

# Research on the Development Path for Jointly Building a World-Class Strategic Industrial Cluster in Shenzhen-Hong Kong Under the Integrated Perspective of the “New Industrialization” Strategy

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**Abstract:** The strategic integration of “new industrialization” between Shenzhen and Hong Kong has shown a positive trend. Based on their respective comparative advantages, the two regions have established an orderly industrial division system. The deep integration of Shenzhen’s manufacturing industry with Hong Kong’s service industry has jointly promoted the prosperous development of the regional economy. In the Lok Ma Chau Loop area, the Shenzhen-Hong Kong Science and Technology Innovation Cooperation Zone is thriving, with a series of strategic emerging industrial projects successively landing, serving as a model for scientific and technological innovation cooperation between the two regions. Meanwhile, as an important platform for Shenzhen-Hong Kong cooperation, the Qianhai Shenzhen-Hong Kong Modern Service Industry Cooperation Zone has attracted a large number of Hong Kong-funded enterprises, becoming the forefront of economic interaction between Shenzhen and Hong Kong. However, while the strategic integration of “new industrialization” between Shenzhen and Hong Kong has achieved significant results, it also faces numerous challenges. Firstly, there is still considerable room for improvement in the alignment of systems and standards. Shenzhen and Hong Kong have significant differences in their economic, legal, and administrative systems, lacking a unified coordination mechanism and planning layout, which has led to a slow process of optimizing resource allocation. Secondly, Shenzhen faces “bottleneck” key technology challenges in its industrial development, with the lack of core technological breakthroughs becoming a bottleneck restricting industrial upgrading. Hong Kong, on the other hand, faces issues of industrial structural hollowing-out and simplification, with a fragile economic system due to the lack of manufacturing support. This paper aims to delve deeply into the current situation and challenges of the strategic integration of “new industrialization” between Shenzhen and Hong Kong, and by analyzing the advantages and disadvantages of cooperation between the two regions, proposes a development path for jointly building a world-class strategic industrial cluster.

**Keywords:** New industrialization; Shenzhen-Hong Kong Science and Technology Innovation Cooperation Zone; Qianhai Modern Service Industry Cooperation Zone; Industrial upgrading

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## 1. Introduction

With the accelerated development of global economic integration today, the coordinated development of the regional economy has become an important engine to promote economic growth. As the forefront of China's reform and opening up, Shenzhen and Hong Kong, relying on the unique advantages of "One Country, Two Systems," have undergone a multi-stage evolution from the initial "Three Imports and One Export" trade cooperation model to the medium-term "Front Shop and Back Factory" cross-regional production system, and then to the current deep integration of "Two Cities and Three Regions." In this process, Shenzhen-Hong Kong cooperation has not only witnessed the rapid economic growth of the two places but also highlighted the scientific nature and strong vitality of the "One Country, Two Systems" policy<sup>[1]</sup>. With the restructuring of the global industrial chain and the rise of the new industrialization wave, how Shenzhen and Hong Kong can jointly build a world-class strategic industrial cluster under the perspective of the strategic integration of "new industrialization" has become an important issue that needs in-depth discussion.

Shenzhen, as the innovation city of China, has always adhered to the strategic positioning of "an industrial city with strong manufacturing," and is committed to promoting the high-end, intelligent, and green development of the manufacturing industry. In recent years, Shenzhen has made remarkable achievements in the field of advanced manufacturing. Strategic emerging industries such as electronic information, biomedicine, new energy, and new materials are booming, and it has become a high-tech industrial base attracting worldwide attention. Hong Kong, on the other hand, with its status as an international financial, trade, and shipping center as well as its profound educational and scientific research resources, is actively exploring a new path of industrialization with scientific and technological innovation at its core, striving to rebuild its scientific and technological innovation capabilities and inject new vitality into its economy.

Shenzhen and Hong Kong have complementary advantages and great potential for cooperation. Shenzhen's solid manufacturing base and strong capacity for scientific and technological innovation have provided a broad stage for the industrialization of Hong Kong's scientific research achievements. Hong Kong's advanced financial services, high-end talents, and international vision have provided strong support for Shenzhen's industrial upgrading and transformation. Therefore, promoting the strategic integration of "new industrialization" between Shenzhen and Hong Kong is not only an internal demand for the economic development of the two places but also a key measure to build a world-class strategic industrial cluster and enhance the global competitiveness of the region and even the country.

## 2. Current situation of strategic integration of "new industrialization"

### 2.1. Geographical advantages

Shenzhen and Hong Kong have unique geographical advantages, which are not only reflected in their close geographical proximity but also the efficient and convenient transport network between them. Shenzhen and Hong Kong, as two major economic hubs in southern China, are geographically close, which provides a solid foundation for their deep integration and strategic cooperation. With geographical proximity and convenient transportation, Shenzhen and Hong Kong have almost realized the "zero distance" in space through convenient port clearance and rail transit. These advantages provide unique conditions for the strategic integration of "new industrialization" between Shenzhen and Hong Kong. Such close ties between Shenzhen and Hong Kong have enabled the efficient flow of resources between the two places and promoted the deep integration of economic factors. For example, the 2021 Hong Kong Policy Address proposes to build a "Northern metropolitan area"

covering about 300 km<sup>2</sup> in the north of Hong Kong, forming a strategic layout of “two cities and three circles” with Shenzhen, and linking Shenzhen to form a Shenzhen-Hong Kong Science and Technology Innovation Cooperation Zone, further strengthening the synergy between Shenzhen and Hong Kong.

## **2.2. Strong industrial complementarity**

In the process of promoting the strategic integration of “new industrialization,” Shenzhen and Hong Kong have achieved mutual benefits and win-win results through the deep integration of industrial chains. This integration is not only reflected in the close cooperation between upstream and downstream enterprises but also the seamless connection between all links of the industrial chain. Through the deep integration of industrial chains, Shenzhen and Hong Kong can form closer industrial ties and more efficient industrial synergy mechanisms. With the further development of the Guangdong-Hong Kong-Macao Greater Bay Area and the deepening of the practice of “One Country, Two Systems,” the industrial complementarities of Shenzhen and Hong Kong will be further highlighted. The governments of the two places will continue to strengthen policy coordination and institutional innovation, to provide stronger policy support and institutional guarantee for the strategic integration of “new industrialization” between Shenzhen and Hong Kong.

## **2.3. Strong policy support**

In recent years, the governments of Shenzhen and Hong Kong have introduced a series of policy measures to support the strategic integration of the new type of industrialization. The Shenzhen Municipal government insists on putting the focus of economic development on the real economy and accelerating the construction of a world-leading and important advanced manufacturing center. To this end, Shenzhen has issued a series of policies to support the high-quality development of the manufacturing industry, such as several measures to further promote steady growth and improve the quality of Shenzhen’s industrial economy, among others, providing manufacturing enterprises with various supports such as tax incentives and financial support. At the same time, the Hong Kong Special Administrative Region (HKSAR) government has actively promoted the strategy of “re-industrialization” and introduced a series of policies and measures to support scientific and technological innovation and industrial development, such as the Blueprint for the Development of Hong Kong Innovation and Technology, which provides a sound policy environment for Shenzhen-Hong Kong cooperation.

## **2.4. Abundant innovation resources**

As important nodes on China’s economic landscape, Shenzhen and Hong Kong are rich in innovation resources, which are the core driving force to promote the strategic integration of “new industrialization” between Shenzhen and Hong Kong. Take regional cooperation in science and technology innovation as a breakthrough point, accelerate the establishment of a regional collaborative innovation system, and pool our efforts to build a global highland in science and technology innovation <sup>[2]</sup>. From scientific research institutions, high-end talents, technology research and development to innovation ecosystems, Shenzhen and Hong Kong have demonstrated strong innovation capabilities in all aspects, providing a solid foundation for in-depth cooperation between the two sides.

# **3. Major factors constraining strategic integration**

## **3.1. Inadequate alignment of systems and standards**

Trade in services between Shenzhen and Hong Kong continues to expand, but there are obvious differences in

economic, legal, and administrative systems, as well as a series of hidden institutional barriers, which to some extent hinder the flow and allocation of modern service elements such as research and development, information transmission, technology development and human resources, resulting in poor connectivity between the two places in the modern high-end service sector<sup>[3]</sup>. The existence of this problem not only affects the efficiency and depth of bilateral cooperation but also poses a potential obstacle to building a world-class strategic industrial cluster in the future.

Firstly, there are significant differences between Shenzhen and Hong Kong in their economic systems. Shenzhen's economic system is based on the socialist market economy and emphasizes the decisive role of the market in resource allocation. Hong Kong, on the other hand, has a free market economy with less government intervention and a dominant market mechanism in resource allocation. Such differences in economic systems make it often difficult for the two sides to find common economic interests and balance points in the process of cooperation, which affects the depth and breadth of cooperation.

Secondly, the difference in legal systems is also an important manifestation of the lack of docking of Shenzhen and Hong Kong systems and standards. Shenzhen's legal system follows the socialist legal system with Chinese characteristics. Hong Kong, on the other hand, has a common law system with significant differences from the mainland. This difference in the legal system may lead to conflicts and uncertainties in the application of law in the process of cooperation between the two sides.

Thirdly, differences in administrative systems also bring challenges to the docking of Shenzhen and Hong Kong systems and standards. Shenzhen's administrative system follows the mainland's administrative system. Conversely, Hong Kong enjoys a high degree of autonomy and its administrative system is relatively independent. Such differences in administrative systems may lead to inconsistency in policy implementation and communication barriers during the cooperation between the two sides.

## **3.2. Imperfect technological innovation and cooperation mechanisms**

In the process of promoting the strategic integration of "new industrialization" between Shenzhen and Hong Kong, the imperfect technological innovation and cooperation mechanism is one of the key factors restricting the deep integration and common development of the two sides. As the core driving force to promote industrial upgrading and transformation, the lack of technological innovation will directly affect the effectiveness of Shenzhen and Hong Kong in building world-class strategic industrial clusters. Simultaneously, the imperfect cooperation mechanism will also hinder the efficient integration and utilization of resources on both sides and limit the depth and breadth of cooperation.

### **3.2.1. Lack of technological innovation**

#### **3.2.1.1. Limited breakthrough ability of core technology**

Although Shenzhen and Hong Kong have made certain achievements in technological innovation, there are still obvious deficiencies in core technological breakthroughs. As a highland of scientific and technological innovation and an advanced manufacturing center in China, Shenzhen has made remarkable progress in high-tech industries and strategic emerging industries, but in some key areas such as chip manufacturing, high-end equipment, and new materials, the core technologies are still subject to others. Although Hong Kong is globally competitive in service sectors such as finance, trade, and logistics, it is relatively weak in technological innovation in manufacturing and lacks independent innovation capabilities. This lack of breakthrough capability

in core technologies has made it difficult for Shenzhen and Hong Kong to form an internationally competitive industrial cluster in the process of promoting the strategic integration of “new industrialization.”

### **3.2.1.2. Insufficient and uneven distribution of R&D investment**

Technological innovation needs a large amount of research and development (R&D) investment as support, but there is insufficient and uneven distribution of R&D investment in Shenzhen and Hong Kong. Although Shenzhen has increased its investment in scientific and technological innovation in recent years, there is still a big gap compared with developed countries. There is also an imbalance in the distribution of R&D investment between different fields and industries, and the progress of technological innovation may be restricted in some fields and industries due to insufficient investment. As for Hong Kong, due to the particularity of its economic structure, its R&D investment is mainly concentrated in the service sector, and its support for technological innovation in the manufacturing sector is relatively limited. This insufficient and unequal distribution of R&D investment has restricted the cooperation and development of technological innovation between Shenzhen and Hong Kong.

### **3.2.1.3. Low efficiency in the transformation of scientific research results**

The transformation of scientific research results is an important link to technological innovation, but there are inefficient problems in the transformation of scientific research results in Shenzhen and Hong Kong. On the one hand, some scientific research achievements may be difficult to transform into actual productive forces due to a lack of market orientation and industrialization experience. On the other hand, problems such as intellectual property protection and benefit distribution involved in the transformation of scientific research results may also lead to low efficiency. Additionally, problems such as limited financing channels and insufficient policy support for the transformation of scientific research results further aggravate the low efficiency of the transformation. This problem of low efficiency in the transformation of scientific research results not only affects the effectiveness of Shenzhen and Hong Kong cooperation in technological innovation but also restricts the process of building a world-class strategic industrial cluster.

## **3.2.2. The imperfect cooperation mechanism**

### **3.2.2.1. Lack of unified coordination mechanism**

In the process of promoting the strategic integration of “new industrialization,” Shenzhen and Hong Kong lack a unified coordination mechanism to integrate the resources of both sides and clarify the direction and goal of cooperation. Although the two sides have established certain cooperation frameworks and mechanisms, these mechanisms tend to focus on a specific field or project and lack comprehensiveness and systematism. The lack of a unified coordination mechanism makes it difficult for the two sides to form synergy in the process of cooperation, leading to problems such as resource dispersion and duplication of construction. Moreover, communication and collaboration between different departments may also be affected by the lack of a unified coordination mechanism, further restricting the depth and breadth of cooperation.

### **3.2.2.2. Poor information sharing and communication**

Information sharing and communication is an important part of the cooperation mechanism. However, there are problems in information sharing and communication between Shenzhen and Hong Kong. On the one hand,

the two sides may have barriers and obstacles in information acquisition and sharing, leading to information asymmetry and decision-making errors in the process of cooperation. On the other hand, the two sides may also have differences and restrictions in communication methods and channels, which affect efficiency and communication. Poor information sharing and communication not only increase cooperation costs and risks but also restrict the in-depth cooperation and development of technological innovation between the two sides.

### **3.2.2.3. Unreasonable benefit distribution mechanism**

The benefit-sharing mechanism is one of the core contents of the cooperation mechanism. However, there may be unreasonable problems in the distribution of benefits between Shenzhen and Hong Kong. In the course of cooperation, the two sides may have conflicts due to different interest demands, which makes it difficult to sustain and deepen cooperation. Furthermore, the unreasonable interest distribution mechanism may also affect the enthusiasm and initiative of both sides to participate in cooperation, and further restrict the effectiveness and development of cooperation. To promote the in-depth development of the strategic integration of “new industrialization” between Shenzhen and Hong Kong, the two sides need to establish a fair and reasonable benefit distribution mechanism to ensure that all parties can obtain reasonable returns in the cooperation and share the benefits brought by the cooperation results.

## **3.3. The lack of a sound mechanism for talent flow and training**

In the process of promoting the strategic integration of “new industrialization” between Shenzhen and Hong Kong, the flow of talents, as the core element of development, and the soundness of the training mechanism directly affect the depth and breadth of cooperation. However, at present, there are still many imperfections in the flow and training of talents between Shenzhen and Hong Kong. These problems not only restrict the efficiency and quality of bilateral cooperation but also affect the construction of world-class strategic industrial clusters.

### **3.3.1. The performance of imperfect talent flow mechanism**

#### **3.3.1.1. High barriers to cross-border talent flow**

Despite their geographical proximity and close economic ties, Shenzhen and Hong Kong still face many barriers to cross-border talent flow. Firstly, there are differences in visa policies and residence permits between the two places, leading to costly and cumbersome procedures for the cross-border movement of talent. Secondly, information asymmetry in the cross-border job market has also increased the difficulty of talent mobility, making many talents who are willing to work in each other’s cities discouraged by a lack of understanding. Additionally, different legal systems, cultural backgrounds, and working habits may also create a sense of inadaptability to cross-border talents, further hindering the free flow of talents.

#### **3.3.1.2. Lack of high-level talent sharing**

Although both Shenzhen and Hong Kong have rich scientific research resources and high-end talents, the sharing of these high-level talents between the two places is relatively low. From one perspective, due to institutional differences and imperfect cooperation mechanisms, it is difficult for the two sides to effectively integrate and utilize each other’s high-level talent resources. From another perspective, the flow of high-level talent is often restricted by many factors, such as salary, working environment, career development, and so forth, which makes it difficult for the two sides to form a close talent cooperation network.

### **3.3.1.3. Mismatch between supply and demand of skilled talents**

In the process of promoting the strategic integration of “new industrialization,” the demand for skilled personnel is growing day by day. However, there is an obvious mismatch between Shenzhen and Hong Kong in the training and supply of skilled talents. Although with the upgrading and transformation of industrial structure, some traditional skills have been gradually eliminated, while the demand for emerging skills is growing day by day. Nevertheless, the training of skilled talents often lags behind the changes in market demand, resulting in an imbalance between the supply and demand of skilled talents. This mismatch between supply and demand not only affects the production efficiency and competitiveness of enterprises but also restricts the depth and breadth of cooperation between Shenzhen and Hong Kong.

### **3.3.2. Reasons for the imperfect talent training mechanisms**

#### **3.3.2.1. The education system is out of step with the needs of the industry**

The current education systems in Shenzhen and Hong Kong are, to a certain extent, out of step with industrial needs. From one angle, the curriculum, teaching content, and methods of higher education institutions fail to fully reflect the latest trends and needs of industrial development. From another angle, the vocational education and skills training system also fails to closely align with the market demand, resulting in the difficulty of training talents to meet the actual needs of industrial development.

#### **3.3.2.2. Insufficient training in innovation ability and practical ability**

In the process of personnel training, the cultivation of innovation ability and practical ability is crucial. However, the current efforts of Shenzhen and Hong Kong in these aspects still need to be strengthened. On the one hand, the input and output of universities and research institutions in scientific research and innovation are insufficient. On the other hand, practical teaching links are relatively weak, resulting in the lack of students’ ability to solve practical problems. This lack of innovation ability and practical ability training limits the space for the growth and development of talents.

#### **3.3.2.3. Lack of cross-field and interdisciplinary talent training**

With the continuous progress of science and technology and the deepening of industrial integration, the demand for interdisciplinary and interdisciplinary talents is growing. However, at present, there is still a lack of cross-field and interdisciplinary talent training in Shenzhen and Hong Kong. The discipline setting is relatively independent and the boundary is clear, which leads to the singularity and limitation of talent training. Conversely, there are relatively few opportunities for interdisciplinary cooperation and exchange, which makes it difficult for talents to master knowledge and skills in multiple fields. This lack of cross-field and cross-disciplinary talent training limits the improvement of talents’ comprehensive ability and innovation ability.

## **4. Promote the implementation path of the “new industrialization” strategic integration between Shenzhen and Hong Kong**

### **4.1. Strengthening top-level design and strategic planning**

In the process of promoting the strategic integration of “new industrialization” between Shenzhen and Hong Kong, strengthening top-level design and strategic planning is the cornerstone to ensure smooth cooperation and achieve win-win development. Top-level design involves comprehensive consideration of the overall planning,

strategic direction, policy framework, and implementation path of cooperation, which is an important guarantee for ensuring efficient and orderly cooperation between the two places. Special attention should be paid to the difference, particularity, and demonstration of innovation elements and cooperation process, orderly and effective selection of key areas, key projects, and prominent blocking channels, good design of practice paths, innovation of institutions and mechanisms, and creation of maximum value of a new regional cooperation community<sup>[4]</sup>.

#### **4.1.1. Define the vision and objectives of cooperation**

Hong Kong and Shenzhen need to jointly establish a clear vision and objectives for cooperation. This step is the starting point for top-level design and the cornerstone of the cooperation. In setting the vision and goals, we should fully take into account the development needs, resource endowments, and comparative advantages of the two places to ensure that the direction of cooperation is clear and the goals are achievable. Specifically, the vision should reflect the deep cooperation between Shenzhen and Hong Kong in promoting technological innovation, industrial upgrading, talent flow, and capital market connectivity, with a view to building a world-class strategic industrial cluster. The goals should be specific and quantified, such as setting specific indicators such as the number of key projects jointly promoted by the two sides during the cooperation period, the number of scientific and technological innovation achievements, and the growth of industrial cooperation output value.

#### **4.1.2. Develop a cooperation planning system**

Based on a clear vision and objectives for cooperation, Shenzhen and Hong Kong should jointly formulate a detailed planning system. This system should cover a number of aspects.

- (1) Master plan: Define the overall framework, strategic layout, and phased goals of bilateral cooperation. The overall plan should be forward-looking and instructive, and provide macro guidance for the implementation of specific cooperation projects.
- (2) Special plans: Formulate special plans for key areas such as scientific and technological innovation, industrial upgrading, talent flow, and capital market interoperability. Special plans should be specific and highly operable, and specify the specific content, implementation path, and timetable of cooperation.
- (3) Implementation plan: A detailed implementation plan shall be formulated on the basis of the special plan. The implementation plan shall include project selection criteria, financial support policies, resource allocation plans, supervision and evaluation mechanisms, and so forth, to ensure that the cooperation projects can be smoothly promoted and achieve practical results.

### **4.2. Promoting scientific and technological innovation and industrial upgrading**

In the process of promoting the strategic integration of “new industrialization” between Shenzhen and Hong Kong, promoting scientific and technological innovation and industrial upgrading is one of the core approaches. This is not only relevant to the long-term economic development of the two places, but also the key to realizing the goal of a world-class strategic industrial cluster.

#### **4.2.1. Jointly build a high-level innovation platform and carrier**

##### **4.2.1.1. Building a Shenzhen-Hong Kong Science and Technology Innovation Cooperation Zone**

As an important platform, the Shenzhen-Hong Kong Science and Technology Innovation Cooperation Zone should give full play to its geographical and policy advantages to attract top global research institutions and



enterprises. To promote the sharing and complementarity of scientific and technological resources between the two places, and accelerate the transformation and application of scientific and technological achievements through jointly building laboratories, research and development centers, and other innovation carriers. Accordingly, the zone should strengthen cooperation with universities and research institutions at home and abroad, build an open and cooperative innovation network, and promote collaborative innovation across disciplines and fields.

#### **4.2.1.2. Expansion of Qianhai Shenzhen-Hong Kong Modern Service Industry Cooperation Zone**

Qianhai Shenzhen-Hong Kong Modern Service Industry Cooperation Zone should not only continue to consolidate its leading position in the field of modern service industry but also actively expand the function of scientific and technological innovation. By attracting a cluster of high-end service industries such as finance, science and technology, and information, the zone will form a positive interaction with scientific and technological innovation. To encourage Qianhai enterprises to invest in scientific and technological innovation, support them to cooperate with scientific research institutions in Shenzhen and Hong Kong to jointly carry out research and development and application promotion of cutting-edge technologies.

### **4.2.2. Strengthen research on key core technologies**

#### **4.2.2.1. Establishment of joint research and development mechanism**

Shenzhen and Hong Kong should establish a joint research and development mechanism to jointly tackle key core technologies that restrict the industrial development of the two places. We should integrate the scientific and technological resources of the two places by setting up joint research and development funds and jointly building research and development platforms, to form a strong synergy for collaborative innovation. In unison, we will strengthen exchanges and cooperation with international advanced research institutions and enterprises, introduce and absorb foreign advanced technology and management experience, and enhance our innovation capacity.

#### **4.2.2.2. Making breakthroughs in key areas**

Focusing on strategic emerging industries such as artificial intelligence, biomedicine, new materials, and new energy, Shenzhen and Hong Kong should identify a number of key R&D projects and concentrate their efforts on breakthroughs. By overcoming a number of “bottleneck” technical problems, the core competitiveness of the two industries will be enhanced. In parallel, the protection of intellectual property rights will be strengthened to ensure the effective transformation and application of scientific research results.

### **4.2.3. Promote coordinated industrial development**

#### **4.2.3.1. Deeper integration of industrial chains**

Shenzhen and Hong Kong should promote the deep integration of industrial chains following their respective industrial advantages and characteristics. Shenzhen should continue to leverage its advantages in advanced manufacturing and strengthen cooperation with Hong Kong in research and development, design, marketing, and other links. Hong Kong should make use of its advantages in modern service industries such as finance, trade, and logistics to provide strong support and services for Shenzhen’s manufacturing industry. Through upstream and downstream synergies and cross-border integration of the industrial chain, an industrial ecology with complementary advantages and coordinated development should be formed.

#### **4.2.3.2. Fostering emerging industrial clusters**

In combination with the industrial development plans of the two places, we will jointly cultivate several internationally competitive emerging industrial clusters. Through measures such as formulating targeted support policies and providing quality service guarantees, high-quality enterprises and projects at home and abroad will be attracted to settle in the clusters. At the same time, cooperation and exchanges among enterprises in the cluster should be strengthened, knowledge sharing and technological innovation should be promoted, and the overall competitiveness of the cluster should be enhanced.

### **4.3. Optimize factor flow and resource allocation**

In the process of promoting the strategic integration of Shenzhen and Hong Kong's "new industrialization," optimizing factor flow and resource allocation is a crucial task. It not only concerns whether the synergies between the two economies can be maximized but also directly affects the enhancement of industrial competitiveness between Shenzhen and Hong Kong and even the Guangdong-Hong Kong-Macao Greater Bay Area as a whole. The following will be discussed in detail from three aspects: promoting the free flow of talent, strengthening cooperation in the capital market, and optimizing the allocation of land resources.

#### **4.3.1. Promote the free flow of talent**

Talent is the core driving force for scientific and technological innovation and industrial upgrading. In the process of optimizing the flow of factors of production, promoting the free flow of talent is a top priority. Shenzhen and Hong Kong should further relax restrictions on cross-border employment on the existing basis, simplify visa procedures and residence permit procedures, and create more convenient conditions for talents to work across the border.

Firstly, the two governments should jointly formulate and implement an efficient and convenient mechanism for talent introduction and management. This includes setting up a special talent service agency to provide one-stop services for cross-border employment. The establishment of a unified talent information platform to realize the sharing and docking of talent information. Concurrently, the two places should promote the docking of social security, medical security, children's education, and other aspects of the system, to eliminate the worry of talent flow.

Secondly, universities and research institutes of the two places should be encouraged to carry out joint training programs to promote the sharing and cooperation of high-level talents. Cooperation and exchanges in the field of education between the two places should be deepened by sending visiting scholars to each other, jointly holding academic conferences and jointly building laboratories. Simultaneously, support enterprises of the two places to cooperate in talent introduction and training, and jointly build a talent team with international competitiveness. Additionally, a talent incentive and evaluation mechanism should be established to provide a broader development space and more favorable treatment conditions for outstanding talents. We should encourage talents to play a bigger role in scientific research, innovation, and technological transformation through the establishment of innovation and entrepreneurship funds and science and technology award programs.

#### **4.3.2. Strengthen cooperation in capital market**

The capital market is an important platform for the flow of factors of production. In the process of promoting the strategic integration of "new industrialization" between Shenzhen and Hong Kong, strengthening cooperation

in the capital market is of great significance for optimizing resource allocation. The two sides should actively promote capital market connectivity, support Shenzhen companies to list and raise funds in Hong Kong and encourage Hong Kong investors to invest in innovative enterprises in Shenzhen.

Firstly, deepen the connectivity mechanism between the financial markets of the two places. The cost and risks of cross-border financing for enterprises in the two places should be reduced by establishing more convenient channels for capital flow. Moreover, cooperation and exchanges between financial institutions of the two places in cross-border business should be promoted to improve the quality and efficiency of financial services.

Secondly, encourage cooperation and docking between enterprises of the two places in the capital market. We will support innovative enterprises from Shenzhen in listing and financing in Hong Kong, and make use of Hong Kong's status as an international financial center to attract more international capital support. Furthermore, Hong Kong investors should be encouraged to pay attention to and invest in Shenzhen's growth enterprises to share the fruits of economic development between the two places. Cooperation in financial regulation should also be strengthened to prevent cross-border transmission of financial risks. Financial regulators of the two places should establish closer communication and cooperation mechanisms to jointly deal with volatility and risk challenges in the financial market. They should ensure the stable and healthy development of the financial markets of the two places through information sharing, risk early warning, and joint-supervision.

#### **4.3.3. Optimize land resource allocation**

Land resources are one of the basic elements of industrial development. In the process of promoting the strategic integration of "new industrialization" between Shenzhen and Hong Kong, optimizing the allocation of land resources is of great significance for enhancing the industrial competitiveness of the two places. In conjunction with Shenzhen's urban renewal and land reconditioning work, rational planning of industrial land layout will be carried out to improve land use efficiency.

Firstly, promote the extensive application of the "industrial upstairs" model in Shenzhen. Through the construction of high-rise industrial buildings and multi-story factories and other ways to improve the output efficiency per unit area of land. Also, the supporting facilities and service system in the building should be improved to provide enterprises with a more convenient production and business environment. This cannot only alleviate the shortage of land resources in Shenzhen but also improve the image and quality of the city.

Secondly, support Hong Kong enterprises to build production bases or research and development centers in Shenzhen. Make use of Shenzhen's manufacturing base and industrial chain advantages to attract Hong Kong companies to set up branches or research and development centers in the city. The cost and risk of Hong Kong enterprises investing in Shenzhen should be reduced by providing policy support such as tax incentives and land supply. Plus, cooperation and exchanges between enterprises of the two places in technology research and development, market exploration, and other areas should be strengthened to jointly promote the development and upgrading of industries in the two places. Likewise, communication and coordination in land use planning between the two places should be strengthened. The coordination and complementarity of land use between the two places should be ensured through the formulation of unified land use planning standards, policies, and measures. Simultaneously, the supervision and management of the land market should be strengthened to prevent the waste and abuse of land resources.

#### **4.4. Promote the construction of key areas and projects**

In the process of promoting the strategic integration of “new industrialization” between Shenzhen and Hong Kong, promoting the construction of key regions and projects is a key way to achieve coordinated economic development between the two places. These projects not only carry the heavy burden of industrial upgrading but also are important carriers for deepening cooperation between the two places and promoting the flow of factors and resource allocation.

##### **4.4.1. Shenzhen-Hong Kong Science and Technology Innovation Cooperation Zone**

At the forefront of Shenzhen-Hong Kong cooperation, the establishment and development of the Shenzhen-Hong Kong Science and Technology Innovation Cooperation Zone is of great significance to promoting scientific and technological innovation and industrial upgrading in the two places. The zone should give full play to Shenzhen’s scientific and technological innovation advantages and Hong Kong’s internationalization advantages, and build itself into a world-leading scientific and technological innovation highland.

###### **4.4.1.1. The agglomeration of scientific and technological innovation resources**

The Shenzhen-Hong Kong Science and Technology Innovation Cooperation Zone should strive to attract the world’s top scientific research institutions, universities, and enterprises to settle in. By providing preferential tax policies, research funding support, and complete infrastructure supporting facilities, the zone will attract first-class research teams from home and abroad to conduct cutting-edge scientific and technological research. At the same time, enterprises and research institutions are encouraged to establish an innovation system that closely integrates production, university, research, and application to promote the rapid transformation and application of scientific and technological achievements.

###### **4.4.1.2. Bridge for international scientific and technological cooperation**

The cooperation zone should become an important platform for international scientific and technological cooperation. Exchanges and cooperation with global science and technology innovation centers should be strengthened by holding international science and technology forums, exhibitions and other activities. Synchronously, we will actively promote the joint declaration and implementation of transnational scientific research projects to enhance the international influence of regional science and technology innovation. On top of that, scientific and technological cooperation with countries and regions along the Belt and Road should be strengthened to expand the space for international cooperation.

###### **4.4.1.3. Building an innovation and entrepreneurship ecosystem**

Building a sound innovation and entrepreneurship ecosystem is one of the core tasks for the development of cooperation zones. By setting up support institutions such as innovation and entrepreneurship funds, incubators and accelerators, the zone will provide a full range of entrepreneurship services to start-ups and teams. Intellectual property rights protection will be strengthened to create a favorable environment for innovation and entrepreneurship. Moreover, cooperation with financial institutions should also be strengthened to provide diversified financing channels for innovation and entrepreneurship projects.

#### **4.4.2. Qianhai Shenzhen-Hong Kong Modern Service Industry Cooperation Zone**

As an important platform for Shenzhen-Hong Kong modern service industry cooperation, the Qianhai Shenzhen-Hong Kong Modern Service Industry Cooperation Zone's construction and development are of great significance for promoting the internationalization and high-end of the service industry of the two places.

##### **4.4.2.1. Innovation highland for the opening up of the service industry**

Cooperation zones should actively explore new models and paths for opening up the service industry. More internationally renowned companies should be attracted to the zone by easing restrictions on market access and optimizing the business environment. Accordingly, enterprises should be encouraged to carry out cross-border trade in services and develop innovative financial formats to promote the internationalization of the service sector.

##### **4.4.2.2. Cluster development of modern service industries**

The cooperation zone shall focus on the development of modern service industries such as finance, logistics and information technology. By introducing and cultivating a group of internationally competitive leading enterprises and service brands, the agglomeration effect of modern service industries will be formed. Together, we will strengthen the synergy and integration of the upstream and downstream of the industrial chain to enhance the overall competitiveness of the service industry.

##### **4.4.2.3. Facilitation of cross-border services**

In order to enhance the facilitation of cross-border services, the Zone should strengthen communication and coordination with Hong Kong in such aspects as laws, regulations and regulatory mechanisms. The cost and time cost of cross-border services should be reduced by promoting cooperation between the two places in customs clearance facilitation and currency exchange liberalization. In addition, the free flow of talents and cooperation and exchanges between the two places should be strengthened to provide strong talent support for cross-border services.

#### **4.4.3. Shenzhen Advanced Manufacturing Park**

As an important carrier for the development of Shenzhen's manufacturing industry, the construction and development of Shenzhen Advanced Manufacturing Park is of great significance for promoting the intelligent and green manufacturing industry.

##### **4.4.3.1. The leading of intelligent manufacturing**

The park should actively introduce and cultivate a group of leading enterprises and high-tech enterprises in the field of intelligent manufacturing. By promoting the application of advanced technologies such as industrial Internet, big data and artificial intelligence in the manufacturing sector, the park should enhance the intelligent level of manufacturing. In parallel, it will strengthen the combination of production, university, research and application, and promote the research and development of intelligent manufacturing technology and the transformation of results.

##### **4.4.3.2. Promotion of green manufacturing**

In order to achieve the sustainable development goals of the manufacturing industry, the park should vigorously

promote green manufacturing technologies and processes. It should reduce the negative impact of manufacturing on the environment by establishing strict environmental standards and measures to save energy and reduce emissions. At the same time, enterprises should be encouraged to carry out circular economy practices and comprehensive utilization of resources, so as to enhance the green development level of the manufacturing industry.

#### **4.4.3.3. Innovation in industrial chain coordination**

Strengthening the collaboration and innovation of upstream and downstream enterprises in the industrial chain is one of the important directions for the development of the park. Close cooperation and exchanges between upstream and downstream enterprises in the industrial chain should be promoted by building public service platforms and establishing industrial alliances. Concurrently, enterprises should be encouraged to carry out cross-border integration and collaborative innovation activities, and promote the extension of the manufacturing industry to the high-end of the value chain.

## **5. Conclusion**

Shenzhen-Hong Kong cooperation has made remarkable progress in scientific and technological innovation and industrial integration. Platforms such as the Shenzhen-Hong Kong Science and Technology Innovation Cooperation Zone and the Qianhai Shenzhen-Hong Kong Modern Service Industry Cooperation Zone have become important carriers, attracting a large number of projects in strategic emerging industries. However, the strategic integration of Shenzhen-Hong Kong “new industrialization” still faces challenges such as inadequate alignment of systems and standards, insufficient breakthroughs in key technologies in Shenzhen, hollowing out of Hong Kong’s industrial structure, and poor flow of factors for scientific and technological innovation. To this end, it is suggested to promote institutional innovation and mechanism reform through precise links, create a new model of manufacturing cooperation with “research before production” and “research and production in one,” strengthen vocational and technical education to cultivate skilled talents, organize an open scientific and technological innovation community, and promote the coordinated aggregation and utilization of industrial land, so as to comprehensively promote the deep integration of Shenzhen and Hong Kong’s new industrialization, to jointly build a world-class strategic industrial cluster. Through these measures, Shenzhen and Hong Kong are expected to achieve deeper economic linkage and complementary advantages, jointly cope with global economic challenges, and open up new prospects for win-win cooperation.

## **Disclosure statement**

The author declares no conflict of interest.

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