

Building Smart City in Ho Chi Minh City, Vietnam

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Abstract

Ho Chi Minh City is a special city with great potential and strong development ability, which is considered as the locomotive of Vietnam's economic development. During more than 45 years of construction and growth, the city has always had reasonable socio-economic development policies, making great contributions to the State budget. Facing potential and advantages, the Party and State have paid special attention and have many separate policies to promote the city's development. Within the scope of this article, we refer to Resolution No. 54/2017/QH14 of the National Assembly on piloting specific mechanisms and policies for the development of Ho Chi Minh City and the process of implementing and taking advantage of the conditions, opportunities, removing difficulties to achieve the strategic goal of becoming a modern, high-income city.

Keywords: Ho Chi Minh City, smart city, project.

Introduction

Ho Chi Minh City is a special urban area, with an area of only 0.6% of the country's, a population of more than 9% of the country's population, but contributing over 22.2% of GDP and about 28% of total revenue of the national budget. Economic growth of Ho Chi Minh City in 35 years of renovation averaged 10.7%/year, 1.6 times higher than the average growth rate of the whole country. The city's per capita GRDP in 2020 reaches 6,328 USD/person, 2.34 times higher than the national GRDP per capita (the whole country is 2,708 USD/person) (*Ho Chi Minh City Party Committee, 2020*).

In order to create favorable conditions for Ho Chi Minh City to maximize its inherent potential, on November 24, 2017, the National Assembly passed Resolution No. 54/2017/QH14 on piloting specific mechanisms and policies for the development of Ho Chi Minh City, giving the City some basic autonomy. This is a good condition and a favorable opportunity for Ho Chi Minh City to unleash its inherent capacity and maximize its advantages, proceeding to implement the project of building the city into a smart city.

Literature Review

Discussing the issue of building Ho Chi Minh City into a smart city, there have been a number of articles with related content so far. For example, the article "*The role of human resources in the smart urban model of Ho Chi Minh City*" by author Nguyen Tien Hung published in the Journal of Industry and Commerce on March 2, 2021, refers to The project "*Building Ho Chi Minh City into a smart city*

in the period of 2017-2020, with a vision to 2025" of the People's Committee of Ho Chi Minh City. In it, the author introduces through the smart city model, discusses aspects of the Scheme and the implementation process of the Scheme for the period of 2017-2019, thereby making recommendations on human resource development strategies to ensure the successful implementation of the smart city model. Similarly, there is an article "*Building Ho Chi Minh City into a smart city*" by two authors, Pham Dinh Long and Vo Thi Hong Dan, published in the Electronic Communist Journal on August 21, 2021. The authors discuss the concept of a smart city, the factors affecting the smart city construction strategy, the process of building Ho Chi Minh City into a smart city. The challenges faced, thereby recommending seven solutions to increase the effectiveness and success of the strategy to build Ho Chi Minh City into a smart city.

Research Method

Refer to the above articles, based on the theoretical basis of the Central Resolutions on Ho Chi Minh City, documents of congresses and conferences of the Party Committee of Ho Chi Minh City, documents of the City Government; Using methods such as: history - logic, analysis, synthesis, statistics, the author goes into the background research and conditions and opportunities to build Ho Chi Minh City into a smart city.

Research results

Resolution No. 54/2017/QH14 of the National Assembly dated November 24, 2017 on piloting specific mechanisms and policies for the development of Ho Chi Minh City

According to Resolution No. 54/2017/QH14 of the National Assembly dated November 24, 2017 on piloting specific mechanisms and policies for the development of Ho Chi Minh City, the city is allowed to implement 4 groups of specific mechanisms to create dynamic and breakthrough force. That is the mechanism for land management, finance - budget, authorization mechanism and income of cadres, civil servants and public employees under the management of the city.

Regarding land management, the People's Council of Ho Chi Minh City is allowed to change the use purpose of rice-growing land from 10 hectares or more in accordance with the planning.

Regarding investment, the People's Council of Ho Chi Minh City is entitled to decide on investment policies for Group A projects using the City's budget in accordance with the Law on Public Investment (*except for projects specified at Point a. a, b, c and d clause 1, article 8 of the Law on Public Investment*).

In terms of finance - budget, the People's Council of Ho Chi Minh City is allowed to pilot the increase of tax rates in some areas to no more than 25% compared to the current tax rate, apply to collect a number of fees and charges which are not yet available in category. The city is entitled to implement the mechanism of creating resources for salary reform, enjoy 50% of the land use levy when selling public assets attached to assets on land, enjoy the proceeds from equitization and divestment in enterprises. State enterprises managed by the City...; use this revenue and the city budget to invest in the development of socio-economic infrastructure.

Regarding the authorization mechanism and income of cadres, civil servants and public employees under the management of the City, the Chairman of the Ho Chi Minh City People's Committee is

authorized to authorize the Chairman of the district-level People's Committee to perform a number of tasks, duties and powers of the Chairman of the City People's Committee. The City People's Council has the right to decide to allocate the City budget to spend the increased average income for cadres, civil servants and public employees with a maximum level not exceeding 1.8 times the salary level, rank and position. The level of income for experts, scientists and special talents of the City is regulated by the City People's Council (*National Assembly of the Socialist Republic of Vietnam 2017*).

In terms of mechanisms, Resolution 54/2017/QH14 has created three advantages for Ho Chi Minh City: Firstly, increasing autonomy in various fields from land planning to investment management and finance, budget policy, cadre apparatus, creating policy space for the city and development room for the entire southern region. Second, remove some constraints on the mechanism to create motivation for development. Third, create resilience and motivation from the pilot mechanisms and policies. With that in mind, Resolution 54/2017/QH14 is especially important to solve problems, help Ho Chi Minh City make the most of available resources, attract talents, experts and scientists from all over in order to promote socio-economic development, create conditions for Ho Chi Minh City to improve its competitiveness, achieve faster development, contribute more, more sustainable development of the country. Also on that basis, Ho Chi Minh City completely has favorable conditions and opportunities to build and implement the project to build Ho Chi Minh City into a smart city.

Ho Chi Minh City implements the Resolution, takes advantage of favorable conditions and opportunities, focuses on removing difficulties, and invests in implementing breakthrough programs towards building a smart city

By the time the National Assembly issued Resolution No. 54/2017/QH14 dated November 24, 2017 on piloting specific mechanisms and policies for the development of Ho Chi Minh City, the city had achieved outstanding achievements in economic and social development. After 35 years of implementing the Doi Moi Road, Ho Chi Minh City's high development results are due to a combination of many factors. Partly because the city has a modern economic structure with industry and services accounting for more than 90%, qualified workers are among the highest in the country; the number of enterprises accounting for 34% of the total number of enterprises in the country; has the largest private economic force in the country, is the largest financial center in the country; highest labor productivity in the country; has a tradition of dynamism, creativity, innovation etc.

From the above advantages, Ho Chi Minh City quickly implemented Resolution 54/2017/QH14 to solve problems and make the most of land and resources. people, attracting talents, experts and scientists to realize socio-economic goals. This is a favorable condition for Ho Chi Minh City to maximize its available capacity, but at the same time, it also increases pressure in many aspects when limiting the pilot time to implement mechanisms and policies for 5 years. Speaking at the Conference of key officials of Ho Chi Minh City on February 23, 2018, Mr. Nguyen Thien Nhan, Politburo member, Secretary of the City Party Committee, emphasized: "*The pilot implementation of the mechanism, Specific policies for Ho Chi Minh City must be placed in the general overview of the whole country, harmoniously combining the common and the private, within the legal framework. What is clear should be done immediately, what is unclear or complicated will be piloted, preliminary and summarized for replication*" (Ho Chi Minh City Portal, 2018).

Implementing Resolution 54/2017/QH14 of the National Assembly, the 7th session on March 16, 2018 of the People's Council of Ho Chi Minh City passed many resolutions, including Resolution No. 03/2018/NQ-HĐND promulgates regulations on spending additional income for cadres, civil servants and public employees in the state management sector, socio-political organizations and public non-business units managed by the City; and Resolution 04/2018/NQ-HĐND on the income level of experts and scientists for the field that the city needs to attract in the 2018-2020 period. The two resolutions mentioned above are highly appreciated because they create the basis for the policy of attracting talents, maximizing the intellectual capacity of the City, speeding up the implementation of strategic goals, including: project to build Ho Chi Minh City into a smart city.

The project of building Ho Chi Minh City into a smart city, and at the same time orienting to form the city's central area including District 2, District 9 and Thu Duc District to take the lead in the fourth industrial revolution. is one of seven breakthrough programs that Ho Chi Minh City focuses on implementing in 2018. The vision of the Project is that *“Ho Chi Minh City will develop a relatively high and sustainable economy, on the basis of mining. make the best use of resources, with the people as the center of the city”* (Ho Chi Minh City People's Committee 2017). It can be seen that the vision that puts the highest priority is the economic development of the City on the basis of making the most of resources including human resources, natural resources, technology, central location... Points Especially in that, the vision puts *“people at the center of the city”*, meaning that people will enjoy a good quality of life, well served in nine specific areas: transportation, health care, food safety, environment, human resources, security and order, e-government, embellishment - urban development, and anti-flood field. At the same time, citizens can participate in the process of monitoring, management and construction of the City. The project is implemented in three phases: Phase 1 (2017-2020) is the stage of deploying and building a technology foundation for smart cities, with a focus on cloud computing infrastructure, central redundant data center, open data platform, big data analytics platform, shared data warehouse and shared databases, intelligent operations center (IOC) with public service platforms people and information security monitoring center (SOC - can be integrated into the IOC center); deploy a number of smart solutions to meet the current urgent needs of the City under breakthrough programs to soon bring practical benefits to the people, including: Digital government, traffic, environment schools, flood control, security and order, health and people's health. Phase 2 (2021-2025) will focus on deploying smart solutions in specialized fields in a synchronous manner, helping to solve important problems of the City in many fields; The specialized intelligent solutions that have been launched since phase 1 need to continue to be expanded, along with updating data. Phase 3 (after 2025) will continue to set new goals and tasks towards a longer-term vision; the technology platform will continue to be consolidated to improve processing and storage capacity, safety and security levels; Smart solutions are upgraded in the direction of getting smarter and expanding to other areas of life.ithin the scope of the project *“Building Ho Chi Minh City into a smart city in the period of 2017-2020, with a vision to 2025”*, the highlight is the construction of creative urban areas in districts 2, 9 and 3. Thu Duc district on the basis of developing digital economy and knowledge economy. This innovative urban area will become the core nucleus of implementing the fourth industrial revolution in the area and the foundation for implementing smart urban projects throughout the City.

The advantages of these districts are reflected in the fact that: Thu Duc District has the National University of Ho Chi Minh City with 18 member universities, affiliated units and research institutes, with a large number of lecturers and researchers. science with academic degrees and degrees. Therefore, Thu Duc will be the place to focus on research and innovation and creativity. District 2 has Thu Thiem urban area providing infrastructure and utilities for many different functions. This place will be built into an international financial center with many vibrant economic activities. District 9 has a Hi-Tech Park with 13 corporations and companies in the high-tech field. Ho Chi Minh City's innovative and creative urban area will have research, training, technology transfer, service centers, high-tech production areas, culture and entertainment... Thus, after being formed, the city's creative urban area will closely and effectively connect three functions: a center for research and application of science and technology, a center for education and training of qualified human resources, and a center for education and training of qualified human resources, degree, high quality and production and trading center of high-tech goods and services. From here, the added value chain on the basis of high technology, modern technical and social infrastructure according to international standards and effective financial support for businesses will contribute to creating momentum for the implementation of the Project. successful project.

After nearly three years of efforts to prepare the necessary conditions for Ho Chi Minh City, on December 9, 2020, the National Assembly Standing Committee approved a resolution to establish Thu Duc city in Ho Chi Minh City with 100% agreement rate. Resolution 1111/NQ-UBTVQH14 of the National Assembly Standing Committee takes effect from January 1, 2021, establishing Thu Duc city on the basis of importing the entire natural area and population of District 2, District 9 and Thu Duc District.

After its establishment, Thu Duc city covers over 211 km² of natural area and has a population of more than one million people; located adjacent to District 1, District 4, District 7, District 12, Binh Thanh District, Dong Nai Province and Binh Duong Province. Thus, the plan to build the Creative Urban Area in the East of the City has been shaped with the birth of Thu Duc City, opening the second phase of implementing the Project at a higher level.

In phase 1 of implementing the Project "Building Ho Chi Minh City into a smart city in the period of 2017-2020, with a vision to 2025" (2017-2020), Ho Chi Minh City has focused on building four central pillars of the Scheme. These are: building a shared data warehouse and developing an open data ecosystem for the City; to build the City's socio-economic simulation and forecasting center; to build the City's smart urban regulation center; established the City Information Security Center. By the end of 2020, certain results have been achieved. The shared data warehouse has operated at Quang Trung Software City on the basis of integrating existing data of departments and sectors. The data has been deployed to serve the City's management and direction. In addition, the City has piloted the Open Data Portal at <https://data.hochiminhcity.gov.vn> , in near future, the pilot will provide information about medical examination and treatment facilities and practice certificates. Most recently, the City has implemented a shared digital map service (temporarily called background digital service), providing a unified geocode service as a basis for standardizing geographic information fields for different regions on the City database layer.

Regarding the construction of the Smart City Operation Center, in phase 1, the Center has integrated image data from the traffic monitoring camera of the City police, the camera of the Saigon River Tunnel Management Center Saigon and security camera systems have been developed over time in districts and regions to connect into a centralized camera system. At the time of operation, on April 15, 2019, there were 1,100 cameras installed at high, mid-range and low-range to maximize monitoring quality, of which four high-altitude cameras are arranged in four directions, able to observe the whole city.

The Center for Socio-Economic Modeling and Forecasting and Forecasting affiliated to the City Development Research Institute was inaugurated on August 1, 2019, operating within the scope of functions and tasks, including: Organizing investigations and surveys and collect information to build a database to meet the requirements of building analytical, forecasting and simulation models. Research and systematize theoretical, scientific and experimental bases for building analytical, forecasting and simulation models. Building and gradually systematizing quantitative models for analysis, forecasting and simulation of issues related to major socio-economic indicators, along with some problems in national and international interests of the City. Applying data visualization technology to analyze data, present results from quantitative models and make reports of the center, reports under the direction of City leaders. Provide consulting services and cooperate with organizations and individuals at home and abroad. Perform other duties as assigned by the Director of the City Development Research Institute and in accordance with the law.

On October 11, 2020, the City Information Security Center officially came into operation. The center has the function of ensuring information security in the process of implementing the digital transformation goal of Ho Chi Minh City and providing information security services and other products to preserve capital in the short term and ensure safety. long-term business development. The Center actively connects and collects information on information security and the Internet from partners and suppliers; security error; potential hazards. Thereby, quickly warn about information security incidents with protected agencies and units. All these features will support the management of the City government and improve the efficiency of the work of ensuring network safety and security in the area.

At the end of phase 1, entering phase 2 to implement the project, on February 23, 2021, the People's Committee of Ho Chi Minh City issued Decision No. 575/QĐ-UBND approving the Program "Research" and develop artificial intelligence (AI) applications in Ho Chi Minh City in the period of 2020-2030". Accordingly, the city sets out the goal of building and developing an artificial intelligence ecosystem, in which developing mechanisms and policies to develop artificial intelligence, building computing infrastructure, building data infrastructure, etc. Whether; training, fostering and attracting artificial intelligence human resources to serve the goal of turning the city into one of the centers of Vietnam and the ASEAN region for research, deployment and transfer of artificial intelligence applications. Artificial intelligence is determined to become a key economic sector that makes an important contribution to promoting the city's economy to develop quickly and sustainably, becoming a center of Vietnam and the region for research and development, transfer of artificial intelligence applications.

To achieve the above goal, the City proposes solutions, such as: Building and developing an artificial intelligence ecosystem. In which, developing mechanisms and policies for the development of artificial intelligence; building digital infrastructure, computing infrastructure; building data infrastructure; building and developing artificial intelligence human resources; research, development and testing of artificial intelligence applications. At the same time, promote the application of artificial intelligence for economic development. In particular, creating infrastructure and an innovative environment to increase the number of startups, small and medium-sized enterprises in the field of artificial intelligence and increase the total investment capital in the field of artificial intelligence. Promote businesses to apply artificial intelligence in digital transformation to promote internal resources and increase competitiveness. Promote the development and deployment of artificial intelligence applications in the fields of finance, banking, transportation, tourism, e-commerce, telecommunications, education, etc.

A few issues

For more than 45 years, Ho Chi Minh City has been the largest city in the country in terms of population and economic scale. The proportion of economic sectors is shifting in the direction of modernity, increasing the structure of the service sector, gradually reducing the industry, developing high-tech agriculture, etc. promote development. In the coming time, the city will thoroughly grasp the spirit of the Resolution of the 13th National Party Congress, actively implement the Resolution of the 11th City Party Congress, and set medium and long-term goals.

Specifically, by 2025, it will be a modern smart city, service and industrial city, maintaining the role of economic locomotive and growth engine of the Southern Key Economic Zone and the whole country, leading in innovation, having a good quality of life, civilization, modernity, and gratitude. GRDP per capita reached 8,500 USD. By 2030, it will be a modern industrial and service city, a cultural city, a leader in the digital economy and digital society. GRDP per capita is about 13,000 USD; is the economic, financial, commercial, scientific, technological and cultural center of Southeast Asia. Vision to 2045, the city will become the economic and financial center of Asia, sustainable development, high quality of life, GRDP per capita of about 37,000 USD, an attractive destination for the whole world.

It can be seen that the identified target represents Ho Chi Minh City's ambition for a brilliant future development. Therefore, from the foundation is Resolution No. 54/2017/QH14 of the National Assembly on piloting specific mechanisms and policies for the development of Ho Chi Minh City, creating favorable conditions for the City to remove obstacles and difficulties and bottlenecks, devise and implement socio-economic development strategies suitable to their specific conditions and circumstances. The project "*Building Ho Chi Minh City into a smart city in the period 2017-2020, with a vision to 2025*" is a bold breakthrough for the city to achieve its set strategic goals. In order for the Project to be implemented effectively and on schedule, Ho Chi Minh City needs to solve some of the following issues:

Firstly, to promote the building of responsible government, smart government, and effective work, with the focus to implement drastic administrative reform. When assessing the annual socio-economic development indicators, there is one indicator that is often unsatisfactory, that is administrative reform. Ho Chi Minh City is one of the localities implementing the public implementation plan. Administrative

reform is the earliest in the country, and the effectiveness achieved is also high and well appreciated. However, in the current context, administrative reform must be seen as an urgent task that the City must perform, creating openness about the mechanism to receive the participation as well as the contribution of initiatives of entrepreneurs - investors. In the process of implementing the Project, to achieve the goals on schedule, Ho Chi Minh City.

Secondly, Ho Chi Minh City must drastically solve the problems of traffic infrastructure. Congestion, flooding, and road quality are problems that the city is trying to overcome but have not achieved the desired effect. To solve this problem, it not only requires the concentration of efforts of all departments and levels of government of the City with technical and technological solutions, but also requires high determination and thoroughness of the Government propaganda, mobilizing people to join hands to implement for their own interests.

Thirdly, Ho Chi Minh City needs to strengthen people's firm trust. Over the years, many violations, including land violations, have been discovered and handled. Land planning is carried out to benefit the people, but due to improper implementation or inappropriate propaganda has led to many frustrations among the people. These things have reduced people's trust in the City government. Therefore, on the one hand, the City performs well the tasks identified in the Resolution of the Party Congress, the orientations of the City Party Committee, the resolutions of the People's Council, the plans and decisions of the Party Committee. The City People's Committee, on the other hand, must drastically prevent possible violations that damage the close relationship between the people and the government.

Conclusion

Currently, Ho Chi Minh City is focusing on working with the whole country to successfully achieve the "dual goal" of national economic development, these are, maintaining macroeconomic stability and controlling inflation. , while promoting GDP growth, creating more room to better perform tasks of ensuring social security, improving people's quality of life, solving pressing problems, stabilizing order and security whole society..., on the one hand, creating a new face for the City, bringing a peaceful and comfortable life to the people, on the other hand, improving competitiveness, becoming a place to attract talents and investors to enrich the city, successfully implementing the project of building the city into a smart city, making a great contribution to the building of a more prosperous and beautiful country.

Acknowledgement

To complete this work, I would like to show my gratitude to the Rector of Nha Trang University for creating favorable conditions for me to research and write this article. I also don't forget my gratitude to Dr. Vo Van Dung who oriented ideas and methods for this research.

References

- [1]. City Party Committee, People's Council, People's Committee, Vietnam Fatherland Front Ho Chi Minh City. (2015). Ho Chi Minh City 40 years of construction, development and integration, Publishing House. General, Ho Chi Minh City.
- [2]. Ho Chi Minh City Portal. (2018). "Ho Chi Minh City implements a series of specific programs, projects and mechanisms".

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- [3]. Ho Chi Minh City People's Council. (2017). "Resolution No. 25/NQ-HDND on implementing the National Assembly Resolution on piloting specific mechanisms and policies to develop the City Ho Chi Minh City", Ho Chi Minh City.
- [4]. Ho Chi Minh City Party Committee. (2018). "Conclusion No. 269-KL/TU of the Standing Committee of the City Party Committee on the pilot scheme to spend additional income for cadres, civil servants and employees organizations in the area of state management, political organizations, socio-political organizations and public non-business units managed by the city", Ho Chi Minh City.
- [5]. Ho Chi Minh City People's Committee. (2017). "Decision No. 6179/QD-UBND on Approval of the Project "Building Ho Chi Minh City into a Smart City in 2017" -2020, vision to 2025", Ho Chi Minh City.
- [6]. Ho Chi Minh City People's Committee. (2017). "Plan for implementation of contents and projects to implement Resolution No. 54/2017/QH14 on piloting specific mechanisms and policies development of Ho Chi Minh City", Ho Chi Minh City.
- [7]. Ho Chi Minh City People's Committee. (2021). "Decision approving the program "Research and development of artificial intelligence (AI) application in Ho Chi Minh City in the period 2020" -2030", Ho Chi Minh City.
- [8]. Luu Mai Hoa. (2019). "Implementing specific mechanisms and policies to improve the competitiveness of Ho Chi Minh City", National scientific conference "Improving the business environment, enhancing the Vietnam's competitiveness in the fourth industrial revolution", Publishing House. Finance.
- [9]. National Assembly of the Socialist Republic of Vietnam. (2017). "Resolution No. 54/2017/QH14 on piloting specific mechanisms and policies for the development of Ho Chi Minh City", Hanoi.
- [10]. Party Committee of Ho Chi Minh City. (2015). Document of the 10th Party Congress Delegates, Publishing House. General, Ho Chi Minh City.
- [11]. Party Committee of Ho Chi Minh City. (2020). Document of the 11th Party Congress, Publishing House. General, Ho Chi Minh City.
- [12]. Party Committee of Ho Chi Minh City. (2020). Appendix Table of Political Report submitted to the 11th Party Congress, Ho Chi Minh City.
- [13]. Standing Committee of the National Assembly. (2020). "Resolution 1111/NQ-UBTVQH14 on the arrangement of district and commune administrative units and the establishment of Thu Duc city in Ho Chi Minh City Minh", Hanoi.
- [14]. Vietnam News Agency Electronic Newspaper. (2017). "City Party Secretary: Resolution 54 - New Development Motivation for Ho Chi Minh City".