

DESIGNING LIKE A MASTER

STUDIO NICOLETTI ASSOCIATI

Studio Nicoletti Associati's founder Manfredi Nicoletti founded the office in 1957 focusing his attention on ecological and bioclimatic issues within buildings.

One of the first major works that embodied the ideas maturing out of his research was an expansion of Manhattan into the Hudson River that design was completed in 1968.

The cardinal concept behind this project was that the design of the form derived as a response to the specific necessities of the site.

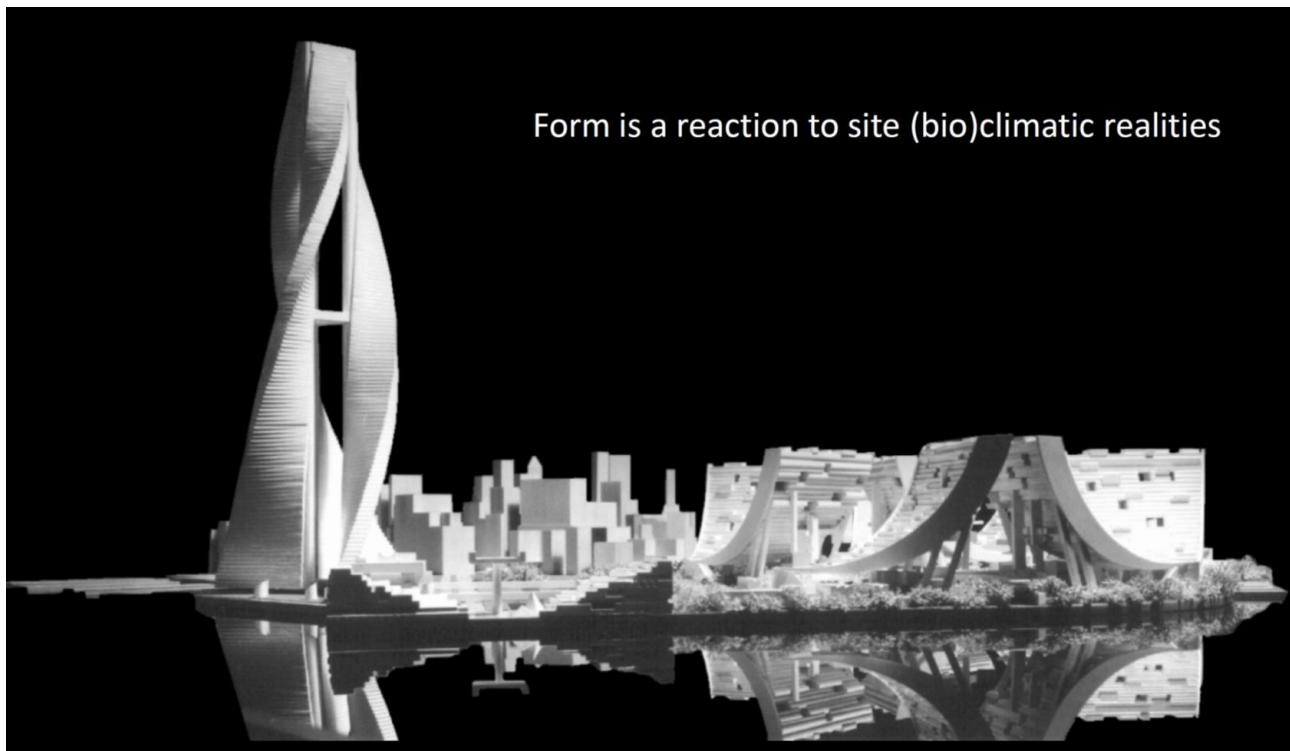
The buildings of the expansion in fact were not protected within the city by other buildings, but were totally exposed to the raw climate conditions of the Hudson. In this specific site the major issue to consider were the winds.

HELICOIDAL SKYSCRAPER

The HELICOIDAL SKYSCRAPER and underlying buildings were designed to minimize the impacts of the winds

coming from the Hudson river not only on the structure of the building itself but also as a filter to the city behind.

Nicoletti believed the city was essential in creating healthy living conditions for people. Healthy living conditions within the city permitted the city to be the



Helicoidal Skyscraper – New York Crescent Project – Manhattan, NY 1968
Source: Studio Nicoletti Associati

main activator of human knowledge: and only through vibrant and active human knowledge could crises related to our developing in the biosphere be resolved.

With this notion in mind in 1972, Manfredo Nicoletti, created a first of a kind course dedicated to studying the relationship between the 'morphology (FORM) of a city and its 'ECOLOGY', at the University of Rome. In the opening speech he speaks of having a naive and utopian DREAM, a hope though that he believed had NO alternative.

These were the years in which the developed world was experiencing one of the most severe energy crises while at the same time architects were challenging each other to build the tallest skyscrapers. Between 1972 and 1974 in New York and Chicago the two skyscrapers that were to remain the tallest until 1998 were built.

The need for tall buildings was an evident manifestation of the exponential growth of cities.

"The office was responding to the problematics that were becoming noticeable due to this population movement. The potentials of the city and the reasons for the difficulties urbanists were encountering in creating healthy new centers for human life were being investigated."

His curiosity led him to bring together experts in various fields to investigate the nature of this evolving city: the effects people had on it and the effects the city in turn had on people. The book Nicoletti published in 1978 was entitled "Urban Ecosystem", a term attributed to him and a book that was the first to talk about this critical topic.

He was using the plurality of visions the city's noosphere (human knowledge) contained to understand how to collaborate with the biosphere in order to create a healthy urban ecosystem.

In this book he speaks about inclusion, about dynamic and participatory designing, an organic and total design as the foundation of the ecological approach.

Nicoletti believed in the equal inclusion and integration of all disciplines during the creation of a building or a city, versus specialized participation.

"Meanwhile the effects of exporting unsustainable urban cultures of countries with enviable 'high living standards' were being noticed in places that had picked up these development strategies in the hope that they were also picking up the living standards collaterally.

Tropical climate cities were building crystal boxes. Western urban cultures were being transferred without any sort of INTEGRATION to Middle Eastern, oriental cultures with effects that today we know."

"We are creating harmful relationships with our biosphere through an incorrect use of knowledge."

One of the problems is the awkward use of architectural language. Architectural language patterns created for other uses were being adapted and repaired to 'fit'.

This need for repair arises from an unsound use of memory. **Memory applied as imitative use feels safe.** Without an obligatory and often awkward adaptation to the almost limitless number of factors that impact a building or a city, this memory can only produce misfit bodies.

"Memory is important to give past a continuity.

Memory is important for it gives us language, creativity, and most importantly individuality.

In our case, Memory is important for it gives us the language of architecture.

We though tend to use '**accredited**' language based on imitation, that requires covering, bandaging, refitting and patches to adapt it to the real necessities.

We create forms, conceived of a **non-contextual but safe language**, while instead we should be creating using a responsive architectural language."

CASA MONCADA

"CASA MONCADA is an example of one of our office's oldest built projects in which the form derives from contextual memories that respond symbiotically to the urban ecosystem.

The social housing complex was designed in the 80s for a noble family of Palermo in Sicily.

Palermo is located in the very south of Italy nearly at the same latitude as northern Africa. Needless to say for this project we used the memories and the culture of Sicily.

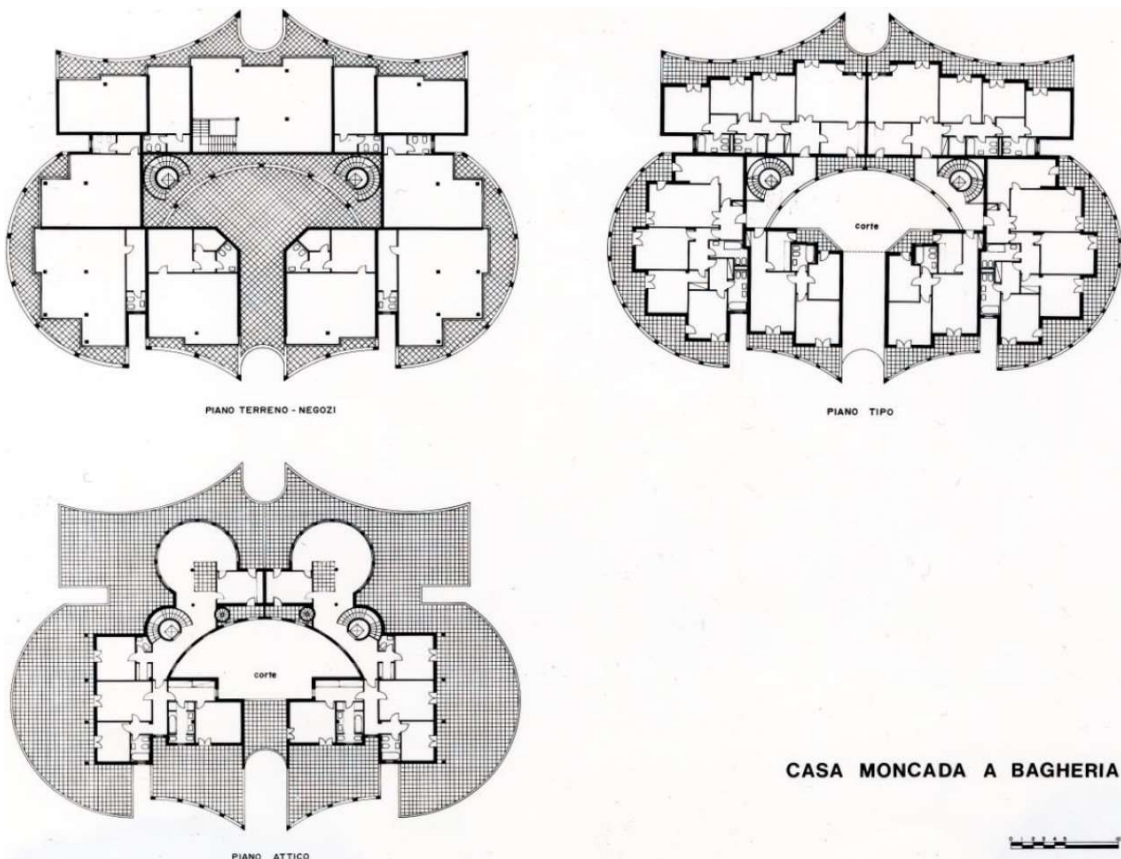
Bagheria is the oldest area of Palermo in which many aristocratic villas are located. All these villas are designed to be an exception within the ordinary urban fabric of the city. Our client commissioned us to create social housing that had the same relevance and exceptionality as the aristocratic villas.

The need to protect from the blazing sun is clearly visible examining the typical Sicilian palazzo. Large porticos at the ground floor and Islamic mashrabiyas are used to filter the sun.

In the same way our building is protected by a bioclimatic skin that envelops the whole building



Casa Moncada – Bagheria, Italy
Source: Studio Nicoletti Associati



CASA MONCADA A BAGHERIA

Casa Moncada – Bagheria, Italy
Source: Studio Nicoletti Associati

creating a passive filter from sun beams. This skin is not a patch adapted to the building but is formed by a combination of different architectural elements: structures, balconies, railings, slab overhangs.

A simply designed building core is elegantly and functionally protected by a modern interpretation of a mashrabiya.

Passive bioclimatic solutions such as the external mashrabiya and the internal well are used to create natural ventilation, cooling and sun protection of the building. Once again, as in the Helicoidal Skyscraper of New York, the integration of passive solutions into the building is what created the ultimate form.

I avoid discussing the topic of sustainability in isolation. I avoid taking any aspect that will influence the design of my creation in isolation. Designing is taking into consideration the realities as ONE scope and not as a series of isolated factors."

"Only through a TOTAL all-encompassing design process, can we create with and not against."

"But what exactly do we mean by TOTAL ARCHITECTURE.

Bruce Lee, had a similar perspective.

Lee was a master of a large number of martial arts such as karate, judo and kung fu. Through the deep knowledge of these arts he decided to create a new form of martial art. This new martial art though was not created in contrast to the other forms.

He united the techniques of these martial arts into one harmonious idea, ONE TOTAL THOUGHT, where all the forms could live together and where the only method he formalized was that there was no ONE method.

We can re-think architecture in a similar manner.

Let's think of the various martial arts as the various disciplines in architecture: structures, M&E, form, sustainability, acoustics etc. If we were to use the Bruce Lee's One Total Thought, these disciplines would not be taken separately but inclusively during the architectural design of a building.

Could these architectural disciplines be unified by not only compositional scope but also by bioclimatic scope through what we can call Total Architecture; **a dynamic architectural language that exists in symbiosis with its surroundings.**

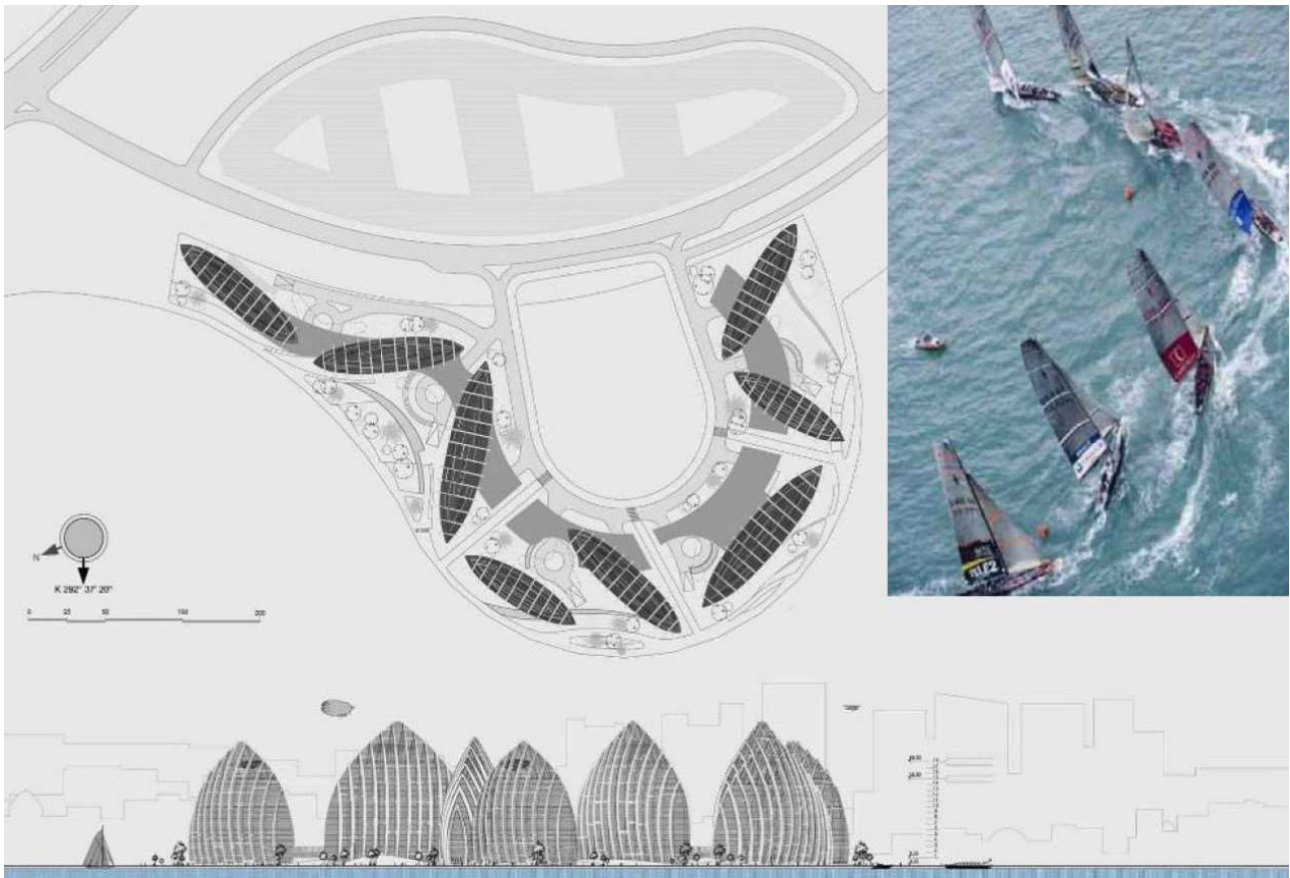
It would be an architectural language in which no element works independently of the necessities of the location in which it lives in. **Responding to the context is therefore the method of this new language of form created through a Total Thought Design: Above all it will be a method."**

PUTRAJAYA WATERFRONT RESIDENTIAL COMPLEX

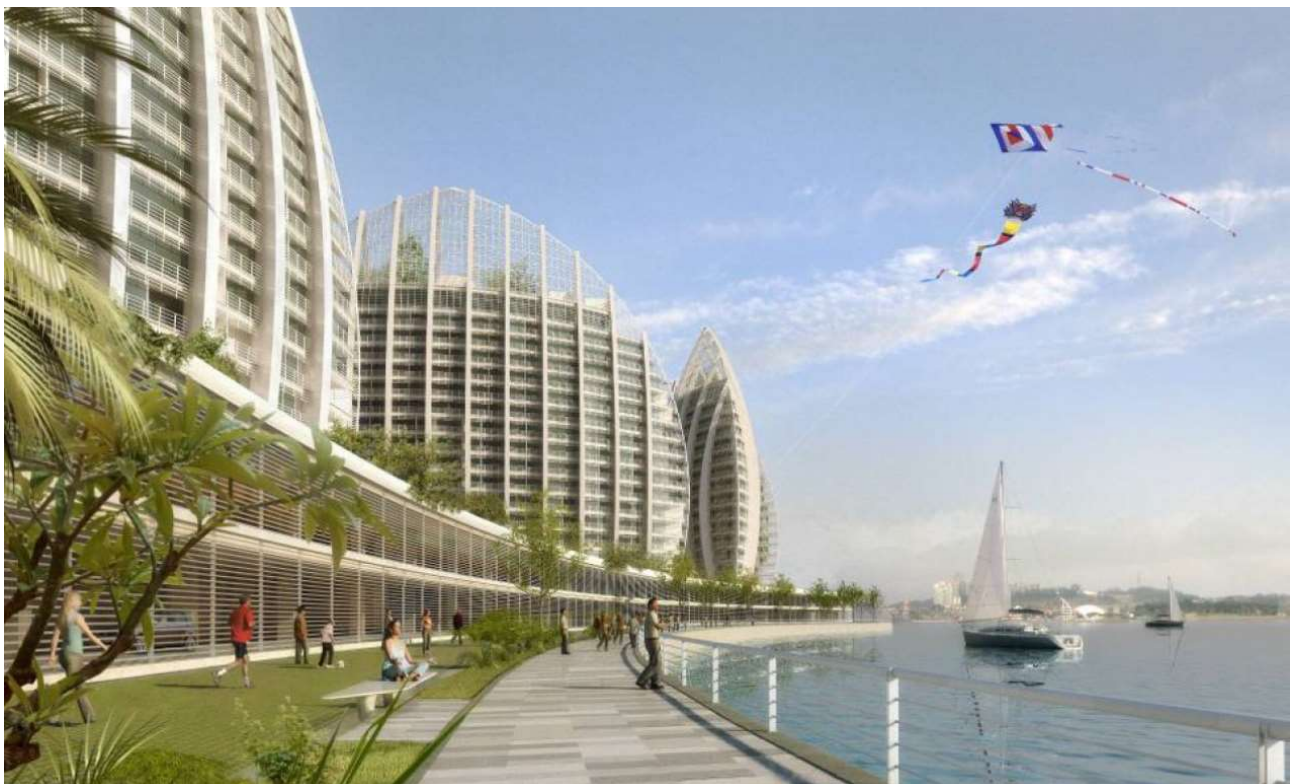
"It is an example of our way of using this method where building elements merge to live harmoniously with surrounding."



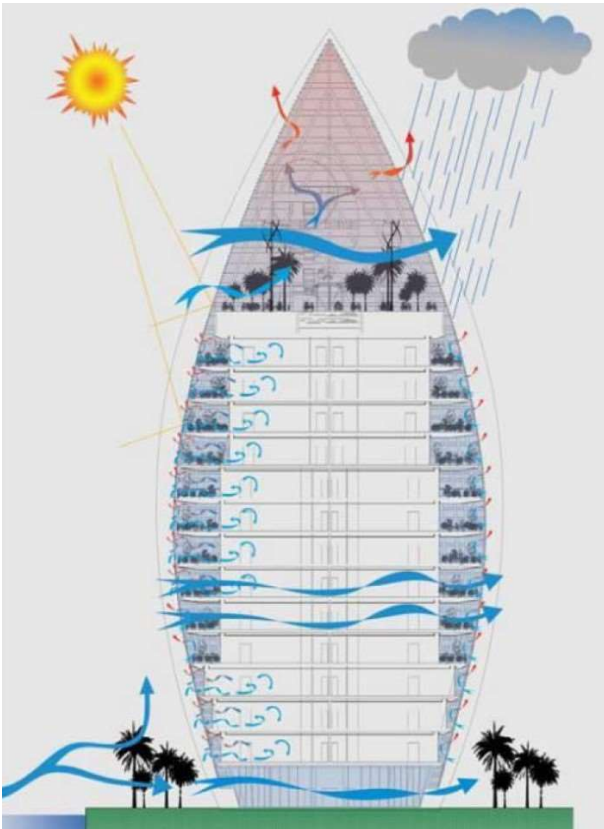
Putrajaya Waterfront Residential Complex – Kuala Lumpur, Malaysia
Source: Studio Nicoletti Associati



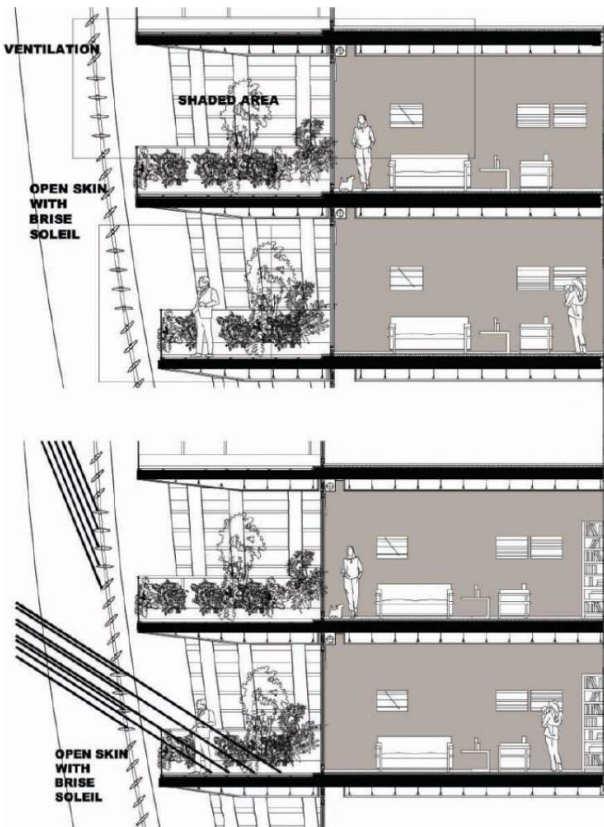
Putrajaya Waterfront Residential Complex – Kuala Lumpur, Malaysia
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“Putrajaya is a locality south of Kuala Lumpur and is the administrative district of Kuala Lumpur constructed on an artificial Laguna almost 10 km long.

Putrajaya is so near the equator that the sun is perpendicular almost all year long and can shine both from the south and from the north. The client commissioned us to design iconic buildings and asked us to integrate bioclimatic solutions of the traditional Malay architecture.

We began by studying traditional Malaysian residential construction and then applied our total architecture method to the local traditional principles.

The architectural elements in traditional construction are all Passive bioclimatic solutions. Large roof overhangs, cross ventilation, attentive use of vegetation not to block wind but only sun beams, ventilation of roof space, urban layout.

These passive solutions are those that we find most effective because they integrate the various elements of the building maintaining the balconies, structures, parapet and facades functional. These elements exist but are not recognizable one by one. Together they form the structure of the bioclimatic mechanism of the building.

The language of the building could not be more organic. When by organic I mean the total fusion of sustainability technology and traditional construction to create something nontraditional.

The building we were commissioned to design had to be conceived in such a manner that each of the seven buildings functioned in a similar manner with the same performance standards no matter where the buildings were to be situated. This was also done to give the client maximum flexibility in site planning.

The result is what you can see in the Putrajaya Waterfront Residential Complex.”

BIO ISTANBUL

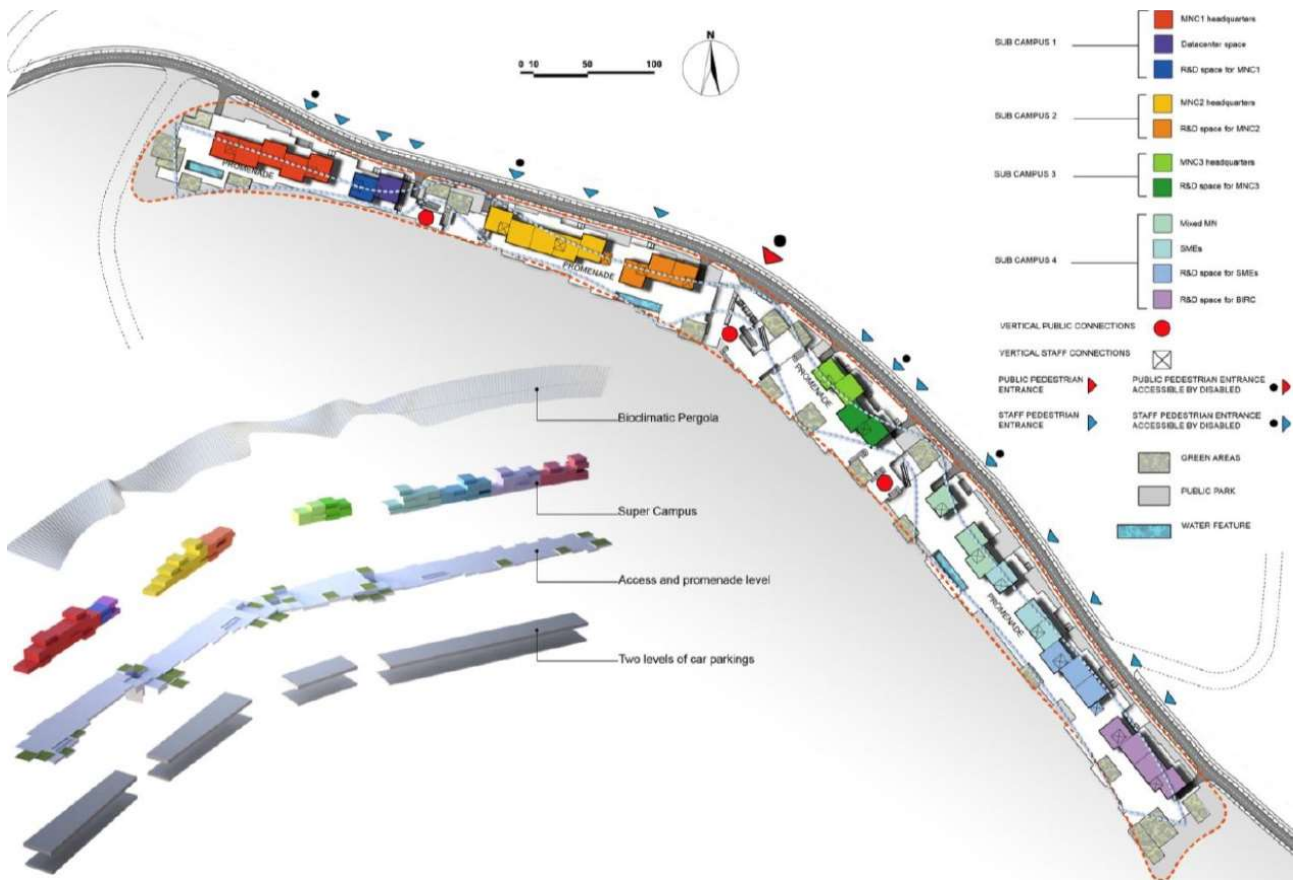
“BIO ISTANBUL is another example of application of our total architectural method.

We were asked by Bio Istanbul to design a large development for medical research and medical commercial venues formed by a series of different campuses.

Our inspiration came from the traditional commercial and manufacturing architecture of Turkey and Islamic countries. We wanted to recreate the idea of being in a



Bio Istanbul – Turkey
Source: Studio Nicoletti Associati



Bio Istanbul – Turkey
Source: Studio Nicoletti Associati

bazaar where the public moves from one building to another within one unique open space. The space not only ties together the various building but also serves to protect the people from the climate.

The site is situated between a large park and one of the main roads of the medical campus. The site is over 1 km long and only 30 m wide. So the different campuses could not form a nucleus but could only be placed in a very fragmented line.

Our idea was to unify the different campuses visually and physically through the design of a bioclimatic pergola, reminiscent of the typical Islamic souks and bazaars.

The bioclimatic pergola protects the campus buildings from solar radiation coming from the south but permits a clear and uninterrupted view from inside the buildings to the green areas on the south.

Moreover, the campus buildings were designed to recreate the ever changing architecture of the historical

Islamic centers, with wide terraces on the roofs and overhangs to further protect the buildings skin from direct solar radiations and climate conditions.

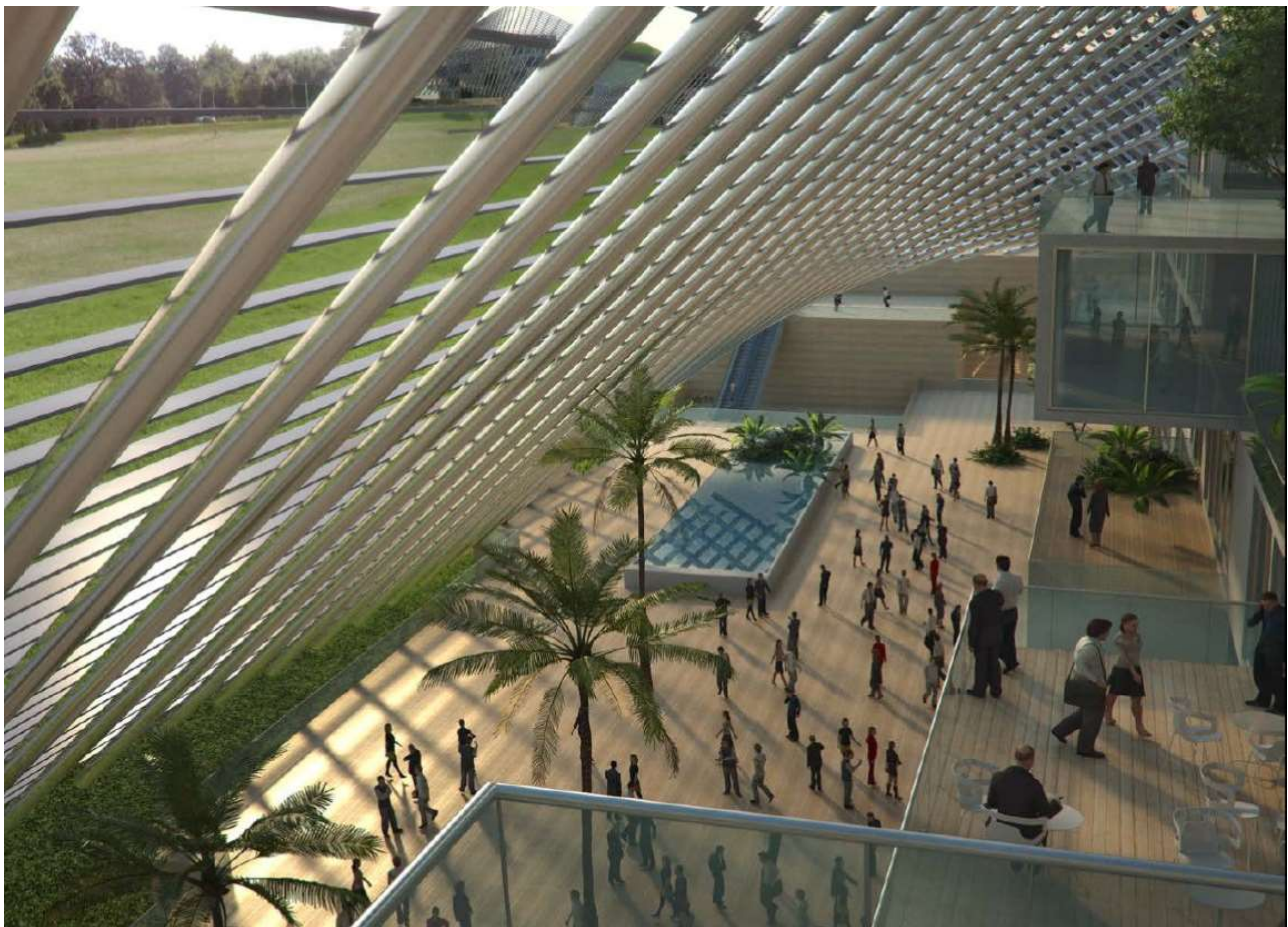
We created a shadowed open and public space, connecting all the campuses and facing the park,

illuminated mainly by filtered and indirect natural light.

Also in this case, a total architectural approach was proposed using terraces, overhangs, structures and an elegant pergola, to passively protect our building from the local climate."



Bio Istanbul – Turkey
Source: Studio Nicoletti Associati



Bio Istanbul – Turkey
Source: Studio Nicoletti Associati

"A redefined language of form appropriate to the needs of today can be created making use of the totality of knowledge nurtured continuously in the noosphere."

"Our memories should make use of the lessons creatures and humans have learned in the past millions of years of survival and adaptation to earth's rhythms, and translated through today's noosphere into a language that responds to the necessities of today.

History (memory) is to be used with reason and not by mimicry.

Because an architect is not a specialization, it is not a limitation. An architect is a creator. A creator that looks for a better tomorrow using the knowledge cities are vibrant with, to redefine beauty every moment."



Casa Moncada – Bagheria, Italy
Source: Studio Nicoletti Associati

STUDIO NICOLETTI ASSOCIATI, founded in 1957, delivers world-class professional design and management services. STUDIO NICOLETTI ASSOCIATI offers award-winning architectural design, progressive infrastructure engineering, highly ranked project and construction management and is known for high quality and professionalism. At over 30 professionals, STUDIO is one of the oldest and largest firms in Rome and delivers total services to a project or forms flexible work teams that can integrate into a larger team in partnering and sub-consulting roles. The STUDIO practice's expanded through all major aspects of urban and building design in Italy, Europe, Africa, USA, Middle and Far East. The philosophy to conceive building design is the result of an organic growth from a specific context. A context which is both the humus and the raw material of any architectural conception.

Among many projects built and on the process of being built: The Astana State Auditorium for 3500 seats in Kazakhstan; The Nigeria National Complex in Abuja, including the Nigeria Cultural Centre, the Tower of Nigeria and the City Hall; The Abuja 32ha Millennium Park, opened by Queen Elisabeth in 2003; The Museum of Modern Art in Warsaw - International competition Honour Mention; The New Hall of Justice in Campobasso - European Competition First Prize; Putrajaya Waterfront development in Kuala Lumpur - International Competition First Prize.