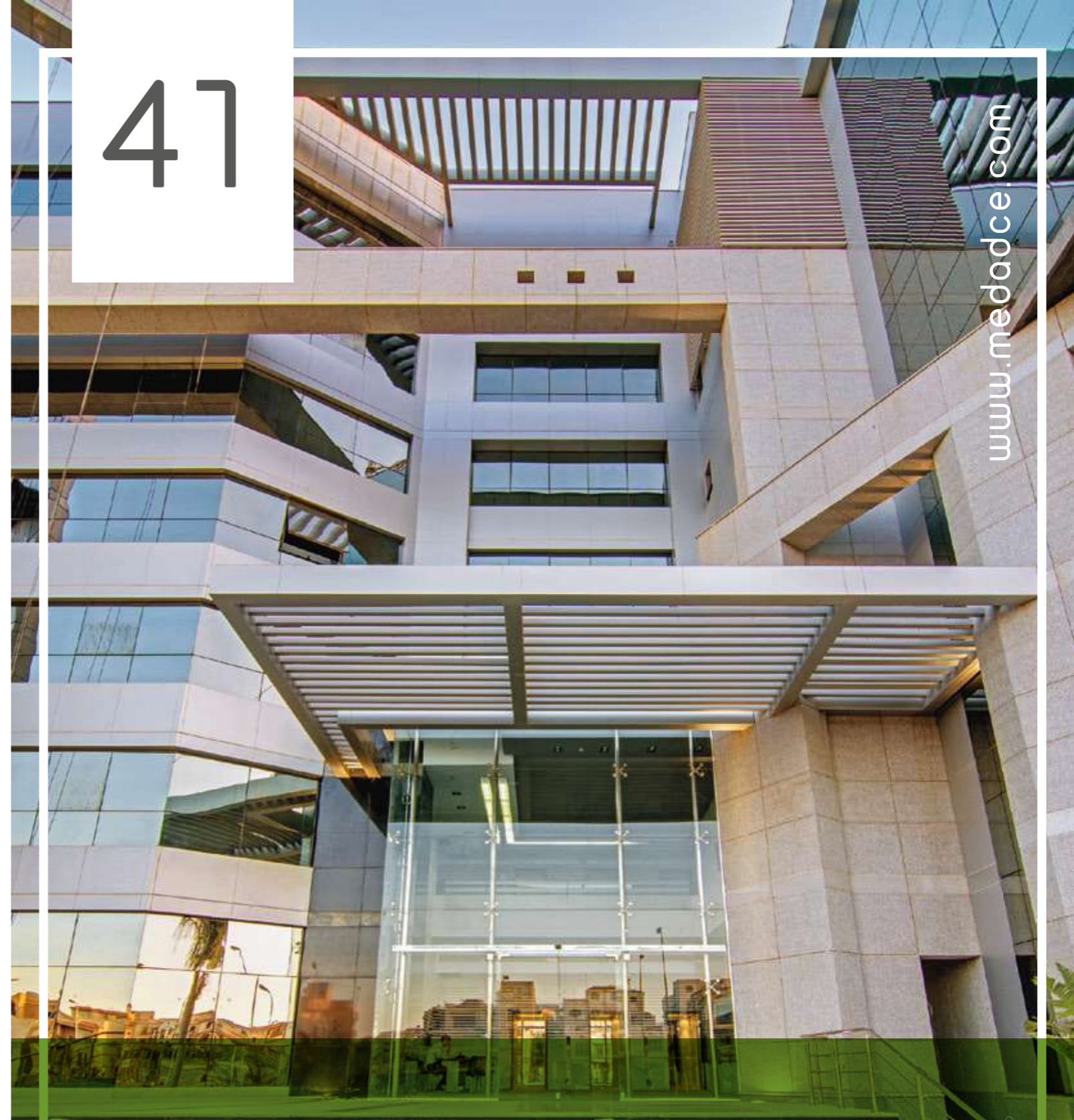


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www.medadce.com



مَدَاد
MEDAD

SPRING EDITION

THIS EDITION FEATURES:

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Art is one of the main focal points in architecture. Thus, as part of Medad's vision we discuss unique contemporary artistic works featuring their artists and the minds behind it.
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Medad keeps up with new technologies related to the architectural field, therefore we are sharing some of the new exciting innovation as part of Medad's ambition and aspiration to enrich the practice.
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ABOUT MEDAD:

Medad is a creative design office providing architectural, urban and interior design along with project management and furniture procurement services for clients across the globe.

We design innovative retail, residential, hospitality, office and integrated mixed-use developments, with a focus on the people who use them. Our office is committed to creating unique and memorable destinations – projects and places that enhance their surroundings and improve the lives of those who populate and move through them daily.

Medad thinks globally but acts locally. We believe design should be timeless and inspiring yet practical for both their owners and occupants. We imagine things from both the outside to the inside and the inside to the outside. Our special expertise is the interlocking of the architecture to the interior design. With creativity and modern thinking we realize projects which stand out and the result is perfectly tailored to the user.

Medad has been part of the architecture community and engineering consulting for 34 years with a rich history of collaborations and ever enriched artistic, technical, and professional capabilities.

Medad also established several entities and sister companies (Egyptian Company for Building Industry "Madina", Arabian Wood industries Co. "Araek", "Madar" Project Management, United Group of Wood Industry "khashab Khan", TORATH for construction and urban development, FNON for the wood industry and finally AlMayan for handmade products). with a continued creative activities and products with a high degree of excellence.

Medad's branches extend to several countries including Saudi Arabia (Riyadh, Jeddah), Qatar (Doha), UAE (Ras Al Khaimah), Libya (Tripoli), and finally Kenya (Nairobi).

Medad senior staff's accumulated experiences are being passed on through an educational process, whether lecturing or arbitration projects in various Egyptian universities such as Cairo University, American University in Cairo, Arab Academy for Science, Technology & Maritime Transport, and Modern Sciences and Art University (MSA).

MEDAD NEWS

Egyptian Chinese University Recruitment Forum



شاركت مداد مهندسون استشاريون في ملتقى التوظيف المقام في الجامعة المصرية الصينية في إطار دعم مداد للمهندسين والبحث عن كفاءات ومواهب جديدة.

Medad Consulting Engineers participated in the Employment Forum at the Egyptian Chinese University within the framework of Medad's support for engineers with skills and new talents.



Eng. Mohamed Sobhi Seraj
Managing Director

وقد مثل مداد في الملتقى السيد المهندس محمد صبحي سراج وشهد إقبالا كبيرا من السادة المهندسين للتعرف على أعمال مداد مهندسون استشاريون ومجالات عملها المتنوعة واتجاهاتها في التصميم والتنفيذ.

The Extension of The Four Scholars Mosque New Cairo, Egypt



أسند إلى مداد مهندسون استشاريون توسعة مسجد الأئمة الأربعة الذي قامت مداد بتصميمه وتنفيذه في التجمع الخامس القاهرة الجديدة وفقا لرؤية مداد ورسالتها في تصميم المساجد. والذي احتفت بتصميمه مبادرة عالم من المساجد من جائزة عبداللطيف الفوزان لعمارة المساجد.



لمشاهدة رؤية مبادرة عالم من المساجد وتحليلها لمسجد الأئمة الأربعة :

<https://www.youtube.com/watch?v=QKwSk8syoDQ>

نموذج التصميم في غاية البساطة ولكنه فعال للغاية في استحضر ضوابط الدين الإسلامي ومستحباته مثل إعطاء الحد الأقصى لطول خطوط الصلاة، بالإضافة الى مساحة صلاة للسيدات في الميزانين، مع الخصوصية الكافية التي قدمتها نوافذ مستوحاة من الحلي الإسلامية، وأيضا توفير أرفف للمصاحف و خزانات الأحذية باستخدام ازدواجية العمارة المعاصرة، الزخارف التقليدية واضحة جدا وتنتشر في جميع أنحاء المسجد، مثل المثانة، السقفية، المدخل، المحراب والفتحات مع بعض التشكيلات الهندسية.



ويكون مقترح التوسعة متضمنا زيادة (ساحة مصلى الرجال، وساحة مصلى النساء، وامتداد لقاعة صلاة النساء، وميضاة، ودورات مياه، وأماكن لانتظار السيارات)

- ساحة مصلى الرجال
- ساحة مصلى النساء
- امتداد قاعة صلاة النساء
- ميضاة
- دورات المياه
- الطرق وأماكن انتظار السيارات

MEDAD Races Against Time In Asten College Project To Open First International School



تسابق مداد مهندسون استشاريون الزمن في الانتهاء من تنفيذ مشروع مدارس أستين كولدج الدولية قبل بداية العام الدراسي الجديد والذي أسند إليها الإشراف على تنفيذه بمشروع تاج سيتي. وهي إحدى مشروعات شركة التعليم المتوازن (Balanced) التي تتبع نظام التعليم البريطاني (IGCSE) ومن أول المدارس التي تطبق فكرة التحول الرقمي في التعليم من خلال الشراكة مع مايكروسوفت مصر.

ويتميز مشروع تاج سيتي بموقعه الاستراتيجي المتميز بمنطقة القاهرة الجديدة على الطريق الدائري بالقرب من مطار القاهرة الدولي حيث يبعد دقائق عن كل من منطقتي شرق القاهرة وهليوبوليس.

والمشروع عبارة عن مبنين:

1. مبنى إداري (أرضي + دورين) بمساحة حوالي 315 متر مربع لكل طابق.
2. مبنى المدرسة (أرضي + 3 أدوار) بمساحة حوالي 3500 متر مربع لكل طابق.

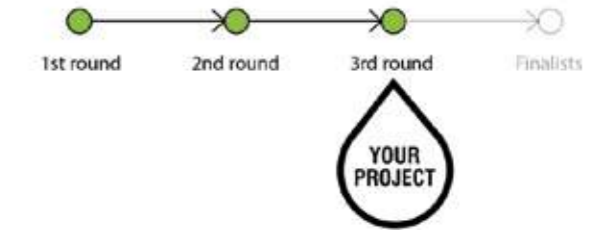


Medad Has Reached The Pre final Stage Of The Competition Evaluation!



Your result

Congratulations! Your project has made it through the third round of the evaluation process, just one step before the selection of the finalist proposals.



شاركت مداد مهندسون استشاريون في مسابقة مركز التنمية المستدامة في زامبيا. وقد وصلت مداد إلى المرحلة قبل النهائية من تقييم المسابقة. وكانت المسابقة حول تصميم مخيم مايوكوايوكوا للاجئين مع التركيز على استخدام المواد المستدامة في التصميم والسبل والآليات البسيطة السهلة في التنفيذ مع الأخذ في الاعتبار أن المباني المصممة ستكون مرجعا للأهالي بحيث يمكن تكراره في أماكن مختلفة وبوظائف متعددة.



BAKKAH TOWER
MECCA, KSA
برج بكة
مكة المكرمة، السعودية

MEDAD'S COMMUNITY:

The directors and senior staff of Medad bring many years of collective experience to every project – we know what works. At the same time, we capture emerging trends worldwide and incorporate the best new ideas into our designs on a continual basis. Working with many of the world's strongest developers, designers, and retailers, we treat each new opportunity as a collaborative exploration, with the goal of meeting the expectations of our clients with added-value of our clients and our projects' end users.

We believe in investing in a team of strong collaborators and supporters of one another. Our process is an open studio where input and comment is sought and considered from all of members of our team guided by a strong design lead. Nurturing a creative atmosphere and drawing on a diverse and experienced team ensures for effective and timely results.



MAYUKWAYUKWA REFUGEE CAMP مخيم مايوكووايوكووا للاجئين



A SUSTAINABLE DEVELOPMENT CENTER COMPETITION IN ZAMBIA.

Medad has reached the pre final stages of the competition evaluation.

One of the huge inspirations of the site, was a very unique context fabric, looked like branched tree. We used that fabric in our Layout to make our center part of the surrounding nature. The natural distribution of trees in the site, created different levels of privacy zones, which were very useful while dividing the project into private (with heavy density of trees for bed rooms) - semi Private (with medium density for class rooms) and public (with low density for Exterior spaces).

We connected every possible group of trees with shades made of bamboo and ropes to create outdoor spaces that can be used, even as a temporary classroom in the early phases of the construction, and to be - later on - as an outdoor area for class room buildings. This way cutting trees down is not necessary. On the contrary, they are necessary for making more outdoor shaded areas.



وشبه خاصة (مع كثافة متوسطة لغرف الفصول) وعمامة (مع كثافة منخفضة للمساحات الخارجية). وقمنا بتوصيل كل مجموعة ممكنة من الأشجار بمظلات مصنوعة من الخيزران والحبال لإنشاء مساحات خارجية يمكن استخدامها حتى كغرفة دراسية مؤقتة في المراحل الأولى من البناء ، ولتكون - لاحقًا - كمنطقة خارجية لغرف الفصول الداخلية. وبهذه الطريقة لم يكن قطع الأشجار ضروريًا بل على العكس من ذلك ، فقد صار الحفاظ عليها ضروريًا لإنشاء المزيد من المناطق المظللة في الهواء الطلق.

مسابقة مركز التنمية المستدامة في زامبيا. وصلت فيها مداد مهندسون استشاريون إلى المرحلة قبل النهائية من تقييم المسابقة. كان واحدا من أهم مصادر الإلهام الطابع العام للموقع ونسيجه الفريد من نوعه ، كان أشبه بشجرة متفرعة. وقد استخدمنا هذا النسيج في مخططنا لجعل مركزنا جزءًا من الطبيعة المحيطة. وأدى التوزيع الطبيعي للأشجار في الموقع إلى إنشاء مستويات مختلفة من مناطق الخصوصية ، والتي ساعدت كثيرًا أثناء تقسيم المشروع إلى مناطق خاصة (مع كثافة كثيفة من الأشجار لغرف النوم)





02

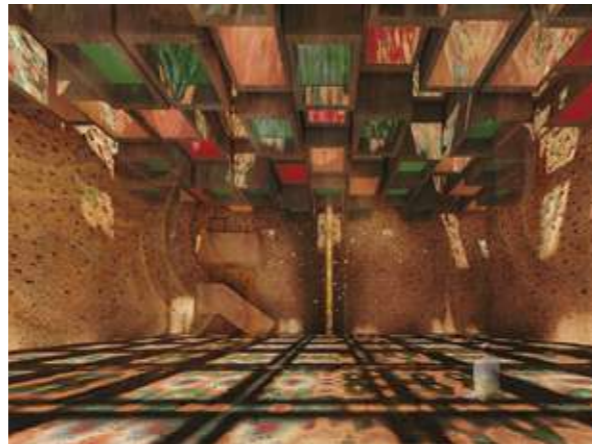
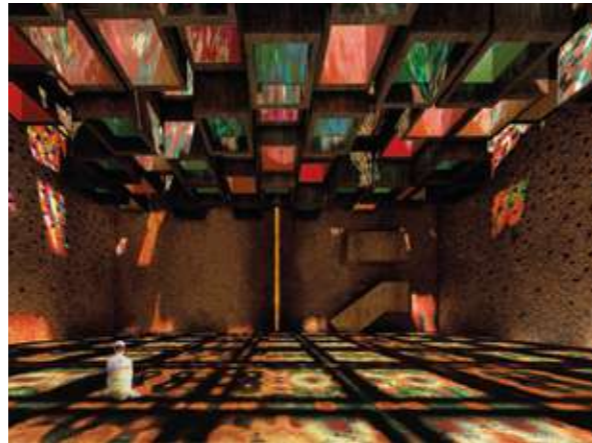
IL MONTE GALALA MOSQUE Ain Sokhna, Egypt مسجد المونت جلالة العين السخنة، مصر

The Il Monte Galala is one of the largest and most distinguished projects in Ain Sokhna from Tatweer Misr.

With a project area of 2,2 million square meters, Monte Galala Resort Ain Sokhna is the first mountain recreational resort in Egypt and also a global health resort.

As Part of Medad's Contributions to the Project, Medad Consultant Engineers was contracted to develop and design the project's main Mosque. Medad helped design both the exterior and the interior of the mosque building, with the goal of creating an outstanding experience to visiting users.

The mosque consists of a basement, ground floor, and mezzanine. The design concept revolved around the mosque having a series of slanted roof skylights, each with a set of stained glass that refract the incoming sunlight to create a marvellous lightshow within the mosque. This also eliminates the need for side windows, making the mosque's facade truly unique.



يعد مشروع المونت جلالة من أكبر المشروعات وأكثرها تميزًا في العين السخنة من شركة تطوير مصر. تبلغ مساحة المشروع 2,2 مليون متر مربع ، بطول شاطئ 1300 متر ، وتبلغ نسبة البناء حوالي 15 بالمائة

الباقى مكون من خدمات ومناظر طبيعية. مغطاة بالعشب الأخضر المورق على ارتفاع 220 متر مربع فوق مستوى سطح البحر ، مما يجعل جميع الوحدات السكنية داخل المنتجع تتمتع بإطلالة مميزة على المناظر الطبيعية الساحرة

ساهمت مداد مهندسون استشاريون في المشروع في بعض الأجزاء، من ضمنهم المساهمة في تطوير تصميم المسجد الرئيسي للمنتج

المسجد يتكون من بدروم، ودور أرضي، و ميزانين. الفكرة التصميمية للمسجد تعتمد على وجود نوافذ سقفية مائلة، و متعددة الارتفاع. كل نافذة مزخرفة بزجاج ملون يكسر ضوء الشمس بطريقة جاذبة للنظر. وتتكامل هذه الأضواء مع بعضها البعض لخلق جو هادئ و مبهر للزوار. و بالاعتماد على النوافذ السقفية فيمكن الاستغناء عن النوافذ الجانبية لابتكار واجهة فريدة



COMMERCIAL PARK 6th October, Egypt

منتزه تجاري 6 أكتوبر، مصر

The project is located along Gamal Abdel-Nasser Road, in 6th October City. The walkway runs in front of the Hunting Club and a Residential Compound. The total project area is 49,669 m², with a built up area of 2490 m², meaning only 5 percent of the project is reserved for shops and amenities.

The Park is designed to act as a social and recreational hub for residents of the nearby complex, as well as the Hunting Club. The winding walkways create a pleasant vibe that send the user through a journey as they explore the different services and amenities.



03



يقع الممشى الترفيهي في طريق جمال عبد الناصر في مدينة 6 أكتوبر. المشروع في موقع مميز، يوازي مجمع سكني و نادي الصيد

تبلغ مساحة المشروع الكلية 49,669 م²، و مساحة البناء هي 2490 م² فقط، أي لا تتعدى المحلات و المباني الترفيهية 5 بالمئة من المساحة الكلية

الممشي مصمم ليكون مركزا اجتماعيا يخدم سكان المجمع و النادي. الممشى مكون من طرق متداخلة تخلق إحساسا بالمغامرة





KAKYA HOTEL COMPETITION Mecca, KSA

مسابقة فندق الكعبة مكة المكرمة، السعودية

The Project was submitted as part of a competition held in 2014 by Al Subaei Real Estate Development and Investment. The project was to be located in southern Mecca, KSA, within the Kakya residential zone. The project's land area is 6564 m², with the proposed total built up area reaching 15521 m². The designed proposed by Medad was conceived after rigorous studies of the region's history, cultural identity, traditions, and environment.

By studying the local architecture, the design concept was formed. The local architecture identity is functional, yet ornate. Due to the temperate nature of the region, allowing natural airflow in architectural designs was an absolute priority, but so was the privacy of the user. The resulting solution was the inner courtyard that's prevalent in many of the residential homes in the area. Mimicking this courtyard structure not only makes the project more energy efficient, but also connects it to the surrounding region through the visual identity and environmental design.



شاركت مداد مهندسون استشاريون بمسابقة فندق الكعبة التي أقامته شركة السباعي للاستثمار و التطوير العقاري. الموقع مقام في منطقة الكعبة السكنية في جنوب مكة المكرمة في المملكة العربية السعودية. مساحة الأرض هي 6564 م². و تبلغ مساحة البناء للتصميم المقترح 15521 م²

سعت مداد في هذه المسابقة للحفاظ على التراث و النطاق البصري للمنطقة التي توصلت إليه بعد دراسات عميقة للحضارة العامة و الاحتياجات البيئية و الاجتماعية للسكان و الزوار

من تلك الدراسات تكونت الفكرة التصميمية، بمحاكاة الطابع المعماري الذي يركز على الخصوصية الشخصية و التهوية الطبيعية للتعامل مع الجو الحار. وقد حل السكان هذا التحدي ببناء أفنية داخلية تخلق تيارا طبيعيا و في نفس الوقت تفني عن الحاجة إلى فتحات كثيرة في الواجهات الخارجية

فأنت مداد بالتصميم المعماري الحديث، الذي يستغل هذه الطول المعمارية القديمة الفعالة بشكل معاصر و جديد، يعيد إنعاش الطابع العام للمنطقة و يؤكد التراث و الحضارة القديمة

SHEIKH ABDULLAH ALHEMIDAN MOSQUE

Toif, KSA

مسجد الشيخ عبدالله الحميدان
الطائف، السعودية

OUR VALUES:

Collaboration is central to our creative process.

We believe in the power of people working together creatively. We actively engage with clients, consultants and our staff, encouraging open discussion throughout all phases of a project.

We build relationships – care about our clients.

“Our word is our bond” and it is the guiding principle in all of our client relationships. This enables us to add value significantly and to build trust with our clients and partners.

Our designs are based on simple and elegant solutions, with the client in mind.

Our design approach is sensitive to location and culture, often combining the latest thinking with the local Islamic requirements to create truly inspirational spaces.

THE LINE

No roads, cars or emissions, it will run on 100% renewable energy and 95% of land will be preserved for nature. People's health and wellbeing will be prioritized over transportation and infrastructure, unlike traditional cities. Only 200 meters wide, but 170 kilometers long and 500 meters above sea level.

THE LINE will eventually accommodate 9 million people and will be built on a footprint of just 34 square kilometers. This will mean a reduced infrastructure footprint, creating never-before-seen efficiencies in city functions. The ideal climate all-year-round will ensure that residents can enjoy the surrounding nature.



Residents will also have access to all facilities within a five-minute walk, in addition to high-speed rail – with an end-to-end transit of 20 minutes. The city will be zero-carbon, through the elimination of carbon-intensive infrastructure like cars and roads.



It will operate on 100% renewable energy, including the operations of its industries. The integration of nature and open spaces throughout will serve an important role in purifying air quality.

To ensure the establishment of microclimatic spaces, the environment has been carefully designed to allow for an optimal balance of sunlight, shade and natural ventilation. Furthermore, the green open spaces throughout the city will further enhance the comfort for those living, working and visiting here.



لا توجد طرق أو سيارات أو انبعاثات ، سيتم تشغيله على طاقة متجددة بنسبة 100 ٪ وسيتم الحفاظ على 95 ٪ من الأرض من أجل الطبيعة. سيتم إعطاء الأولوية لصحة الناس ورفاهيتهم على النقل والبنية التحتية ، على عكس المدن التقليدية. عرض 200 متر فقط ، لكن طوله 170 كيلومترًا و 500 متر فوق مستوى سطح البحر.

سوف يستوعب الخط في النهاية 9 ملايين شخص وسيتم بناؤه على مساحة 34 كيلومترًا مربعًا فقط. سيعني هذا تقليل أثر البنية التحتية ، مما يؤدي إلى كفاءات لم يسبق لها مثيل في وظائف المدينة. سيضمن المناخ المثالي على مدار العام أن يتمكن السكان من الاستمتاع بالطبيعة المحيطة. سيتمكن السكان أيضًا من الوصول إلى جميع المرافق في غضون خمس دقائق سيرًا على الأقدام ، بالإضافة إلى السكن الحديدية عالية السرعة - مع عبور من طرف إلى طرف لمدة 20 دقيقة.

ستكون المدينة خالية من الكربون وستعمل على طاقة متجددة بنسبة 100٪ .

NEW MURABBA



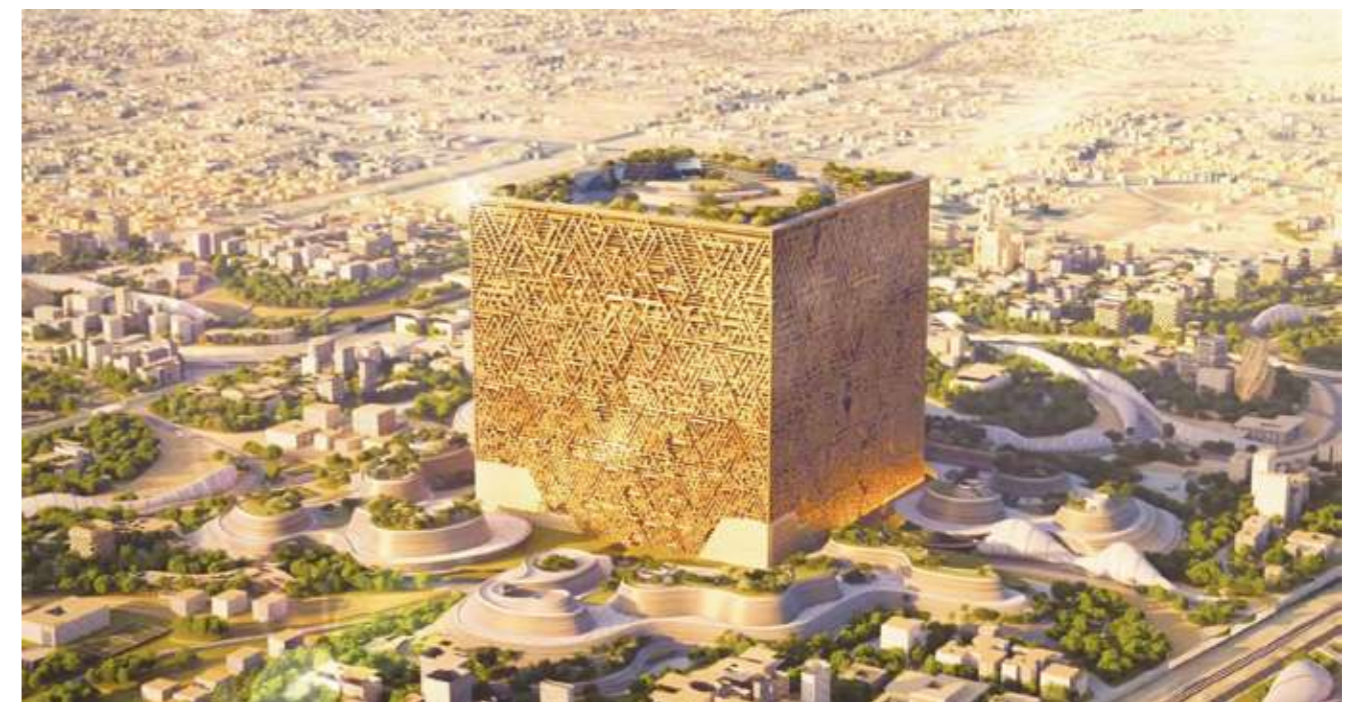
The NMDC project will be situated at the intersection of King Salman and King Khalid roads to the North West of Riyadh, over an area of 19km², and accommodate hundreds of thousands of residents.

The New Murabba project will be built around the concept of sustainability, featuring green areas and walking and cycling paths that will enhance the quality of life by promoting healthy, active lifestyles and community activities.

It will also feature an iconic museum, a technology and design university, a multipurpose immersive theatre, and more than 80 entertainment and culture venues.

AT THE HEART OF NEW MURABBA IS A NEW ICON, THE MUKAAB.

Defining Riyadh's new skyline, The Mukaab will attract visitors from across the world with its incredible state-of-the-art entertainment, dining and retail. The world's largest modern downtown. This is the new face of Riyadh.



يقع مشروع المربع الجديد عند تقاطع طريق الملك سلمان والملك خالد شمال غرب الرياض، على مساحة 19 كيلومتر مربع، ويستوعب مئات الآلاف من السكان. سيتم بناء مشروع المربع الجديد حول مفهوم الاستدامة، وبمضم مساحات خضراء ومسارات للمشاة وركوب الدراجات من شأنها تحسين نوعية الحياة من خلال تعزيز أنماط الحياة الصحية والنشطة والأنشطة المجتمعية.

كما سيضم متحفًا مبدعًا، وجامعة للتكنولوجيا والتصميم، ومسرحًا متعدد الأغراض، وأكثر من 80 مكانًا للترفيه والثقافة.

في قلب المربع الجديد يوجد رمز جديد، المكعب. تحديدًا لأفق الرياض الجديد، سيجذب فندق المكعب الزوار من جميع أنحاء العالم بأحدث وسائل الترفيه والمطاعم وتجارة التجزئة. أكبر وسط مدينة حديث في العالم.

PRIVATE VILLA
Cairo, Egypt
فيلا سكنية خاصة
القاهرة , مصر

DESIGN PHASES:

We aim to make the design process enjoyable for our clients, interpreting their ideas and developing a finished product meets their expectations with added-value.

Pre-contract design stages:

- Briefing
- Concept Design
- Schematic Design
- Detailed Design

Post-contract construction stages:

- Tender
- ff&E Procurement
- Project Supervision



FUTURISM

In 1908, the Italian poet Filippo Tommaso Marinetti swerved to miss a cyclist and crashed his car in a ditch. The experience of the old bicycle versus the modern car inspired him to write his manifesto of futurism, a movement that would conquer nostalgia and tradition. Marinetti coined the word futurism to reflect his goal of discarding the art of the past and celebrating change, originality, and innovation in culture and society. Futurists wanted to depict visually the perception of movement, speed, and change. Their works typically include rhythmic spatial repetitions of an object's outlines during transit. The effect resembles multiple photographic exposures of a moving object.



Incomplete Cube
Sol LeWitt
1975



Untitled
Robert Morris
1965



focus was placed on creating a unique and dynamic vision of the future and artists incorporated portrayals of urban landscapes as well as new technologies such as trains, cars, and airplanes into their depictions. Speed, violence, and the working classes were all glorified by the group as ways to advance change and their work covered a wide variety of artforms, including architecture, sculpture, literature, theatre, music, and even food. The group developed a number of novel techniques to express speed and motion, including blurring, repetition, and the use of lines of force.



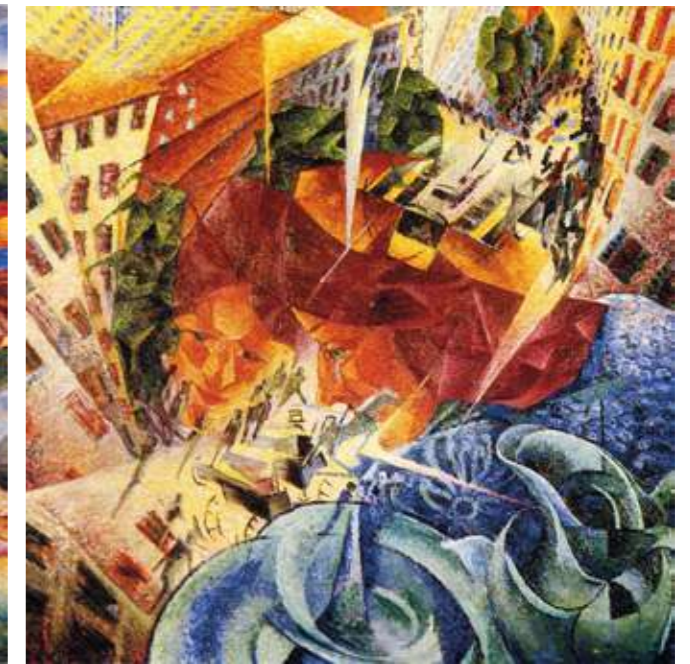


UMBERTO BOCCIONI

GIRL WITH BALLOON

Umberto Boccioni was an Italian Artist who Died Young and Revolutionary Artist born on October 1882 ,19. Boccioni contributed to the futurist and Early Modernist movements and died on August 1916 ,17. He was one of the most prominent and influential artists among the Italian futurists, Emerging first as a painter, Boccioni later produced some significant futurist sculpture. He first matured as a

He was first publicly recognized as an art critic, writing reviews for Arts magazine. He developed from an abstract painter into the producer of the hollow, rectilinear volumes for which he became well known. Key to this transformation was his essay "Specific Objects," the first serious attempt to frame the new movement - Minimalism - theoretically. The text celebrated a new kind of artwork untethered from the traditional frameworks of painting and sculpture, focusing instead on an investigation of "real space".



"The time has passed for our sensations in painting to be whispered. We wish them in the future to sing and re-echo upon our canvasses in deafening and triumphant flourishes."

Boccioni believed that scientific advances and the experience of modernity demanded that the artist abandon the tradition of depicting static, legible objects. Despite his fascination with physical movement, Boccioni had a strong belief in the importance of intuition, whose work was grounded in an attempt to closely describe the physical character of objects, albeit in a new way.



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We foster a highly creative, collaborative work environment at our office and constantly infuse our various teams with developing young design talent. Our creative staff is comprised of exceptionally talented design professionals who have embraced Medad's philosophy of design.



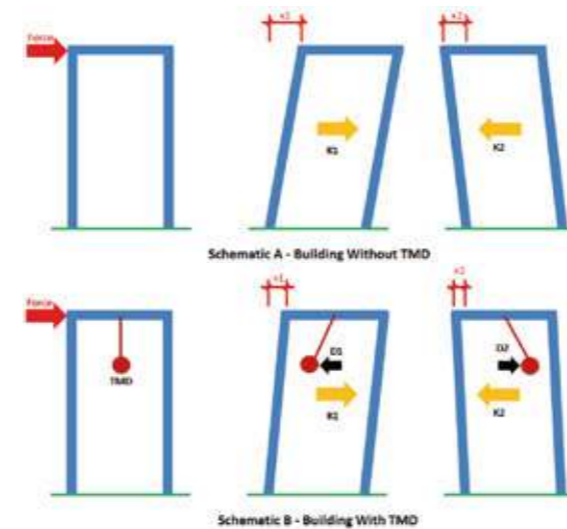
Tuned Mass Damper System

A Tuned Mass Damper (TMD), also called a "harmonic absorber", is a device mounted to a specific location in a structure, so as to reduce the amplitude of vibration to an acceptable level whenever a strong lateral force such as an earthquake or high winds hit. There are two basic types of TMD; the Horizontal TMD which is normally found in slender buildings, communication towers, spires and the like. the main idea of the system is to match the frequency of the TMD to the inherent frequency of the structure itself, that is to say, if the structure's frequency is 0,2 Hz for example, the TMD should be designed to a frequency that is exactly the same or close to this value.



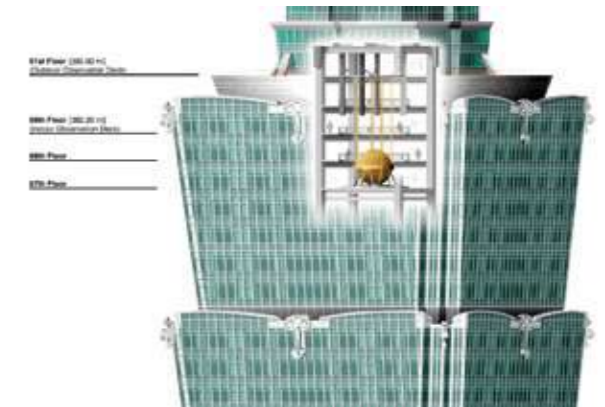
The other type is the vertical TMD, which is usually applied in long span horizontal structures such as bridges, floors and walkways. When installed in buildings, dampers are typically huge concrete blocks or steel bodies mounted in skyscrapers or other structures, which move in opposition to the resonance frequency oscillations of the structure

How does a TMD work?

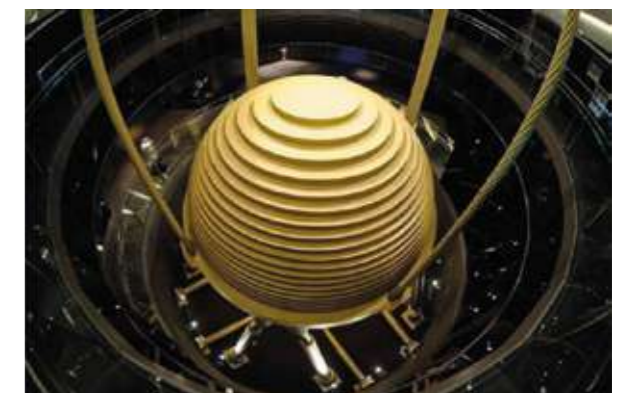
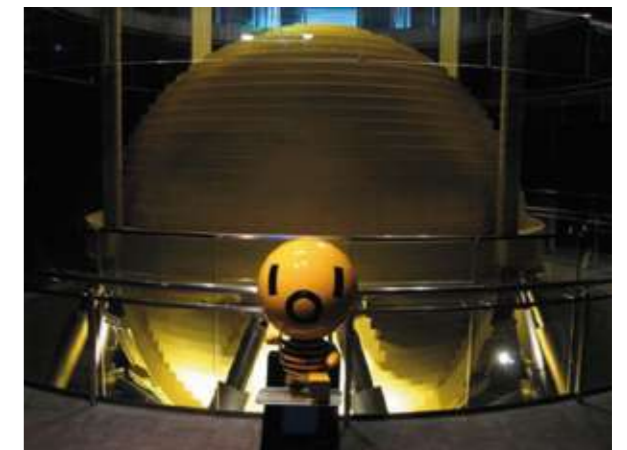


When the main structure starts to move, the TMD system generates a force in the opposite direction of the main structure. Dynamic responses of the main structure are effectively reduced. Mass dampers are easy to design and produce.

TMD applications



One of the most famous TMD's is the one built for Taipei 101 which boasts a gigantic spherical Tuned Mass Damper weighing approximately 730 tons and costing around 4\$ million. Rather than hide the Tuned Mass Damper, which is the normal approach, the designers opted to make it a feature and open it for public viewing. It has become a popular tourist attraction in Taiwan.



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6 Essential Features of Net Zero Building

According to WGBC, the definition of a net zero carbon building is one that is "highly energy efficient and powered by renewable energy sources on site and/or off site, with any offsetting carbon balance remaining".

Is it really possible to achieve this goal or at least get closer to it for new builds and renovations? Below, we list 6 things to take into account to contribute to this global objective.



1. Apply the concepts of Bioclimatic Architecture

Making use of bioclimatic architecture and passive concepts is a key component to achieve a net zero building. By designing projects connected to the local climate and context, energy can be saved. This means using as much natural light as possible during the day, while balancing thermal energy losses.



2. Provide renewable energy on site whenever possible

That buildings are able to supply all their energy needs from low-cost, locally available, non-polluting renewable sources. This means using the sun through photovoltaic panels or water heating panels, Or even using local wind systems or other renewable energy sources if possible.



3. Use efficient equipment and lighting

Talking about the energy efficiency of appliances and lighting. If we approach a balance between generation and consumption, reducing losses and improving the efficiency of the equipment present in the building is vital. That means generating the same amount of energy with fewer natural resources or getting the same service with less energy. Therefore, choosing high-efficiency equipment will make less electrical energy needed.



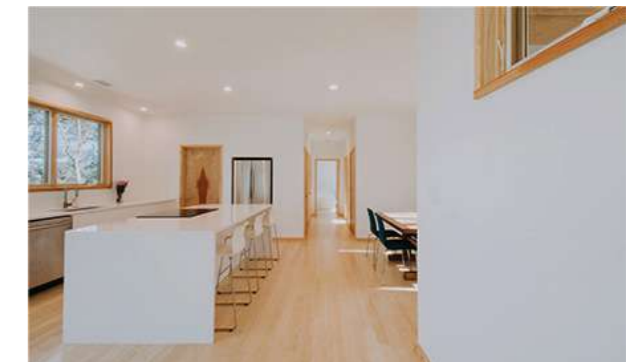
4. Invest in windows and doors

Climate specificities will define the ideal window choice. In cold climates, the combination of high insulation together with enhanced entry of free heat from the sun allows to save heating energy and minimize cold surface perception near the window. On the other hand, warm climates have to manage sun heat incomes together with a reasonable insulation level in order to minimize indoor temperatures without high cooling loads, and only efficient ventilation.



5. Consider embedded carbon

The carbon embodied in each material refers to the sum of greenhouse gas emissions during extraction, transport, fabrication and installation. For example, concrete is a material that emits a huge amount of carbon during its manufacturing the use of wood in a project reduces the carbon incorporated in the building, since the material absorbs carbon while the tree grows.



6. Eliminate fossil fuels

Another key concept is to reduce the use of fossil fuels in the building. These are mostly used for heating buildings, water or cooking. So instead of using gas or oil, prefer renewable sources such as biogas and wood. Heat pumps and geothermal energy can also be used, as well as electricity.

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