Preface

Every time technology changes, it creates threats to established ways of doing business and opportunities for new ways to offer products and services. The metaverse is the driving force bringing the current technology together in a unified, immersive experience. One indication that the final stage has arrived is when the terminology becomes part of our common culture. This is where the metaverse world is the hottest topic today. The topic of the metaverse world now appears regularly in national media and becomes a point of discussion during business meetings and during social gatherings. Have you embarked on the metaverse world?

OPPORTUNITIES IN THE METAVERSE WORLD

The metaverse has a lot of technologies underlying its foundation and is probably the next iteration of the internet and mobile platform. Let's explore the key technologies that drive the metaverse world. The availability of the 5G and 6G infrastructure level will be the driver of the metaverse world. These will provide the infrastructure speed to deploy devices mainly referring to Augmented Reality (AR) or Virtual Reality (VR), smart wearable (SM), and Omnidirectional treadmill (ODT) fields. VR interactive equipment, including virtual reality interaction technology, motion capture technology, and ergonomics research development as well as deployment has driven the growth of the metaverse world. Participants in the Metaverse will be able to have more immersive experiences that converge reality and the virtual world by utilizing mixed reality and AR/VR technologies. Blockchain, NFT, and virtual currency, as the core technologies of the meta-universe, can provide scarcity for the virtual world. These technologies are the basis for the establishment of social systems, legal systems, and business systems in the Metaverse ecosystem. Blockchain financial technology focuses on the innovation of blockchain technology and products. It has been applied to digital assets, equity bonds, supply chain traceability, joint credit investigation, and data security areas. In the field of NFT, at present, NFT companies and start-ups are mainly concentrated in three fields: digital collections, game assets, and the virtual world. The driving force sectors of the Metaverse world will be games, smart medicine, industrial design, and smart education.

According to GrayScale (2021), the metaverse will likely infiltrate every sector in some way in the coming years, with the market opportunity estimated at over $1 trillion in yearly revenues. How attractive is the metaverse world? Based on MatthewBall (2021), the metaverse offers opportunities to spend on virtual goods at $54 billion per year, almost double the amount spent buying music. The GDP for Second Life was about $650M in 2021 with nearly $80M USD paid to creators (Zdnet, 2022) and not to mention even brick-and-mortar shop like Walmart is preparing to enter the metaverse (CNBC, 2022).

Obviously, not to miss out on the gaming industry. In-game ad spending is set to reach $18.41 billion by 2027 (IPS, 2021). Thus, there is the possibility of the metaverse massively expanding access to the marketplace for consumers from emerging and frontier economies. Furthermore, there is a shift toward online technologies during Covid has been convoyed by a rapid uptake of technologies like metaverse and others (Agur, Peria, and Rochon, 2020; Lai and Tong, 2022). There is a need for more structured research and development as well as strategies to support these growing industries. (Pisano, 2015, Stam and Wennberg, 2019; Lai, 2020; Lai and Liew, 2021).

STRATEGIES IN THE METAVERSE WORLD

Organizations are prioritizing metaverse hiring, customer research, and upskilling as much or even more than their investments in metaverse-related technology. It's a good strategy since technology is primarily an enabler. Even countries are implementing favorable metaverse strategies. Let's explore the development of the metaverse in China and the country's strategy as well. More recently, the Guangzhou Huangpu District and Guangzhou Development Zone jointly released Measures for Promoting the Innovation and Development of the Metaverse (also referred to as the "10 Metaverse Measures"), the first policy of its kind in the Guangdong-Hong Kong-Macao Greater Bay Area. Some of the highlights include:

- Promoting innovation agglomeration and encouraging enterprises to form clusters and become "highly specialized";
- Supporting technological leadership, where institutions and businesses should work hand in hand to solve technical bottlenecks.
- Strengthening the protection of intellectual property rights.
- Increasing talent acquisition; and
- Establishing a "Metaverse Industrial Fund" to attract social capital.

A new wave of innovation, strategies, development, and deployment across consumer industries has been seen globally with the rapid development of the metaverse world. This pandemic has changed the way people live, work, and socialize, accelerating demand for innovation, as retailers, consumer goods, and travel companies shift from reacting to the crisis to reinventing products and services according to findings of a new global survey from Accenture. We can see the huge demand for technologies from the popular zoom (virtual meeting), online movie streaming like Netflix, video-sharing (TikTok), delivery services like Grubhub, and others. Similarly, this pandemic has transformed online shopping from a nice-to-have to a must-have around the world. The pandemic has accentuated the trend toward greater adoption of social media (e.g: Facebook, Instagram, etc) and growth in sales through e-commerce websites. Shifts in consumption habits have also been observed, driven by the need for sourcing essential items. Social media and owning e-commerce shops are important sales channels for e-commerce companies. Both channels have witnessed higher growth since the beginning of the pandemic due to the lockdown. Organizations are differentiating themselves by adding new technologies like AR, VR, virtual coins, etc to attract customers to their platforms.

The organization's decision-makers are eyeing Augmented Reality, Virtual Reality, Artificial Intelligent, Blockchain, E-payment, and cutting-edge computing technologies in the metaverse world. It is eminent that these technologies have significant implications in the metaverse world that are stalwart

in inspiring social impact. This has opened new areas of opportunities for organizations to strategies themselves toward the metaverse world. Businesses primarily focused on the creation of wealth previously while education and technology have taken the centre stage during this Covid pandemic, pressure to behave more ethically and responsibly has prompted organizations to consider investments that serve Environment, Social, and Governance (ESG) goals. These encompass strategies and practices that feature the management of economic, social, and environmental performance to optimize benefits for both business and society with metaverse technologies. Therefore, metaverse technologies do revolutionize how the world works and the impact on the society and environment. Furthermore, this has been attracting more and more metaverse academicians, researchers, developers, and professionals across the globe to facilitate the ecosystem for a better world.

ORGANIZATION OF THE BOOK

This book offers multi-disciplinary Strategies and Opportunities for Technology in the Metaverse World coming from 6 continents. The book is organized into seventeen chapters. A brief description of each of the chapters follows:

The first section of the book highlights contributions sharing the analysis, strategies, opportunities, and future direction of the metaverse world.

Chapter 1 starts with the "ANALYSIS OF METAVERSE TECHNOLOGY, IS IT REAL OR VIRTUAL?". Today, the formation of digitalization has taken on a completely different concept from the metaverse and has taken the whole world under its influence. This chapter would provide detailed information about the metaverse universe with an overview of its advantages and disadvantages. Additionally, the possibility of taking the role of the real world will be evaluated by comparing the metaverse universe with the real world.

Chapter 2 is the up-and-coming trend of the "Artificial Intelligence and Blockchain Technology in the 4.0IR Metaverse Era: Implications, Opportunities, and Future Directions". Based on current trends in AI and blockchain technology, this study proposes that the distance between entrepreneurs all over the world and their potential workers may be greatly decreased to virtually real-time.

Chapter 3 is entitled "Exploring The Incredible Potentials And Opportunities Of Metaverse World." Metaverse is expanding exponentially, implementing new technology for the progression to deliver the best experience using AR (Augmented reality), VR (Virtual reality), and XR (Extended reality). This chapter discusses the incredible potential by which we can achieve outstanding results for implementing Metaverse technology or establishing a connection and connecting with people in a more live manner (in virtual spaces) and achieving real-time experience.

Chapter 4 is about the metaverse new economy titled "The Fourth Illusion: How a New Economy of Consumption is Been Created in The Metaverse". The immersive experience of Virtual Reality is characterized by three illusions: the illusion of place, the illusion of embodiment and the illusion of plausibility (Slater, 2009) (Slater et al., 2009). This chapter describes the use of Blockchain Technology, namely the NFTs, as the origin of a fourth illusion.

Chapter 5 will dive into the title "User Acceptance Towards Non-fungible Token (NFT) as the Fintech for Investment Management in the Metaverse". Non-fungible token (NFT) is the choice of a new form of financial technology in the metaverse to authenticate digital asset ownership. The objective of this study was to examine the impacts of NFT on the metaverse communities.

Chapter 6 is the not to be missed opportunity the "Metaverse in Investment using Sentiment Analysis and Machine Learning." Non-fungible token (NFT) is the choice of a new form of financial technology in the metaverse to authenticate digital asset ownership. The objective of this study was to examine the impacts of NFT on the metaverse communities.

In the next section, the metaverse will focus on the education section.

Chapter 7 will start with the "Wonders of the World: Metaverse for Education Delivery". This chapter overviewed several existing works being conducted on metaverse in immersive education. The application of metaverse to the education sector has been well studied and widely accepted as an engaging and effective method of delivering learning experiences.

Chapter 8 then look at the quality of education with the metaverse "Research on Improving the Quality of Talent Training in Higher Vocational Colleges in China". This Chapter is intended to serve as a model for other higher vocational colleges seeking to improve the quality of talent training while also promoting the modernization and internationalization of high-quality vocational education.

Chapter 9 will focus on the "Delphi study on Metaverse Campus Social Perspectives". The Metaverse Campus (MC) is an idea of converting learning from physical classes into virtual worlds. The initiative of MC allows students worldwide to partake in classes and events in the same world.

Chapter 10 focuses on the metaverse payment potential through the "Research on College Students' purchasing using a webcast platform". This chapter studies the purchasing behavior of college students using the webcast platform and understands the factors that college students use the webcast platform in the metaverse world.

Chapter 11 is on how education can use metaverse to support language learning with the title "Classroom Interaction and Second Language Acquisition in the Metaverse World." This chapter mentions applying innovative ideas using metaverse for second language acquisition with the support of new scenarios and developed applications (e.g., role-play activities in personalized settings, etc.), aimed at exploring these possibilities for language teaching.

The last section of the book will investigate a few different spectrums from legal to the adoption of a metaverse in a few countries.

Chapter 12 will start exploring the "ADOPTION OF METAVERSE IN SOUTHEAST ASIA: - VIETNAM, INDONESIA, MALAYSIA" in ASEAN. Countries in Southeast Asia (SEA) are at with their respective development within the metaverse space. It is important to recognize the level of development of the metaverse in these countries.

Chapter 13 explores the edification with the title "Metaverse or Not Metaverse: A content analysis of Turkish Scholars' Approach to Edufication in the Metaverse. This chapter examines how Turkish educational researchers used Metaverse concept during the Covid-19 pandemic. A thorough examination of the term metaverse is conducted from its emergence, evolution, past and current usage within the academic circles along with the terms edufication and gamification

Chapter 14 investigates the "Effects of Digital Technologies on Academic Performance of Nigerian Adolescents. The rapid development of technology has penetrated almost all sectors of society and makes any form of resistance almost impossible. The incorporation of digital technology into adolescent's daily life, as well as its impact on their cognitive, emotional, and social development, is growing by the day. They can use technology to play, explore, and learn in a variety of ways.

Chapter 15 covers the "A hybrid SEM-ANN approach for intention to adopt metaverse using C-TAM-TPB and IDT in China". The study aims to identify factors affecting university students' intention to

adopt metaverse due to the 4th industrial revolution and the COVID-19 pandemic in China based on the integration of C-TAM-TPB model and IDT theory

Chapter 16 will focus on the satisfaction of shopping in the metaverse world with the title "Customer e-satisfaction Towards Online Grocery Sites in the Metaverse world". The main objective of this study is to establish the dimensions of customer satisfaction which is hypothesized to have a relationship with customer intention to purchase from online grocery sites and this will provide organizations insights into customer satisfaction in e-commerce in the metaverse.

Chapter 17 ends with the legal area title "The Role of Legal Governance Framework in the Metaverse World." The book chapter analyses how the current legal framework of self-governance is weak in regulating the metaverse world. The rule of law, as a discourse that emphasizes the legitimacy of governance and appropriate limits on the exercise of power, provides a useful framework as a first step to reconceptualizing and evaluating these tensions in communities at the intersection of the real and the virtual, the social and the economic, and the public and the private.

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