



**EXPO
2020
DUBAI
UAE**

EXPO 2020 DUBAI

SUSTAINABILITY REPORT 2019

CONNECTING MINDS,
CREATING THE FUTURE





"We pay the utmost care and attention to our environment for it is an integral part of the country, our history and our heritage. Our forefathers and our ancestors lived in this land and coexisted with its environment, on land and sea, and instinctively realised the need to preserve it."

LATE SHEIKH ZAYED BIN SULTAN AL NAHYAN

Founder of the UAE



"Protection of the environment and achievement of sustainable development in the UAE is a national duty; it has its own institutional structures, integrated legislature and advanced systems."

HIS HIGHNESS SHEIKH KHALIFA BIN ZAYED AL NAHYAN

President of the United Arab Emirates



“We are building a new reality for our people, a new future for our children, and a new model of development”

HIS HIGHNESS SHEIKH MOHAMMED BIN RASHID AL MAKTOUM

Vice-President and Prime Minister of the UAE and Ruler of Dubai



“The civilised, advanced nation we seek to build and the sustainable development we are keen to achieve both require concerted efforts from all sectors of the community and from all public and private entities and organisations. They require consistent and harmonious work in order to achieve our goals and promote and underpin our nation’s status with its distinct role regionally and internationally.”

HIS HIGHNESS SHEIKH MOHAMED BIN ZAYED AL NAHYAN

Crown Prince of Abu Dhabi and Deputy Supreme Commander of UAE Armed Forces

HIS EXCELLENCY SHEIKH NAHAYAN MABARAK AL NAHAYAN



**Cabinet Member, UAE Minister of Tolerance and Coexistence
Commissioner General, Expo 2020 Dubai**

It gives me great pleasure to welcome you to the second annual Expo 2020 Dubai GRI Sustainability Report, containing findings from across Expo 2020 Dubai during 2019.

This report represents a continued, deep-rooted commitment to our sustainability standards and activities for the benefit of Expo stakeholders and all interested parties in line with the commitments we have made to the Bureau International des Expositions (BIE).

A culmination of our sustainability initiatives and innovations, our 2019 report is built on the foundation of our sustainability policies and strategies that seek to integrate sustainable practices across all of operations and project phases at Expo 2020 – creating a positive impact across various phases of the Expo that will inspire the global community in shaping a sustainable future.

Our sustainability performance across various key performance indicators (KPIs) and targets has been outlined in this report, in alignment with the integrate-impact-inspire pillars that help to safeguard transparency and fulfil our commitment to UAE Vision 2021.

We extend our gratitude to Expo 2020's Official Partners, whose dedicated support

in adopting our sustainability agenda – some innovative examples of which feature in this report – continues to play a crucial role in helping us realise our vision to host one of the most sustainable World Expos ever held.

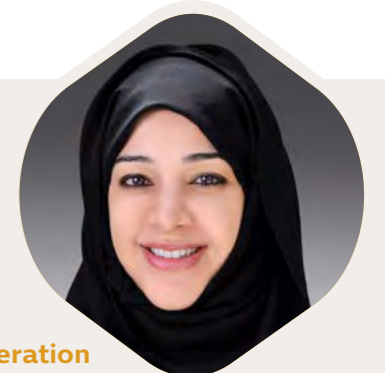
Having established our RISE Guidelines for Sustainable Operations in 2019, we continue to work together with these stakeholders, among others, to establish a sustainable supply chain that reduces our environmental footprint across the entirety of Expo.

The success of Expo 2020 depends on our ability to come together, through these most challenging of times, with resilience and endurance.

As we patiently wait to open our doors a year later than originally scheduled, we are taking this time to reflect on the UAE's values of tolerance and global cooperation – alongside our Emirati traditions and internationally renowned hospitality – that will define our journey towards the UAE's Golden Jubilee celebrations in 2021, marking 50 years since the founding of our nation.

Together, we shall inspire future generations with a positive global impact and legacy for the UAE as we proudly carry the heritage of our forefathers into a changed world.

HER EXCELLENCY REEM AL HASHIMY



**Cabinet Member, UAE Minister of State for International Cooperation
Director General, Expo 2020 Dubai Bureau**

In recent challenging times, it has become increasingly evident that our secured future depends on our ability to unite and work closely together to seek solutions for some of our planet's most pressing challenges.

As Expo 2020 Dubai prepares to open on 1 October 2021, we are all challenged to rethink our way of life as we adapt to myriad new realities that are shaping a rapidly-evolving world. Our World Expo, delayed by a year due to the impact of COVID-19, will be a unique opportunity to share our vision for a post-pandemic future – one that inspires hope, tolerance and optimism for generations to come.

We are grateful to the Bureau International des Expositions (BIE) and its Member States for their swift response and support for our postponement, which demonstrated solidarity and a commitment to creating an enriching and meaningful World Expo.

Sustainability, as one of our three subthemes, is a crucial part of this, and we remain true to our goal of hosting one of the most sustainable World Expos ever. Through an effective framework of implementation and monitoring, Expo 2020 continues to track its sustainability performance across various environmental, social and economic verticals, with ambitious KPIs and targets.

Highlighting our performance across 11 sustainability areas, including energy, transport and materials, the 2019 Expo 2020 Dubai Sustainability Report shows that we

have surpassed the majority of our targets, and are close to achieving the remainder.

While this 2019 edition relates to the pre-Expo construction phase, upcoming reports will see these goals extended to event and post-event KPIs, which will showcase the holistic impact of Expo 2020.

We are committed to delivering an exceptional World Expo that celebrates the potential of human collaboration and creates a positive, enduring impact on communities across the world as part of the UAE's wider national focus on sustainability.

As we create a lasting legacy that honours our theme of 'Connecting Minds, Creating the Future', we aim to bring the world together – creating awareness, fostering global action and inviting innovative solutions to address pressing sustainability issues as reflected in the 2030 Agenda for Sustainable Development.

Our key stakeholders, including the Expo leadership and our employees, Official Partners and Providers and International Participants, as well as contractors, consultants, volunteers and the local community, all play a crucial role in helping to achieve Expo 2020's vision for sustainability.

To you all, we express our heartfelt gratitude, and we invite your invaluable feedback and engagement as we seek to further our united commitment to building a sustainable future for us all.

TABLE OF CONTENTS



01

ABOUT EXPO 2020 DUBAI

A. ABOUT THIS REPORT

We are pleased to present Expo 2020 Dubai's 2019 Sustainability Report. This is the second report to be prepared in accordance with the GRI Sustainability Reporting Standards: Core option.

The GRI Standards are a globally recognised sustainability reporting mechanism, which provides a common language and platform for organisations and their stakeholders to communicate their economic, environmental and social impacts.

This report provides insights into the impact of Expo 2020 Dubai within the United Arab Emirates (UAE) in 2019.

1. SCOPE

The sustainability performance data provided in this report covers the period between 1 January 2019 and 31 December 2019. However, where applicable, data and initiatives from other years have also been included to illustrate trends and progress over the years.

2. CONTENT

The sustainability performance information included in this report is based on the guiding principles of balance, transparency and accountability.

These significant tenets improve the quality and reliability of the content, ensuring all our stakeholders have timely access to enhanced information to help them make informed decisions.

The sustainability strategy of Expo 2020 Dubai is structured to **Integrate, Impact and Inspire**. The strategy aims to **integrate** sustainability throughout the entire framework of Expo 2020, create a thorough, meaningful **impact** that extends beyond the site and the six months of the event, and **inspire** those who visit to become part of the journey towards a more sustainable future.



3. GRI SERVICES

For the Materiality Disclosures Service, GRI Services reviewed that the GRI content index is clearly presented and the references for Disclosures 102-40 to 102-49 align with appropriate sections in the body of the report.

For the GRI Content Index Service, GRI Services reviewed that the GRI content index is clearly presented and the references for all disclosures included align with the appropriate sections in the body of the report.

The services were performed on the English version of the report.

4. CONTACT

Expo 2020 Dubai engages in open dialogue with all its stakeholders in order to fulfil its commitment to sustainability. To help improve performance and ensure better sustainability performance during and after the event, Expo 2020 welcomes any comments, queries or recommendations related to this report.

These can be initiated via the following email address: sustainability@expo2020.ae. A digital version of this report can be downloaded at expo2020dubai.com

These events are a festival of wonder and imagination, where visitors can experience, explore, discover and have fun while sharing ideas and working together.



B. EXPO 2020: AT A GLANCE

We explore the evolution of the UAE's historic participation at World Expos and what Expo 2020 Dubai has in store.

1. THE ROLE OF THE BUREAU INTERNATIONAL DES EXPOSITIONS

The Bureau International des Expositions (BIE) is an intergovernmental organisation that has encouraged education, innovation and cooperation through the administration and regulation of World Expos since 1931.

The World Expos are one of the oldest and largest international events, arranged and assisted by governments with the intention of educating the public, promoting progress and fostering cooperation. Today, four main Expos fall under its umbrella: World Expos, International Specialised Expos, Horticultural Exhibitions, and the Design Triennale of Milan.

BIE's organisational structure includes the General Assembly, Committees, the Secretariat and 170 member states. To date, more than 50 Expos have been organised under the auspices of the BIE, whose objective is to ensure the quality of Expos and guard the rights of their organisers and participants.

2. 50 YEARS OF EXPO: PARTICIPATION TO HOST

The World Expos are a festival of wonder and imagination, where visitors can experience, explore, discover and have fun while sharing ideas and working together.

World Expos give countries the opportunity to showcase their culture and display their architectural and technological abilities. In the past, paradigm-shifting discoveries such as the telephone, X-ray machines and architectural marvels such as the Eiffel Tower have all made their debut at different World Expo events. Today, these Expos continue to bring the world together for a global exhibition of solutions to the fundamental challenges facing humanity.

Abu Dhabi was invited to have its own pavilion at Expo 1970 Osaka, one year before the establishment of the UAE in 1971. As per the vision of the late Sheikh Zayed bin Sultan Al Nahyan, the founding father of the UAE, the UAE foresaw its participation at key global events, such as the World Expo, as crucial in building a global identity for itself and showcasing Emirati values and culture.

These values and key messages – such as individual contributions to human progress, fundamentals of human connections, youth as a national priority, and representation of women's rights and contributions – have consistently been cornerstones of the UAE's presence at World Expos. Various stamps and coins continue to be exhibited in local museums across the UAE, honouring the nation's participation at such events.

1970
Osaka

i. EXPO 1970 OSAKA

Abu Dhabi's World Expo debut at Expo 1970 Osaka focused on celebrating the country's culture and national identity among 78 participating nations, and various international organisations.

During that time, many Japanese delegations visited the late Sheikh Zayed bin Sultan Al Nahyan, to build on the growing relationship between Japan and the Emirate of Abu Dhabi.

Appointed by the late Sheikh Zayed, His Excellency Rashid Abdullah Al Nuaimi represented the UAE Pavilion at Expo 1970 Osaka. Its design, which took two years to complete, symbolised the culture and growth of Abu Dhabi.

The assigned budget to build the UAE Pavilion was BD 60,000 in 1971 - equivalent to approximately just over AED 3 million in present times.



Figure 1: Entrance to the Abu Dhabi Pavilion at Expo 1970 Osaka

“We are determined to move forward and evolve to achieve the resurgence and prosperity of Abu Dhabi and the Gulf region, to become a nation of great importance in the history of the world”

His Highness Sheikh Khalifa bin Zayed Al Nahyan on Abu Dhabi's participation at Expo 1970 Osaka



Figure 2: His Highness Sheikh Khalifa bin Zayed Al Nahyan during Abu Dhabi's National Day celebrations

Key highlights from Expo 1970 Osaka included Abu Dhabi National Day celebrations on 3 September 1970, attended by His Highness Sheikh Khalifa bin Zayed Al Nahyan, current President of the UAE.

The World Expo served as one of the first platforms where His Highness spoke about Abu Dhabi and the Union of the Emirates.

In his speech, he emphasised the late Sheikh Zayed's vision for the Union and its importance for the region. His Highness also thanked countries that welcomed the idea of the Union, including Japan – the host country of Expo 1970 Osaka.

1992 Seville

ii. EXPO 1992 SEVILLE

Expo 1992 Seville was the first World Expo that the UAE participated in after its establishment in 1971.

The design of the UAE Pavilion was inspired by the Jahili Fort in Al Ain, Abu Dhabi. The Pavilion displayed important historical artifacts that highlighted the rich history of the Emirates, which would seem – to the event’s global audience – unusual for the UAE as a young country at the time.

The exhibition included detailed screens that depicted prehistoric excerpts dating back more than 3,000 years. Copper objects, such as swords, arrows and arches dating back to the second millennium BC were also showcased.

Images also showed vessels, such as jars in the form of drums dating back to the Iron Age, alongside axes, bowls, daggers, darts, and tubs from the Qusais tombs in Dubai.

An important value that the UAE highlighted in its successful participation at Expo 1992 Seville was the appointment of Hessa Al Ossaily, by the late Sheikh Zayed bin Sultan Al Nahyan, to manage the UAE Pavilion. She is known across the UAE as the first female Emirati television presenter.

However, she had a lesser known, but equally important responsibility, for representing the UAE in global events, such as the World Expo.

Hessa Al Ossaily became the first female Arab to be appointed as the Commissioner General of any participating Arab nation in the entire history of the World Expos.



Figure 3: UAE Pavilion in Expo 1992 Seville



Figure 4: Hessa Al Ossaily

Expo 1992 Seville was the first World Expo that the UAE participated in after its establishment in 1971.

2000 Hannover

iii. EXPO 2000 HANNOVER

The UAE adopted a theme of ‘Man – Nature – Technology’ for its pavilion at Expo 2000 Hannover in Germany, highlighting how the people of the UAE have lived throughout history. Its overall design and exhibition was intended to give visitors a ‘live’ experience of the nation’s culture.

A great amount of efforts were made to enrich the visitor experience, with various programming elements based on UAE values.

Efforts were underpinned by partnerships that were created by the UAE Ministry of Information and Culture – the main organising body for the UAE Pavilion at the time.

Under the directives of the late Sheikh Zayed, and the efforts of His Highness Sheikh Abdullah bin Zayed Al Nahyan, then UAE Minister of Information and Culture, different values were embedded in the UAE Pavilion through these unique partnerships.

For example, the UAE Ministry of Information and Culture worked with the UAE-based General Women’s Union and the Ibn Majid Society to enrich its cultural experience and programming.

The Ibn Majid Society assigned a number of artisans during the six-months of Expo 2000 Hannover to showcase the making of traditional artefacts, such as containers, fishing nets and tools used for diving, while the General Women’s Union highlighted some of its projects and initiatives and worked to create engaging content for women.

In order to promote awareness about the World Expos, the UAE Government took the significant initiative to share the importance of these events specifically with students of the UAE.



Figure 6: General Women's Union receiving an award by Expo Hannover



Figure 5: UAE Pavilion at Expo 2000 Hannover

A large group of students, from many government universities, attended Expo 2000 to engage with the UAE Pavilion and gain invaluable insight into what World Expos seek to achieve.

With its enriched visitor experience and the attention to detail, the award-winning UAE Pavilion was recognised for its distinguished design and high number of visitors, which reached approximately five million in total – including 300 senior officials from various countries.

Building on the designs from Expo 1992 Seville and Expo 1970 Osaka, the design of the UAE Pavilion was again inspired by the Al Jahili Fort.

To create an authentic visitor experience, sand used in the pavilion was shipped from the UAE’s deserts, under the direction of the Ministry of Information and Culture. In addition, while past UAE Pavilions were demolished, materials used to construct the pavilion at Expo 2000 Hannover were completely recyclable.



Figure 7: Ibn Majid Society's Artisans in the UAE Pavilion

2010 Shanghai

iv. EXPO 2010 SHANGHAI

The UAE's overall emphasis at Expo 2010 Shanghai shifted in terms of its design and content, with the pavilion focusing on the UAE's past, present and future. Starting with Expo 2010 Shanghai, the National Media Council became the main entity that oversees and manages the UAE's participation in World Expos – working with various ministries, national institutions and Masdar to create the visitor experience for the UAE Pavilion at Expo 2010.

The UAE Pavilion's "Better City for a Better Life" theme focused on the country's strategies for smarter and more sustainable initiatives and projects.

The pavilion, designed by Foster + Partners and inspired by sand dunes, presented live shows that depict the reality of life in the UAE, both past and present.

The pavilion's content highlighted the UAE's cultural and environmental diversity and featured live presentations on screens in the pavilion's three main halls – highlighting the story of the UAE's success in achieving sustainable and cultural development.

The pavilion also served as a showcase for pioneering projects such as Masdar City, a carbon-neutral, zero-waste community in Abu Dhabi that is intended to become a centre for the development of new ideas around energy production.

UAE Pavilion volunteers, who were part of the Emirates Foundation's Takatof programme, also played a significant role in showcasing a strong image of Emirati values and culture through their interactive engagement with pavilion visitors.

The UAE Pavilion won several awards for its participation in Expo 2010 Shanghai, scooping the official 'Best Pavilion' award from a selection of country pavilions. Judged by Shanghai Jiao Tong University as the 'Most Popular International Pavilion' at Expo 2010, the pavilion was also named by the Illinois Society of Structural Engineers as the Best Midsize Building in 2010. After Expo 2010 ended, the pavilion was dismantled, shipped and rebuilt in Manarat Al Saadiyat in Abu Dhabi.



Figure 8: UAE Pavilion in Expo 2010 Shanghai



Figure 9: UAE Pavilion volunteers in Expo 2010 Shanghai

2013 Expo 2020 Dubai bid

v. DUBAI'S WORLD EXPO BID

On 27 November 2013, Dubai won its bid to host a World Expo, making it the first city in the Middle East Africa and South Asia (MEASA) region to host the event. The messages highlighted in this year included the UAE's push to be the first in the region to host the Expo, its vision and strength on a global scale, which in turn, allowed it record-breaking moments, and the strength of community engagement to support the UAE's bid to host.

This part of the narrative is very nostalgic to the community of the UAE, who remember the events of that moment clearly.

Many families chose to put large banners on their houses, which read (in translation to English), "Our Home supports Expo".

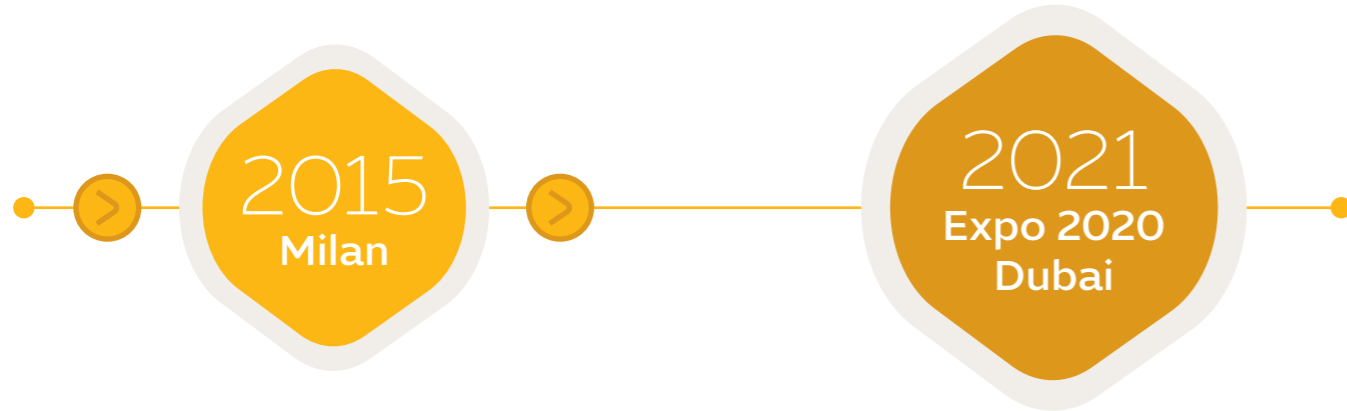
The theme of Expo 2020, "Connecting Minds, Creating the Future", and Dubai's geographic significance were seen as a gateway to creating partnerships and opportunities not only with Dubai, but also with the entire region, which motivated the global community to vote for Dubai.

It was a record-breaking moment for the UAE when it got the highest number of votes (116 votes) by the member states of the BIE in the history of the bidding process for World Expos.

Theme of Expo 2020 Dubai: "Connecting Minds, Creating the Future"



Figure 10: His Highness Sheikh Mohammed bin Rashid Al Maktoum's tweet on the announcement of the campaign in support of Dubai's bid



vi. EXPO 2015 MILAN

Expo 2015 Milan took place after the UAE won its bid to host Expo 2020 Dubai. A large group from the Expo 2020 organising body visited Milan under an observer programme to gain insight into the preparation and management of a World Expo. These learnings contributed, in a large extent, to the overall planning of Expo 2020.

Also designed by Foster + Partners, the UAE pavilion at Expo 2015 Milan took its inspiration from the deserts of the UAE.

The curves of its walls reflected the sand dunes, with its design also giving visitors an experience of walking along the narrow traditional streets of the UAE. The pavilion's first section highlighted the UAE's past, the second its present and the third its future.

In light of Expo 2015's main theme "Feeding the planet, Energy for life", the pavilion's content reflected the importance of finding innovative and efficient solutions for sufficient, safe food – reflecting some of the challenges facing the UAE and highlighting the significant interplay between land, energy and water.

The National Media Council and Takatof programme volunteers were again responsible for managing the visitor experience, receiving, supervising, guiding, welcoming and providing information to

guests on the heritage, culture and civilisation of the UAE.

Having played a significant role in showcasing UAE values, many of these volunteers have chosen to continue their World Expo journey, as either staff members or volunteers of Expo 2020.

The UAE Pavilion won an award for the best exterior design, while the National Media Council received an honourable mention for its efforts as the UAE Pavilion organiser and delivering a strong visitor experience.



Figure 11: A UAE Pavilion volunteer with visitors at Expo 2015 Milan



Figure 12: A group of UAE Pavilion volunteers at Expo 2015 Milan



Figure 13: The UAE Pavilion in Expo 2015 Milan

3. EXPO 2020 DUBAI THEME

On 27 November 2013, following a record vote by BIE members, Dubai was selected to host the World Expo in 2020 – becoming the first Arab nation, and the first country in the Middle East, Africa and South Asia (MEASA) region, to do so. Dubai's winning bid was the result of an inspiring collaboration between the UAE's leadership and the event's organisers to engineer an event that will have a sustainable and long-lasting impact for generations to come.

The theme of Expo 2020 Dubai – 'Connecting Minds, Creating the Future' – aims to cultivate new connections, collaborations and partnerships across sectors and geographies, with the event serving as a platform to inspire progressive change that will shape the future.

Within this, Expo 2020 identified three interconnected drivers of progress – Opportunity, Mobility and Sustainability – as subthemes.

The infographic features three circular icons on a yellow background. The top icon shows two people shaking hands with a globe, labeled 'OPPORTUNITY'. The middle icon shows a blue train on tracks, labeled 'MOBILITY'. The bottom icon shows a green building with solar panels, labeled 'SUSTAINABILITY'.

THE EXPO 2020 GLOBAL PLATFORM

Expo 2020 Dubai's theme and subthemes have been developed to capture a vision for the future from the perspective of the UAE leadership (from Vision 2021 through to the 2071 Centennial Plan), linking regional priorities and global challenges – as reflected in the 2030 Agenda for Sustainable Development and the United Nations Sustainable Development Goals (UN SDGs).

As the world strives to create a sustainable future, Expo 2020 Dubai has sought to integrate sustainability – as one of its three subthemes – into all its activities and create a meaningful impact beyond the six months of the event. It seeks to deep dive into rising global concerns around sustainability and the pressing need to drive change to create a better future.

The Sustainability Pavilion aims to promote such interactions by enabling new experiences through pioneering technologies and a sustainable infrastructure.

Furthermore, Expo 2020 hopes that by hosting people from across the world at a global platform, interactions will open up avenues to find collective solutions to combat global challenges.

Expo 2020 will serve as a medium to breathe life into its main theme and three subthemes. To achieve this, extensive planning is essential to ensure visitors are given the correct framework through which they can consume and immerse themselves in the dynamic, exciting content that will be on display.

Expo 2020 will engage with the international community visitors from across the world and will be able to embark on a seamless journey to seek collective solutions to global challenges, in a culmination of innovation and collaboration.

Expo 2020 Dubai will be organised by the UAE as an event that will bring about partnerships and associations, leading to long-term, sustainable benefits that will permeate people's lives around the world – leaving a lasting legacy for generations to come.

4. EXPO 2020 SITE PLAN

The 4.38 sqkm Expo 2020 site incorporates the Opportunity, Mobility and Sustainability Thematic Districts, all of which converge on Al Wasl Plaza – the beating heart of the Expo 2020 site.

The site also houses the Dubai Exhibition Centre, the Route 2020 Metro Station, arrival plazas, parks, permanent buildings, approximately 30,000 car parking spaces, and others.



i. AL WASL PLAZA

Al Wasl Plaza is situated at the heart of the site, connecting all other aspects together. The domed trellis acts as a 360-degree video projection screen, which will create an immersive experience that can be viewed from inside and outside.



ii. THEMATIC DISTRICTS

There are three Thematic Districts in the Expo 2020 site, reflecting the mega-event's three subthemes of Opportunity, Mobility and Sustainability. Construction of the districts was completed in May 2019. The three petal-shaped Thematic Districts are central to the design of the masterplan and are connected to the central Al Wasl Plaza, set to be the next iconic structure of Dubai.



iii. UAE PAVILION

Targeting LEED Platinum, the innovative design was inspired by the wings of a falcon, the UAE's national bird. The longest individual wing section on the roof is 70 metres.



iv. SUSTAINABILITY PAVILION

True to its subtheme, the Sustainability Pavilion is targeting a LEED-Platinum certification during its construction phase and zero net energy consumption in its Legacy phase. Sustainable features include 9,300 sqm of PV panels on the steel canopy, 4,100 sqm of PV panels across 18 'Energy Trees', and a system that filters and reuses water collected through the canopy.



v. MOBILITY PAVILION

The Mobility Pavilion, which is targeting LEED Gold building, features a dynamic landscape with undulating tracks and demonstration areas for the latest innovations related to the Mobility subtheme.



vi. PARKS

Two major parks provide space for large outdoor performance areas, plus zones for recreational activities. Facilities include washrooms, prayer rooms and food and beverage outlets.



vii. DUBAI EXHIBITION CENTRE

The Dubai Exhibition Centre (DEC) will be used as a multi-purpose function and event venue.



viii. ARRIVAL PLAZAS

There are four entrances to the Expo 2020 site: three leading to the welcome plazas for each Thematic District, and a fourth entrance concourse running from the Metro Station to the DEC.



ix. METRO STATION

The Metro Station is part of Route 2020, an extension created by the Roads and Transport Authority (RTA) to serve the Expo site. With a fleet of 50 trains, it will run every two minutes, carrying up to 46,000 passengers per hour.



x. PERMANENT BUILDINGS AND INFRASTRUCTURE

All permanent buildings on the Expo site are on track to achieve a minimum of LEED Gold and CEEQUAL Excellence, the highest rated infrastructure in the region.

5. PARTICIPATING COUNTRIES

As of 2019, 192 countries had confirmed their participation in Expo 2020 Dubai.

6. GOVERNANCE CORPORATE GOVERNANCE

As the host of Expo 2020 Dubai, and pursuant to the Convention Relating to International Exhibitions that was signed in Paris on 22 November 1928, and the regulations made for its implementation, the UAE is required to implement a series of legislative and financial measures to facilitate the event's organisation.

To implement these measures, the UAE Government has developed the necessary legal, financial and organisational measures required to organise and host the event successfully. Compliance to laws and regulations are administered by respective departments, monitored by a dedicated internal audit team.

The Dubai Government established the World Expo 2020 Preparatory Committee (the Higher Committee) through Decree 49 of 2013. The Higher Committee was formed to centralise strategic decisions and oversee the overall planning and delivery of Expo 2020's requirements and activities.

The Bureau

The Bureau Expo Dubai 2020 (the Bureau) was set up under Decree 30 of 2014, issued on 25 June, 2014, while Decree 31 of 2014 appointed Her Excellency Reem Al Hashimy, UAE Minister of State for International Cooperation, as the Director General of the Bureau.

As a government entity, the Bureau acquires its legal and financial jurisdiction directly from the Government of Dubai and acts as the executive arm of the Higher Committee. For more information on the functions and powers of the Bureau, kindly refer to the [Expo 2020 Dubai Sustainability Report 2018](#).

Expo 2020 Dubai LLC

On 12 December 2015, the Bureau incorporated Expo Dubai 2020 LLC in the Department of Economic Development (DED). Once incorporated, the organisation set up the Board of Directors to advise the Director General on operational development and overseeing the Expo, reporting through the Bureau to the Higher Committee. It also set up various Board Committees and a management governance structure to oversee the operational development of the Expo and provide timely reports through the Bureau to the Higher Committee.

HIGHER COMMITTEE

Members of the Higher Committee, who come from diverse background of expertise and experience, include:



His Highness Sheikh Ahmed Bin Saeed Al Maktoum
President, Dubai Civil Aviation Authority
Chairman of the Expo Dubai 2020 Higher Committee



His Excellency Mohammed Ibrahim Al Shaibani
Director General, HH The Ruler's Court of Dubai, UAE
Vice Chairman of the Expo Dubai 2020 Higher Committee



Her Excellency Reem Ebrahim Al Hashimy
UAE Minister of State for International Cooperation
Director General, Expo 2020 Dubai Bureau



His Excellency Sheikh Sultan Bin Tahnoon Al Nahyan
Member of the Abu Dhabi Executive Council
Member of the Expo Dubai 2020 Higher Committee



His Excellency Dr. Sultan Ahmed Al Jaber
Cabinet Member and Minister of State
Chairman of the Board of Directors of the National Media Council
Member of the Expo Dubai 2020 Higher Committee



His Excellency Mattar Mohammed Al Tayer
Chairman of the Board and Executive Director, Roads and Transport Authority (RTA)
Member of the Expo Dubai 2020 Higher Committee



His Excellency Lieutenant General Abdullah Khalifa Al Marri
Commander-in-Chief of Dubai Police
Member of the Expo Dubai 2020 Higher Committee



His Excellency Mohamed Alabbar
Chairman, Emaar Properties PJSC
Member of the Expo Dubai 2020 Higher Committee



His Excellency Helal Saeed Al Marri
Director General, Dubai Department of Tourism and Commerce Marketing (DTCM)
Member of the Expo Dubai 2020 Higher Committee



His Excellency Khalifa Al Zaffin
Executive Chairman, Dubai Aviation City Corporation (DACC)
Member of the Expo Dubai 2020 Higher Committee



His Excellency Dawood Abdulrahman Al Hajiri
Director General, Dubai Municipality (DM)
Member of the Expo Dubai 2020 Higher Committee



02

THE FOUNDATIONS OF A SUSTAINABLE EXPO

SUSTAINABILITY AT EXPO 2020 DUBAI

A. DELIVERING A SUSTAINABLE EXPO

Expo 2020 Dubai focuses on the UAE's ongoing transition to a knowledge-based economy, mirroring how the country conducts business, creates networks and addresses challenges as a melting pot of opportunity, entrepreneurship, education, connectivity and future growth.

Expo 2020 Dubai embodies the principles of sustainable development, respecting ecological limits and natural resource constraints, encouraging prosperity and well-being while optimising conditions for human development. It also lays the foundation for a sustainable legacy for future generations.

Expo 2020 aims to deliver one of the most sustainable World Expos in history, supporting the UAE in its journey towards a green economy. The event will focus on critical sustainability target areas, supported by various key performance indicators (KPIs).

EXPO 2020 DUBAI'S FOUR KEY SUSTAINABILITY OBJECTIVES INCLUDE:

- 01 Leaving a legacy of sustainable infrastructure and future-oriented sustainable practices
- 02 Catalysing sustainability efforts in Dubai and the UAE
- 03 Increasing public awareness by engaging society on sustainability principles and sustainable living
- 04 Developing sustainability solutions that are scalable, extending their benefits to the wider economy

Through this main chapter 'Foundations of a Sustainable Expo', we explore various sustainability topics, based on how sustainability is **integrated** across Expo 2020 Dubai – embracing the opportunity to create a meaningful **impact** and **inspiring** the global community to become part of a sustainable future.

EXPO 2020 ALIGNMENT WITH REGIONAL AND GLOBAL ASPIRATIONS

In order to achieve its sustainability targets, Expo 2020 has implemented a well-integrated, strategically consistent approach that aligns with national and international drivers.



Global Policy 2030 Agenda for Sustainable Development



UAE Vision 2021



Dubai Plan 2021

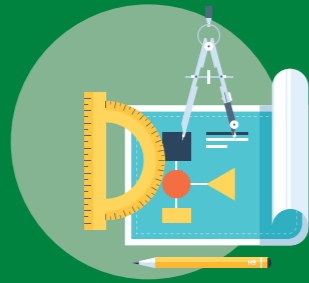


EXPO 2020 DUBAI UAE

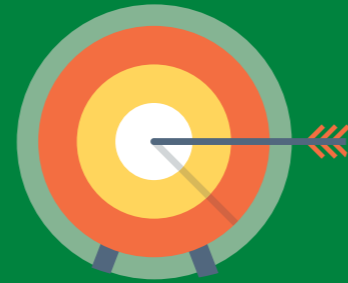
Expo 2020's programme-wide sustainability strategy ensures the integration of a number of processes and methodologies across a wide range of areas, including planning, design, construction and operations.



Programme-wide approach to sustainability, prioritising the delivery of passive solutions



Programme-wide approach to integrated sustainable design



Sustainability key areas of approach

To deliver one of the most sustainable World Expos in history, Expo 2020's Sustainability Policy sets the foundation to ensure the event respects the environment, society and culture – engaging the global community, participants and visitors to become part of the solutions that address various sustainability challenges across the world.

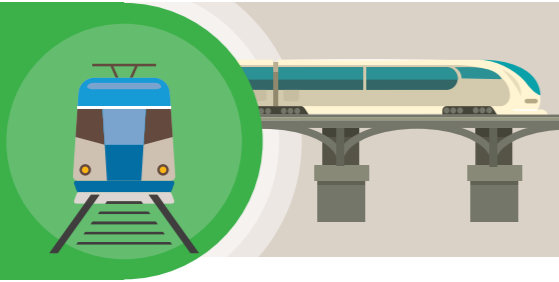
By focusing on its key sustainability objectives, Expo 2020's sustainability strategy aspires to create lasting positive environmental, social and economic impacts on a national, regional and global scale. Expo 2020 encompasses a sustainable scope for several disciplines, including sustainable construction and materials, sustainable event operational management, responsible procurement, accessibility and inclusion, responsible production and consumption of resources, sustainable partnerships, sustainability certification and community volunteering.



EXPO 2020 SUSTAINABILITY KEY AREAS, KPIS, AND 2019 PERFORMANCE

TRANSPORT

OBJECTIVE: Encourage the use of sustainable, lower carbon transport by providing alternative transport options such as the metro and the Expo Rider bus service



KPIs

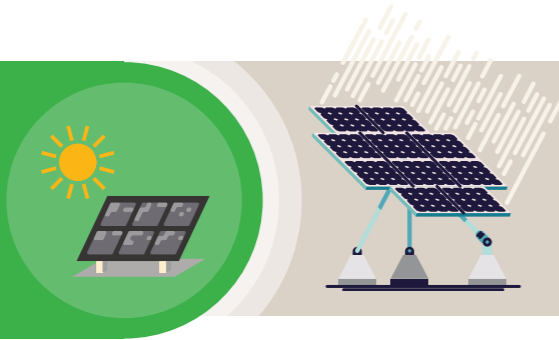
Encourage significant shift from private vehicles to alternative transport options

2019 PERFORMANCE

51% projected reduction of personal vehicles

ENERGY

OBJECTIVE: Reduce energy consumption



KPIs

Reduce energy demand in buildings by 20% in comparison to international standards

2019 PERFORMANCE

30.1%

PUBLIC REALM

OBJECTIVE: Create people-centric, comfortable and walkable spaces



KPIs

Provide shading for 75% of primary walkways in Thematic Districts at mid-day peak

2019 PERFORMANCE

75.5%

Provide shading for 60% of hard landscaping areas and public open spaces at mid-day peak

2019 PERFORMANCE

58.8%

SUSTAINABILITY AWARENESS

OBJECTIVE: Enable visitors, participants and facility managers to appreciate, understand and contribute to the responsible use of resources



KPIs

75% of sustainability features at Expo 2020 with educational awareness, collateral or activities

2019 PERFORMANCE

75% Projection

KPIs

50% of landscape plants (during Expo 2020) and 95% of landscape plants (post Expo 2020) are native and adaptive species

2019 PERFORMANCE

92% for Expo projects

95% of landscape area managed without the use of chemical pesticides, herbicides or fertilisers

2019 PERFORMANCE

100%

KPIs

Recycled water is used for 100% of non-potable applications (e.g. irrigation, cooling)

2019 PERFORMANCE

100%

Collect and use 95% of condensate water recovered from buildings

2019 PERFORMANCE

On track for event time

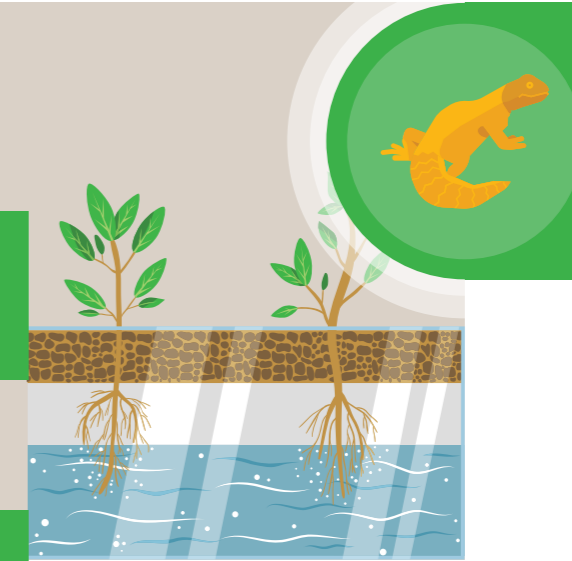
Reduce water demand in buildings by 40% in comparison to local standards

2019 PERFORMANCE

52.4%

ECOLOGY

OBJECTIVE: Enhance the ecological value of the site and promote local species



WATER

OBJECTIVE 1: Reduce the demand on potable water systems by applying a water efficiency hierarchy, followed by the substitution of potable water with non-potable supplies

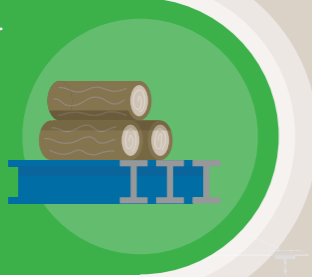


OBJECTIVE 2: Reduce water consumption

EXPO 2020 SUSTAINABILITY KEY AREAS, KPIS, AND 2019 PERFORMANCE cont.

MATERIALS

OBJECTIVE: Minimise depletion of natural resources through design for reuse and Legacy



KPIs

90% of materials used in permanent construction to be retained for the Legacy phase, District 2020

2019 PERFORMANCE

84.1%

90% of selected materials are procured in accordance with Sustainable Materials Guidelines

2019 PERFORMANCE

89.2%



WASTE

OBJECTIVE: Minimise quantity of waste to landfill



KPIs

85% (by weight) of waste segregated into different waste streams, during construction, operation and decommissioning, to allow for diversion from landfill

PERFORMANCE AS OF 2019

92% cumulative



SUSTAINABLE OPERATIONS AND REPORTING

OBJECTIVE: Communicate sustainability progress and achievements in a transparent and stakeholder-responsive way



KPIs

Achieve ISO 20121 Sustainable Event Management certification

2019 PERFORMANCE

On track for event time

Publish sustainability reports based on internationally recognised guidelines

2019 PERFORMANCE

Publication of the 2018 Expo 2020 GRI Sustainability Report

KPIs

Achieve LEED Gold for Expo building projects

2019 PERFORMANCE

On track for all Expo permanent buildings

Achieve CEEQUAL Excellent Certification for Expo infrastructure projects

2019 PERFORMANCE

On track for Expo permanent infrastructure



SUSTAINABILITY CERTIFICATION

OBJECTIVE: Demonstrate added value through sustainability certification of both horizontal and vertical infrastructure

KPIs

Fully implement a greenhouse gas (GHG) mitigation and off-setting strategy

2019 PERFORMANCE

Phase 1 completed in 2019 (see 2018 GRI report)



CARBON

OBJECTIVE: Measure and minimise carbon emissions in Expo 2020 Dubai



B. RISE Guidelines For Sustainable Operations

Expo 2020's commitment to setting the foundations for a sustainable social, economic and environmental legacy involves the implementation of Expo 2020's RISE Guidelines for Sustainable Operations across all phases of the event.

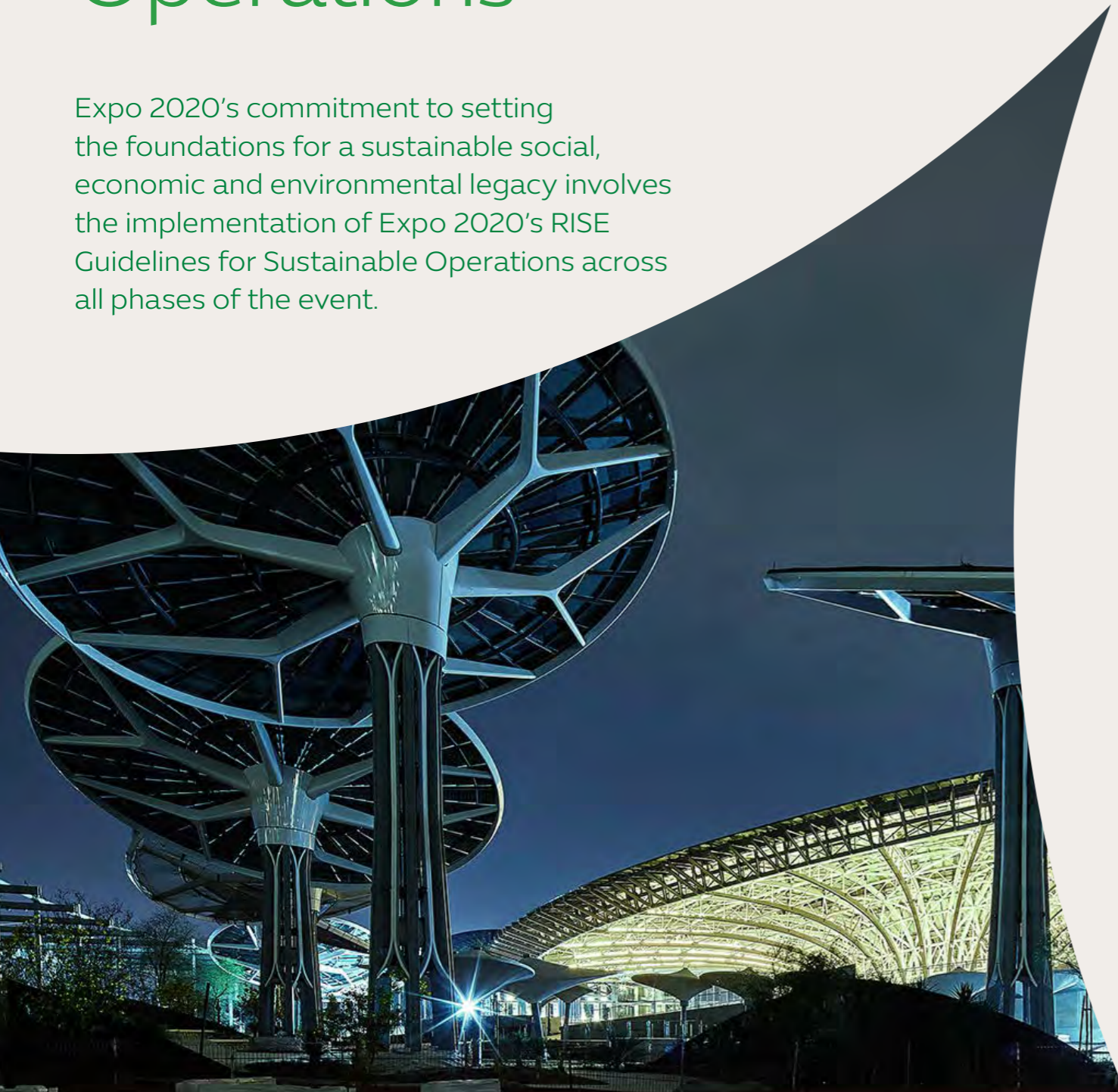
Aligned with ISO 2012 Sustainable Event Management System and commitments stipulated to the BIE, these Expo 2020-developed operational guidelines help suppliers **integrate sustainability into products and services that they supply to Expo 2020.**

Aligned with the belief that Expo 2020's sustainability goals can only be achieved through internal and external stakeholder engagement, the RISE Guidelines are designed to be practical, achievable and aspirational – helping to leave a lasting positive legacy for our community and the environment.

RISE stands for:



The RISE Guidelines refer to other established standards, policies and guidelines. Examples include environmental legislation from the European Commission, benchmarks from The Sustainability Consortium – a global non profit dedicated to improving the sustainability of consumer products – and contextual GCC, UAE environmental and social policies.



OBJECTIVES OF THE RISE GUIDELINES FOR SUSTAINABLE OPERATIONS

1. Enable and drive Expo 2020's sustainability commitment through mandatory, voluntary requirements and guidelines. Throughout the document, two forms for compliance – **Controls** and **Guides** – have been established. Controls address firm Expo 2020 requirements that **must** be followed, whilst Guides are recommended – optional requirements for suppliers to follow, wherever possible, to help Expo 2020 and its stakeholders maximise positive impact.
2. Utilise the RISE methodology to challenge and motivate the market, driving positive change at the local, regional and international level. Each criterion is defined as follows:



RESPECT:

Criterion covers areas such as child labour, worker welfare, fairtrade – where requirements are aimed at guarding the conditions for local and overseas workers – and the importance of making facilities physically accessible for all, including People of Determination.



SAFETY:

Criterion sets expectations for suppliers to commit to Expo 2020's Health & Safety (H&S) requirements. Suppliers are reminded to comply with national and Expo 2020 food hygiene standards. There are also requirements associated with the management and control of the potential health impacts of cleaning and retail products.



IMPACT:

Requirements in this area support the wider uptake of sustainable behaviours to influence positive social development. This criterion concerns Corporate Social Responsibility (CSR), recognising the opportunity for organisations to actively and positively engage the communities in which they operate. Traceability through the supply chain is also included, with requirements for local and responsible sourcing. Suppliers are also requested to raise awareness of their sustainability initiatives to visitors.



ENVIRONMENT:

Requirements cover the natural and built environment, recognising the need for good stewardship and accountability. For example, guidelines on the use of single-use plastics and the recycling of packaging materials are clearly set out within the RISE Guidelines, supporting Expo 2020's target of diverting 85% of waste from landfill. The sustainable procurement of materials such as paper is also reinforced under the RISE Guidelines, alongside requirements for the reduction of green-house gas emissions, water consumption and pollutants.

3. Provide a detailed description of the mandatory and voluntary standards using the RISE methodology for Expo 2020's sustainability operations requirements. Each chapter is dedicated to a specific supplier category:



FOOD AND BEVERAGE:

Encourage suppliers to question the sourcing of their products, eliminating any risks to unsustainable environmental practices



RETAIL:

Health, Safety and Environmental caution is required and encouraged throughout the product supply chain and life cycle, emphasising ethical sourcing



LOGISTICS:

Advocate minimising vehicle fuel consumption, greenhouse gas emissions, water consumption, vehicle journeys, packaging, wastes and air pollution



LANDSCAPING:

Support the reduction of chemical pesticides, herbicides and fertilisers, and encourage the use of eco-friendly cleaning products. The RISE Guidelines also support the use of green waste for composting, as opposed to landfill, and seek to reduce the use of peat-based compost



PACKAGING AND SINGLE-USE MATERIALS:

Support suppliers to consider strategies that each, and their supply chains, can adopt to reduce packaging and single-use materials



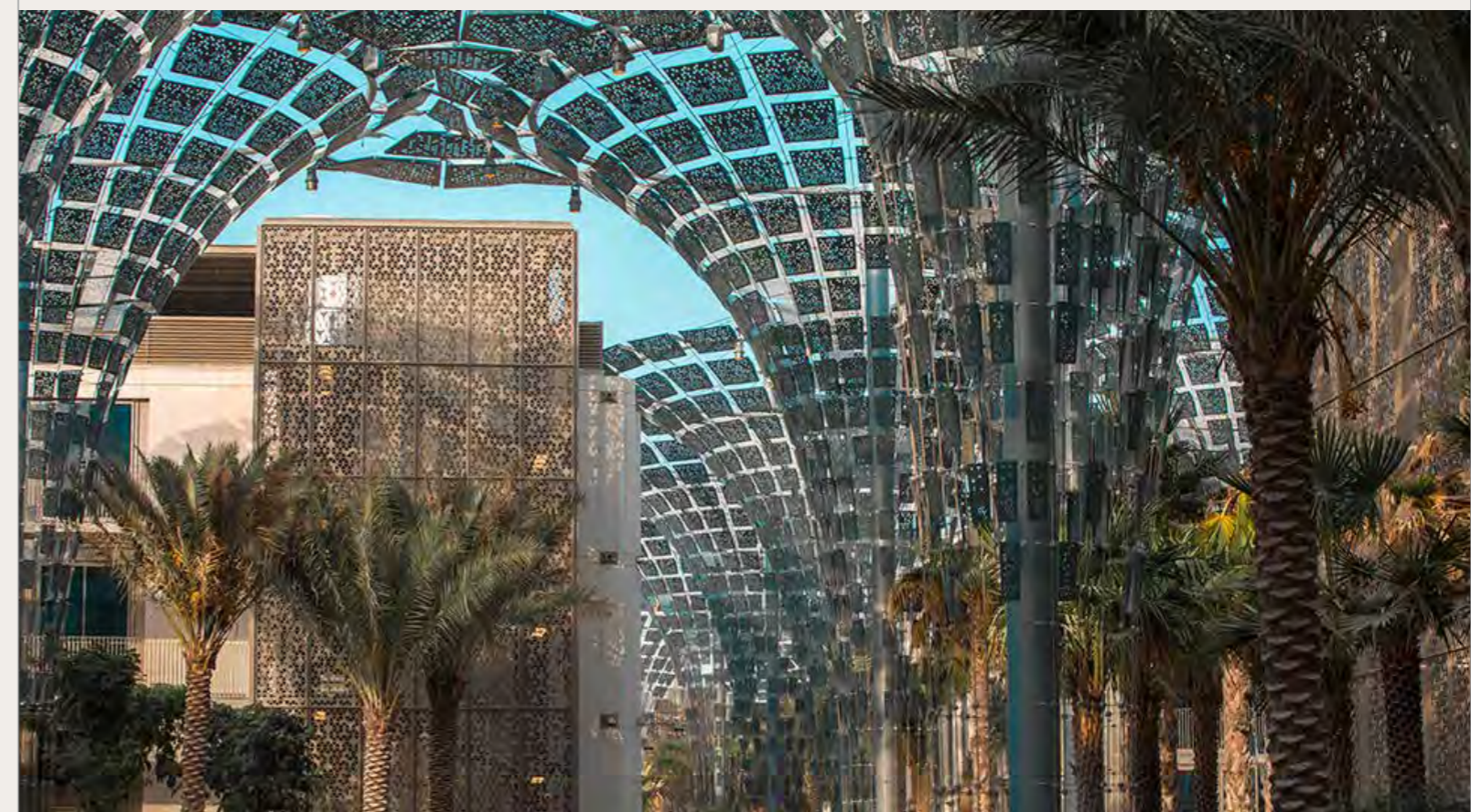
CLEANING SERVICES:

Encourage cleaning-product/services suppliers to opt for environment-friendly products which adhere to relevant global environmental certifications for cleaning products



FURNITURE, FITTINGS AND EQUIPMENT:

Support suppliers in ensuring all furniture, fittings and equipment used within the Expo 2020 site are designed, procured and installed to perform sustainably



LEGACY OF EXPO 2020 RISE GUIDELINES FOR SUSTAINABLE OPERATIONS

SPREAD BEST PRACTICE AND LEAVE A SUSTAINABLE LEGACY

By championing new behaviours and showcasing sustainable innovations across Expo 2020, stakeholders can play a major role in promoting best practice at the local and regional level



PROVIDE STAKEHOLDERS WITH A POSITIVE REPUTATIONAL ADVANTAGE

Stakeholders within Expo 2020 Dubai's supply chain will benefit from greater visibility as champions of positive change and responsible decision making. This will benefit their positive influencing power regionally and provide them global visibility through the platform of Expo 2020



POSITION EXPO 2020 AS A CATALYST FOR SUSTAINABILITY ACROSS THE REGION

The Expo 2020 RISE Guidelines for Sustainable Operations, as a future model for sustainability across the region, can be used by individuals and organisations long after Expo 2020 Dubai ends – exemplifying a true, lasting key performance indicator that will benefit society for generations to come



INTEGRATE

A. STAKEHOLDERS & MATERIALITY

Expo 2020's initial stakeholder mapping exercise in 2018 was conducted with the participation of various Heads of Department at Expo 2020. To appropriately identify all relevant stakeholders, the exercise was based primarily on the following parameters:

Benchmarking Expo 2020 against previous major events:

This allowed organisers to identify relevant stakeholders at similar events and help to understand how such stakeholders have the potential to influence Expo 2020



ISO 20121:2012:

This framework outlines, at a minimum, the parties that are expected to be affected by Expo 2020's activities, services and reasonably affected by the organisation's strategies and objectives

Essential recipients of Expo 2020's relevance:

This includes prominent governing bodies such as the BIE, UAE governmental organisations and Expo 2020 employees

Based on the exercise, Expo 2020 stakeholders have been mapped into the following categories:

	1. Expo 2020 Dubai LLC and its employees		2. International Participants		3. Vendors and Suppliers
	4. Local Community and Volunteers		5. Civil Society and Non-Governmental Organisations (NGOs)		6. Construction Consultants, Contractors and Workers
	7. Partners		8. Youth and Schools Programmes		9. Government Authorities and Entities

Stakeholder categories were adopted largely under the ISO 20121:2012 framework. However, workers' trade union organisations were not included in the materiality exercise because under UAE law expatriate workers are directed to take recourse with the Ministry of Labour for all work-related grievances.

Additionally, to prevent a complete exclusion of this category, material topic discussions with internal and external stakeholders were designed to be inclusive of all levels of employee interaction.

1. STAKEHOLDER ENGAGEMENT AND MATERIALITY

Building on the stakeholder mapping exercise conducted in 2018, Expo 2020 conducted two internal stakeholder materiality workshops for senior management and employees of Expo 2020, and one for external stakeholders. These sessions involved key senior management members, Expo 2020 employees and external stakeholders, including representatives from government entities, commercial partners, NGOs and volunteers.

Their purpose was to seek input from Expo 2020 stakeholders on the 30 economic, environmental and social topics (shortlisted based on the GRI-specific standards, along with two additional non-GRI topics, Innovation and Accessibility) and finalise the topics to be included in the 2019 Annual GRI Sustainability Report.

2019 MATERIALITY WORKSHOPS

INTERNAL

18 December 2019

Workshop 1 (Senior Management): 10 representatives from key senior management at Expo 2020

Workshop 2 (Employees): 14 Expo 2020 employees

EXTERNAL

19 December 2019

34 Expo 2020 external stakeholder participants, including representatives from government entities, commercial partners, NGOs and volunteers

INTERNAL DEPARTMENTS AND EXTERNAL STAKEHOLDERS WHO ATTENDED THE MATERIALITY WORKSHOPS

INTERNAL DEPARTMENTS	EXTERNAL STAKEHOLDERS
Logistics	Ministry of Education
Communications	Dubai Police
Worker Welfare	Dubai Electricity and Water Authority
Health and Safety Assurance	Ministry of Infrastructure Development
Marketing	Ministry of Economy
Research and analytics	Ministry of Culture and Knowledge Development
District 2020	Community Development Authority - Dubai
Real Estate and Assurance Office	Department of Tourism and Commerce Marketing
Portfolio Management Office	Dubai Airports
Integrated Operations Office	Dubai South
International Participants	Ministry of Community Development
Environment	Dubai Civil Defence
Operations	Emirates NBD
Expo School Programme	Nissan
Human Resources	SAP
Innovation & Future Technology (IFT)	Siemens
Security	Christie
International Organisations and Non-Official Participants	Kier
International Business Engagement	Al Naboodah
	Expo 2020 Volunteer Representative
	Knowledge and Human Development Authority
	Roads and Transport Authority
	UPS
	Swatch
	Canon
	Emirates Nature-WWF
	Emirates Environmental Group
	Emirates Green Building Council

2. METHODOLOGY

The workshop was conducted using 'MentiMeter', an online voting application that allows users to cast their votes, in real time, through their smartphones or laptops. After each topic was introduced, the floor was then opened to questions and discussion. Following this, session participants ranked each topic using a scale between one and 10. To avoid any response bias, results were not shown until after all participants had finished casting their votes.

The ranking of topics was based on the significance of each topic from the point of view of stakeholders. The scale ranged between one (least significant) and 10 (most significant).

3. RESULTS AND FINDINGS

Of the 30 sustainability topics that were consulted with the stakeholders, 25 of them were ranked as material topics in 2019. Both the non-GRI topics were ranked in the top of the list, also including new topics such as anti-corruption, forced labour, security and procurement practices, etc in addition to the material topics disclosed last year. While 2019 continued to primarily cover the Pre-Expo phase, event-specific topics such as customer health and safety were already being prioritised by the stakeholders in their assessment.

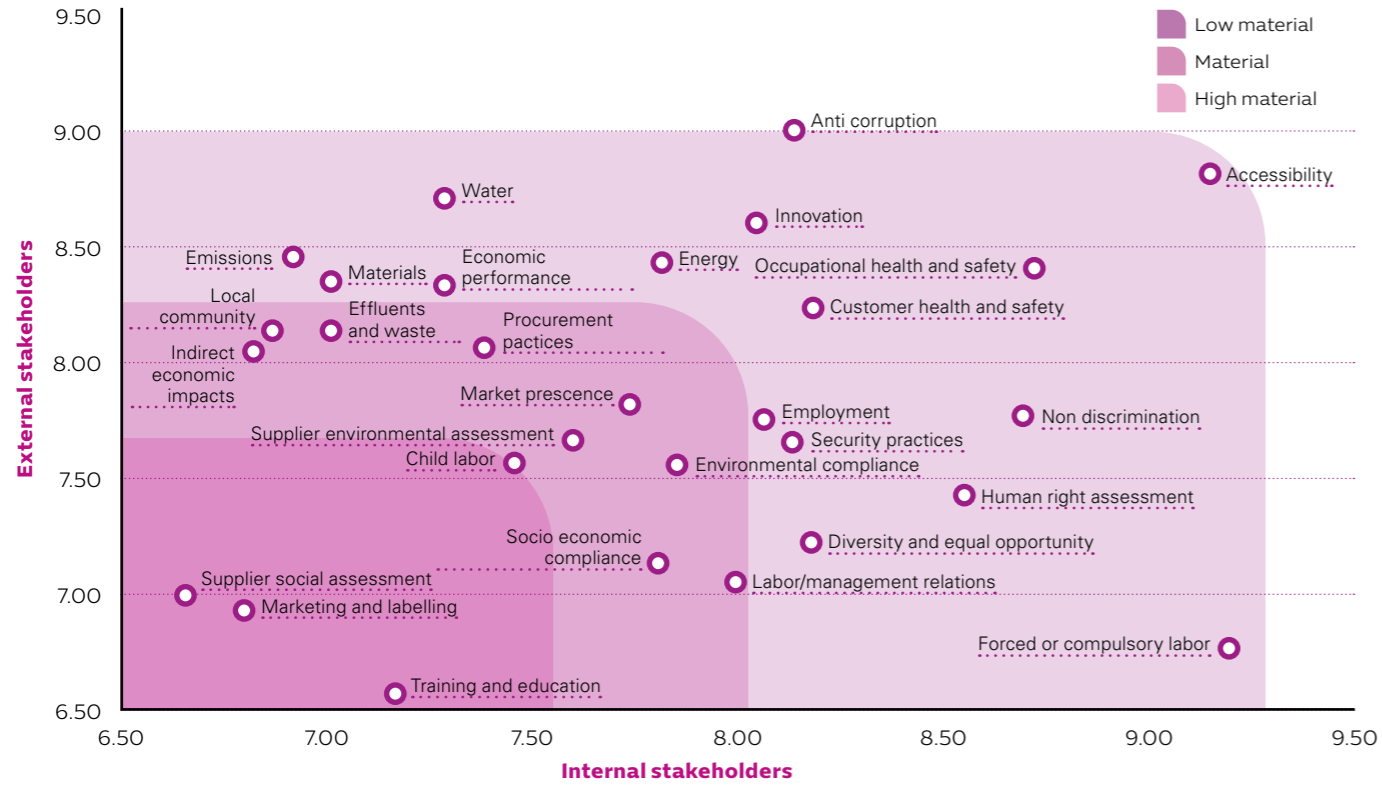
COMBINED RANKING FROM INTERNAL AND EXTERNAL WORKSHOP RESULTS

GRI STANDARD	TOPIC
Non-GRI Standard	Accessibility
205	Anti-Corruption
403	Occupational Health and Safety
Non-GRI Standard	Innovation
406	Non-Discrimination
416	Customer Health and Safety
302	Energy
303	Water and Effluents
412	Human Rights Assessment
408	Forced or Compulsory Labor
410	Security Practices
401	Employment
201	Economic Performance
204	Procurement Practices
405	Diversity and Equal Opportunity
202	Market Presence
305	Emissions
307	Environmental Compliance
301	Materials
308	Supplier Environmental Assessment
306	Effluents and Waste
402	Labor/Management Relations
413	Local Community
419	Socio Economic Compliance
407	Child Labor

4. MATERIALITY MATRIX

Results from the 2019 Materiality Assessment are displayed in the matrix below.

The graph's vertical axis represents results from Expo 2020's external stakeholder materiality workshop, while the horizontal axis depicts findings from the two internal stakeholder sessions.



B. SUSTAINABLE SUPPLY CHAIN

By engaging more than 40,000 suppliers, registered across 174 countries, and incorporating sustainability principles within its procurement practices, Expo 2020 is helping to increase awareness and extend its vision of sustainability across its supply chain.

Evaluation of submitted tenders is carried out by separate tender review teams. Following the opening of the tender, the procurement manager ensures that only approved members are part of the evaluation process, manages the tender review and issues a pro-forma report - supported by the technical review team. The tender review is conducted within the agreed timescale, based on a predetermined scoring matrix. Bidders are contacted for further clarifications, if required, to ensure a decision is made on complete and accurate information.

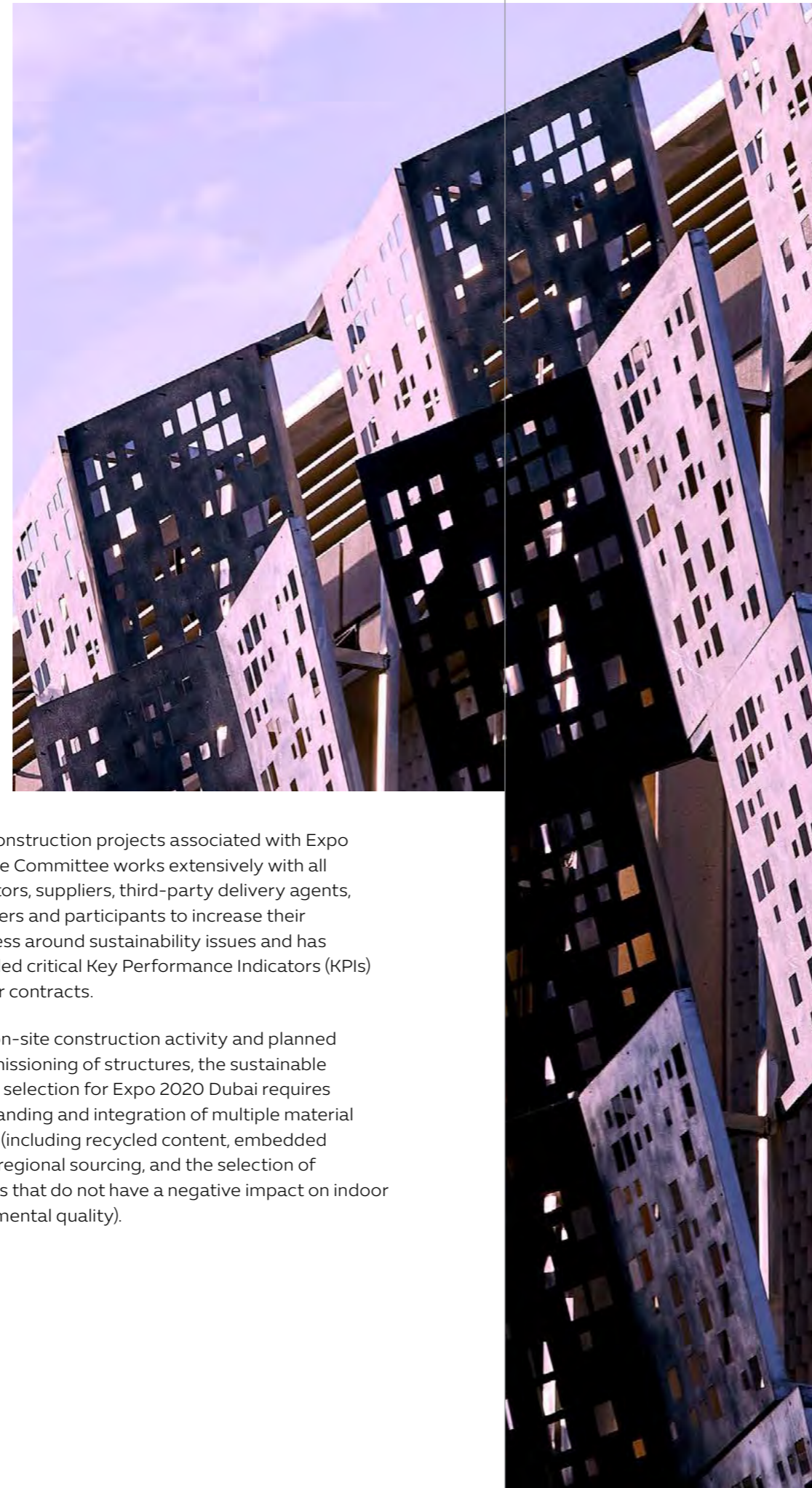
1. SUSTAINABLE MATERIALS

The Expo Higher Committee has a specialised Contracts and Tender Committee that is responsible for supervising the procurement and tendering process in relation to work undertaken for Expo 2020 Dubai.

The process is structured and ratified through specific guidelines which pertain to material selection and carbon emissions abatement.

For all construction projects associated with Expo 2020, the Committee works extensively with all contractors, suppliers, third-party delivery agents, developers and participants to increase their awareness around sustainability issues and has embedded critical Key Performance Indicators (KPIs) into their contracts.

Due to on-site construction activity and planned decommissioning of structures, the sustainable material selection for Expo 2020 Dubai requires understanding and integration of multiple material aspects (including recycled content, embedded carbon, regional sourcing, and the selection of materials that do not have a negative impact on indoor environmental quality).



OVERVIEW OF COMPLIANCE REQUIREMENTS FOR KEY MATERIALS

PRODUCT	CERTIFICATION	SUBMISSION REQUIREMENT
 STEEL	<ul style="list-style-type: none"> World Steel Association Climate Action Programme (CAP) membership CARES Sustainability Standard, BES 6001 or equivalent 	<ul style="list-style-type: none"> EPD Evidence of membership
 CONCRETE	<ul style="list-style-type: none"> EPD to EN 15804 Certified to the WBCSD Cement Sustainability Initiative Responsible Sourcing Scheme Replacement of Portland Cement with Fly Ash, Silica Fume and/or GGBS 	<ul style="list-style-type: none"> EPD Certificate Evidence of membership
 TIMBER	<ul style="list-style-type: none"> Forestry Stewardship Council (FSC) certification Programme for the Endorsement of Forest Certification (PEFC) certification 	<ul style="list-style-type: none"> Chain of Custody (CoC) certificate with codes or serial numbers Copy of certificate
 AGGREGATE	<ul style="list-style-type: none"> BES 6001 certification Crushed Concrete Aggregate (CCA) in concrete production conforms to BS 8500 requirements ACI 555R in conjunction with corresponding ASTM standards Reuse based on ASTM and AASHTO standards 	<ul style="list-style-type: none"> Copy of certificate Lab test results
 PVC	<ul style="list-style-type: none"> ECVM Industry Charter for the Production of VCM and PVC 	<ul style="list-style-type: none"> Certificate Product data sheet
 ALL MATERIALS	<ul style="list-style-type: none"> For suppliers with more than 250 employees: <ul style="list-style-type: none"> BS EN ISO 14001 accreditation EMAS accreditation Employer Approved Environmental Management System BS EN ISO 9001 accreditation BS OHAS 18001 accreditation 	<ul style="list-style-type: none"> Copy of certificate and/or management system Document demonstrating compliance

The Committee and the relevant team members track all suppliers and contractors' contributions based on Expo 2020's procurement strategy, which is guided by the Expo Environmental and Sustainability requirements, as well as the Sustainable Materials Guidelines.

2. PROMOTING LOCAL PROCUREMENT

Since the start of the programme and by the end of 2019, Expo 2020 Dubai awarded a total of 10,700 contracts, 55% of which were awarded to small and medium enterprises.

Expo 2020 has also established a 'Small and Medium Enterprises Engagement Policy' in order to be inclusive and encourage SME participation across its supply chain. Out of a total of 5,360 contracts awarded in 2019, 90 per cent have been made to companies registered in the UAE, contributing to the nation's in-country value.

Catering to businesses of all sizes from around the world, Expo is also committed to promoting local and sustainable procurement. This can positively influence the social, environmental and economic impact on our local communities.

Out of a total of 5,360 contracts awarded in 2019,

90%

have been made to companies registered in the UAE, contributing to the nation's in-country value.

BEST CROSS-FUNCTIONAL TEAM

Leveraging shared experiences from previous expos and other international events such as the Olympic Games, Expo 2020's procurement team leads a cross-functional team that builds on inspiration from more than 190+ participating nations.

One of the key initiatives launched by the team includes an online marketplace (OMP) – a new-generation e-sourcing platform developed for Expo 2020 – that connects businesses, encourages collaboration and offers exposure so they can more successfully compete for international opportunities. The project also created a portal for international participants to access information on procurement in the UAE.

Expo 2020 wins 'Best Cross-Functional Team' and 'Young Procurement Professional of the Year' at the CIPS Middle East Conference and Supply Management Awards 2020.

YOUNG PROCUREMENT PROFESSIONAL OF THE YEAR

Contributing to the team's ongoing success is Expo 2020 senior leadership team member Adam Bektic, a recipient of the 'Young Procurement Professional of the Year' prize at the CIPS Middle East Conference and Supply Management Awards 2020.

Adam established and transformed operations, leading strategy development, negotiations and risk management for Expo 2020.

Currently, he is the procurement lead on all temporary event overlay requirements for Expo 2020. He leads the non-construction, centralised procurement team for all non-real estate and delivery matters. Over the past four years, Adam has consistently exceeded performance targets, achieving a minimum 10% saving across packages procured, reducing procurement cycle times and improving compliance with key governance policies, processes and procedures.



3. SUSTAINABLE PARTNERSHIPS

The successful delivery of Expo 2020 Dubai is highly dependent on the event's robust network of partners who will support the event's visitor experience and its legacy.

At the heart of Expo 2020 is a belief in the power of connections, embedded in its main theme, 'Connecting Minds, Creating the Future'. This belief drives the vision and strategy for nurturing smart, strong and sustainable partnerships across cultures, organisations and generations.

With this in mind, Expo 2020 closed 2019 with eleven Official Premier Partners, eight Official Partners and eight Official Providers.

Part of Expo 2020's legacy will be the boosting of Dubai's supply chain capabilities through the implementation of business-friendly legislation to encourage foreign partnerships, and investment in local manufacturing and service provision. This legacy will lie in the partnerships and projects formed during Expo that will continue to grow and flourish past event time.

OFFICIAL PREMIER PARTNERS

COMPANY NAME: ACCENTURE
Partnership Tier: Premier Partner
Category/Designation: Official Digital Service Partner (jointly with Etisalat)

Description: Working closely with Telecommunications partner Etisalat, Accenture will ensure world-class integration of various ICT systems and innovative solutions to meet the digital needs of visitors, organisers and participants. Accenture will also design, build and run solutions in areas such as virtual assistance, business intelligence, analytics, mobile applications and guest relations.



COMPANY NAME: DP WORLD
Partnership Tier: Premier Partner
Category/Designation: Official Premier Global Trade Partner

Description: DP World is one of the world's leading logistics solutions providers. It owns and operates 80 terminals globally, including the Port of Jebel Ali, less than 10km from the Expo 2020 site. DP World is playing a vital role in the supply chain of Expo 2020, providing logistical support for the participating countries. As an active supporter of innovation and start-up organisations, both locally and internationally, DP World will complement various initiatives of Expo 2020.



COMPANY NAME: CISCO
Partnership Tier: Premier Partner
Category/Designation: Official Digital Network Partner

Description: As Digital Network Partner, Cisco will provide the secure, intelligent foundation for connectivity through its intent-based networking solution. Designed for the demands of the digital era, Cisco® intent-based network provides an infrastructure that constantly learns, adapts and protects, making it the ideal foundation for the complete digital experience offered at Expo 2020 Dubai. It will also help enable visitors, exhibitors and organisers to connect anywhere, on any device – securely, reliably and seamlessly. Expo 2020 will also utilize the Cisco Vision™ signage solution to help deliver information and experiences throughout Expo in a way that enhances attendee engagement.



COMPANY NAME: EMIRATES NBD
Partnership Tier: Premier Partner
Category/Designation: Official Banking Partner

Description: The UAE-based banking group will operate an onsite 'Bank of the Future' at Expo 2020 Dubai and will provide a network of ATMs throughout the site.



By showcasing a variety of services to visitors, participants and organisations, such as bespoke SME banking packages, merchant account operations, and Islamic banking and foreign exchange services, Emirates NBD will demonstrate how it is leading the banking industry by being at the forefront of innovation.

COMPANY NAME: ETISALAT
Partnership Tier: Premier Partner
Category/Designation: Official Telecommunications Partner
 Official Digital Service Partner (jointly with Accenture)

Description: The UAE's leading international telecom and digital service provider will provide site connectivity and 5G telecom infrastructure, enabling Expo to offer its visitors and participants cutting-edge, immersive digital experiences that bring the event's themes to life. It will also offer high-speed and redundant Wi-Fi, capable of handling hundreds of thousands of visitors onsite at peak times.



COMPANY NAME: NISSAN
Partnership Tier: Premier Partner
Category/Designation: Official Automotive Partner

Description: Nissan is providing a fleet of operational vehicles to EXPO, including electric vehicles (EVs), which feature advanced technologies. Leading 'Nissan Intelligent Mobility' technologies and next generation cars will be showcased during the event at various points across the site, with learnings from the Partnership helping to accelerate the electrification of mobility in the region.



COMPANY NAME: EMIRATES AIRLINE
Partnership Tier: Premier Partner
Category/Designation: Official Airline Partner

Description: Emirates, the world's largest international airline, will play a key role in bringing visitors to Expo 2020 through its extensive route network of over 150 destinations. The Emirates Pavilion will offer visitors a glimpse into the future of commercial aviation in 2071, exploring the boundaries of innovation and technology in sustainable commercial aviation. The Cleaner Skies installation at the Emirates Pavilion will highlight key sustainability issues in the context of passenger growth, technological advancements and promising innovations to ensure cleaner and quieter skies.



COMPANY NAME: PEPSICO
Partnership Tier: Premier Partner
Category/Designation: Official Beverage and Snack Partner

Description: Expo and PepsiCo have joined forces with a shared vision to work together towards a healthier and more sustainable future in the lead-up to, during and beyond the next World Expo in 2021. We will work together to inspire and educate millions on areas of critical importance including water stewardship, sustainable packaging, agriculture and nutrition. PepsiCo will also bring its portfolio of brands, activation and entertainment expertise.



COMPANY NAME: MASTERCARD
Partnership Tier: Premier Partner
Category/Designation: Official Payment Technology Partner

Description: As the Official Payment Technology Partner of Expo 2020, Mastercard will harness the power of innovation to demonstrate how we can create a seamless, borderless world and connect people in simple, secure and smart ways. Mastercard is committed to making Expo 2020 and Dubai truly priceless, offering unforgettable experiences, extraordinary surprises and exclusive access to visitors and residents throughout their journey.



COMPANY NAME: SAP
Partnership Tier: Premier Partner
Category/Designation: Official Innovative Enterprise Software Partner

Description: SAP will co-innovate with Expo2020 Dubai on real-time technology platforms that enable organisers and exhibitors to instantaneously analyse data and identify visitor trends. These insights will help tailor each visitor's experience to their personal preferences. Expo is expecting to run real-time solutions on the SAP HANA in-memory platform and the SAP S/4HANA real-time business suite. With a global network of customers, partners, employees, and thought leaders, SAP helps the world run better and improve people's lives.



COMPANY NAME: SIEMENS
 Partnership Tier: Premier Partner
 Category/Designation: Infrastructure and Digitalisation Partner

Description: As one of the largest manufacturing and electronics companies in the world, Siemens will provide a range of innovative solutions, technologies and products. These include security and building management systems and MindSphere, an open operating system for the Internet of Things that will play a central role in the smart operations of the Expo site. Siemens has also chosen to become an anchor tenant at District 2020 with up to 1000 employees set to be located in a new office space adjacent to Al Wasl Plaza during the transition to District 2020.



COMPANY NAME: DEWA
 Partnership Tier: Official Partner
 Category/Designation: Official Sustainable Energy Partner

Description: As the Official Sustainable Energy Partner of Expo 2020 Dubai, DEWA will deliver renewable energy, electricity and water projects in collaboration with Expo 2020. Through Shams Dubai, DEWA is contributing towards energy generation from solar arrays installed at the Expo site. DEWA has also built three 132/11kV substations with 45 kilometres of high-voltage 132kV cables. The Expo site will also be provided with electric vehicle charging stations from the Green Charger initiative to support the growing electric vehicle industry in Dubai. By collaborating with Expo 2020 and Siemens, the parties aim to research, test and demonstrate end-to-end technical solutions related to the development of a hydrogen economy in the UAE through developing a solar-driven hydrogen pilot facility at the outdoor testing facilities of the Mohammed bin Rashid Al Maktoum Solar Park.



COMPANY NAME: EMAAR HG
 Partnership Tier: Official Partner
 Category/Designation: Official Hotel and Hospitality Partner of Expo 2020

Description: Established in 2007, Emaar Hospitality Group owns and manages a portfolio of hospitality assets and brands including Address Hotels + Resorts, Vida Hotels and Resorts, serviced residences, leisure clubs and a comprehensive portfolio of world-class restaurants and spas. As the Official Hotel and Hospitality Partner for Expo 2020, Emaar Hospitality Group will provide exceptional hospitality to visitors, creating authentic experiences with local flavor at 2020 Club by Emaar, as well as in our hotels and restaurants across the Emirate of Dubai.



COMPANY NAME: UPS
 Partnership Tier: Official Partner
 Category/Designation: Official Logistics Partner

Description: As the Official Logistics Partner, UPS will provide thousands of square meters of warehouse space and a dedicated team of logistics personnel during the six-months. UPS will draw from expertise and experience gained as logistics partner of the London 2012 Olympic Games and the Beijing 2008 Olympic Games.



OFFICIAL PARTNERS

COMPANY NAME: CHRISTIE DIGITAL
 Partnership Tier: Official Partner
 Category/Designation: Official Projection and Display Partner

Description: A global leader in visual and audio technologies, Christie will showcase its state-of-the-art digital solutions that help create the world's best shared experiences and enable Expo 2020 Dubai to realise its objective of being the most advanced and technologically memorable World Expo ever. Christie will exhibit its breakthrough RGB pure laser projection technology, designed and built using the highest environmental standards and processes. More than 250 of its D4K40- RGB projectors will create life-evolving scenes on Al Wasl Plaza's giant 130-metre-wide projection surface.



COMPANY NAME: DULSCO
 Partnership Tier: Official Partner
 Category/Designation: Official Waste Management Partner

Description: DulSCO are tasked with helping Expo achieve the target of diverting 85% of waste from landfill. DulSCO's purpose built Waste2Resource facilities will support Expo's mission to reduce, reuse, recycle and repurpose the waste generated from the event. This involves recycling paper and cardboard to produce useful daily items or upcycling glass and plastic to create sustainable Expo-branded mementos.



COMPANY NAME: ENOC
 Partnership Tier: Official Partner
 Category/Designation: Official Integrated Energy Partner

Description: ENOC is the Official Integrated Energy Partner of Expo. Under the theme Reimagine Energy, ENOC invites the world to connect and explore, through a diverse and multi-format programme, how we understand, produce and consume energy in our fast-growing, fast-changing world. ENOC's participation includes a highly immersive and interactive pavilion, a modern, sustainable, and architecturally unique service station and a number of Zoom convenience stores.



OFFICIAL PROVIDERS

COMPANY NAME: AL AIN FARMS
 Partnership Tier: Official Provider
 Category/Designation: Official Dairy Provider

Description: Founded in 1981, Al Ain Farms is a celebrated dairy brand, known for its milk, laban and yoghurt. Through a collaboration based on the shared principles of sustainability and innovation, Al Ain Farms will help take Expo 2020 into millions of homes across the country, and to welcome visitors from all over the world to Expo with its quality local products.



COMPANY NAME: DUBAI CHAMBER
 Partnership Tier: Official Partner
 Category/Designation: Official Business Integration Partner

Description: Dubai Chamber will create opportunities for the local and international business community to meet and collaborate at a series of high-profile events. These include, but aren't limited to, the upcoming Global Business Forum Africa, Global Business Forum Latin America, the inaugural Global Business Forum ASEAN & the World Chambers Congress 2021. Dubai Chamber will also have presence in the Expo 2020 Business Connect Centre, facilitating entities from around the world as they foster connectivity and collaboration across borders.



COMPANY NAME: L'OREAL
 Partnership Tier: Official Partner
 Category/Designation: Official Beauty Products & Services Partner

Description: L'Oreal will operate studios and a pop-up store, as well as host shows and immersive experiences onsite, with a focus on products and services driven by personalisation and sustainable innovation. L'Oreal will also participate in conferences and other events focusing on climate change, women's empowerment, the impact of next generation technology on the industry, and the future of beauty, highlighting its role in shaping the fast-growing industry.



COMPANY NAME: CANON
 Partnership Tier: Official Provider
 Category/Designation: Official Printing and Imaging Provider

Description: The first company to support a World Expo's entire printing and imaging needs, Canon will leverage its 80 years of expertise to support onsite activities to capture Expo 2020 – including printing services for all participants, businesses and visitors, accreditation services and back office operations. Canon Professional Services will also offer camera and lens loans, expertise and maintenance for media onsite.



This legacy will lie in the partnerships and projects formed during Expo that will continue to grow and flourish past event time.

COMPANY NAME: DIGITAL14
Partnership Tier: Official Provider
Category/Designation: Official Cyber Security Provider

Description: As the next World Expo's Official Cyber Security Provider, Digital14 will safeguard the digital experience of visitors and more than 200 participants using Expo's digital platform, as well as the data and applications running on it. This UAE-based trusted advisor in cyber resilience will provide a range of cutting-edge cyber security services before, during and after the event, including cyber security management, monitoring, risk assessment, incident response and technical forensics.



COMPANY NAME: JACOBS MACE
Partnership Tier: Official Provider
Category/Designation: Official Programme Delivery Management Provider

Description: Jacobs Mace is an unincorporated joint venture between Jacobs, a global engineering design and consulting firm, and Mace, a privately-owned international consultancy and construction company. Jacobs Mace is helping to deliver the development and infrastructure works for Dubai's Expo site, working in tandem to transform the 438-hectare site in the Dubai South district into a global festival of human ingenuity. The delivery programme, which consists of over 30 individual projects, will provide this area of the city with a sustainable legacy and transform it into a destination capable of hosting more than 250,000 visitors a day.



COMPANY NAME: DOMINO'S PIZZA
Partnership Tier: Official Provider
Category/Designation: Official Pizza Provider

Description: Founded in 1960 and selling more than 500 million pizzas worldwide annually, Domino's has a long history of innovation. The first company to promise delivery within 30 minutes, it pioneered technology that allows customers to track the progress of their order online, and is currently in the process of creating a self-driving delivery car. Visitors seeking a great value meal will find several outlets of Domino's across the Expo 2020 site, each serving delicious handcrafted pizzas, as well as a selection of sides and desserts.



COMPANY NAME: ORIENT INSURANCE PJSC
Partnership Tier: Official Provider
Category/Designation: Official Insurance Provider

Description: Orient Insurance will provide property insurance for the Expo site's iconic architecture, plus liability coverage for operations. It will also offer services to participants including businesses, multilateral organisations, non-government organisations, educational institutions and more than 190 nations.



COMPANY NAME: ESHARAH ETISALAT SECURITY SOLUTIONS
Partnership Tier: Official Provider
Category/Designation: Official Secure Systems Provider

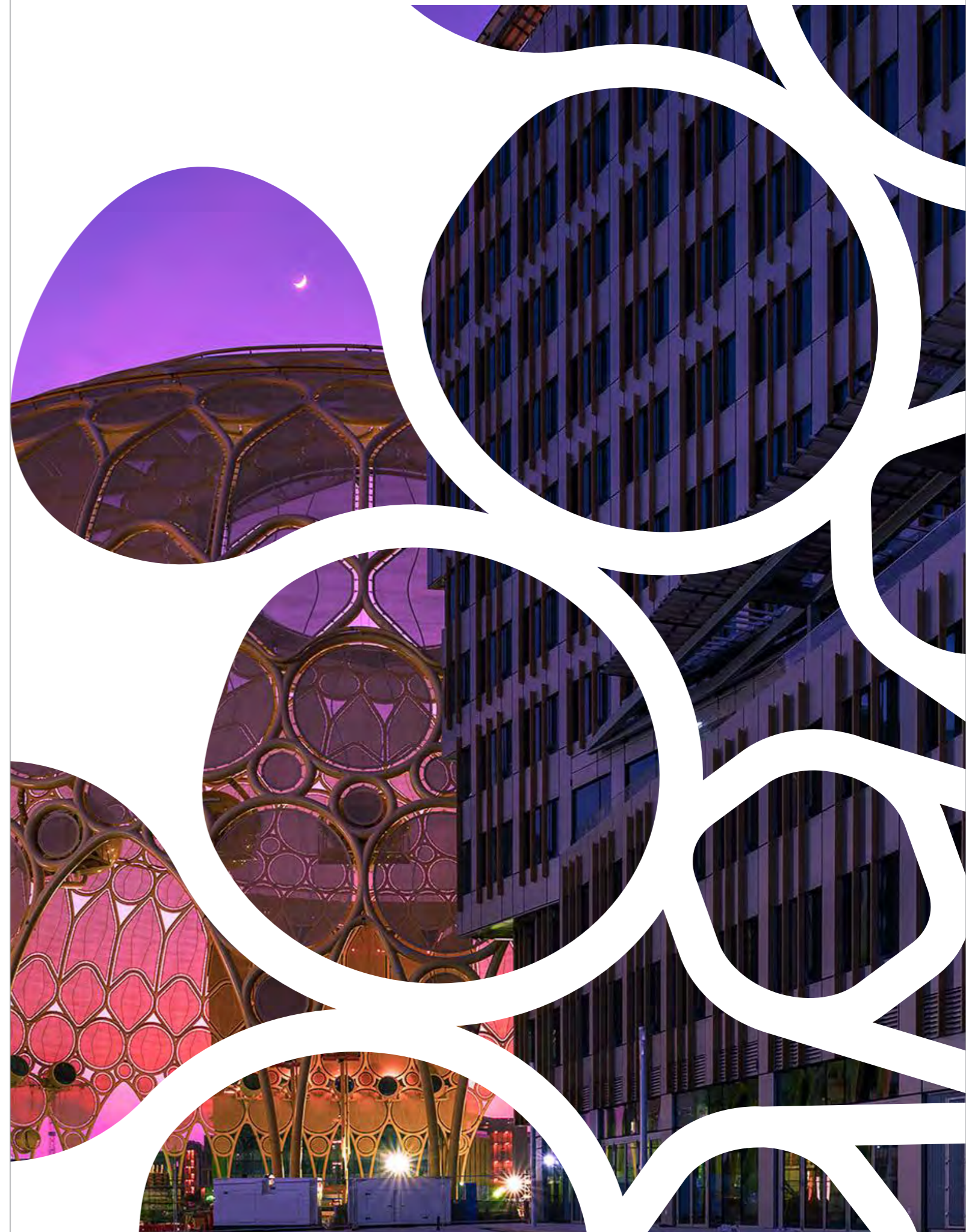
Description: Esharah will provide a secure mobile network and state-of-the-art critical communications solutions to serve the needs of security and first response teams during Expo 2020.



Security personnel, volunteers and first responders will be able to tap into best-in-class encrypted mobile communications technology under the partnership.

COMPANY NAME: SWATCH
Partnership Tier: Official Provider
Category/Designation: Official Timing Provider

Description: Swatch will deliver precision timekeeping for the duration of the event, as well as countdown installations that will serve as landmarks across Dubai. Its presence will include retail locations in the welcome plaza and each of the Thematic Districts where visitors will be able to view watch collections inspired by Expo 2020's subthemes - Opportunity, Mobility and Sustainability.



IMPACT

A. ECONOMIC IMPACT

Hosting more than 190 participating nations and welcoming visitors from across the world from 1 October 2021, Expo 2020 represents an economic milestone for the UAE and the region.

Its economic impact has been estimated across three phases, Pre-Expo, During Expo and Legacy.

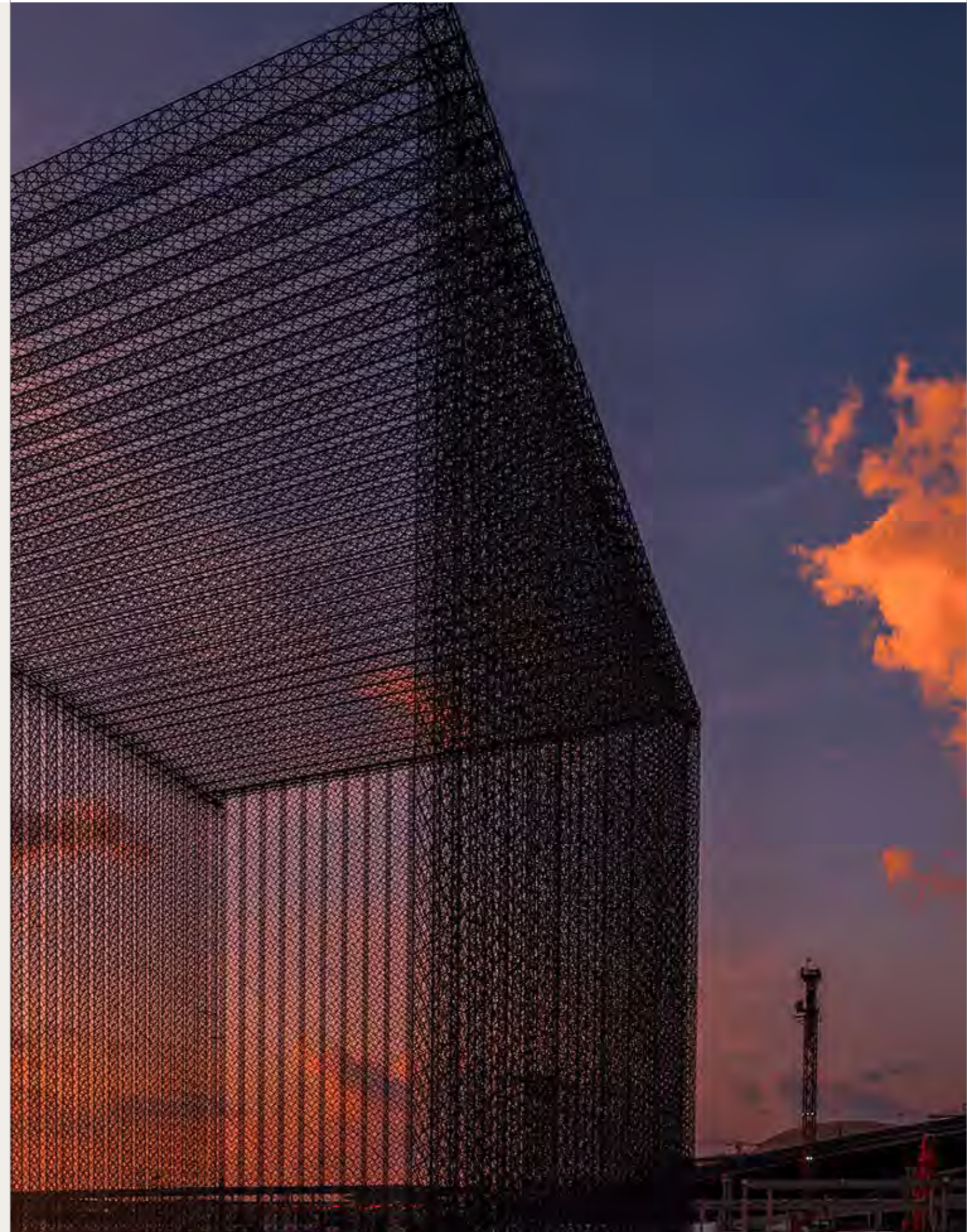
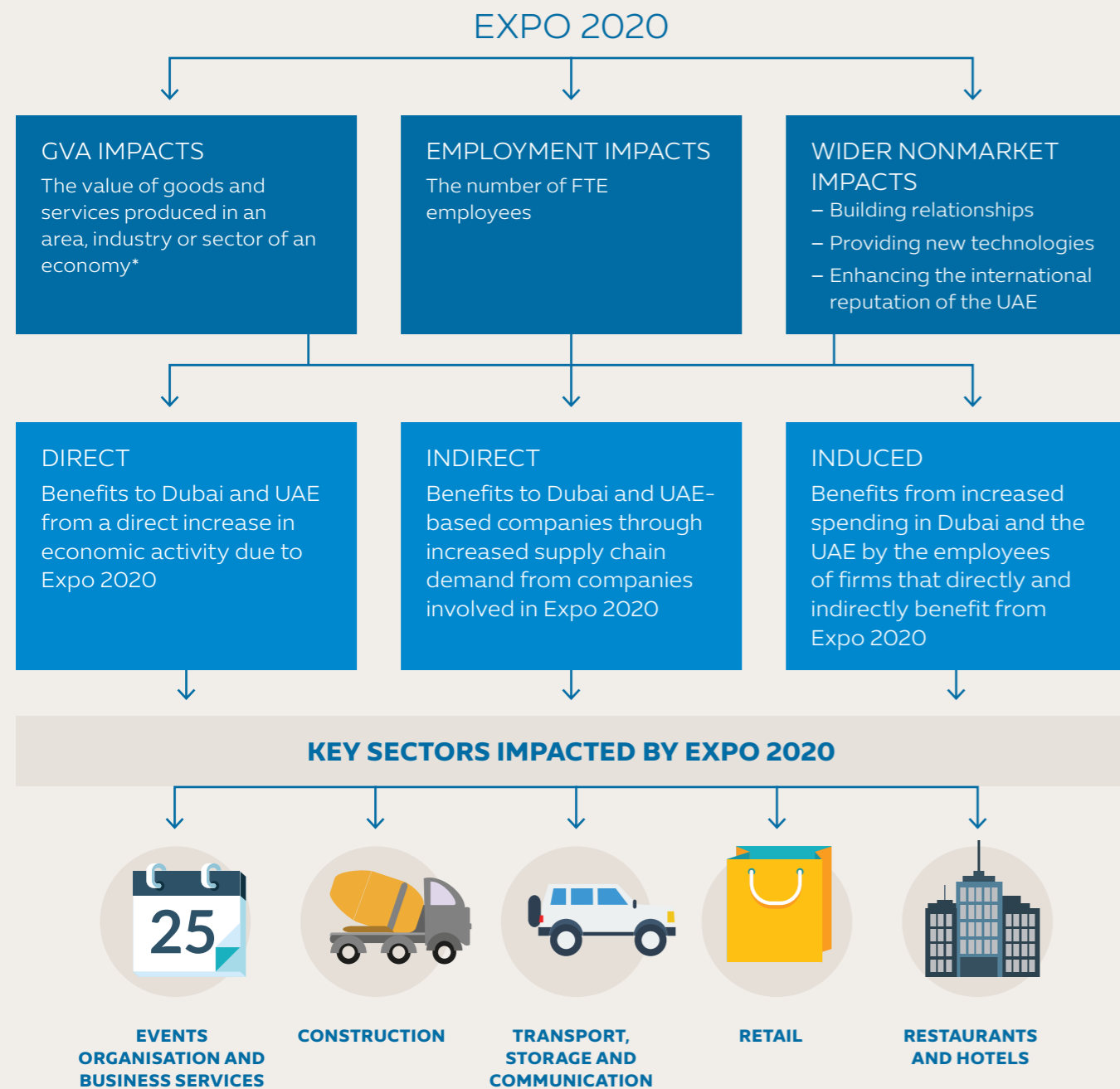
Construction activities during the Pre- Expo phase include on- and off-site activities.

KEY DRIVERS OF IMPACT

PRE-EXPO	DURING EXPO	LEGACY
 <p>Construction (On-site, supporting infrastructure, adjacent sites)</p>	 <p>Visitor expenditure (On-site, off-site expenditure on hotels, retail, hospitality, etc.)</p>	 <p>Commercial activities and visitors to District 2020, Dubai Exhibition Centre (On-site investment, operations and employment)</p>
 <p>Employment (Expo employees and the employees from the construction sector)</p>	 <p>Employment (On-site and Expo-related expenditure)</p>	 <p>Other off-site investment, operations and employment</p>
 <p>Pre-Expo Contribution (Various online and community engagement campaigns)</p>	 <p>Operations (On-site and off-site buildings, infrastructure and maintenance)</p>	

The estimated economic benefits are measured as the impact on the Gross Value Added (GVA), employment and wider non-market parameters. For further details, please refer to **Expo 2020 Economic Impact Report**.

Hosting **192** participating nations and welcoming visitors from 1 October 2021



B. ENVIRONMENTAL IMPACT

Expo 2020 Dubai has taken a holistic approach to the management of its environmental impact, encompassing all operations across the various phases of Expo.

1. MANAGEMENT APPROACH

Striving to be one of the most sustainable World Expos ever held, Expo 2020 lays the foundation for a sustainable legacy for future generations – emphasising human development and technological advancements, while respecting our planet’s ecological and natural resources.

It seeks to identify innovative solutions to some of our planet’s present and future sustainability challenges, inspiring a culture of environmental stewardship in all that have an Expo 2020 experience.

Following Dubai’s successful World Expo bid in 2013, an Environmental Impact Assessment (EIA) took place in 2014 - before the commencement of any construction work - to ensure that it would not cause a negative impact.

The Expo 2020 Health, Safety, Quality and Environment (HSQE) Policy was formulated using EIA findings (later updated in 2018), outlining the minimum standards applicable to third-party delivery agents, developers, consultants and contractors.

Core values of the HSQE Strategy, developed to implement the HSQE Policy, include:

HSQE



CARE

- We care for ourselves and others to ensure we go home in a safe and healthy condition every day
- We take worker health and well-being just as seriously as occupational safety



RESPECT

- We respect the environment and promote sustainable practices
- We look for opportunities for our work to have a positive impact on the environment



PRIDE

- We take pride in the work we do, striving for excellence in quality
- We focus on 'getting it right the first time' to reduce defects and the need for rework

The Construction Environmental Management Plan (CEMP) and the 'Environmental Assurance Standards' were both developed once the Environment Clearance certificate was obtained in 2017.

These specify the requirements for the environmental screening of all suppliers operating across the Expo 2020 site. While the CEMP is mandated by Dubai Municipality for all construction activities across Dubai, extensive time and effort would have been required to gain multiple approvals for simultaneous construction projects across the site.

With this in mind, a site-wide and site-specific CEMP was created for Expo, approved by Dubai Municipality and updated every six months to ensure appropriate environmental management practices are adopted throughout the construction phase of the Expo 2020 Dubai Programme.

In accordance with the Expo's Programme-wide CEMP, all contractors – upon being awarded a contract and prior to mobilisation of a project – must submit, to the Supervision Consultant, their project-specific Environmental Plans (EPs) for approval.

Contractors and consultants submit monthly environmental and sustainability data logs, compiled by the Construction Supervision Consultants (CSCs) and reviewed against their Key Performance Indicators (KPIs).

Supervision Consultants also undertake surveillance audits and issue corrective actions as required during construction, while the Expo environmental team measure consultants' performance and compliance on a quarterly basis, and collate data that is reported to regulatory authorities.

All parties involved in the execution of Expo 2020 are subject to certain minimum standards. These ensure strong environmental management of all activities, compliance with environmental laws and the correct management of Expo 2020's construction-related environmental risks. The performance of contractors is frequently audited against these standards to (1) increase stakeholder confidence in the data and (2) implement necessary measures for improvement. The 'Environmental Assurance Standards' outlined by Expo include the below elements:

 <p>ENVIRONMENT CLEARANCE Programme-wide Environment Clearance (EC) granted by Dubai Municipality (DM).</p>	 <p>ENVIRONMENT PLANS Programme-wide plans (CEMP and CWMP) to standardise the requirements and achieve satisfactory performance.</p>	 <p>DATA MONITORING Regular data monitoring and recording to enable the programme quarterly performance report to DM.</p>	 <p>RESOURCES Adequate environment staff allocated to ensure proper implementation of the CEMP and CWMP.</p>	 <p>COMPLIANCE MONITORING Regular Inspections and Audits to monitor the implementation of the plans and their effectiveness.</p>	 <p>TRAINING Environment Training provided to the supply chain to ensure proper understanding of the requirements.</p>
 <p>ECOLOGY PROTECTION Fauna and Flora protection to avoid any damage to trees or sensitive habitats.</p>	 <p>WASTE MANAGEMENT Waste management best practices to ensure reduction and recycling of waste.</p>	 <p>SPILL PREVENTION Spill prevention and response through proper management of materials, plant and equipment.</p>	 <p>AIR POLLUTION PREVENTION Prevention of air pollution through proper management of plant and equipment.</p>	 <p>DUST CONTROL Dust control by applying best practices (paved access roads and dust suppression as needed).</p>	 <p>INCIDENT REPORTING Environment incident reporting internally and externally to authorities, as and when required.</p>

2. SUSTAINABILITY CERTIFICATIONS

The sustainable performance requirements and expectations of our third-party contractors are also stipulated by Expo 2020's commitment to LEED and CEEQUAL certifications – green building standards that demonstrate leadership, innovation, environmental stewardship and social responsibility on a global scale.



SUSTAINABILITY CERTIFICATIONS

OBJECTIVE	KEY PERFORMANCE INDICATOR	TARGET
Demonstrate added value through sustainability certification of both horizontal and vertical infrastructure	Achieve LEED Certification as appropriate for the building projects Achieve CEEQUAL Certification as appropriate for the infrastructure projects	LEED Gold CEEQUAL Excellent

The benefits of LEED-certified buildings include verified, performance-based improvements using numerous passive, active design and construction measures. The standards' overall objective is to reduce the built environment's impact on human health and the natural environment through measures to more efficiently use energy, water, and other resources, while also reducing waste, pollution and environmental degradation.

By the end of 2019, Expo 2020 was seeking to obtain LEED Certification for 121 of its buildings. One hundred of these buildings are targeting LEED-gold certification, while 21 are seeking LEED-silver or LEED-certified status. All buildings are currently on track to achieve their LEED rating targets. In 2019 34 of the 121 buildings completed the US Green Building Council (USGBC) Design Stage review, while 85 completed such a year prior.

All buildings on the Expo site are also in compliance with Dubai Municipality's Al Sa'fat – Dubai Green Building Evaluation System. All projects that began after its launch follow these standards, with projects starting beforehand complying with the Dubai Green Building Code that preceded Al Sa'fat.



3. CLIMATE CHANGE

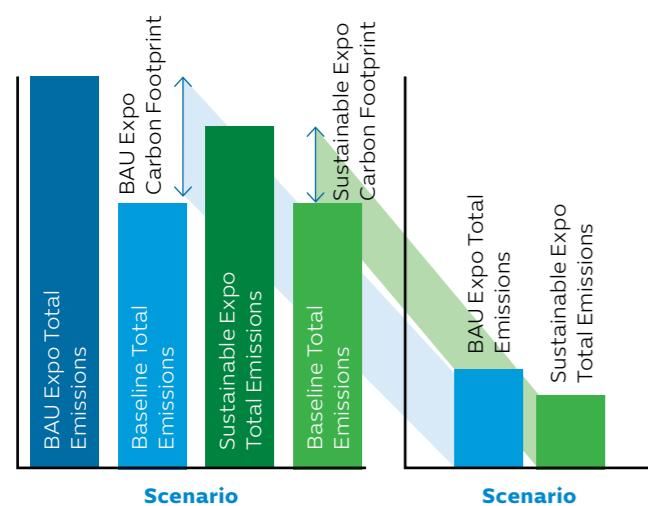
According to the World Economic Forum's 2020 Global Risk Report, the majority of the top 10 risks, as measured by likelihood and impact, continue to be climate change-related. In light of increasing climate change concerns globally, Expo 2020 Dubai – the largest event ever held in the Arab World – would be a global platform to showcase innovative solutions and increase awareness of sustainability challenges for visitors. Striving to be one of the most sustainable World Expos ever held, Expo 2020 has also implemented a variety of strategies to minimise its Green House Gas (GHG) emissions and will collaborate with participants, partners and visitors to offset a significant percentage of its carbon footprint.

SCENARIO ANALYSIS

To understand the future impact of its carbon footprint, Expo 2020 has developed a multi-year GHG Emissions Inventory. Based on this, estimates have been quantified for both the existing (BAU Expo Carbon Footprint Scenario) and future (Sustainable Expo Carbon Footprint Scenario) GHG footprint of the event, noting how these scenarios' estimates differ significantly in light of Expo's various sustainability measures.

Project or programme GHG accounting typically involves ex-ante and/or ex-post quantification of emissions from all relevant GHG sources with the activities in question, as well as an estimation of emissions from those sources using counterfactual or hypothetical information for the scenario in which the activities in question would not have occurred. This counterfactual scenario is referred to as the "Baseline".

EXPO BUSINESS AS USUAL (BAU) EMISSIONS VS SUSTAINABLE EXPO EMISSIONS



When compared to BAU Expo Carbon Footprint scenario, it is estimated that approximately **7%** of Expo 2020's carbon footprint will be reduced through the Sustainable Expo Carbon Footprint strategy.

In order to quantify the estimated total past and future GHG footprint of the Expo, as well as the GHG reductions achieved through progressive management, estimates have been prepared for two scenarios:

BAU Expo Carbon Footprint
A scenario where typical design, construction and operations would occur without sustainability management efforts such as minimising energy use and construction materials, and other sustainability programmes.

Sustainable Expo Carbon Footprint
The actual scenario where Expo's sustainability commitments are considered. Estimated GHG emission increases from sources of concern with preparations for and hosting of the Expo under the umbrella of a world-class energy and sustainability programme, which is underpinned by a range of mandatory sustainability requirements and standards such as CEEQUAL and LEED.



Case Study: Reducing emissions through efficient logistics: UPS

As the Official Logistics Partner of Expo 2020 Dubai, UPS has been collaborating with regional leaders and partners since 2017 to minimise the environmental impact of Expo 2020 and deliver a sustainable event.

To this effect, it takes all decisions based on data and applies its expert monitoring and analysing capabilities to calculate the greenhouse gas (GHG) emissions generated due to its services provided for Expo 2020. Once the scope of environmental impacts is fully understood, UPS then takes a two-pronged approach to manage its footprint.

In alignment with its environment-friendly approach, UPS has developed a hand-held tool that helps ensure the most efficient delivery route for vehicles by helping the drivers make better decisions on the road.

In alignment with its environment-friendly approach, UPS has developed a hand-held tool that helps ensure the most efficient delivery route for vehicles by helping the drivers make better decisions on the road. It helps drivers avoid unnecessary wastage of fuel and emission of GHGs. The device, known as Delivery Information Acquisition Device (DIAD), will make a global debut in Expo 2020.

Further, all UPS delivery trucks are equipped with telematics — sensors that collect data on each vehicle, including speed, stops, fuel use and engine maintenance. Together, these technologies provide more visibility into UPS network and enable it to optimise efficiency across its fleet.

Since the 1930s, UPS has pioneered the development of alternative fuels and advanced vehicle technologies when they began testing electric vehicles in their fleet.

UPS is bringing the best practices of today to Expo 2020, including zero-emissions solutions such as the e-assist quad cycles and tricycles, designed and built in collaboration with 'Fernhay' and 'Rytle', long-time UPS partners. These cycle solutions are optimized using an energy measurement tool created in partnership with SAP and advanced charging infrastructure developed through smart-grid solar partnerships.

Expected on display at the event will be the latest generation of UPS electric vehicles, which were designed in partnership with 'Arrival', as well as a showcase of UPS's Flight Forward drone technology, which foreshadows large-scale electrified aviation capabilities. Remaining emissions generated by Expo 2020 activities can be offset through UPS's carbon neutral shipping solution, a low-cost way to counterbalance the transportation emissions of any shipment.

UPS supports Expo 2020's ambition to deliver one of the most sustainable World Expos in history, including preserving infrastructure development post event.

Through these efforts, UPS supports Expo 2020's ambition to deliver one of the most sustainable World Expos in history, including preserving infrastructure development post event. UPS's investments in vehicles and facilities will be integrated into Expo's local operations, advancing its support of commerce and trade in this fast-growing region, and benefitting Dubai residents and visitors.



4. ENERGY

Efficient energy use and sustainable energy production are key aspects of Expo's overall energy strategy that include baseline energy use, building form and design, energy-efficient technologies and systems, efficient energy supply and renewable energy generation both on-site and off-site. The objective of the programme-level energy strategy is to ensure cost effective solutions with a clear use in the Legacy phase based on a viable business case

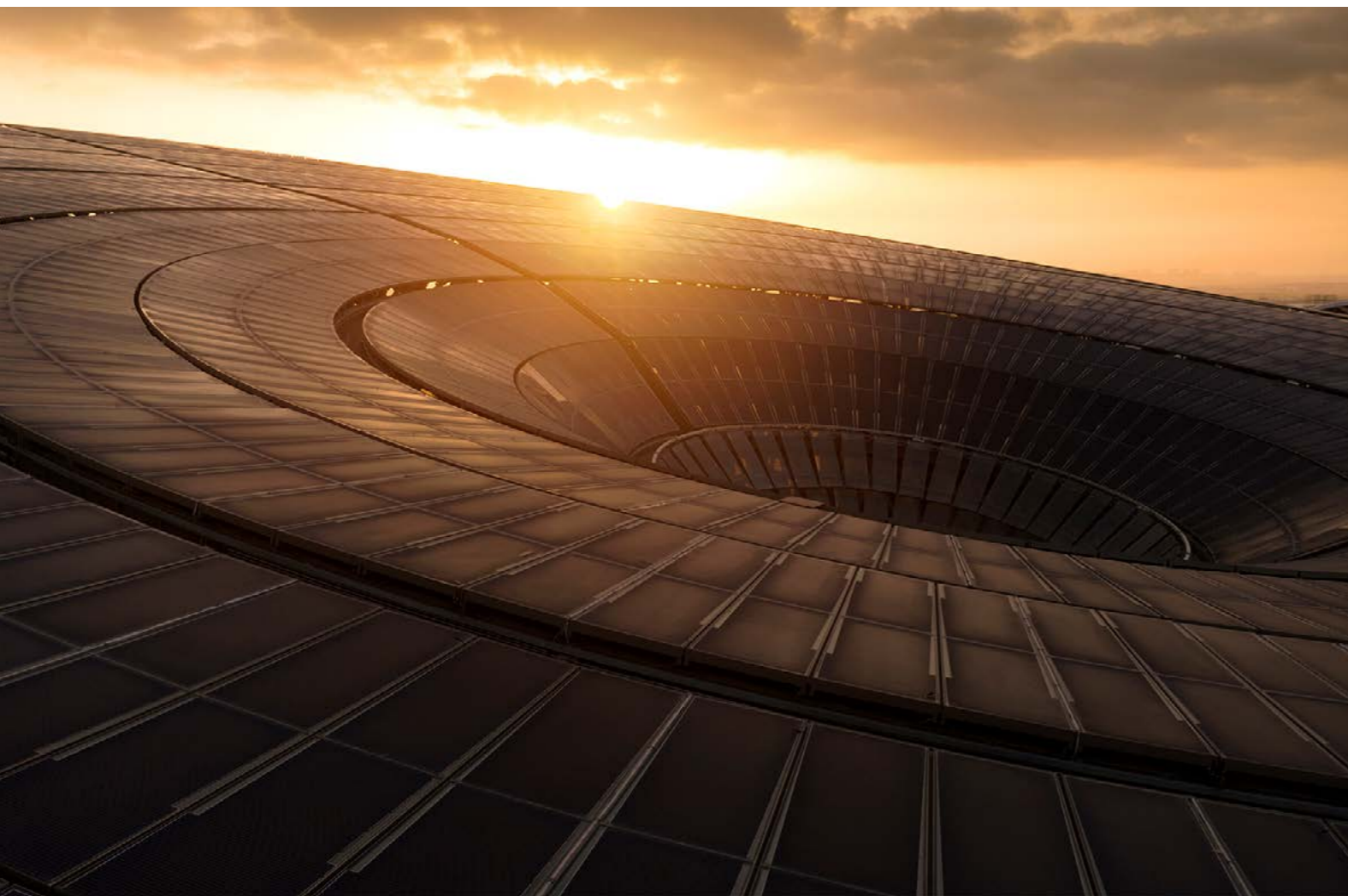
Passive design solutions were prioritised, implemented and maximised before the selection of optimised 'active' industry standard solutions. These were also integrated with innovative technological solutions. This approach will result in cost effective environmental outcomes that are realised through comprehensive energy savings.

ENERGY CONSUMPTION

Expo 2020's major source of energy in 2019 was fuel. All Expo 2020 site offices and the masterplan site areas, which were primarily in their construction phases during the year, had been powered by diesel and bio-diesel generators.

TYPE OF FUEL	OVERALL CONSUMPTION (LITRES) IN 2018	OVERALL CONSUMPTION (LITRES) IN 2019	OVERALL CONSUMPTION (GIGAJOULES) IN 2019
Diesel	11,707,761	12,049,773	432,022
Petrol	262,450	128,313	4,183
Biodiesel	5,703,775	6,340,295	210,878
TOTAL	17,673,986	18,518,381	647,083.216

Table 1: 2019 total fuel consumption by type (litres) & (gigajoules)
 *Energy density conversion factors are based on commonly used 'UK Government GHG Conversion Factors'

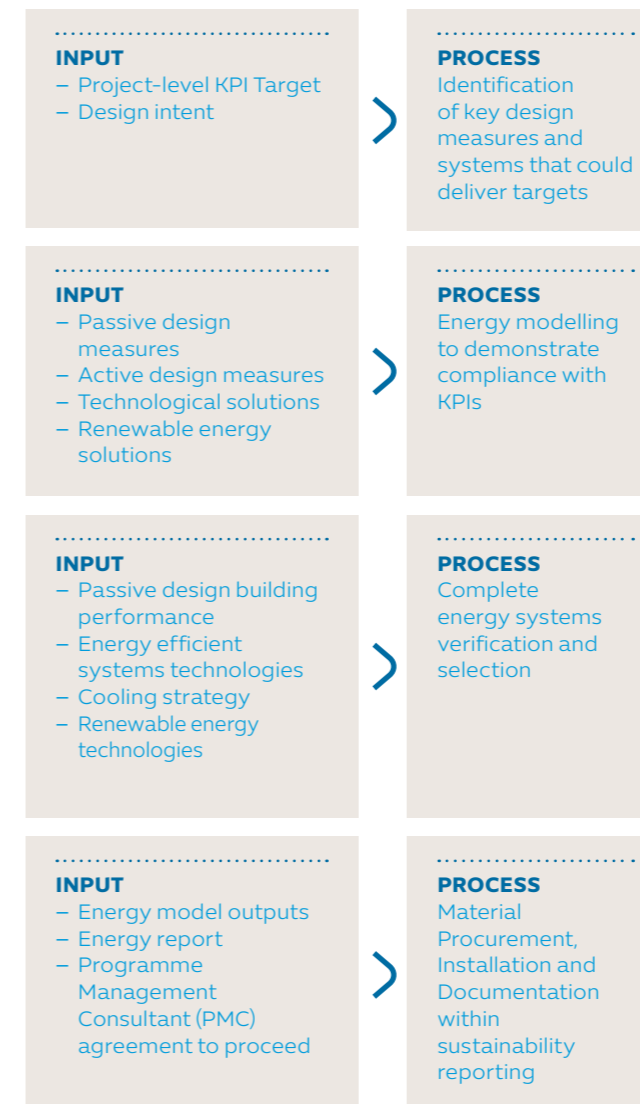


ENERGY REDUCTION

Predicted energy reductions for each Expo-led building are modelled by ASHRAE 90.1, an internationally recognised standard for building efficiency. This standard is used to measure their performance against Expo 2020's energy KPIs and to support the requirements for LEED-Gold Certification, a requirement for all permanent buildings delivered by Expo.

The standard offers detailed minimum energy efficiency requirements for the design and construction of new buildings, and their systems, and offers a benchmark to model against. The following illustration shows Expo's energy-reduction design process, as modelled through this methodology.

ENERGY REDUCTION DESIGN PROCESS



Based on modelled energy usage, Expo was able to reduce annual site-wide energy consumption by **30.1%**

RENEWABLE ENERGY

In alignment with the national and local renewable energy strategies, the installation of onsite renewable energy will offset some of the operational energy demands during Expo 2020 and its Legacy phase. All permanent buildings within the main Expo site have renewable energy systems to support the on-site generation of renewable energy sources.

- With a combined total capacity of 5.5 Megawatts, renewable energy installations at Expo include:
- 12,000 sqm of photovoltaic (PV) surfaces across the Sustainability Pavilion's roof and solar trees, resulting in a "net-zero" energy building in the Legacy phase
 - rooftop solar PV panels on permanent buildings, providing approximately 22% of the energy required to operate the buildings in the Legacy phase
 - the installation of renewable energy assets, including educational elements in two schools in Dubai and in Abu Dhabi that were selected through the Expo 2020's Sustainability Champions programme

All permanent buildings within the main Expo site have renewable energy systems to support the on-site generation of renewable energy sources.

Case Study: Sustainability Champions

With Sustainability as one of its three key subthemes, Expo 2020 seeks close collaboration with the schools community to leave a legacy of sustainability across the UAE.



Supporting the UAE Founding Father's vision for a sustainable future, more than 100 schools participated in the Expo 2020 'Sustainability Champions' schools programme – launched in collaboration with the UAE Ministry of Education and the UAE Ministry of Climate Change and Environment (MOCCA) during Abu Dhabi Sustainability Week (ADSW) 2018.

Following a selection process, two schools — Umm Al Arab School in Abu Dhabi and American School of Dubai — were rewarded for their commitment and contribution to sustainable initiatives. The schools received PV panels worth a combined AED 1 million, plus support for their sustainability initiatives from Expo 2020. This will not only help each school cut its operating costs, but allows them to continue to raise awareness on sustainability and contribute to a lasting renewable energy legacy for Expo 2020.

"We have always encouraged sustainable habits and innovation by spreading awareness and taking informed action to improve the present and future of our community. Further, improving efficiency and reducing costs, the PV panels will provide a real-life example of sustainable practice to inspire our students."

Dr Paul Richards
Superintendent, American School of Dubai

"It is great to see that so many schools participated in the programme, which reflects high levels of interest and enthusiasm in the school community for sustainability, as well as Expo 2020 as a national project."

Najeeb Mohammed Al-Ali
Executive Director, Expo 2020 Dubai Commissioner General Office

"We are proud to be recognised for upholding the values of sustainability. Our faculty and all 2,100 students have worked hard to integrate sustainability values into our classrooms, curriculum and community engagement activities. Our student innovators, for example, created the UAE's first recycling centre for schools."

Asma Al Harthi
Principal, Umm Al Arab School

Case Study: ENOC Service Station of the Future

In 2019, Emirates National Oil Company (ENOC), Expo 2020's Integrated Energy Partner, announced the Service Station of the Future – a new concept design for a smart service station that is modern, sustainable and architecturally unique.



The new concept design station draws from the rich heritage of UAE's traditions in the form of its national tree, the Ghaf, that was adopted to symbolise the Year of Tolerance by the UAE Government in 2019. With the Ghaf tree known for its enduring sustainability elements and deep roots, making it resilient to harsh weather conditions, the Ghaf tree design for the main canopy is built using carbon fibre – a first of its kind for a service station.



Leadership in Energy and Environmental Design (LEED)

- The Service Station of the Future has already achieved a high number of credits in the LEED design review and is on track to be the first service station globally to achieve LEED Platinum Certification when construction completes



Energy and Efficiency

- PV panels with a peak capacity of 105 kWp have been installed atop the canopy, the building's roof and the boundary walls
- Using smart, energy-efficient and renewable solutions, including wind turbine generated power and photovoltaic (PV) solar panels, the service station will achieve overall power saving of 48% – equivalent to 228 MWh a year. The clean energy initiatives will also help reduce approximately 100,000 kgs of carbon dioxide emissions, equivalent to the benefit of planting 114 trees annually
- Wind turbines with a 5 kWp capacity will convert wind energy into electricity with an on-grid net metering facility; the service station also features charging stations for electric vehicles
- A high efficiency air conditioning system has been installed to cool the convenience store
- High efficiency LED lighting with 130 lumen/watt – offering 20 to 30% energy savings vs regular LED and 60% savings vs conventional lighting – have been installed across the station
- Programmable Multi Level DALI control system sensors for lighting have been installed, allowing lights to be dimmed when there is no activity or traffic in the station and offering 10 to 15% energy savings during busy nights

The Service Station of the Future will serve the Expo 2020 Dubai fleet during the event's six-month run. After the Expo, the service station will be open to the public as part of the site's Legacy phase.

Some of the service station's key sustainability features include:



Water Efficiency

- Water-efficient fixtures and fittings
- Recycled grey water and storm water for landscaping
- Grey water treatment plant to reduce outdoor water consumption



Materials Efficiency

- Twenty Environmental Product Declarations (EPDs) used throughout the construction of the canopy and the station
- Structure of the service station's canopy constructed from carbon fibre (three times stronger and five times lighter than steel). The Ethylene tetrafluoroethylene (ETFE) - commonly known as polymer - cushion allows natural light penetration and provides 100% UV protection



Natural Ventilation and Cooling Design

- The design of the canopy has been customised to allow for a flow of natural light during the day, while keeping temperatures lower in the warmer summer months



Design and Innovation

- Digital convenience store and fuel pumps, including screens that highlight the CO2 emission reduction on a digital display, from the station, in real time
- Smart CCTV system linked to Dubai Police Headquarters
- User-friendly station, facilitating self-service capabilities in the future
- Fuel dispensers with stage two vapour recovery systems (near zero emissions) to reduce fuel vapour loss

5. WATER

Water is a very scarce natural resource in the UAE. To ensure sustainable access to water in line with local regulations, World Health Organisation standards and the country's vision to achieve prosperity and sustainability, the UAE announced in 2017 its Water Security Strategy 2036.

This strategy focuses on reducing total demand for water resources by 21% increasing the water productivity index (the ratio between the UAE's monetary output and its input of water), reducing the water scarcity index and increasing the use of treated water and the UAE's national water storage capacity.

In line with the UAE Water Security Strategy 2036, Expo 2020 has developed its own water strategy, focusing on reducing the demand on potable water systems by applying a hierarchy of use for efficiency, followed by the substitution of potable water with non-potable water supplies.

This focus is supported by Expo 2020's Overall Sustainability Targets, aimed at reducing water usage.

This strategy focuses on reducing total demand for water resources by **21%** increasing the water productivity index



- 01 Reduce water consumption in Expo 2020 buildings with 40% improvement above the regulatory baseline provided by the Dubai Electricity and Water Authority (DEWA)
- 02 Install smart controls on 100% of publicly accessible water fixtures and fittings
- 03 Monitor leakage detection for 90% of external water networks
- 04 Ensure 100% of non-potable exterior water use to be from treated sewage effluent (TSE)
- 05 Recover 95% of air-conditioning condensate from buildings larger than 1,000sqm for onsite reuse
- 06 Implement indoor water demand reduction through the installation of water efficient or water-less fixtures
- 07 Reduce potable water use through substitution of grey water, black water and onsite capture of shallow groundwater at the Sustainability Pavilion.
- 08 Protect natural water resources during construction through construction environmental site management

These water targets are further implemented by Expo 2020's approach to reduce water consumption, which includes the following three main action points:

1. DEMAND REDUCTION
Involves covering all indoor and outdoor water-consuming systems under the umbrella of reduction initiatives.

a. reducing indoor water demand by using efficient or waterless fixtures and fittings such as low-flush toilets, low-flow or waterless urinals, low-flow taps, low-flow showers, water efficient appliances.

b. reducing outdoor water through careful landscaping design considering local rainfall patterns, plant selection, soil water retention properties, and irrigation scheduling technologies.

2. DEMAND SUBSTITUTION
Includes two sub-actions:

a. identifying the use of alternative water sources for certain supplies (such as for irrigation, water features or toilet flushing).

b. creating a water balance model for each project to take advantage of the benefits of capturing, treating and reusing different water streams (such as black water, grey water or air-conditioning condensate).

3. WATER RESOURCE PROTECTION
Considers the crucial aspects for eliminating waterway contamination and pollution. This is further divided into two stages:

a. design stage, which involves the management of groundwater drainage and seasonal surface water flows.

b. construction stage, which includes pollution prevention, construction water management and commissioning of the construction site.

As part of Expo 2020's ambitious water-saving targets, all permanent buildings on the Expo site are targeted to reduce water demand by 40% in comparison to DEWA's regulatory baseline. In 2019, the water reduction from all permanent buildings amounted to 52.4%, which primarily includes the key buildings mentioned in the table below, as well as others still in their development phase.

INDOOR POTABLE WATER USE REDUCTION	ANNUAL BASELINE WATER CONSUMPTION (M ³ OF WATER /YEAR)	PREDICTED ANNUAL WATER CONSUMPTION (M ³ OF WATER /YEAR)	PERCENTAGE REDUCTION FROM BASELINE FROM POTABLE WATER SOURCES
Thematic Districts Buildings	14,352	6,468	54.9
Al Wasl Plaza Buildings	10,102	3,454	65.8
Fire, Ambulance & Police Buildings	12,386	4,599	62.9
Sustainability Pavilion	4,931	2,452	50.0
UAE Pavilion	4,770	1,871	60.8

Table 2. Estimated LEED water savings: water consumption reduction on Expo 2020 site buildings from baseline calculations





Expo 2020 aims to reduce landscape water consumption and have set a maximum water budget for different types of landscape areas in compliance with Dubai Municipality Al Sa'fat Rating System as well as requiring that no potable water is used for irrigation. All Expo projects are required to meet or exceed these targets through the following strategies:

- 01 The use of native and adaptive plant material
- 02 The use of high efficiency irrigation systems
- 03 The use of moisture retention of soil mixes
- 04 Extensive use of leak detection and flow metering
- 05 Live monitoring and management of water flows against Key Performance Indicators

REDUCTION IN WATER USE FOR LANDSCAPES	BASELINE WATER BUDGET FOR IRRIGATION OF LANDSCAPE AREAS AND PUBLIC REALM (LITRES/M ² /DAY)	PREDICTED WATER CONSUMPTION FOR LANDSCAPE AREAS AND PUBLIC REALM (LITRES/M ² /DAY)	PERCENTAGE REDUCTION FROM BASELINE WATER BUDGET
Parks	10.0	8.7	13.0%
Public Realm	7.0	5.0	28.5%

Table 3. Estimated water savings for park and public realm irrigation

EXPO 2020'S WATER CONSUMPTION

Expo 2020 categorises water consumption into the following three types.

GROUNDWATER:

Sourced from external dewatering activities and groundwater supplying agencies, groundwater is transported to the Expo site by third-party service providers and is used for dust suppression, road levelling, soil levelling and onsite construction work. It is also extracted from onsite bore wells after obtaining necessary permits and is used for construction work

POTABLE WATER:

Obtained from the Dubai Electricity and Water Authority (DEWA).

TREATED SEWERAGE:

Obtained from external sources, onsite sewage treatment units and contractor facilities, such as worker accommodation facilities.

Contractors at Expo 2020 record their daily water consumption and compile it into monthly Environment Data Logs. In 2019, Expo 2020's total recorded water consumption was 957,811 litres, a minor increase of 0.65% on 2018. Groundwater consumption fell by approximately 38.3%, potable water consumption increased

by roughly 39.3% and treated sewage effluent rose by roughly 76.5% – showcasing Expo 2020's efforts to replace the use of groundwater and potable water with treated sewage effluent.

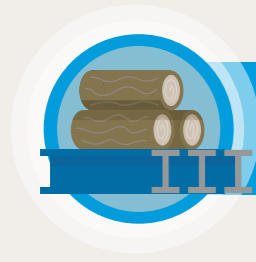
Expo 2020's yearly water consumption by type, for 2019, is illustrated in the table below.

WATER TYPE	GROUNDWATER (LITRES)	POTABLE WATER (LITRES)	TREATED SEWERAGE EFFLUENT (LITRES)
Consumption	335,685	360,821	261,305
TOTAL	957,811		

Table 4. 2019 total water consumption by type

6. MATERIALS

Our planet has a finite amount of resources. Using sustainable materials during construction helps to avoid the depletion of natural resources and maximise resource efficiency, while also reducing construction costs. Expo 2020 manages the use of materials through measurable targets, outlined below:



MATERIALS

01

Conserve natural resources and preserve biodiversity at the point of extraction by selecting sustainable materials for Expo 2020 facilities. 90% of key materials shall be procured in accordance with the Sustainable Materials Guidelines.

02

Minimise the depletion of natural resources by retaining 90% of materials used in permanent construction projects designed for reuse and Legacy.

03

75% of materials used for temporary construction projects to be redeployed or recycled.

The selection of sustainable material for Expo 2020 is being achieved through the implementation of the following practices, as outlined in the Expo Sustainable Materials Guidelines:

- Selection of materials with a lower embodied carbon content, reducing the Green House Gas (GHGs) emitted during Expo 2020's construction phase
- Choice of responsibly sourced materials to minimise the environmental impact associated with material extraction, product manufacture and transportation. This involves obtaining Environmental Product Declarations (EPDs), independently verified and registered documents that communicate transparent and comparable information about the life-cycle and environmental impact of products
- Ensuring all timber used on site carries sustainable forestry certification, specifically from the Forest Stewardship Council (FSC) or Programme for the Endorsement of Forestry Certification (PEFC)

Expo 2020 aims to incorporate material with recycled content to support the diversion of waste from landfill and reduce the demand for virgin materials and embodied carbon. To do so, project management teams, architects, designers, engineers and consultants have been assigned the responsibility of selecting materials that comply with Expo's Sustainable Material Guidelines. These materials are included in the design documents and specifications for Expo's buildings, before a project contractor is assigned to procure them.

Before purchasing any materials, the contractor produces material submittals for review and approval by Expo 2020. All approved materials are recorded in a monthly material reporting log, where their compliance with the Expo Sustainable Materials Guidelines are highlighted. Each project team maintains records of each submittal, including any required certifications as part of the contract documents.

In effect, Expo 2020 requires all sourced material to be certified through one or more of the following standards:

– **BS EN ISO 9001 Quality management systems:** Provides a systematic approach to meeting stakeholders' needs within statutory and regulatory requirements related to Expo 2020's products or services, and notably the provision of consistent quality; ISO 9001 also serves as a foundation for 'BS EN ISO 14001: Environmental management system' certification by ensuring a quality and controlled approach to the management of Expo 2020's operational emissions.

– **BS 8555:2016 Environmental management systems:** Provides guidance on the phased implementation of an environmental management system, allowing Expo 2020 to implement and maintain ISO 14001 in a staged approach.



– BS EN ISO 14001 Environmental management system:

Provides a system for measuring and improving Expo 2020’s environmental impact; use of ISO 14001 allows Expo 2020 to inform stakeholders with confidence that (1) the environmental impact is being adequately measured and (2) that Expo is working towards improving its environmental performance by monitoring and recording environmental indicators, such as GHG emissions, water consumption and waste output.

– ISO 26000:2010 Guidance on social responsibility:

Provides guidance on social responsibility and helps Expo translate principles into effective actions, sharing best practices related to social responsibility.

– SA 8000 Social Accountability certification:

Encourages Expo to develop, maintain and apply socially acceptable practices in the workplace.

– FSC (Forest Stewardship Council) certification:

Ensures products, specifically wood and timber, come from responsibly managed forests that provide environmental, social and economic benefits.

– PEFC - Programme for the Endorsement of Forest Certification:

Promotes sustainable forest management through independent third-party verification, ensuring all wood and timber is sourced in a sustainable manner.

By incorporating sustainable material requirements into all aspects of Expo 2020, the aim is to enhance awareness among the events designers and employees.

Materials are sourced through environmentally and socially responsible suppliers, while supplier employees and those people living in proximity to material extraction sites and manufacturing facilities are also protected.

Additionally, the choice of low-emission materials and products will improve the indoor environmental quality at Expo facilities, with a positive impact on occupants’ health, well-being and productivity.

MATERIAL TYPE	WEIGHT / VOLUME (TONNES)	PERCENTAGE OF EPDS OBTAINED	PERCENTAGE FOREST STEWARDSHIP COUNCIL (FSC) CERTIFIED	PERCENTAGE RECYCLED
Concrete	1,235,387	99%	N/A	N/A
Steel	100,369	90%	N/A	N/A
Timber/Wood	3,434	N/A	78%	N/A
Packaging materials	359	N/A	N/A	100%

Table 5. 2019 total weight/ volume of materials used to produce, package primary products and services

Our planet has a finite amount of resources. Using sustainable materials during construction helps to avoid the depletion of natural resources and maximise resource efficiency, while also reducing construction costs.



Case Study: Swiss-made Sustainable Swatch Headquarters in Biel

Expo 2020 appointed internationally renowned Swiss brand Swatch as its Official Timing Provider, which will deliver precision timekeeping for the duration of the event as well as countdown installations that will serve as landmarks across Dubai.



Swatch's presence will have retail locations in the Welcome Plaza and each of the thematic districts where visitors will be able to view watch collections inspired by Expo 2020's subthemes, including the Swatch SISTEM51 watches, which are battery free and powered by the wearer's movement.

For its new headquarters inaugurated in October 2019 at Biel, Swatch uses Swiss made, sustainable design to redefine the Biel landscape. Designed by the Japanese star architect Shigeru Ban, the building features light, transparency and organic movement, reflecting the Swatch brand in its own den. The shimmering, curved silhouette of the new Swatch building extends over a total length of 240 meters and a width of 35 meters. The unusual design breaks with the conventions of classic office building architecture and blends harmoniously into the urban environment.

The energy concept is based on solar technology and groundwater use, allowing building functions such as ventilation, cooling, heating and basic lighting to operate autonomously.

A timber grid shell construction, chosen for its ecological and sustainable properties, forms the basic structure of the large-area façade that measures 27 meters at its highest point. During the planning phase, modern 3D technology was used to define the exact shape and positioning of the approximately 4,600 beams of the timber grid shell. While the wooden structure was still being erected, the installation of around 2,800 honeycomb timber grid shell elements, which make up most of the façade, began.

SUSTAINABILITY ELEMENTS:

100%
Swiss timber,
primarily spruce

1,997m³
of timber used,
a quantity that
can regrow in
the Swiss forests
in less than
two hours

Heating and
cooling by
groundwater
pumping system
for Swatch,
Omega and Cité
du Temps

SUSTAINABILITY ELEMENTS:

9
underground
wells and two
former oil tanks
converted into
water reservoirs

442
curved solar
elements inserted
into façade
structure

1,770m²
of installed
photovoltaics

Each element was meticulously tailored from up to 50 individual parts and adapted to its individual function and position. Some of these elements can be opened for smoke extraction, while others are equipped with photovoltaic cells. Tiny white dots on the glass façades serve as sun protection. Five black Bucida buceras olive trees extend up to two stories in height inside the building, grows comfortably at room temperature and keeps its fine leaves all year round.

A clever use of groundwater to heat and cool the building and solar power from the photovoltaic system make a significant contribution to an optimum CO₂ balance. Thanks to state-of-the-art technology from Velospot bicycle sharing and charging stations to intelligent blackouts and glazing, from LED lighting and highly efficient ventilation systems to thermal component activation and paperless offices, the new Swatch building demonstrates that modern construction and modern ways of working can be in harmony with nature.

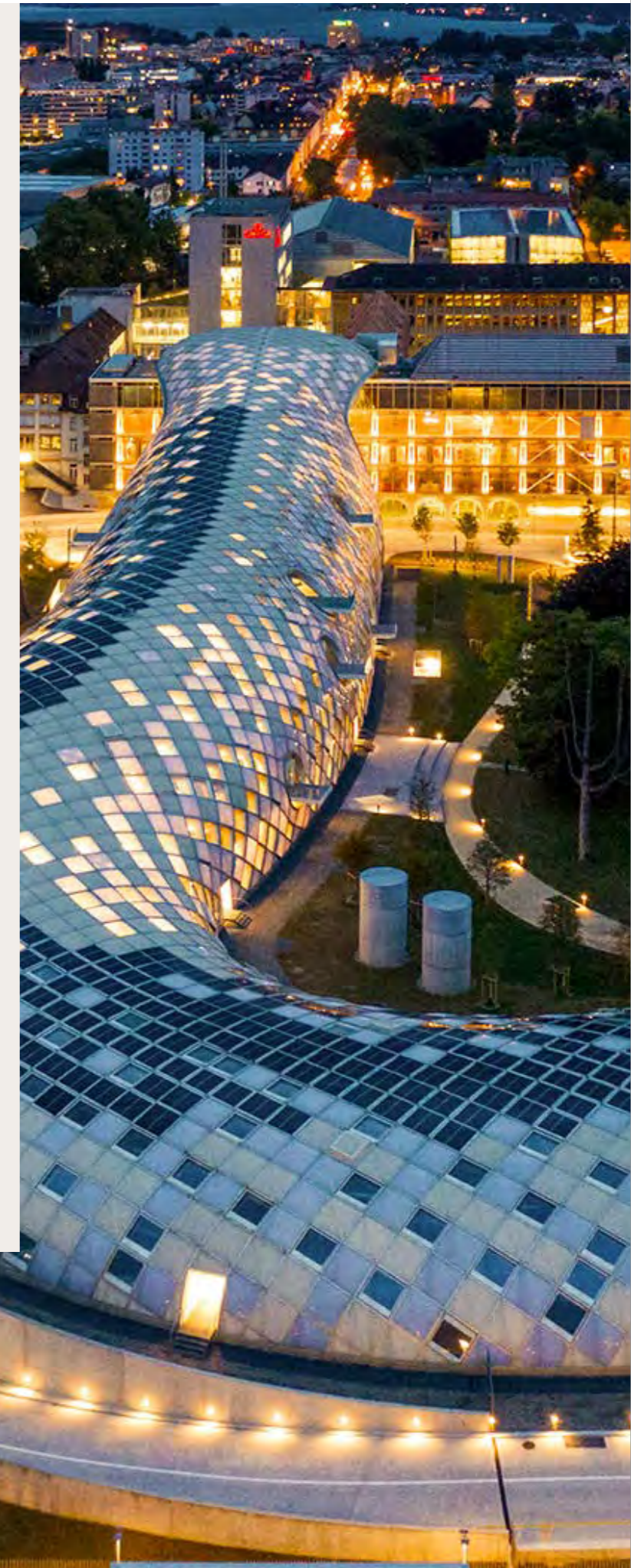
Only timber from Swiss forests – mainly spruce – was used in the construction. A total of just under 1,997 cubic meters of this was needed, a quantity that regrows in the Swiss forest in less than two hours. The energy concept is based on solar technology and groundwater use, allowing building functions such as ventilation, cooling, heating and basic lighting to operate autonomously.

The groundwater utilisation concept ensures the heating and cooling of the new Swatch building. Nine underground wells are distributed over the entire area, as well as two former oil tanks which have been converted into water reservoirs. With 1,770 m² of installed photovoltaics, around 212.3 MWh of electricity would be generated per year – equivalent to the average annual consumption of 61 Swiss households.

120
Green area
with more
than 120 newly
planted trees

170
Underground
garage with
170 automobile
parking spaces,

182
bicycle
parking spaces



7. WASTE



WASTE

01

Establish a hierarchical waste management strategy throughout the Expo 2020 site, with waste avoidance as the preferred solution and waste recovery as the last solution

02

85% of waste segregated into different waste streams, during construction, operation and decommissioning, to enable its diversion from landfill

Successful waste management can only be accomplished when the entire waste stream is fully understood. As such, waste minimisation is best accomplished with careful planning and consideration for all anticipated waste streams. Expo 2020's project teams have developed and implemented strategies to minimise the production of waste during the event's design, construction and operational phases, as well as for managing waste in accordance with recognised international best practices. Project-specific KPIs and targets have been set for the segregation of construction and operational waste to enable its diversion from landfill.

For the pre-Expo phase, a Construction Waste Management Plan (CWMP) has been developed in alignment with the overall objectives and KPIs. The CWMP is an approved formal procedure to establish minimum requirements and standards for the collection, segregation, transportation and recycle/reuse/disposal of wastes including record keeping and waste tracking system.

The CWMP has identified key areas, policies and regulations for targeted interventions to avoid or minimise waste generation in the first instance, followed by control measures to minimise the quantum of waste going to a disposal site and treatment facilities, by providing guidance on reuse and recycling measures.

An efficient implementation of the CWMP at site shall ensure disposal of residuals to have greatest net social and economic benefits and the least environmental impacts.

The scope of the CWMP covers waste generation from ongoing construction activities.

The CWMP applies to all entities working at Expo 2020 Dubai site including Employers, Design Consultants, Supervision Consultants, Contractors and Subcontractors.

Following global best practices, all project-specific waste management at Expo 2020 is strategised into a hierarchical system of processes. Priority is given to the minimisation and/or avoidance of the production of waste (REDUCE), followed by the maximisation of waste value through support for efforts to reuse and recycle (REUSE AND RECYCLE). Waste recovery (RECOVER) is the last option before waste is taken to landfill.



Expo 2020 adopts the following waste management hierarchy to minimise waste production:

1. REDUCE

Strategies for the minimisation of waste production has been considered across all phases of the work from design through construction, and into operational decisions.

DESIGN PHASE

Design using prefabrication options, standardisation and modular design concepts.

Functional dimensions to minimise off-cuts and reduce waste generation.

Design components to market-standard specifications to minimise custom manufacturing.

Identification of products with reduced packaging requirements or with stewardship schemes in place to optimise packing efficiencies and gain additional unit volume.

CONSTRUCTION PHASE

Sequential programme works to avoid damage to completed surfaces, reducing or eliminating the need for re-work.

Provision of proper material staging/storage areas to help eliminate breakage/damage and reduce waste generation.

OPERATIONAL PHASE

Development of food procurement, storage and preparation regimes to minimise food waste.

Specification of reusable plates, cups and cutlery where appropriate for significant reductions in waste.

2. REUSE

Expo 2020 has established a robust culture of material reuse throughout event planning and construction processes, taking into account reasonable effort and costs. This strategy has many positive impacts on both design and construction, such as:

Balancing cut and fill across all projects maximises the opportunity to reuse excavated materials.

Demolition products, such as crushed concrete, are incorporated into the project design when product is of suitable quality and its usage is compliant with building codes.

Salvaged materials are incorporated where possible to reduce the demand for new or raw materials.

Temporary items should, to a practicable extent, be procured on lease or through buyback schemes.

Expo achieved a cumulative diversion rate of 92% since the start of the programme.

3. RECYCLE

The diversion of waste through recycling is the most commonly implemented aspect of the Expo 2020 waste hierarchy. This includes:

Sufficient facilities for the collection and storage of recyclable materials, as well as signage to encourage awareness and avoid improper sorting.

Provision of central sorting and storage areas at a facility or neighbourhood scale, irrespective of whether sorting is undertaken by the building user or a facilities management operator.

Area design that accounts for potential impacts from odour, noise and vehicle movements.

Management equipment and strategies, such as recycling chutes, compactors or balers.

DESIGN PHASE

For end-of-life disassembly, avoiding the use of composite products that reduce the need for processing prior to recycling.

Avoiding coatings where possible or selecting coatings that do not preclude recycling.

CONSTRUCTION PHASE

Provision of clearly labelled waste segregation storage areas and collaboration with a certified waste and recycling haulier.

Appointment of a construction waste manager and implementation of a robust worker education programme to ensure success of construction waste management.

OPERATIONAL PHASE

Procurement strategy for disposable items targeting recyclable and/or biodegradable plates, cups and cutlery.

Preference for biodegradable, compostable products.

Identification of technologies and innovations to process compostable waste

4. RECOVER

In collaboration with Official Waste Management Partner Dulsco, Expo is setting a waste recovery strategy to be implemented during the operations of the event.

85% waste is to be segregated into different waste streams during construction, operation and decommissioning

To complement the waste management hierarchy, Expo has developed its RISE Guidelines for Sustainable Operations, details of which can be found on the 'Sustainability at Expo 2020' section in the beginning of this chapter.

To adhere to the requirements of 'ISO 20121: Sustainable Event Management System', the Sustainability Team developed the RISE Guidelines that set out the requirements for suppliers to integrate sustainability compliance requirements into the products and services they will supply to Expo during event time.

Example criteria include encouraging responsible sourcing of food and retail products across the supply chain by promoting fair trade and eco-labels and eliminating front of house post packaged single-use plastics and promoting the use of biodegradable packaging.

Consequently, the RISE Guidelines contribute to the reduction of plastic and organic waste.

In 2019, Expo's waste management hierarchy successfully led to 80% of the total waste generated having either been recycled or reused.

In line with Expo 2020's waste target which specifies that 85% of waste is to be segregated into different waste streams during construction, operation and decommissioning, the waste management hierarchy has allowed Expo to effectively achieve a cumulative diversion rate of 92% since the start of the programme.





NON-HAZARDOUS WASTE

Expo 2020 manages and separates its non-hazardous waste by classifying it into nine categories:

- Concrete
- Steel and Metals
- Glass
- Timber
- Paper and Cardboard
- Asphalt
- Organic (food)
- Plastic
- General

Waste generated on-site is segregated, stored in dedicated containers and collected for disposal or recycling/reuse via Dubai Municipality-approved waste service providers. In 2019:

Approximately 95.36% of generated concrete was recycled or reused, while 32.55% of the concrete waste was reused onsite for construction or road works; the remaining amount of generated concrete waste was either sent to the approved landfill sites for disposal (approximately 0.04%) or the Al Bayada waste facility for potential reuse at a later stage (approximately 4.61%)

All asphalt waste generated onsite was reused by contractors for the construction of temporary access roads and pavements for groundwater lagoons and storage ponds

Recyclable waste was either reused onsite – such as timber (99.89%), plastic (98.72%), paper and cardboard (97.35%), steel and metals (100%) – **or was sent to registered recyclers**, including Dulsco, Expo 2020’s Official Waste Management Partner, wherever possible

General waste produced from construction activities was segregated onsite and collected in designated bins with proper labelling and coverings, in compliance with Dubai Municipality’s technical guidelines related to waste handling, management, transportation and disposal; the majority was then disposed at Dubai Municipality’s landfill sites

Generated e-waste, mainly comprising of cartridges, was collected and transported to integrated facility management company Imdaad; **77 cartridges were collected and transported to Imdaad during 2019**

TOTAL WASTE GENERATED FOR WASTE STREAMS DURING CONSTRUCTION AT THE EXPO SITE IN 2019

TYPE	GENERATED (TONNES)	RECYCLE/ REUSE (TONNES)	DISPOSED AT LANDFILL (TONNES)	STORED AT AL BAYADA (TONNES)
 CONCRETE	51,464	49,076	19	2,370
 STEEL AND METALS	1,936	1936	(0.00)	-
 GLASS	Zero generation and recycling of glass during the construction process in 2019.			
 TIMBER	3,696	3,692	4	-
 PAPER AND CARDBOARD	151	147	4	-
 ASPHALT	4,315	4,315	0	-
 ORGANIC (FOOD)	2,850	2	2848	-
 PLASTIC	548	541	7	-
 GENERAL	9,679	0	9,679	-
TOTAL (TONNES)	74,638	59,708	12,561	2,370
DISPOSAL PERCENTAGE		80%	17%	3%

Table 6: 2019 non-hazardous waste summary

Case Study: Emaar Hospitality Group and Winnow

As the Official Hotel and Hospitality Partner for Expo 2020 Dubai, Emaar Hospitality Group is committed to prioritising environmental sustainability across its portfolio of hotel brands, restaurants and leisure facilities in Dubai.



Food management is one particular area where the group has already made a significant impact. Globally, one third of all food is wasted, imposing an enormous financial burden for businesses and costing the global economy approximately USD 1 trillion in lost output – equivalent to roughly 1.5% of global GDP.

Emaar Hospitality Group's chefs and restaurant managers have been able to accordingly adjust food purchases, reducing their spending, tackling the root cause of food waste: overproduction

Over the past two years, Emaar Hospitality Group has partnered with Winnow — a leading food waste solution provider to help measure, monitor and cut waste — to implement pioneering technology that ensures its kitchens operate to the highest level of efficiency, reducing food waste and promoting a healthy environment for future generations. Emaar has been one of the early adopters globally and the first user in the UAE of Winnow Vision, a cutting-edge digital tool that uses Artificial Intelligence to 'learn' to recognise different foods being thrown in the bin and calculate the financial and environment cost of this discarded food to commercial kitchens. Furthermore, Winnow provides hotels and restaurants with dashboards offering visibility into which food items are being wasted, enabling them to take informed action. With this information, Emaar Hospitality Group's chefs and restaurant managers have been able to accordingly adjust food purchases, reducing their spending, tackling the root cause of food waste: over production.

In less than two years, Emaar Hospitality Group has saved AED 2 million across 13 hotels, prevented 415,000 meals from going in the bin and reduced CO² emissions by 644 tonnes — equivalent to removing 140 cars from the road for a year. Back in 2018, the target was to cut food waste by 30%. The Group significantly exceeded this, with an average food waste reduction of 70%.

Between January 2018 and December 2019, Emaar Hospitality Group and Winnow:

reduced food waste on average by **70%**

achieved savings of **AED 2 million** across 13 hotels

saved **415,000** meals from being thrown away

achieved savings of **644 tonnes of CO²**, equivalent to 140 cars removed from the road for a year

Case Study: Clean-Up 4 a Purpose Campaign

Commemorating Earth Day, Dulsco – Official Waste Management Partner for Expo 2020 – hosted 'Clean-up 4 a Purpose', a public awareness campaign in partnership with Expo 2020 Dubai and DGrade's 'Simply Bottles', a non-profit initiative that works with schools, businesses and other organisations to increase recycling rates of plastic water bottles in the UAE.



Held in the Al Qudra region, the event saw 300 volunteers proudly sign a pledge to 'Reduce, Reuse, Repurpose and Recycle,' thereby pledging to adopt environmental consciousness in their day-to-day lives. By spreading awareness, the event demonstrated at a micro-level how Dulsco is aiming to achieve 85% waste diversion from landfill during Expo 2020 Dubai, support Expo 2020's goal to be one of the world's most sustainable World Expos ever.

'Clean-up 4 a Purpose' got underway with an awareness session that educated participants about the different types of waste to be collected, the negative impact of waste on the environment and the importance of segregation and recycling. Caps made out of recycled plastic bottles were gifted – wearable proof of what can be achieved with effective plastic recycling – and safety gloves, picking clutches and masks were handed out to ensure health and safety standards are met.

A total of 250 UAE school children, their teachers from various schools in Dubai, along with 50 employees, volunteers and partners from Dulsco, Expo 2020 Dubai and DGrade took part in the event. The activities were divided among collecting the waste from open areas, segregating the recyclables in separate bags and recording the weight of the material collected.

Once all the waste had been collected, sorted and weighed, recyclables such as cans, glass and metal would then be recovered at Dulsco's Material Recovery Facility for further segregation and recycling, to be made into new products through approved recyclers, while plastic bottles would be donated to DGrade and turned into apparel (t-shirts and caps).

The event concluded with a total of half a tonne of waste collected in almost 100 waste bags (20% recyclables, 80% general waste) in only two hours. All participants were given certificates for completing the activity and being part of the initiative, followed by a 'Trash into Treasure' workshop aimed at inspiring students on how to turn their waste into resource, especially every day-use item such as bags and pencil cases.

Not only did the campaign encourage active participation of communities in waste management and recycling initiatives, but also helps to achieve a circular economy, UAE Vision 2030 and the UN Sustainable Development Goals, including SDG 11 (Sustainable Cities and Communities) and SDG 15 (Life on Land) by contributing to protecting desert animal life and maintaining their natural habitat.

Not only did the campaign encourage active participation of communities in waste management and recycling initiatives, but also helps to achieve a circular economy, UAE Vision 2030 and the UN Sustainable Development Goals.

Clean-up 4 a Purpose

The event saw **300 volunteers** proudly sign a pledge to 'Reduce, Reuse, Repurpose and Recycle,' thereby pledging to adopt environmental consciousness in their day-to-day lives.

Dulsco is aiming to achieve **85%** waste diversion from landfill during Expo 2020 Dubai, support Expo 2020's goal to be one of the world's most sustainable World Expos ever.

HAZARDOUS WASTE

Expo 2020 classifies hazardous waste into four categories:

Oil-based:

Sent for recycling to Cyclo Oil, a Dubai based company that owns and operates a lube oil refining plant.

Water-based:

Disposed of at the Jebel Ali Hazardous Waste Treatment Facility (JAHWTF).

Solid hazardous:

Disposed of at JAHWTF via Dubai Municipality-registered service providers or sent to Emirates Environmental Group (EEG) and Ecyclex International Recycling LLC for recycling.

Other:

Hazardous waste that does not fall under the above three categories, such as medical waste, is disposed of at JAHWTF via Dubai Municipality-registered service providers.

A total of 99.19 tonnes of hazardous waste has been generated in 2019, an increase of roughly 196.8% compared to 2018. This rise is a result of an increase in construction, in preparation for Expo's upcoming Operational Phase.

WASTE TYPE	OIL-BASED HAZARDOUS WASTE (TONNES)	WATER-BASED HAZARDOUS WASTE (TONNES)	SOLID HAZARDOUS WASTE (TONNES)	OTHER HAZARDOUS WASTE (TONNES)
TOTAL GENERATED	23.32	12.99	46.02	17.18

Table 7. 2019 hazardous waste summary

WASTEWATER MANAGEMENT

For effective management and monitoring, Expo 2020 classifies generated wastewater into three main categories:

Blackwater:

Wastewater from bathrooms, generated from contractors' premises, is stored in septic tanks located at the bottom of toilet cabins in various rest areas on Expo site; it is transported by Dubai Municipality to sewage treatment plants (STPs) in Jebel Ali, Dubai Sports City and Al Aweer

Greywater:

Wastewater from sinks and washing utilities is stored and transported by the same method

Condensate:

Water that originates from air washers, air-cooling coils, condensing appliances, overflow from evaporative coolers and similar water-supplied equipment or air-conditioning equipment; in 2019, no condensate was produced by Expo's operations or activities

Expo monitors the onsite sewage treatment plant by issuing and sharing environmental reports with Dubai Municipality on a quarterly basis. These reports include the monitoring and evaluation results of hydrogen sulphide and ammonia, to determine the ambient air quality at the temporary STP.

The reports ensure that the STP complies with the World Health Organisation's regulatory standards and with Dubai's Wastewater Discharge Limits and Standards. Expo's Environment team closely monitors any unplanned water discharges and records any occurrences in an environmental incident log.

WASTEWATER TYPE	SEWAGE / BLACK WATER (M3)	GREY WATER (M3)	CONDENSATE (M3)	TOTAL (M3)
Generated	227,858	36	N/A	227,894
Disposed	211,720	N/A	N/A	211,720
Treated and reused	16,138	36	N/A	16,174

Table 8. 2019 wastewater summary in Megalitres

SPILLAGE

All Expo site contractors are required to develop and include a Spill Response Procedure in their Environment Plan, detailing responsibilities, preventative and mitigation measures in the event of any type of on-ground spillage. Prevention and mitigation controls include:

- Training all site personnel on contamination and spills
- Taking inventory of onsite spill response equipment
- Evaluating and reporting all incidents related to the spillage of hazardous chemicals
- Review of any follow-up preventative action
- Hazardous chemicals used on-site must be stored in well-ventilated and illuminated chemical storage areas or rooms; all storage areas are provided with an impervious floor surface, a secondary containment with 110% capacity, Material Safety Data Sheet (MSDS), and fire extinguishers and spill response equipment in the immediate vicinity

As a result of these stringent measures, only 81 incidents were recorded over 2019, two of which were recognised as serious spills.

Ranging from potable water flooding to accidental oil spills, all incidents were cleaned up by the respective contractors using approved environmental emergency response procedures.

To date, 170 environmental incidents have been recorded. Nine classified as serious and 161 as minor, these incidents have been categorised into four categories:

- Hazardous materials/spills
- Wastewater management
- Concrete management
- Other, including potable water pipe leakage and incidents related to smoke emissions from generators or vehicles.

ENVIRONMENTAL INCIDENTS BY TYPE (CUMULATIVE UNTIL YEAR-END 2019)

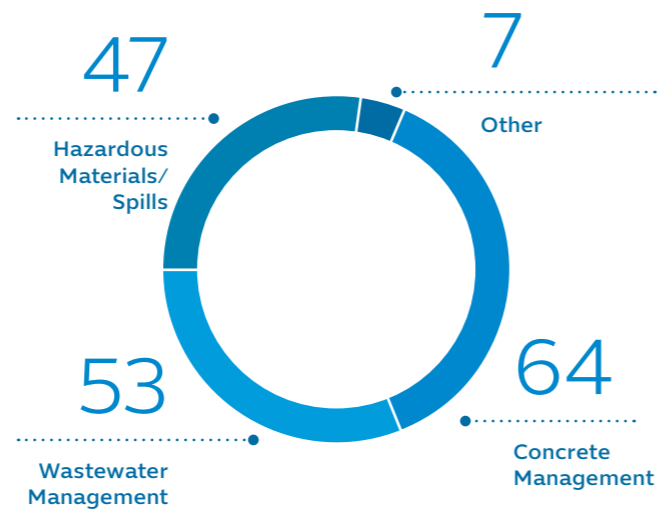


Figure 14: Environmental incidents by type

All Expo site contractors are required to develop and include a Spill Response Procedure in their Environment Plan

A high-level summary of the significant spills that have been recorded in 2019 and mitigation measures taken.

DATE	SPILL DETAILS	RESPONSE	PREVENTATIVE ACTIONS
19 November 2019	Discovery of an underground septic tank during excavations for a project. Initial investigations indicated that the underground tank was not removed by the previous contractor that occupied the plot. Given this was a deliberate and unauthorised disposal of wastewater, the incident was classified as a serious incident.	Contaminated soil and remnants of the septic tank were removed and relocated to an isolated laydown contaminated material storage area for further investigation, before being properly disposed of. The affected area was backfilled and compacted with clean soil.	<p>By Expo 2020:</p> <ul style="list-style-type: none"> - Drone footage/ photos of previous occupants were used to identify potential interfaces with underground structures. - Location of any active sites with underground structures, such as septic tanks, were recorded. Expo will also ensure all recorded underground structures are removed from the Expo site by April 2021.
5 December 2019	During its removal, the underwater wastewater holding tank got damaged, resulting in approximately 200 litres of wastewater released. The tanks were partially removed and the site team decided to leave the tank, backfilling the area. Given this action was deliberate and the consequence was not reported, the incident was classified as a serious.	The tanks and associated waste were removed and stored in the waste storage area for further disposal.	<p>By Contractors:</p> <ul style="list-style-type: none"> - Ensure appropriate training/ and de-briefings are delivered to the mobilisation and demobilisation teams. - Implement policies to avoid the installation of septic tanks underground wherever possible. - Special permits will be required to install underground septic tanks. - Update Project Logistics Plans and keep track of coordinates for all underground structures. - Ensure appropriate supervision at all times during a project's demobilisation stage. - Communicate lessons learned to improve awareness.

Table 9. 2019 significant spills that have occurred

8. BIODIVERSITY AND ECOLOGY



BIODIVERSITY AND ECOLOGY

EXPO 2020 SUSTAINABILITY TARGETS

01

Ensure Expo 2020's development will enhance ecosystem management and the natural environment through preservation of existing resources and creation of new urban and non-urban natural areas.

02

Protect all existing areas of ecological value both within and outside the project boundary by maximising landscaping with native/adaptive species and minimising the planting of invasive species.

03

Ensure that 95% of the landscape area is managed without the use of chemical pesticides, herbicides or fertilisers.

From the initial phases of this project development, various environmental factors, including the flora and fauna of the location, have been considered in the decision-making processes.

The Expo site will include Arab-style vistas, including palm groves, jasmine trees, wadi figs and desert scenery. Aiming to keep visitors cool, shaded canopies will be provided by the national tree of the UAE, the Ghaf tree.

The megaproject's 4.38 sqkm site includes 22ha for a nursery, in cooperation with Dubai Municipality, that will cultivate 12,157 trees, including palm trees, more than 256,000 shrubs and thousands of flowering plants and herbs.

The plants selected for Expo 2020 Dubai are either indigenous or adaptable to Dubai's environment, while the methods deployed by Expo in the design and construction stages of the nursery are eco-friendly.

Solar-powered lights have been installed along the main road, and the nursery's team exclusively uses organic fertilisers, in addition to recycling the nursery's waste.

Treated wastewater provided by Dubai Municipality is being used to meet most of the nursery's irrigation needs, and clean drinking water is being used for only seed development during the first stages of plant development.

In 2019, Norway-based company Desert Control – a grant recipient under Expo 2020's USD 100 million global innovation and partnership programme Expo Live, cooperated with the Expo Live team to test liquid clay nanoparticles in Expo's Innovation Park by mixing pond soil with synthetic mud.

The Expo site will include Arab-style vistas, including palm groves, jasmine trees, wadi figs and desert scenery. Aiming to keep visitors cool, shaded canopies will be provided by the national tree of the UAE, the Ghaf tree.

Case Study: Beehive on Expo site

A colony of honeybees that set up home on the Expo 2020 site were safely relocated, through the efforts of Expo 2020's Sustainability department, the Beekeepers Association and the quick-thinking of the construction worker who uncovered them.

Although not native to the UAE, the Apis mellifera bees nested in a pile of steel rebar on the plot of the Sustainability Pavilion.

In line with the event's Sustainability subtheme, the Expo 2020 4.38km² site is pesticide-free – a possible reason for the bees to settle at this location. Construction was temporarily halted, and Expo's Sustainability team collaborated with the Beekeepers Association to rescue the colony through its 'Adopt a Beehive' initiative.

The insects did not have time to build a honeycomb, suggesting that they nested less than 24 hours before being spotted.

While relocating loose bees can be a complicated process, professionals from the Beekeepers Association – equipped with a selection of protective clothing and helped by the courageous worker who made the initial discovery – removed the bees and their queen, before transporting them to the Beekeepers Association's Bee Garden in The Sustainable City, Dubai.

A year after the rescue of the honeybees' rescue, honey from the hive was harvested and bottled in specially-designed Expo 2020 jars and shared with the employees.



C. SOCIAL IMPACT

Expo 2020 is committed to creating a positive, lasting social impact for its stakeholders and the wider community, both during and after the event. Numerous social initiatives, aligned under the event's Opportunity, Mobility and Sustainability thematic subthemes, have been organised in the years leading up to Expo 2020.



Case Study: The Expo School Programme

One of the most integral components of Expo 2020 Dubai is the Expo School Programme.



Featuring its own dedicated team, the Expo School Programme collaborates with educators and students across the UAE, enabling them to explore Expo 2020's vision inside and outside the classroom.

From inspiring initiatives and immersive workshops to meaningful talks and educational experiences, the Expo School Programme ensures that the school community plays an essential role in bringing excitement and momentum to this historical event, ultimately contributing to the success and legacy of Expo 2020 Dubai.

From inspiring initiatives and immersive workshops to meaningful talks and educational experiences, the Expo School Programme ensures that the school community plays an essential role in bringing excitement and momentum to this historical event.

The Expo School Programme team also provides teachers with the tools necessary to prepare their students for the world ahead. Through an online library of Learning Resources around with interdisciplinary lessons, collaborative exercises and curated learning materials, teachers can bring the vision and values of Expo 2020 Dubai to their classrooms and beyond.

These resources cover an array of dynamic, Expo-inspired topics, including the three thematic subthemes: Opportunity, Mobility and Sustainability. In the area of Sustainability, students explore the various challenges that our environment faces today, from land to sea and sky.

The goal is to invite the next generation to discover how innovative technology can facilitate global sustainability and identify new ways to rebalance the resources of our planet and safeguard its future.

The Expo School Programme team wrapped up 2019 with the successful launch of the Expo 2020 Young Innovators programme in November. An engaging initiative where UAE students sketch their most creative ideas before they are put forward to be selected and transformed into life-improving innovations.

Of more than 5,000 submissions received, 200 of these sketched concepts will be moulded into 3D prototypes and showcased in the Young Innovators Exhibition in Expo 2020's Sustainability Pavilion.

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Case Study: Accenture, Expo 2020 Pledge 2,020 Hours of Coding Tutorials to UAE Students

Accenture and Expo 2020 Dubai have committed to hosting 2,020 hours of coding tutorials for UAE-based primary school students.



The '2020 Hours of Code' initiative helps primary school students build invaluable critical-thinking and problem-solving skills, which are useful to all students regardless of their career interests. Delivered in collaboration with the Expo School Programme, these weekly sessions started in 2019 and took place at the Expo 2020 Dubai Visitor Centre. In addition to providing computers for the sessions, Accenture is leading tutorials in both Arabic and English to ensure all participating students benefit from the experience. Delivered to young learners from across the UAE, these development sessions enable participants to develop coding and computer science skills in a fun and engaging environment.

The initiative reached
1,298 students
across
42 sessions
by the end of 2019.

We are proud to announce this important initiative that builds on our robust partnership with Expo 2020," said Gerardo Canta, who leads Accenture's Communications, Media & Technology practice in the Middle East and Turkey. "As the UAE strives to cement its position as a digital hub in the region, it is essential that our youth are fluent in coding to meet these aspirations. Though delivering more than 2,000 hours of coding is an ambitious target, it is a testament to our passion and commitment to equip this nation's youth with the right tools to succeed.

Mohammed Alhashmi, Chief Technology Officer at Expo 2020 Dubai, said: "In line with Expo's theme of 'Connecting Minds, Creating the Future', the 2020 Hours of Code initiative will enable young people to explore exciting concepts while developing new skills that will empower them in their future careers. Together with Accenture, we aim to help take our youth's digital literacy to the next level.

Coding has become an important focus for the leadership of the UAE in recent years, with the launch of initiatives such as 'One Million Arab Coders', announced in 2017 by His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE, and Ruler of Dubai. Accenture has been participating in 'Hour of Code' initiatives since 2015. In 2018, nearly 2,500 Accenture employees committed to teach an hour of code at local events in their communities, helping to inspire more than 100,000 students across the world to learn coding and computer science skills.

As Digital Services Premier Partner and Systems Integrator for Expo 2020, Accenture is committed to help ensuring Expo 2020 is one of the most innovative World Expos ever held. Announced during UAE Innovation Month 2019, the '2020 Hours of Code' initiative extends the ongoing partnership between Accenture and Expo 2020, bringing to life its theme 'Connecting Minds, Creating the Future' and one of its three key subthemes, Opportunity.

Case Study: PepsiCo's 'Dare To Do More' Challenge

'Dare To Do More' is an iconic student challenge from PepsiCo that kicked off across college campuses in Egypt, India, Thailand and Saudi Arabia during October 2019.



The competition challenged the students to generate big ideas that would help PepsiCo become "Faster, Stronger, Better" in its sustainability efforts and reduce its carbon footprint in the following categories: Water, Agriculture, Plastic Waste Management. Designed to attract top graduates across PepsiCo's key markets, the competition sought to harness students' entrepreneurial spirit for an opportunity to interview for a place in one of the company's graduate schemes.

The competition received more than 15,000 registrations, each of which went through an initial series of virtual assessments. These were then assessed by a panel of region-specific panelists who then shortlisted the top ten big ideas from each country. The winner from each country (Egypt, India, Thailand and Saudi Arabia), travelled to Dubai to meet our esteemed judges and compete for the grand prize.

The competition received more than **15,000** registrations that went through an initial series of virtual assessments

This one-of-a-kind experience showcased PepsiCo's leadership, innovation and global strategy, while also providing opportunities to network, share ideas and have fun. Country team winners from India, Egypt and Thailand also earned offers of employment from PepsiCo in their country of residence.

The Grand Finale winner, Bijayeta Pati from the Institute of Management Technology in India, won the competition for her innovative concept 'Re-Plas' bricks. Serving as an alternative to construction material, the bricks are made from plastic waste. The project reinforces PepsiCo's commitment to pioneering innovative solutions in plastic waste management.

All the country team winners from India, Egypt and Thailand have also earned job offers from PepsiCo at their country of residence.

Bijayeta has earned herself a job with PepsiCo India, a 3 month project stint at the Dubai Office and a trip to the PepsiCo Headquarters in Purchase, New York where she will present her idea to Senior Leaders.





Case Study: Expo Live

Launched in 2016, Expo Live is Expo 2020's global innovation and partnership programme, which finds and funds innovators whose novel solutions are tackling some of the world's most pressing challenges – inspiring positive, tangible action around the world and leaving a lasting legacy.



The programme, comprised of the Innovation Impact Grant Programme (IIGP) and the University Innovation Programme, is supporting social entrepreneurs across all over the world with funding, guidance and exposure. Expo Live projects look for solutions across 14 different sectors, including agriculture, education, environment, employment, energy and healthcare. These include innovators that help solve global challenges set down in the United Nations' Sustainable Development Goals (SDGs).

To date, 120 IIGP grantees, or Global Innovators, have secured funding with grants of up to USD 100,000 each, plus guidance and exposure. Over four completed cycles, the IIGP has received more than 11,000 applications from 184 countries.

Through Expo Live, Expo 2020 – a global platform for innovation that will bring together more than 200 international participants, including 192 nations – is proving that innovation can come from anywhere, to everyone. With more than 40 projects focusing on sectors such as agriculture, waste management and energy, Expo Live exemplifies the traditional notion of sustainability, with solutions relating to the natural environment, the consumption of resources and the balance between human prosperity and the wellbeing of the planet.

Social entrepreneurship is a powerful solution for the world, balancing the need for economic growth with a firm, unbridled commitment to bolstering social equity. Expo Live also builds on this trajectory, supporting entrepreneurs, startups and other innovators so they can scale their innovations through funding, guidance and exposure – to ensure they have lasting impact not only in the region but across the world, even after Expo 2020 ends.

Expo Live works alongside its Global Innovators to ensure the positive impact generated from Expo Live grant - and the project's implementation - transforms the lives of its beneficiaries and that the project's environmental footprint is taken into account.

2019 was an exciting year for Expo Live, with 51 Global Innovators from 38 countries on-boarded, the programme's largest cohort yet.

Between January 2017 and the end of 2019, Expo Live:



Conducted four rounds of calls for proposals, receiving more than 11,000 applications from 184 countries



Confirmed 120 Global Innovators from 65 countries, whose projects having a direct impact on their communities in sectors including, but not limited to, water, healthcare, energy, employment, health and agriculture



Hosted the 2nd Expo Live Global Innovators Summit in Dubai, held under the theme 'When Passion meets Capabilities', that brought together UAE government representatives, Global Innovators, incubators, Expo 2020 Partners, and others, to get inspired, connect, share and learn



Awarded grants to 46 student teams from 19 universities across the UAE under its the University Innovation Programme.

Case Study: International Participants Meeting 2019

The fourth official annual International Participants Meeting (IPM) took place on 29-30 November 2019, bringing together delegates from 192 participating countries to receive updates on the progress of Expo 2020.



The appointment of His Excellency Sheikh Nahayan Mubarak Al Nahayan, Cabinet Minister and UAE Minister of State for Tolerance, as the Commissioner General of Expo 2020 Dubai was the first of many updates revealed during this event.

Her Excellency Reem Al Hashimy, UAE Minister of State for International Cooperation and Director General of Expo 2020 Dubai, addressed participants on Expo 2020's pledge to deliver meaningful engagement, while delivering spectacular visitor experience through attractions and pavilion programmes, across the 4.38 sqkm site.

Expo 2020 will present ground-breaking opportunities for participants and visitors to contribute to the preservation of our planet's most valuable natural resources.

Expo 2020 Dubai aims to provide a platform for people to formulate sustainable policies and partnerships, through which humanity might realise its full potential. It focuses on forging new paths based on the 17 UN SDGs, supercharging these SDGs and bringing them to life for visitors to Expo 2020. As one of the first countries to sign up for the Agenda 2030 and align national priorities with it, the UAE will use Expo to catalyse meaningful discussions and tangible solutions to these challenges for the coming decade and beyond.

The opening plenary session addressed site progress, with Ahmed Al Khatib, Chief Development and Delivery Officer, taking the delegates through a virtual tour of the Metro Arrivals Plaza, Dubai Exhibition Centre, and Al Wasl Plaza. This was followed by the participants' delivery session, where Omar Shehadeh, Chief International Participants Operations Officer, remarked that 4,000 one-on-one meetings have been organised and hosted between Expo and Participants so far, in conjunction with authorities and other stakeholders.

Tony Matthews, Operations Director, Back of House, recapped the technical meetings that took place through 2019. This featured detailed information on site operations, including a logistics journey with Official Logistics Partner UPS, and how to book a delivery slot on the Delivery Management System. He also reminded participants of the Waste Management Strategy, adding that a rate card for waste disposal has now been finalised and was live on the Expo Portal comms along with the Operations Guide.

Clive Stephens, Operations Director, Front of House, emphasised that it was now participants' responsibility to complete their pavilions, submit approval requests and be declared operationally ready prior to the opening of Expo 2020. They must also commit to training staff so they would be fully prepared for event time. Communication is key, and participants were advised to keep talking to Expo 2020 to address any issues and comments.

Services to be provided to participants to encourage business connections and an exciting line-up of events taking place throughout the six months of Expo were revealed, alongside an increasingly busy and exciting schedule for Dubai Exhibition Centre during the Expo event. Additionally, for participants with specific business requirements, a review of dedicated areas on site, such as the Business Connect Centre and other multi-purpose facilities, was conducted.

The need to increase global awareness through marketing efforts was captured. An outline of Expo 2020's marketing plans, how Expo will raise awareness, drive consideration and convert that into Expo visitorship was presented.

So far, Expo has generated mass awareness in more than 30 markets around the world, beginning with the

'Welcome the Future' campaign. The 'One Year to Go' event generated hundreds of pieces of coverage across 29 countries, amassing a reach of 3.6 billion people. The celebrations led by international stars Mariah Carey and Hussain Al Jassmi, attracted 400 representatives from more than 150 media organisations.

The Expo Media Centre will serve as a hub for accredited media and is located at the heart of the Expo 2020 site, adjacent to Al Wasl Plaza. Participants have been asked to provide an early view of their planned activities and events so Media Operations can plan the necessary broadcast and photopgraphic coverage.

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INSPIRE

A. EXPO'S COMMITMENT TO PEOPLE

Expo 2020 is committed to creating a positive social impact by recognising the rights and responsibilities towards its people.

1. RESPECTING PEOPLE'S RIGHTS

Since the Bid phase, Expo 2020 Dubai has pledged to create a positive social impact on its stakeholders as a part of its commitment to the BIE. To achieve this, the Expo 2020 team has developed an integrated framework for its outreach and stakeholder engagement that aligns with the event's key subthemes, Opportunity, Mobility and Sustainability. In line with this framework, Expo has implemented the Worker Welfare Policy and Assurance Standard, which applies to organisations that support the delivery of Expo 2020 Dubai, including third party developers, contractors and partners throughout the event's lifecycle and various phases.

The Worker Welfare Policy is based on the following fundamental principles where Employers must:

1. Ensure fair and free recruitment
2. Ensure that employees understand the terms and conditions of their employment
3. Treat employees equally and without discrimination
4. Protect and preserve the dignity of employees and not tolerate harassment or abuse of any kind
5. Respect the right of employees to retain their personal documents
6. Pay employees' wages and benefits on time and in full
7. Allow employees freedom to exercise their in-country legal rights without fear of reprisal
8. Provide safe and healthy working and living environment
9. Provide access to grievance mechanisms and remediation
10. Ensure that bonded, indentured, forced or child labour is not used

Employee and worker welfare is further managed through Expo's Code of Conduct, which emphasises on treating coworkers with respect and in a non-discriminatory manner. Successful adherence to Expo's values by all Expo 2020 employees resulted in no incidents of discrimination in 2019.

2. SECURITY PRACTICES

Assisting in the monitoring of external security companies and contractors onsite, who are audited on a regular basis, all Expo 2020 security personnel have been apprised of the Worker Welfare Policy and the requirements under the Worker Welfare Assurance Standards.

The scope of health, safety and security guidelines is also extended to customers and visitors during the six months of Expo, indicated as a significant subject by key stakeholders in the 2019 materiality assessment. However, with 2019 primarily covering the Pre-Expo phase, this report does not include reporting on customer health, safety and security disclosures.

Each workshop welcomed external cybersecurity experts and included hands-on exercises and simulations to enrich the knowledge of the attendees.

To enhance its cyber security practices by raising awareness of the threats of cybersecurity and promoting the cyber-literacy of its workforce, Expo 2020 kicked-off the Cyber Smart Programme in July 2019. Its launch was announced during Expo's Cyber Week, a week of games and activities across Expo 2020's departments that covered various aspects of cybersecurity. The programme included five workshops that covered an array of topics, such as cybercrime trends, championing cyber awareness, building a cybersecurity culture, cyber defense in the enterprise and managing cyber risks. In collaboration with Digital14, Expo 2020's Official Cyber Security Provider, each workshop welcomed external cybersecurity experts and included hands-on exercises and simulations to enrich the knowledge of the attendees. Complementing the workshops, and building on general awareness and communications related to cyber security, Expo also uses posters, games, screen savers, email communications, and other channels, to promote cyber security communication.



3. ANTI-CORRUPTION

Expo 2020 adopts a zero tolerance approach to any malpractice or fraudulent act, requiring its management and employees to observe high standards of business and personal ethics when conducting their duties and responsibilities.

Expo requires its suppliers to abide by Expo's Supplier Conflict of Interest document and observe the highest standards of business and personal ethics in the conduct of their duties and responsibilities. Expo's Supplier Conflict of Interest states that it is the responsibility of a Supplier to declare any Conflict of Interest, perceived or actual to Expo, that may prevent them from entering into a contract with Expo. Suppliers have the opportunity to appeal Expo's Conflict decision within three days. Any decision communicated after the appeal is final.

Expo's Whistleblowing Policy, which is applicable to all employees (seconded and outsourced), volunteers, consultants and other people working within Expo, encourages the reporting of any malpractice or fraudulent activities across the supply chain. Expo 2020 is committed to investigating all reported violations, while maintaining the strictest confidence to protect the rights of any party subject to investigation.

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Whistleblowers are also discouraged from making false or malicious allegations that may result in disciplinary actions against a whistleblower. Violations can be reported following a process detailed in the Whistleblowing Policy and through various channels, such as a direct meeting with the Director-PMO (Portfolio Management Office) or via a phone call/email.



4. ACCESSIBILITY

In the UAE's National Policy for Empowering People with Special Needs, people with special needs or disabilities are referred to as 'people of determination'. The key principles of accessibility include equity, dignity, functionality and independence, which should be applied through every stage of a development, including concept, build, design and operations. Inclusion and accessibility are an integral part of Expo 2020 Dubai, and are aligned with the Dubai leadership's vision to ensure that public buildings and city-wide facilities are accessible for people of determination by 2020.

To deliver a true 'Expo for Everyone', Expo 2020 Dubai will deliver experiences for all, irrespective of age or physical, sensory and/or psychological challenges. The event will demonstrate the power in bringing together people, with different capabilities, to harness ideas, generate innovations and demonstrate best practices. The same values are expected of Expo partners as a consideration when developing content and experiences, as well as during the construction phase.

Expo's accessible infrastructure design means that all visitors will be able to physically access and experience the event, inclusive of their physical abilities. These were initially guided by the international guidelines of the American Disability Act (ADA) – the most widely used in the global accessibility realm, following which the local standards of Dubai Universal Design Code (DUDC) were developed that guided later developments.

Following these guidelines, Expo 2020 has incorporated various provisions for people of determination, including hearing enhancement systems, quiet rooms with sensory equipment, service dog relief areas and accessible restrooms. These provisions will also be complemented by services such as adaptive tour offerings and an availability of (1) hidden impairment lanyards for those who wish to be identified and (2) Expo staff that are specifically trained to engage with people of determination. Moreover, the Expo 2020 website will also be WCAG 2.1 AA (Web Content Accessibility Guidelines) compliant, allowing access for users with a visual or hearing impairment to download social guides on accessibility at Expo 2020.

Aiming to leave a legacy of accessible spaces that can be easily utilised and creating a culture of understanding and acceptance, Expo 2020 engaged more than 400 staff members during its Accessibility and Inclusion week in September 2019. In addition to an information stall that was set up, different speakers covered a range of disability-related topics on each day of the week. They included Steven Mifsud, Director of award-winning UK-based access consultancy firm Direct Access, and Falah Al Ali, a photographer at Expo 2020. Both shared their experiences of being deaf, among other life experiences. Further, Salem Bawazir, who leads the Inclusion Programme within Expo 2020's Human Resources Department and is a wheelchair user with cerebral palsy, talked about his experiences that led to the concept of the PODium app – currently in development for people of determination by SAP, Official Innovative Enterprise Software Partner for Expo 2020.

To deliver a true 'Expo for Everyone', Expo 2020 Dubai will deliver experiences for all, irrespective of age or physical, sensory and/or psychological challenges.

Expo 2020 has reached out to various people of determination communities to raise awareness of Expo through events such as 'AccessAbilities Expo', held at the Dubai World Trade Centre in collaboration with the UAE's Community Development Authority. It was observed during such events that the majority of people of determination were aware of Expo 2020 and were looking forward to visiting. Another key Expo 2020 contribution to accessibility and inclusion initiatives includes its participation in the 2019 Emirates NBD Unity Run at Silicon Oasis, where Expo staff and volunteers participated to show their support. By continuing to participate in various awareness programmes, Expo 2020 aims to actively engage with this community to ensure an inclusive Expo 2020 experience for all – 'An Expo for Everyone'.

5. LOCAL COMMUNITY ENGAGEMENT

A number of fun and engaging initiatives have enabled people from across the country, of all ages, nationalities and backgrounds, to show their support and excitement, and become part of the Expo story as we prepare to bring the world together. Expo's commitment to Sustainability was reflected throughout.



RAMADAN INITIATIVE

In May 2019, Expo staff, partners and volunteers hand-delivered more than 25,000 Ramadan gift boxes to homes in all seven emirates, enabling people to personally connect with the Expo. Visiting homes and communities across the country was also an opportunity to bring the Emirati spirit of hospitality and generosity to life, values which are particularly significant during the Holy Month of Ramadan. Distributed items included reusable bags and reusable coffee mugs.



EXPO ICE CREAM VAN

In November and December 2019, two colourful Expo-branded ice cream vans travelled across the UAE and distributed 60,000 soft-served ice cream cones, free of charge. The van visited more than 145 residential areas and upwards of 45 universities and government offices, as well as community events, media outlets and public spaces across the UAE, sharing fun facts about previous World Expo inventions – including the ice cream cone – inspiring people to think about what they may see at Expo 2020. To reduce packaging, staff encouraged the use of cones to serve the ice cream and also offered recyclable ice cream cups and napkins.



THE WORLD'S GREATEST SHOW IN THE MAKING TOUR

'The World's Greatest Show in the Making Tour' was an exciting opportunity for people in the UAE to get a sneak peek at the Expo site and enjoy a small taste of the Expo visitor experience. The engaging and informative guided bus tours began in the summer of 2019 and returned again in December 2019, welcoming over 10,000 people in total from more than 120 nationalities.

The tours were aligned with Expo's sustainability-focused 20 Point Action Plan and included the distribution of reusable water bottles, and particular care and attention given to People of Determination and those with additional accessibility requirements.



B. PEOPLE OF EXPO 2020

We celebrate the achievements and contributions of our people at Expo 2020 as one of our biggest sources of inspiration for the megaevent.

1. EMPLOYEE DIVERSITY

Expo 2020 largely depends on the talent, skills and dedication of its workforce, which is made up of highly qualified personnel who represent more than 40 geographical regions and include more than 30,000 dedicated, passionate volunteers. All Expo 2020 employees are inducted into the organisation through an Employee Integration Programme on the Expo 2020 Al Wasl intranet, an efficient employee platform for connecting, collaborating and communicating. This portal also offers easy access to internal and external news, alongside a centralised events and training calendar with information on Expo programmes, training events and wellness initiatives.

In 2019, as a part of its push for diversity, Expo 2020 welcomed a total of 646 new employees from different age groups, genders and geographical locations – representing an increase of 397 employees compared to 249 new hires in 2018. However, 2019 saw 99 employees leave the organisation, the majority of whom were women (61.6%) and non-UAE nationals (65.7%).

To address these departures, Expo has focused on increasing the diversity of its workforce. While the majority of employees recruited in 2018 were men, approximately 52% of new hires in 2019 were women, showcasing Expo 2020's focus on being an equal-opportunity employer. Furthermore, 155 (24%) of all new hires in 2019 were UAE nationals, highlighting Expo 2020's ongoing commitment to emiratization.

AGE DISTRIBUTION (YEARS)	NUMBER OF NEW EMPLOYEES	PERCENTAGE
Under 30	171	26.5
30-49	428	66.3
50 and above	47	7.3
TOTAL	646	100

Table 10. Total number of employees hired by age group in 2019

NATIONALITY	NUMBER OF NEW EMPLOYEES	PERCENTAGE
UAE national	155	24
Non-UAE national	491	76
TOTAL	646	100

Table 11. Total number of employees hired by region in 2019

AGE DISTRIBUTION (YEARS)	EMPLOYEE TURNOVER	PERCENTAGE
Under 30	32	32.3
30-49	55	55.6
50 and above	12	12.1
TOTAL	99	100

Table 13. Total employee turnover by age group in 2019

GENDER	NUMBER OF NEW EMPLOYEES	PERCENTAGE
Women	335	51.9
Men	311	48.1
TOTAL	646	100

Table 12. Total number of employees hired by gender in 2019

NATIONALITY	EMPLOYEE TURNOVER	PERCENTAGE
UAE national	34	34.3
Non-UAE national	65	65.7
TOTAL	99	100

Table 14. Total employee turnover by region in 2019

In 2019, as a part of its push for diversity, Expo 2020 welcomed a total of 646 new employees from different age groups, genders and geographical locations.



GENDER	EMPLOYEE TURNOVER	PERCENTAGE
Women	61	61.6
Men	38	38.4
TOTAL	99	100

Table 15. Total employee turnover by gender in 2019

CONTRACT TYPE	REGION							TOTAL
	AFRICA	ASIA	EUROPE	MIDDLE EAST	NORTH AMERICA	SOUTH AMERICA	OCEANIA	
Permanent	21	125	162	193	52	18	49	620
Temporary	0	4	5	7	0	0	0	16
Secondment	0	0	1	9	0	0	0	10
Intern	0	7	3	64	4	1	0	79
TOTAL	21	136	171	273	56	19	49	725

Table 16. Total number of employees, by employment contract and region, in 2019

CONTRACT TYPE	MEN	WOMEN
Permanent	299	321
Secondment	5	5
Temporary	8	8
TOTAL	312	334

Table 17. Total number of employees, by gender and contract type, in 2019



An important component to diversity at Expo 2020 is promoting gender equality. All employees of the same grade receive a competitive wage based solely on the local employment market. Moreover, approximately equal numbers of male and female employees have been allocated to Expo's governance bodies, ensuring each gender has equal representation in governance matters.

Diversity also includes efforts to achieve an even distribution of employees by age group. In order to create a balanced distribution of age groups across the Expo workforce, 26.5% of new hires in 2019 were under 30 years old. In the same year, 66.3% of all hires ranged from 30 to 50 years old, a decrease on 2018 when 71% of new hires were in this age group.

Diversity also includes efforts to achieve an even distribution of employees by age group. In order to create a balanced distribution of age groups across the Expo workforce,

26.5% of new hires in 2019 were under 30 years old.

66.3% of all hires ranged from 30 to 50 years old, a decrease on 2018 when 71% of new hires were in this age group.

AGE DISTRIBUTION (YEARS)	PERCENTAGE
Under 30	21.1
30 to 49	70.1
50 and above	8.8
TOTAL	100

Table 18. Percentage of individuals within Expo's governance bodies by age group

GENDER	PERCENTAGE
Women	49.6
Men	50.4
Total	100
TOTAL	100

Table 19. Percentage of individuals within Expo's governance bodies by gender

Initiatives aimed at promoting employee diversity are further supported by several initiatives that seek to celebrate a diverse and dedicated workforce. Notably in 2019, Expo organised a Volunteers Celebration and continued to pursue its Emiratisation programme, aimed at fostering greater inclusivity.



Case Study: Emiratisation Programme

The first World Expo to be held in the Middle East, Africa and South Asia, Expo 2020 represents a defining moment in the history of the UAE.



It is an opportunity for Emirati nationals to gain valuable experience in organising and delivering a global event, working alongside the world's foremost professionals and receiving crucial training across a broad range of professional disciplines.

In line with the UAE National Agenda 2021, Expo 2020's broad Emiratisation strategy is open to nationals of all ages, with a focus on youth. It is designed to ensure UAE citizens play a central role in delivering an exceptional World Expo, securing Expo's legacy by establishing a world-class pool of national talent for future generations. In 2019, 16.86 per cent of the leadership group, defined as Senior Manager and above, consisted of UAE nationals.

Expo's Emiratisation strategy is backed-up by five programmes that encourage the participation of UAE citizens in the World Expo.

1. Expo Event Makers Programme

Expo 2020 Dubai has allocated 330 opportunities for Emirati university students who are yet to graduate in 2020 to fill vital guest-facing roles as 'Event Makers' – Emirati youth that will work across the Expo 2020 team and be responsible for ensuring Expo visitors have an exceptional experience. This will be a unique opportunity for these graduates to kickstart their career. Those selected for the Event Makers Programme will receive fast-tracked training, full pay, skills and invaluable experience, also helping them become highly sought after employees in the future.

2. Government Mobilisation

Government participation plays a vital role in ensuring the success of Expo 2020, offering the event a range of benefits that include more local and national expertise. The event's Secondment and Assignment Programmes aim to attract 400 UAE government and institutional staff, encouraging a pool of national talent that will help deliver an event that is representative of the UAE and builds upon the nation's legacy. These programmes seek to deploy and nurture local talent and secure a better equipped workforce, post-Expo, as a part of the Expo 2020's legacy.

The pre-event Secondment Programme offers roles lasting 12-14 months, while the Assignment Programme will employ government and institutional staff during Expo 2020.

Both programmes are endorsed by the Dubai Government Human Resources Department and will be considered part of an employee's period of service and will be counted in their pension and retirement benefit periods.

3. The Expo Generation Programme

Formerly known as the 'Expo 2020 Academy', the Expo Generation Programme is tasked with recruiting, training and mobilising more than 300 English-speaking Emirati high school graduates, diploma or bachelor degree holders aged between 18 and 35. Selected applicants undergo a comprehensive six-week training programme where they are introduced to Expo 2020's content, divisions, people and guest groups, before being assigned to operational and management roles. Roughly 70% of training under the Expo Generation Programme involves on-the-job learning, with the remainder focused on mentoring and structured coaching.

Since its launch in June 2019, the scheme has received more than 2,000 applications. The first 10 candidates formed a pilot class that began in November 2019, before the programme welcomed a total of 350 recruits in different batches by 2020.

4. Expo 2020 Internship Programme

Expo's Internship Programme aims to train 300 UAE nationals, offering an opportunity for young Emiratis to work with some of the world's most talented professionals and gain exposure to the working world. Open to both Emirati undergraduates and recent graduates, irrespective of their experience levels, the scheme enables interns to apply their academic learning into practice and develop core competencies for future employment. Successful candidates could be placed in a position most suited to their particular field of study. Recent graduates can enjoy internships lasting up to three months at Expo 2020, while undergraduate placements are based on the requirements of students' universities.

5. Expo Inclusion Programme

The Expo Inclusions Programme has been crafted specifically for people of determination. It provides access to development opportunities in exploratory roles across different functions at Expo 2020 Dubai.



Case Study: Expo Volunteers Celebration 2019

30,000 volunteers will have a unique opportunity to play a crucial role in Expo 2020, giving back to the nation by helping to welcome the world to the UAE and ensuring Expo 2020 is a success.



The second Expo 2020 Volunteers Celebration was held in April 2019 to thank all volunteers for supporting Expo in its journey to host an exceptional World Expo. Roughly 3,000 volunteers were celebrated in the Zabeel Park Amphitheatre, where they met with some of the Expo team members, took part in numerous activities and challenges, enjoyed live performances and different cuisines, and received giveaways. They were also introduced to the Programme's first official supporter, Dubai Police.

In September 2019, the Expo 2020 Volunteers Programme announced Etisalat as their Official Premier Partner during their first nation-wide campaign. With more than thirty different volunteering roles expected to cater to sixteen million volunteering hours spread across the six-month Expo duration, Etisalat's campaign will help raise awareness encouraging its regional customers to register as volunteers.

"We are delighted and indeed honoured to extend our partner relationship with Expo 2020 Dubai in encouraging 30,000 'faces' to be part of this prestigious programme, giving them an opportunity to participate in the largest global event ever held in the Arab world. This is also in line with our brand direction, 'Together Matters', which embodies the power of technology in connecting and enriching people's lives, reflecting the UAE's Leadership's principles of promoting co-existence, voluntary work and generosity." - Dr Ahmed Bin Ali, Group Senior Vice President, Corporate Communication, Etisalat.

The Expo 2020 Volunteers Programme also signed a Memorandum of Understanding with the UAE National Service and Reserve Service Authority, aimed at recruiting a large number of volunteers to participate during Expo 2020. A range of training courses will be provided to all volunteers, ensuring they are well-prepared to take on their assigned roles and responsibilities.

Achievements accomplished by Expo 2020's volunteering workforce in 2019:

Approximately **100,000** volunteering applications received

Visited more than **22** government entities across the UAE to conduct interviews using its Portable Recruitment Stand

Gained a fan base of more than **52,000** followers and subscribers across all Expo 2020 Volunteers social media platforms



Engaged in a total of **281** volunteering events in 2019

Engaged a total of **6,719** Volunteer within events in 2019

Almost **20,000** volunteering hours committed

Demographics of Expo 2020 volunteers

GENDER

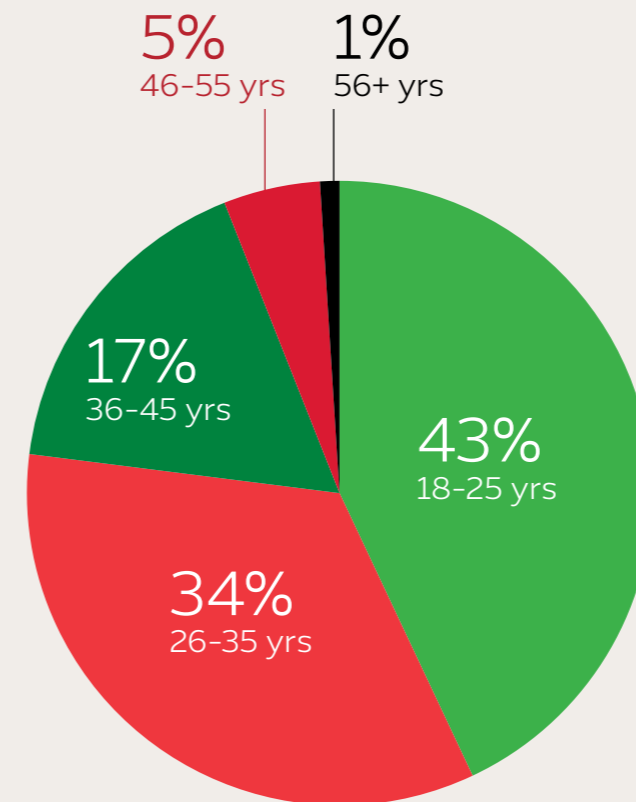


54%
Female

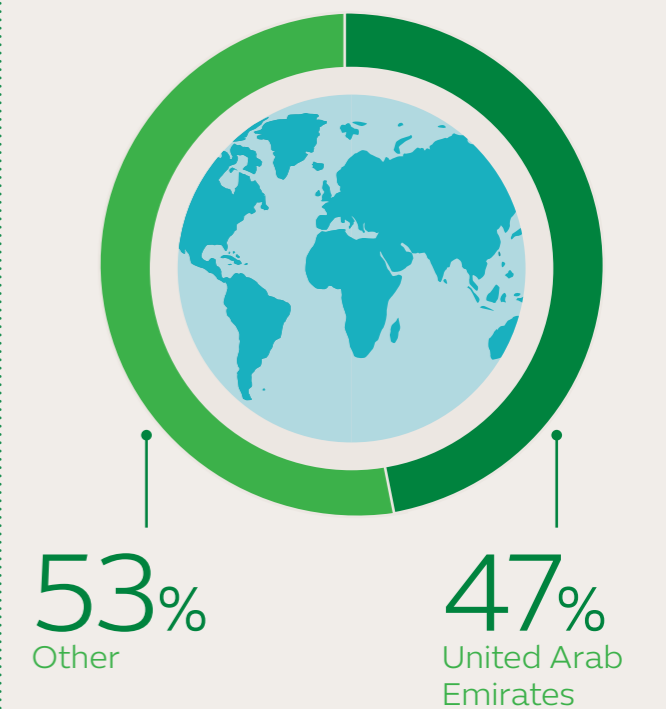


46%
Male

AGE



NATIONALITY



C. LIFE AT EXPO 2020

In attracting and retaining the best of talents, Expo 2020 Dubai aspires to provide a memorable experience working towards the event.

1. EMPLOYEE BENEFITS

Expo 2020 values all of its employees and provides them with comprehensive benefits, including leave entitlement, medical benefits, educational assistance and annual flight tickets for those expatriate employees working from overseas. Additionally, employees receive other benefits such as:

-  Parental and compassionate leave
-  Role-Specific Training prior to Expo through the Online Training Platform
-  Food and beverage choices on campus
-  Access to an on-campus gym
-  End-of-service gratuity and bonus
-  Group life insurance policy

BENEFIT TYPE	DESCRIPTION
Leave entitlements	In addition to the basic annual leaves (sick, annual, parental and compassionate leave), Expo 2020 employees can take leave for the annual Islamic Hajj pilgrimage as well as exceptionally long leave to accompany relatives for medical treatment.
Medical benefits	All employees and their dependents receive A-class international medical Coverage. This includes medical, dental, optical and maternity cover.
Educational assistance	Expo 2020 provides employees with educational assistance for their eligible children studying in UAE schools.
Annual leave ticket	All employees and their dependent families receive an annual return ticket home from Dubai. Employees can also choose to receive a cash allowance instead.

Table 20. Expo 2020 Employee Benefits

Expo has established clear guidelines as part of its integrated framework. This includes establishing a minimum notice period regarding the implementation of any operational changes and a minimum notice period provided to Expo employees, and their representatives, before the implementation of significant operational changes that could substantially affect them.

2. PARENTAL LEAVE

In addition to promoting gender equality through its recruitment policy, Expo 2020 facilitates the retention of qualified employees through well-sponsored parental leave entitlements for all permanent employees. Female employees employed in a permanent position at Expo 2020 are entitled to a paid maternity leave for a period of ninety days starting from the date of delivery. New mothers are also entitled to two-hour breastfeeding breaks each day as part of their paid working hours after the expiry of their maternity leave, until the child reaches one-year-old. On the other hand, male employees who have a new born baby are granted three working days' paternity leave with full pay, to be taken during the first 30 days of the baby's birth.

In 2019, parental leave benefit was taken by 22 female and 17 male employees. At the end of 2019, the retention rate for male and female employees taking parental leave stood at 100% and 88.24% respectively.

PARENTAL LEAVE	GENDER	
	MALE	FEMALE
Total number of employees who took parental leave	17	22
Total number of employees that returned to work after parental leave ended	16	17
Total number of employees that (1) returned to work after parental leave ended and (2) remained employed at Expo 12 months after their return	100%	88.24%
Return to work and retention rates of employees that took parental leave	100%	88.24%

Table 21. Parental leave for all permanent Expo employees in 2019



Instagram post interface showing 84,560 Likes and the caption: EXPOGAMES2019 let the games begin! #expogames2019 #expo2020 #teamwork #uae #teamspirit #sports #iloveexpogames #Dubai #ForTheWin #sportylifestyle #fitness #getfit #unity #funtimes #enjoylife

3. TRAINING AND DEVELOPMENT

All Expo employees have access to an online performance management and development system. This platform allows employees and line managers to set out clear objectives and create a baseline so employees can measure their success against identified objectives. Feedback from employees

and line managers are shared to uncover areas of development, strength and achievement. These regular performance and career development reviews are delivered to all Expo employees.

Expo also provides an array of training opportunities for its employees. Examples of training provided at Expo are listed below.

COURSE NAME	COURSE DESCRIPTION	NO. OF ATTENDEES
BUSINESS AS USUAL TRAINING:		
Fire Safety	This course is designed to provide attendees with simple safety tips that will help prevent fires at home and in the workplace. It also educates them on the proper fire extinguisher use.	13
First Aid	This course will help attendees recognise emergencies and identify hazardous conditions in their environment. It also aims at helping employees make quick and appropriate decisions to save lives.	21
Presentation Skills	This course is designed to help participants design well-structured PowerPoint presentations that deliver impactful messages. It also help participants learn how they can create powerful content to engage audiences.	11
Excel Training	This course is designed to help participants gain the knowledge and skills required to use Excel as a tool to professionally manage and present data.	10
Project Management	This course is delivered to equip learners with the right tools and techniques to help them enhance their project management skills.	11
Sign Language	This session is designed to help staff communicate confidently with hearing-impaired Expo 2020 employees.	38
People of Determination	This session is held to raise awareness of the UAE National Policy to Empower People of Determination and teach successful interactive techniques that can be used inside and out of the workplace.	164
LEADERSHIP PROGRAMMES:		
Mission Leader	The Accelerated Learning Programme (ALP) is designed to efficiently develop the potential, skills and knowledge of Expo employees through a series of workshops that individually focus on a specific set of leadership skills and behaviours.	148
SESSIONS ORGANISED TO SUPPORT EVENT TIME TRAINING:		
IDS Masterclass Session Planning	Two-hour mini masterclass provides participants with the fundamental instructional design skills to create session plans for Role Specific Training (RST).	25
Engaging PowerPoint Presentations	Mini masterclass provides participants with the skills to create engaging PowerPoint presentations for Role Specific Training (RST).	25
Creating Role Specific Training e-book	One-hour 'How To' session provides participants with the guidance to collect and create suitable content for an RST E-book.	18



4. EMPLOYEE MENTAL HEALTH AND WELLBEING

The happiness and wellbeing of every employee drives the 'Yalla Expo!' strategy. A dedicated function within the Human Resources Department, its mandate is to create and sustain a healthy and positive work environment. The objective is to empower the team to make lifelong commitments to various aspects of wellness to ensure a cohesive and proactive environment in preparation for hosting an exceptional World Expo. The strategy aims to create a sense of community by encouraging positive connections with self, colleagues, family, friends and charities through team building events and workshops, charity and family events – ensuring an evolution from Team to 'Tribe'.

Programme goals include:



Educating and empowering employees in six areas of well-being: nutritional, physical, emotional, social, environmental and intellectual



Providing opportunities for employees to engage in 'intentional activities' that increase happiness



Helping transform Expo into a 'Tribe' by fostering a positive and collaborative culture through team building and social activities

The strategy aims to create a sense of community by encouraging positive connections with self, colleagues, family, friends and charities

The wellness strategy is based on seven pillars – the seven petals of wellness (Figure 15). It focuses on:

- Tackling stress by providing Expo employees with the adequate tools and techniques to manage their stress and emotions. These include health and fitness tips, wellness events, awareness sessions, on-site health assessment, regular meditation and yoga sessions.
- Increasing awareness of Expo employees' environmental impact by conducting initiatives related to recycling, composting and sustainability.
- Increasing awareness of the benefits of healthy eating by encouraging Expo employees to choose healthy snack options and offering nutritional meal plans, options at a discounted rate.
- Promoting a healthy work environment by providing ergonomic seating for all employees, as well as an on-site gym and employee sponsorships to participate in sports such as basketball, football, golf, cycling, driving and netball. This is complemented with annual fitness events such as the Expo Games – a two-day event with physical and intellectual challenges.
- Promoting a culture of open communication, respect, transparency and positive relationships by incentivising employees to give back to the community through volunteerism and donations. This includes activities such as the Jebel Ali Sanctuary cleanup, Eid shopping for underprivileged children through Expo 2020 Official Banking Partner Emirates NBD and packing school kits for Syrian refugees in Jordan through Dubai Cares.

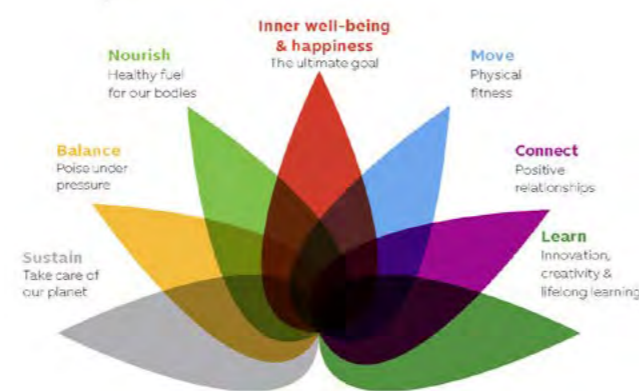


Figure 15: The seven petals of wellness



Case Study: Employee Wellbeing

Employee wellbeing and engagement are top priorities for Expo's leadership.



"Social wellbeing is one of the most important aspects of our lives and overall wellbeing. It is important to make sure our colleagues have a sense of belonging, connect with each other, and feel included and supported. This helps them build healthy relationships, creates a network of support, increases productivity and makes the office a more positive and enjoyable space."

Alya Al Shamsi,
Assistant Manager, Wellness and Engagement.

Expo 2020 strongly believes its employees are its most valuable assets, with their mental and physical wellbeing essential to performance. Due to the pace and size of the project, it is important to ensure teams are engaged, motivated and dedicated at every step of the way so they can deliver an exceptional World Expo, together. In October 2019, Expo's One-Year-To-Go campaign (pre-postponement) accelerated the pace of operations, as teams continued to work hard to ensure Expo's doors open on time. Consequently, there has been an increased focus on mental health and social wellbeing initiatives in 2019.

New initiatives launched in 2019 include:

Innovation Garden:

To ensure employees can step away from Expo's fast paced office environment and access fresh air in an open, calm and quiet space, the Innovation Garden was created. Occasionally, food trucks were brought into the garden, providing a relaxed, casual and laidback dining experience for employees.

Flu Shots:

It can be difficult for employees to take time out of their day to get their flu shots before the flu season. The Wellness and Engagement team invited a mobile clinic onto site to give flu shots, reaching 100 employee beneficiaries.

Expo Winterville:

A day-long winter festival was organised to celebrate the end of the year and the hard work and achievements of all Expo employees. It gave employees an opportunity to take a break from work and enjoy various activities, together. The event included a snow park, an acrobatic parade, a 'build a snowman competition', a 'decorate a gingerbread man' icing stand and carnival games, alongside delicious food. More than 1,000 employees attended the event, with 750 participating in the raffle draw. The event provided an opportunity for teams to spend time together in a fun environment.



Ongoing Initiatives:

International Days:

It is important for a diverse work culture, such as Expo 2020's, to celebrate occasions like Mother's Day and International Happiness Day – great gestures that show employees they are being cared for and their efforts are well appreciated. It also reminds employees to enjoy the unique journey they are on with each other, as a team.

- **International Day of Happiness:** An ice-cream cart toured the Expo 2020 office, handing out free ice cream to all employees
- **Mother's Day:** All mothers at Expo were invited to sign up for a 20-minute neck massage
- **Father's Day:** All fathers at Expo were given a complimentary coffee
- **International Day of Friendship:** This event began in 2017 to bring employees closer together and get to know each other on a more personal level. In 2019, 500 employees attended a one-day carnival-themed event onsite, featuring games, food and a raffle draw, and giving employees a chance to enjoy themselves and take time off from work.

Dubai Fitness Challenge:

An annual Dubai-wide fitness activation initiated by His Highness Sheikh Hamdan Bin Mohammed Bin Rashid Al Maktoum, Crown Prince of Dubai. During this month-long event, Dubai residents are encouraged to exercise for at least 30 minutes every day. Aimed at transforming the city into the most active in the world, the initiative involves various exciting activities in public spaces across Dubai. The Expo team's 2019 participation, for the third consecutive year, was not only an opportunity for us to promote healthy behaviour across our organisation, but to also join Dubai in creating an inspiring and active workforce. Fitness classes were scheduled daily on the Expo site (during working days) by professional trainers. Weekly endurance challenges were organised and the winners rewarded.

UAE National Day:

The UAE National Day is observed at the Expo offices to celebrate the UAE national spirit among all employees. It gives a sense of achievement and belonging to Expo 2020 as a national project. Activities at the office in 2019 included traditional Emirati food and dance, falconry, henna art, a photo booth and a live presentation on the UAE's history and culture.

Expo 2020 strongly believes its employees are its most valuable assets, with their mental and physical wellbeing essential to performance.

Arabic Classes:

Arabic classes have proven to be one of the most popular and longest running wellness and engagement initiatives at Expo. Eight batches have already completed the course, which consists of 20 sessions that teach basic conversational Arabic. These free, optional sessions help employees develop their basic Arabic language skills while they live and work in an Arab nation.

Social Clubs:

More social clubs were launched at the Expo offices in 2019, including book, gaming, music, badminton, rock-climbing, karting and chess clubs. Many new friendships were formed through these social groups, giving employees a sense of belonging.

Financial Workshop:

Expo 2020's two-day annual financial workshop helps employees manage their finances effectively and achieve financial freedom.

Ramadan Volunteer Work:

Employees were given an opportunity to volunteer with our partners at Emirates NBD. Volunteers could either help to distribute Iftar meals or take orphaned children Eid shopping.

Expo Games:

The Expo Games is an annual Expo event where employees are asked to team up to participate in both physical and intellectual challenges. The fourth edition of the games took place over two days in 2019, with 10 registered teams taking part (roughly 20 members per team) and even more spectators.

Employee Assistance Programme:

Through our medical insurance provider, we continue to provide and promote a confidential helpline for employees and their eligible dependents. The helpline is designed to help employees who are struggling with stress, anxiety, depression, loneliness, relationships, parenting, and more. It also offers access to a wide range of mental health and wellbeing benefits, such as professional counselling, expatriate support, critical incident support, work-life balance support, workplace training and manager support.

Catering Options:

Expo's wellness and engagement team sought to increase the number of caterers on-site in 2019 to ensure a larger variety of food options for employees. In addition to our existing supplier, the team added two new permanent coffee shops and three new food vendors, one of which has a mobile cart which travels around the office with healthy meals and drinks. The team also invited temporary SME food vendors to set up pop-ups, on-site, in two-week long rotation schedule. This provided a unique marketing opportunity for SME caterers and presented a chance for our employees to try out various food options.

D. HEALTH AND SAFETY

Expo 2020 Dubai has developed and implemented an integrated strategy and policy for Health, Safety, Quality and Environment (HSQE).

The HSQE policy is applicable to all employees, partners and organisations involved in the delivery of Expo 2020. Expo 2020's HSQE Strategy is based on three core values – Care, Respect and Pride – linked to the three disciplines of Health and Safety (inclusive of Worker Welfare), Environment and Quality.



A high-level document that includes Expo 2020's HSQE and Worker Welfare (WW) commitments was published in April 2019, outlining Expo's 'Better Together' vision to drive continual improvements and deliver a lasting legacy.

EXPO 2020 BETTER TOGETHER HSQE STRATEGY'S SIX STRATEGIC PILLARS



LEADERSHIP:

Organisations must ensure leaders demonstrate HSQE and WW leadership to develop a positive culture.



COMMUNICATION:

Effective communication is an essential element of successful HSQE and WW management. Organisations must communicate information to workers on HSQE and WW risks and the measures in place to manage risks.



COMPETENCY:

Organisations must ensure workers are competent in HSQE and WW on the basis of appropriate training and experience, appointing competent HSQE and WW resources.



ENGAGEMENT:

Organisations must effectively engage with their supply chains to ensure HSQE and WW is an integral consideration during procurement and outsourcing activities.



REWARD AND RECOGNITION:

Organisations must look at ways of recognising and rewarding excellence in HSQE and WW performance.



CONTINUAL IMPROVEMENT:

Organisations must measure and monitor HSQE and WW performance, and implement action plans to address areas for improvement.

1. LEADERSHIP

Building on the HSQE and Worker Welfare commitments made in line with Expo's Better Together strategy, 29 safety leadership tours and 31 project leadership tours were conducted in 2019 across the Expo site.

Contributing to the Leadership pillar of the Better Together strategy, the topic of mental health gained increased significance for Expo 2020 in 2019. In line with its three core values – Care, Respect and Pride – and wellness strategy, Expo has introduced further campaigns on mental health. These include the 'Care to talk?' and 'Mental health promises' campaigns, alongside the 'Thriving or surviving?' stress awareness drive. Communication drives are founded on Expo's mental health strategy, which provides background on why the management of mental health is important and practical measures put in place to develop a positive mental health culture.

The strategy is based on four objectives:

- Raise awareness and understanding of mental health
- Promote positive behaviours to prevent mental ill health
- Develop confidence and capability to have discussions about mental health
- Provide resources, tools and techniques to effect positive mental health

The strategy seeks to support positive health and wellbeing, increase productivity, develop positive work relationships, reduce work-related incidents and ultimately deliver an exceptional World Expo. A key aspect of the strategy attempts to remove the stigma associated with mental illness and spark positive conversations around mental health. Fifteen focus areas have been set up to align with the following objectives:

ASPECT

LEADERSHIP



COMMUNICATION



COMPETENCY



ENGAGEMENT



REWARD AND RECOGNITION



CONTINUAL IMPROVEMENT



FOCUS AREA

- Delivering training to senior leaders to set the right tone on mental health across Expo 2020.
- Encouraging senior leaders to share personal stories that help to create an environment where people feel confident talking about mental health concerns.
- Providing guidance and information to support effective conversations on mental health.
- Establishing a central repository of resources on mental health that is accessible to everyone.
- Using existing technology and systems to communicate information on mental health.
- Embedding mental health first aiders across the organisation who have completed accredited training.
- Delivering training for managers and supervisors to raise awareness of mental health.
- Establishing a steering group to drive the implementation of our mental health strategy.
- Working with operational departments to ensure impacts on mental health are addressed during decision-making.
- Holding open engagement forums to encourage information sharing and lessons learned on mental health.
- Recognising organisations and individuals who demonstrate practices and behaviours that align with Expo's mental health strategy.
- Promoting positive reinforcement to improve motivation and mental health.
- Ensuring mental health illness is reported and investigated in the same way as any other health and safety incident.
- Working with health providers and external specialists to continually improve mental health support that can be offered.
- Conducting periodic reviews of the implementation of Expo's mental health strategy and objectives.



2. COMMUNICATION

RISK ASSESSMENT, HAZARD IDENTIFICATION AND MITIGATION

For all hazardous activities, Expo requires permit-to-work systems are implemented. The event also has a risk control process in place, which is reviewed and approved by Supervision Consultants. Key personnel from these consultants are assessed against a matrix of required qualifications and relevant experience, before being interviewed by the consultant's representative and obtaining final approval. Risk assessments are reviewed on a periodic basis – and after an incident – to ensure risk-mitigation measures are suitable and sufficient for the remaining task to be carried out safely.

Expo 2020 implements an Observe, Engage, Improve (OEI) process, aimed at creating an environment of awareness and openness where people have the confidence to challenge unsafe acts and conditions to develop a culture of care in the Expo 2020 programme. Expo projects are required to use the employer's online system to highlight, close and verify observations. Observations are raised by the observer, actioned by the responsible organisation (usually the Contractor) and verified by the Supervision Consultant. All are recorded on the online system.

As a part of the daily pre-task briefing, all workers are reminded of their right to walk away from any unsafe condition during any task. Expo 2020 has implemented a confidential hotline and a "Worker Connect" mobile application, where workers can report health and safety concerns without fear of reprisal. This is closely monitored by the Assurance team to ensure that no inappropriate action is taken against personnel who report unsafe conditions.

Figure 16. Expo 2020's mental health focus areas

Open and transparent reporting of all site incidents, including near-misses, is a prerequisite across all Expo 2020 projects. Contractors are obliged to report all events and near-misses to the Supervision Consultant as soon as is practicable and by the quickest means available. Serious events must be reported within one hour of occurrence and regular updates are required throughout any incident until outcomes are known. For serious incidents, an initial report and action plan must be provided within 24 hours of the occurrence, with a full report and corrective action plan provided within five days.

For any serious incident, a safety alert and/or lessons learned are developed and shared for programme-wide distribution and learning.

All tasks carried out at Expo 2020 are subject to a risk assessment. Expo has identified several significant health and safety hazards that are applicable to the construction phase of Expo 2020, supported by key frontline behaviours (Promises) applicable to each hazard.

Although this campaign focused only on significant hazards, it is noted that all hazards have been appropriately identified, assessed and managed.

The following significant hazards were given attention:

- Work at Height
- Mobile Plant and Equipment
- Lifting
- Breaking Ground and Excavations
- Driving
- Hot Works
- Energised Systems
- Confined Spaces
- Temporary Works
- Working in the Heat

These Promises were published on the Worker Connect app in October 2019, and across various languages, to raise awareness among workers.

These significant hazards were identified through a collaborative approach involving health and safety professionals that represented stakeholders from across the Expo programmes.

Several workshops were held to (1) identify the top 10 hazards across the Expo site and (2) determine critical behaviours associated with each hazard which, if followed, would prevent a serious injury. Of these hazards, work at height and lifting operations have caused or contributed to the most high-consequence injuries during the reporting period.

To reduce and mitigate these hazards and minimise risks, a full review of method statements and risk assessments is carried out after any incident. This is an ongoing process across the Expo programme to ensure any residual risk is reduced to as low as reasonably practicable before work re-commences. Expo 2020 requires a range of measures to be implemented to mitigate health and safety risks associated with its activities, including:

Fitness to Work:

Contractors are required to carry out basic health checks of their personnel (in addition to those required for visa purposes) at least once a year.

Safety Critical Roles:

Where ill health of an individual may compromise their ability to undertake a critical safety task, additional checks must be undertaken to manage this risk. Personnel undertaking safety critical tasks include plant operators, crane operators, mobile machine drivers, drivers, scaffolders, slingers/signallers, traffic marshals, steel erectors, confined space workers or those working at height. Additional checks must be identified through risk assessments or with appropriate guidance.

Medical Surveillance:

Occupational health monitoring of operatives exposed to high risk operations, such as noise, manual handling and hand arm vibration, should be performed.

Well-being: Each contractor must have an ongoing programme of health awareness to educate their workforce.

Hygiene: Arrangements are required to educate and ensure workers adopt good hygiene practices, such as personal hygiene standards, protection against dermatitis and use of PPE.

Contractors are required to ensure appropriate health risks are identified through risk assessments and controls are identified and implemented to mitigate these risks.

OTHER HSE COMMUNICATION

Lessons learnt from incidents, positive stories and HSE achievements have been effectively communicated in the form of 'Knowledge Shares' and 'Topic of the Month' posters. In 2019, 16 Knowledge Share and 12 Topic of the Month posters were distributed programme-wide, covering topics such as fire during hot works, pedestrian walkways, cable damage, tower crane-brake failure, gas line strike and truck fires. Animated videos were also launched in December 2019 for various HSE topics covered under the HSE Promises.



Health & Safety Knowledge Share

Tower Crane Brake Failure

Whilst lifting a load of steel rebar (weighing approximately 2 tons) the hoist brake of a tower crane failed causing the load, along with hook and hoist line, to fall to the ground from a height of 3 metres. An exclusion zone was in place and no one was injured.

Key Points

1. The lifting team had ensured an exclusion zone was in place during the time the load was suspended. This positive act prevented a more serious incident.
2. The investigation identified that greater attention was required for the thorough examination and that an inspection of the lining on the brakes is required on a regular basis.
3. Overuse of the emergency brakes by the operator to slow the load rather than control it via the hoist drum had resulted in increased wear on the brake lining. (Note This could also be caused by voltage drops or fluctuations).

Recommendations

1. Ensure procedures to inspect/track wear on brake discs, and to replace brake discs are in place and communicated to plant & maintenance professionals.
2. Consider dedicated training for crane operators encouraging them to refrain from using emergency brakes except for in emergencies.
3. Discuss the incident with site operatives to reinforce the importance of maintaining and complying with exclusion zones under suspended loads.

3. COMPETENCY

HEALTH AND SAFETY TRAINING

Expo 2020 has defined clear training requirements for leaders, managers and supervisors that are related to or involved in construction, and operatives using various equipment, as referenced in Expo's Health and Safety Assurance Standards. Expo's Assurance Standards also require management competencies be extended throughout the supply chain.

It is the responsibility of all organisations working on the Expo 2020 site to ensure all individuals possess the skills, experience and training mandated as per Expo standards.

Each organisation is required to develop its training matrix and training plan, retaining copies of certificates and records available onsite. Contractor training systems must be approved by the Supervision Consultant, and can include on- or off-the-job training, coaching, toolbox talks or briefings.

Expo 2020 delivers a range of health and safety training courses onsite, available free of charge to all organisations working on the programme. These courses are designed to support enhancement of competency levels and include:

Health and Safety Leadership (equivalent to IOSH Leading Safety):

A four-hour course intended for senior managers, directors and anyone in a leadership position at Expo 2020. Training focuses on the essentials for executing the Expo 2020 HSQE strategy and behaviours that define transformational leadership in health and safety. In 2019, 581 people completed the Health and Safety Leadership module training.

Construction Awareness for Managers (equivalent to IOSH Managing Safely):

A 10-hour course intended for managers who have a direct influence on the management of construction-related work activities. Covered over two days, this course focuses on the management of significant hazards at Expo 2020. In 2019, 575 people completed the Construction Awareness for Managers module.

Supervisors Activity Briefing: A three-hour course for those responsible for supervising people at work. It introduces the Expo Activity Briefing process that ensures significant hazards are prioritised and key safety behaviours are communicated to those who are performing such work. Supervisors that successfully complete the course are awarded an Expo-branded Black Hat. In 2019, 1,514 people completed the Supervisors Activity Briefing module.

Visual Impact Training: A one-hour module delivered in Hindi and intended for frontline workers responsible for complying with the Expo 2020 Health and Safety Assurance Standards. Visual Impact Training is available for the following significant hazards: working at height, lifting, mobile plant and equipment, underground services and excavation, confined spaces, hot works, and working in the heat and with energised systems. Each 60-minute session involves theatrical performances to highlight the importance of health and safety, enabling workers to visualise and differentiate between unsafe and safe practices. In 2019, 15,884 people completed the Visual Impact Training module.

4. ENGAGEMENT

OCCUPATIONAL HEALTH SERVICES

All Expo contractors must ensure their workers possess an occupational health card for medical examinations at a Dubai Municipality-approved clinic. Additionally, contractors must provide free professional counselling services for workers that require treatment for emotional, traumatic and mental health issues.

WORKER PARTICIPATION AND CONSULTATION

All Expo 2020 contractors and consultants are encouraged to implement effective consultations with workers to ensure relevant health and safety matters are discussed with the workforce at appropriate times. These consultations enable two-way communication between workers and contractors, encouraging workers to speak up and raise concerns or suggest improvements relating to their workplace health and safety.

Expo 2020 Health and Safety Assurance Standards require contractors to conduct monthly meetings to ensure consultations and discussions with the workforce on health and safety as well as worker welfare related topics. Expo has also established various forums that are attended by contractors and Supervision Consultants, providing an opportunity to raise concerns and facilitate the communication of health and safety information. Where decisions and guidance are required, health and safety matters can be escalated to existing forums, including the quarterly Executive Leadership team (ELT) meeting and the monthly Programme Safety Leadership meeting.

Expo has established a schedule of programme-wide senior leadership health and safety tours to ensure direct engagement between Expo leadership, project teams and the workforce. When selected, the contractor and Supervision Consultant are expected to host the tour and actively contribute, as a part of a joint commitment, in the delivery of exceptional health and safety performance across Expo 2020. In 2019, a total of 29 senior leadership health and safety tours were organised.

5. REWARDS AND RECOGNITION

Expo 2020 issued 42 different awards for organisational and individual excellence in health and safety in 2019, supporting more than 100 project-level award and recognition ceremonies. In line with the newly launched integrated HSQE and Worker Welfare strategy, The Better Together Awards 2019 was launched to recognise the successes of individuals and organisations in achieving exemplary performance. The Awards included 16 different categories for individuals, initiatives and organisations. Of the 207 high quality submissions received in 2019, 16 winners were recognised at the awards ceremony – held in December 2019 and attended by 300 guests from contractors, subcontractors, design and Supervision Consultants, project management consultants, service providers and government authorities.



**6. CONTINUAL IMPROVEMENT
HEALTH AND SAFETY PERFORMANCE
AND CHALLENGES**

Key health and safety performance highlights for 2019 include:

CATEGORY	EXPO EMPLOYEES	NON-EXPO EMPLOYEES (CONTRACTORS)
Number of fatalities (for all employees and contractors)	0	0
Number of hours worked	1,710,000 (approximated based on 950 Expo employees over a 45- week period)	90,651,911
Serious/high-consequence work-related injuries*	Number: 0 Rate: 0	Number: 23 Rate: 0.03
Minor/recordable work-related injuries*	Number: 0 Rate: 0	Number: 980 Rate: 1.07
Main type(s) of injuries	N/A	Hand and finger injuries

*The accident frequency rates have been calculated using 100,000 hours worked.

Following Expo’s health and safety initiatives, key challenges identified in 2019 include a lack of: uniformity in health and safety legislations; investigation of health and safety incidents; legal systems and accountability for frontline workers; benchmarking of health and safety incidents and data for an event of given scale and scope; and reporting of near-misses and minor injury incidents.

HEALTH AND SAFETY ASSURANCE

Expo 2020 has implemented a robust health and safety management system that applies to all personnel involved in the construction phase of Expo 2020, which engaged a monthly average of 29,055 workers in 2019.

Expo 2020 has implemented a robust health and safety management system that applies to all personnel involved in the construction phase of Expo 2020

During the year, all contractors and Supervision Consultants involved in Expo 2020 were internally audited at least twice. In terms of external assurance, 13 HSE audits of Supervision Consultants were conducted by Expo 2020 and project management consultants in 2019, alongside 135 audits by supervision consultations to identify areas for improvement.

Expo 2020 has an agreement in place with the UK Health and Safety Executive to conduct regular, independent monitoring visits of the Expo programme. Each of these visits lasts five days and involves three UK HSE inspectors carrying out reviews of potential high-risk activities or strategic policies and procedures. In total, three independent monitoring reviews were conducted in 2019.

In October 2019, Expo launched Revision 1 of the Event Health and Safety Assurance Standards, which apply to event organisers and organisations working on their behalf. In December 2019, Expo also issued Revision 4 of the Health and Safety Assurance Standards. This is a prescriptive document that includes management arrangements applicable to all organisations involved in the delivery of Expo 2020. It requires organisations maintain a health and safety management system aligned to the requirements of ISO 45001. Expo 2020 also follows requirements detailed in the Dubai Municipality Code of Construction Safety Practice, for Consultants and Contractors to establish and implement health and safety measures.



E. INNOVATION

In 2019, Expo 2020's Innovation and Future Technologies department focused on exciting projects related to the event, showcasing various innovative technologies at a number of Pre-Expo events.

Celebrated in February 2019, Innovation Month offered Expo staff, partners and visitors an opportunity to experience several innovative activations at the Expo 2020 Campus. They included virtual-, augmented- and mixed-reality applications, as well as holograms, artificial intelligence, robots and other technologies. All were especially well received by the hundreds of UAE school students who visited the Expo 2020 Visitor Centre during the month.



Delegates at Expo's International Participants Meeting (IPM) in Dubai and visitors to the World Future Energy Summit in Abu Dhabi were able to experience these technologies first-hand. They also had the opportunity to engage with the recently 'employed' Expo robot 'Temi', who welcomed visitors arriving at the Expo stand and tested their Expo 2020 knowledge through a newly developed online quiz.

Also launched at these occasions was a Digital Expo Map, an interactive touchscreen application that allows users to (1) easily find information, images and videos of participating countries and Expo's thematic districts, and (2) review Expo 2020's sustainability KPIs and objectives.

The centre piece of these efforts and developments will be the immersive digital visitor experience which will offer visitors a journey through Expo 2020 Dubai



By showcasing such innovations at more than 30 events around the world during 2019, Expo 2020 has offered a glimpse into its visitor experience. The centre piece of these efforts and developments will be the immersive digital visitor experience which will offer visitors a journey through Expo 2020 Dubai, combining its physical and digital components in a futuristic way. The building blocks of this powerful technology were tested with a selected audience throughout 2019, with feedback confirming the digital experience was entertaining, inspirational and educational.

Innovative Building Technologies at Expo 2020 Dubai

The Expo 2020 Dubai site can be considered a community in itself, with approximately 400 buildings covering more than four square kilometres. All infrastructure and buildings on the site are new and use the most cutting-edge green and smart technologies. With the help of its Partners, including Official Premier Partner for Infrastructure and Digitalisation Siemens, Expo 2020 is the site to demonstrate how energy and building technologies will help to shape the future of sustainable, smart cities.

Case Study: Measuring Sustainability Success at Expo 2020 Dubai – ‘Siemens MindSphere’

Organisations and leaders worldwide are trying to tackle the fundamental issue of how the mega-cities of tomorrow can cater to the demands of their increasing population in terms of providing essential services – such as clean water, adequate waste removal, smart modes of transportation and resilient infrastructure – and devising solutions to deal with the negative impacts of these activities, such as emissions.

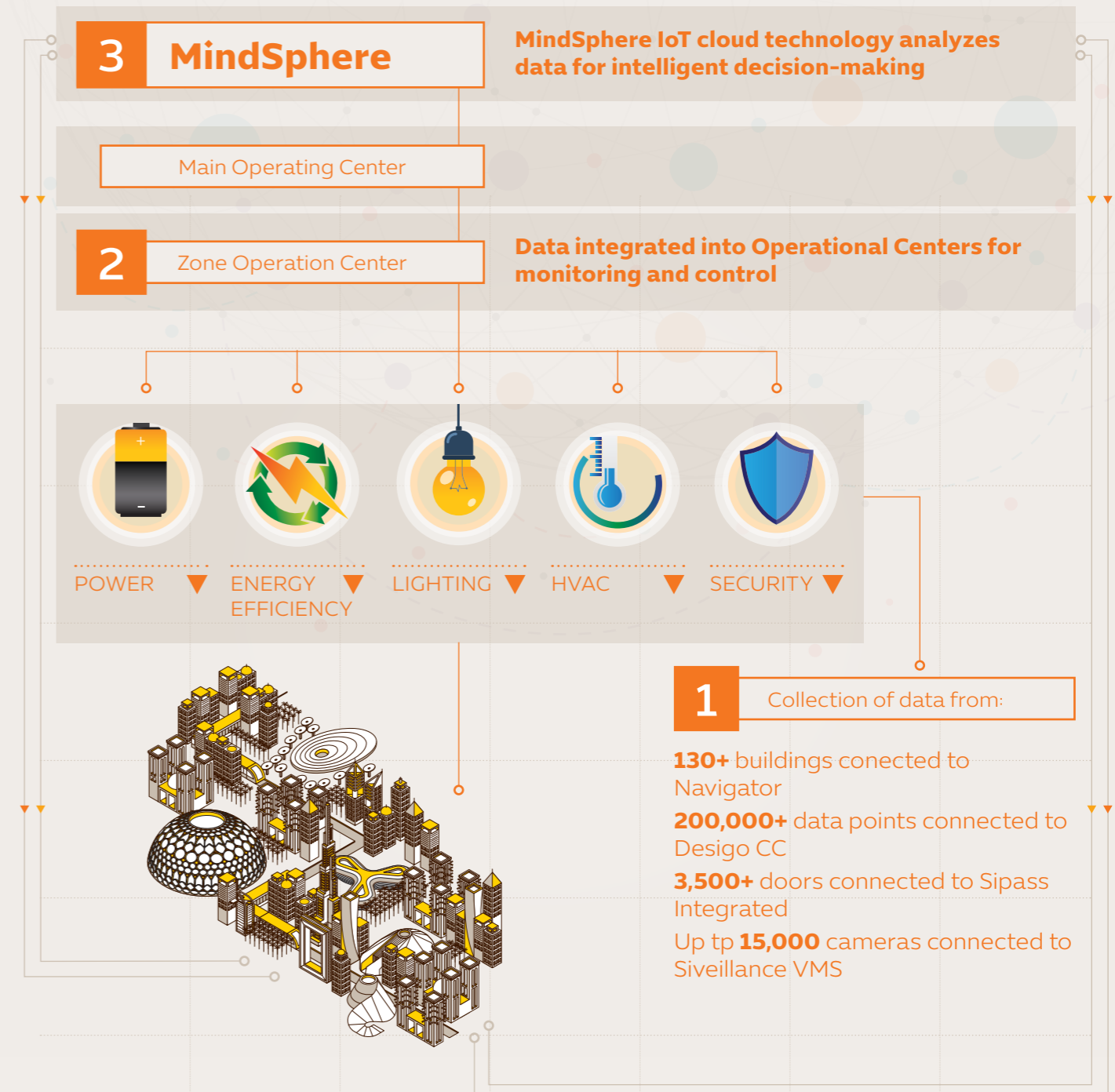


Expo 2020 Dubai is positioning itself as a platform that showcases innovative new technologies and solutions that address these sustainability topics.

Siemens, one of the largest technology companies in the world, has partnered with Expo 2020 Dubai and will collaborate on a range of smart city initiatives.

With 130-plus Siemens tech-enabled smart buildings across the Expo site — all connected through Siemens ‘MindSphere’ Navigator platform, a cloud technology that analyses and visualises data for intelligent decision-making — Expo 2020 Dubai offers a unique opportunity to understand how smart infrastructure technologies can enable and deliver sustainable communities.

Siemens works with Expo 2020 Dubai to create a blueprint for future cities.



Data monitored on the 'MindSphere' platform provides a comprehensive insight into building performance through energy efficiency and renewable energy consumption statistics; monitoring water consumption and water efficiencies, including leak detection; water

recycled systems; waste segregation; and operational waste management streams. Major data types that Expo 2020 will analyse using Siemens Mindsphere software includes:



UNIT	ENVIRONMENT	ENERGY	WATER	COMFORT	WASTE
Site Wide	Windspeed and direction	Total electricity and renewable	Domestic and landscape	Temperature	Solid and organic
Buildings	Temperature	HVAC	Wastewater	Daylight levels	Solid
Analytics	CO ₂	Share renewable	Unit consumption	Anticipation	Trend waste

For instance, Siemens helps to reduce water consumption for landscape irrigation across the Expo 2020 site by monitoring data collected from a variety of IOT enabled devices connected to the 'MindSphere' platform. These devices monitor weather, soil condition and water flow rates, as well as any leaks across the venue's extensive landscaped areas and pass the data to the Mindsphere platform for analysis and visualisation. IoT enabled devices, such as controllers, sensors, valves, etc., provide continuous data to indicate whether the irrigation system is functioning in compliance with the KPIs set for water flow rates or whether adjustments need to be made to improve operational efficiency. As a general rule, no potable water is used anywhere on the site for irrigation purposes. Flow-rate sensors will detect the quantity of water dispensed, check for any potential leakages in the irrigation loops and notify site operations of a problem that might otherwise go unnoticed.

In another example, Expo Dubai 2020 will utilise Siemens' building management system (BMS) to control, regulate and optimise HVAC, lighting, shading, fire safety and other related elements.

The BMS will feed the data into MindSphere, which will provide Expo with the information needed to maximise sustainability by adjusting each building's HVAC and lighting systems to optimise energy consumption.

Further, Expo 2020 will use Siemens' Navigator, powered by MindSphere, to provide energy usage data that will enable the Expo facilities team to determine whether the site is meeting KPIs such as whether the buildings' energy usage is exceeding the ASHRAE 90.1 efficiency standard and by how much.

Expo, Siemens and the Dubai Electricity and Water Authority (DEWA) are also working together to build the region's first green hydrogen production facility, located at the Mohammed bin Rashid Al Maktoum Solar Park in Dubai. The site will demonstrate how smart cities can use hydrogen – a fuel of the future – to power sustainable buildings, transportation systems, and more, with green energy. Generated by surplus solar power, Hydrogen can be stored safely and cost-effectively in large volumes, before being used later to generate electricity – making it a viable solution to help meet sustainability goals such as decarbonisation and further integration of renewables.

SOURCE

SOLAR ENERGY



GRID STABILIZATION

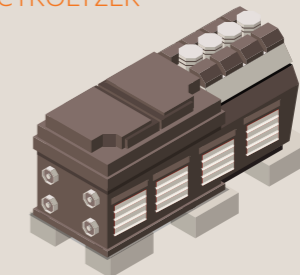


ELECTROLYSIS

1.25MWe
POWER CONSUMPTION
OF AN ELECTROLYZER

65%
STACK EFFICIENCY OF
THE ELECTROLYZER

SILYZER 200

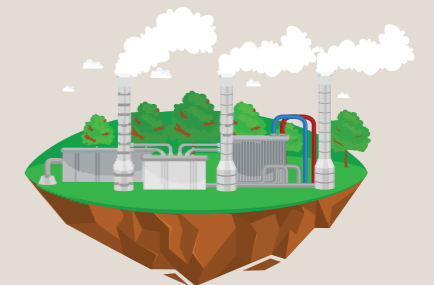


RATED H₂ PRODUCTION
12 HOUR OPERATION

→ 20KG H₂/h
240KG H₂/d

STORAGE

12HRS
OF HYDROGEN
PRODUCTION IS THE
STORAGE CAPACITY



APPLICATIONS

280kWe
OF HYDROGEN PER HOUR IS THE ELECTRICAL OUTPUT
OF THE HYDROGEN GAS MOTOR

RE-ELECTRIFICATION

POTENTIAL USE CASES FOR LEGACY



150
FUEL CELLS FCV -
MOBILITY
MOBILITY



20KG
OF HYDROGEN PER HOUR IS
THE PRODUCTION RATE
INDUSTRIAL

Case Study: Sustainability Pavilion (Terra)

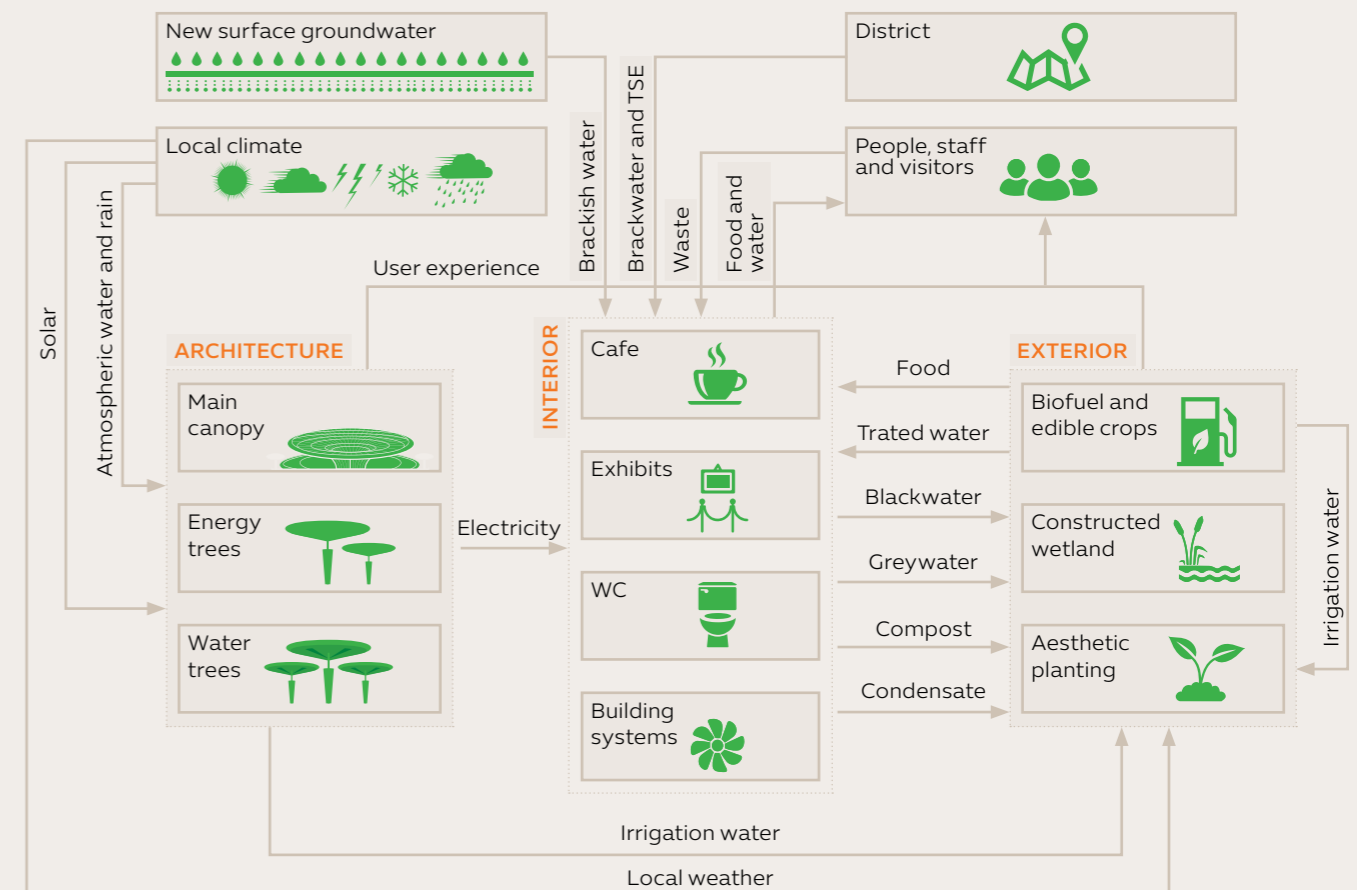
Terra: The Sustainability Pavilion is one of the Expo 2020 Dubai's signature experiences, taking visitors on an immersive and emotional journey through the wonders of the natural world and inspire them to create a better, more sustainable future.



The Terra visitor experiences include a walk-through time in an Arabian wadi; a giant balance maze requiring visitors to collaborate to bring the Earth into balance; an interactive walk through the roots of the forest, where every footstep affects the 'wood-wide-web'; and an exploration 'under the ocean' to discover the beauty and the mysteries contained within. The consumption halls help visitors uncover the hidden harmful impacts of our choices and features a deep-sea fish whose system is clogged with discarded plastic waste. The Laboratory of Future Values showcases solutions to the eco-challenges faced by the world today, and 'Gnasher' — a giant consumption machine — shows how natural resources are being destroyed to make consumer products. Covering 6,300 sqm, the exhibition can host 4,400 people per hour, with each visit taking about 45 minutes.

The Pavilion, designed by UK-based Grimshaw Architects, is planned to meet LEED Platinum green building standards — the highest available accreditation for sustainable architecture. All food and beverages at Terra will be sustainably sourced and packaged and visitors will be able to learn where their food has come from and the impact it has had on the environment.

The building's technology will generate enough energy to charge 890,000 mobile phones per year. The grounds of Terra will feature innovative irrigation techniques, including a greywater recycling system, as well local plants aimed at reducing water use by 75%. A 130-metre-wide canopy — the size of up to five whales lined up — will use energy from the sun to generate electricity during the day. More than 1,050 solar panels have been designed to produce four Gigawatt hours of electricity, per year. Almost 10 tonnes of reclaimed wood will be used to cover the auditorium walls. The orientation of the funnel-shape of the Pavilion canopy will create air flows that naturally ventilate the Pavilion courtyard, as well as let in ambient light. A water tree will also produce water from the surrounding air and solar panel-equipped energy trees will rotate to face the sun, like a sunflower. The Pavilion is sited partially below ground, meaning it will be generally cooler than its surroundings. Its canopy will also shade it from the sun. Solar energy will be used to sterilise water and remove micro-bio-contaminants.



The Pavilion represents an opportunity for Dubai and the UAE to lead a new approach to sustainability, showcasing new technologies to adapt to the natural environment and climate, while promoting long-term solutions for society. Its striking form and unusual capabilities make the Sustainability Pavilion unique as a functional laboratory for architectural exploration, demonstrating the possibilities of sustainable designs even in challenging climates like that of Dubai.

Drawing inspiration from complex natural processes such as photosynthesis, the dynamic form of the Pavilion is dedicated to its functionality – capturing energy and water from all available sources.

Drawing inspiration from complex natural processes such as photosynthesis, the dynamic form of the Pavilion is dedicated to its functionality – capturing energy and water from all available sources. The Pavilion was developed in a holistic manner, which incorporates a supporting landscape design. The gardens surrounding the Pavilion design are an integral part of the experiential and functional visitor experience, setting the stage for the exhibition contents within and creating gathering areas that will manage and distribute crowds, while also providing retail, food and beverage opportunities. The creation of sunken exhibition spaces makes use of the thermal comfort. One of the key factors for this building's success is understanding the priority to reduce demand for resources and employing them effectively, and exploring synergies between systems and embracing efficient technologies to achieve the net zero target.



F. GLOBAL OPTIMISM OUTLOOK SURVEY

The Expo 2020 Dubai Global Optimism Outlook Survey is the world's first index focused on tracking and driving global optimism levels through environmental and social change.

Linked to Expo 2020's three key subthemes of Opportunity, Mobility, and Sustainability, subjects covered include technology, travel and climate change.

The survey, commissioned by Expo 2020 Dubai and conducted by market research and data analytics firm YouGov, tracked 20,000 respondents – aged between 18 and 64 years old – across 23 countries. One thousand respondents were from the UAE.

THE WORLD IS MORE OPTIMISTIC THAN YOU MIGHT THINK!

The Global Optimism Outlook Survey revealed that almost two-thirds are optimistic about the future and 9 in 10 believe it's up to us to make it better.

6 things helping us make the world better, according to the survey

- Better Resource Usage
- Better communication and collaboration
- Alternative Energy
- Robots & AI
- Electric Vehicles
- Fast and Reliable Connectivity

The world's wish list for the future in 2050

62%	Access to education	56%	Universal clean-energy transportation
60%	Plastic free oceans	54%	Carbon-free travel
57%	Access to resources		

Key findings from the Expo 2020 Dubai Global Optimism Outlook Survey include:

SUSTAINABILITY:



- Respondents would most like to experience carbon-free travel in the year 2050 (54%)
- Over half of those surveyed (53%) would rather experience free trade for all and amongst all than travel into space (28%)
- Respondents ranked conservation of natural resources as most important for creating a better future, followed by tolerance and respect
- Respondents would prefer to experience universal clean energy transportation than sustainable smart cities
- The youth are most optimistic about the future of sustainability (64%)
- Those in full-time education reveal higher levels of interest in sustainable solutions and the future of our planet (63%)

KNOWLEDGE AND EDUCATION:



- Nearly half (46%) of global respondents believe that economic development is being encouraged in their country, first and foremost, through easier access to education and knowledge



TECH AND TRANSPORT



Respondents were more optimistic about their future in relation to Mobility (67%), followed by Opportunity (66%) and then Sustainability (65%).



Respondents were more optimistic about their personal future than the future of their nation or the world



Male respondents would rather experience free trade for all, while female respondents on average would rather experience carbon-free travel in 2050



Respondents cite self-powering and energy-producing transportation (52%), 100 per cent safe travel (52%) and carbon-free travel (54%) as the most important factors for mobility over the next 30 years



Eighteen to 29 year-old respondents place more importance on fast and reliable connectivity, robotics and artificial intelligence over older respondents

OTHER



Emerging and developing nations are more optimistic about opportunity, while developed countries are more optimistic about mobility



Respondents across all regions were comparatively less optimistic about our global ability to combat climate change, but are more optimistic about a future where clean and renewable energy is predominately used



03

THE EXPO LEGACY

A. EXPO 2020 LEGACY CONTRIBUTION

From the very beginning, Expo 2020 Dubai has been committed to building a legacy that is meaningful and sustainable, extending its impact and benefits beyond the UAE to the wider region and the rest of the world. Expo 2020 Dubai will create physical, economic, social, environmental and reputational legacies.

EXPO 2020 LEGACY: DIMENSIONS OF PLANNING



01 ECONOMIC LEGACY

Expo 2020 Dubai will contribute to new business generation, GDP growth and job creation across the region. The event and its legacy will contribute to the UAE's ongoing economic diversification, supporting growth in key industries such as travel and tourism, logistics and transport, construction and real estate.

The growth of these sectors continues to support non-oil activities in the UAE, boosting private sector job and GDP growth – helping to build a more diversified, resilient, sustainable and knowledge-driven economy.

03 REPUTATIONAL LEGACY

Expo 2020 Dubai will raise the UAE's international standing, with strengthened bilateral and multilateral relations. Expo 2020 Dubai will highlight the UAE's capacity to bring the world together, promoting collaboration and crosspollination of thoughts, cultures and ideas. As the first World Expo in Middle East, Africa and South Asia (MEASA), Expo 2020 Dubai will showcase the great potential of the region.

05 PHYSICAL LEGACY

Expo 2020 Dubai will continue to 'connect minds' and inspire as District 2020, which will fulfil Expo's founding vision to continue as an ecosystem to connect, create and innovate. From the start, the Expo 2020 Dubai site has been designed with its future as a city in mind. More than 80% of Expo's built environment will live on as District 2020 which embodies the future of living and working through a 'new urban experience'. As a key part of Dubai South, Expo 2020 will help foster future growth in the area.

02 SOCIAL LEGACY

Hosting a World Expo presents an immense opportunity to inspire, empower and involve the UAE's youth before, during and beyond Expo 2020 Dubai. Expo 2020 will promote awareness of Expo's subthemes of Opportunity, Mobility and Sustainability, encourage cultural exchanges and rekindle visitors' interests in these key drivers of the future. In addition, stimulating innovation by identifying, showcasing and celebrating innovators and breakthroughs around the world, while nurturing the next generation's innovative spirit and the facilitation of cultural exchanges and thought-provoking ideas and inventions.

04 ENVIRONMENTAL LEGACY

With the sustainability strategy in place and the launch of its RISE Guidelines for Sustainable Operations, Expo 2020 aims to position itself as the catalyst for sustainability in the region, serving as a future model for best case practices and innovations in sustainability. Additionally, by incorporating various energy efficient technologies and sustainable designs through the construction phase, Expo's environmental legacy will be visible through its positive environmental performance and efficient use of natural resources.



B. DISTRICT 2020 – THE FUTURE OF THE EXPO SITE



District 2020's vision is to become a mixed-use community and innovation ecosystem that directly contributes to the growth of Dubai's innovation- and knowledge-driven economy. A diverse and inclusive urban community in the heart of new Dubai, District 2020 will attract the largest organisations, budding young enterprises, and families to live and work.

Located in Dubai South, near Al Maktoum International Airport, District 2020 can be easily accessed from all of the UAE's airports and seaports. The site, which will reuse at least 80% of the infrastructure built by Expo 2020 Dubai and house only buildings that are LEED Gold or Platinum certified, will be served by major highways and a dedicated Dubai Metro Route 2020 station.

District 2020 is integrated, with a purpose-built smart infrastructure designed to cater to the needs of future workers and residents. It combines an innovation district with contemporary residences, education facilities, entertainment venues, and a range of social attractions – providing the perfect balance of convenience, connection and community.

Part of Expo 2020's Legacy phase aspirations is that District 2020 attain the WELL Community Standard Pilot – the premier global standards for supporting health and wellbeing through inclusive, integrated and resilient communities. District 2020 has become the first community in the region to successfully register for certification of the standards. These standards focus on the following ten concepts:



Following its six-month run, Expo 2020 Dubai will transition into District 2020. A smart and sustainable global destination that carries forward the spirit of the World Expo, District 2020 supports the UAE's vision for sustainable economic development and focuses on driving growth in key industries and technologies, including travel and tourism; logistics and transport; education; construction; Internet of Things (IoT); artificial intelligence; big data; and blockchain.

“DISTRICT 2020 HAS A VISION TO CREATE A GLOBAL INNOVATION DISTRICT, WITH A MANDATE TO SUPPORT THE GROWTH OF INDUSTRIES AND ENABLE FUTURE TECHNOLOGIES. AS A HUMAN-CENTRIC SMART CITY DESIGNED TO ENCOURAGE COLLABORATION AND CONNECTION, IT WILL PROVIDE A CAREFULLY CURATED WORKING AND LIVING ENVIRONMENT, WHILE BRINGING SIGNIFICANT VALUE TO OUR DIVERSE COMMUNITY.”

NADIMEH MEHRA

Vice President, District 2020, Expo 2020 Dubai



C. CORPORATE ARCHIVE

Expo 2020 Dubai is the largest event ever staged in the Arab World. It has a responsibility to manage the valuable knowledge and resources accumulated in its planning and delivery over the course of 10-plus years. It is important that records relating to the event are captured to transfer knowledge, expertise, experiences, best practices and lessons learned – positioning Expo 2020 Dubai as a benchmark for future World Expos and other mega-events.

One of the initiatives to assist with the successful capture and transfer of knowledge is the Expo 2020 Corporate Archive. Established in April 2019 with the appointment of a professional archivist, the initiative is tasked with capturing the significant records of Expo 2020 and ensuring their availability for future users. These may range from UAE Government entities such as the UAE National Archives in Abu Dhabi to the BIE, the World Expo Museum in Shanghai, and members of the public and academia.

Corporate Archive Champions: To this end, the Corporate Archive works with approximately 70 'Champions' from different departments to identify and transfer relevant records to the Corporate Archive.

Cataloguing software: To assist with cataloguing, appropriate software – used by museums and archives around the world – has been procured and successfully configured by Expo 2020 to suit the needs of the Corporate Archive.

Information required: To enable accurate, detailed cataloguing of the records, the Champions are obliged to supply details – including access rights – about each record at time of transfer. This allows for cataloguing to be carried out by the Corporate Archive team in accordance with international standards of archival description, enabling reliable searches in future.

Storage facilities: State of the art storage facilities for Expo 2020's physical records have been procured. These will be used for the proper storage of all physical records, including textiles, glass, paper, wood, metal and media tapes, among others.

Raising awareness: Various initiatives, including one-on-one meetings, presentations and pop-up events, have been undertaken to raise awareness across Expo about the need to safeguard the event's valuable records. These initiatives showcase the various items already collected by the Corporate Archive team, giving an indication of the types of records most welcomed for transfer. They also serve as information sessions for colleagues, as well as volunteering opportunities for new Champions.

Outcomes: The Corporate Archive will act as a central repository for all historic Expo 2020 records that are generated during the Bid, Pre-Event and Event phases. A website with a link to the contents of the Corporate Archive will be made available to online researchers on Expo 2020's transition to District 2020. An exhibition space has also been envisaged in order to showcase items for the collection.



04

EXPO 2020 AND THE SDGs

A. EXPO 2020'S CONTRIBUTION TO UN SDGS

The Sustainable Development Goals (SDGs) are a universal call for action launched by the United Nations in 2015, inviting the global community to take action in contribution to 17 development goals, measured by 169 targets.

These goals address a range of global challenges, including climate change, inequality, economic growth, poverty and global health.

With the ambition to be one of the world's most sustainable Expos, Expo 2020 Dubai is committed to aligning our sustainability contributions with the SDGs. As one of Expo 2020's main subthemes, sustainability is emphasised throughout Expo's operations and initiatives across all its pre-event, during-event and legacy phases. Together with the help of our partners, suppliers, vendors, contractors, consultants and others, Expo 2020 Dubai aims to achieve a positive impact that will reach the global community.

Apart from the contributions of its own operations, Expo aims to utilise its global outreach platform capabilities to raise awareness about the SDGs and global sustainability issues. Visitors will be able to experience interactive exhibits at the Sustainability Pavilion that showcase these issues, as well as the various means in which Expo has addressed them. Through initiatives such as the Expo Live innovation and partnership programme and the Expo Global Best Practice Programme, Expo will showcase innovative projects from around the world that are providing solutions to these global problems.



LOOKING INWARDS

Examples of Expo 2020 initiatives that are aligned to the UN SDGs and their targets.



GOOD HEALTH AND WELLBEING

In 2019, Expo launched its mental health and wellbeing strategy that initiated various events and campaigns to raise awareness and provide support for mental health amongst Expo employees and workers.



QUALITY EDUCATION

Students and the wider school community play an integral role in creating Expo's social legacy. Through various initiatives under the Expo School Programme, Expo has engaged with students and incorporated its legacy into the school curriculum.



GENDER EQUALITY

52% of Expo's new hires in 2019 were women, contributing to an overall gender-balanced workforce at Expo.



CLEAN WATER AND SANITATION

Expo's effective water management system has set initiatives to reduce water consumption, minimise water loss, reuse treated water, and protect natural water resources.



AFFORDABLE AND CLEAN ENERGY

Renewable energy systems with a combined total capacity of 5.5 Megawatts have been installed on all permanent building projects on the Expo site. Additionally, the ENOC Service Station of the Future, launched in 2019, also incorporates Solar PVs and first-of-its-kind, on-grid wind turbines.



DECENT WORK AND ECONOMIC GROWTH

With the majority of procurement contracts awarded to locally registered suppliers and almost quarter of the total workforce comprising UAE nationals, we are ensuring that the economic stimulus created by Expo is equitable, inclusive and localised. Expo is also backing the crucial small- and medium-sized enterprise (SME) sector, which accounts for around half of all businesses registered with Expo, and is supporting together creative solutions from around the world through the Expo Live Innovation Impact Grant Programme.



INDUSTRY, INNOVATION AND INFRASTRUCTURE

Through technological activations and innovative building technologies, such as Siemens Mindsphere, our Innovation and Future Technology department is working on creating a futuristic visitor experience and a sustainable infrastructure for Expo's legacy.



REDUCED INEQUALITIES

Through our Worker Welfare policy framework and initiatives, we ensure free and fair recruitment, a non-discriminatory and tolerant work culture, and a safe and healthy work environment for all our employees and contractors. We are also working to create an inclusive and accessible event for Expo employees and visitors of determination (people with disabilities) by incorporating accessible designs into the infrastructure and engagement programmes.



RESPONSIBLE CONSUMPTION AND PRODUCTION

Expo is well on its way to meeting its target to divert 85% of its waste away from landfill. In 2019, 80% of Expo-generated waste was recycled or re-used, 17% was disposed at landfill, and 3% was stored for future use at Al Bayada waste facility centre, all of which allowed Expo to effectively achieve a cumulative diversion rate of 92% since the start of the programme. In 2019, Expo also launched the *RISE Guidelines for Sustainable Operations* before and during the event, and for incorporating sustainability into products and services that are supplied for the Expo.



CLIMATE ACTION

As climate change continues to be a major global risk, Expo 2020 Dubai has developed an emissions methodology to assess the event's total carbon impact and has predicted alternative scenarios with a predicted 7% reduction in the sustainable scenario.



LIFE BELOW WATER

A dedicated Spill Response Procedure, with extensive processes to deal with hazardous chemicals to mitigate water contaminations, and preserve the UAE's scarce water resources.



LIFE ON LAND

A dedicated ecosystems management process to conserve and protect biodiversity and ecology within the Expo construction site. Expo's ecosystem conservation to targets mandate no harm to any fauna or flora.



PARTNERSHIPS FOR THE GOALS

Expo 2020 Dubai serves as a global platform for partnerships and collaborations, bringing together 192 participating countries, plus businesses, multilateral organisations, educational establishments and visitors from across the world.

APPENDIX

GRI disclosure

<p>3  305-1: Direct (Scope 1) GHG emissions 305-2: Energy indirect (Scope 2) GHG emissions 305-3: Other indirect (Scope 3) GHG emissions 306-1: Water discharge by quality and destination 306-2: Waste by type and disposal method 306-3: Significant spills 401-2: Benefits provided to full-time employees that are not provided to temporary or part-time employees 403-2: Hazard identification, risk assessment and incident investigation 403-3: Occupational health services</p>	<p>9  201-1: Direct economic value generated and distributed</p>
<p>4  404-1: Average hours of training per year per employee</p>	<p>10  102-8: Information on employees and other workers 401-1: New employee hires and employee turnover 404-3: Percentage of employees receiving regular performance and career development reviews</p>
<p>5  401-1: New employee hires and employee turnover 401-2: Benefits provided to full-time employees that are not provided to temporary or part-time employees 401-3: Parental leave 404-1: Average hours of training per year per employee 404-3: Percentage of employees receiving regular performance and career development reviews 405-1: Diversity of governance bodies and employees 406-1: Incidents of discrimination and corrective actions taken</p>	<p>12  301-1: Materials used by weight or volume 302-1: Energy consumption within the organisation 302-4: Reduction of energy consumption 303-1: Interactions with water as a shared resource</p>
<p>6  303-1: Interactions with water as a shared resource 303-2: Management of water discharge related impacts 303-3: Water withdrawal 306-1: Water discharge by quality and destination 306-2: Waste by type and disposal method 306-3: Significant spills 304-2: Significant impacts of activities, products and services on biodiversity 304-3: Habitats protected or restored</p>	<p>13  302-1: Energy consumption within the organisation 302-4: Reduction of energy consumption 305-1: Direct (Scope 1) GHG emissions 305-2: Energy indirect (Scope 2) GHG emissions 305-3: Other indirect (Scope 3) GHG emissions 305-5: Reduction of GHG emissions</p>
<p>7  302-1: Energy consumption within the organisation 302-4: Reduction of energy consumption</p>	<p>14  304-2: Significant impacts of activities, products and services on biodiversity 304-3: Habitats protected or restored 305-1: Direct (Scope 1) GHG emissions 305-2: Energy indirect (Scope 2) GHG emissions 305-3: Other indirect (Scope 3) GHG emissions 305-5: Reduction of GHG emissions</p>
<p>8  201-1: Direct economic value generated and distributed 202-2: Proportion of senior management hired from local community 204-1: Proportion of spending on local suppliers 301-1: Materials used by weight or volume 302-1: Energy consumption within the organisation 302-4: Reduction of energy consumption 303-1: Interactions with water as a shared resource 303-3: Water withdrawal 401-2: Benefits provided to full-time employees that are not provided to temporary or part-time employees 402-1: Minimum notice periods regarding operational changes 403-1: Occupational health and safety management system 403-4: Worker participation, consultation, and communication on occupational health and safety 404-2: Programmes for upgrading employee skills and transition assistance programmes 405-1: Diversity of governance bodies and employees 409-1: Operations and suppliers at significant risk for incidents of forced or compulsory labour</p>	<p>15  304-2: Significant impacts of activities, products and services on biodiversity 304-3: Habitats protected or restored 305-2: Energy indirect (Scope 2) GHG emissions 305-3: Other indirect (Scope 3) GHG emissions 305-5: Reduction of GHG emissions</p>
	<p>16  205-1: Operations assessed for risks related to corruption 205-2: Communication and training about anti-corruption policies and procedures 205-3: Confirmed incidents of corruption and actions taken 307-1: Non-compliance with environmental laws and regulations 408-1: Operations and suppliers at significant risk for incidents of child labour 410-1: Security personnel trained in human rights policies and procedures 416-2: Incidents of non-compliance concerning the health and safety impacts of products and services 419-1: Non-compliance with laws and regulations in the social and economic area</p>

Alignment Relevance

LOW MEDIUM HIGH

Relevance ranking methodology: Identifying the correlated aligned relevance rank per goal is done by mapping the material GRI disclosures to the targets associated with each SDG. A percentage is obtained by identifying how many targets are covered through the mapping exercise against the total number of targets within a goal. Low relevance indicates 1-30% alignment, Medium relevance indicates 31-60% alignment, and High relevance indicates over 61% alignment. For example, SDG five has six targets, and the material GRI disclosures align with three targets, thus indicating a 50% alignment (medium).

METHODOLOGY

This Sustainability Report presents the first steps in aligning Expo's material GRI disclosures to SDG target disclosures. Utilising the publication developed by GRI and the UN Global Compact, 'An Analysis of the Goals and Targets', the methodology in the publication illustrates how the SDGs target disclosures can be aligned with GRI disclosures.

By identifying the links between Expo's material GRI disclosures with the SDGs target disclosure, this report was able to map the number of goals and targets it is aligned with.

The SDGs alignment specifically pertains to the 2019 Sustainability Report and Expo's material topics. Furthermore, this SDGs mapping exercise is a high-level activity and does not reflect the full extent of Expo's overall alignment with the SDGs.



B. GLOBAL BEST PRACTICE PROGRAMME

The Global Best Practice Programme is Expo 2020 Dubai's platform to showcase projects that provide tangible solutions to the world's biggest challenges in line with the SDGs.



Social development: Reliable, affordable and appropriate healthcare and education systems and delivery



Water, food and energy security: Smarter consumption and resource management to better meet increasing water, food and energy requirements for a growing global population

The programme highlights simple but effective initiatives, which localise the SDGs and can be adapted, replicated, and scaled for enhanced global impact. Through this, Expo seeks to enhance the visibility of best practices across the following five focus areas, for a better 2030:



Inclusive and sustainable service delivery: Reliable service provision in urban, suburban and rural areas, as well as in fluid environments such as informal, nomadic, post-disaster, emergency, and refugee settlements

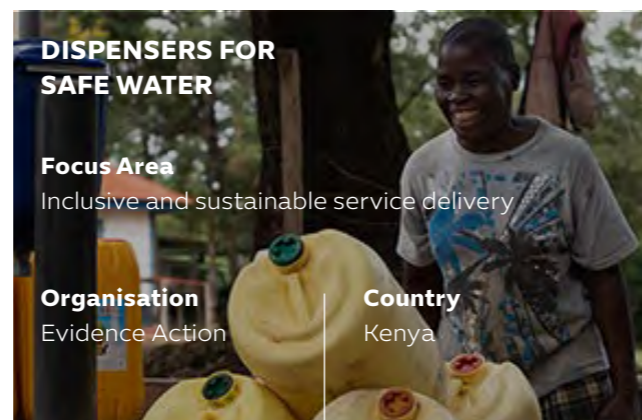


Livelihoods and enterprise development: Promoting alternative employment and income opportunities, women in the workplace, competitive products and services, and improved market access



Resilient habitats: Better protecting human, economic and natural assets in urban, rural and fluid environments (informal, nomadic, post-disaster, emergency & refugee settlements)

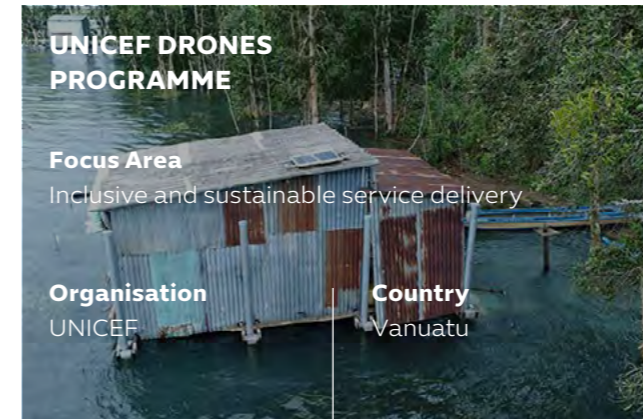
The Global Best Practice team selected 25 development projects and solutions from a pool of 1,175 applications from around the world, to be exhibited as part of the programme at the Expo. The jury included representatives from the BIE, the University of Cambridge, Bill and Melinda Gates Foundation, World Bank, UN-Habitat, UN-Water, UNDP, UNICEF, the Food and Agriculture Organisation of the United Nations, the International Renewable Energy Agency, Abu Dhabi Fund for Development, and the Mastercard Center for Inclusive Growth.



DISPENSERS FOR SAFE WATER

Focus Area
Inclusive and sustainable service delivery

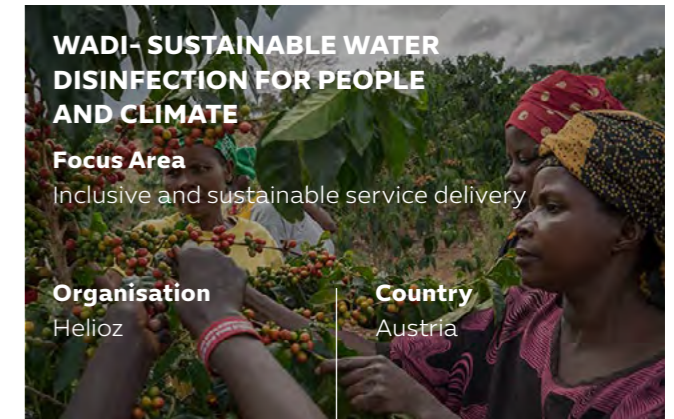
Organisation Evidence Action | **Country** Kenya



UNICEF DRONES PROGRAMME

Focus Area
Inclusive and sustainable service delivery

Organisation UNICEF | **Country** Vanuatu



WADI- SUSTAINABLE WATER DISINFECTION FOR PEOPLE AND CLIMATE

Focus Area
Inclusive and sustainable service delivery

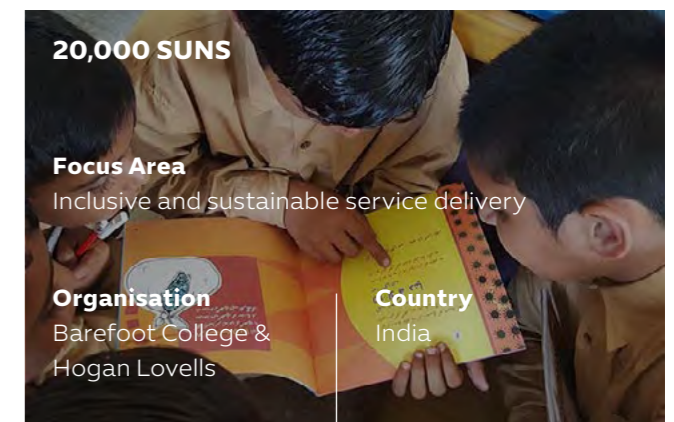
Organisation Helioz | **Country** Austria



BIG BOX FOR CALAIS JUNGLE REFUGEE CAMP

Focus Area
Inclusive and sustainable service delivery

Organisation Jangala | **Country** United Kingdom



20,000 SUNS

Focus Area
Inclusive and sustainable service delivery

Organisation Barefoot College & Hogan Lovells | **Country** India



GLOBAL PLASTIC WASTE DEPOSIT AND TRACKING SYSTEM

Focus Area
Livelihoods and enterprise development

Organisation Empower | **Country** Norway



QUESTION COFFEE FOR SDGs

Focus Area
Livelihoods and enterprise development

Organisation Sustainable Growers | **Country** Rwanda



THE MOUNTAIN PARTNERSHIP PRODUCTS INITIATIVE

Focus Area
Livelihoods and enterprise development

Organisation The Mountain Partnership | **Country** Peru



DIGITAL FARMER SERVICE

Focus Area
Livelihoods and enterprise development

Organisation Esoko | **Country** Ghana

ELECTRONIC RICKSHAW SERVICES BY WOMEN FOR WOMEN

Focus Area
Livelihoods and enterprise development

Organisation UN Women | **Country** Nepal

BUILDING A GREEN REFUGEE CAMP

Focus Area
Resilient Habitats

Organisation Land Life Company | **Country** Cameroon

SDG CAMPS

Focus Area
Social Development

Organisation UNDP | **Country** Tunisia

JANMA CLEAN BIRTH KITS

Focus Area
Social Development

Organisation Ayzh | **Country** India

CONSERVATION COOPERATIVES

Focus Area
Resilient Habitats

Organisation Planet Indonesia | **Country** Indonesia

HUMANITARIAN DEVELOPMENT-PEACE NEXUS

Focus Area
Resilient Habitats

Organisation Food and Agriculture Organisation of the United Nations (FAO) | **Country** Kenya, Uganda

FIGHTING NEGLECTED TROPICAL DISEASES WITH MOBILE PHONES

Focus Area
Social Development

Organisation Sightsavers | **Country** Nigeria

PLUS SCHOOL MENUS

Focus Area
Water, food and energy security

Organisation World Food Programme | **Country** Bhutan

THE SRI LANKA MANGROVE CONSERVATION PROJECT

Focus Area
Resilient Habitats

Organisation Seacology | **Country** Sri Lanka

THE BUOYANT FOUNDATION PROJECT AT THE UNIVERSITY OF WATERLOO

Focus Area
Resilient Habitats

Organisation Buoyant Foundation Project | **Country** Vietnam

ECO VILLAGE

Focus Area
Water, food and energy security

Organisation Bangladesh Environment and Development Society (BEDS) | **Country** Bangladesh

1ST BELIZE CACAO AGROFOREST CONCESSION IN PROTECTED AREA

Focus Area
Water, food and energy security

Organisation Ya'axché Conservation Trust | **Country** Belize

CREATING AGENTS OF POSITIVE CHANGE

Focus Area
Social Development

Organisation The Citizens Foundation | **Country** Pakistan

HYGIENE PROMOTION THROUGH ROUTINE IMMUNISATION

Focus Area
Social Development

Organisation WaterAid Nepal | **Country** Nepal

AGUA TICA

Focus Area
Water, food and energy security

Organisation FUNDECOR (Agua Tica's Technical Secretary) | **Country** Costa Rica

CITIZEN FARM

Focus Area
Water, food and energy security

Organisation Edible Garden City | **Country** Singapore

For more information, please visit <https://www.expo2020dubai.com/en/programmes/best-practice-programme>.

05 GRI CONTENT INDEX AND TOPIC BOUNDARIES



For the Materiality Disclosures Service, GRI Services reviewed that the GRI content index is clearly presented and the references for Disclosures 102-40 to 102-49 align with appropriate sections in the body of the report.

The service was performed on the English version of the report.



For the GRI Content Index Service, GRI Services reviewed that the GRI content index is clearly presented and the references for all disclosures included align with the appropriate sections in the body of the report.

The service was performed on the English version of the report.

A. GRI CONTENT INDEX

GRI STANDARD	DISCLOSURE	PAGE NUMBER(S) AND/OR URL(S)	OMISSIONS AND CLARIFICATIONS
GRI 101: Foundation 2016			
General Disclosures			
GRI 102: General Disclosures 2016			
	Organisational profile		
	102-1 Name of the organisation	7	
	102-2 Activities, brands, products, and services	12-14	
	102-3 Location of headquarters	Content Index	Expo 2020 Dubai, Expo Road, Dubai South, Jebel Ali, Dubai, UAE
	102-4 Location of operations		
	102-5 Ownership and legal form	14	
	102-6 Markets served	25, 59, 97, 98	
	102-7 Scale of the organisation	66- 68, 71	
	102-8 Information on employees and other workers	66- 68	
	102-9 Supply chain	27- 31	
	102-10 Significant changes to the organisation and its supply chain	Content Index	No significant changes occurred to the organisation and its supply chain in 2019
	102-11 Precautionary Principle or approach	Content Index	Expo 2020 Dubai is applying the precautionary principle to its environmental activities
	102-12 External initiatives	18, 35, 43-44, 92	
	102-13 Membership of associations	Content Index	Expo 2020 Dubai is not a member of any associations
Strategy			
	102-14 Statement from senior decision-maker	4	
Ethics and integrity			
	102-16 Values, principles, standards, and norms of behaviour	34, 62, 72, 77	
	102-17 Mechanisms for advice and concerns about ethics	63	
Governance			
	102-18 Governance structure	14-15	

GRI STANDARD	DISCLOSURE	PAGE NUMBER(S) AND/OR URL(S)	OMISSIONS AND CLARIFICATIONS
	102-21 Consulting stakeholders on economic, environmental, and social topics	24-26	
Stakeholder engagement			
	102-40 List of stakeholder groups	25	
	102-41 Collective bargaining agreements	Content Index	Collective bargaining agreements are not permitted in the UAE
	102-42 Identifying and selecting stakeholders	25	
	102-43 Approach to stakeholder engagement	25	
	102-44 Key topics and concerns raised	25-26	
Reporting practice			
	102-45 Entities included in the consolidated financial statements	Content Index	No entities included
	102-46 Defining report content and topic boundaries	105	
	102-47 List of material topics	25	
	102-48 Restatements of information	Content Index	No restatement of information from the previous report
	102-49 Changes in reporting	25	
	102-50 Reporting period	7	
	102-51 Date of most recent report	Content Index	Expo 2020 Dubai Sustainability Report 2018 released in 2019
	102-52 Reporting cycle	7	
	102-53 Contact point for questions regarding the report	8	
	102-54 Claims of reporting in accordance with the GRI Standards	Content Index	This report has been prepared in accordance with the GRI Standards: Core Option
	102-55 GRI content index	101	
	102-56 External assurance	Content Index	This report is not externally assured. We aim to gain external assurance of our sustainability report in the upcoming years to enhance our reporting efforts.

Material Topics			
GRI 200 Economic Standard Series			
Economic Performance			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	32-33, 72	
	103-2 The management approach and its components	32-33, 72	
	103-3 Evaluation of the management approach	32-33, 72	
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	32-33	

GRI STANDARD	DISCLOSURE	PAGE NUMBER(S) AND/OR URL(S)	OMISSIONS AND CLARIFICATIONS
Market Presence			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	69	
	103-2 The management approach and its components	69	
	103-3 Evaluation of the management approach	69	
GRI 202: Market Presence 2016	202-2 Proportion of senior management hired from the local community	69	
Procurement Practices			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	28	
	103-2 The management approach and its components	28	
	103-3 Evaluation of the management approach	28	
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	28	
Anti-corruption			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	63	
	103-2 The management approach and its components	63	
	103-3 Evaluation of the management approach	63	
GRI 205: Anti-corruption 2016	205-1 Operations assessed for risks related to corruption	63	
	205-2 Communication and training about anti-corruption policies and procedures	63	
	205-3 Confirmed incidents of corruption and actions taken	Content Index	No incidents of corruption reported in 2019
GRI 300 Environmental Standards Series			
Materials			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	27, 43, 44	
	103-2 The management approach and its components	27, 43, 44	
	103-3 Evaluation of the management approach	27, 43, 44	
GRI 301: Materials 2016	301-1 Materials used by weight or volume	44	
Energy			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	38	
	103-2 The management approach and its components	38	
	103-3 Evaluation of the management approach	38	

GRI STANDARD	DISCLOSURE	PAGE NUMBER(S) AND/OR URL(S)	OMISSIONS AND CLARIFICATIONS
GRI 302: Energy 2016	302-1 Energy consumption within the organisation	38	
	302-4 Reduction of energy consumption	38	
Water and Effluents			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	41-42	
	103-2 The management approach and its components	41-42	
	103-3 Evaluation of the management approach	41-42	
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	42	
	303-2 Management of water-discharge related impacts	52	
	303-3 Water withdrawal	42	
	303-4 Water discharge	52	
	303-5 Water consumption	42	
Biodiversity			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	54	
	103-2 The management approach and its components	54	
	103-3 Evaluation of the management approach	54	
GRI 304: Biodiversity 2016	304-2 Significant impacts of activities, products, and services on biodiversity	54	
	304-3 Habitats protected or restored	54	
Emissions			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	36	
	103-2 The management approach and its components	36	
	103-3 Evaluation of the management approach	36	
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	36	
	305-2 Energy indirect (Scope 2) GHG emissions	36	
	305-3 Other indirect (Scope 3) GHG emissions	36	
	305-4 Reduction of GHG emissions	36	
	305-5 Reduction of GHG emissions	36	
Effluents and Waste			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	47-49, 52-53	
	103-2 The management approach and its components	47-49, 52-53	
	103-3 Evaluation of the management approach	47-49, 52-53	

GRI STANDARD	DISCLOSURE	PAGE NUMBER(S) AND/OR URL(S)	OMISSIONS AND CLARIFICATIONS
GRI 306: Effluents and Waste 2016	306-1 Water discharge by quality and destination	52	
	306-2 Waste by type and disposal method	49	
	306-3 Significant spills	53	
Environmental Compliance			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	34	
	103-2 The management approach and its components	34	
	103-3 Evaluation of the management approach	34	
GRI 307: Environmental Compliance 2016	307-1 Non-compliance with environmental laws and regulations	Content Index	Expo 2020 Dubai complies with all relevant environmental regulations set forth by the UAE Federal Government and Dubai Municipality. During 2019, the organisation has not been in violation of any environmental regulations nor has it received any complaints relating to environmental matters
Supplier Environmental Assessment			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	22, 34	
	103-2 The management approach and its components	22, 34	
	103-3 Evaluation of the management approach	22, 34	
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	22, 34	
GRI 400 Social Standards Series			
Employment			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	66	
	103-2 The management approach and its components	66	
	103-3 Evaluation of the management approach	66	
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	66-67	
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	72	
	401-3 Parental leave	72	
Labor/Management Relations			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	72	
	103-2 The management approach and its components	72	
	103-3 Evaluation of the management approach	72	

GRI STANDARD	DISCLOSURE	PAGE NUMBER(S) AND/OR URL(S)	OMISSIONS AND CLARIFICATIONS
GRI 402: Labor/Management Relations 2016	402-1 Minimum notice periods regarding operational changes	72	
Occupational Health and Safety			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	77	
	103-2 The management approach and its components	77	
	103-3 Evaluation of the management approach	77	
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	81	
	403-2 Hazard identification, risk assessment, and incident investigation	78	
	403-3 Occupational health services	80	
	403-4 Worker participation, consultation, and communication on occupational health and safety	80	
	403-5 Worker training on occupational health and safety	80	
	403-6 Promotion of worker health	78-80	
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	78	
	403-8 Workers covered by an occupational health and management system	81	
	403-9 Work-related injuries	81	
Training and Education			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	73	
	103-2 The management approach and its components	73	
	103-3 Evaluation of the management approach	73	
GRI 404: Training and Education 2016	404-2 Programs for upgrading employee skills and transition assistance programs	73	
	404-3 Percentage of employees receiving regular performance and career development reviews	73	
Diversity and Equal Opportunity			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	66-67	
	103-2 The management approach and its components	66-67	
	103-3 Evaluation of the management approach	66-67	
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	66-67	

GRI STANDARD	DISCLOSURE	PAGE NUMBER(S) AND/OR URL(S)	OMISSIONS AND CLARIFICATIONS
Non-discrimination			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	62	
	103-2 The management approach and its components	62	
	103-3 Evaluation of the management approach	62	
GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	Content Index	No incidents of discrimination reported in 2019
Child Labor			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	62	
	103-2 The management approach and its components	62	
	103-3 Evaluation of the management approach	62	
GRI 408: Child Labor 2016	408-1 Operations and suppliers at significant risk for incidents of child labour	Content Index	No incidents of child labour reported in 2019
Forced or Compulsory Labor			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	62	
	103-2 The management approach and its components	62	
	103-3 Evaluation of the management approach	62	
GRI 409: Forced or Compulsory Labor 2016	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labour	Content Index	No incidents of forced labour reported in 2019
Security Practices			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	63	
	103-2 The management approach and its components	63	
	103-3 Evaluation of the management approach	63	
GRI 410: Security Practices 2016	410-1 Security personnel trained in human rights policies or procedures	63	
Human Rights Assessment			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	62	
	103-2 The management approach and its components	62	
	103-3 Evaluation of the management approach	62	
GRI 412: Human Rights Assessment 2016	412-1 Operations that have been subject to human rights reviews or impact assessments	Content Index	No incidents of human rights abuse reported in 2019

GRI STANDARD	DISCLOSURE	PAGE NUMBER(S) AND/OR URL(S)	OMISSIONS AND CLARIFICATIONS
Local Communities			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	65	
	103-2 The management approach and its components	65	
	103-3 Evaluation of the management approach	65	
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	65	
	413-2 Operations with significant actual and potential negative impacts on local communities	Content Index	There has been no negative impact to the local community as a result of the event planning and construction activities of Expo 2020. There were no rights abuse incidents reported in 2019
Customer Health and Safety			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	21-22, 43-44	
	103-2 The management approach and its components	21-22, 43-44	
	103-3 Evaluation of the management approach	21-22, 43-44	
GRI 416: Customer Health and Safety 2016	416-1 Assessment of the health and safety impacts of product and service categories	20, 43-44	
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	Content Index	No incidents on non-compliance reported in 2019
Socioeconomic Compliance			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	14, 81	
	103-2 The management approach and its components	14, 81	
	103-3 Evaluation of the management approach	14, 81	
GRI 419: Socioeconomic Compliance 2016	419-1 Non-compliance with laws and regulations in the social and economic area	Content Index	There were no cases of non-compliance with laws and/or regulations in the social or economic area reported for 2019

B. TOPIC BOUNDARIES

In accordance with GRI Standards, boundaries refer to the place or limit to which the impact has occurred and Expo’s involvement with these impacts.

SPACE-BASED BOUNDARIES:

- **On-site:** the geographic spatial boundaries where the event will occur. This does not include Expo Village and Dubai Exhibition Centre (DEC)
- **Off-site:** activities which do not take place within Expo’s geographic spatial boundaries In addition to this, Expo also includes temporal boundaries, dividing its operation into three time-related phases

TEMPORAL BOUNDARIES:

- **Pre-event phase:** the preparation period before the event
- **Event phase:** the six-month duration of the event
- **Legacy phase:** the period after the event

THE BOUNDARIES OF THIS 2019 GRI SUSTAINABILITY REPORT FALLS PRIMARILY UNDER THE PRE-EVENT PHASE, UNLESS STATED OTHERWISE.

Material Topics	Material within the organisation	Relevant Stakeholders								Site Boundary	
		Expo 2020 LLC and its employees	International Participants	Vendors/Suppliers	Local Community/Volunteers	Civil Society and Non-Governmental Organisations (NGOs)	Construction Consultants & Contractors/Workers	Partners	Youth & Schools Programme		Government Authorities
Economic											
Economic Performance	On-site Off-site
Market Presence	.			.							On-site
Anti-Corruption	On-site
Procurement Practices	On-site
Environmental											
Energy	On-site
Water	On-site

Material Topics	Material within the organisation	Relevant Stakeholders								Site Boundary	
		Expo 2020 LLC and its employees	International Participants	Vendors/Suppliers	Local Community/Volunteers	Civil Society and Non-Governmental Organisations (NGOs)	Construction Consultants & Contractors/Workers	Partners	Youth & Schools Programme		Government Authorities
Environmental											
Emissions	On-site
Effluents and Waste	On-site
Materials	On-site
Environmental compliance	On-site
Supplier Environmental Assessment	On-site
Biodiversity	On-site
Social											
Employment	.			.							On-site
Occupational health and safety	On-site
Customer Health and Safety	On-site
Local Community	On-site Off-site
Socio-economic compliance	On-site
Non-discrimination	On-site
Human rights assessment	On-site
Labour/Management Relations	On-site
Forced or Compulsory Labour	On-site
Child labour	On-site
Security Practices	On-site
Diversity and Equal Opportunity	On-site
Training and Education	.			.				.			On-site Off-site
Non-GRI											
Innovation	On-site Off-site
Accessibility	On-site

C.

ACRONYMS AND ABBREVIATIONS

ACRONYM/ ABBREVIATION	EXPANSION
ADSW	Abu Dhabi Sustainability Week
AED	Arab Emirates Dirham
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
AASHTO	American Association of State Highway and Transportation Officials
ASTM	ASTM International, formerly known as American Society for Testing and Materials
BAU	Business As Usual
BIE	Bureau International des Expositions
BME	Building management system
BS 8555	Internationally recognized Environmental Management System (EMS) standard
BS EN ISO 9001	Internationally recognized Quality Management System (QMS) standard
BS EN ISO 14001	Internationally recognized Environmental Management System (EMS) standard
CAP	World Steel Association Climate Action Programme
CCA	Crushed Concrete Aggregate
CCTV	Closed-Circuit Television
CEEQUAL	Civil Engineering Environmental Quality Assessment and Award Scheme
CEMP	Construction Environmental Management Plan
CO2	Carbon dioxide
CoC	Chain of Custody
CIPM	Chartered Institute of Procurement & Supply
CSC	Construction Supervision Consultants
CSR	Corporate Social Responsibility
CWMP	Construction Waste Management Plan
DALI	Digital Addressable Lighting Interface
DEC	Dubai Exhibition Centre
DED	Department of Economic Development
DEWA	Dubai Electricity and Water Authority
DIAD	Delivery Information Acquisition Device
DM	Dubai Municipality
EEG	Emirates Environmental Group
EIA	Environmental Impact Assessment
ENOC	Emirates National Oil Company
EP	Environmental Plans
EPD	Environmental Product Declaration
ETFE	Ethylene tetrafluoroethylene
EV	Electric Vehicles
FSC	Forest Stewardship Council
FTE	Full Time Equivalent
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GGBS	Ground-granulated blast-furnace slag
GHG	Greenhouse gas
GRI	Global Reporting Initiative
GVA	Gross Value Added

ACRONYM/ ABBREVIATION	EXPANSION
H&S	Health and Safety
HE	His/ Her Excellency
HH	His Highness
HSE	Health, Safety and Environment
HSQE	Health, Safety, Quality and Environment
HVAC	Heating, ventilation, and air conditioning
ICT	Information and Communication Technology
IFT	Innovation and Future Technology
IIGP	Expo Live's Innovation Impact Grant Programme
IOSH	Institution of Occupational Safety and Health, UK
IoT	Internet of Things
IPM	Expo 2020's International Participants Meeting
ISO	International Organisation for Standardisation
KPI	Key Performance Indicator
KSA	Kingdom of Saudi Arabia
LED	Light-Emitting Diode
LEED	Leadership in Energy and Environmental Design
LLC	Limited Liability Company
MEASA	Middle East, Africa and South Asia
MOCCA	Ministry of Climate Change and Environment
MSDS	Material Safety Data Sheet
NGOs	Non-Governmental Organisations
OHAS	Occupational Health and Safety
OMP	Online Marketplace
PEFC	Programme for the Endorsement of Forest Certification
PJSC	Public Joint Stock Company
PMC	Programme Management Consultant (PMC)
PMO	Portfolio Management Office
PPE	Personal Protection Equipment
PV	Photovoltaic
PVC	Polyvinyl Chloride
RTA	Roads and Transport Authority
RST	Role Specific Training
SDGs	Sustainable Development Goals
SME	Small to Medium Enterprise
STP	Sewage Treatment Plant
TSE	Treated Sewage Effluent
UAE	United Arab Emirates
UK	United Kingdom
UN	United Nations
UV	Ultraviolet radiation
UPS	United Parcel Service
USGBC	US Green Building Council
VCM	Vinyl Chloride Monomer
WBCSD	World Business Council for Sustainable Development
WCAG	Web Content Accessibility Guidelines
WW	Worker Welfare

