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مؤسسة دبي للمستقبل
DUBAI FUTURE FOUNDATION

Dubai ملتقى 2022
Metaverse دبي
Assembly للميتافيرس

Assembly Outcomes Report

28–29
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Museum of the Future
Dubai, UAE

DUBAIFUTURE.AE/METAVERSE

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Executive Summary

Dubai's first mega Metaverse event, the Metaverse Assembly, successfully concluded in September 2022. The flagship event welcomed over 600 technology experts, hosted 25 main and side sessions featuring 30 speakers and 40 technology companies. Jointly hosted at the Museum of the Future and AREA 2071 Emirates at Towers by the Dubai Future Foundation (DFF), the event also attracted 40,000 virtual attendees. The Metaverse is expected to add US$4 billion to annual GDP and 40,000 jobs to the country's workforce by 2030.

The two-day event was kickstarted by a keynote from H.E. Khalfan Belhoul, CEO at the Dubai Future Foundation welcoming all participants and attendees. H.E. Khalfan Belhoul stated that even though the concept of the Metaverse is not completely understood by most people, the value it can add is clearly evident to both governments and businesses. He mentioned that Dubai's "north star" in this journey is ensuring that we embrace the Metaverse creating a safe space that puts human lives first.

Over fifteen initiatives and strategies were announced in the Assembly. Under the patronage of H.H. Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, Dubai's Metaverse strategy was shared with attendees. The UAE's Ministry of Economy launched their third address in the Metaverse - offering an immersive customer experience with a human touch to citizens and residents. Hailing the Metaverse as a great leveler, the island nation of Barbados is set to enter the Metaverse with a new virtual embassy. Emirates Airlines shared plans to hire 4,000 cabin crew members by mid-2023 and train them in the Metaverse.

Key sectors that will benefit the most in the Metaverse were also identified. Dubai's Metaverse strategy, as detailed by Omar bin Sultan Al Olama, Chairman of Dubai Chamber of Digital Economy and Vice Chairman of the Higher Committee for Future Technology and Digital Economy, listed tourism, education, government services, retail and real estate as frontrunners. Many other speakers also added healthcare, gaming, and sustainability to the list.

Speakers highlighted the UAE's approach and openness to embracing new technologies and the Metaverse in particular. Dubai was referred to as the "crypto-capital" of the world and UAE as a "test bed" for new technologies.

We saw key themes emerge around what stakeholders must do to be successful in embracing the Metaverse:

01
Collaboration

02
Regulations

03
Openness

04
Business use cases

Dubai ملــتــقــى **2022**
Metaverse دبـــــي
Assembly للميتافيرس

1.0
EXECUTIVE
SUMMARY

01 Collaboration

Identifying and forming partnerships early on was cited as a key ingredient for the success of adapting the Metaverse. A panel comprising Emirati entrepreneurs cited collaboration as the major driver for their success in embracing the Metaverse.

02 Regulations

A new approach is the need of the hour where regulators will have to wear a referee's hat and refrain from being gatekeepers. As the Metaverse is in its infancy, now is the right time to formulate regulations pertaining to data protection and privacy, and cybersecurity risks. It was also agreed that clear roles and responsibilities will have to be established for all participants in this transformative journey.

03 Openness

Some governments and businesses are more open to newer technologies (blockchain, Web 3.0, and so on) than others. It is essential that all governments and businesses collectively work together to bring a shift in mindset, sooner than later. This includes piloting new technologies that could assist in solving current challenges within government or develop and deploy new government services with an aim to further improve the quality and type of services on global standards.

04 Business use cases

Government and enterprise are encouraged to bring their business challenges and opportunities in the form of use cases and explore how Web 3.0 and metaverse technologies can help them solve these challenges. Several entities like Emirate Airlines and DP World have announced their plans to leverage the metaverse to support in internal functions (staff training) or explore a parallel business model (virtual trade) at the Assembly, the pressure now is on local and federal government in the UAE to lead once more in this space with their own use cases.

Among the benefits of the Metaverse, the most significant ones are as follows:

01
More power to the consumer as they will be able to have increased control over their data, and possibly be able to monetise it.

02
Diplomatic parity for countries, which was evident from Barbados' initiative of launching an embassy in the Metaverse that will put it at par with countries of different sizes and economic stature.

03
Lesser control in the hand of existing platforms and de-monopolisation of technology.

04
Never-seen-before experiences for users across industries - from immersive learning for students of all ages to new levels of interactions with artists for music lovers.

This document outlines Dubai's Metaverse Strategy as announced during the Assembly, and summarises discussions and conversations across the various sessions (keynotes, panels, fireside chats) conducted over its course.

2.0

Dubai's Metaverse Strategy

Dubai's Metaverse Strategy

The Crown Prince of Dubai and Chairman of the Dubai Executive Council Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, launched the Dubai Metaverse Strategy with the aim for Dubai to **"be one of the leading Metaverse economies, and a major hub for the global Metaverse community"** by

01
Fostering Metaverse innovation and economic contribution

02
Cultivating Metaverse talent through education and training

03
Developing metaverse use-cases and applications in Dubai Government

04
Adopting, scaling, and globally advocating for safe platforms

The Metaverse Strategy will focus on four key sectors, namely:

01 Tourism

Metaverse events and scaling up the country's tourism with a Metaverse tourism taskforce

02 Education

Hosting training programs and enabling talent with the Metaverse education accelerator

03 Government Services

Creating a Metaverse alliance of private and government entities to build the Metaverse ecosystem and a Metaverse service migration roadmap

04 Retail and real estate

Creating Dubai's digital twin and enabling a global immersive shopping experience through Metaverse-friendly retail and real estate policies

This strategy is coupled by one for governance and regulation, following the concerns present within the community such as security and privacy, infrastructure, inclusivity, talent and investment. By setting up the Virtual Assets Regulatory Authority (VARA), Dubai is moving ahead to exploring the opportunities and addressing the challenges.

3.0

Dubai's positioning in the Metaverse

Dubai's positioning in the Metaverse

Multiple speakers lauded Dubai's openness in embracing the Metaverse and emerging as a global hub for this new reality. Dubai was described as the **"crypto capital of the world"** and initiatives to attract the right talent were cited including Golden, Green, and freelance visas.

Dubai has already established its strengths in sectors such as aviation, logistics, retail and travel and tourism. The Metaverse will help in driving the next wave of growth in these sectors, while enabling newer opportunities in industries including gaming and healthcare as well as better delivery of government services.

Excerpts from speakers during the two-day Metaverse Assembly, highlight **Dubai's strong position as a global Metaverse hub:**

"There is a clear alignment in Polygon's mission with the steps being taken in the city (of Dubai)"

Sandeep Nailwal, Polygon

"Dubai's top-down approach to the Metaverse is commendable and leadership here is all set to drive GDP growth by leveraging this technology"

Keith Jordan, Mastercard

"At present, countries are polarised - some are against the notion of Web 3.0, while others such as the UAE are willing to embrace this seemingly inevident transition"

Vishal Gondal, GOQii

"Our government's efforts in embracing the Metaverse are worth mentioning and we have ample opportunities to co-create and collaborate, which is the mantra for success"

Amin Al Zarouni, Bedu

"The ideal ecosystem for the Metaverse consists of partnerships and bridging knowledge gaps - the main objective behind the Dubai Metaverse Assembly"

Marwan Al Zarouni, Digital Dubai

4.0

Summarised Sessions

Day 1

Keynote:
Embracing the Metaverse

Speaker:
H.E. Khalfan Belhoul, Chief Executive Officer, Dubai Future Foundation

Citing the Metaverse the 4th industrial revolution, H.E. Khalfan Belhoul, CEO of the Dubai Future Foundation pointed out that "physical interactions between human beings are at great risk" with kids being in front of their screens more than ever, losing social skills and emotional intelligence in the process. His Highness highlighted major challenges we need to think about as the human race prepares for this "quantum transformation". He then took the audience back in time before the invention of the aeroplane, stating that as an alien concept to populaces alive at that point in time. That said, the human race' adaptability prevailed and will continue to do so in future.

The opportunities the Metaverse presents are not ones we should take for granted, as we did for digitalisation up until before the Covid-19 pandemic. We collectively learnt the true advantage of digitalisation during the pandemic and the same ingredients - collaboration, and inclusivity - will be needed for the Metaverse to succeed.

Looking at the UAE's history, His Highness stated that innovation resides within the fabric of society and the DNA of the country's forefathers and leaders. Successes from establishing the World Trade Centre in the midst of the desert to the world's tallest building, the Burj Khalifa, were cited to support his point. Today the city of Dubai serves as a connector between the West and East. "The biggest risk will be not taking a risk", His Highness added.

He also mentioned that today's world is not bound by physical boundaries, but only by digital prowess. The Metaverse was hailed as an amazing opportunity for everyone to embrace and leverage its huge potential, untapping tremendous value in the process.

Lastly, the "north star" will be ensuring a safe environment that puts humans first. Humans will be at the centre of this transformation, as has been the case for all transformations in the past and for the ones that will follow.

"physical interactions between human beings are at great risk"

"The biggest risk will be not taking a risk"

Panel:

Metaverse and the Economy: What is the size of the Opportunity?

Moderator:

Karl Tlais, Founder and Chief Executive Officer, iAdvisory

Speakers:

HE Abdulla bin Touq Al Marri, Minister of Economy, UAE; Bashar Kilani, Managing Director, Accenture; Mark Zaleski, Managing Director and Partner, BCG Digital Ventures

With the Web 3.0 market size expected to reach **US$80** billion by **2030** and Dubai becoming one of the fastest growing economies in the Middle East, there is an opportunity for the UAE to emerge as the global hub for the Metaverse. The panellists discussed the fundamentals of the Metaverse and its future, and how it will be central to the digital economy for Gen Z and future generations. The discussion was centred around:

01
The vision and economic prowess in the Middle East region

02
Understanding how to establish the UAE as a net export hub for the digital economy of the future

03
Taking a closer look at key drivers - regulation, infrastructure, research and development, talent and investment

04
Recognizing the Gen Z effect and acknowledging the speed of change

The moderator defined the Metaverse as "an immersive way powered by virtual and augmented realities for users to engage and trade within a digital universe and environment encompassing multi-layer gaming, remote working and education". He added that at the core of this transformation is a digital economy that will be shaped by Gen Z and following generations. He also mentioned that the size of the Metaverse opportunity is **US$8-13 trillion**, and that the Gen Z group are going to be the real drivers of the Metaverse economy, generating **US$33 trillion** over the next **10 years**, which will be spent online and within the Metaverse ecosystem.

The Minister of Economy stated that UAE's economy has always been based on innovation and technology, and the country is a platform for global talent enabled by the Golden, Green, and freelance visas. There are multiple programs and initiatives targeting the talent that will drive the Metaverse. Bashar from Accenture added that the Metaverse economy will be 1.5x than today's digital economy, equaling in size to the third largest national GDP today. 70 percent of the population in the Middle East region is below the age of 30, which is a strategic advantage in this technological wave. Mark from BCG Digital Ventures remembered the low adoption rate in the early years after the advent of the Internet, and today's Gen Z cannot even imagine a world without it. As cost of components goes down, the pace of advancement in technology will continue to ramp up.

Bringing the government and private sector together will help to establish the UAE as a global net export hub for the Metaverse. The UAE government is gearing up to extend its full support to the private sector to attain this goal. The Minister of Economy stated the need for governments to operate and work along private businesses and embed a similar mindset and operating models. Bashar Accenture hailed initiatives such as **Dubai 10x** that are already planning for a digital future. Mark compared Dubai to the Silicon valley a couple of decades ago, citing the Metaverse Assembly as an event establishing clear intentions to play a crucial role in the Metaverse journey.

The panellists introduced the concept of "responsible Metaverse" and listed key considerations for all stakeholders - building trust, ensuring safety and protecting IP; realising the human aspect and solving for human well being; maintaining inclusion and equity in this new world order; and recognizing the effect of Gen Z.

Gen Z folks are expected to spend a large chunk of their incomes in the Metaverse - creating their avatars and reimagining making friends. The youth's strong association with and ideas for the Metaverse are beyond what older generations can imagine.

Finally, HE Abdulla bin Touq Al Marri announced the Ministry of Economy's third address in the UAE in the Metaverse. The audience were presented with the possibilities of replacing the Ministry's two dimensional website to a three dimensional virtual address and how users will be able to have an immersive experience replicating a physical visit to the Ministry's office - taking a ticket, interacting with voice, holding events, and signing agreements.

Keynote:

Metaverse 101:
Unravelling the Metaverse
and Its Future

Speaker:

Ihab Foudeh, Microsoft

Ihab's keynote focused on the opportunities lying in the Metaverse for governments, corporates and societies, and their preparedness to seize them.

He shared Microsoft's mission to "empower every person and every organisation on the planet to achieve more". The Metaverse will add a new dimension to human interaction, and can be manifested into the consumer Metaverse, the enterprise Metaverse and the industrial Metaverse. This global excitement about the Metaverse is evident from the fact that 90 percent of business leaders predict that it will have a positive impact on their business.

The Metaverse will "create digital replicas (in a virtual world) of people, places, things, and processes (in the real world) and then integrate them back into the real world, creating never-before seen experiences and new opportunities."

The Microsoft executive talked about unlocking new value for their consumers through the power of presence (going beyond a video in a hybrid world), creating new immersive worlds (empowering consumers to innovate and establish new cultures), simulating, predicting, and automating (reducing cost, improving efficiency and increasing ROI). All this can be achieved while maintaining high levels of safety and security in the Metaverse. Microsoft's Mesh 14 and Hololens 2 were also revealed to the audience who were encouraged to leverage new technologies at their workplaces.

"empower every person and every organisation on the planet to achieve more"

Panel:
Sector Deep-Dive: Opportunities in virtual real estate

Moderator:
Sarah Foster, The National

Speakers:
Guy Parsonage, PwC; Samuel Hamilton, The Decentraland Foundation; Joe Abi Akl, Majid Al Futtaim; Ali Sajwani, DAMAC Properties

"Buying land in the Metaverse today is similar to buying land in New York 250 years ago" mentioned Sarah Forster as her opening remarks for this panel discussion where opportunities in virtual real estate were highlighted.

Ali from Damac talked about leveraging the Metaverse for creating immersive digital twins of Damac properties that can offer an immersive viewing experience to present and future customers. Decentraland has 90,000 parcels of land in the Metaverse hosting a collection of different communities since 2017. The price of a unit of land has increased from US$20 in 2017 to US$3,500 today. Samuel believes Decentraland to drive the next iteration of social media where users can have "a more human experience".

Joe from Majid Al Futtaim drew attention to influencing factors for a lifestyle conglomerate buying land in the Metaverse. The Metaverse was defined as an evolution of trends that the world has witnessed since the beginning of the Covid-19 pandemic, and a phenomenon that will continue to evolve further to address changing consumer needs.

Majid Al Futtaim have trained over 1,000 employees on Web 3.0 and the Metaverse, and have also established a Web 3.0 studio. Damac is achieving this via D-Labs, a team of younger people ideating on the Metaverse, away from typical corporate culture.

There is no doubt that the pandemic accelerated the adoption of the Metaverse, but Guy from PwC highlighted that while people have learned they can be productive in front of a screen during the pandemic, they have also been using the same platforms for so long that they are yearning for something new. Guy recognized the Metaverse as a fantastic opportunity that comes with its set of risks and challenges (as with any other opportunity). There is a need to bridge the gap between opportunities and risks to venture into the Metaverse safely. PwC does this by coming up with practical Metaverse use cases for clients and their brands. A major risk cited was data protection. Guy further mentioned that we will have to ensure data safety in Metaverse manifestations such as land units provided by Decentraland. Organisations alone will not be able to achieve this and there is a need for regulating data safety and security - as agreed by all panellists.

Lastly, the audience were introduced with the twin concepts of an Open Metaverse (like the Internet that offers complete freedom to upload and create things), and the Closed Metaverse (comprising legacy companies building a contained and closed ecosystem). A common goal that all agreed upon is to protect the Metaverse from being monopolised (by a few technology companies).

"Buying land in the Metaverse today is similar to buying land in New York 250 years ago"

Fireside Chat:

Making Trade Flow: How the Metaverse will enable people and operations

Speaker:

HE Sultan Ahmed Bin Sulayem, Group Chairman and CEO, DP World

Moderator:

Brandy Scott, Arabian Radio Network

The pandemic brought along many supply chain issues and highlighted many inefficiencies that have existed for years but never been addressed. In this panel, Brandy from Arabian Radio Network sought answers from HE Sultan Ahmed Bin Sulayem from DP to the question - how will the metaverse enable people and operations?

DP World operates in over 60 countries with 94 terminals, and wants to leverage the Metaverse to interact with their stakeholders. The CEO talked about the different ways they have used these advanced technologies to solve trade and supply chain issues, as well as for training employees and monitoring their terminals worldwide.

While disruptive technology can be worrisome to the workforce and impact employee motivation, Sultan Ahmed believes that it has actually allowed DP World to establish a safer workplace by "replacing dangerous jobs with jobs that are safe". Not only does this enable a shift from dangerous, lower paying jobs to safer, higher paying ones, but it also shifts focus from physical strength to mental abilities. It has also helped attain inclusivity in the workplace - for instance by training Emirati women to operate multiple cranes remotely.

DP World relies heavily on technology as it handles US$400,000 worth of cargo every hour, around the clock and accounting for 75 million containers or 11 percent of the world's trade. Routing this volume in the most efficient way and storing all the data generated in the process is only possible by leveraging the latest technologies. He also mentioned quantum computing to be of particular interest in processing and utilising information much faster.

"replacing dangerous jobs with jobs that are safe".
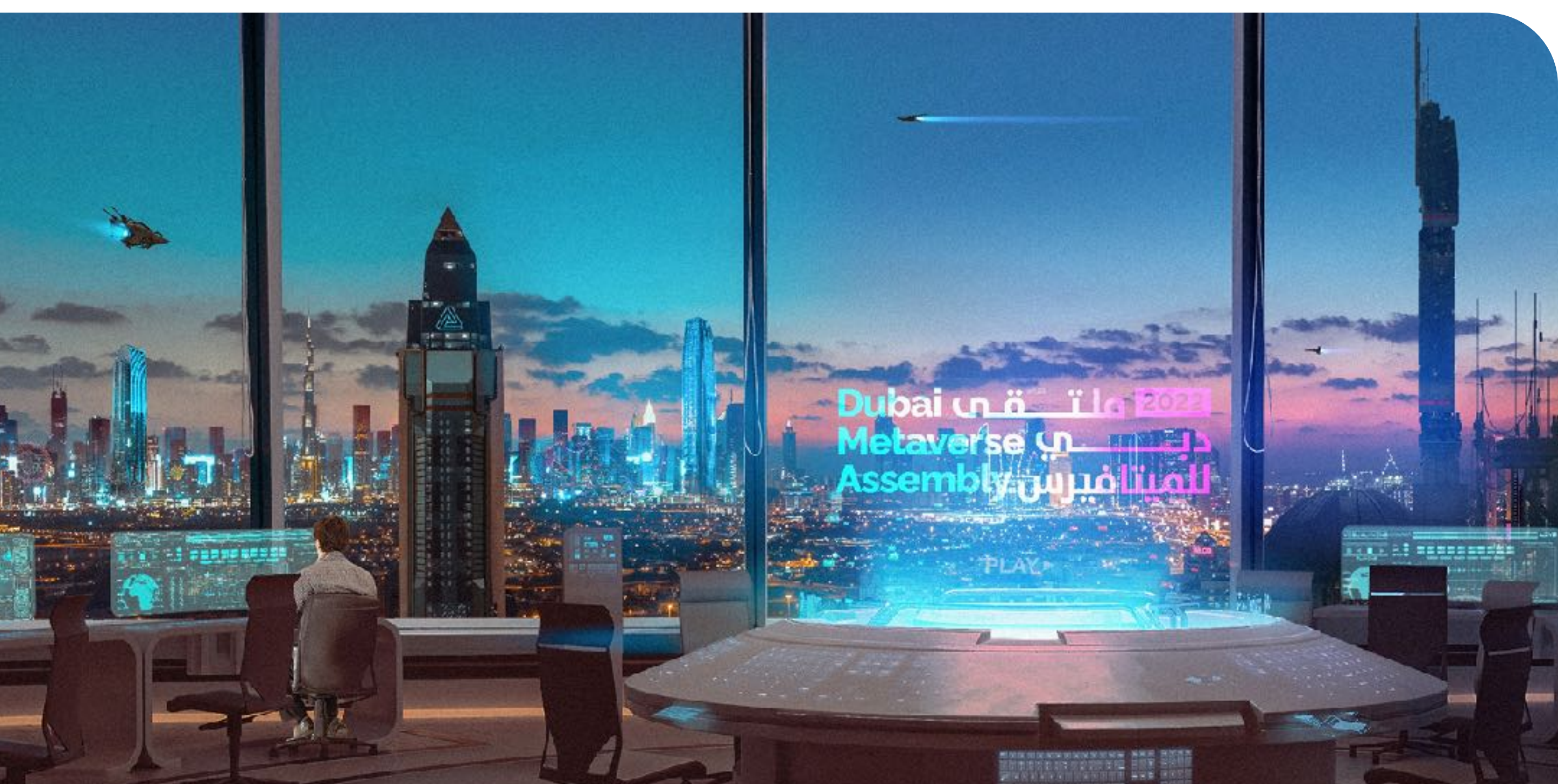
Panel:

Maximising the Potential of Ecosystems on the Metaverse

Moderator:

Laura Buckwell, Euronews

Speakers:

Cathy Li, World Economic Forum (WEF); James Hairston, Meta; Marwan Al Zarouni, Digital Dubai; Balsam Danhach, FTX

Laura started by asking the panel about how to achieve the best form of the Metaverse in order to build a perfect ecosystem. Cathy from WEF cited the Metaverse to be an "ongoing digital transformation" and not just a destination, and the evident need for all sectors to collaborate in designing a perfect ecosystem to establish a safe Metaverse.

Marwan from Digital Dubai was in agreement with Cathy and mentioned that the ideal ecosystem for the Metaverse consists of partnerships and bridging knowledge gaps - the main objective behind the Dubai Metaverse Assembly.

James from Meta listed a perfect Metaverse ecosystem as open and interoperable, enhancing but not replacing everyday tasks such as gaming, socialising, or even government services. He added that the perfect ecosystem will have to be accessible, vibrant, dynamic, and truly global. Balsam from FTX added that if the Metaverse is flexible and sustainable enough to self-correct, then we are on track to establishing the perfect ecosystem.

To establish this dynamic and value-driven ecosystem, we must identify and prepare for challenges along the way. Cathy listed security and privacy challenges in a Web 2.0 world that will be amplified with the advent of Web 3.0, while there will be newer challenges discovered with trial and error. Marwan believes that the digital divide will increase and will have to be bridged by training and education on underlying technologies. James pointed out concerns around equity and inclusion, and safety and privacy. He added that if done right, Metaverse in the MENA region could account for 6% of GDP, which is equivalent to US$360 billion over the next decade.

Keynote:

The Dubai Metaverse Strategy: Unlocking Dubai's Potential

Speaker:

HE Omar bin Sultan Al Olama, Chairman of Dubai Chamber of Digital Economy and Vice Chairman of the Higher Committee for Future Technology and Digital Economy in Dubai

In a session presided by His Highness Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, Crown Prince of Dubai, His Excellency Omar bin Sultan Al Olama, Chairman of Dubai Chamber of Digital Economy and Vice Chairman of the Higher Committee for Future Technology and Digital Economy in Dubai, listed the opportunities for the country and how to capture them by announcing Dubai Metaverse Strategy.

His Excellency started by sharing UAE's global accomplishments including Emirates airlines that operates in 158 countries, DP World that manages 78 terminals around the world, and Dnata that has successfully reinvented airport logistics at 127 airports. Dubai's reach is global and limitless, and the Metaverse will extend it further by breaking geographical barriers. Under the leadership of Sheikh Hamdan, Dubai is preparing to welcome 160 million tourists in the next 10 years.

This is the right time to focus on and invest in the Metaverse, which is the next major technological leap for the human race. The speaker highlighted three major leaps that the world has witnessed in the recent past:

01
Gaming:

games have evolved from two dimensional gameplay to three dimensional ecosystems with their own economies

03
Connectivity:

the world has witnessed speeds evolving from 14,400 bps to 20 billion bps with the advent of 5G and other technologies

02
Experience:

playing music in the past was limited by cassettes (90 minutes of music on a tape), today the average person has access to 100 billion hours of music with the click of a button

All of these evolutions have contributed to the world's (and Dubai's) readiness to take on something like the Metaverse, a new and ever-evolving technology.
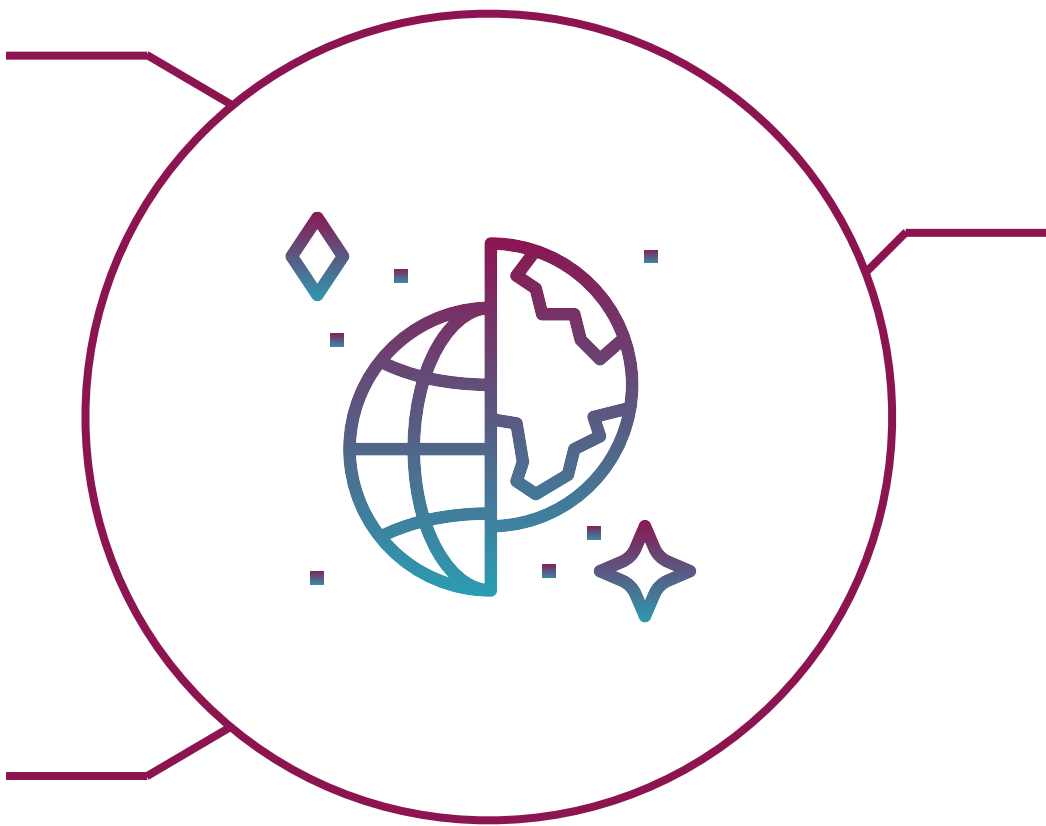
His Excellency then presented the structure of the Metaverse strategy. The strategy aims to establish Dubai as "a leading Metaverse economy, and a major hub for the global Metaverse community". In the near future, we will measure countries and cities by Gross Metaverse Product (GMP) instead of GDP. GMP will ride on virtual contributions to a country's economy, fueled by the Metaverse.

Focus sectors for the Metaverse strategy and underlying initiatives were also shared:

01 Tourism:

Creating a digital twin for Dubai, while promoting virtual tourism activities and dedicating a qualified team to lead promising sector.

02 Education:

Highlighting its role in shaping the future generations, His Excellency mentioned that the Metaverse will help students experience and understand concepts like culture and history in never before ways and by eliminating the need to solely rely on an author's viewpoint. Initiatives in this space include training programs for Emiratis and residents, and launching a Metaverse Education Accelerator.

03 Government services:

Using the Ministry of Economy as an example, the vision for delivery of government services in the future was shared. Users will be able to get help from the comfort of their homes and have a conversation with a service agent (as they would in real life) on the Metaverse.

04 Retail and Real Estate:

Launching Dubai's digital twin and offering immersive shopping experiences in the Metaverse.

His excellency ended by saying "Dubai is not a single player in the Metaverse" and after the Metaverse Assembly, "the Metaverse will revolve around Dubai".

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4.8
SUMMARISED SESSIONS
DAY 1

Keynote:
Metaverse 101: Building
the responsible Metaverse

Speakers:
Asma Shabab, Accenture;
Anne Groeppelin, Accenture

Asma stressed upon the need for a Responsible Metaverse that is inclusive by design, and was virtually joined by Anne from Accenture's Sophia Antipolis labs in France. Anne defined the Metaverse as an "evolution of the Internet where users will be able to move from 'browsing' to 'participating and/or inhabiting' in a persistent shared experience that spans the spectrum of our real world to a fully virtual world and in between". Advancements in Metaverse have been propelled by 5G, significant improvements in computing power, and user adoption driven by the pandemic. The rise of the Internet of places allows users to experience things in different mediums "from virtual to physical and everything in between". In addition, the concept of the Internet of ownership was also introduced, allowing users to own a digital identity for owning and trading articles in the Metaverse.

Approaching this new technology from a responsible angle and understanding what decentralisation entails should be the way forward for businesses as they plan to serve both customers and employees expecting to move their identity, properties, and assets across the different worlds and spaces. Accenture also shared their framework for the Responsible Metaverse focusing on trust (privacy and IP protection) and human (wellbeing and inclusion) dimensions.

"evolution of the Internet where users will be able to move from 'browsing' to 'participating and/or inhabiting' in a persistent shared experience that spans the spectrum of our real world to a fully virtual world and in between"

Keynote:

Metaverse 101: Augmented Reality: Revolutionising the Conventional

Speaker:

Jade Meskill, Magic Leap

Magic Leap is an American company that makes AR devices that can blend the digital and physical worlds. Jade spoke about how AR, VR, and the Metaverse are at a critical juncture where their value needs to be demonstrated in tangible ways, this means that technology needs to have real applicable use cases that add business value.

Magic Leap uses the Magic Leap 2 to simulate high stake situations for firefighters in an AR world, to train them on how to manage a wildfire of different intensities and varieties. The use of technologies powers better informed decisions leveraging the Metaverse. With Magic Leap making the shift from the consumer world and focusing on enterprises, they are building their products in a decentralised universe where users own their data.

5.0

Summarised Sessions
Day 2

Keynote:
Into the Metaverse by Meta

Speaker:
Ziad Traboulsi, Meta

Ziad started by comparing Metaverse to the Internet in the 1990s. Like the data explosion that the Internet resulted in, Metaverse will make our current experiences enriched and enhanced. He also highlighted some key statistics on the economic impact of the Metaverse – accounting for over US$3 trillion or 2.8 percent of Global GDP by next decade, and more than US$360 billion or 6.2 percent of MENAT's GDP.

The expanse of the Metaverse can be imagined by the number of avatars possible that is 1 quintillion (or a thousand raised to the power of six). The possibilities are endless as well – avatars can be made to look like anyone or anything. Ziad pointed out that we will see a lot happening in this space during the next decade as companies and policymakers come together to unleash Metaverse's full potential.

He further highlighted some ongoing use cases in the Metaverse such as Horizon World and Ray-Ban Stories. He also claimed that Meta's offerings (Facebook, Instagram, WhatsApp, etc.) will act as bridges to the Metaverse.

The keynote ended with Ziad citing some exciting projects that are currently underway at Meta – Project Cambria, a pathbreaking headset; Haptic Glove – offering the 'sense of touch' in a Metaverse world; No Language Left Behind – a real-time AI-based translation tool; and Builder Bot, another AI-enabled tool.

the economic impact of the Metaverse – accounting for over **US$3 trillion** or 2.8 percent of Global GDP by next decade, and more than **US$360 billion** or 6.2 percent of MENAT's GDP.

Keynote:

The Future of the Nations in the Metaverse

Speaker:

HE Gabriel Abed, Ambassador of Barbados to the UAE

HE Gabriel Abed started with establishing the concept of 'virtual sovereignty' that lies at the intersection of governments, blockchain and borderless innovation. This was supported by three perspectives for governments to consider:

01
Growth of Digital Value

Individual's economic value increasingly encapsulated in the digital world, shifting the global economy's centre of gravity (value being increasingly held in cryptocurrency, NFT art, access to data, digital platforms, etc.)

02
Metaverse gaining traction

Major software and hardware advancements increasing accessibility and utility of the Metaverse (new borderless digital economies taking form, alongside new user adoption)

03
Growing need for Regulation

Mainstream adoption should be guided by digital rights and obligations, to govern social and economic interactions (these frameworks will be a key determinant of the Metaverse's ability to transform society)

HE Gabriel Abed also listed examples of governments foraying into the Metaverse – Barbados looking to establish a Metaverse assembly, the European Union's Metaverse initiative, Dubai's Virtual Asset Regulatory Authority's headquarters, and Metaverse cities in South Korea.

The biggest advantage of Metaverse is offering a level-playing field. Whether it's a small nation or a G7 economy, the Metaverse will provide diplomatic parity. He mentioned that Governments need to pull up their sleeves and work towards drafting regulations, tackling digital data protection and uncovering new concepts such as tokenisation. Emphasis was also laid on adapting Web 3.0 and having cybersecurity policies in place.

A Metaverse Embassy for Barbados will enable:

Diplomatic parity

Empower developing nations to gain diplomatic representation at the same level as larger nations without vast budgets and infrastructure

Future-proofing national services

Use technology to stay ahead of the curve and make inroads where future economic growth will occur

International coverage

Form a reputation as a forward-thinking nation with an appetite for technological innovation in governance

Immersive experience

Create an immersive virtual experience for diplomats, investors, and citizens that embodies national culture and norms

Resource efficiency

Manage multiple diplomatic missions with one non-resident Ambassador. Maintain and update content, functions, and experience remotely
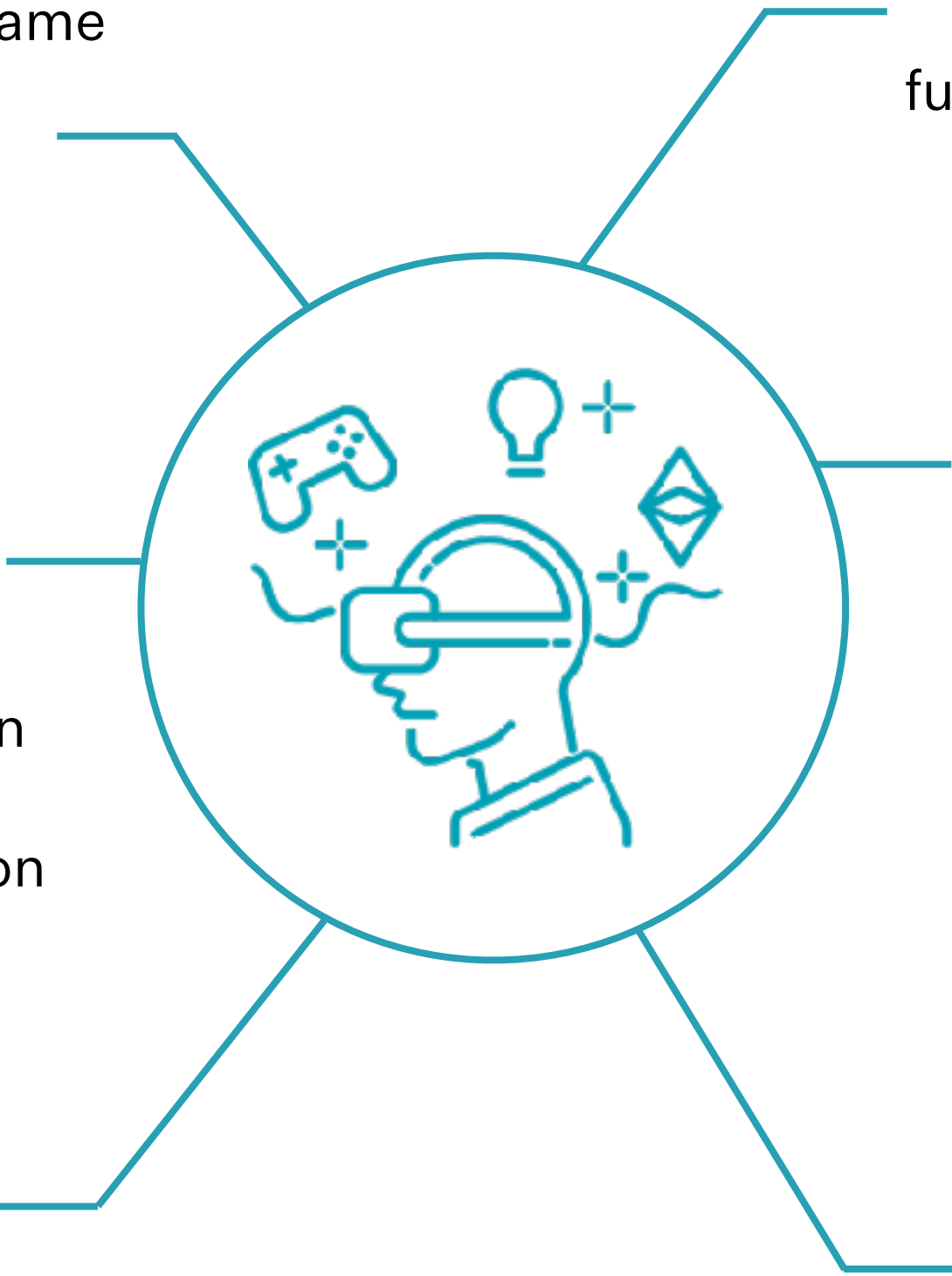
Broader reach

Expand the reach of diplomacy, virtually promoting culture, tourism, and investment to all corners of the world

HE Abed also impressed upon use cases of harnessing the Metaverse's full potential. These include Meta-citizenship and identity, Meta-Special Economic Zones, and Meta-University. Meta-citizenship and identity leverage digital rights best suited for users by leveraging the Metaverse. Meta-SEZs allows businesses to operate seamlessly across borders by leveraging harmonised regulations designed to foster innovation. Meta-university draws on the Metaverse to provide a fully immersive and interactive education.

The keynote ended with some food for thought – questions for governments to consider as they navigate a Metaverse future, namely:

Q1
What kind of legislative frameworks are required to service the Metaverse economy?

Q2
What does the first Metaverse bilateral treaty look like?

Q3
How far and wide are you willing to go in providing services in a borderless environment?

Panel:
The Role of Governments in Virtual Worlds

Moderator:
Mina Al-Oraibi, The National

Speakers:
Catherine Zhou, HSBC; Keith Jordan, Mastercard; Alexander Chehade, Binance; Christian Kunz, DIFC Authority; Vinit Shah, Virtual Assets Regulatory Authority (VARA)

The discussion started with the Moderator asking Christian (from DIFC Authority) about the need for regulations in a Metaverse world. Christian stated the overarching goal as creating a safe environment for citizens and residents and the need to evaluate both financial and ethical risks. He mentioned that this will be challenging as the Metaverse space is a rapidly evolving domain and often words and actions are not synced. Christian cited the four fundamentals for future regulations, namely protection, financial stability, accountability, and fairness.

DIFC Authority is undertaking several initiatives in this direction. Guidelines are being formulated in consultation with the UAE Central Bank and other stakeholders. It is also looking at international partners, from corporates to special agencies. A global venture studio launchpad has also been launched with an aim to bring together companies and start-ups.

The discussion then moved to Vinit from VARA who stated that the regulatory authority has a 'product' and not an 'activity' lens, when looking at regulations. Catherine from HSBC stated that her role requires to plan for the "day after tomorrow". She further highlighted that tokenisation will be a major phenomenon over the coming years and an "open harbour" will be required, which all stakeholders will have to build together.

Alexander from Binance highlighted the organization's vision to create and provide safe infrastructure with "user-centricity" being key. He mentioned that several identity tokens will be created over time and Binance' role will be to ease sophistication.

Keith from Mastercard praised Dubai's top-down approach to the Metaverse and stated that the leadership is all set to drive GDP growth by leveraging this technology.

He also expressed the need to identify a "north-star" as well as for regulators to broaden their horizons beyond just transactions. Vinit (VARA) further elaborated by adding that both users and Metaverse developers will have to share the responsibility to build and drive trust as the world adopts this new phenomenon. Catherine (HSBC) drew regulators' attention to monitoring the "what" and not solely focusing on the "how".

DIFC' Christian expressed the need to set rules for an upcoming virtual world with well-defined responsibilities for each stakeholder. He said that we already have these answers for the existing real world, while we must look for them in a Metaverse world. To put things into perspective, he listed UAE' payment market size at US$70.6 billion and mentioned that today there are over 400 million active Metaverse users globally.

Another big win stated for the Metaverse is the shift of power towards the consumer. The world will witness the emergence of a B2A or Business to Avatar model and consumers will assume the role of self-gatekeepers. The Metaverse will also drive financial inclusion as well bring in positive societal and cultural changes.

The discussion also focused on major existing bottlenecks. Both VARA and Binance stated interoperability, safety, and data protection as the challenges to watch out for. HSBC expressed the need for a clear way forward, while Mastercard pressed on the urgent need for legacy businesses to adapt to a Metaverse reality.

Lastly, the panellists agreed upon best practices for embracing the Metaverse – setting up regulators such as VARA, testing and validating use cases, designing and developing payment mechanisms and tokenisation hubs, and transforming completely to a 'digital first' mindset.

Fireside chat:
Sector Deep-dive –
Opportunities in Aviation

Speaker:
Adel Al Redha, COO,
Emirates

Moderator:
Mustafa AlRawi, The National

Emirates has always embraced new technologies as and when they emerge. Recently, the airlines configured their A350 aircrafts leveraging the Metaverse (via AR and VR) in Hamburg, Germany. Adel Al Redha stated that by doing so they were able to eliminate surprises and increase transparency. He also cited the importance of taking risks to remain competitive.

Some changing industry dynamics were also highlighted such as the growing independence from middlemen in the travel industry. While five years back, direct bookings with airlines accounted for less than 10 percent of total ticket sales, today the number is up to almost 50 percent. When asked about the right time to invest in the Metaverse, the speaker said it was yesterday.

The biggest challenge moving forward is getting the right talent. That said, Adel Al Redha was confident that Dubai's strategies and the Emirates brand will together help in attracting and retaining the right talent.

The speaker also shed light on the need for listening to and solving for the youth (30 years and below). This group not only represents the future consumer, but also is the best source for new and fresh ideas. Adel Al Redha emphasised that Emirates acknowledges this and strives to offer the right platform and support to youth both within and outside the organisation.

Fireside chat:

Which Sectors is the Metaverse already Impacting?

Moderator:

Jane Witherspoon, Euronews

Speakers:

Yusuf Bahadir, GoArt; David Clark-Joseph, Pixelynx; Vishal Gondal, GOQii; Bradford Bird, The Fabricant

The discussion began with Yusuf from GoArt citing Gartner' prediction around 25 percent of the global population spending at least an hour a day on the Metaverse by 2026. Vishal from GOQii maintained that health and wellbeing will be central in a Metaverse world. Leveraging AR, people will be able to lead healthier lives in the real world. He mentioned that currently most businesses are in the business of making users click on advertisements, but the Metaverse will change this fundamentally. Vishal also cited an example where a national chain of hospitals in India incentivized diabetics by offering a certain quantity of gold for every 0.1 units decline in their HbA1c number (The haemoglobin A1c test measures the amount of blood sugar attached to one's haemoglobin).

David from Pixelynx stated how legacy music creators have been disintegrated with the user. He further elaborated on Metaverse's ability to establish a direct connection with listeners. The interaction between music and Web 3.0 will bring about a) enhanced fandom, b) more immersive experiences, c) increase in user-generated content, and d) enable anyone to create a podcast (adding on a lighter note that not everyone should be creating a podcast though). Web 3.0 can benefit art in general and music in particular.

Bradford from The Vibrant remembered how the idea of a digital fashion store was ridiculed, a few years back. Today, he added, major fashion brands have formulated their Metaverse strategies. The primary buyers for digital clothing include gamers (who have been buying digital clothing for many years) and fashionistas (who have increasing social media presence).

GoArt Metaverse is developed by game design company RoofStacks. The company has been AR technologies since its funding in 2015. Its latest offering is the GoArt Metaverse App leveraging its partnership with Ready Player Me.

Pixelynx is a venture focused on blurring the lines between music, blockchain and gaming. The company is building technology and acquiring equity in a range of startups that will form the foundation of how music is experienced in the metaverse. Founded by music veterans including deadmau5, Richie Hawtin, Seven20 and Graphite Media, Pixelynx aims to build a global network of artists, visionaries and startups that are passionate about re-imagining how the music industry evolves through Web 3.0 and the Metaverse.

Established in 2014, GOQii's smart tech-enabled healthcare platform brings together the entire preventive healthcare ecosystem. It's Smart Health Ecosystem integrates tools for real-time personalised coaching, an explosive high-growth Health e-commerce store, scheduling health check-ups, a health locker, a unique 'GOQii Cash' program where healthy behavior is rewarded with cash discounts and insurance discounts based on health management data and live coaching by experts on GOQii Play, the health OTT platform.

The Fabricant is a digital fashion house leading the fashion industry towards a new sector of digital-only clothing.

The moderator then asked the panellists to list challenges and cite best practices to overcome them. GoArt drew attention to mobile devices as the primary medium to engage users and the need to design Metaverse experiences on these devices. Pixelynx seconded this opinion and mentioned the need for gamification of apps. GOQii touched upon the concept of 'open Metaverse' and the power that content creators will get unlike what they enjoy with the social media platforms like Facebook, at present. Vishal highlighted the misalignment between business objectives and consumer needs as a big roadblock, citing Spotify as an example of users' inability to take their playlists to another platform. The Fabricant listed 'equal opportunity' as a major benefit from Metaverse - digital fashion lets co-creators (i.e. designer, coder, etc.) split rewards.

Collaboration will be the key to success in a Metaverse reality. We will also see the rise of "social commerce" with the amalgamation of social media and e-commerce in the Metaverse, which will allow users to monetise their data (users will become shareholders). In addition to equal opportunity (illustrated above), Metaverse will also equalise distribution of income and force platform owners to share revenues with users for sharing their data.

Healthcare will benefit immensely from the transition to Web 3.0. Insurance companies will be able to incentivise policyholders for leading a healthy life. Governments will be able to reduce sick-care expenses.

The panel also shed light on the role of regulators. They stressed that establishing a code of conduct will be more important than formulating policies. Regulators will have to wear a 'referee' hat and let go of their role as 'gatekeepers'.

Lastly, all panellists agreed that things will take off once governments and organisations are able to transition from Web 2.0 to Web 3.0. At present, countries are polarised - some are against the notion of Web 3.0, while others such as the UAE are willing to embrace this seemingly inevident transition.

Fireside chat:
UAE Metaverse Contributors

Moderator:
Alex Gubbay, The National

Speakers:
Amin Al Zarouni, Bedu; Adbelrahman Mohamed, MetaCon Global; Abdulla Mohamed Al Dhaheri, Chaintech Labs; Haya Al Gussain, Evolve Network Club

Bedu is a Web3.0 pioneer based in the UAE, providing a wide range of products and services to help its partners build meaningful and innovative Metaverse, Blockchain and NFT solutions. The company operates under two verticals - Bedu Labs and Bedu World.

MetaCon Global holds events involving blockchain gaming, esports, Web 3.0, NFTs and more.

Chaintech Labs Ltd is a blockchain research and development house, incorporated in the Dubai International Financial Center, and founded by a group of blockchain researchers and game developers from Stockholm, San Francisco, New York, and Dubai.

Evolve is an exclusive networking platform connecting and building a community of enlightened and thriving entrepreneurs and business people.

This was a unique panel comprising young Emirati entrepreneurs who are making a mark in the Metaverse domain. The discussion started with enlisting sectors that can benefit the most from Metaverse. Education was cited as a sector that has traditionally been slow to adopt technologies - a reality that changed during the Covid-19 pandemic. Metaverse will enable a highly immersive education experience for students, allowing them to learn and explore subjects like never before. Bedu's 2117 Metaverse inclusion is a step towards that direction. Solving climate change and becoming sustainable was also identified as an area for the Metaverse.

Abdelrehman from MetaCon shared an interesting term, "betaverse" implying that everyone is in a trial phase today with respect to Metaverse adoption. He further stated that MetaCon's mission is to combine personal passion with professional interest - that clearly reflects in its aim to establish a colony on Mars by the year 2117.

The panelists agreed upon the following challenges in their Metaverse journey:

01
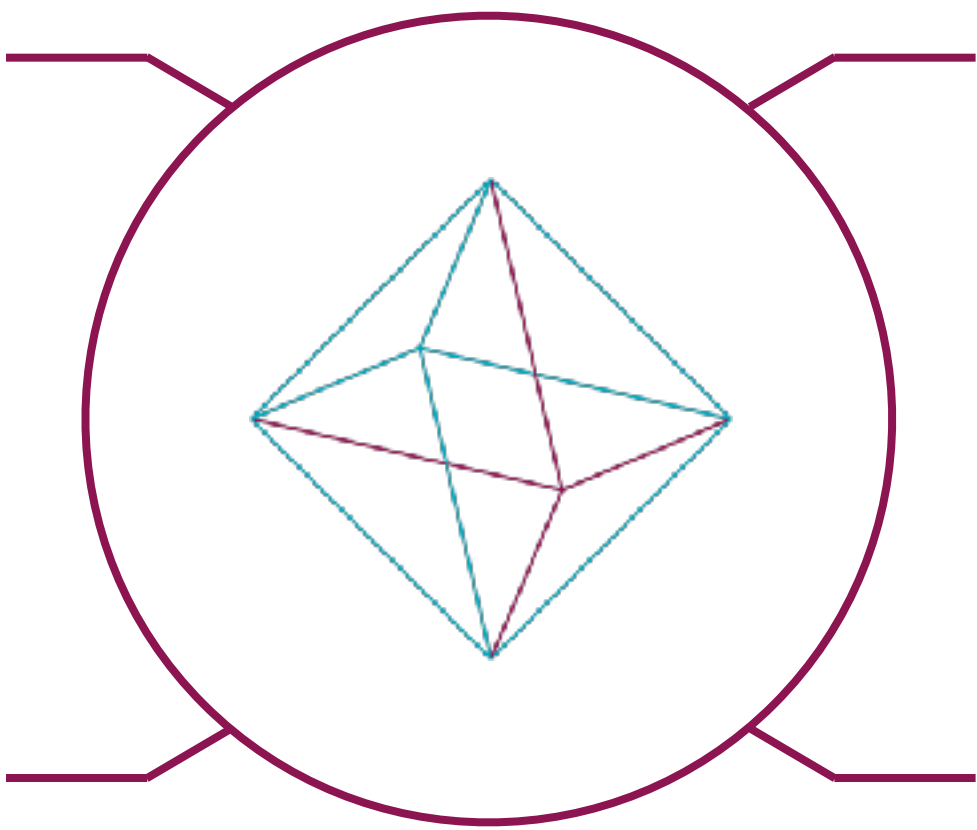Lesser known brand and confusion around organisational identity

02
Absence of a clear roadmap and shortsightedness

03
Lack of effort in educating oneself and tendency to follow others

04
Inability to form the right (and timely) partnerships

All the entrepreneurs applauded the national government and their efforts in embracing the Metaverse and Web 3.0 and stressed on collaboration as the mantra for success.

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Metaverse دبي
Assembly للميتافيرس

5.7
SUMMARISED SESSIONS
DAY 2

Keynote:
Sector Deep-dive – Gaming in the Metaverse

Speaker:
Sarah Buxton, Gala Games

Sarah highlighted three main themes for the Metaverse, namely:

1 "Consumer" will have to be replaced by "community"

2 Web 3.0 will have to be build with and not for users

3 Web 3.0 will create a world where users own items, moving from companies owning territories

Fireside chat:
Metaverse and immersive gaming

Speaker:
Ahmed Tehemar, GameFi, BNB Chain

Ahmed started by mentioning that gaming and Metaverse are not as interrelated as many believe them to be. This will become evident as the Metaverse continues to grow and evolve. He also drew attention to gamification of education and healthcare in the Metaverse to serve consumers of the future.

When asked about roadblocks, he mentioned that he is satisfied with the progress and that the world seems to be moving in the right direction. He did add though that gaming content will need to adapt as we move forward and developers will need to focus on a larger target group (currently most games are designed for 10-14 years old). Developers will have to look beyond this group and also design content for 18-41 years old, which is a huge segment according to GameFi.

As highlighted by multiple speakers, Ahmed also cited collaboration as the key to success - collaboration between content creators as well as all stakeholders.

Lastly, Ahmed listed the biggest hurdle to Metaverse adoption - the limited availability of components and the mismatch between the speeds with which software and hardware progress. He listed that advancement of gaming content in general is limited by currently available hardware.

Keynote (Virtual):
ening scope of gaming today and in the near future

Speaker:
Sebastian Borget, The Sandbox

Moderator:
Tom Urquhart, Arabian Radio Network

The Sandbox's Open Metaverse comprises five key components - content (creators and NFTs), economy (digital jobs, DeFi gaming, and DAOs), blockchain (standard and open protocols), experience (own and build your avatars to play, meet, and earn), and culture (over 300 IP and brands including Gucci, Adidas, Atari, Ubisoft, and Warner Music Group).

Sebastian elaborated on The Sandbox's mantra to offer an immersive experience to users:

1 Give value to fans and loyal users

2 Reward users for their contributions

3 Embrace the NFT culture

4 Encourage user-generated content

5 Put creativity first

Keynote:

The Building Blocks for
Web 3.0 and the Metaverse

Speakers:

Sandeep Nailwal, Polygon

Sandeep started with explaining the concept of Metaverse and its ability to add a layer of ownership in the virtual world - property rights are built in natively. He added that globally today users are spending 60-70 percent of their time on apps via their mobile devices - that is where businesses and developers must focus their efforts.

A challenge for blockchain is the low valuations that startups in this space are garnering. Even 10,000 to 15,000 active users often lead to a valuation to the order of US$500 million, which is much lower than similar scenarios in the physical world. One among 10,000 apps achieves blockbuster success on mobile app stores, which clearly gives an indication of the number of apps being churned out every day; on the other hand, there are only around 50,000 total blockchain apps at present.

There are currently 2 billion transactions and 170 million active IPs, but for Web 3.0's mass adoption, the number of active users will have to touch the one billion mark. Sandeep cited some interesting use cases from leading businesses including Meta's Instagram, Starbucks' loyalty program, Robinhood's exclusive wallet on Polygon, and ebay. He added that these and other leading businesses are relying on Polygon to build their Metaverses.

Sandeep lauded Dubai's leadership and their vision of making Dubai the "crypto-capital" of the world. There is a clear alignment in Polygon's mission with the steps being taken in the city. He added that Ethereum (ETH) is the basic layer that Polygon operates on and ETH has recently reduced their carbon footprint by almost 99 percent. Polygon themselves have a net negative carbon footprint.

6.0
Conclusion

Conclusion

The message is clear - governments and businesses need to act now to prepare themselves for and reap the benefits of an inevitable Metaverse transformation. The speed of transition is expected to be unprecedented - faster than the evolution of the Internet or mobile data speeds, which are among the most rapid evolutions witnessed in recent years.

Action points are also laid out - governments need to establish regulators (like VARA in Dubai) and formulate regulations for a new Metaverse world order, wearing a 'referee's' hat and moving away from a gatekeeper's mindset. Collaboration is key to attaining success and all stakeholders in the Metaverse ecosystem must identify and form the right partnerships, without any delays. Tangible, relatable use cases need to be the cornerstone of any metaverse experiment or project to gain credibility with users, the regulators and the public.

The Metaverse is expected to empower users in never-before-seen ways. Users will be able to exercise full control over their data and possibly monetise it; users will be able to co-create and engage with artists and developers in immersive ways; students will benefit from learning by seeing; and consumers will witness a decentralised and de-monopolised world.