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INTERNATIONAL

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GUIDO PALMIERI
*Realtà Mapei
International's
Editor-in-Chief*

“Connected” to the world: the challenge of Expo Dubai

Expo 2020 Dubai (which opened on 1st October and will close on 31st March next year) is full of symbols that go well beyond a traditional event held every five years in a different country. Let's begin with the organising nation itself. For the first time in its over one-hundred-year history, a World Expo is being held in an Arab nation, strategically located from both a geopolitical and economic-trade viewpoint. Here's another extraordinary fact: after a lengthy “closure” caused by the Covid-19 pandemic world-wide, Expo 2020 Dubai is the first truly global event that is expected to attract 25 million visitors. In a nutshell, the world, which has already got going again over the last few months, has an opportunity to receive a fresh boost and look to the future with greater hope and optimism.

**MAPEI PRODUCTS
AND SOLUTIONS
USED IN OVER
50 PAVILIONS,
NUMEROUS EXPO
AREAS, AND FOR
THE CONSTRUCTION
OF NEW
INFRASTRUCTURES**

The concept of the future is closely associated with the Expo's “mission”, and it is no coincidence that the event's motto is “Connecting minds, creating the future”. The Expo will be an interesting melting pot of ideas, thoughts and experiments on issues projecting us into our tomorrow: from climate change to urban growth, from intercultural dialogue to gender equality and the most futuristic challenges of innovation and digitalisation. All very cutting-edge issues because they coincide with the main points of the Recovery Plan the EU Commission and European Parliament have implemented to repair the economic-social damage caused by the Covid-19 health crisis: a plan that is an investment in Europe's future.

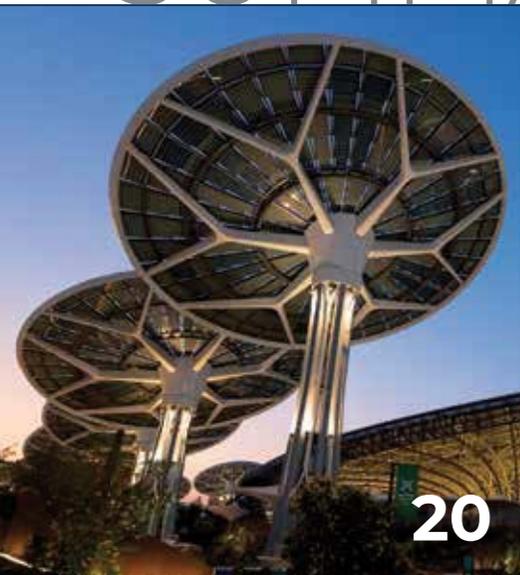
“Being connected” is not just a slogan: Dubai plans to be the central hub of a major network of links encompassing a vast area stretching from North Africa to Southern Asia. But it is also a challenge for companies aiming to be leading players on global markets: the ability to innovate (decisive for achieving a leadership role) is closely related to the ability to be globally “connected”, i.e. open to the outside world, new ideas and changes.

Mapei identifies with the major themes (opportunity, mobility, sustainability) being debated at the Expo and, right from the design and construction work for completing not just over 50 national pavilions but lots of other areas on the exhibition site, it has made a notable contribution in the name of innovation and experimentation. One example suffices: the resin coatings of the Italy Pavilion created using coffee powder and orange peel.

In addition to a lengthy dossier with interviews and a presentation of the event, in this special publication on Expo 2020 Dubai we have collected together (and narrated) lots of projects carried out using Mapei products and materials in national pavilions, thematic areas and welcome spaces.

In this “Expo Special” we are also presenting prestigious plans and projects carried out by Mapei Construction Chemicals, the Mapei Group's Regional headquarters in the Middle East over recent years. Have a nice reading

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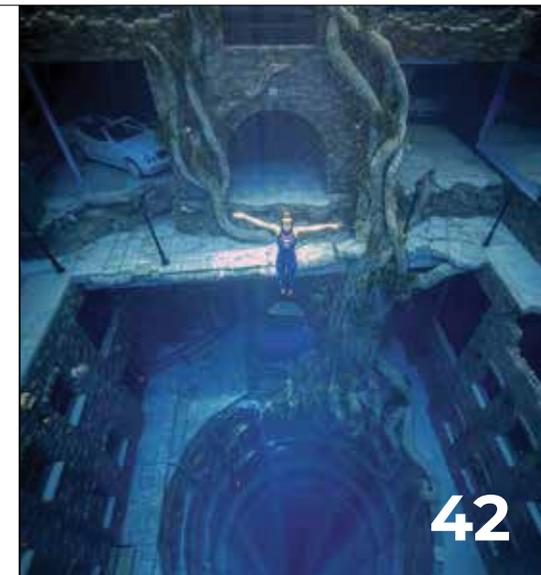
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Cover story
On the 1st of October the curtain rose at Expo 2020 Dubai, an event that will go on till March the 31st. This special publication shows Mapei's involvement in this special event as supplier of building solutions and Partner of Italy at Expo 2020 Dubai.

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Printed by
Rotolito SpA - Pioltello (Italy)

Published by
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Realtà Mapei
Registered by the Tribunal of Milan n. 363/20.5.1991

Realtà Mapei International is published 6 times per year

Credits
Mapei Construction Chemicals, Governmnt of Dubai - Media Relations, Expo 2020 Dubai Media Services, Italyexpo2020, Italian Commissioner's Office for Expo Dubai, Oriana Spadaro, Massimo Sestini

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Welcome Expo



Global connections for envisaging the future

The curtain rose on Expo 2020 Dubai on 1st October. This is the first world fair to be held in the Middle East/North Africa/South Asia region. Planned to be held in 2020 and then postponed due to the health crisis, it will end on 31st March 2022.

On the 50th anniversary of the founding of the United Arab Emirates, the event is a great showcase for the countries taking part that present a range of innovative projects and ideas inspired by the Expo's motto: "Connecting minds, Creating the future".

This elaborate theme is divided into three keywords that bring together the global community in search of solutions to fundamental issues: sustainability (progress and prosperity without compromising the needs of future generations), mobility (innovative systems for logistics, transport and communication), opportunity (creating a better future by unleashing the potential of individuals and communities).

The event's facts and figures are impressive: over 200

pavilions, 191 participating nations, approximately 25 million visitors expected, who will gather over a total area of 4.3 km² (equal to 613 football pitches). The Emirate of Dubai expects its economy to be boosted by 33 billion US dollars through the Expo, which will also create almost 300,000 jobs. All while focusing special attention on the project's sustainability, which has received glowing recognition from CEEQUAL: Expo 2020 Dubai became the first project in the Middle East to score 'Excellent' ratings from one of the world's first assessment, rating and certification schemes for sustainability in infrastructure projects.

Mapei is involved in the event as Partner of Italy Pavilion at Expo 2020 Dubai and supplied its products for the construction of plenty of other pavilions, hospitality and welcome areas and nearby infrastructures. This special report provides an overview of these projects that have also seen the creation of tailor-made products and the constant presence of Mapei experts on site.

Close ties between business and the local region to "create the future"



INTERVIEW WITH
VERONICA SQUINZI,
MAPEI'S CEO

"Connecting Minds. Creating the Future" is the theme of this edition, which, for the first time, is being hosted in the ME.NA.SA. region (Middle East, North Africa, South Asia), an area where Mapei is strengthening its operations. What connections has Mapei set up to contribute creating the future of local communities?

The theme of this year's Expo is an idea that has always underpinned Mapei's strategy. We were founded almost 85 years ago and have always believed in being local, i.e. in creating value not just from Italy but also by actually operating in different countries to connect people while promoting the values and quality that are our hallmark. We are international; we operate across all five continents and we are investing heavily

in new local companies because we believe that being local gives us inside knowledge of the market. Being able to draw on the experience of various regions enriches us and allows us to grow in a healthy way while holding onto our core values - quality, sustainability, research - and it also enables us to have highly specialised products that can deal with all the problems potentially arising on building sites.

What is Mapei's approach to internationalisation?

In every country in which we operate worldwide, as well as creating facilities to support our operations, we draw on competent local resources with an understanding of sustainability. Our dual goal is to grow the company and, at the same time,

contribute to the development of the local community. Indeed, we firmly believe that you cannot "create the future" without close ties between business, local regions and communities.

Mapei is renewing its support for the Expo. What is the importance of this event nowadays and what does it mean for Italy as a system?

Expo 2020 Dubai, just like all the other expos, is a great showcase of the world, which, this year in particular, provides an opportunity to show off the creative-business skill and potential of Italy and to reassert our excellence following the tricky period we have just been through. Mapei, which for years has been an ambassador for Italian know-how, could not fail to be present at this event

and is committed to helping designers ensure a truly memorable experience for visitors of the Italy Pavilion.

The Italy Pavilion is a melting pot of cooperation and innovation "Made with Italy". What was Mapei's contribution to this project involving other great champions of Italian excellence to give shape to the design concept "Beauty connects people"?

In the design concept "Beauty connects people", not taken as beauty from a purely aesthetic viewpoint but as "a harmony of beauty, truth, goodness and taste", we found a powerful analogy with our business operations. Mapei products and solutions cannot be seen but, thanks to their innovation and specialisation, they help make building works

more beautiful, sustainable and long-lasting, giving concrete shape to designers' ideas. And that is what we have done for the Italy Pavilion, too. Making it possible for the project to use iconic materials for both Italian and Arab culture, such as coffee, oranges, desert sand, we have given shape to one of the underlying ideas behind the Italy Pavilion: Mediterranean-ness as the co-existence of different cultures.

How important is sustainability?

In our concept of "beauty", we include the sustainability and durability of everything we make in partnership with designers and leading contractors: not just major works but also projects that will then be part of the everyday lives of thousands of people.

This global platform will be a launchpad for Italy

INTERVIEW WITH NICOLA LENER, AMBASSADOR OF ITALY TO THE UNITED ARAB EMIRATES

“Connecting minds, Creating the future” is the theme of Expo 2020 Dubai. How does Italy interpret the spirit of this international event?

Expo 2020 Dubai is an important showcase for Italy's ability to innovate and network and to provide a contribution to the challenges the world is facing: from sustainability and climate change to further progress in technological processes. The event takes place at a time when Italy is chairing the G20, which allow issues in which the nation is involved internationally to be included amongst the main themes of this Expo.

The underlying theme of the Expo, connectivity, has plenty in common with the vision of the future this country has: gradually distancing itself from paradigms like hydrocarbons and increasingly focusing on places where people, goods, financial resources and ideas come together, perhaps the paradigm the Emirates identifies with most closely. Italy is tackling this issue along the lines of beauty and so Italy's approach to the main theme of Expo 2020 Dubai is “Beauty connects people”. Beauty envisaged not just aesthetically but as a concept that encompasses what is right and useful, hence inclusive; what we today would describe as sustainable. All these concepts provide a prism through which Italy demonstrates its innovative-technological abilities to embrace and contribute to tackling the challenges of sustainability, post-pandemic resilience and inclusivity”.

Italy epitomises connecting in its deepest sense, both culturally and in terms of its geographical position. Could Expo 2020 Dubai provide a great opportunity to focus on Italy's role not just in the Mediterranean but in a much wider area including the Middle East and Gulf countries?

Definitely. Italy is in a strategic position in the Mediterranean just like the United Arab Emirates are in relation to the Asian, Arab and African markets. The



Emirates' economy focuses on notable diversification in terms of industry and services, as Dubai itself shows, and it will be increasingly guided by connectivity as it promotes itself as a central junction on a major network

of East-West and North-South links, which encompasses a vast area stretching from North Africa to the Arab peninsula and Southern Asia and from Central Asia to East-South Africa. It is just a four-hour flight from Dubai to countries which, combined together, encompass one third of the world's population, and an eight-hour flight to countries accounting for two thirds of the global population: a densely populated area which is economically dynamic with great growth potential. The Emirates aspire to take on an increasingly central role thanks to their ability to connect through both physical infrastructures and also digital and mental infrastructures by focusing

on talent, a knowledge-based economy and innovation. Italy was the first of the G7 countries to confirm its participation in Expo 2020 and one of the first to sign the Participation Contract. The Expo is the biggest promotional event during this period with Italy's entire economic system investing important resources.

Expo 2020 is also a great showcase for promoting the competitiveness of the Italy brand and its excellence in all fields. How can we make the best use of this stage and what can we expect to happen after the event is over?

Despite the pandemic, there were consoling results in bilateral trading in 2020 achieving overall revenue of 8.4 billion Euros, which make Italy the Emirates' leading EU trading partner and eighth biggest partner globally. The Emirates are Italy's most important partner in the MENA (Middle East and North Africa) region. More specifically, exports are growing so fast that we have risen from 11th to 9th position among suppliers to this Arab nation, second of all EU nations behind only Germany. Approximately 600 Italian businesses operate in the UAE in various

industries, such as building and infrastructure, energy, consumer goods, defence, aerospace, banking and insurance.

We are extremely powerful and highly regarded in the consumer goods, farm food, fashion, household articles, design, car manufacturing, energy and infrastructure sectors. We are less renowned for our work in research and innovation in certain key sectors, which are showcased in the Italy Pavilion. I am referring to renewable energy and the hydrogen economy, waste management, including Waste-to-Energy (WtE), water treatment, aerospace, technology serving sustainable mobility, the life sciences and artificial intelligence.

Special mention should also go to the farm technology sector. Italy is investing so much in production in areas with extreme climates, indoor farming, latest generation glasshouses, hydroponics and much more. Italian technology for this field has great potential.

As regards the post-Expo period, we are committed to ensuring that most of the contacts, relations and experience our companies, institutions and research centres build up during the event will allow us to make further progress in economic relations between Italy and the UAE, a further “rung up the ladder” in terms of the quantity and quality of our exchanges with this country and the extensive area surrounding it.

Is the event's pulling-power in terms of foreign investment another opportunity Italy can take advantage of?

Definitely. Expo 2020 will coincide perfectly with the implementation of the Italian Recovery and Resilience Plan and associated process of extensive ambitious reforms required to get rid of any obstacles that have hindered our economy's growth over the last few decades. This will provide a better climate for investment in Italy. It is, therefore, vitally important to take the opportunities offered by global platforms like the Expo to show all international investors present in Dubai the extent of these reforms and their impact on the reliability of our system as a whole.

Italy means art, culture and history, which translates into tourism. How can we encourage tourist flows towards Italy, particularly from nations in the Gulf region, the closest to Dubai?

We can do this by tailoring tourism to this particularly attractive but highly demanding market. We must very quickly equip the nation with extensive hospitality amenities, highly qualified staff in terms of linguistic and cultural knowledge, state-of-the-art technology and integrated tourist opportunities based around providing experience of the very highest quality. I think the National Recovery and Resilience Plan will provide the financial

resources required to invest in this direction, but we will also have to raise the “cultural” awareness of operators in this field.

Tourists from the Emirates and the Gulf region in general adore Italy and love to spend their holidays here, but they are used to a different kind of service from ours and we must be able to understand and meet their needs if

we want to hold onto them over time. So, it is not enough to be the most beautiful country in the world if we cannot offer the most beautiful tourist experience in the world.

“With overall trade worth 8.4 billion Euros, Italy is the EU's leading partner in the Arab Emirates and the eighth biggest partner globally”

NICOLA LENER

He was born in Cagliari on 18th August 1968. He graduated in Law from Cagliari University and then began a career in the diplomatic service in 1993.

He was the Director of the Economic and Trade Department of the Italian Embassy in Lima, Peru, from 1997 to 2004 and then in charge of the same department in Amman, Jordan.

After returning to Italy, he was appointed to the Directorate General for Italians Abroad and Migration Policies. He was the Consul General in Casablanca, Morocco, from 2006 and then Deputy Ambassador in Ottawa, Canada, from 2010.

He re-joined the Italian Ministry of Foreign Affairs and International Cooperation in 2014 in the Directorate General for Cultural and Economic Promotion and Innovation, where he was involved in the internationalisation of the Italian economic system and then Deputy Director General from 2016.

He has been the Ambassador of Italy to the United Arab Emirates since 1st October 2019.

Dialogue and contamination: beauty connects people

MAPEI IS PARTNER OF ITALY PAVILION AT EXPO 2020 DUBAI IN A PROJECT COMBINING CREATIVITY, INNOVATION AND SUSTAINABILITY



© Massimo Sestini for #ItalyExpo2020

Three ships arrived from the sea bringing with them knowledge, works of ingenuity and the chance to interact and exchange ideas. They bring people together creating bridges and connections between distant countries. This is the image that inspired Carlo Ratti and Italo Rota in designing the pavilion

representing Italy at Expo 2020 Dubai: three upturned vessels form the building's roof making reference to those Italian explorers who, for centuries, sailed the high seas. A way of talking about Italy, which has always fostered contaminations in the name of creativity and talent. Contaminations that the Italy Pavil-



© Massimo Sestini for #ItalyExpo2020

The Italy Pavilion was created with contributions from partner companies called to provide the best building solutions, technology and exhibition components. Mapei was among them and supplied building materials used in different areas.

ion has chosen to narrate through the claim "Beauty connects people". The concept of beauty is here seen as a means of conveying knowledge and interaction and as a strategic resource for planning the future.

A sustainability-driven pavilion

"Nothing is created, nothing is destroyed, everything is transformed", this famous quote by the French chemist Antoine-Laurent de Lavoisier inspired Carlo Ratti and Italo Rota in designing a building focused on the circular economy. As Carlo Ratti himself noted, "We tried to interpret this famous quote in the Italy Pavilion by choosing organic materials and, above all, lots of reused ele-

ments: I do not think any truly contemporary project can ignore the principles of circularity". Italo Rota also referred to the circular economy in an interview reported over the next few pages, specifically commenting on the natural materials used in the Pavilion.

The Pavilion covers an area of 3500 m² and rises up to a height of approximately 27 m. Inside there is an exhibition layout with installations on the subjects of innovation and sustainability. 28,000 visitors-a-day are expected, making a total of over 5 million over the six-month event.

Mapei partners the Italy Pavilion

Mapei is Partner of Italy Pavilion at

WE HAVE MANAGED TO COMBINE ITALY'S HEART AND SOUL WITH LOCAL CULTURE

INTERVIEW WITH STEFANO IANNAZONE, THE MAPEI GROUPS' REGIONAL DIRECTOR FOR MIDDLE EAST AND EAST AFRICA



Mapei is the sole supplier of the Italy Pavilion with an industrial plant located just a few miles away from the Expo area. What has this meant for the project?

Mapei's manufacturing site in Dubai is, indeed, just a few miles away from the location where the Expo is being held and we have been operating in the United Arab Emirates for over 10 years with the highest investment in production in the country of any Italian company. The fact that our manufacturing plant is located in the vicinity of the Expo location has enabled us to react extremely quickly to any issues arising during building operations. For example, a number of issues occurred on-site during the night shift, but our technicians and engineers were

on hand at the location early the following morning to resolve the problems encountered during the night.

This is definitely a real asset that has enabled us to gain the confidence not only of the Italy Pavilion and Italy Commissioner's Office but also the entire Italian system, which has been able to count on a supplier like Mapei that is so nearby and always ready to react to any problems or requests emerging on site.

Mapei supplied both off-the-shelf products for the Italy's Pavilion, ordinarily available on the market, and also special finishing products specifically designed for building this project. These special finishing products (not previously marketed) were first tested at the company's

Expo 2020 Dubai, strengthening its ties with World's Fairs that began at the Shanghai Expo in 2010 and then Milan Expo in 2015. Just like more than 50 other pavilions set right across the exhibition area, the Italy Pavilion was built using Mapei systems, many of which were specially designed for this work and required numerous laboratory and on-site tests. Resin coatings, waterproof-

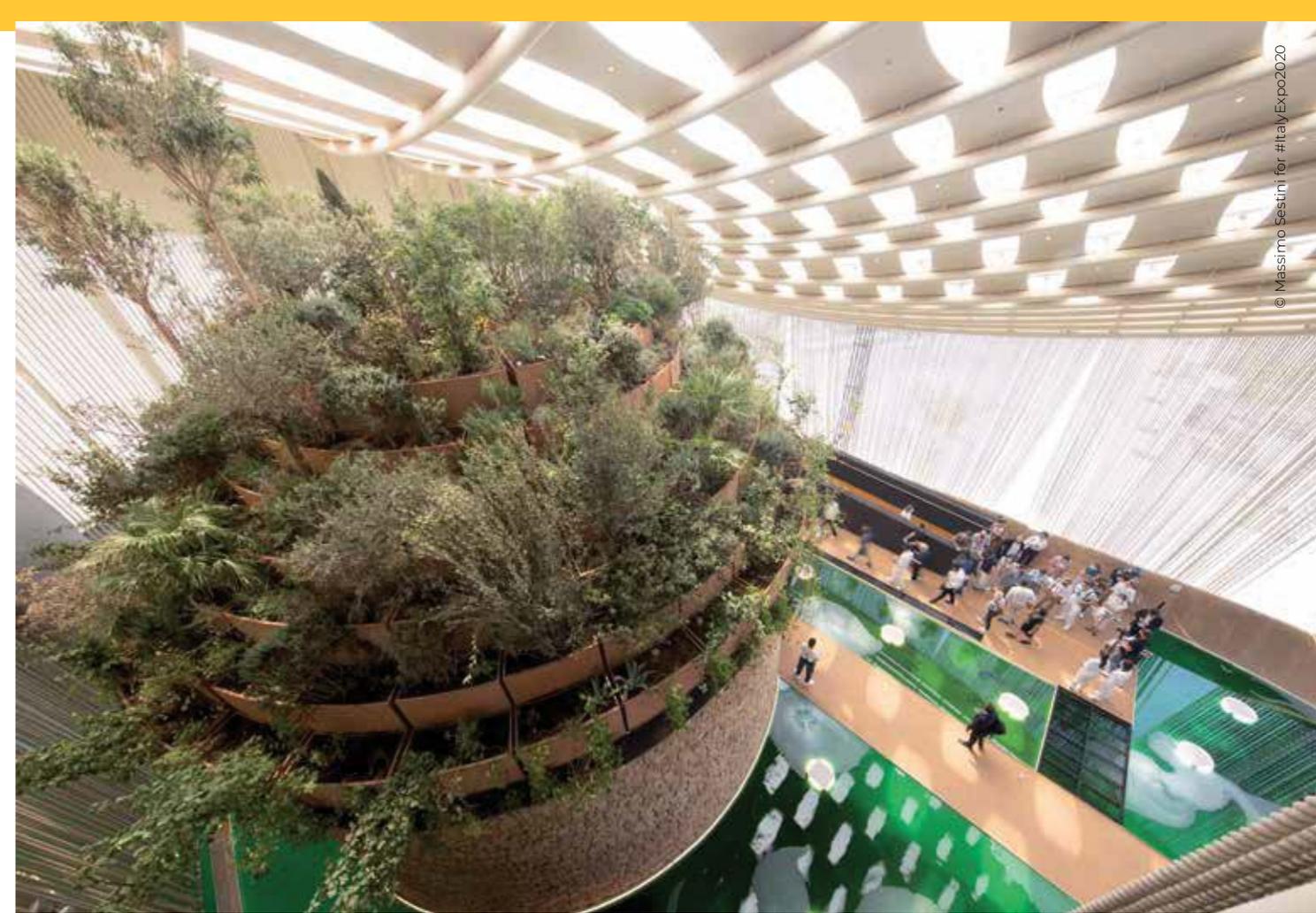
ing agents, wall coatings, and lots of other products chosen for their reliability and sustainability, have enabled the construction of a spectacular pavilion, which, once again, provides an overview of Italian genius.

Two awards for the Italy Pavilion

“Best Innovative Project of the Year” and “Commercial Project of the Year”: these are the two prizes the Italy Pavilion was awarded on 29th September. The “Construction Innovation Awards” are prizes given by Construction Business Views ME, one of the main media for the building industry in the Middle East focused on individual and corporate excellence and successful projects in various realms. The winners in the 22 different categories were selected by a panel of experts in the industry. For the architectural designers, the Italian Commissioner’s Office in charge of Italy’s involvement in Expo 2020 and Mapei, this is important recognition for the guidelines they chose for developing this project: commitment to innovation, excellence in building design and management of the entire process.



© Massimo Sestini for #ItalyExpo2020



© Massimo Sestini for #ItalyExpo2020

Italy's Pavilion is an innovative hub featuring exhibition areas and functional spaces for events. Plenty of its areas were completed with Mapei products.

Research & Development laboratories in Milan. Having a manufacturing plant just a few miles away from the project location meant we could test out the materials on site under the same weather and application conditions encountered on the Expo site. This was definitely a big advantage for the people involved in the project.

Being present on site and in such close vicinity to the Expo location also meant we could train the teams responsible for installing our products properly under the actual conditions in which they will be used. This certainly met with the approval of all the stakeholders in the Italy's Pavilion. Operating in the Emirates and having already established relations with both local and Italian institutions in the area certainly allowed us to understand the needs and demands (even on a conceptual level) of the architect and convey them to local operators, providing them with

all the products they required.

This is one of Mapei's most distinctive features: keeping its distinctly Italian identity but also having an understanding of the place in which we operate, attempting to embrace the soft, cultural traits of the host nation.

“Mapei's manufacturing plant in the Emirates located close to the Expo site made work easier”

Mapei's contribution to the World Expo goes beyond the Italy Pavilion. Which other projects did Mapei work on to enable the 2020 event to take place?

The Mapei Group's involvement in works connected with World Expos dates back to the 2010 event in Shanghai, when we began supplying specific materials for meeting the Italy Pavilion's specific design needs (see *Realtà Mapei International* no. 32). Our involvement in the Dubai Expo is the latest example of Mapei's commitment to Expos and Italy's Pavilion.

For Mapei and Mapei's business operations in the United Emirates, the Expo was more than just the Italy's Pavilion. Mapei contributed to the completion of dozens buildings and areas on the Expo site, ranging from the reception areas for the general public to the auditoriums, and we also helped construct more than 55 national pavilions for numerous countries that acknowledged not just the quality of the products supplied but also the efficiency of the service provided.

Moving beyond the confines of Expo 2020, we can also claim to have contributed to all the infrastructural links to the Expo site, such as the extension to the underground railway that will run right into the site. We had the honour of being involved in both the design and construction works, including both the underground and aboveground sections of Dubai metro and its stations.

“We supplied materials for the Italy Pavilion and helped build more than 50 national pavilions inside the Expo”

What was Mapei's approach in the Arab Emirates?

Mapei has had its own manufacturing plant in the Emirates for over 10 years, but the Mapei Group's operation in the Emirates and the Gulf actually date back at least 20 years. Since then, we have begun to contribute to the development of the most important infrastructural and residential projects in the Emirates and the entire Persian Gulf region. For example, I would like to mention the construction of Burji Khalifa skyscraper, the tallest in the world, and Burj Al Arab Hotel. The

biggest shopping malls in Dubai were built using Mapei technology and products. So, if you like, we might say that Expo 2020 Dubai is the icing on the cake of an enterprise that first began 20 years ago and was intended to make Mapei technology available for the development of an area that still has very real prospects for growth.



© Oriana-Spadaro

“Metamorphosis”, narrative idea of the project

WE SPOKE WITH ITALO ROTA, DESIGNER OF THE ITALY PAVILION

The Italy Pavilion for Expo 2020 Dubai uses architecture to stage a creative and innovative presentation of “Beauty connects people”. What were the first choices you made in order to make this idea become visible?

When Carlo Ratti and I started working on the design of the Italy Pavilion, the first thought that came into our minds was to create a narrative idea of a pavilion in line, on the one hand, with the fundamental concepts of a circular economy, as well as being, on the other hand, a place of innovation. Then, more than a work of architecture, we came up with the idea of a large architectonic installation that arrives and takes shape and is then taken down and leaves. While on this journey it underwent a series of modifications that we could define as a metamorphosis. And to do this we had to think about creating “new materials”, many of them of organic origin, and tackle very particular situations, such as the fact that the pavilion in the visitors’ area is not air conditioned. So we had to pay a lot of attention and be particularly sensitive, which led to the creation of this highly unusual and innovative structure. The concept is of three large boats

that arrive in Dubai, are overturned and form the roof. As we all know the word of Latin origin “nave” (in Italian “navata”) actually comes from the fact of turning over a boat. When we say “nave” we mean being together, thinking together, imagining a togetherness and a future to save the planet.

Which of the architectonic and exhibitiv elements were designed to provide visitors with a memorable experience?

The story behind the interior is very complex, very rich, and I think visitors will undertake a long journey through Italy of the past, the present and the future. And during their visit, visitors will experience various episodes connected with great technological innovations. In the centre of the pavilion there is an alga factory. Alga became a leitmotif of the pavilion: It produces energy and oxygen because alga “devours” CO₂. To accompany this farm, we created a lot of new materials, thanks also to Mapei, using other “remains” of human activity such as coffee grounds and orange peel, as well as other simple components such as desert sand.

““We created a lot of new materials using coffee grounds and orange peel powder and other simple components such as desert sand”

If you had to give a synthetic summary of architecture of the future, what should it be like for you? What should be the role of materials and why?

Today, and quite rightly, we often talk about sustainability. I believe we should no longer talk about sustainability in the same way as we have until now because, today, it should be something that comes with common sense. It’s another matter, on the other hand, if we pass to another level, contributing in a more profound way to changing the environment and, above all, to approach the more far-reaching issue of the climate crisis.

To do this we must imagine architecture as being not only transformable and reusable but, above all, creating fewer and fewer physical products on the planet. So, we must have materials and technological solutions that transform elements into exchangeable products. I would define it as “architectural banking”; a place where I can take products, exchange them and invest them in exactly the same way as they did before with currency. We also need to have materials that are part of an “urban mine”, from which these products can be extracted with great purity and then transformed. I believe that these two processes together, along with other considerations, can also lead to a reduction in the total constructed mass when producing something new because, one of the problems we have today, is that producing something new also produces a large amount of debris.

Mapei helped make your design choices possible; which ones in particular and how big a part did the company play in achieving the results you expected?

We have been working with Mapei for many years because the innovations this company has developed are perfectly in line with the evolution in architecture in recent years. And also, we have been using Mapei products for years in our projects because they are in step with the evolution in architecture, in terms of both sustainability and long-term innovation. So, when we contacted Mapei for the Italy Pavilion, we proposed working with the materials we had selected when we conceived the idea for the building. Everything went really well and really quickly, which was also due to the fact that materials of this type can only be made by developing prototypes. The work carried out in the Mapei Research & Development laboratories was really interesting and effective.

Can you give us a concrete example of materials developed with the support of Mapei?

For the Italy Pavilion we proposed the use of all five senses during visits: apart from sight and sound, the “classic” senses when visiting a display pavilion, we also added the senses of touch, smell and, in certain areas, taste. For example, we used coffee powder to create, together with Mapei, a very particular material used to coat the first 600 m of the walkway in the pavilion. And this is what turns it into a visit immersed in the fragrance of coffee. Coffee is something that Italy and the Arab countries have in common and creates a moment of almost olfactory brotherhood. Another product we developed together with Mapei was a special coating containing orange powder that is almost like fabric, highly variegated and also fragrant. Another material we created in collaboration with Mapei was made using sand from the Expo site. It forms a sand-dune with an installation made from the same type of sand sitting on it. And here you can see how well the desert blends in, just like it does on the site in Dubai.

ITALO ROTA

Born in Milan in 1953, Italo Rota graduated from Milan Polytechnic. After winning the competition to design the interiors of Musée d’Orsay in Paris, in the late 1980s he moved to Paris where he completed the renovation of the Modern Art Museum in the Pompidou Centre (with architect Gae Aulenti), the new rooms for the French School in the Cour Carré courtyard at the Louvre Museum, and the redesign of Nantes city centre. He currently lives and works in Milan. His firm’s works vary in subject matter, scale and style, always working on a global approach deriving from experience gained working on installations, events and temporary structures. His most recent works include the restructuring of Palermo Port’s Maritime Station in Southern Italy and the conversion of the Arengario Building into the “Museo del Novecento” in Milan; the Dolvi temple in India, and the Columbia University in New York. He also designed “Ciudades de Agua” exhibition pavilion in Spain for Saragossa Expo 2008 and, working with Carlo Ratti, the Italy Pavilion for Dubai Expo 2020. He was awarded the Landmark Conservancy Prize in New York and the Grand Prix de l’Urbanisme in Paris.

Coffee and orange peel powders for a sensorial experience

A NEW CHALLENGE FOR MAPEI RESEARCH & DEVELOPMENT: USE NATURAL SUBSTANCES TO MAKE THE COATINGS OF THE ITALY PAVILION

Amongst the many partners that contributed and worked on the Italy Pavilion project, Mapei was contacted and asked to help turn an architectonic idea into reality: to use innovative forms and materials that could combine functional performance properties with eco-sustainability and aesthetic requirements. Mapei accepted the challenge, studying, designing, testing and, finally, proposing solutions that would provide both the required performance characteristics and a marked, natural and materic effect finish in particular.

The idea behind the project to use, or rather re-use, natural substances such as coffee grounds, orange peel and sand from the nearby desert, became a reality in the Mapei Research & Development laboratories by creating coatings that combine technical efficiency with design and sustainability. And what is more, the walkway in the Italy Pavilion has been designed with a coating made from powdered orange peel and spent coffee grounds to give visitors a truly special sensorial experience. Thanks to these completely natural elements, in combination with a specially selected colour and particle size of ceramic quartz mixed with MAPECOAT UNIVERSAL, a non-yellowing epoxy resin, a unique and eco-sustainable coating was created with a distinctive texture.

The same type of binder, combined with sand from the local desert, was used to create the entire area, which now projects an image of sand dunes from the local desert. These coatings were chosen not only for the floors, but also for the walls of the structure up to quite a considerable height, which made it even more difficult to develop and choose the most suitable product system and the best way of applying it.

From primers to top coatings
The substrates were also primed with extreme care using Mapei products and with types of material compatible with the construction materials. PRIMER GRIP WHITE, a water-based synthetic resin used to promote adhesion, was specifically selected for its col-

From primers to top coatings

our in order to obtain the right base layer and enhance the dynamic shading effects of the powdered orange peel and coffee grounds. It was also necessary to apply a coat of PRIMER LT, a one-component acrylic primer, to guarantee perfect adhesion of the system to the concrete substrates, and of MAPETHERM ARI mortar before skimming the ESP panels. The final step was to protect the surfaces with MAPEFLOOR FINISH 630, a water-based transparent acrylic formulate used to increase the resistance of surfaces to wear.

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ULTRATOP LOFT for cementitious floors

Mapei also supplied products for cementitious and resin floorings created in many of the other areas of the Italy Pavilion.

The trowel-applied cementitious system ULTRATOP LOFT, with its special textured materic finish, proved to be the optimum solution to give a sense of continuity to the natural aesthetic effect, the pivotal concept of the entire project. Thanks to the use of ULTRATOP LOFT F (in its natural base colour pigmented with ULTRATOP EASYCOLOR in its Manhattan CO shade), along with PRIMER LT

and a protective top-coat of MAPEFLOOR FINISH 630, cementitious coatings were created in many areas with steps or corridors and in other areas used for dining or for office space.

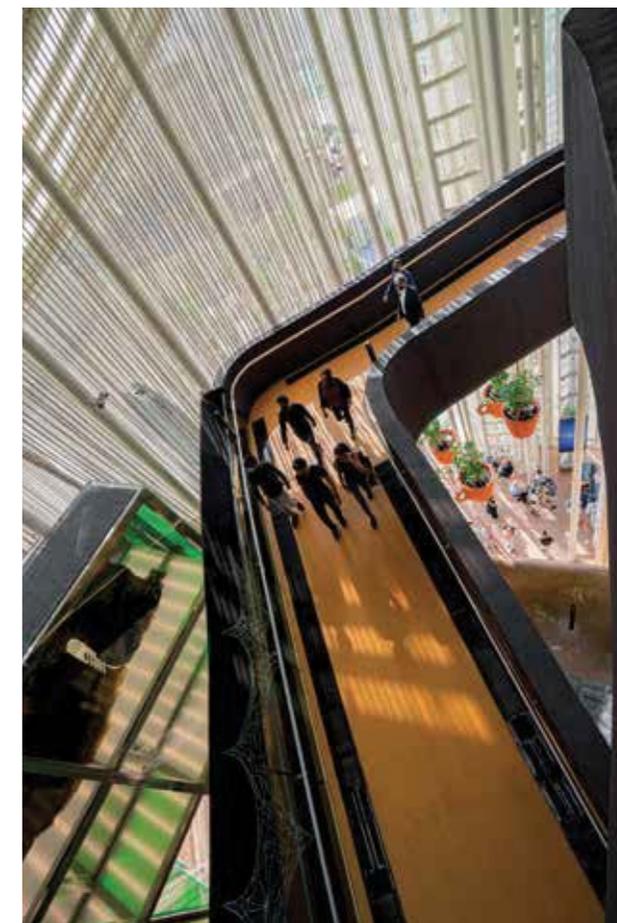
In the plant and service areas and in the kitchen, the designers opted for solutions more suited to their final use. The flooring, made from the MAPEFLOOR SYSTEM 32 multi-layered epoxy system, guarantees sufficient mechanical resistance to particularly demanding processes and excellent resistance to chemical substances in areas where food and drinks are prepared and served.

Also, thanks to its non-slip finish, this product ensures that work environments are much safer.

Also, thanks to its non-slip finish, this product ensures that work environments are much safer.

Piercarlo Rocca. Corporate Flooring Director, Resin and Cementitious Flooring Line, Mapei Group.

“The coatings were chosen not only for the floors, but also for the walls and the dunes”



TOP OF THE PAGE AND RIGHT.

The walkways were coated with MAPECOAT UNIVERSAL mixed with desert sand, coffee powder or orange peel powder.

ABOVE. Cementitious floors in various areas were completed with ULTRATOP LOFT.



SAFE WATERPROOFING FOR PONDS CONTAINING ALGAE

The Italy Pavilion sets an example of sustainability using microalgae in the biofixation of the carbon dioxide emitted within the premise of the Pavilion. The biofixation process

by means of algae captures carbon dioxide through photosynthesis so that CO₂ can be exploited as a raw material in high-quality products. This is why Italy pavilion has five large water ponds located at the mezzanine level for the cultivation of algae which needed to be waterproofed with non-toxic material that doesn't hamper the growth of algae.

Mapei was able to provide several options of liquid applied systems forming an excellent bond and can be applied on various surfaces of concrete, metals, etc., creating a strong, flexible, and continuous waterproofing membrane. The proposed systems were as follows:

- PURTOP 1000 a two-component, solvent-free, spray applied pure polyurea membrane applied with a high-pressure bi-mixer type pump, and fast curing time of approx. 6 seconds
- PURTOP EASY DW a two-component hand applied elastic polyurethane membrane which once applied, in just a few hours forms a seamless and elastic membrane.

Mapei's technical solutions were successful in overcoming the challenges faced due to aggressive site conditions and project's time constraints. Mapei's strong on-site technical support contributed to the successful completion of all stages of work. This included developing the method statements and drafting detailed AutoCAD drawings based on real site conditions and supervising all the waterproofing operations.

Waterproofing materials by Polyglass, a subsidiary of the Mapei Group, also played an important part. Products like IDROPRIMER, SPIDER P, ADESOGUARD HDPE and POLYSTUOIA 20 enabled the vertical and horizontal surfaces of the observation deck and gardens to be fully waterproofed.

Shatha Weldali. Regional Product Manager for Waterproofing & Sealants, Mapei Construction Chemicals (UAE)

Wide-ranging products for the Italy Pavilion

FROM WATERPROOFERS TO WALL COATINGS: PLENTY OF SYSTEMS WERE CHOSEN TO COMPLETE THE STRUCTURE

HYGIENE AND CLEANLINESS FOR WALLS

Amongst the numerous solutions that played a part in making the Italy Pavilion at Expo Dubai 2020 truly unique are Mapei wall coatings, a combination of protection, durability and aesthetics. MAPECOAT ACT 021 was applied on the walls of the restaurant, a special enamel paint with advanced technology for protecting and decorating walls and specifically designed to meet requirements such as high levels of hygiene and cleanliness in areas used for processing and preparing food, as well as being mould-resistant and compliant with the HACCP (Hazard Analysis Critical Control Point) protocol.

Again for walls, in other areas of the pavilion the product of choice was DURSILITE, a water-based paint for decorating and protecting internal walls in highly demanding internal environments. DURSILITE was applied after treating the walls with DURSILITE BASE COAT, a coloured, smooth acrylic base coat and adhesion promoter for preparing and evening out surfaces. And lastly DURSILAC BASE FILLER, a water-based, acrylic undercoat with good filling properties, was used for the wooden doors, followed by DURSILAC MATT, water-based acrylic-urethane enamel paint with a matt finish.

HIGHLY- RESISTANT STONE AND CERAMIC FLOORS

The floor and wall coverings in some areas of the Italy Pavilion are made of ceramics and natural stones, materials which in themselves epitomize the excellence of Italian manufacturing. Mapei installation systems were chosen to ensure these surfaces are durable, highly resistant against heavy foot traffic, and pleasant to look at. For example, the porcelain tile floors and walls in various sections were installed using KERAFLEX MAXI S1, a white-coloured deformable cementitious adhesive that is ideal for surfaces subject to heavy foot traffic, before grouting the joints using ULTRACOLOR PLUS, a fast-setting and fast-drying anti-efflorescence mortar.

The same system was used to bond marble coverings on the floors of the utility rooms, while those in the VIP areas (see picture on the right) were installed using GRANIRAPID adhesive, whose extraordinary fast-drying and bonding properties make it particularly suitable for works that need to be brought into operation immediately.



In the name of sustainability

THE MAPEI PRODUCTS USED IN THE THEMATIC PAVILIONS HAVE BEEN CHOSEN DUE TO THEIR SUSTAINABILITY AND ABILITY TO MEET THE DESIGNERS' REQUIREMENTS



TERRA – THE SUSTAINABILITY PAVILION

Terra was designed by Grimshaw Architects according to rigorous eco-sustainable and energy efficiency parameters, which enabled the pavilion to be awarded LEED Platinum certification. The 130 m-wide shell is covered with over 5,000 solar panels. In the gardens around the pavilion, 18 structures in the shape of trees rotate to follow the direction of the sun, while producing energy. Inside the pavilion, 1,500 m² of large-size ceramic tiles were installed with KERAFLEX MAXI S1 before grouting the joints with ULTRACOLOR PLUS in the dry areas, and with KERAPOXY in the wet areas. MAPESIL AC silicone sealant was used to seal the expansion joints. The same system, with the exclusion of KERAPOXY, was used to install stone and ceramic tiles outside the pavilion. A ramp was created inside the pavilion, which was covered with two layers of black rubber. Using ULTRABOND ECO 571 2K to bond the rubber covering to the substrates, and the two layers together, helped the designers to obtain a surface that doesn't reflect the light so that visitors can concentrate their attention on the displays on the vertical surfaces.



ALIF – THE MOBILITY PAVILION

Designed by Foster + Partners, this Pavilion allows visitors to explore how mobility has influenced the development of mankind over the centuries and our relationship with technology and the digital world. The undulating pavilion is surrounded by a dynamic landscape, conceptualised as a lively fairground that incorporates winding tracks and demonstration areas for the latest mobility-related technological inventions. There is a partly underground/partly open-air, 330-m high-speed track, where cutting-edge mobility devices can be seen in action.

After treating the substrates with PRIMER G and levelling them off with ULTRAPLAN, ULTRAPLAN MAXI and ULTRAPLAN ECO 20, linoleum, vinyl and textile flooring was installed with, respectively, ULTRABOND ECO 520, ULTRABOND ECO 375 and ULTRABOND ECO FIX inside the pavilion. Resin flooring was also created inside the pavilion using MAPEFLOOR FC 200 ME, an epoxy resin-based coating product manufactured and distributed on the Emirates market by Mapei Construction Chemicals, in combination with PRIMER SN and QUARTZ 0.5. For the external areas large slabs of granite were installed with KERAFLEX MAX S1, before grouting the joints with ULTRACOLOR PLUS. In the fountains and water features, the substrates were waterproofed with MAPELASTIC SMART and MAPETEX SEL membranes, while ADESILEX P7 adhesive was used to bond ceramic tiles and ULTRACOLOR PLUS to grout joints.



THE QUEST FOR EXCELLENCE, SHARED EXPERIENCES AND TECHNOLOGY ARE THE PILLARS SUPPORTING OUR GROWTH

THE EXPO "SPIRIT" AND MAPEI VALUES

A tiny gold ring buried in the sand. That is how the journey to Expo 2020 began thousands of years ago beneath a sand dune that looked just like all the others. However, the keen eye of His Highness, Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the United Arab Emirates and the Ruler of Dubai, noticed it during a reconnaissance trip by helicopter about twenty years ago.

Intrigued by the different layout of the dunes, the Sheikh had the coordinates noted down and very soon teams of archaeologists from all over the world were excavating to bring Saruq Al Hadid to light, a

major manufacturing centre for forging bronze, copper and iron located in the southern outskirts of the Emirate of Dubai. The site, which flourished most during the Iron Age (1900-600 BC), was also one of the most important trading centres for the entire Gulf basin, Mesopotamia, the Indo-Iranian region and Egypt, as is testified by the discovery of as many as 53 seals coming from these areas now on display in the museum of the same name in the Al Shindagha district right in the heart of the old city of Dubai.

Travellers and merchants used to meet in Saruq Al Hadid, not just to look for tools and weapons but also

jewellery, including a small circular shaped ring as small as a little finger that was produced with a fine gold making technique called granulation.

This ring, a symbol of sophisticated skill and, at the same time, of a trading centre and meeting point between the East and West, has been chosen as the logo for Expo 2020. The slogan "Connecting minds, Creating the future" makes even more explicit reference to Dubai's drawing power (now and in the past) to people and talents from all over the world in a melting pot of nationalities, cultures, skills, ambitions and dreams. Expo 2020 Dubai sets out

to celebrate this spirit, focusing on bridging curiosity with experience, tradition with progress, looking to the future in an open-minded and inclusive way, focusing on people and their professionalism/talent capable of shaping our tomorrow.

This line of thinking overlaps with the Mapei Group's own philosophy, in accordance with which a vocation for international expansion and growth has guided a global search for value based on sharing experience, technology and products and enhancing the skills and expertise of individuals. Characteristics that make the Group so global and local at the same time.

Representatives of almost two hundred countries gather at the Expo to present their ideas and projects for the future to the world, tackling three main themes: Opportunity, Mobility and Sustainability, also represented spatially in the architectural layout of the Expo site in the shape of three petals.

"Opportunity" is taken as the ability to unlock the potential of individuals and communities to shape the future; "mobility" is envisaged across-the-board, i.e. the possibility of imagining increasingly smart and efficient ways of moving around goods, people and ideas; and "sustainability" in its most noble sense:



MISSION POSSIBLE - THE OPPORTUNITY PAVILION

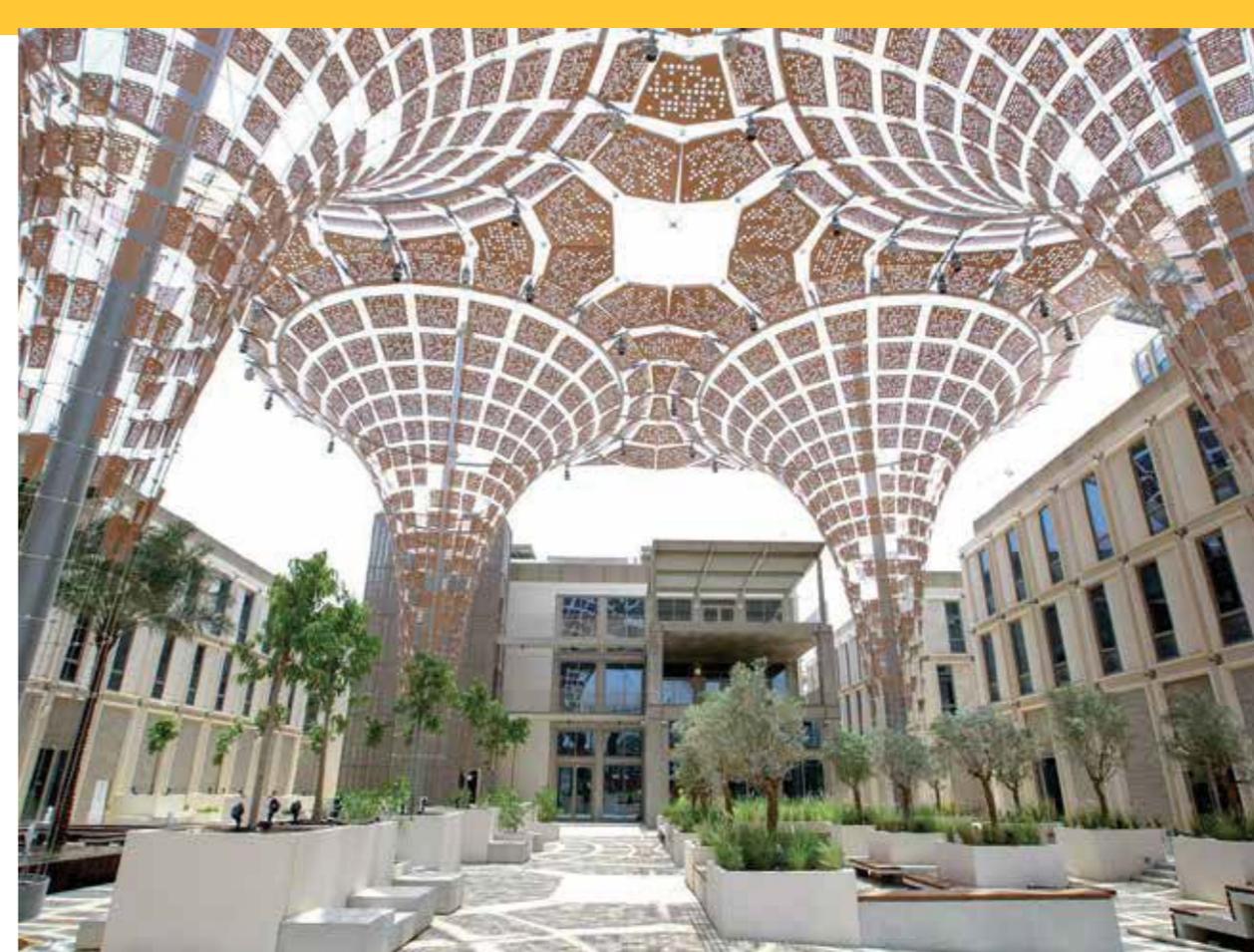
Situated in the heart of the district of the same name, the intention of the Opportunity Pavilion is to explore the various possibilities on offer to individuals and the communities of our planet, stimulating the desire to react and create a better world. Designed by AGi Architects, it extends over an area of more than 8,000 m² and reflects the idea of a city square as a place where people come together, a scenario for collective rituals. This pavilion was also designed according to sustainable criteria that exploit the difficult climatic conditions of Dubai, creating a structure with a low impact on the environment and the ability to ensure the visiting public enjoy a pleasant experience. For the screeds inside the pavilion, Mapei supplied TOPCEM, a special hydraulic binder used to make normal-setting, rapid-drying (4 hours), controlled-shrinkage screeds.

respecting and living in harmony with the world in which we live. These fundamental themes are closely connected with the world of building where products and materials can make a difference and help create a better and more sustainable future: a challenge made possible by research, sharing experience and developing cutting-edge systems, pillars on which Mapei has always built its own international growth. These themes take on even greater significance in the Middle East and Africa region, where a World Expo is being organised for the first time. The biggest challenge is to integrate them into the rapid and powerful

growth the region is currently experiencing economically, demographically and in terms of architectural design with significant global repercussions, like, for example, the major infrastructural projects being carried out across Africa. A challenge that Mapei has decided to take up by directly operating in various countries in the region, from Kenya to Egypt, promoting its own solutions, providing technical assistance, and supporting the architectural designers and professionals who are shaping the world of tomorrow. The aim is to make concretely available all the experience gained in years of Research & Devel-

opment by providing constant theoretical-practical training, continuing the quest for excellence on a technical, applicational and environmental level, and blazing a trail even (and above all) in regions where regulations are less strict, and markets are still anchored to more conventional application systems. A constant commitment to training and listening that is in tune with the Expo's motto: Connecting minds, Creating the future.

Andrea Perini, Regional Area Manager, Mapei Group.



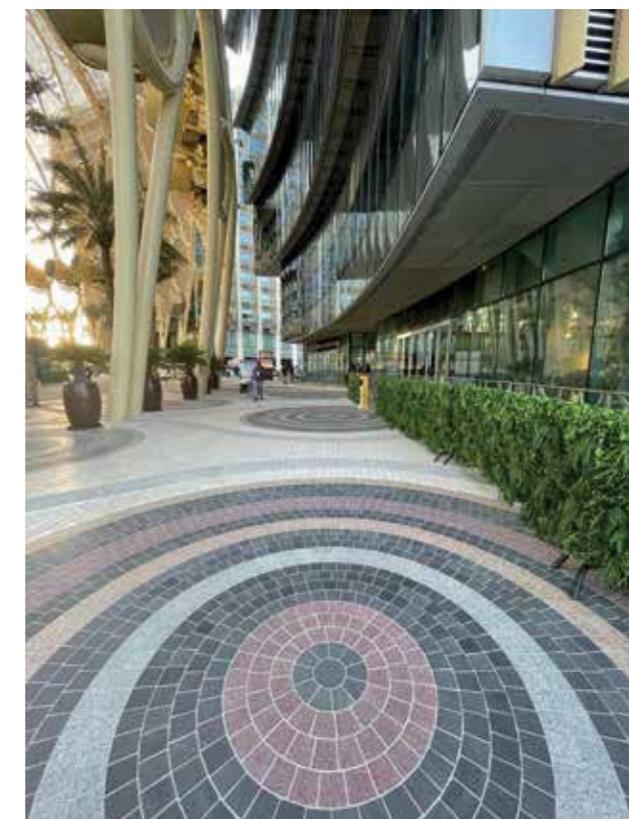
THEMATIC DISTRICTS

The sub-themes of Expo 2020 Dubai (Opportunity, Mobility, and Sustainability) are represented by three thematic districts inspired by typical Arabic neighborhoods, with tree-lined streets, shaded enclaves, traditional geometry, landscaping, and colours to reflect each subtheme.

Forming the largest built-up area of the site and including 86 low-rise buildings that house dozens of country pavilions, food and beverage outlets, retail spaces, performance spaces and leisure areas, each district is anchored by its own thematic pavilion and connected to the central Al Wasl Plaza. Mapei contributed products from its ceramic, resilient and waterproofing lines in several areas of the thematic districts, spanning over 9,000 m².

This included KERABOND T adhesive for ceramic tiles and ULTRACOLOR PLUS and KERACOLOR FF grouts for joints. Installation of linoleum, textile, and vinyl floors on raised access floors was completed with ULTRABOND ECO 520, ULTRABOND ECO FIX and ULTRABOND ECO 375 respectively, after preparing the substrates with PRIMER G, QUARTZ 1.2 ME, and ULTRAPLAN FIBER KIT (the latter two products are manufactured and distributed on the UAE market by Mapei Construction Chemicals) to ensure resistant floorings in high-trafficked areas. To guarantee proper waterproofing of structures below ground level, two products by Polyglass (a subsidiary of the Mapei Group) come into use: SPIDER P self-adhesive bituminous membrane and IDROPRIMER quick drying bituminous water based primer. MAPELASTIC SMART was used to waterproof substrates in several wet areas of the service rooms.

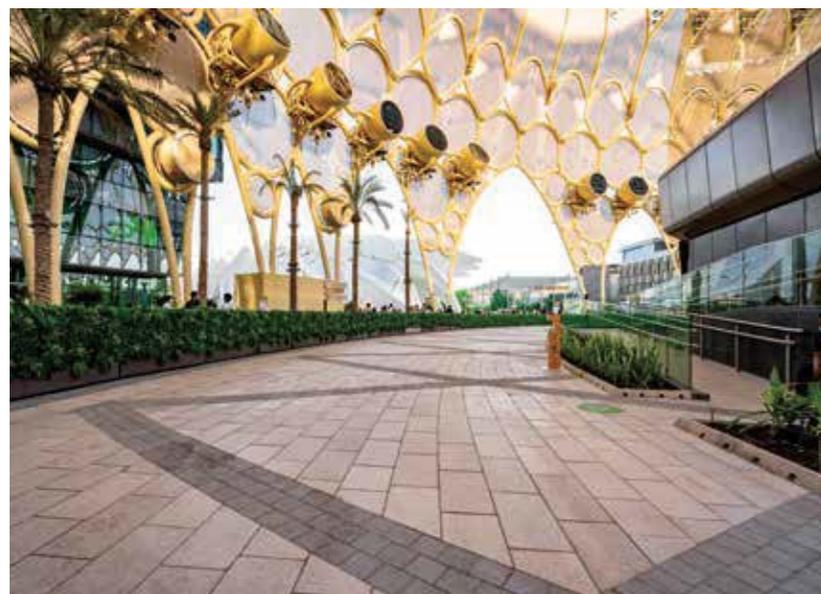
Mapei supplied products to install stone, ceramic tiles and resilient materials in many areas of the districts.





Al Wasl Plaza

THE BEATING HEART OF THE EXPO SITE



Ahmad Iftikhar.
Key Account Manager

Al Wasl Plaza is the beating heart of the Expo site and the setting for the captivating ceremony, as well as the hub where the three theme districts come together. Its name, the ancient nickname of Dubai which also means "connection" in Arabic, is a reminder of one of the cardinal themes of the Expo: this is where the entrances to the city's metro rail network can be found. The Plaza is dominated by an enormous 65 m tall cupola with a diameter of 150 m, which also serves as a 360° projector screen.

Mapei's contribution

The Plaza obtained LEED Gold certification according to the LEED v4 for Building Design and Construction: Core and Shell classification system and Mapei contributed to this result by supplying eco-sustainable materials. Granite floors were installed with KERAFLEX MAXI S1 and then grouted with KERAPOXY and, in several areas, with ULTRACOLOR PLUS. The expansion joints were sealed with MAPESIL LM. Several small water features were built in the surroundings of the main arena and waterproofed with MAPELASTIC SMART and MAPETEX SEL.



RIGHT.

The Rove Hotel, located in the Al Wasl Plaza, also used Mapei materials for its construction, including adhesives and grouts for the swimming pool on the terrace.

The grey carved granites were installed with KERAFLEX MAXI S1. The joints were then grouted using KERAPOXY. About 10000 m² of granite coverings were treated with ULTRACARE protective agents. The square is also the location of the only hotel inside the Expo site, the Rove Expo 2020 Dubai Hotel. Inside the hotel, KERABOND T was used to bond porcelain flooring in the communal areas before grouting joints with KERAPOXY. In service areas, substrates were waterproofed with MAPELASTIC AQUADENFENSE, MAPELASTIC SMART and MAPETEX SEL before installing ceramic

tiles with ADESILEX P9. The walls in the common areas were coated with the ULTRATOP LOFT cementitious system. Products manufactured and distributed on the United Arab Emirates market, such as MAPEGROUT T60 ME and PLANITOP 400 ME, were used to repair the concrete. In the swimming pool located on the hotel terrace, the substrates were water-proofed with MAPELASTIC SMART, glass mosaics were bonded with KERAPOXY ADHESIVE and joints grouted with KERAPOXY DESIGN, while the expansion joints were sealed with MAPEBAND tape and MAPESIL AC.

Lots of products for lots of countries

FROM RESIN COATINGS TO TILE ADHESIVES, MAPEI SUPPLIED MATERIALS FOR 55 NATIONAL PAVILIONS. HERE YOU FIND A FEW OF THEM.

United Arab Emirates

Designed by Santiago Calatrava, the United Arab Emirates Pavilion is in the form of a falcon, a reminder of the country's tradition of falconry. It was designed using sustainable building techniques and materials to obtain LEED Platinum certification. The majestic appearance of the structure was obtained thanks also to the use of very high-quality white granite slabs from Oman for the landscape. The external granite paving had to be a close match with the colour of the facades. This is why indoor and outdoor granite floors were installed with KERAFLEX MAXI S1, while the joints were grouted with KERACOLOR FF and ULTRACOLOR PLUS in the same shade as the slabs. MAPESIL LM was used to seal the expansion joints. MAPELASTIC SMART was used for waterproofing the substrates of the shallow water feature at the entrance of the building, before bonding ceramic tiles with KERAFLEX MAXI S1 and ADESILEX P7 and grouting joints with ULTRACOLOR PLUS. The ULTRATOP LOFT system was also used in the pavilion to create cementitious floors that is resistant to high levels of footfall.



Inside the pavilion, TOPCEM was used to make more than 7,000 m² of screeds. The substrates of many areas were treated with ULTRAPLAN ECO 20 levelling compound, distributed on the Emirates market by Mapei Construction Chemicals. The vinyl flooring was installed with ULTRABOND ECO 370 adhesive. ADESILEX P9 was chosen to install the porcelain tiles, while KERAFLEX MAXI S1 was used to install the stone materials. ULTRACOLOR PLUS was then used to grout joints in both areas. In the water features, the substrates were waterproofed with MAPELASTIC SMART before installing ceramic tiles with ADESILEX P9 and grouting the joints with ULTRACOLOR PLUS.

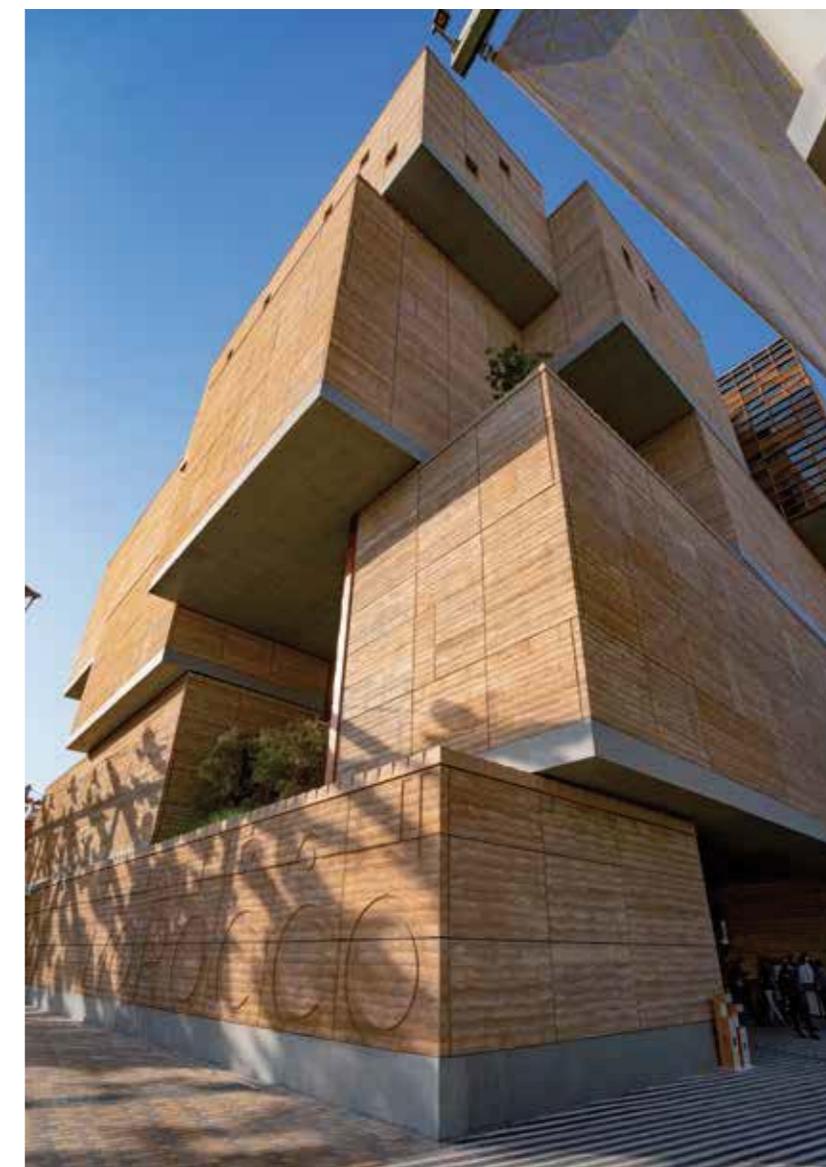
United States

The pavilion, designed by the Woods Bagot design studio, is intended to present the United States as a dynamic society, promoting liberty and collective prosperity.



Morocco

The pavilion, which is particularly striking for its sculptural forms, takes inspiration from traditional Moroccan building techniques and conducts visitors inside the Moroccan medinas by means of a ramp that ends in a high-level viewing platform. Mapei contributed products from its resin and cementitious floors line towards the application of the flooring in the pavilion and products for installing ceramic tiles for the common and wet areas. MAPEFLOOR I 300 SL ME was used as an internal self-leveling epoxy for seamless floor finishes. The concrete surfaces of the external areas were treated with the aliphatic polyurethane finish MAPEFLOOR FINISH 58 W, which improves the superficial mechanical characteristics of surfaces.





France

A structure of light: that is what the France Pavilion appears to be. This is because France aims to present the country as a centre that “radiates” expertise for the “construction” of tomorrow. MAPEFILL GP-ME and MAPEGROUT ME05, manufactured and distributed on the Emirates market by Mapei Construction Chemicals, were used to repair

and restore concrete. The concrete water tanks were waterproofed with IDROSTOP PVC BI BE ME, a waterstop that is also distributed locally by Mapei Construction Chemicals. The synthetic membrane MAPEPLAN T M 15, made by Polyglass (a subsidiary of the Mapei Group), was used to waterproof the steel roofs.



Australia

The Australia Pavilion is an anthem to the biodiversity, a sense of collaboration and the mobility that characterise Australia. It also aims to offer visitors a taste of its natural landscape, as it resembles a large cloud floating over a series of rocky outcrops. Products from Mapei’s ceramic installation line played a key role in the construction of this structure. KERAFLEX MAXI S1 adhesive was used to bond large-size ceramic tiles before grouting joints with ULTRACOLOR PLUS and sealing the expansion joints with MAPESIL AC. In other areas, stone floors were installed with ADESILEX P9.



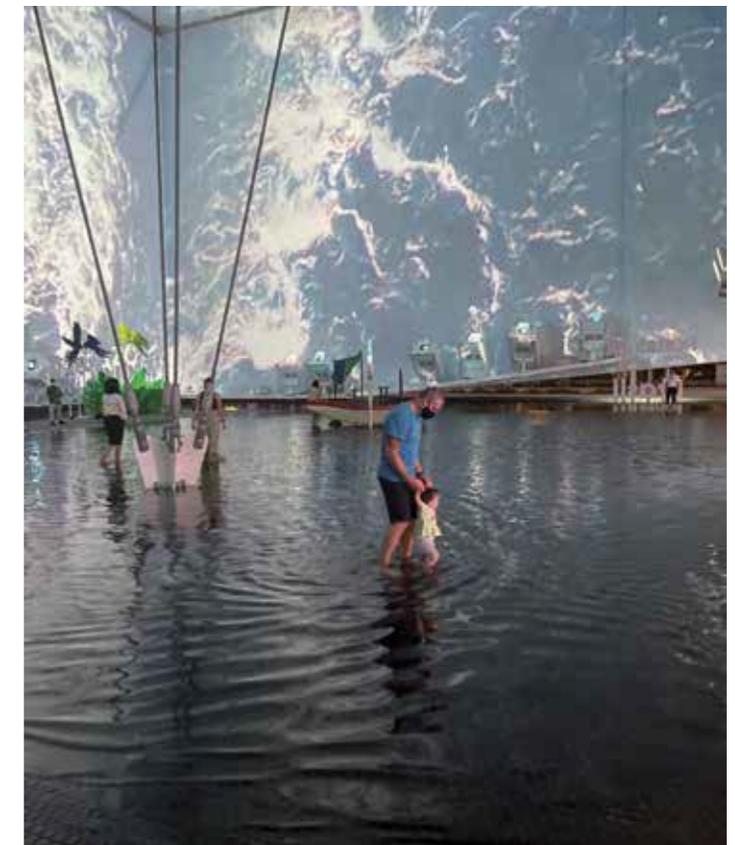
Kingdom of Saudi Arabia

A scintillating opening to the future is the image the Kingdom of Saudi Arabia is aiming to project of itself at Expo 2020 Dubai. The

structure resembles a large open window rising upwards towards the sky. And inside, visitors can explore the richness of the Saudi cultural heritage, the country’s natural beauty and cutting-edge technology. The substrates in several internal areas were treated with PRIMER G and levelled off with ULTRAPLAN ECO 20, which is manufactured and distributed in the Emirates by Mapei Construction Chemicals, before installing linoleum flooring with ULTRABOND ECO 520. The steel roof structure and steel decks were waterproofed with MAPEPLAN TM 15 membrane made by Polyglass, a subsidiary of the Mapei Group.

Brazil

The intention of the Brazil Pavilion is to recreate the lush, natural landscape and the sounds, colours, fragrances and biodiversity of the Amazon Forest. Built around a pedestrianised surface immersed in water, it allows visitors to cool off in the shade of a structure that resembles the stilt-houses of the Amazon forest. In the external water features MAPELASTIC SMART and MAPETEX SEL were used here to waterproof around 4,000 m² of substrates before installing glass mosaics with ADESILEX P10 and grouting joints with KERAPOXY. The substrates in internal areas were treated with PRIMER G and ULTRAPLAN ECO 20, a levelling compound manufactured and distributed in the Emirates by Mapei Construction Chemicals, before installing rubber floors with ULTRABOND ECO V4 SP.



Qatar

Designed by the Spanish architect Santiago Calatrava, the Qatar Pavilion is inspired by the images featured on the country's coat of arms (a palm tree, a sailing ship and two swords). The result is a curved, sail-shaped structure intersected by a lower building. The aim of the pavilion is to incarnate the values of mobility, strength and tradition which Qatar is recognised for. At the side there is a 20 m high tower that recalls the palm trees typical of this



country's landscape. Mapei collaborated in the construction of the external water features by supplying MAPELASTIC SMART mortar to waterproof the substrates and the adhesive KERAFLEX MAXI S1 to install the stone coverings.



Egypt

Designed by the architect Hazem Hamada, the pavilion takes visitors on a trip through time across a walkway over the water, which, together with sculptures and other exhibits on the inside, evokes the landscape of the River Nile. The water features on both the inside and outside were created with the help of Mapei, which supplied MAPELASTIC, MAPELASTIC SMART and MAPETEX SEL for waterproofing substrates before using KERAFLEX MAXI S1 to installing granite and KERAPOXY ADHESIVE to bond ceramic tiles. All the joints were grouted with KERAPOXY.



Azerbaijan

The Azerbaijan Pavilion has a striking timber viewing platform encompassed by a delicate leaf-shaped roof. It is surrounded by 1,300 m² of gardens and walkways. The pavilion represents energy and life and boasts many sustainable design technologies. TOPCEM was used to prepare the floor screeds before bonding small-size ceramic tiles with ADESILEX P7 and large-size tiles with KERAFLEX MAXI S1. ULTRACOLOR PLUS was used for grouting joints in both areas.

China

Totalling 4,636 m², the China Pavilion is one of the largest at Expo 2020 Dubai. The pavilion is modelled on a traditional Chinese lantern and features references to ancient Chinese innovations in its architecture. The main feature is a wall inspired by moveable type-printing technology that turns into a spectacular, digital light show at night. ULTRAPLAN CONTRACT, self-levelling, ultra quick-hardening smoothing compound, was used for self-levelling a sizeable portion of the floor substrates.



OTHER CONTRIBUTIONS

From Singapore to the Fiji Islands, from Angola to Switzerland and from Chile to the Vatican City, many other nations have utilized Mapei products as trusted building solutions for the construction of their own national pavilion: for waterproofing roofs and wet areas, self-levelling substrates, installing ceramic tiles, repairing concrete and coating floors with cementitious or resin products. The same applies to other pavilions such as the Integrated Energy Partner ENOC (Emirates National Oil Company), Etisalat (Emirates Telecommunication Company), Women's Pavilion, DP World that highlights Dubai Port (in the photo above), and Dubai Exhibition Centre, to name a few where Mapei has left its mark through its products. Other buildings for welcoming and accommodating visitors are illustrated over the following pages.

FROM THE EXPO VILLAGE TO FACILITIES FOR MEETINGS AND EVENTS: NUMEROUS APPLICATIONS FOR PLENTY OF PRODUCTS



EXPO VILLAGE

Strategically located just outside the site of the Expo, this is an area created to cater for up to 25 million visitors and local authority employees during the months of the Expo and will also serve as a residential complex for 3,500 residents in 2,000 housing units. It includes 11 groups of luxury apartments for a total of 15 buildings, shops, medical centres and a school. This is the first structure completed for the Expo and work on it commenced in 2018. The intention of the authorities was to obtain LEED Gold certification for this area and, from the initial stages of the project, Mapei was accepted as privileged partner due to the company's ability to supply certification and documentation regarding the reduced environmental impact of its products. KERABOND T adhesive was used in all 15 buildings to bond ceramic floor and wall tiles over a total surface area of 250,000 m², which were grouted with ULTRACOLOR PLUS. For the external water features, the substrates were waterproofed with MAPELASTIC SMART and MAPETEX SEL before installing mosaics with ADESILEX P10 and grouting the joints with ULTRACOLOR PLUS. In the swimming pools, KERAPOXY ADHESIVE was used to bond ceramic tiles and KERAPOXY was used to grout the joints.

A host of solutions to welcome and host visitors

The organisers of the Expo 2020 Dubai have dedicated a number of spaces inside the site to the large influx of visitors: piazzas, live exhibition venues, water features, relaxation areas and gardens. There are also other structures on the site reserved for journalists, representatives of local authorities, police, security personnel and VIP guests, as well as facilities, both inside the Expo and just outside the site, that will be used to host those coming to Dubai to visit the World's Fair. Let's take a look at some of them.

WORLD MAJLIS

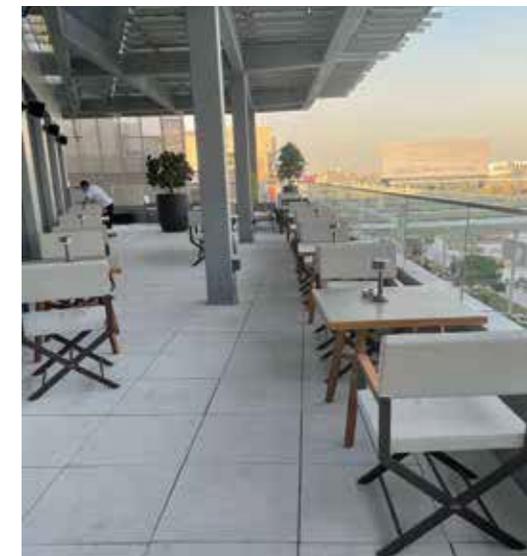
The area called the World Majlis Area is a public space that recalls an important aspect of Emirate traditions and of Arabic countries in general: the Majlis, in fact, is an assembly in which various communities come together to exchange ideas and to discuss and decide on various topics. This is an area used to hold debates, conferences and other events. It includes a series of reception and VIP rooms. Ceramic tiles were installed in the internal areas using ADESILEX P7 adhesive with ULTRACOLOR PLUS for grouting the joints, while KERALASTIC T was used to install marble flooring in external areas.



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DUBAI EXHIBITION CENTER

This large, high-tech exhibition centre extends over an area of 45,000 m² and will be used to host special events, exhibitions, conferences and meetings, both during the months of the Expo and then after its closure. In the centre there is also a theatre, an auditorium, poly-functional areas and various meeting rooms. In the service areas, ceramic floor and wall tiles were installed with KERABOND T adhesive after treating the substrates with PRIMER G. The joints were then grouted with ULTRACOLOR PLUS. MAPEGROUT T60 and PLANITOP 400, on the other hand, were used to repair concrete.



2020 CLUB BY EMAAR

The colossus of Emirate hospitality, Emaar Hospitality Group, wanted to dedicate a special area to VIP guests with a series of lounges, relaxation areas, hookah smoking areas and a spa. There is also a heliport available for guests on the roof of the structure. Mapei took part in the construction of these spaces by supplying the adhesives ADESILEX P7 and MAPESET to install ceramic tiles and ULTRACOLOR PLUS mortar to grout the joints. Porcelain tiles were installed in several areas with ADESILEX P7 and then grouted with KERAPOXY.



**MAPEI
CONSTRUCTION
CHEMICALS**

2008

**THE YEAR IT WAS
FOUNDED**

(ITS NAME WAS
"INNOVATIVE BUILDING
SOLUTIONS")

148

STAFF

(FROM 25 DIFFERENT
NATIONS)

1

**MANUFACTURING PLANT
IN DUBAI**

41

**MILLION EUROS
TURNOVER IN 2020**

112,000

TONS

**PRODUCTION CAPACITY
IN 2020**

Maxi infrastructure plan in the Arab Emirates' future



HASSAN BOUHADI,
GENERAL MANAGER
OF MAPEI
CONSTRUCTION
CHEMICALS LLC,
SHARES HIS VIEWS
WITH US

Infrastructure development played and continues to play a fundamental role in the UAE's expansion and growth plans. The UAE has recently set ambitious and comprehensive plans for a sustainable urban development focusing on enhancing people's happiness and quality of life and reinforcing UAE as a global destination for citizens, residents and visitors over the next 20 years.

To meet its infrastructure plans, the UAE government has started pushing forward with its various initiatives and projects, including the Dubai 2040 Urban Development plan, the Sheikh Zayed Housing Programme,

the Dubai Tourism Strategy and Dubai Industrial Strategy 2030.

Over the next 6 years, a budget of 40 billion US dollars has been set to meet this infrastructure development plan. Some of the major projects being explored include a futuristic suspended rail network in Dubai, turning a landfill area into a solar farm, a waste-to-energy plant to generate enough electricity to power up to 22,500 UAE households, a reverse osmosis desalination plant with a capacity of producing up to 150 million imperial gallons (almost 682 million liters) of clean water per day, two seawater nano-filtration

plants with a combined treatment capacity of 210 million imperial gallons (over 954 million liters) a day.

The Abu Dhabi Executive Council also approved a framework between the Abu Dhabi Government and Aldar Properties for the development of capital projects in the UAE. Aldar will provide management oversight of US 2.7 billion worth of Musanada's projects in education, healthcare, infrastructure, social services, and facilities management.

A total of 10 billion US dollars was allocated to infrastructure projects in 2021, and of this amount, the biggest spends were allocated to rail (5

billion US dollars), roads and bridges (1.5 billion US dollars), and utilities (0.5 billion US dollars).

This provides a great opportunity for Mapei Construction Chemicals, as we continue to play a key role in developing UAE's resilient and eco-friendly infrastructure network, including ports and terminals, roads and bridges, rail, sewerage and waste treatment plants, and utilities.

So far this year, Mapei Construction Chemicals has already made significant contributions to developing infrastructure projects in UAE, below are few examples:

12 billion US dollars will be invested in building railways, roads, ports and terminals in 2022

Mapei, which has already contributed to major projects, hopes to play a key role in the country's latest phase of transformation



A tunnel along the Etihad Rail network, where Mapei supplied 27,500 m² of MAPEPLAN PVC membrane system for tunnel waterproofing. <

Ports & Terminals:

- Supplying 28,000 m² of MAPEPLAN PVC membrane system to waterproof the conveyer belt tunnel at a construction raw material handling facility at a new port terminal in Dibba (UAE).
- Supplying 235 tonnes of PLANIGROUT 300 ME and 12,000 cartridges of MAPEFIX EP 385 for repairing of crane rail network at a container handling terminal.

Rail:

- Supplying 27,500 m² of MAPEPLAN PVC membrane system for tunnel waterproofing, part of the Etihad Rail network, which included nine tunnels with a combined length of 6.9 km.

Utilities:

- Supplying concrete and shotcrete admixtures for a new pumped storage hydropower plant in the Hajar

Mountains, Hatta (UAE): around 500,000 kg of MAPEQUICK AF-70 alkali-free accelerator for shotcrete and sprayed concrete; 100,000 kg of DYNAMON SP4000 superplasticizing admixture; 145,000 kg of MAPEPLAST RP220 SA retarding plasticizer.

- Supplying 15,000 m² of the TPO membrane system MAPEPLAN TM to waterproof the roof of the new Barakah nuclear power plant in Abu Dhabi.

With infrastructure spend projected at 12 billion US dollars in 2022, most of which will be focused on rail, ports, terminals, roads and bridges, Mapei Construction Chemicals looks forward to continue playing its role in making the UAE a better connected and a more environmentally-resilient country.

MAPEI CONSTRUCTION CHEMICALS

THE GROUP'S HEADQUARTERS FOR MIDDLE EAST AND EAST AFRICA

Mapei first began operating in the United Arab Emirates in 2008 when its subsidiary "Innovative Building Solutions" was set up in Dubai.

After a few months' marketing the mother company's products in the country, local manufacturing of building materials began in 2009 in a plant located in Dubai Investment Park. Initially the subsidiary focused on products for installing ceramic and stone materials, products for the building industry, and admixtures for concrete and cement additives: a segment of the market producing the best results in the short term on a market dominated by the competition.

Since then, the subsidiary, now called Mapei Construction Chemicals, has gained the confidence of companies on the local building market, extended the range of products it supplies and manufactures locally, overcome the 2009 economic recession, boosted its human resources

(now employing a total of 148 staff from 25 different nations) and increased its revenue (reaching a figure of 41 million Euros in 2020) and been involved in the construction of numerous architectural works, including the most prestigious in the Arab Emirates such as Burj Khalifa skyscraper incorporating Armani Hotel, Dubai Metro, Dubai and Abu Dhabi airports, Ferrari World Theme Park and Louvre Museum in Abu Dhabi.

Mapei Construction Chemicals is also the Group's regional headquarters in the Middle East and East Africa. Over recent years it has helped extend Mapei's presence in neighbouring countries like Qatar (Mapei Doha was founded in 2015), Saudi Arabia and even Africa in the form of Mapei Egypt for Construction Materials and Mapei East Africa, two subsidiaries that have boosted the Group's operations in 2018-19 on a continent where Mapei South Africa and Vinavil Egypt have been operating for a number of years.



CERAMIC TILES AND ENGINEERED STONE INSTALLED IN THE NEW STATIONS ALONG THE METRO RAILWAY LINE RUNNING TO THE EXPO SITE



Dubai Route 2020

The aim of the “Route 2020” project was to extend the Red Line of the Dubai metro railway system connecting the city to the Expo site. Thanks to an investment of 2.9 billion US dollars, the new stretch is now 15 km long (11.8 km of elevated railway and the remaining 3.2 km underground) and runs from Jebel Ali station to the Expo area, near Al Maktoum International Airport. As a result, this new infrastructure makes it easier to access the exhibition area and, because it passes through various densely populated areas of the city, it is also a fast, safe method of urban transport for many inhabitants of Dubai.

4 of the 7 stations in total were opened to the public on 1st January this year (Jebel Ali Station, The Gardens, Discovery Gardens and Al Furjan), whereas Route 2020 became operational a little later on 1st June along the section running to the Expo site. The capacity of the underground railway line, which can currently car-

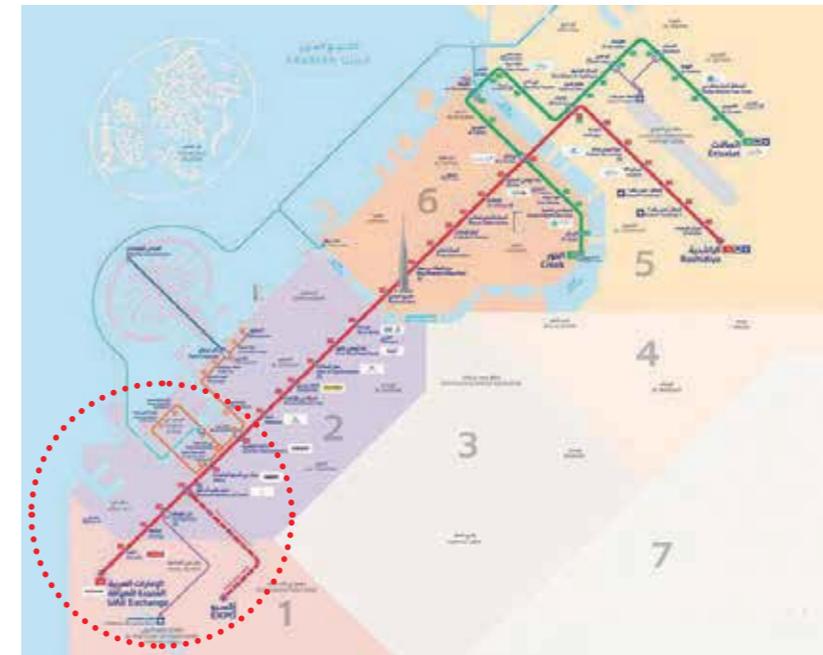
ry 16,000 passengers every hour in both directions (with 24 trains every hour at peak times), should increase in the future to reach a capacity of up to 275,000 passengers in 2030. Route 2020 is now ready to guarantee the journey of the 35,000 visitors/day expected during the week and 47,000 at weekends during the months of the Expo. The construction work also included three main power supply stations and an additional traction power supply station.

Mapei's contribution

Mapei was involved in the excavation works of the new metro line, supplying products for underground works to the Expolink consortium, made up by Alstom, Acciona and Gülermak. The company provided solutions for building a 2.5 km long, 10 m diameter tunnel, which was excavated with TBM (Tunnel Boring Machine). Mapei supplied chemical products used for TBM excavation works such

as the grout systems for the backfill of the TBM segment (MAPEQUICK CBS SYSTEM 1 and MAPEQUICK CBS SYSTEM 2, MAPEBENT CBS 2); the foaming agent POLYFOAMER FP for the TBM cutterhead and the sealants MAPEBLOX T and MAPEBLOX H. Besides, LAMPOSILEX and RESFOAM 1 KM were used to close the water leakage in the tunnel. The company also took part in the construction works for the new Route 2020 by supplying materials for the screeds, to prepare substrates and for the installation of stone inside all the stations along the line. To cope with the constantly increasing passenger levels, the stations have larger access ramps to the platforms compared with those along the existing stations of the Red Line. TOPCEM special hydraulic binder was used to create normal setting, controlled shrinkage and rapid-drying screeds in all the stations along Route 2020, for a total surface area of

The new Route 2020 is an extension to the Red Line of the Dubai metro system and runs for 15 km from the city to the Expo 2020 Dubai site.



15 Km
LENGTH OF THE LINE

7
STATIONS
FROM JEBEL ALI
TO EXPO 2020

16,000
PASSENGERS
CURRENT CAPACITY PER
HOUR IN EACH DIRECTION

275,000
PASSENGERS
EXPECTED CAPACITY
IN 2030

29%
VISITORS OF EXPO
WILL USE THE LINE
TO REACH THE SITE

70,000 m².

In four of the stations, slabs of engineered stone were installed using GRANIRAPID adhesive, which allowed the site teams to install the material in difficult climatic conditions, at temperatures of more than 30 °C. The stone covering was made up by engineered agglomerate so, following extensive tests in Mapei R&D laboratories, this adhesive system was especially selected, to avoid any stains or moisture-related problems to the final surfaces. Besides, fast-track products like TOPCEM and GRANIRAPID helped the application teams meet the tight timeline. The stone was then grouted with KERACOLOR FF cementitious mortar mixed with FUGOLASTIC admixture. The product chosen to seal the expansion joints was MAPESIL LM which helps prevent the formation of marks and stains on the surface of stone.

In the service areas of the stations, ceramic tiles were installed with KERAFLEX MAXI S1 adhesive before grouting joints with KERAPOXY. Given the high level of vibration caused by the movements of the trains, KERAFLEX MAXI S1 was chosen due to its high deformability. For the four buildings that house the electric controls for the trains the MAPETHERM SYSTEM was used, an external thermal insulation system for facades that prevents rooms inside buildings from heating up excessively, thereby reducing energy consumption, improving the level of comfort and the sustainability of the structures. Apart from bonding rockwool insulation panels with MAPETHERM AR2 mortar, the materials chosen for this work were MAPETHERM AR1 adhesive and skimming compound and MAPENET 150 mesh. In all buildings, the insulated surfaces were then treat-

1. TOPCEM hydraulic binder was used to create the rapid-drying screeds in the stations.
2. In the stations, the engineered stone flooring was installed with GRANIRAPID before grouting joints with KERACOLOR FF + FUGOLASTIC.
3. The walls of some of the buildings that house the electric controls were insulated with the MAPETHERM system before finishing off the surfaces with QUARZOLITE BASE COAT and QUARZOLITE TONACHINO.
4. Mapei also took part in the excavation work of the Red Line by supplying products for TBM and underground works.



ed with QUARZOLITE BASE COAT coloured acrylic undercoat before applying QUARZOLITE TONACHINO, a textured coating of 1.5 mm grain size. Using the ColorMap® automatic tinting systems, which is also available in the UAE, enabled the right shade of grey to be obtained from amongst the more than 1,000 colours of the Mapei Master Collection. In several areas ULTRAPLAN ECO 20 levelling compound, which is produced and distributed on the local market by Mapei Construction Chemicals, was used to level off the substrates, after treating them with PRIMER G. On raised floors, on the other hand, the system chosen to level any irregularities was made up by PRIMER SN, mixed with QUARTZ 1.2 ME (which is distributed on the UAE market by Mapei Construction Chemicals), and ULTRAPLAN MAXI. In some areas vinyl floor coverings were installed with ULTRABOND ECO 375 adhesive. Various building materials distributed on the local market by Mapei Construction Chemicals, such as MAPEGROUT ME05, MAPEGROUT ME06, MAPEFILL GP-ME and MAPEGROUT T60 ME, also found a use in the construction work for the various structures of the Route 2020 project.



MAPEI PRODUCTS
Products for underground constructions: Mapequick CBS System 1, Mapequick CBS System 2, Mapebent CBS 2, Polyfoamer FP, Mapeblox T, Mapeblox H, Lamposilex, Resfoam 1 KM
Building screeds: Topcem
Preparing substrates: Primer SN, Ultraplan Eco 20*, Quartz 1.2 ME*, Ultraplan Maxi, Ultraplan

Fiber Kit*
Installing ceramic tiles and stone materials: Granirapid, Keraflex Maxi S1
Grouting joints: Keracolor FF, Fugolastic, Kerapoxy, Ultracolor Plus
Sealing expansion joints: Mapesil LM
Installing vinyl floors: Ultrabond Eco 375
Thermal insulation: Mapetherm AR1,

Mapenet 150
Wall coatings: Quarzolite Tonachino, Quarzolite Base Coat
Products for building: Mapefill GP ME*, Primer G, Lamposilex, Mapefill SP ME*, Mapegrout T80, Polyfond Kit Drain, Resfoam 1 KM Flex, Resfoam 1K-M, Resfoam 1K-M AKS, Eporip, Lamposilex, Mapegrout

ME 05*, Mapegrout ME 06*, Mapegrout T60 ME*, Planigrout 300 ME*, Planitop 110 ME*

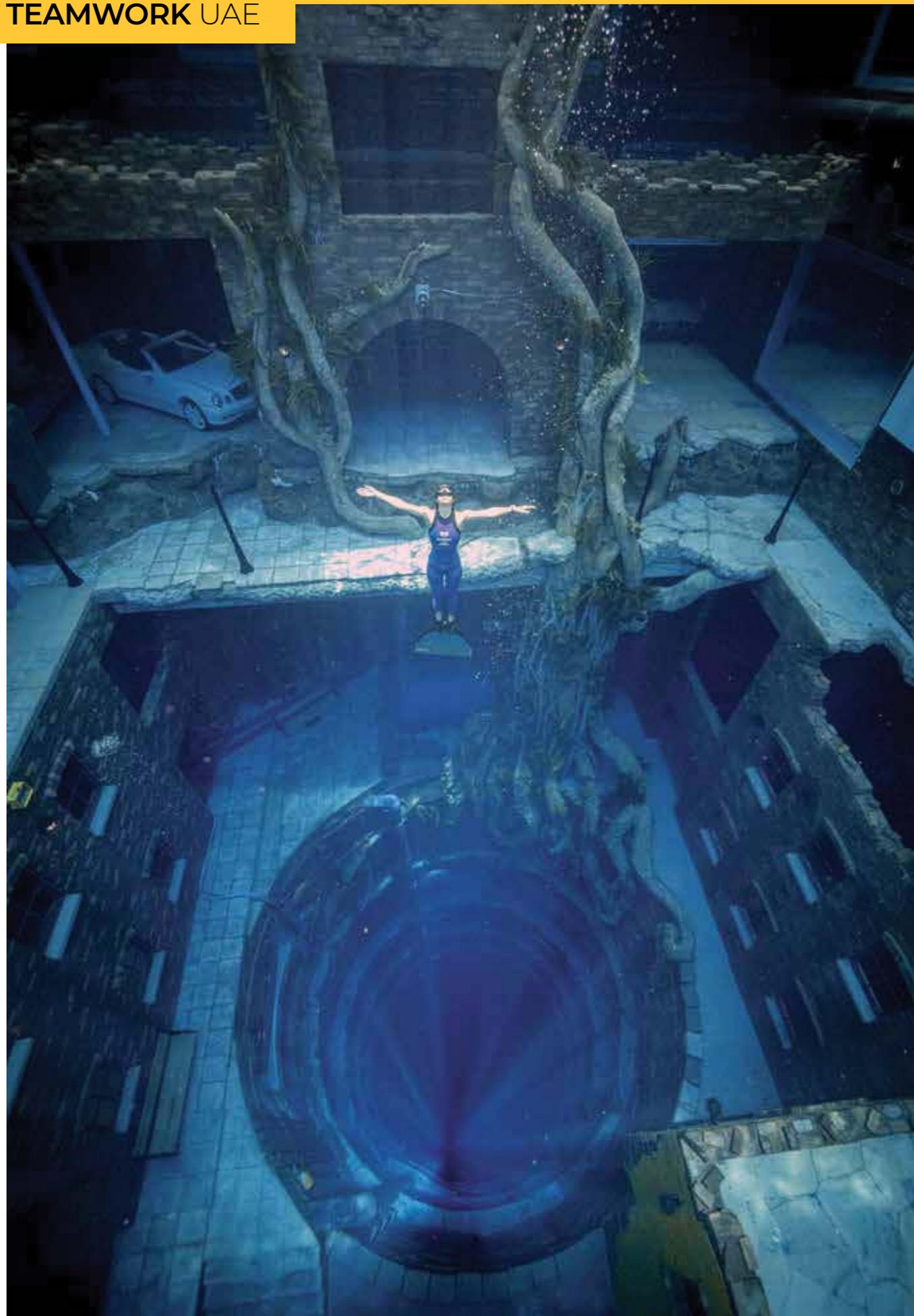
*These products are manufactured and distributed on the UAE market by Mapei Construction Chemicals (UAE)

For further info on products see mapei.com and mapei.ae

NOT JUST THE METRO

Apart from the Route 2020 project, Mapei products were also used for the construction of various underpasses, bridges and roads that connect the Expo site to the rest of the city. For example, KERAFLEX MAXI S1 was used to install ceramic tiles on vertical surfaces in 5 underpasses leading to the Expo site. Various materials from the building line, produced and distributed by Mapei Construction Chemicals, were used to repair the concrete on various roads and bridges in the surrounding area, such as MAPEGROUT ME05, MAPEGROUT T60 ME, PLANIGROUT 300 ME and PLANITOP 110 ME.





LEFT. The new 60 m (196 feet) deep pool in the Deep Dive Dubai complex is the world's deepest swimming pool for diving.
RIGHT. The pool is hosted in a building styled like an enormous oyster to honour the United Arab Emirate's pearl diving legacy.



Dubai

Deep Dive Dubai

RELIABLE, HIGH TECH PRODUCTS ENSURE A SAFE PLUNGE INTO THE DEEPEST POOL IN THE WORLD AND IN NEARBY UNDERWATER SPACES

The latest addition to the city's thriving sports and adventure activities scene, Deep Dive Dubai is the place to be for all aqua enthusiasts. Opened in July 2021, the recreational centre's 60 m-deep pool is certified by Guinness World Records as the world's deepest swimming pool for diving.

The pool, part of the new Deep Dive Dubai attraction, has stolen the record from Poland's Deepspot, which has a depth of over 45 m.

Besides, it holds 14.6 million litres of freshwater, enough to fill six Olympic-sized swimming pools.

Deep Dive Dubai is located in Dubai's Nad Al Sheba neighbourhood and features a sunken city (complete with an abandoned streetscape, an apartment, garage, arcade) that divers of all levels can explore, guided by mood lighting and ambient music.

The building's facade is styled like an enormous oyster to honour the United Arab Emirate's pearl diving legacy and the Emirati pioneer's bravery. With an onsite dive and gift shop, a restaurant and meeting spaces that can host up to 100 guests, Deep Dive Dubai also promises to become a dynamic new venue for events.

Deep experience for a deep pool

Due to its long-time experience in building materials for sports venues and swimming pools, Mapei was involved in the construction works and supplied products for waterproofing the substructure of the building, as well as completing the water features and the indoor and outdoor facilities. Moisture sensitivity tests were conducted in Mapei laboratories resulting in adhesives of a certain class being recommended. KERAFLEX and KERAFLEX MAXI S1 were chosen as the most suitable adhesives for bonding stone coverings in common areas and outdoor areas. For the installation of mosaic tiles on marine plywood in the changing rooms, KERALASTIC T two-component, polyurethane adhesive was chosen due to the nature of the substrate. The mosaic tiles in the pool were bonded with KERAPOXY adhesive. The special white and yellow gold coloured glass mosaic called for an attractive and high-quality finish, so Mapei proposed a special system made up of KERAPOXY DESIGN decorative, acid resistant epoxy grout, and MAPEGLITTER metallic coloured glitter, to grout joints. As for the other areas of the pool, joints were grouted with KERAPOXY epoxy grout.

Waterproofing below ground level

A few viewing galleries of the pool are located deep below the ground level and needed perfect waterproofing. The challenge of these operations, which had to be completed below ground level, were successfully met by using MAPEPLAN TU S, a synthetic waterproofing membrane manufactured by Polyglass (a Mapei Group's subsidiary), and IDROSTOP PVC BEC 32 ME, a PVC waterstop distributed on the UAE market by Mapei Construction Chemicals.



Find out more
KERAPOXY DESIGN

MAPEI PRODUCTS

Bonding stone and mosaics: Keraflex Maxi S1, Keralastic T, Keraflex, Kerapoxy
Grouting joints: Kerapoxy Design, Mapeglitter, Kerapoxy
Waterproofing below ground level: Idrostop PVC BEC 32 ME, Mapeplan TU S by Polyglass (Mapei Group)

mapei.com, mapei.ae



Several colourful open public spaces were created in Abu Dhabi following the Government's Ghadan 21 initiative. Mapei supplied MAPECOAT TNS PRIMER EPW to prepare the substrates and MAPECOAT TNS RACE TRACK coating for the floor surfaces.

Abu Dhabi Ghadan 21

AN AMBITIOUS GOVERNMENTAL PROJECT IS BEING IMPLEMENTED TO TRANSFORM URBAN AREAS IN ABU DHABI

The AED 50 billion (1.6 million US dollar) three-year "Ghadan 21" programme, envisioned and launched in 2019 by HH Sheikh Mohamed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi, Deputy Supreme Commander of the UAE Armed Forces and Chairman of the Abu Dhabi Executive Council, focuses on economy, knowledge and community.

The Executive Committee of Ghadan 21 has already launched more than 50 projects in its first year, with a slew of additional initiatives set to be implemented within 2021. In response to the global economic problems of 2020, the Executive Council developed an economic stimulus package to expedite major measures aimed at increasing business ease and lowering living costs. With an investment 1.5 billion Euros, the Ghadan 21 initiative aims to improve Abu Dhabi's competitiveness in four areas: business and investment, society, knowledge and innovation, and liveability. The UAE capital's development plan also includes thriving communal areas, revitalized streets, and a city-wide cycling network.

Colourful and safe urban areas with MAPECOAT TNS RACE track

Mapei contributed to this key project thanks to its long-time experience in designing and creating safe, resistant and beautiful urban areas. The company supplied MAPECOAT TNS RACE TRACK to create long run-

ning/walking tracks, a kids play area, sport courts and parking areas in Abu Dhabi.

MAPECOAT TNS FAST TRACK is an acrylic waterborne, rapid film-forming, coloured coating with excellent physical and mechanical characteristics which is especially suitable to protect concrete and asphalt surfaces subject to a high level of footfall, such as racetracks, cycle lanes, pedestrian areas, playgrounds, access/exit routes in sports facilities, parking areas, etc, due to its special formulation.

It may be used as a finishing coat on external flooring requiring a high level of slip-resistance. It allows highly durable, non-slip surfaces to be created that maintain their surface roughness over the years, including in wet conditions. The wide range of colours available, along with the other shades available using the ColorMap automatic colouring system, means that personalised colours may also be created.

In the Abu Dhabi project, MAPECOAT TNS RACE TRACK was applied after treating the substrates with MAPECOAT TNS PRIMER EPW two-component epoxy primer



Find out more
MAPECOAT TNS RACE TRACK

Works in the UAE

FROM TUNNELS TO DESERT RESORTS,
MAPEI SUPPLIED BUILDING SOLUTIONS
FOR DIFFERENT KINDS OF PROJECTS



Nakheel Mall - Dubai

With 300-plus outlets, Nakheel Mall is the new soul of Palm Jumeirah island in Dubai, featuring everything from family fun to fine dining, from toy shops to trampolines, cinemas to supermarkets. Depachika Food Hall is considered one of the centre pieces for the Mall and the designer's choice for the floor was a white floor with a "terrazzo alla veneziana" effect. Mapei proposed its ULTRATOP system. This ensured the creation of resistant, polished floors by applying ULTRATOP, self-levelling, ultra-fast setting cementitious mortar. The system also involved the use of PRIMER SN, QUARTZ 1.2, and ULTRATOP STUCCO.

Sharjah Mosque Sharjah

The Sharjah Mosque is the largest mosque in the Emirate of Sharjah. It was inaugurated by His Highness Sheikh Dr Sultan bin Muhammad Al Qasimi, Supreme Council Member and Ruler of Sharjah. It reopened its doors in 2019, after 5 years of building works. It can accommodate up to 25,000 worshippers. Surrounded by gardens and water fountains, the complex looks imposing in its grandeur. White marble slabs were bonded inside 5 external landscaped structures with KERAFLEX MAXI SI adhesive. All the water feature areas have been waterproofed with MAPELASTIC SMART. Joints were grouted with KERAPOXY epoxy grout in the fountains and with ULTRACOLOR PLUS cementitious grout in the water sliding area.



Al Sidra tunnels - Khor Fakkan-Sharjah

Al Sidra tunnel, with its 2.7 km length, is the longest covered tunnel in the Middle-East, part of the highway that connect the cities of Khor Fakkan and Sharjah. Five twin tunnels stretch along the highway, all featuring a 9.6 m width and 8.5 m height. The project for the Al Sidra tunnel requested the use of innovative technologies which Mapei was able to supply. A waterproofing system was installed on the whole perimeter of the tunnel and involved the use of MAPEPLAN TU S 20 and MAPEPLAN DISK supplied by Polyglass (Mapei Group). Mapei also supplied 800 tons of alkali-free accelerator MAPEQUICK AF 70 for the shotcrete used for the entire length of the tunnel.



Al Wathba Luxury Collection Resort and Spa - Abu Dhabi

Deep within the desert landscape of Abu Dhabi, Jumeirah Al Wathba Desert Resort & Spa is an intimate retreat located deep in the desert 50 km to the south east of Abu Dhabi and is spread over 20,000 m². The resort comprises 90 rooms, 13 villas, a 1,000-m² pool, six restaurants and bars. Mapei supplied the ULTRATOP system for completing 10,000 m² of decorative and resistant cementitious floors for the reception, rooms and villas. The system involved the use of PRIMER SN, QUARTZ 1.2, ULTRATOP, MAPECRETE STAIN PROTECTION, and MAPELUX OPACA.



A great team for a great Expo

Mapei Construction Chemicals team worked together for Expo 2020 Dubai project and as an outcome, they accomplished great results by supplying Mapei's products to over 55 country pavilions, 16 zones, 60 areas. The Dubai-based subsidiary of the Group brought and put the right people together across different departments such as specification, technical services, sales, export, marketing and product line managers. The work between the team was aligned with the company objectives and pursued a common goal. Not to mention, it helped also fast track project deliveries as things got done in the most efficient manner.

At an earlier stage of the project, the first team players were the specification and products line managers. They worked closely to ensure Mapei range of products, systems and solutions to be specified to architects, specifiers and consultants, while tracking the project from design phase to installation through visits, seminars, method statements, etc.. The second team players were the technical services department and sales team by demonstrating to the contractors and applicators the key features and benefits of the company products and systems through trainings, and onsite visits and

technical support during applications.

In a parallel path, the marketing team lineup with all departments to track Mapei's involvement during the build-up of the Expo from the first day, by providing technical documentations, presentations, product references, datasheets, etc.. Moreover, it took care of designing new adverts, communications plan, promotional items suiting the Expo 2020 Dubai guidelines on a sustainable path, visiting sites as pictures were essential to capture the beauty and the result of our products before and after applications for the Expo Special Edition of Realtà Mapei International magazine, and for the MAPEI Middle East & East Africa's social media platforms, which was launched by beginning of September for networking opportunities, educational content, live updates and audience engagement. Moreover, we also coordinated with export managers arranging visits for their customers to Mapei's Dubai office and Expo site, along with other subsidiaries of the Mapei Group.

Marwa El Moniery, Marketing Manager, Mapei Construction Chemicals



The Mapei Construction Chemicals' team working for Expo was made up by many staff belonging to different departments. Here you find their names: Stefano Iannacone, Hassan Bouhadi, Andrea Perini, Ahmad Iftikhar, Albert J Thykadavil, Alia Khawaja, Daniele Spiga, Dario Casile, Gireesh Kumar, Hany El Assal, Ihab Alhalbouni, Marwa El Moniery, Moayad Ali, Mohammed Nazrul Haque, Mohammed Qunber, Mohammed Salim, Muhammad Faisal Sheikh, Muhammad Tahir, Nisreen Salman, Salvatore Onnis, Shatha Weldali, Shoeb Ali Khan.

OUR INVOLVEMENT IN EXPO 2020 DUBAI

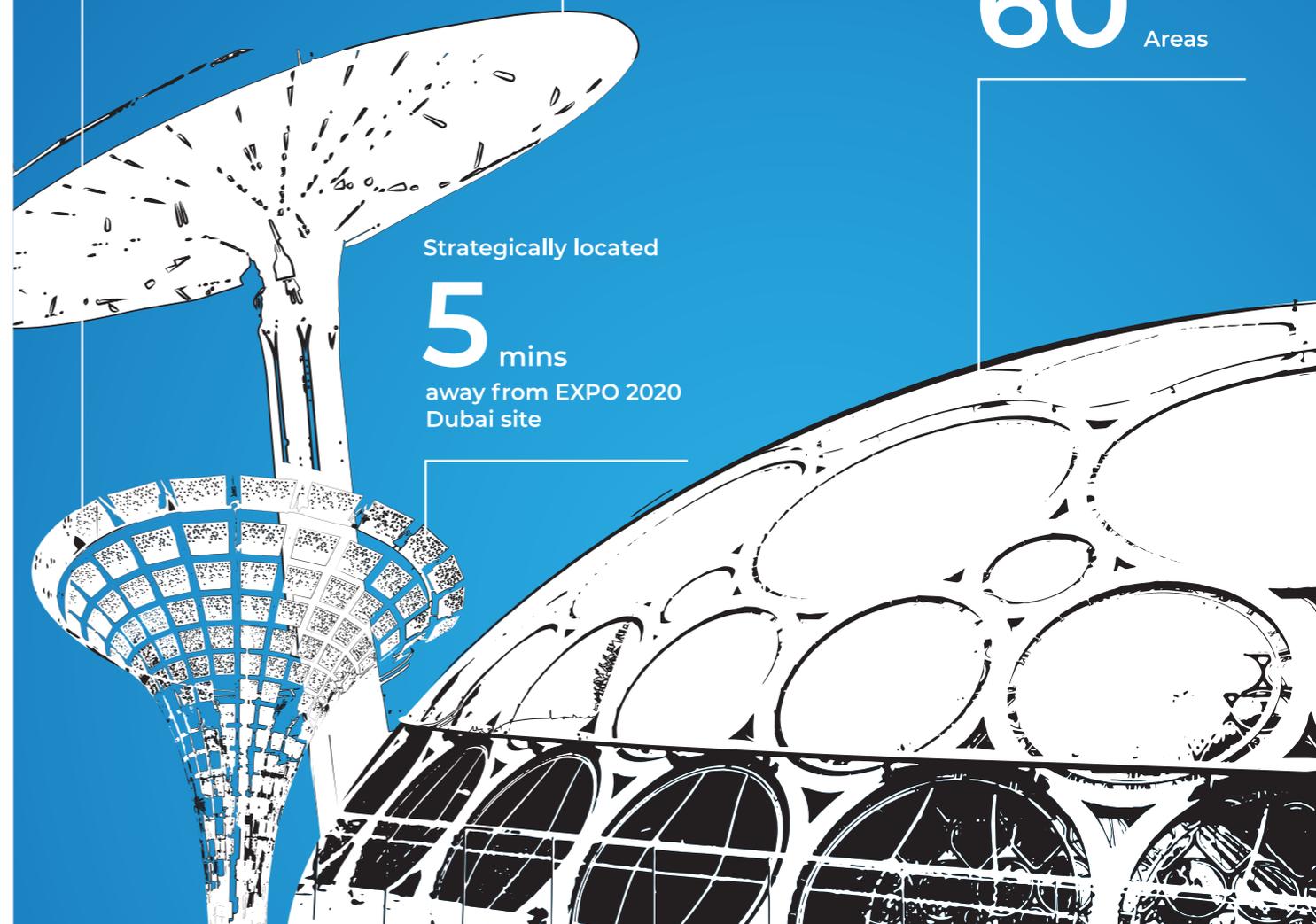
Manufactured more than **200** sustainable & eco-friendly products

Provided over **8,000** tons of materials

Supplied to more than **55** Pavilions
16 Zones
60 Areas

Strategically located

5 mins away from EXPO 2020 Dubai site



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Learn more on mapei.ae



ITALIA
LA BELLEZZA UNISCE LE PERSONE
BEAUTY CONNECTS PEOPLE
الجمال يجمع الناس

Partner of Italy Pavilion at Expo 2020 Dubai

MAPEI. THE BEAUTY OF SUSTAINABLE INNOVATION



We created new building materials specially for Italy Pavilion at Expo 2020 Dubai, using coffee, powdered orange peel and desert sand. Recycled materials that gave life to a sustainable microcosm, where guests can take part in a memorable sensory experience. As natural born innovators, we are partners in a project that creates beauty today and will lead to ever-growing sustainable solutions tomorrow.

EVERYTHING'S OK
WITH **MAPEI**

Learn more on [mapei.com](https://www.mapei.com)



ITALIA
LA BELLEZZA UNISCE LE PERSONE
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Partner of Italy Pavilion at Expo 2020 Dubai