating interplay between the city and the High Line has created a powerful urban dynamic among the elevated park and surrounding streetscape. This same dynamic is evident within the design; an interconnected chevron separates and merges the building's two distinct zones, further establishing this contextual relationship and giving each residence the highest degree of originality.

An integration of volumes that flow into each other, the design follows a coherent formal language to create the sensibility of the building's overall ensemble. With an arrangement that reinvents the spatial experience, each residence will have its own distinctive identity, offering multiple perspectives and exciting views of the neighbourhood.

The 11-storey development will feature approximately 39 residences of up to 5,500 square feet with 11-foot ceilings, technological integration and tailored interiors. Designed with multiple elevator cores, a majority of the residences will have a private vestibule and entrance that adds to the intimacy of the building.

The double-height entrance lobby offers glimpses beyond to the residents' communal spaces and outdoor garden. Large terraces, courtyard, indoor pool & spa, and entertainment space give additional opportunities to relax and entertain. All residences have access to a full suite of curated amenities including full-time



concierge, doorman, Luxury Attaché lifestyle services and hand-delivered mail. Leisure amenities include the City's first private IMAX Theater and entertaining suite with events terrace. The wellness level features a 75-foot saline system sky lit swimming pool, fitness center, reservable private spa suite with sauna, steam room, whirlpool, cold plunge, waterfall showers and massage beds. Additional features include automated robotic parking and storage vaults with a private viewing room. The building is currently under construction with anticipated occupancy in early 2017.



Galaxy Soho BEIJING

The Galaxy Soho project in central Beijing for Soho China is a 330,000m² office, retail and entertainment complex that is an integral part of the living city, inspired by the grand scale of Beijing. Its architecture is a composition of four continuous, flowing volumes that are set apart, fused or linked by stretched bridges. These volumes adapt to each other in all directions, generating a panoramic architecture without corners or abrupt transitions that break the fluidity of its formal composition.

The great interior courts of the project are a reflection of traditional Chinese architecture where courtyards create an internal world of continuous open spaces. Here, the architecture is no





longer composed of rigid blocks, but instead comprised of volumes which coalesce to create a world of continuous mutual adaptation and fluid movement between each building. Shifting plateaus within the design impact upon each other to generate a deep sense of immersion and envelopment. As users enter deeper into the building, they discover intimate spaces that follow the same coherent formal logic of continuous curvilinearity.

The lower three levels of Galaxy Soho house public facilities for retail and entertainment. The levels immediately above provide work spaces for clusters of innovative businesses. The top of the building is dedicated to bars, restaurants and cafés that offer views along one of the greatest avenues of the city. These different functions are interconnected through intimate interiors that are always linked with the city, helping to establish Galaxy Soho as a major urban landmark for Beijing.

Leeza Soho BEIJING

Leeza Soho is a mixed-use office building designed as an cylindrical tower as response to its urban context. The tower is required to straddle a sub-surface tunnel that diagonally bisects the site, creating a tower of two halves with the vertical atrium, nearly 200 meters tall, located directly over the tunnel. As the tower and atrium rise, they gently twist to face towards the main Lize road, one of Beijing's primary east-west transport arteries.

Visitors enter the tower via its central dividing space, the tallest atrium in the world, that extends the full height of the building. This central space runs through all the office floors offering natural daylight, ventilation and views of the city in all directions through the atrium's glazed walls that follow the twisting layout of offset floorplates as the building rises. The office floors provide very efficient and flexible grade A office space, from the F3-F45, while structural rings at the refuge/MEP floors create skybridges that connect the two halves together.



Leeza Soho's facade expresses the twisting geometries of the tower. Composed of a double-insulated glass unitised curtain wall system, this façade system shifts from stepped at the offices to smooth at the tower's entrance and atrium. The stepped windows allow for natural ventilation in the office spaces when appropriate and the tower fully integrates sustainable design strategies to reduce energy consumption and emissions, as well increase water collection, the use of natural daylight within the offices and lobbies on each floor. The atrium also maximises natural daylight and ventilation in its interior microclimate.

Site Location

Leeza Soho project is located in southwest Beijing between the Second Ring and Third ring roads along the main east-west Lize Road, part of Beijing's regional planning for the transport and business district of Fengtai located between the city center and the New Beijing Airport currently under construction to the south.

Leeza Soho office tower is defined by its unique site conditions and urban environment. Built above the intersection of two new subway lines, Line 14 & Line 16, at the transport hub of Lize Financial Business District Station. A sub-surface tunnel runs diagonally directly beneath the site to connecting the two subway lines. Leeza Soho will give direct access to public transport links: to the subway station below ground and the bus stops lining the main Lize Road to the north, and Lou Tuo Wan East Road to the east. In addition, bicycle access from Lou Tuo Wan South Road and vehicular access from Lize Zhong 2nd Rd to the west provide 360-degree accessibility to the surrounding neighborhood. An underground promenade will link the subway station to Leeza Soho and a new public park to the west of the site.

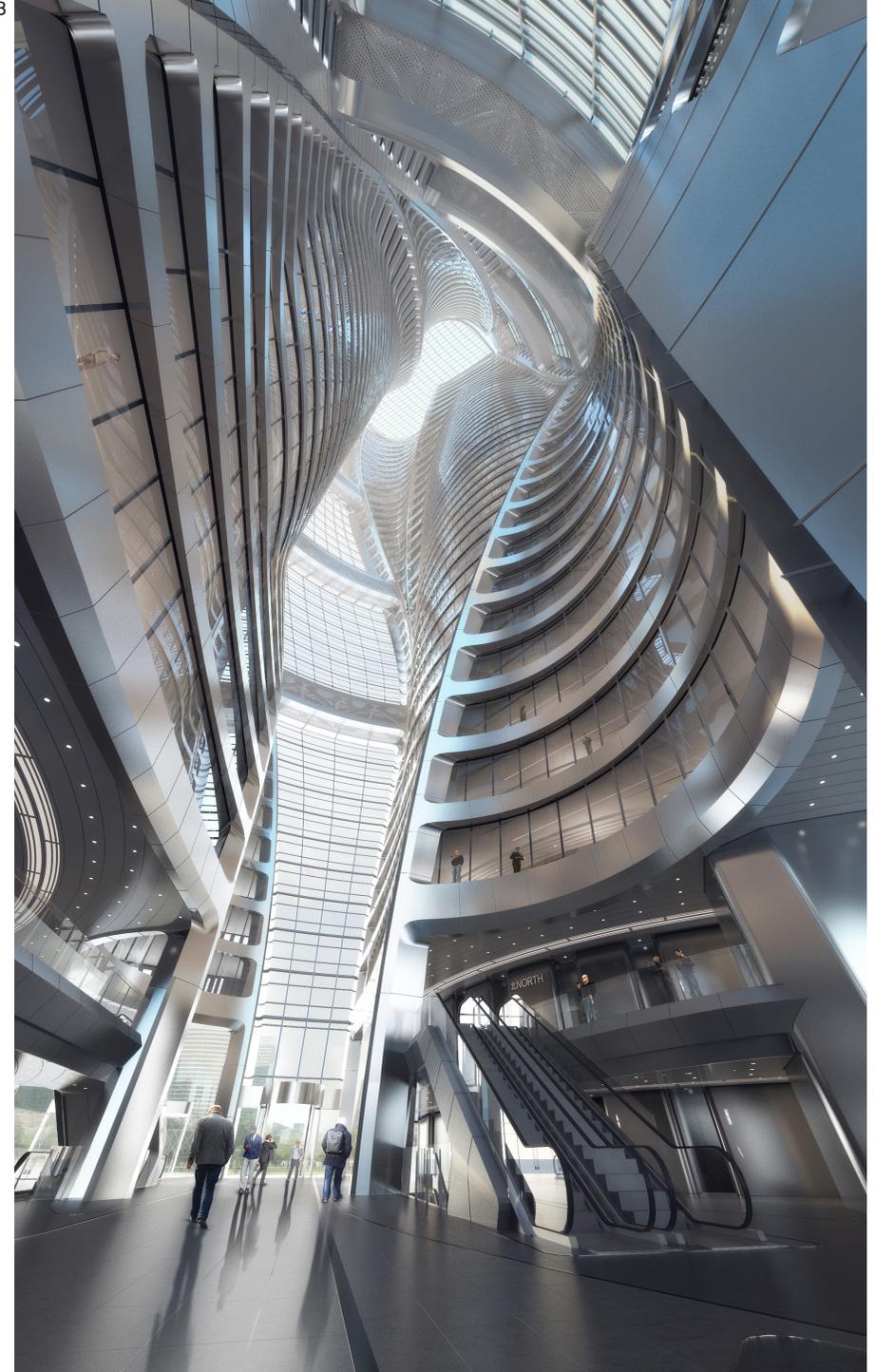


Sustainability

Leeza Soho is a responsive tower design that provides self-shading for the atrium lobby. Double insulated low-e glass ($U=2.0W/m^2oC$ and $SC=0.4$) and envelop insulation ($U=0.55W/m^2oC$) help the building to maintain a relatively comfortable indoor environment in extreme weather and reduce the requirement for air conditioning and energy consumption. Parking bays will be reserved for sustainable energy cars and with bicycle parking and shower facilities also provided.



Leeza Soho is also integrated with advanced, automated operational intelligence. It's 3D BIM energy management system will monitor in real-time environmental control and energy efficiency. To improve indoor environment quality for the office, the fresh air rate per person provided exceeds the ASHRAE standard by 30%. High efficiency filters will be installed to remove PM2.5 particles in the air handling system. In its interior design and construction, low VOC materials are carefully chosen to eliminate pollution sources from the start. Leeza Soho's MEP energy monitoring system is also designed to achieve the goals of less potable water usage and energy consumption including: heat recovery from the exhaust air, high efficiency and responsive chillers and boilers, pumps and fans, lighting devices and controls. Grey water will be recycled for toilet flushing and irrigation and low-flow fixtures installed throughout the tower. The energy consumption simulation results suggest that the total annual energy cost of Leeza Soho is 16% lower than that of a similar building of the high ASHRAE standards, with a 40% reduction of annual water potable water usage.



Beijing New Airport Terminal Building

DAXING, BEIJING

ADP Ingénierie (ADPI) and Zaha Hadid Architects (ZHA) have completed the concept design for the world's largest airport passenger terminal - the Beijing New Airport Terminal Building - in Daxing, Beijing, under the leadership of the Beijing New Airport Headquarters (BNAH), based on the bid-winning planning scheme by ADPI.

Following the 2011 international competition bid, in October 2014 the Beijing New Airport Headquarters created a Joint Design Team bringing together ADPI and Zaha Hadid Architects with competition consortium group members Buro Happold, Mott Macdonald and EC Harris to collaborate on the optimised concept design for the Beijing New Airport Terminal Building.

With Beijing's existing Capital Airport already exceeding its planned capacity, the new airport will serve the world's fastest growing aviation sector and enable further connections between Beijing and cultural, economic and civic centres around the globe. Initially accommodating 45 million passengers per year, the new terminal will be adaptable and sustainable, operating in many different configurations dependant on varying aircraft and passenger traffic throughout each day. With an integrated multi-modal transport centre featuring direct links to local and national rail services including the Gaotie high speed rail, the new Daxing airport will be a key hub within Beijing's growing transport network and a catalyst for the region's economic development, including the city of Tianjin and Hebei Province.



The Joint Design Team scheme integrates principles originally developed during the competition phase by ADPI and the Zaha Hadid Consortium Group respectively, which included Pascall+Watson, Buro Happold, Mott Macdonald and EC Harris. ZHA's projects include some of the world's most popular, user-focused and adaptable civic architecture that prioritises the public realm and user experience. This expertise, together with ADPI's history and knowledge of airport planning and development, will ensure the new terminal at Daxing to be the world's most convenient, sustainable and future-proof airport.

Following the completion of the concept design stage, the project is now being led by the Local Design Institute team under the continued leadership of BNAH.



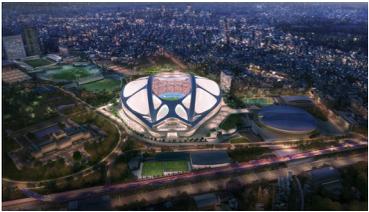
New National Stadium of Japan TOKYO

The New National Stadium of Japan is integrated within the urban fabric of Tokyo. The design is an urban connector which enhances and modulates people moving through the site from different directions and points of access. The elevated ground connections govern the flow of people through the site, effectively carving the geometric forms of the building.

The building volume sits gently within the urban landscape and is articulated as an assembly of stadium bowl, structural skeleton, cladding membranes and the museum, together forming an intricate structural composition that is both light and cohesive.

The stadium roof defines an iconic silhouette that integrates gently within the cityscape around it. It is an intricate assembly of efficient long-spanning structural ribs which are spanned by a system of lightweight, translucent membranes. This unique structure is a light-

weight solution, where the stadium elevation graciously touches the ground, defining a clear approach towards the stadium entrances. The interior of the stadium is also given a clearly identifiable identity through the strong roof structure that contrasts with the lightness of the translucent membrane tensile structures.



Antwerp Port House

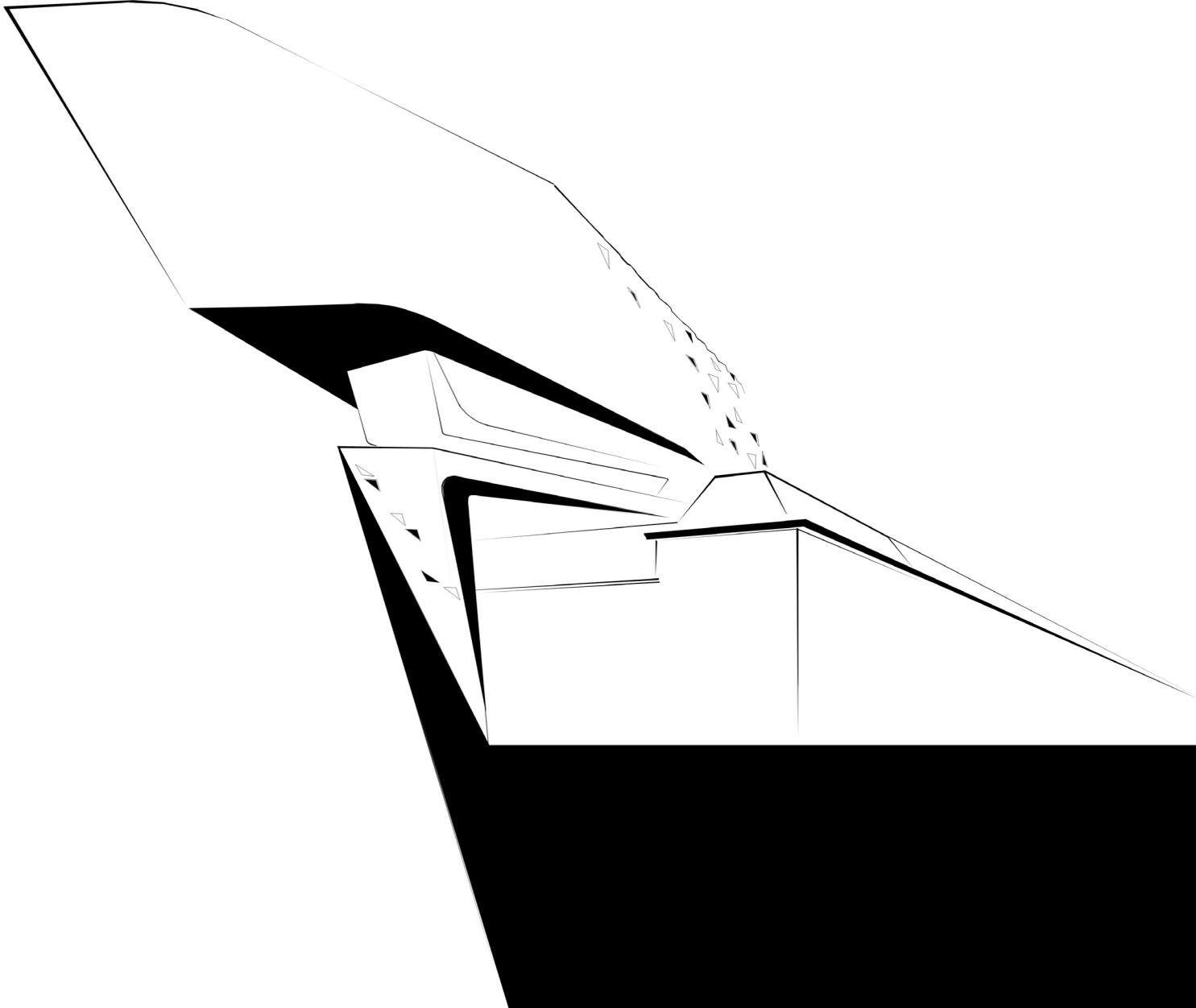
ANTWERP

The Antwerp Port Authority will build its new headquarters - the future Port House - on the boundary between the city of Antwerp and its harbour. The new Antwerp Port Authority headquarters will house approximately 500 staff in a single new location that comprises both a former fire station and a new extension.

Staff and visitors arrive in the central atrium from where public counters, offices and meeting rooms in the existing building are directly accessible. The offices, meeting rooms, auditorium and panoramic restaurant in the new extension are accessible via panoramic lifts just off the central courtyard.

Two underground levels of car and bicycle parking, the restoration and renovation of the existing building and the exterior landscaping of the site also form an integral part of the design. The maximum dimensions of the new building extension are 114m length, 24m width and 46m height (four additional floors).





Credits

1998 – 2009	MAXXI Museum of XXI Century Arts, Rome, Italy
Client	Italian Ministry of Culture & Ministry of Public Works
Design	Zaha Hadid, Patrik Schumacher
Project Architect	Gianluca Racana
Production Team	Ana M.Cajao, Fabio Ceci, Matteo Grimaldi, Paolo Matteuzzi, Mario Mattia, Maurizio Meossi, Luca Peralta, Barbara Pfenningstorf, Gianluca Ruggeri, Luca Segarelli, Anja Simons, Maria Velceva, Paolo Zilli
Design Team	Gianluca Racana, Dillon Lin, Christos Passas, Oliver Domeisen, Shumon Bazar, Ali Mangera, Barbara Pfenningstorf, Ana M.Cajao, Sonia Villaseca, Jee-Eun Lee, James Lim, Sara Klomps, Bergendy Cooke, Jorge Ortega, Woody Yao, Graham Modlen, Markus Dochantschi, Ana Sotrel, Jim Heverin, Hemendra Kothari, Zahira El Nazel, Amin Taha, Caroline Voet, Julia Hansel, Shumon Basar, Stephane Hof, Florian Migsch, Kathy Wright, Jin Wananabe, Helmut Kinzler
Associated Architect	ABT srl, David Sabatello, Piercarlo Rampini, Paolo Olivi, Marco Valerio Faggiani, Paolo Bisogni
Structure	Anthony Hunt Associates - Les Postawa, Dave Weale. OK Design Group - Simone Di Cintio, Marco Barone
M&E	Max Fordham and Partners - Henry Luker, Neil Smith. OK Design Group - Carlo Rossi, Pete Fanelli, Domenico Raponi
Lighting	Equation Lighting - Mark Hensman, Paolo Giovane
Acoustic	Paul Gilleron Acoustic - Paul Gilleron
2000	Art Centre, Graz, Austria
Client	City of Graz, Kunsthau of Graz
Design	Zaha Hadid, Patrik Schumacher
Project Team	Gianluca Racana, David Gerber, Sonia Villaseca, Paola Catterin, Stanley Lau, Eddie Can, Yoash Oster, Janne Westermann
Consultants	Structural Façade Adams Kara Taylor
Cost	Davis Langdon & Everest

2000	Quebec National Library, Montreal, Canada
Client	Quebec National Library
Design	Zaha Hadid, Patrik Schumacher
Project Team	Stephane Hof, Dillon Lin, Lida Charsouli, Sonia Villaseca, Chris Dopheide, Djordje Stojanovic, Garin O'Aivazian, Davide Gerber, Andreas Durkin, Liam Young, Christos Passos, Sara Klomps Ramoisy Tremblay Architects
Local Architect	Ove Arup & Partners, Hanscomb, Office for Visual Interaction
Consultants	
2001 – 2021	One North Masterplan, Singapore
Client	JVC, Singapore
Design	Zaha Hadid, Patrik Schumacher
Project Architects	David Gerber, Dillon Lin, Gunther Koppelhuber, Markus Dochantschi
Project Team	Silvia Forlati, Kim Thornton, Rodrigo O'Malley, David Mah, Yael Brosilovski, Hon Kong Chee, Fernando Perez Vera
Urban Strategy	Lawrence Barth
Competition Team	David Gerber, Edgar Gonzalez, Chris Dopheide, David Salazar, Tiago Correia, Ken Bostock, Paola Cattarin, Dillon Lin, Barbara Kuit, Woody K.T. Yao
Infrastructural Engineers	Arup Simon Hancock, Ian Carradice, David Johnston
Transport Engineers	MVA Paul Williams, Tim Booth
Landscape Architects	Cicada Private Limited
Urban Strategy	Lawrence Barth
Lighting Planners	LPA Karou Mende
Planning Tool	B consultants Tom Barker, Graeme Jennings
2001 – 2005	BMW Central Building, Leipzig, Germany
Client	BMW
Design	Zaha Hadid, Patrik Schumacher
Project architects	Jim Heverin, Lars Teichmann
Project team	Matthias Frei, Jan Huebener, Annette Bresinsky, Manuela Gatto, Fabian Hecker, Cornelius Schlotthauer, Wolfgang Sunder, Anneka Wegener, Markus Planteu, Robert Neumayr, Christina Beaumont, Achim Gergen, Caroline Anderson
Competition Team	Lars Teichmann, Stephane Hof, Eva Pfannes, Manuela Gatto, Tina Gegoric, Cesare Griffa, Filippo Innocenti, Maurizio Meossi,

	Debora Laub, Sara Manning, Robert Sedlak, Zetta Kotsioni, Yasha Grobmann, Liam Young, Niki Neerpasch, Kenneth Bostok, Djordje Stojanovic, Leyre Villoria, Christiane Fashek, Eric Tong, Tiago Correia
Landscape Architects	Gross. Max (Edinburgh, UK)
Structural Engineer	Anthony Hunts Assoc., (London, UK), IFB Dr. Braschel AG (Stuttgart, Germany)
Costing	IFB Dr. Braschel AG,
Partner Architect	IFB Dr. Braschel AG, (Stuttgart, Germany), WPW Ingenieure GmbH
Light design	Equation Lighting, London
2003	Ice-Storm, Lounging Furniture MAK, Vienna, Austria
Client	MAK - Museum for Applied Arts, Vienna
Design	Zaha Hadid, Patrik Schumacher
Project Architects	Thomas Vietzke, Woody Yao, Rocio Paz, Tiago Correia, Adriano de Gioannis
2003	Z-Scape, Lounging Furniture
Manufacturer	Sawaya-Moroni, Milan
Design	Zaha Hadid, Patrik Schumacher
Design Team	Caroline Voet, Woody Yao, Chris Dopheide, Eddie Can
2003	BBC Music Centre, London, UK
Client	BBC
Design	Zaha Hadid, Patrik Schumacher
Project Team	Steven Hatzellis, Graham Modlen, Ergian Alberg, Karim Muellem, Ram Ahronov, Adriano De Gioannis, Simon Kim, Yansong Ma, Markus Planteu
Structure	Bob Lang, Ove Arup
Services	Nigel Tonks, Ove Arup
Acoustics	Richard Cowell, Ove Arup
Theater Consultant	Anne Minors
Cost Consultant	Sam Mackenzie, Davis Langdon & Everest
2003	Fine Arts Centre, University of Connecticut, USA
Client	University of Connecticut
Design	Zaha Hadid, Patrick Schumacher
Competition Team	Juan I. Aranguren, Simon Kim, Karim Muallem, Elena Perez Guembe, Theodore Spyropoulos
Structure	Bob Lang, Ove Arup

Services	Nigel Tonks, Ove Arup
Acoustics	Richard Cowell, Ove Arup
Theatre Projects	David Staples
Cost Consultant	Sam Mackenzie, Davis Langdon & Everest
2002	High Speed Train Station, Florence, Italy
Client	TAV
Design	Zaha Hadid, Patrik Schumacher
Project Leader	Filippo Innocenti
Project Team	Fernando Perez Vera, Maurizio Meossi, Lorenzo Grifantini, Cedric Libert, Barbara Pfenningstorf, Matthias Frei, Brent Crittenden, Achim Gergen, Tamar Jacobs, Cornelius Schotthauer, Anneka Wegener, Thomas Vietzke, Adams Kara Taylor, Hanif Kara
Structural Engineer	Hoare Lea, Phil Dow, Andrew Bullmore, Miller Hannah
Service Engineer	Hoare Lea, Dominic Meyrick
Lighting Consultant	Abt srl, David Sabatello, Ares srl, Roberto Righini, Immo Consultant, Alessandra Albani
Consultants	
2003 – 2012	New High Speed Train Station Napoli-Afragola, Naples, Italy
Client	TAV
Design	Zaha Hadid, Patrik Schumacher
Project architect / managing	Filippo Innocenti, Paola Cattarin
Design team	Fernando Perez Vera, Ergian Alberg, Hon Kong Chee, Cesare Griffa, Karim Muallem, Steven Hatzellis, Federico Bistolfi, Mario Mattia, Paolo Zilli, Tobais Hegemann, Michele Salvi, Chiara Baccarini, Alessandra Bellia, Serena Pietrantonj, Roberto Cavallaro
Competition team	Thomas Vietzke, Jens Borstelmann, Robert Neumayr, Elena Perez, Adriano De Gioannis, Simon Kim, Selim Mimita
Structural engineering	AKT- Hanif Kara, Paul Scott, INTERPROGETTI Giampiero Martuscelli
Environmental engineering	MAX FORDHAM – Henry Luker, Neil Smith. STUDIO REALE
Landscape design	GROSSO MAX – Eelco Hooftman
Local team	INTERPLAN 2 SRL – Alessandro Gubitosi

2001	Temporary Tokyo Guggenheim Museum, Tokyo, Japan
Client	Guggenheim Museum, NY
Design	Zaha Hadid, Patrik Schumacher
Design Team	Gianluca Racana, Kenneth Bostock, Vivek V. Shankar
Structural engineering	AKT – Hanif Kara
Service Engineer	Hoare Lea
Lighting Consultant	Hoare Lea
Materials Engineer	Tom Barker
2003	Guggenheim Museum, Taichung, Taiwan
Client	Guggenheim Museum, NY
Design	Zaha Hadid, Patrik Schumacher
Project Architect	Dillon Lin
Design Team	Jens Borstelmann, Thomas Vietzke, Yosuke Hayano
Production Team	Adriano De Gioannis, Selim Mimita, Juan-Ignacio Aranguren, Ken Bostock, Elena Perez, Ergian Alberg, Rocio Paz, Markus Planteu
Structural Engineer	Adams-Kara-Taylor Hanif Kara, Andrew Murray, Sebastian Khourain, Reuben Brambleby, Stefano Strazzullo
Services Consultant	IDOM, Bilbao
Cost Consultant	IDOM UK, IDOM Bilbao
2000 – 2016	Maritime Terminal, Salerno, Italy
Client	Comune di Salerno Palazzo di Citta
Design	Zaha Hadid, Patrik Schumacher
Project Architect	Paola Cattarin
Design Team	Vincenzo Barilari, Andrea Parenti, Anja Simons, Giovanna Sylos Labini, Cedric Libert, Filippo Innocenti
Competition Team	Paola Cattarin, Sonia Villaseca, Christos Passas, Chris Dopheide
Local Executive Architect	Interplan Seconda - Alessandro Gubitosi
Costing	Building Consulting - Pasquale Miele
Structural engineers	Ingeco - Francesco Sylos Labini, Ove Arup and Partners (preliminary design) - Sophie Le Bourva
M&E	Macchiaroli and Partners - Roberto Macchiaroli
	Itaca srl-Felice Marotta, Ove Arup and Partners (preliminary design)
Maritime/Transport Engineering	Ove Arup and Partners (London, UK) - Greg Heigh
Lighting	Equation Lighting Design (London, UK) - Mark Hensmann
Main Contractor	Passarelli SpA

	Site supervision
Director of Works	ing. Gaetano Di Maio
Architecture	arch. Paola Cattarin
Structure	ing. Giampiero Martuscelli
MEP	ing. Roberto Macchiaroli
Contract administration	geom. Pasquale Miele
Health and Safety	arch. Alessandro Gubitosi
2000-2005	Phaeno Science Centre, Wolfsburg, Germany
Client	Neulandgesellschaft mbH On behalf of the City of Wolfsburg
Design	Zaha Hadid, Christos Passas
Architects	Zaha Hadid Architects, Mayer Baehrle Freie Architekten BDA (Loerrach, Germany)
Project Architect	Christos Passas
Asst. Project Architect	Sara Klomps
Project Team	Sara Klomps, Gernot Finselbach, David Salazar, Helmut Kinzler
Competition Team	Christos Passas, Janne Westermann, Chris Dopheide, Stanley Lau, Eddie Can, Yoash Oster, Jan Hubener, Caroline Voet
Special Contributor	Patrik Schumacher
Contributors	Silvia Forlati, Guenter Barczik, Lida Charsouli, Marcus Liermann, Kenneth Bostock, Enrico Kleinke, Constanze Stinnes, Liam Young, Chris Dopheide, Barbara Kuit, Niki Neerpasch, Markus Dochantschi
Project Architects	(Mayer Baehrle) Rene Keuter, Tim Oldenburg
Project Team	(Mayer Baehrle) Sylvia Chiarappa, Stefan Hoppe, Andreas Gaiser, Roman Bockemühl, Annette Finke, Stefanie Lippard, Marcus Liermann, Jens Hecht, Christoph Volkmar
Structural Engineers	Adams Kara Taylor (London, UK), Tokarz Freirichs Leopold (Hanover, Germany)
Services Engineers	NEK (Braunschweig, Germany), Buro Happold (Berlin, London)
Cost Consultant	Hanscomb GmbH (Germany)
Lighting Consultants	Fahlke & Dettmer (Hanover, Germany), Office for Visual Interaction (New York, USA)
2003 – 2010	Guangzhou Opera House, Guangzhou, China
Client	Guangzhou Municipal Government
Design	Zaha Hadid
Project Director	Woody K.T. Yao, Patrik Schumacher
Project Leader	Simon Yu
Project Team	Jason Guo, Yang Jingwen, Long Jiang,

	Ta-Kang Hsu, Yi-Ching Liu, Zhi Wang, Christine Chow, Cyril Shing, Filippo Innocenti, Lourdes Sanchez, Hinki Kwong, Junkai Jian
Competition Team 1 st Stage	Filippo Innocenti, Matias Musacchio, Jenny Huang, Hon Kong Chee, Markus Planteu, Paola Cattarin, Tamar Jacobs, Yael Brosilovski, Viggo Haremt, Christian Ludwig, Christina Beaumont, Lorenzo Grifantini, Flavio La Gioia, Nina Safainia, Fernando Vera, Martin Henn, Achim Gergen, Graham Modlen, Imran Mahmood; Cyril Shing, YanSong Ma, Yosuke Hayano, Adriano De Gioannis, Barbara Pfenningstorff
Local Design Institute	Guangzhou Pearl River Foreign Investment Architectural Designing Institute, Guangzhou
Structural Engineers	SHTK, Shanghai; Guangzhou Pearl River Foreign Investment Architectural Designing Institute
Facade Engineering	KGE Engineering, Zhuhai
Building Services	Guangzhou Pearl River Foreign Investment Architectural Designing Institute
Acoustic Consultants	Marshall Day Acoustics, Melbourne
Theatre Consultant	ENFI, Beijing
Lighting Design Consultant	Beijing Light & View (Beijing, China)
Project Management	Guangzhou Municipal Construction Group Co. Ltd., Guangzhou
Construction Management	Guangzhou Construction Engineering Supervision Co. Ltd., Guangzhou
Cost Consultant	Guangzhou Jiancheng Engineering Costing Consultant Office Ltd., Guangzhou
Principal Contractor	China Construction Third Engineering Bureau Co. Ltd., Guangdong
2004 – 2007	Nordpark Cable Railway, Innsbruck, Austria
Client	INKB (Innsbrucker Nordkettenbahnen GmbH) PPP
Design	Zaha Hadid, Patrik Schumacher
Project Architect	Thomas Vietzke
Design Team	Markus Planteu, Jens Borstelmann
Production Team	Caroline Andersen, Makakrai Suthadarat, Marcela Spadaro, Anneka Wagener, Adriano di Giannis, PeterPichler, Susann Berggren
Project & Construction Management	Malojer Baumanagement GmbH
Planning Adviser	ILF Beratende Ingenieure ZT, Malojer

	Baumanagement GmbH
Total Contractor	STRABAG AG
Engines & Cables Contractor	LEITNER GmbH
Facade Contractor	Pagitz Metalltechnik GmbH
Structural Engineers	(concrete base) Baumann & Obholzer Ziviltechnik; (roof structure) Bollinger Grohmann Schneider ZT
Bridge/Track Engineer	ILF Beratende Ingenieure ZT
2008 – 2010	Mobile Art Chanel Contemporary Art Container, Hong Kong, Tokyo, New York, Paris
Client	Chanel
Design	Zaha Hadid, Patrik Schumacher
Project Architect	Thomas Vietzke, Jens Borstelmann
Project Team	Tetsuya Yamasaki, Daniel Fiser
Engineering	Arup, London, UK
Cost Consultant	Davis Langdon, London, UK
Main Contractor/ Tour Operator	ES Projects
FRP Manufacturing	Stage One Creative Services Ltd
2005 – 2008	Zaragoza Bridge Pavilion, Zaragoza, Spain
Client	Expoagua Zaragoza
Design	Zaha Hadid, Patrik Schumacher
Project Architect	Manuela Gatto (Associate)
Project Team	Fabian Hecker, Matthias Baer, Soohyun Chang, Feng Chen, Atray Chhaya, Ignacio Choliz, Federico Dunkelberg, Dipal Kothari, Maria Jose Mendoza, José Monfa, Marta Rodriguez, Diego Rosales, Guillermo Ruiz, Lucio Santos, Hala Sheikh, Marcela Spadaro, Anat Stern, Jay Suthadarat
Competition Team	Feng Chen, Atray Chhaya, Diapl Kotari
Engineers	ARUP Associates
Cost Consultants	ARUP Associates, IDOM
2009 – 2013	Serpentine Sackler Gallery, London, UK
Client	The Serpentine Trust
Design	Zaha Hadid, Patrik Schumacher
Project Director	Charles Walker
Project Lead	(Phase 1) Ceyhun Baskin, Inanc Eray; (Phase 2) Thomas Vietzke, Jens Borstelmann;
	(Phase 3) Fabian Hecker
Project Team	(Phase 2) Torsten Broeder, Timothy Schreiber, Laymon Thuang,

	David Campos, Suryansh Chandra, Matthew Hardcastle, Dillon Lin, Marina Duran Sancho, Jianghai Shen; (Phase 3) Torsten Broeder, Anat Stern, Timothy Schreiber, Marcela Spadaro, Inanc Eray, Ceyhun Baskin, Elke Presser, Claudia Wulf
Restaurant Mise-en-scène & Gift Shop	Melodie Leung, Maha Kutay, Claudia Glas-Dorner, Evgeniya Yatsyuk, Kevin Sheppard, Carine Posner, Maria Leni Popovici, Loulwa Bohsali, Karine Yassine, Steve Blaess
Conservation Architects	Liam O'Connor Architects
Lighting	Isometrix
Structure	ARUP
Services & Fire	ARUP
Kitchen	Sefton Horn Winch
Planning Consultants	DP9
Project Management	Rise
Cost Consultants & Contract Administrator	Gleeds

2005 – 2011/2014 London Aquatics Centre, London, UK

Client	Olympic Delivery Authority
Design	Zaha Hadid, Patrik Schumacher
Project Director	Jim Heverin
Project Architect	Glenn Moorley, Sara Klomps
Project Team	Alex Bilton, Alex Marcoulides, Barbara Bochnak, Carlos Garijo, Clay Shorthall, Ertu Erbay, George King, Giorgia Cannici, Hannes Schafelner, Hee Seung Lee, Kasia Townend, Nannette Jackowski, Nicolas Gdalewitch, Seth Handley, Thomas Soo, Tom Locke, Torsten Broeder, Tristan Job, Yamac Korfali, Yeena Yoon
Project Team (Competition)	Saffet Kaya Bekiroglu (Project Architect), Agnes Koltay, Feng Chen, Gemma Douglas, Kakakrai Suthadarat, Karim Muallem, Marco Vanucci, Mariana Ibanez, Sujit Nair
Sports Architects	S+P Architects, London, UK
Structural Engineer and Services	Ove Arup & Partners, London and Newcastle, UK
Fire Safety	Arup Fire, London, UK
Acoustic	Arup Acoustics, London, UK
Façade Engineers	Robert-Jan Van Santen Associates, Lille, France
Lighting Design	Arup Lighting, London, UK
BREEAM Consultant	Southfacing, London, UK

	2006 Kartal Pendik Masterplan Istanbul, Turkey
Client	Greater Istanbul Municipality and Kartal Urban Regeneration Association
Design	Zaha Hadid, Patrik Schumacher
Project Architect	(Overall) Bozana Komljenovic
Project Team	(Stage2) Amit Gupta, Marie-Perrine Placais, Susanne Lettau, Elif Erdine, Jimena Araiza,
Project Leader	(Stage1) Bozana Komljenovic, DaeWha Kang
Project Team	(Stage1) Sevil Yazici, Vigneswaran Ramaraju, Brian Dale, Jordan Darnell, Oznur Erboga
Competition Leaders	DaeWha Kang, Saffet Kaya Bekiroglu
Competition Team	Sevil Yazici, Daniel Widrig, Elif Erdine, Melike Altinisik, Ceyhun Baskin, Inanc Eray, Fulvio Wirz, Gonzalo Carbajo

2010 Beijing CBD Core Area, Beijing, China

Client	Soho China
Design	Zaha Hadid, Patrik Schumacher
Project Director	Tiago Correia
Project Architects	Victor Orive, Danilo Arsic, Paulo Flores, Thomas Buseck, Mostafa El Sayed, Yevgeniya Pozigun, Tobi Adamolekun, Ines Fontoura, Fabiano Continanza, Alejandro Diaz, Rafael Gonzalez, Ines Fontoura, Shajay Bhooshan, Maria Tsironi, Spyridon Kaprinis, Xiaosheng Li, Rafael Contreras, Andrea B. Caste, Giuseppe Morando, Edgar Payan, Maren Klasing, Seda Zirek, Yuxi Fu, Torsten Broeder, Kaloyan Erevinov
Engineering Consultant	BURO HAPPOLD

2009 Stone Towers, Cairo, Egypt

Client	Rooya Group
Design	Zaha Hadid, Patrik Schumacher
Project Director	Chris Lepine
Project Architect	Tyen Masten, Joris Pauwels
Project Team	Ceyhun Baskin, David Campos, Eren Ciraci, Alessio Costantino, Inac Eray, Paulo Flores, Brandon Gehrke, SofiaHagen, Josias Hamid, Michael Hargens, Jose Lemos, Michael Mader, Daniel Norell, Azen Omar, Edgar Payan, Chryrsanthi Perpatidou, Fernando Poucell, Sofi a Razaque, Elke Scheier, Ebru Simsek

Structural Engineering	Adams Kara Taylor
M&E Engineering	Hoare Lea
Façade	Newtechnic
Landscape	Gross.Max
Lighting	Seam
Wayfinding	Space Agency
Cost / QS	Davis Langdon
Local Architect	Okoplan Architecture and Cairo Structural
Concept	Cairo M&E Engineer
Okoplan Structure	(Integrated Consultant Group)
ICG	

2012 – 2015 Dominion Office Building, Moscow, Russia

Client	Peresvert Group / Dominion-M Ltd
Design	Zaha Hadid, Patrik Schumacher
	Concept Design Stage 2004/2009
Design Director	Christos Passas
Project Architect	Yevgeniy Beylkin
Interior Design Team	Juan Ignacio Aranguren C., Yevgeniy Beylkin, Simon Kim, Agnes Koltay, Larisa Henke, Tetsuya Yamazaki
	Construction stage 2012
Design Director	Christos Passas
Project Architects	Veronika Ilinskaya, Kwanphil Cho
Interior Design Team	Emily Rohrer, Raul Forsoni, Veronika Ilinskaya, Kwanphil Cho
Art Installation	Bruno Pereira
Contributors	Hussam Chakouf, Reza Esmaeeli, Thomas Frings
Local Architect	AB Elis Ltd
Façade Consultant	Ove Arup London, UK
Structural Engineer	Mosproject
Concrete Engineer	PSK Stroitel Promstrocontract
MEP & General Contractor	Stroigroup

Electrical MEP	Novie Energiticheskieskie, Reshenia
Façade Contractor	StroyBit, Prostie reshenia / ALUCOBOND™
Glazing contractor	MBK Stroi Interior contractor: LCC Contractcity
GRC	Architectura Blagopoluchie / FaçadeLight
Lighting Consultant	FisTechenergo
Furniture contractor	M Factor

2007 – 2014 Dongdaemum Design Centre, Seoul, South Korea

Client	Seoul Metropolitan Government, Seoul Design Foundation
Design	Zaha Hadid, Patrik Schumacher
Project Leader	Eddie Can Chiu-Fai
Project Manager	Craig Kiner, Charles Walker
Project Team	Kaloyan Erevinov, Martin Self,

	Hooman Talebi, Carlos S. Martinez, Camiel Weijenberg, Florian Goscheff, Maaike Hawinkels, Aditya Chandra, Andy Chang, Arianna Russo, Ayat Fadaifard, Josias Hamid, Shuojiang Zhang, Natalie Koerner, Jae Yoon Lee, Federico Rossi, John Klein, Chikara Inamura, Alan Lu
Competition Team	Kaloyan Erevinov, Paloma Gormley, Hee Seung Lee, Kelly Lee, Andres Madrid, Deniz Manisali, Kevin McClellan, Claus Voigtmann, Maurits Fennis
Structural & M.E.P.F. Engineer	ARUP

Lighting & Acoustics Consultant	ARUP
Landscape Architect	Gross Max
Façade Consultant	Group 5F
Geometry Consultant	Evolute
Quantity Surveyor	Davis Langdon & Everest
Local Architects	Samoo Architects
Local Consultants	Structure Postech
Mechanical	Samoo Mechanical Consulting (SMC)
Electrical and Telecom	Samoo TEC
Façade	M&C
Civil	Saegil Engineering & Consulting
Landscape	Dong Sim Won
Fire	Korean Fire Protection

2007 – 2012 Heydar Aliyev Centre, Baku, Azerbaijan

Client	The Republic of Azerbaijan
Design	Zaha Hadid, Patrik Schumacher
Project Designer / Architect	Saffet Kaya Bekiroglu
Project Team	Sara Sheikh Akbari, Shiqi Li, Phil Soo Kim, Marc Boles, Yelda Gin, Liat Muller, Deniz Manisali, Lillie Liu, Jose Lemos, Simone Fuchs, Josef Ramon, Tramoyeres, Yu Du, Tahmina Parvin, Erhan Patat, Fadi Mansour, Jaime Bartolome, Josef Glas, Michael Grau, Deepti Zachariah, Ceyhun Baskin, Daniel Widrig, Murat Mutlu;
Special thanks to	Charles Walker
	Main Contractor and Architect of Record DiA Holding
Structure	Tuncel Engineering AKT
Mechanical	GMD Project
Electrical	HB Engineering
Façade	Werner Sobek
Fire	Etik Fire Consultancy
Acoustic	Mezzo Stüdyo

Geotechnical	Enar Engineering
Infrastructure	Sigal
Lighting	MBLD
2012 – under construction	1000 Museum, Miami, USA
Client	1000 Biscayne Tower, LLC
Design	Zaha Hadid, Patrik Schumacher
Project Director	Chris Lépine
Project Team	Alessio Constantino, Martin Pflieger, Oliver Bray, Theodor Wender, Irena Predalic, Celina Auterio, Carlota Boyer
Competition Team	Sam Saffarian, Eva Tiedemann, Brandon Gehrke, Cynthia Du, Grace Chung, Aurora Santan, Olga Yatsyuk
Consultants	
Local Architect	O'Donnell Dannwolf Partners
Structural	DeSimone, MEP, HNGS Consulting Engineers
Civil	Terra Civil Engineering
Landscape	Enea Garden Design
Fire Protection	SLS Consulting Inc
Vertical Transportation	Lerch Bates Inc
Wind	Tu
2013 – 2017	520 West 28th New York City, USA
Client	Related Companies
Design	Zaha Hadid with Patrik Schumacher
Project Director	(Schematic Design) Cristiano Ceccato
Project Architect	Hannes Schafelner
Local Architect	Ismael Leyva Architects
Package Architects	Filipe Pereira, Aurora Santana, Stella Dourtme, Natacha Viveiros, Michael Sims
Project Team	Natacha Viveiros, Jakub Klaska, Michael Sims Jr., Niran Buyukkoz, Sharan Sundar, Jamie Mann, Kevin Sheppard, Nicola Berkowski, Manpreet Singh, Elizabeth Bishop
Schematic Design Team	Cristiano Ceccato, Johannes Schafelner, Alberto Barba, Jakub Klaska, Natacha Viveiros, Sharan Sundar, Kevin Sheppard, Manpreet Singh, Yung Zhang, Elisabeth Bishop
2013 – 2017	Galaxy Soho, Beijing, China
Client	SOHO China
Design	Zaha Hadid, Patrik Schumacher
Project Director	Satoshi Ohashi
Associate	

Associate	Cristiano Ceccato
Project Architect	Yoshi Uchiyama
Project Team	Kelly Lee, Rita Lee, Eugene Leung, Lillie Liu, Rolando Rodriguez-Leal, Seung-ho Yeo; (DD Phase) Dorian Bybee, Michael Grau, Shu Hashimoto, Shao-Wei Huang, Chikara Inamura, Lydia Kim, Christoph Klemmt, Yasuko Kobayashi, Raymond Lau, Wang Lin, Yereem Park, Tao Wen, Stephan Wurster; (SDPhase) Samer Chamoun, Michael Hill, Tom Wuenschmann, Shuojiong Zhang
Competition Team	DaeWha Kang (Lead Designer), Monika Bilska, Elizabeth Bishop, Diogo Brito, Brian Dale, Kent Gould, Jwalant Mahadevwala, Michael Powers, Vignesh Ramaraju
Local Design	BIAD Beijing Institute of Architectural Design
Lighting Consultants	LIGHTDESIGN
Contractor	China Construction First Division Group Construction & Development Co., Ltd.
2011 – 2019	Beijing New Airport Terminal Building, Beijing, China
Client	Beijing New Airport Headquarters (BNAH)
Joint Design Team	(Optimised Concept Design) ADP Ingénierie (ADPI) and Zaha Hadid Architects (ZHA) with Buro Happold, Mott MacDonald and EC Harris
Design	Zaha Hadid, Patrik Schumacher
Project Directors	Cristiano Ceccato, Charles Walker
Project Architects	Paulo Flores, Lydia Kim
Project Coordination	Eugene Leung, Shao-Wei Huang
Project Team	Uli Blum, Antonio Monserrat, Alberto Moletto, Sophie Davison, Carolina Lopez-Blanco, Shaun Farrell, Junyi Wang, Ermis Chalvatzis, Rafael Contreras, Michael Grau, Fernando Poucell, Gerry Cruz, Filipa Gomez, Kyla Farrell, Natassa Lianou, Teoman Ayas, Peter Logan, Yun Zhang, Karoly Markos, Irene Guerra
Beijing Support Team	Satoshi Ohashi, Rita Lee, Yang Jingwen, Lillie Liu
Consortium Team	(Competition Stage) Zaha Hadid Architects (Lead), Pascall + Watson, Buro Happold, Mott MacDonald, EC Harris
Consultants	McKinsey & Company, Dunnett Craven, Triagonal, Logplan, Sensing Places

Local Design	Institute BIAD (Beijing Institute of Architecture & Design); CACC (China Airport Construction Company)
(2012)	New National Stadium of Japan, Tokyo, Japan
Client	Japan Sports Council
Design	Zaha Hadid, Patrik Schumacher
Project Director	Jim Heverin, Cristiano Ceccato
Project Architect	Paulo Flores
Design Core Team	Rafael Contreras, Antonio Monserrat, Fernando Poucell, Irene Guerra, Junyi Wang, Karoly Markos
Tokyo Support Team	Yoshi Uchiyama, Ben Kikkawa
2015	Leeza Soho, Beijing, China
Client	Soho China
Design	Zaha Hadid, Patrik Schumacher
Project Director	Satoshi Ohashi
Associate	Ed Gaskin, Armando Solano
Competition Team	(Senior Associates) Manuela Gatto, Satoshi Ohashi (Lead Designers) Philipp Ostermaier, Dennis Brezina, Claudia Glas Dorner
Competition Team	Igor Pantic, Mu Ren, Konstantinos Mouratidis, Nicolette Chan (Beijing Team) Yang Jingwen, Yung-Chieh Huang
Project Team	(Lead Designer) Philipp Ostermaier, Kaloyan Erevinov, Shu Hashimoto, Christoph Klemmt, Yang Jingwen, Samson Lee, Di Ding, Xuexin Duan, Juan Liu, Dennis Brezina, Rita Lee, Seungho Yeo
Consultants	
Structure	Bollinger+Grohmann (Competition), CABR (SD), BIAD (DD) (CD)
Façade	KWP (SD), Kighton Façade, Yuanda (DD)(CD)
MEP	Parsons Brinkerhoff (SD), BIAD (DD) (CD)
Lighting	Light Design (SD) (DD)
Landscape	ZHA (SD) (DD), Ecoland (DD) (CD)
2009 – 2016	Port House, Antwerp, Belgium
Client	Antwerp Port Authority
Architect	Zaha Hadid Architects
Design	Zaha Hadid, Patrik Schumacher
Project Director	Joris Pauwels
Project Architect	Jimmi Lee
Project Team	Florian Goscheff, Monica Noguero,

Competition Team	Kristof Crolla, Naomi Fritz, Sandra Riess, Muriel Boselli, Susanne Lettau
Competition Team	Kristof Crolla, Sebastien Delagrangre, Paulo Flores, Jimena Araiza, Sofia Daniilidou, Andres Schenker, Evan Erlebacher, Lulu Aldihani
Executive Architect	Bureau Bouwtechniek
Structural Engineers	Studiebuero Mouton Bvba
Services Engineers	Ingenium Nv
Acoustic Engineers	Daidalos Peutz
Restoration	Origin
Fire Protection	Fpc

Editorial Coordination

Henry Virgin, Manon Janssens, Woody Yao

Texts by

Patrik Schumacher, Partner Zaha Hadid Architects

Unless otherwise stated all text is by Zaha Hadid Architects

The original text 'Digital Hadid' was first published by Birkhäuser in 2004

Graphic Design and Layout

Giacomo Covacich, b-r-u-n-o.it

Cover

Heydar Aliyev Centre, Baku, Azerbaijan 2011

Photograph by H  l  ne Binet

Image Credits

Photographs are courtesy of:

  Antwerp Port Authority 152,153

  BMW AG / Martin Klindtworth 29

  Courtesy of Sawaya & Moroni 36

  Fernando Guerra 87-92

  Gerald Zugmann 34, 35

  H  l  ne Binet 30-33, 66-74, 79-81, 127

  Hufton + Crow 76-78, 99-104, 115-119, 140, 141

  Iwan Baan 16, 17, 75, 125, 128-129, 131, 142, 143

  Luke Hayes 37, 93-96, 98

  Marc Gerritsen 83

  Roland Halbe 15

  Toshio Kaneko 82, 84-85, 86

  Virgile Simon Bertrand 120-124

Renders are courtesy of:

  Zaha Hadid Architects by Methanoia 148, 149

  Zaha Hadid Architects by Hayes Davidson 136-139

Unless otherwise stated, all images
are courtesy of Zaha Hadid Architects

Zaha Hadid Architects and Fondazione Berengo are at the disposal
of the entitled parties as regards all unidentified iconographic sources

© 2016 Zaha Hadid Architects and Fondazione Berengo

© 2016 the authors for their texts

All rights reserved under international copyright conventions. No part of this
book may be reproduced or utilized in any form or by any means, electronic
or mechanical, including photocopying, recording, or any information storage
and retrieval system, without permission in writing from the publisher.

Zaha Hadid Exhibition Catalogue is composed of
ZAHA HADID ARCHITECTS
ZAHA HADID SELECTED WORKS
ZAHA HADID CODE
ZAHA HADID EXHIBITION PHOTOGRAPHS

Published by bruno
Dorsoduro 1621/A Venice, Italy
b-r-u-n-o.it

First edition May 2016
Printed and bound in Venice by Grafiche Veneziane

ISBN 978-88-99058-11-1

