Build New Business Scenarios of Rail Transit Commerce and Improve the High-quality Development of Rail Transit Industry

MTR Corporation

Executive summary

Due to the global economic downturn and geopolitical tensions, China's economy has not yet fully rebounded in the post-pandemic stage. To spur future economic growth, China must leverage the advantages of its enormous domestic market and unlock its potential of domestic demand.

The central government has recognized the importance of boosting domestic demand and consumption for driving economic development, and has implemented multiple policies aimed at stimulating consumption, enhancing purchasing power, and innovating consumption scenarios.

China's urban rail transit system is unparalleled in its scale and development speed, yet it is limited by natural drawbacks such as huge external benefit yet insufficient internal return. While constructing this vast network, an important task for the rail transit industry is to capitalize on the unique advantages offered by its huge traffic in order to create innovative new consumption scenarios which will boost revenues of rail transit companies and promote high-quality development of the sector.

As a leading rail transit operator in the world, the MTR Corporation has been working closely with the Hong Kong SAR government in the past four decades to implement high-quality urban development strategies and explore new ways to utilize the traffic resources of rail transit. As a result, MTR has successfully created thriving business scenarios based on rail transit traffic, contributing significantly to the city's development and realizing its own high-quality growth. MTR’s success

can serve as a valuable reference for cities in the Chinese mainland which are seeking to innovate and develop new consumption scenarios centered around rail transit.

Looking ahead, the MTR Corporation remains committed to engaging in the drive of Chinese-style modernization and is willing, confident and ready to contributing more to the high-quality development of the rail transit industry across mainland China.

China's economic development faces a more severe and uncertain external environment due to the impact of the COVID-19 pandemic, the global economic recession, intensifying trade frictions and constant geopolitical conflicts. Looking ahead to 2023, the foundation for China's economic recovery is not yet solid. To boost consumption and unleash the potential of domestic demand will be an important measure for China to cope with post-pandemic world economic recession, shrinking international trade and investment and other risks and challenges.

In recent years, China's economic development has been shifting from overreliance on investment and export to greater emphasis on domestic demand, particularly consumption. General Secretary Xi Jinping has repeatedly emphasized the need to implement the strategy of expanding domestic demand and fully utilize the advantages of China's ultra-large-scale market and the potential of domestic demand. The 14th Five-Year Plan proposes to "adhere to the strategic basis of expanding domestic demand, accelerates the cultivation of a complete domestic demand system, integrates the strategy of expanding domestic demand with that of reforming the supply-side structure, and generates new, high-quality demand through innovation". It also calls for "accelerating the construction of a new development pattern based on domestic circulation and also featuring mutually reinforcing domestic and international circulations". In 2022, the Communist Party of China's Central Committee issued the Strategic Outline for Expanding Domestic Demand (2022-2035) and the Implementation Plan for the Strategic Outline for Expanding Domestic Demand during the 14th Five-Year Period. The Central Committee's Conference on Economic Work held in December 2022 emphasized the need to expand domestic demand, giving top priority to the recovery and expansion of consumption. It also called for enhancing consumption capacity, improving consumption conditions, innovating consumption scenarios, fully tapping the potential of the domestic market, and strengthening the fundamental role of consumption in stimulating economic growth. These provide important guidance to focus on expanding domestic demand and enhancing the fundamental role of consumption in domestic economic development.

Over the years, consumption has been the most significant driver of China's economic growth, providing robust support for building a new development pattern, promoting high-quality development, and improving the quality of people's life. In 2021, domestic final consumption expenditure contributed 76.2% to GDP growth, serving as the primary engine driving economic growth. Despite a decline of the

contribution rate in 2022 due to the severe impact of the pandemic, the fundamental role of domestic consumption in China's economic growth has not weakened. With a population of over 1.4 billion and a middle-income group exceeding 400 million, China boasts the world's largest market and the most significant consumption potential. This unparalleled advantage of a super-sized market provides the most reliable guarantee for China's economic recovery and high-quality development.

Furthermore, China's consumer market is incredibly resilient and has immense potential. The rapid development of new consumption scenarios such as online shopping, mobile payment, and the integration of online and offline channels, has helped sustain the growth of consumption. Consumption becomes increasingly smart, personalized and environmentally sustainable. Of the four dimensions of consumption, i.e., policy, technology, model and scenario, the creation of new consumption scenarios has been gaining attention and attracting investment from market players and has emerged as an essential propeller for tapping into the potential of domestic demand, stimulating new drivers of growth, and promoting high-quality economic development.

1. Challenges of High-Quality Development of Rail Transit in Mainland China

Driven by both domestic and international economic factors, urban rail transit in mainland China has undergone rapid development in recent years with unprecedented scale and speed in this history of this sector worldwide. According to the statistics of China Association of Metros, as of the end of 2022, 55 cities in mainland China had opened urban rail transit operations, with a total length of 10,291.95 kilometers. Despite the impact of the pandemic, over 1,000 kilometers of new lines were added in 2022. The National Development and Reform Commission approved nearly 330 kilometers of new lines in 2022, with a planned total investment of 260 billion yuan. During the 13th Five-Year Plan period, a new round of construction plans or planning adjustments was approved in more than 30 cities, with an initial estimated total investment of nearly 3 trillion yuan. The 14th Five-Year Plan aims to increase the operating mileage of urban rail transit by 3,000 kilometers, as well as the operating mileage of intercity railway and urban (suburban) railway by 3,000 kilometers. It is anticipated that urban rail transit

system in mainland China will continue to expand rapidly in the coming years. However, the construction quality and operation of urban rail transit networks in mainland China still has much room for improvement.

As known to all, rail transit has a natural defect in that it provides significant external social and economic benefits but lacks sufficient return on investment internally. The initial construction investment is significant, and in the later stage of operation the costs are also high. This, coupled with a relatively undiversified income source, results in a long payback period and low return on investment. Using the average level of cities in mainland China as an example, if a city plans to build a rail transit network of 500 kilometers with an average initial investment amount of 800 million yuan per kilometer (of which mechanical and electrical facilities and related expenses account for about 30%-40%), the total initial investment would amount to about 400 billion yuan. Financial expenses would be approximately 300 billion yuan over the next 20 years, with total operating costs estimated at 275 billion yuan to 400 billion yuan over 30 years, not including factors such as inflation and depreciation. However, the income source of urban rail transit companies mainly focuses on ticket revenue, which is far from enough to cover the total operating costs of the rail transit network. Assuming that a city with an operating mileage of 500 kilometers has a passenger traffic of 12,000 person-times per kilometer per day and an average ticket price of 3.5 yuan per person-time, the total annual ticket revenue is only 7,665 million yuan, and the total ticket revenue in 30 years can only reach 176.257 billion yuan. Moreover, the affordability of the people and the social impact must be considered when fares are set, making it impossible to achieve the break-even point of construction and operation, let alone the high-quality development of the rail transit system.

As the urban rail transit network continues to expand, it has become the most important means of public transportation for citizens, thanks to its advantages in speed, punctuality, safety, and capacity. However, cities in the mainland will have to face and tackle a daunting challenge of rail transit system development and operation, and that is to make the best use of the external social and economic effects of rail transit, diversify rail-based business, give full play to the commercial value of rail-based economy, and prioritize and enhance the high-quality development of rail transit while building a massive rail transit network and ensuring its safe and efficient operation and management.

2. Unique Advantages of Creating New Scenarios of Rail Transit Consumption

Rail transit is a crucial part of urban infrastructure, providing efficient public transportation services and playing a significant role in promoting social and economic development. However, rail transit companies not only need to consider their public welfare attributes but also need to take care of their own profitability and pursue high-quality business growth. Currently, mainland rail transit companies are generating income through real estate development and property management, among others. However, under the existing regulatory regime, benefits brought about by the appreciation of land along the lines in mainland cities are typically going to non-rail transit companies, rather than rail transit companies. Although rail transit companies have started exploring the commercial development of stations, they only aim to meet the basic needs of passengers, and do not create new consumption scenario which could have generated greater revenues.

The vitality of business comes from passenger traffic, and the realization of commercial value lies in the ability to transform passenger traffic into effective purchasing power. The large daily traffic of rail transit passengers is a precious resource for rail transit companies. In 2021, the average daily passenger traffic of the 50 cities with rail transit operation reached 67.113 million, with Beijing and Shanghai averaging around 10 million. However, huge passenger traffic at this high and stable level can hardly be found in other cities. Large passenger traffic also represents tremendous consumption potential and unlimited business opportunities. By creating new consumption scenarios that attract rail transit passengers, the potential of consumer demand can be transformed into real and effective purchasing power. The enormous commercial value of rail transit is not confined to meeting citizens' transportation needs alone, but great purchasing power converted from great passenger traffic, convenient consumption resources for citizens, and support for the long-term and stable operation of rail transit companies. A mechanism featuring the synergy effect between passenger traffic and business value.

New consumption scenarios bring together the advantages of rail transit and commercial resources and achieve a greater synergy effect. The large passenger traffic of rail transit guarantees strong consumption demand, while commercial operation can improve the efficiency of rail transit and effectively reduce the

construction and operation cost of rail transit. The combination of the two is of great significance to the high-quality development of the rail transit industry. First of all, commerce enabled by rail transit is the derivative product of the rail transit system, and is somewhat restricted by multiple factors such as space and environment. Therefore, commerce within the rail transit system has a certain characteristic of exclusiveness in taking advantage of the huge passenger traffic brought by rail transit. Once the consumption potential hidden in the passenger traffic is transformed into valuable and realistic purchasing power through new consumption scenarios, considerable economic benefits will be generated, and such positive and realistic economic benefits can also provide financial support to rail transit construction, and the two can form a benign, mutually supporting relationship. Secondly, the actual available area of the underground space of rail transit stations often exceeds the area needed to meet the transportation function. When meeting the need of public transportation, the rail transit system should also be designed to accommodate the need of promoting retail business. By co-designing with commercial development, the rail transit system will make a better use of the available spaces in stations. The more spaces are used, the more cost will be saved, which indirectly improves the income of rail transit operation and reduces the operating losses. In addition, the rail transit system makes commute much more convenient, and at the same time offers new consumption scenarios by connecting multiple commercial spaces. In particular, the underground space of rail transit network provides consumers with great comfort and leisure as it prevents consumers from being bothered by bad weather and traffic congestions. This unique advantage is incomparable to conventional commercial areas. It boosts commercial consumption, and meanwhile brings even larger passenger flow to the rail transit system, and hence promote the growth of the rail transit system.

3. Success Stories of High-quality Rail Transit Development in Hong Kong

Hong Kong is a model of high-quality urban development in the world. In the past decades, Hong Kong has successfully explored a way of leading urban development through rail transit, and realized efficient and intensive use of urban land resources which has strongly boosted urban economy and contributes to the development of harmonious communities.

As a holding company of the Hong Kong Special Administrative Region Government, the MTR Corporation Limited (hereinafter referred to as the "MTR") is the backbone service provider in Hong Kong engaged in transport infrastructure construction and public transport operation. It is also one of the world's leading transnational rail transit operation companies. Over the past four decades, MTR has been working closely with the Hong Kong SAR government in a bid to realize the efficient utilization of urban resources. Through the “rail + community” model, MTR has expanded the external benefits of the rail transit system and created successful consumption scenarios by making full use of the unique passenger traffic resources offered by the rail transit system. Station/terminal-based business becomes one of MTR’s biggest profit contributors.

MTR operates about 300 kilometers of local rail network in Hong Kong, with an average daily passenger traffic of nearly 7.3 million. It operates more than 1,492 retail shops, 11 duty-free shops and more than 300 self-service stores with a total area of more than 67,337 square meters. The average occupancy rate is over 98%. Annual profit in recent years has been over HK $3 billion. MTR’s best practice of station-based retail business offers reference for creating new consumption scenarios in the rail transit system in mainland China.

- **Development principles.** Rail transit stations operated by MTR in Hong Kong have different types of commercial development of underground and above-ground commercial spaces without affecting normal passenger traffic and routine operation of hubs. Transportation of passengers and commercial development of above-ground and underground stations share the common purpose of providing good service for passengers. For MTR, commercial development of rail stations is not a simple commercial activity, but based on the large traffic, aims to provide passengers with better services and richer consumption scenarios. Under the premise of ensuring smooth passenger transport and quality passenger services, different consumption scenarios should be created in accordance with station-specific business plans and convert passenger traffic into real consumption opportunities.
- **Holistic planning.** The commercial development plan of Hong Kong rail transit is incorporated into the overall plan of rail transit system development plan, as well as into the overall urban planning of Hong Kong.

Therefore, the planning must be based on the overall consideration of the development of the entire city and region. As the rail transit operator in Hong Kong, MTR conducts a systematic and overall study of rail transit lines and stations in the early stage of rail transit development, makes holistic planning of all lines and all terminals. It considers the specific conditions of each station, and studies the relations between hub terminals and their surrounding buildings, roads and ambient conditions with a view to balance the effectiveness of efficiency of spatial resource development. At the same time, MTR also makes unified planning for the time sequence of station and space development, considers the functions to be developed across different time periods and the coordination of these functions. MTR studies the actual passenger traffic of a certain station and the economic conditions of surrounding areas, and controls the rhythm of commercial resource development in a well-planned way. It carries out step-by-step, phase-by-phase development of commercial resources, and progressively builds a commercial consumption environment based on rail transit stations.

- **Space design.** The success of commercial development of a rail transit station depends on the station's ability to attract passengers, the level of comfort of passengers' experience, and also whether a station can maintain smooth flow of people, goods and waste in a seamless and coordinated way. When planning commercial space development of a rail station, MTR always gives top priority to safety, taking into account fire protection requirements, escape routes, safety facilities, and ventilation equipment. Secondly, MTR takes the issue of comfort very seriously. Although the semi-enclosed underground commercial space provides passengers with a shopping environment free from weather constraints, it may also cause adverse effects such as space depression and poor air quality. Therefore, when designing commercial space of the station, especially underground commercial space, MTR takes many measures to improve the comfort level of the environment. For example, passengers tend to feel monotonous when they see the narrow and long subway connecting passages,. MTR hence increases the width and height of the passages, so as to improve the physical and mental pleasure of passengers. Miniature landscape or animation is placed in station entrance or underground space to increase the visual effect. Distinctive signs are set in stations or underground space to enhance

passengers' sense of direction. Thirdly, MTR carefully studies the shopping habits, shopping mentality and walking habits of rail transit passengers, and takes the research results as the basis for the design of station passages and as an effective means to manage passenger traffic. In addition, under the premise of satisfying fire protection and safety requirements, MTR also makes smart use of the effective space such as station space and underground passenger movement lines through renovation, reducing the area of auxiliary functional sections, and increasing the area of developable space as much as possible.

- **Development strategy.** Factors such as the type, passenger flow, development intensity and commercial positioning of rail transit stations play an important role in the development of rail transit commerce. Ambient environments of stations differ from each other, and each of those factors has different impact on the commercial development of a particular station as well. When planning and designing the commercial development of rail transit stations, MTR makes a comprehensive and in-depth investigation and analysis of the ambient environment and commercial needs, and then determines the proper combination of business forms suitable for the stations, especially the underground commercial space, and seeks the best way to make reasonable use of the commercial space and generate business benefits for the surrounding areas. For example, rail transit passengers in the morning rush hours are mainly business commuters and school students who travel shortly in particular hours but the traffic is very stable. These passengers/consumers prefer to consume at convenience stores or service vendors. In the evening rush hours, passengers have more luxury of time and are likely to be attracted by the atmosphere of the underground commerce and tend to spend more time on entertainment, leisure and shopping before going home. These passengers/consumers prefer fast-moving consumer goods and daily necessities.

  MTR adopts multi-functional and three-dimensional mode in the development of above-ground commerce in rail transit stations, that is, comprehensive development of resources centered on rail transit stations, combination of underground resources and above-ground resources, and integration of transport & transfer, residence, shopping, leisure,

entertainment, hotel and other functions through three-dimensional planning. For example, the MTR Kowloon Station consists of underground interchange stations, Elements Shopping Mall and high-rise towers connected by arcades and cross-street skybridges, with the ground floor interchange station carrying interchange traffic from the MTR and Airport Express, as well as passengers taking private cars, taxis and buses. High-rise towers include residential, office and hotel buildings. Due to its location in the core area, Elements Shopping Mall not only provides superior shopping environment for nearby residents, meet the consumption needs of passengers for shopping, leisure, catering, sports and entertainment, but also attracts many affluent Hong Kong residents and tourists from all over the world to shop here. Therefore, it was designed as a high-end shopping center in the commercial planning. In terms of business mix, it gathers the world's top brands, making Elements one of the high-end shopping centers in Hong Kong that is uniquely built above the ground of the largest rail transit station. Another example is the Festival Walk Shopping Center at MTR Kowloon Tong Station which is also a hub station. It has a prominent advantage in passenger traffic resources brought by the convenient location, but there are relatively fewer tourists. It is adjacent to City University of Hong Kong and Hong Kong Baptist University, and therefore more attention was given to the needs of younger consumers when it was designed. In terms of business mix, Festival Walk not only hosts a number of top international fashion brands a cosmetics stores, but also gathers a number of very creative new concept stores and large entertainment facilities. During the space design, emphasis was placed on spaciousness and transparency with filtration of natural sunshine in order to create a leisure and comfortable environment. For another example, Telford Plaza is an above-ground shopping center at Kowloon Bay MTR Station, which is surrounded by the MTR headquarters building and residential areas, and passengers here are mainly from the middle-income families. Therefore, the commercial planning focuses on matching the consumption power of consumers who are mainly office workers and nearby residents whose priority are lifestyle products, catering, leisure and entertainment, services and department store goods.

Limited by space and traffic, the underground commerce of rail transit

stations needs to take into account the functions of public transport, commerce and auxiliary services, as well as basic commercial services for passengers. When developing underground commerce, MTR adopts the mode of point, strip or circular setting according to the layout of underground space of a specific station. Floor area of a single shop is relatively small. In terms of business type, MTR chooses well-known chain stores to ensure the high quality of business operation and services as well as the brand image of MTR. In the meantime, safe and fast movement of passengers must be guaranteed. The specific business mix is determined by consumption habits of passengers. For example, the target customers of instant consumption are mainly those who go to office or school at a fast pace, and the stores are for business like fast food, snack and drinks and so on. The target customers of impulsive consumption are mainly college students and young people who follow fashion trends closely, and the stores mainly sell popular, trendy goods. The target customers of purposeful consumption are passengers with specific needs, and the stores are mainly coffee shops, pharmacies, flower shops, bookstores, laundries, bank outlets, travel agencies and convenience stores.

- **Management policy.** The MTR Corporation is responsible for the integrated management of rail transit construction and operation, property development and station-based commerce. The company coordinates the planning, design, investment, construction, operation, and management, allocates resources rationally, promotes internal resource sharing and low-cost allocation of resources. It is not only responsible for coordinating construction, operation, property and commercial development and ensuring the progress of the entire project, but also for safety, quality and cost control. It achieves the maximum synergy between rail transit transportation and property development, and moreover creates huge station-based commercial resources. First of all, in the early stage of planning and design, MTR gives a lot of attention to station commercial resources. It prepares the development report of station commercial resources and provides guidance on how to lay out rail transit lines, stations and hubs, and station commercial spaces in a bid to create as much commercial space and resources as possible and build the most comfortable consumption environment. The overall objective is to maximize the value

of commercial resources. Moreover, in the early stage of planning, MTR has made clear that with regard to incumbent commercial tenants, their business formats will complement each other and hence form a strong magnetic effect on passenger traffic. Secondly, MTR has established a management mechanism for daily business operation, safety control and regular review. MTR carefully selects merchants. In particular, when there are high requirements on fire protection, safety and evacuation related to the underground commercial areas, MTR requires that a consensus must be forged between the merchants and MTR on the maintenance of commercial spaces, organization of events, and sharing of operational information. It also establishes an evaluation system to make sure that only the fittest merchants will be selected and stay in order to keep the vitality of the rail transit commerce. In addition, MTR follows a stringent branding strategy, constantly builds and improves the resource pool of branded merchants, supports the business growth of branded merchants, and completely changes the stereotype of passengers that merchants at rail stations are all low-end ones. In turn, it also enhances MTR's brand image as a professional management company specialized in rail transit station commerce. MTR and branded merchants therefore form a benign, mutually-supporting relationship. MTR provides services such as daily patrol, hygiene and station business guidelines to ensure smooth operation of merchants at stations. Through robust safety management, MTR ensures that merchants' business do not affect the normal functioning of the stations, merchants comply with station management rules and their store decoration meets safety requirements. Through annual talks with merchants, quarterly fire protection training, and safety inspection, MTR makes sure that information is shared accurately between all parties and the feedback is made to the requests and advice of merchants.

Creating new consumption scenarios of rail transit and realizing joint development of rail transit and commerce can maximize economic and social value, realize the overall interests of a city, the rail transit operators and the public, and also contribute to the high-quality development of the entire rail transit system. The MTR Corporation has made meaningful exploration in developing commerce based on rail transit in Hong Kong for many years. Its successful experience can provide reference for mainland cities to effectively utilize the unique passenger traffic

resources of rail transit and create efficient new consumption scenarios. As a world-renowned rail transit operator, MTR has accumulated abundant experiences in the high-quality development of rail transit and is very much willing and able to invest in the commercial development of rail transit in the mainland. In the future, MTR will step up its efforts to engage in the development of rail transit in mainland China and remains confident of making greater contribution.