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Research on Business Model Design and Innovation from the View of Meta-Universe

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Abstract. This paper is based on domestic and foreign scholars for meta-universe concept, characteristics and influencing factors of theoretical research, through comparative analysis summarizes the meta-universe space concept based on technical composite presents "strong interaction, high real-time, strong correlation, deep immersion and to center" characteristics, and through the case study found that "highly independent information sharing, innovation incentive, highly coordination of open and integration" of business innovation concept fully meet the characteristics of meta-universe technology block composite. This paper believes that the "universe" business model innovation integration path can be summed up to: starting from the meta-verse space technology block composite, further highlight the meta-verse space concept, finally realize based on the characteristics of the business model innovation concept of business model optimization, and based on the meta-verse architecture characteristics of business model innovation path targeted construction, so as to realize the parties eventually form a benign dynamic cycle of business goals.

Key words. Meta-universe; business model; digital economy; innovation path

1.Introduction

In 2021, China metaverse track "mobile sandbox platform Me ta APP" successfully completed the C round of financing of up to 100 million US dollars. For a time, the concept of "metaverse" quickly became popular, replacing blockchain as the most popular discussion topic at present [1]. The concept of meta-universe was originally derived from a 1992 American novel called The Avalanche. The novel creates a virtual body by creating a virtual world that communicates wirelessly with reality, and uses the virtual body to trigger behavioral consequences that can affect the real world. In fact, the current domestic and abroad for the concept of the universe is still not unified, namely as a new digital concept, relying on the Internet of things technology, artificial intelligence technology, network computing technology, block chain technology, simulation interaction technology blocks let people for the concept of "universe" under the virtual world construction and the real world will change full of expectations [2]. From 2020 to 2021, many foreign giant Internet companies have devoted their attention to the metaverse and the expected layout, people have doubts about how to achieve the

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breakthrough development of traditional industries in the metaverse space and the business model innovation of emerging industries.

Therefore, based on the current upsurge of "business model research under the meta-space", the author deeply explores the innovation of the meta-space business model from another perspective from the current theoretical research and the business breakthrough in the practical application, and lays the innovation path combined with the real case analysis. The innovation path of the "meta-universe" business model can be defined from the characteristics of the metaverse, the factors influencing the construction of the metaverse business model and the innovative concept of the business model under the metaverse, so as to clarify the existing research direction and the future research direction.

2. Literature review and theoretical construction

The "metauniverse" essentially creates a virtual world completely parallel to the real world. As the ultimate direction of science and technology and economic development, the "meta-universe" has completely changed the original development trajectory of the Internet. From the original P C terminal Internet era, The emergence of search engines has partly created a brand new world for people with conservative minds, But static web pages largely limit users' autonomous interactions, That is, it remains a technical tool from a current perspective, Not as "the creation of a new world"; The emergence of APP, O2O, platform, e-commerce and other concepts has established the mobile Internet era, People use mobile phones as the basic nodes for information interaction, The advent of smartphones has dramatically changed the traditional way of communication, Enterprises have largely focused on the real-time improvement of data and information exchange, However, the realistic effect of this performance is limited by the slow construction of network infrastructure and the limited development of the hardware end; As the Internet expands into new room for growth, The advent of the true Internet era has completely changed the way people live, The offline to online transformation is basically completed, People can realize various forms of information exchange online and start the expansion of commercial business such as network marketing, However, there is still room for improvement in interactive and other digital performance.

Coming to the era before the "metaverse", that is, the "True Internet 2 era", the enterprise's attention is mainly focused on solving the problem of multi-person real-time fully immersive virtual space experience, combined with advanced VR, XR, audio and video technology to establish efficient and groundless connection and highly simulated online application software. When really entering the era of "metaverse", the business model at this time can completely rely on the independent but interconnected connection between the real world and the virtual world created, that is, the integration of virtual and real under the high fit, and realize the characteristics of Internet technology such as "strong interaction, high real-time, strong correlation, deep immersion and going to the center .In this context, in 2021, with the launch of meta-verse, a real-time simulation and collaboration platform for giant technology enterprises, many scholars quickly carried out theoretical research on the new changes or disruption of business models under the concept of meta-cosmic space. The latest research interprets the emerging construction from different perspectives, including its concept, its characteristics and its influencing factors.

2.1 The Meta-Universe concept

The ideal state of the concept of "meta-universe" is to truly realize the deep integration of virtual and reality, in which the real-time interaction between users and the deep integration between commercial transactions can be fully realized [3]. The essence of the universe concept is an organic combination of realistic technology blocks, through a series of technical blocks of multiple composites realize high simulation virtual digital world construction, to build "highly autonomous information sharing, win-win cooperation, innovation incentives, industrial chain upgrading, highly coordinated open and integration, corporate responsibility" and other business value concept. Therefore, including blockchain, big data, artificial intelligence, cloud computing, X R and other technologies that are still in the development stage are an important foundation for the construction of the "meta-verse" space to achieve reality [4]. Based on the continuous development and composite of existing technologies, the "unique attributes" of the meta-universe and the business value concept closely related to the characteristics of the meta-universe also gradually reflect its value in the business model innovation. This paper briefly discusses the relevant technical blocks involved in meta space construction by November 2021.

2.1.1 Network operation and quantum operation

The meta-verse is essentially a virtual digital space that can completely simulate real-world production and life while achieving more efficient content production. The main feature reflected in this technology is the real-time performance, that is, the real-time information exchange and data transmission can be carried out between the various stakeholders in the commercial transactions. Therefore, the construction of meta space puts forward more stringent requirements for the real-time carrying capacity of computers. In this virtual digital space, the information interaction between the virtual agents is based on this computational power. At present, the use of the network operation technology and the quantum operation theory can support the construction of the meta-universe, and the application of the quantum computer can achieve a higher precision compared with the traditional computer. According to the latest report, the researchers believe that improving the accuracy of qubit manipulations can surpass the quantum computational harsh fault tolerance threshold (> 99.999%), which is a great boost to the spatial construction of the meta-verse, namely a wide range of scenario applications.

2.1.2 Simulation and interaction technology

Highly simulation directly affects the user experience in the process of product use, which is one of the important features of the meta-verse. Based on AR, XR, holographic projection, brain-computer interaction, etc., a higher degree of simulation interaction can be realized, improve the experience of enterprise users in the metauniverse world to the optimal state, maximize the product effect display of commodity operators, that is, to maximize the commercial value of products in the meta-universe. The purpose of the meta-universe is to establish a completely parallel to the real world digital virtual space, so compared with the traditional Internet technology, it still exists with the real world high viscosity, meta-cosmic space construction using simulation interaction technology can achieve independent of the real space advanced transformation, to further improve the economic efficiency of commodity trading.

2.1.3 artificial intelligence AI

AI computing is one of the key infrastructure of the meta-verse, which largely affects whether meta-space users can achieve deep immersion. Whether it is the game industry or the social industry where the concept of the metaverse space is in full swing, the success of its business model and the expansion of the future strategic space depend on the experience and immersion given to real users by virtual agents under the metaverse space. At present, the high-level development of artificial intelligence is mainly shown in the research and development of artificial intelligence chips. From the current research and development situation, it is still in the stage of rapid development. The rapid development of artificial intelligence can support the multiple scene construction of meta-logical space and the simulation realization of realistic functions. Artificial intelligence chips can transform the massive terminals of the physical world into massive digital information in meta-logical space, so as to achieve the goal of efficient content preparation and completion without affecting user experience.

2.1.4 Blockchain

Decentralization is one of the important features of block chain technology, based on this, using block chain multidimensional technology configuration, including distributed books, block chain network to realize the construction of meta universe space transaction architecture, can realize the height of meta universe space decentralization, realize the freedom, autonomy and sharing business value concept [5]. Compared with the traditional Internet technology, blockchain can achieve the goal of highly decentralized virtual space based on its own technical advantages, and at the same time, realize the deeper data interconnection and real-time sharing, realize multi-direction interaction with other technical blocks, and further improve the real-time nature of the meta-cosmic space.

2.1.5 Internet of Things

The Internet of Things "Internet of Things" provides a solid foundation for the metaverse to build a virtual digital world and highly restore the physical real world [6]. Through the Internet of Things, the meta-universe can realize the multi-industry deepening of the digital economy, gradually blur the traditional industry boundary in the public thought, making the virtual meta-universe construction and the industry in the world realize the more coordinated development of the maximum commercial value. Based on the technical basic advantages of the Internet of Things, the metaverse space can realize complete interconnection without obstacles, and further promote the establishment of the meta-verse infrastructure.

2.2 Characteristics and influencing factors of the meta-Universe

The metaverse is essentially building another so-called "real world", a digital world that can efficiently realize real economic transactions while also optimizing its business model [7]. The digital virtual space constructed by the metaverse itself presents the following characteristics:

2.2.1 Strong interaction

The existing business model, especially represented by the platform economy, has a high demand for interaction between platform operators and between platform merchants and consumers. Of course, the current network computing and other technologies can basically meet the existing needs. However, the enhanced interactivity will inevitably bring about higher commercial value creation. Therefore, the meta-cosmic space, based on the technical block composite and its high protection of the UGC, can achieve a higher degree of real-time interaction between the virtual agents. At the same time, the comprehensive creative protection of virtual users will also further promote the exchange of information and data in this space. From another point of view, it is more conducive to stimulate the realization of commercial value concepts such as innovation concept and promote commercial value creation.

2.2.2 High real-time

Rapid and accurate real-time transmission of explosive data is an important feature of the meta-verse. In addition to having the right to choose whether to realize the personal data sharing, it is the necessary condition for the transaction realization to transmit the data and information sent regularly accurately, whether from the perspective of the enterprise or the user. The technical infrastructure formed by the unique technical blocks of meta-logical space is an important advantage to solve the real-time effect in the existing business model in this space.

2.2.3 Strong association

Through the realization of efficient content production, on the one hand, it realizes cross-dimensional correlation based on the real virtual interaction characteristics in the nature of the space; on the other hand, both the industry cooperation between the stakeholders in the space or the upstream and downstream industrial chain enterprises will greatly improve the correlation. The space concept construction of the metaverse is intended to realize a more efficient product production and business operation based on the existing business model under the premise of a complete virtual reality world. Based on the meta-verse composite technology block, the production data block covering the high specification products completely and similar to the whole industry can be established, so as to realize the vision building of the meta-verse community.

2.2.4 Deep immersion

Under the concept of V R, A R technology implementation equipment highly compatible of all aspects of the real world activity basic formed the true simulation, including social, production, fitness, consumption and other production and life daily activities, so as to realize the virtual body in meta universe space economic behavior highly simulation and the depth of the immersion of real users. On the premise of improving users 'physiological perception, simulated space simulation greatly meets the users' needs of users for space use in the virtual digital world, and greatly improves the user's experience and the satisfaction of meta-cosmic space transactions and experience based on high-quality products.

2.2.5 decentralization

At present, the big problem of the business model spawned by Internet technology is the increasingly serious centralization problem. The virtual digital space established by the metaverse uses the blockchain technology to realize the high decentralization of information storage and information authentication [8]. By adopting the data and information collection transmission between users and based on the data verification, the autonomy of individual information processing is improved on the premise of ensuring the high-speed and real-time data transmission. Specifically, step-by-step storage, smart contract and typical consensus mechanism of blockchain all provide a certain basis for the high decentralization of the meta space, fully reflecting the commercial value concept and proposition of economic transaction freedom and value sharing in the meta space.

The above characteristic overview basically summarizes the current description of the "characteristics of the meta-universe", but the author found that the description of the meta-universe characteristics is different from different perspectives[9].The construction of meta-verse is greatly influenced by its relevant technical block category, the development trend of technical block and the way of technical block composite. It is not difficult to see that the characteristics of the above five ta-universe will also enter different stages of development with the compound change of other single technology or several technology blocks. Therefore, it is better to attribute the above summarized features to the meta-verse itself, that is, as the selective composite of different technological blocks based on their own developments. The development and characteristics of the meta-verse are presented in technology under different composite choices of blocks, and there is some influence between these composite choices.

2.3 "Meta-universe" business model innovation path

The emergence of the concept of the universe space is worth our further depth to explore how to make traditional industries or emerging industries in the universe, space to produce more efficient content output and commercial value creation, at the same time to avoid the real world trade ills, break through the real world industry development obstacles, realize the optimization of business model and innovation. Metaverse is produced by a variety of technical block composite virtual space. The construction of this space is not a simple technical stack, but an organic technical block composite [10]. Therefore, Compared with the traditional offline retail store business model and e-retail O2O model, In metaverse, the existing business model is optimized based on the maturity of current technology infrastructure, It is mainly manifested in the following aspects: First, in the meta-cosmic space, By achieving a deep interaction between the virtual world and the real world, To maximize the requirements of the real-time effect of data transmission and information communication in commercial transactions, At the same time, facing the "trust" problem in the process of real-time and rapid interaction between users in economic transactions, That is, the current problems facing the business model can be largely solved, Realize the optimization of the existing business model; Second, based on the meta-verse-specific properties, Realize greater business space sharing and value creation freedom on the basis of existing business models, That is to realize the absolute and complete grasp and realization of the openness and decentralization of the meta-cosmic space; Third, the inevitable problems of traditional business models in the

current digital economy, On the "data security" issue, The decentralization of free trade through the meta-verse, It is even further necessary to clarify the rule boundaries.

The face of the problems of the existing business model, regardless of the degree of solution, starts from the original intention of its original concept. Meta-business model innovation and path laying is widely expected is not because under the metaverse business model is impeccable, but because it closely corresponds to the current stage of business development demand, such as " high UGC under the protection of high interaction between stakeholders and strong participation, at the same time largely motivate business innovation idea, real-time characteristics of user information sharing highly independent, users highly open free competition between stakeholders, and so on[11].To sum up, the author's innovative path to the "meta-universe" business model is shown in Figure 1.

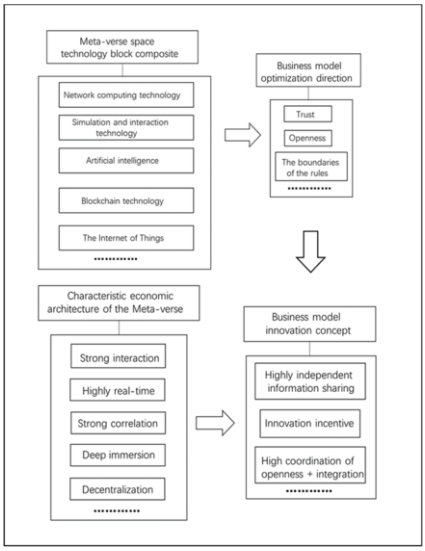

Figure 1. Based on the innovation path of the meta-universe business model

3. Case description and analysis

The author takes the industrial ecological layout from consumer Internet to industrial Internet built by Tencent as an example. As the leading Internet technology company in China, Tencent has prospectively used the concept of meta-universe to activate its own business map construction and create huge economic benefits, and gradually realized its own unique business model construction. Therefore, the author chose Tencent to explore the different business models under the meta-universe based on the industrial layout under the concept, and further analyze the business model design under the "meta-universe" and lay the corresponding innovation path.

3.1 Case description

At present, the realistic construction of meta-universe ideal space cannot be realized based on the existing hardware facilities and technical foundation at home and abroad.

However, Tencent has begun to pay attention to the universe as early as 2020, and began to set up relevant technical teams to achieve the reality of the universe scene in social, audio and video, games and other levels. At present, Tencent has realized the construction of the Mini Metaverse 2D version of "wechat", through the realization of personal needs to social needs, and the series of transaction needs, to meet most of the needs of users' virtual space. In addition, in terms of game layout, audio and video development and other aspects, Tencent has begun to use the meta-universe to reach the underlying agreements with users that are low threshold for them. The formation of this architecture is more conducive to Tencent's own digital world construction. However, the current worldwide "meta-universe" architecture is still in the basic stage, and cannot realize all the characteristics of the meta-universe space, and there are still the existing problems of the existing business models such as high centralization [12]. Therefore, the author takes the layout of Tencent meta-space architecture as an example, and lays out the innovative path of the existing business model.

In Tencent's industrial layout, the concept of "meta-universe", the characteristics of the lower commercial layout are mainly reflected in the following three aspects. First, Make full use of network computing technology to realize the collection of massive data, Data classification and processing according to different requirements, And based on the existing technology to maximize the "real-time" characteristic effect presentation, Promote platform trading, Maximize the business value of data under the premise of fully reflecting the business concept of "real-time and interactive"; next, Largely autonomous sharing of information, Including fully autonomous information interaction without trading roles, the industry at the exchange, While achieving a low degree of U CG protection, It reflects the business value proposition of business model encouraging independent innovation under the concept of meta-cosmic space; The business value concept of data autonomy, openness and other regular boundaries is still in the process of exploration[13], However, it is still an important optimization direction of the business model based on the existing business model path under the meta-verse. Compared with the traditional isolated business model of communication technology, game media or short video production industry, these three characteristics can maximize the characteristic advantages of meta-cosmic space. Most of the current business model relies on big data and cloud computing, which are still limited in technology, and cannot realize real data interaction and virtual and real integration, so as to break through the limitations of the existing business model [14]. And the emergence of the concept of "meta-universe" just provides us with more perspective on business model construction. Based on the above discussion, the author summarizes and extracts the innovation path of industry highly integrated business innovation, virtual reality interactive innovation and boundary derivative innovation under the "meta-universe"[15]. The author makes a comparative study and summary of the three innovation paths, so as to lay out the path of meta-cosmic business model innovation and integration that is more applicable to the current reality.

3.2 Case analysis

3.2.1 Integration-type innovation

The first business model innovation theory based on the underlying protocol architecture of the meta-universe, taking the layout of Tencent meta-universe concept industry as an

example, the author analyzes and summarizes it as "integrated innovation" based on the views of many academic researchers. In general, the incompatibility of the existing Internet technology in the future and boundless concept is solved. At present, based on the development of the Internet, big data, meta-computing and other technologies, Tencent's social software "wechat" is no longer limited to the realization of communication function, but integrates entertainment, social networking and various service functions to achieve a comprehensive and industrial chain building [16]. Obviously it is difficult to fully achieve this goal, but the meta-Universe can solve the following problems [17]. On the issue of consensus building, the current digital cooperation in various industries is based on a certain trust. In the digital economy, the space of the metauniverse needs to transfer data and a series of information interaction, that is, complete information disclosure. Therefore, in terms of trust, integrated innovation solves the trust problem in the process of industry integration from the source. Through the composite application of various technical blocks in the meta-space space, on the one hand, users can construct the virtual body completely and submit information to the platform in the space; on the other hand, the meta-space can use the block chain to protect the vital data interests of all parties, and further improve the efficiency of information flow [18].

One of the important foundations for the realization of meta-logical features is the maturity of V R and X R virtual technologies. At present, with the increasing improvement of the industrial chain of virtual simulation technology, it can promote the space construction of the meta-universe, and at the same time, it can produce a benign effect of driving the high integration of the industry economy on a large scale [19]. Through V R box, P SVR and other terminals and a series of tools and software to achieve a kinds of digital services and platform supply. In the meta-universe,under the concept of tencent industry ecological construction, for example, through the personal demand, social demand and transaction demand, using its own technical advantages, established including access to information, entertainment media, news agency, information sharing, enterprise services, consumer life multi-dimensional industry integration of business model[20]. Under the new meta-cosmic idealized space, the better presentation of such business model innovation mode also needs to rely on the maturity of each block in the immature meta-logical technology composite.

In terms of openness and data security, compared with the current business model of e-commerce that has achieved great development, integrated innovation pays more attention to the breakthrough of the restrictive boundary of traditional openness and the advantage boundary of absolute data [21]. Under meta-space-space, it is required to surpass the original underlying infrastructure, achieve absolute openness through complete information input and output, break the boundary of data advantage and represented by platform operators in the real world digital economy, so as to maximize data mining and improve the efficiency of content production in meta-space economy. As is shown in Figure 2.

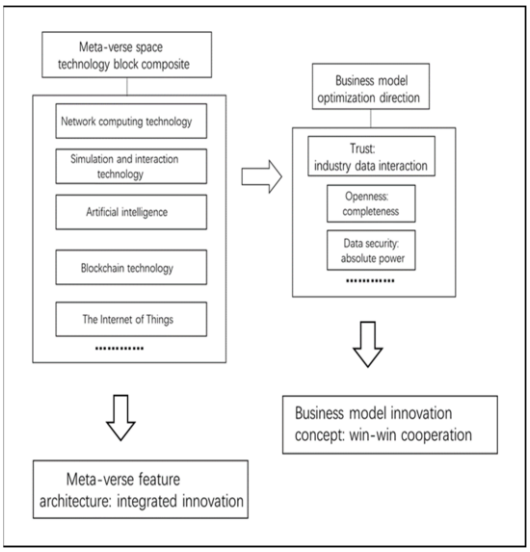

Figure 2. the innovation path based on the integrated business model under the metaverse

3.2.2 Interactive innovation

The second business model innovation path constructed based on the industrial layout of the concept of metaverse can be summed up as "interactive" innovation [22]. The idea emphasizes that the construction of virtual space should fully echo the real world. Based on the meta-verse, it is essentially building a virtual world completely parallel to the real world. The meta-space Internet platform can break through the mediation nature of the original "single platform", and achieve higher economic benefits and commercial value with the help of the meta-space data interaction.

In terms of the trust pointed out by the author, the innovation of interactive business model can avoid the business conspiracy problem based on data advantage caused by the example of platform operators in the real world [23]. The function of each technology block in the meta-universe no longer has the absolute monopoly advantage, but maximizes the respective value based on the open choice of users' personal information. Of course, it doesn't completely deny the information control of technology developers in this business model. Both audio and video industry upgrade or game industry breakthrough, the universe can through a greater degree of virtual reality interaction, namely the real world and virtual digital world realize depth connection, highly simulated the real world users of all kinds of behavior, to minimize the marginal cost of economic transactions, maximize transaction frequency, so as to achieve the efficiency of the change.

In terms of openness and data security, the interactive business model pays more attention to users' self-content creation in the virtual world constructed by the meta-universe, and independently chooses the required consumption content and production content, so as to break the "form autonomy" of users under the technological monopoly in the existing digital economy. Compared with integrated innovation, interactive innovation pays more attention to the compound cooperation of multiple industries under the high matching in the virtual space. Interactive business model innovation is based on the data and information transmission of the real world and virtual space, relying on

network computing technology, quantum computing and Internet of Things technology, to further promote the development and maturity of the business model. From the perspective of the characteristic properties of meta-composite based on technical blocks, the decentralization degree of interactive innovation is more in line with the requirements of meta-logical space economy model. In reality, most of the digital economy is still controlled by some platforms and operators, which cannot realize the independent sharing and input and output of users' information [24]. Therefore, from the perspective of the interactive innovative business model under the meta-universe, although there is no guarantee of whether the problem of centralization can be avoided due to profit-seeking or other reasons, the highly decentralized spatial data operation can be largely guaranteed based on the continuous development and maturity of artificial intelligence AI and other technologies. As is shown in Figure 3.

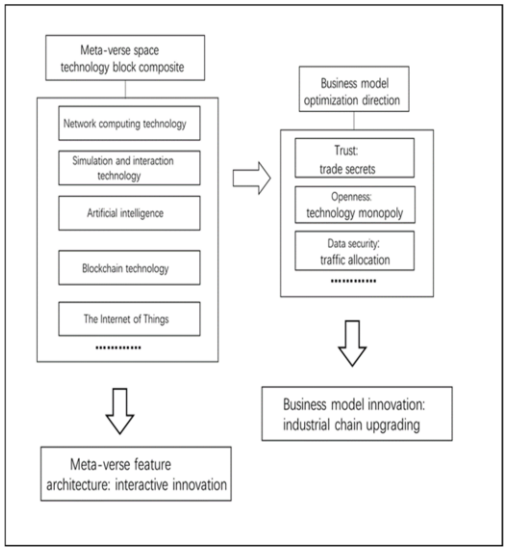

Figure 3 Interactive business model innovation path based on the meta-universe

3.2.3 Boundary-type innovation

The third business model innovation path under the meta-universe concept can be summed up as "boundary type" innovation [25]. With the help of VR, XR and other virtual simulation technologies, to a large extent, users will blur the boundary between reality and virtual, which is conducive to solving the problem of inter-industry connection in existing business models. Therefore, from the perspective of business model, industry boundaries will be highly blurred in the metaverse space, based on which all stakeholders in the metaverse will no longer achieve independent.

In terms of trust and openness, real individuals through the input of personal information of registration space virtual identity to achieve consumption economic transaction behavior, and receive the information and the data transmission, data summary and data processing value creators based on real industry cooperation trend and the fuzzy boundary signal largely can reach a higher degree of business trust, and with the construction of meta-space rules will further positive drive this kind of trust and open extension[26]. From the point of view of the meta-universe technology block composite features, boundary type business model can be realized on the premise of maximizing

the meta-universe technology block of open information storage and authentication characteristics, between this will greatly increase the amount of meta-universe space data, improve the data transaction frequency, maximize the economic efficiency [27].

From the perspective of data security, the business model under the metaverse concept still cannot solve such problems. The autonomy of boundary-type innovation is too high, and although the ambiguity of various boundaries will bring high economic benefits, but the data security risks and related risks are therefore completely presented. Compared with the integrated business model innovation path and the interactive business model innovation path, the rule consciousness of the boundary business model innovation path is weak, and there are many loopholes in the guarantee of transaction security and the establishment of the rules involving the immediate rights and interests of all parties. In theory, the transaction complexity of meta-cosmic space is not less than that of the real world [28]. Compared with the transaction media, the particularity of the way of transaction requires a clearer awareness of law or business rules in the operation process. Further combining with the highly decentralized characteristics of the metaverse technology block, the author believes that the boundary business model innovation path will largely make the parties of value realization involved into the rule gray area. At this time, even if the information autonomy of individual users is guaranteed, once the rights and interests are damaged, the model will be meaningless. Therefore, the economic advantages of the boundary business model innovation path are undeniable, but in this process, the operators should fully realize the corporate responsibility and legal responsibility reflected by the stakeholders in the meta-cosmic space, further maintain the economic transactions under this model, and achieve a win-win situation. As is shown in Figure 4.

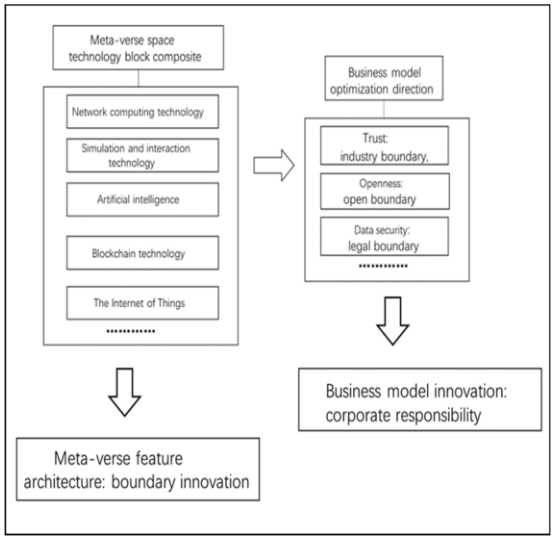

Figure 4 The boundary business model innovation path based on the meta-universe

3.3 "Meta-universe" business model innovation external environment analysis

Metaverse is a virtual digital world construction that can only be realized based on the development of specific technologies, that is, a virtual world that is independent and the real world but highly interconnected with the real world. Therefore, the realistic landing

of the specific idealized concept of meta-cosmic space still requires the accumulation of many conditions. Therefore, the author believes that all this can be attributed to the impact of the external environment on the business model under the meta-universe, that is, the sensitive analysis from five aspects: hardware layout, technology boundary, cultural perspective development, the investment and development trend of frontier fields, and the establishment of rule ecology. One is to consider whether the layout of hardware can meet the needs of meta-verse construction; The second is to consider the current technology development boundary will restrict and influence the development and construction of the meta-verse; Third, the considerations based on social factors, Social-cultural acceptance from a meta-universe perspective, The influence of different understandings of different cultures; Fourth, the current global investment attitude to frontier fields is also an important factor affecting the development process of business model under the meta-universe; Finally, consider the ecological construction of data, privacy, and specific operation rules under the meta-Universe, It has important effects on the specific practical applications of the meta-logical concept. To sum up, the author proposes the following integration path of business model innovation based on the "meta-verse" perspective, which is shown in. As is shown in Figure 5.

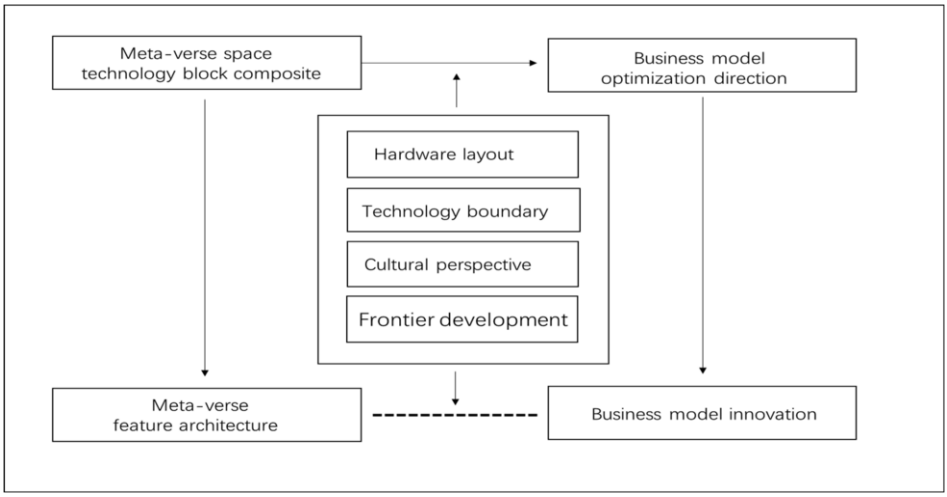

Figure 5 Innovation and integration path based on the meta-universe business model

4. Meta-universe business model path realistic layout suggestions

Based on this, we build a business model canvas according to the above business model innovation path under the above meta-verse, so as to provide suggestions for the application of business model of various enterprises in practice. Starting from the concept of value co-creation from the integration of the 9 business elements involved in the business model canvas, this paper provides suggestions for the realistic layout of the enterprise metaverse business model innovation path from the value proposition, value creation and value realization respectively [29].

4.1 Reset of the value proposition

Based on the development of the current technology level, the "meta-universe" business model innovation path of the above research needs the enterprises to reset their own value propositions in reality.

Take the retail industry as an example, based on the meta-universe technology block, the traditional e-commerce and retail enterprises can no longer meet the market demand under the metaverse. From the current reality, the industry is more suitable for the layout of integrated innovation under the business model path [30]. On the one hand, technology guarantees product quality, reduces operating costs and improves customer viscosity; on the other hand, the parallel world provides a one-stop experience, based on the diversified combination of metaverse technology blocks, the new retail enterprises or e-commerce enterprises, thus constructing a value proposition based on "metaverse" characteristics and derived innovative business model.

4.2 Synchronization of value creation

Under the innovation path of the metaverse business model, the enterprises are required to realize their synchronization with the real world value creation while clarifying their own business model in the virtual world.

Value creation synchronization can bring great advantages and technological advantages to enterprises, and then it can solve a series of problems existing in the economic model in the real world, and then greatly enhance the value creation ability. Taking the sharing economy as an example, under the innovation path of business model under the meta-universe, the recombination of blockchain technology blocks and other technology blocks can be fully utilized to realize the real-time synchronization of its own data and solve the risk of data leakage in the real world. At the same time, the virtual space of the metaverse further defines the role of customers, realizes the double connection between the real world and the virtual world, and avoids the stratification of the existing single-dimensional online world and the offline world. Taking the interactive innovation path as an example here, the massive user information can be obtained under the premise of synchronous value creation and improved data security, so as to improve the frequency of transactions and obtain commercial benefits.

4.3 Value realization of diversity

Under the path of the metauniverse business model innovation, enterprises are required to establish the concept of realizing their own diversified values under the metauniverse business model and have the courage to break through and put it into action.

Under the universe enterprise industry chain upstream and downstream relations closer, greatly reduce their independence, although will bring certain risks, but as opportunities and challenges are always coexist, enterprises need in the mode of innovation path realize their industry chain upgrade, through the universe technology media, space media to realize diversified value, no than limited to the value of a plate, namely through different plates in the universe scenario of real-time information transmission, break through the traditional economic mode of industry link barriers. Take the boundary innovation path as an example. The trust advantages and openness advantages obtained by enterprises under this path need enterprises to transform their own advantages, and use this advantage to drive the meta-universe technology plate to

deliver value to enterprises, so as to realize the practical implementation and application of the business model innovation path.

5. Main Research Conclusions and Prospects

Through the analysis of the metaverse and the next business model, Three different innovation paths were extracted and compared and analyzed, Summarize the integration path based on meta-universe business model design and innovation, The external influencing factors are also briefly analyzed, Summarize the following conclusions: First, The virtual digital space construction of the metaverse is based on the composite of different technical blocks, Not just a simple technical pile-up, But an organic, dynamic composite; second, Given the immature research on the metaverse at home and abroad and the technology of a series of meta-universe infrastructure still developing, Therefore, the summary and elaboration of the metaverse business model innovation is not limited to this, In the future, more of the changes of realistic conditions will present more different characteristics. Taking Tencent's industrial layout under the concept of metauniverse as an example, the author summarizes three characteristic business model innovation paths with the concept of metauniverse embodied in its business model, and finds that these three innovation paths are not completely differentiated in essence, which are common with each other, and of course, they have their own advantages and disadvantages. Also based on the concept of space, they may largely appear in the future to create more innovative business model paths; third, the path of business model is still difficult to realize the theoretical ideal state, and the business model under space is not universal, it still has complex boundary problems to solve, so how to truly realize the space construction and business model practice still needs further analysis and research to realize the optimization of business model.

The practical application of the concept of meta-universe has largely broken the boundary of the existing business model innovation and provided it with a more diversified perspective. In fact, it can become the business model innovation path of all walks of life. However, after in-depth research, the author believes that the greater value of the meta-universe is reflected in that it expands the perspective of the research department and the public, and further breaks the current solidified thinking mode that has reached the end of the virtual world. As the current and future more scholars on the concept of the universe research, will find that the universe built the virtual world is completely digital real world, it solved a series of problems is not limited in the author studied the economic perspective of business model path innovation, the future through the continuous development will constantly develop their greater development space, realize multidimensional value creation.

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