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## ATTRACTING INVESTMENTS FOR THE DEVELOPMENT OF SMART CITY PHU QUOC - KIEN GIANG PROVINCE

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### ABSTRACT

On August 1, 2018, the Prime Minister issued Decision No. 950/QD-TTg, Decided to approve the project of sustainable, innovative city development in Vietnam from 2018 to 2025 and orientation to 2030 (Decision No. 950/TTg) along with the requirement to increase the mobilization of investment capital, domestic and foreign technical assistance. Thus, Phu Quoc Urban, Kien Giang province, is considered a typical pilot of Kien Giang and Vietnam to effectively exploit the potential and turn Phu Quoc into a luxury tourist city, currently modern, intelligent, and safe, environmentally friendly, attracting tourists all over the world. The development of Phu Quoc is oriented to develop synchronously in technical infrastructure, database, quality of life, intelligent city management, landscape, sustainable development, and competitiveness improvement. Competition, effective public services, ensuring security and social order and safety. This article answers the question, "How to attract domestic and foreign resources to invest in developing Phu Quoc's smart city to help Phu Quoc achieve the goals and vision stated above". The article has the task of defining the concept of resources limited to finance and new and innovative technologies for smart cities. The article also examines the influencing factors that play a decisive role in attracting and mobilizing resources to meet the development goals of smart Phu Quoc city. The article will answer the research question that with the primary investment resources being the minimal state budget, how to attract the whole society's resources, especially foreign direct investment and investment from foreign countries. Large private corporations in the country have capital, technology, management experience, and smart city construction potential.

The article studies the experience of attracting and mobilizing investment for smart cities globally, clarifying the current investment situation of Phu Quoc and the current requirements for mobilizing investment resources in Phu Quoc. The article proposes the immediate solution to attract and mobilize investment resources from different economic sectors for Phu Quoc smart city, focusing on private resources and foreign direct investment (FDI) resources.

The solutions will focus on renewing thinking and awareness in piloting new mechanisms, perfecting mechanisms and policies to encourage resource mobilization of all economic sectors, especially the public-private coordination mechanism and modern technology for investment and development of Phu Quoc, turning this city into a bright and modern city at the top level of the whole ASEAN region soon. The article uses a qualitative approach and analysis, synthesis, and comparison methods to serve the research. The data is secondary collected from various sources of Kien Giang departments and business associations.

**Keywords:** Smart city Phu Quoc, Capital Mobilization, Non-State Investment, Foreign Direct Investment (FDI).

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## INTRODUCTION

Science and technology continuously develop and play an increasingly important role in the socio-economic development of each country, especially the achievements of the fourth industrial revolution to create new products. They are the pillars of socio-economic development. Thanks to science and technology, people's living standards have been raised higher and higher, and the quality of life has changed in a positive direction, especially for citizens living and working in a "smart city" will have higher enjoyments, on the contrary, these citizens will be wise residents who are responsible for the place they live.

Kien Giang province has chosen Phu Quoc as a locality with the development potential to invest in building the province's first smart city. Specifically, the People's Committee of Kien Giang province has issued Decision No. 830/QD-UBND dated April 1, 2017, approving the project to build a smart city in Phu Quoc, Kien Giang province, from 2016 to 2020. Then there is Decision No. 2301/QD-UBND dated October 31, 2017, on approving the Project on Building and deploying an intelligent urban model in Kien Giang province in 2017 - 2022, with orientation to 2030. Therefore, Kien Giang province has made relatively early preparations with specific solution tasks. The investment and implementation will be state management agencies taking advantage of local resources associated with support from the Central; however, the state budget cannot fully meet conditions for construction. For building a smart city in Phu Quoc, Kien Giang province wishes to have domestic and international investment capital and technical support to quickly realize the target as stated in the government's policy. "Developing a sustainable smart city towards green growth, promoting potential advantages, improving the efficiency of resource use; optimally exploiting resources and people, improving the quality of life, and at the same time ensuring creating conditions for organizations, individuals and people to participate in research effectively, construction investment, management smart city development management; limit risks and potential hazards; improve the efficiency of state management and urban services; improving the economy's competitiveness and international integration".

Thus, Phu Quoc has a project to build a smart city, but after four (04) years of implementing the project's tasks, it mainly invests in information technology infrastructure but is very limited, sometimes still unfinished, or not implemented because all investment capital is the

state budget. On the other hand, although Phu Quoc has relatively high non-budget investment capital, it is mainly a tourism service project, with very few projects serving intelligent city development. Therefore, the study "Attracting investment for developing the smart city in Phu Quoc - Kien Giang province" is urgent. This article examines the current situation of attracting domestic and foreign investment to develop Phu Quoc city - Kien Giang province and proposes solutions to attract investment to build Phu Quoc into a smart city.

The article uses a qualitative approach with analysis, synthesis, and comparison methods. The article also reviews and summarizes experiences to consider factors that play a decisive role in attracting investment.

The article uses secondary data collected from different sources from Phu Quoc Economic Zone Authority, departments, the People's Committee of Phu Quoc city, and the business associations of Kien Giang.

### **Some Common Problems**

#### ***Smart City***

The term "smart city" was coined in the 1990s. According to Albino (2015), at that time, the role of information and communication technology (ICT) concerning modern infrastructure in the city was considered the most critical factor in building a smart city<sup>1</sup>. Wall and Stavropoulos (2016) the author has gathered the definitions of smart cities that can be classified into two groups, including (1) Technology Focused Definitions; and (2) Broad Definitions. By the 2000s, when the term "smart city" was mentioned by scholars, it attracted much attention worldwide.

Currently, there are many different interpretations of "Smart City". Through many international seminars at home and abroad, experts have pointed out that: A city is only brilliant when it converges three factors: efficient infrastructure, sustainable development, and a friendly living environment, based on six criteria: Smart economy, creative movement, savvy residents, bright environment, innovative city management, and intelligent life. Although there are six criteria to define a smart city, even in the world, each city also determines a central direction, such as European countries often toward the green environment, energy-saving, especially applications in the field of intelligent traffic. Countries in the Asia-Pacific region are more inclined to apply information and communication technology in e-government, health, transport, education, and urban management.

Lai et al. (2020) has introduced the concept of a "Smart city" is an urban area that uses technology and data to increase efficiency, develop sustainable socio-economic development and improve the quality of life for people in urban areas, which will promote innovative city development, including energy, transportation, healthcare. The concept of "smart city" is increasingly being refined by standards used to help regulate how smart the city works and contribute to the intelligent city definition. National and international agencies and organizations must officially recognize smart cities to promote society's advancement<sup>2</sup>.

To create an intelligent city assessment framework, studies on intelligent cities follow (Giffinger & partners, 2007)<sup>3</sup>; The Government Summit, 2015<sup>4</sup>; Manville & partners, 2014<sup>5</sup>)

<sup>1</sup> Albino, V., Berardi, U., & Dangelico, R. M. (2015). Smart cities: Definitions, dimensions, performance, and initiatives. *Journal of Urban Technology*, 22(1), 3–21

<sup>2</sup> Lai, Chun Sing & Ctg (17 August 2020). "A Review of Technical Standards for Smart Cities". *Clean Technologies*. 2 (3): 290–310. doi:10.3390/cleantechnol2030019.

<sup>3</sup> Giffinger, R., Fertner, C., Kramar, H., Kalasek, R., Pichler-Milanović, N., & Meijers, E. (2007). Smart cities Ranking of European medium-sized cities. *Vienna University of Technology*.

give six main groups of characteristics of a smart city, including (1) smart governance, (2) innovative economy, (3) smart transportation, (4) bright environment, (5) intelligent people, and (6) intelligent life.

Currently, Europe has the most intelligent cities in the world. European countries aim to be green and save energy, especially in applications in intelligent traffic. The article mentions two typical cities for reference as follows:

Copenhagen (Denmark) Copenhagen is the city that has achieved the reputation of being the greenest city globally for two consecutive years. The city was also selected as the Green Capital of Europe in 2014. Copenhagen has the lowest carbon index per capita globally and has the most ambitious carbon reduction plan of any city to achieve its carbon-neutral target by 2025. The city is rolling out new and innovative solutions in transport, waste, water, heating, and alternative energy sources to improve sustainable development.

Amsterdam (Netherlands) targets a sustainable development model with a vision and energy strategy until 2040. The proposed ambitions include A climate-neutral city by 2015; Reducing CO<sub>2</sub> emissions by 40% by 2025, compared with 1990 levels; Reducing CO<sub>2</sub> emissions by 75% by 2040. To help achieve the above targets, the Amsterdam Innovation Board (AIM), now the Amsterdam Economic Board, City of Amsterdam, Liander network operator, and supplier telecommunications service provider KPN began building the Amsterdam Smart City platform in 2009 - a partnership between businesses, governments, research institutions and the people of Amsterdam. There is a central office with many people working on the smart city project. In 2013, more than 70 partners with 37 different intelligent city projects were implemented, covering all the intelligent city characteristics such as energy transition, intelligent solutions mobile, and open link.

In Vietnam, Ho Chi Minh City and Da Nang are two cities that can develop in the application of information technology to construction and city development:

- *Da Nang*: Many policies have been issued to promote the application and development of information technology, notably the Project "Building an electronic city model in Da Nang"<sup>6</sup> with primary objectives: "Building and developing Da Nang city into an electronic city in order to create a premise for the development of a knowledge economy, striving to become a modern city of ASEAN size by 2020 and by 2030 in Asia - Pacific". Da Nang city also focuses on implementing e-government and intelligent traffic.

- *Ho Chi Minh City*: Although it does not build a master project "Electronic city model" like Da Nang, the city has also built many projects and programs on information and communication technology applications and is organizing implementation for e-government construction, economic, social development. In each field, we also focus on innovative applications. The People's Committee of Ho Chi Minh City recently officially signed a cooperation agreement with the Vietnam Post and Telecommunications Group to build an intelligent city architecture model.

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<sup>4</sup> *The Government Summit. (2015). Smart cities: Regional perspectives. The Government Summit Thought Leadership Series. Retrieved from <https://www.worldgovernmentsummit.org/api/publications/document/d1d75ec4-e97c-6578-b2f8-ff000a7ddb6>*

<sup>5</sup> Manville, C., Cochrane, G., Cave, J., Millard, J., Pederson, J. K., Thaarup, R. K.,...& Kotterink, B. (2014). Mapping smart cities in the EU. *Brussels: European Union*

<sup>6</sup> Da Nang City People's Committee (2011), Decision No. 10401/QD-UBND dated December 5, 2011 approving "Project on building an electronic city model in Da Nang"

Regarding the general policy of the whole country on the development of "Smart Cities" specified in Decision No. 950/QĐ-TTg, there are views such as: consistent with the guidelines of the Party, state laws; is an essential content of the 4th Industrial Revolution (Industry 4.0), using the means of supporting information and communication technology (ICT); putting the people at the center, implementing the national strategy on green growth; ensure technology neutrality; unify and optimize the technical infrastructure and information and communication technology (ICT) infrastructure, regulations and standards...

### **Investment and Investment Attraction**

In Clause 1, Article 3 of the Law on Investment (2005): Investment is when an investor invests capital with tangible or intangible assets to form assets and conducts investment activities by the Law on Investment and other relevant laws<sup>7</sup>. According to Clause 5, Article 3 of the Law on Investment (2014), Business investment means that an investor invests capital in carrying out business activities such as through the establishment of an economic organization; buying shares, investing in capital contribution, contributing a capital portion of economic organizations; investment in the form of a contract or implementation of an investment project<sup>8</sup>. As for the Investment Law 2020 in Clause 8, Article 3 is that the investor invests capital in carrying out business activities<sup>9</sup>. Hasset (2008) summarized that, according to economists, investment means the production of goods that will be used to produce other goods<sup>10</sup>. Alternatively, investment is the amount of money purchased per unit time of goods that are not consumed but will be used for future production.

Investment attraction is the activities and policies of the State and the business community to promote, support, and encourage investors to invest capital for investment and development. In essence, investment attraction is to exploit and mobilize investment capital sources to meet investment capital needs for economic development, including the synthesis of mechanisms and policies through the conditions of the legal corridor, socio-technical infrastructure, resources to attract capital, science and technology investors, and production and trade to achieve specific goals<sup>11</sup>.

### **Investment Attraction for Innovative City Development**

Innovative city development is an urban development trend in developed countries where the world is entering the 4.0 technology revolution. Internet of Things (IoT), Big Data, and artificial intelligence (AI) are applied to urban management, providing services to people, resource management, and environmental management to improve the quality of public services and improve the quality of life for the community.

Lai and partners (2020) have systematized some typical investment projects for the innovative city development of a similar country to Vietnam. Konza City of the Republic of Kenya will be a smart city focusing on projects providing information and Communication Technology networks. Through this platform, Konza City will be able to connect services and effectively manage those services on a large scale to provide utilities such as traffic, environment, security, order, information communication, and people convenient access to the management

<sup>7</sup> National Assembly (2005), Investment Law, Hanoi.

<sup>8</sup> National Assembly (2014), Investment Law, Hanoi.

<sup>9</sup> National Assembly (2020), Law on Investment, Hanoi..

<sup>10</sup> Kevin A. Hasset (2008, 2nd ed.). "Investment" The Concise Encyclopedia of Economics. *Library of Economics and Liberty*

<sup>11</sup> Nguyen Thi Huyen Quyen (2015), "Attracting investment capital in industry in Dak Lak province", Da Nang University.



and operation of the city government<sup>12</sup>. In addition, the author mentioned some intelligent urban development projects in countries such as China, Dubai, Hong Kong, and Japan. However, these are countries and territories with higher economic conditions than Vietnam.

This article agrees with the scholars mentioned above about six main groups of pillars/characteristics, which will determine what intelligent cities need, including state management activities of the government, or "E-Government", "Smart Government" play the leading role<sup>13</sup>.

This article is not intended to clarify the definition of the term "Smart City". The author focuses on researching the need to mobilize resources to invest in supporting fields to build a smart city, which the Government of Vietnam identifies as a group of solutions. Innovative urban infrastructure development needs resources from society to invest in, especially reputable investors with potential, management ability, experience in human resource training, and research development, especially in foreign direct investment (FDI) from important information and communication technology industry groups.

### **Factors Affecting Investment Attraction for Innovative City Development**

Most intelligent urban construction projects such as Ho Chi Minh City, Da Nang, Bac Ninh, Lam Dong (Da Lat City), and even Kien Giang focus on building five cities. The following parts and applications: (1) Urban connection; (2) Intelligent traffic system; (3) Intelligent water supply system; (4) Smart drainage system; (5) Intelligent food safety control.

The author inherits the research on the factors affecting investment attraction results in general and considers appropriate investment in building smart cities from the published works.

#### *- Eclectic theory (OLI theory)*

OLI: Ownership Advantages; Location Advantage – country-specific advantages; Internalization Incentives. This theory has been elaborated by Dunning, which covers the main elements of many different works in which emphasizes the three most necessary conditions for an enterprise to be motivated to invest. Multinational companies need to possess advanced technology and assets to give them a high edge. Once their technological, operational, organizational, and financial capabilities are strong enough, they choose investment methods to enter the market with more potential risks and promise to bring profits to the potential market.

#### *- The theory of comparative advantage of industries and fields*

The theory of comparative advantage of David Ricardo (1772-1823) states that each country specializing in some industry or some areas has a comparative advantage over another country. Comparative advantage occurs when countries specialize in production in a few industries (several sectors or products) with the most significant profit or negligible disadvantage.

Behrooz Shahmoradi and Mostafa Baghbanyan (2011) studied factors affecting FDI flows to 25 developing countries from 1990 to 2007. The analysis results show the market size and the opening of the economy.

#### *- Factors affecting the investment decision of foreign investors*

Three factors directly affect the attraction of FDI in Vietnam: the policy framework, the engine for finding markets, and the engine for finding resources (Phan Thi Quoc Huong,

<sup>12</sup> Chun Sing Lai et al (2020), "A Review of Technical Standards for Smart Cities".

<sup>13</sup> People's Committee of Kien Giang Province (2017), Decision No. 830/QD-UBND on approving the Project to build a smart city in Phu Quoc, Kien Giang province in the 2016-2020 period.

2014). Nguyen (2010) has pointed out several factors such as technical infrastructure, incentives, and support from local authorities. Low operating costs are the most critical factors that affect decisive factors when foreign investors consider choosing an investment location in Vietnam. Next, the potential market, the abundance of human resources, and natural resources are also considered. Finally, geographical location and social infrastructure appear less important than other factors.

Synthesis of theories and studies on factors affecting investment attraction for intelligent city construction can see that there are many critical influencing factors as follows: urban connectivity; intelligent transportation system; intelligent water supply and drainage system; environmental control and intelligent food safety, favorable and open macroeconomic institutional environment, complete and modern social environment. Within the scope of the article, the author reviews the research results of the works and builds a table of influencing factors as follows, in which PCI represents a convenient and open macroeconomic institutional environment; the social environment.

Table 1  
*Factors Affecting Investment Attraction*

Factors	Observable variables	Author	Impact
(1) Infrastructure and services	<ul style="list-style-type: none"> <li>- Information and communication infrastructure.</li> <li>- Transportation infrastructure.</li> <li>- Downgrading the system of providing electricity and water services,</li> <li>- Banking system.</li> </ul>	Nguyen Manh Toan (2010); GHOST. Boermans, H. Toelfsma et al. (2011); K. Liu, D. Kevin et al. (2012); Santangelo Grazia D (2017); Chen FeiFei (2009); Licai Lv, Simei Wen et al. (2010); A. Hasnah, A. Sanep et al. (2010).	Positive impact on investor decision
(2). Natural condition	<ul style="list-style-type: none"> <li>- Geographical location.</li> <li>- Land, climate.</li> <li>- Natural resources.</li> </ul>	Sarbajit Chaudhuri, Dibyendu Banerjee (2010); S.L Brainard (1997). P. Krugman (1991). Christine Husmann and Zaneta Kubik (2019), A.W. Don (2007) , B Fawaz (2009). Santangelo Grazia D (2017); Licai Lv, Simei Wen et al. (2010); Chen Fei Fei (2009); Addo Addo Missama (2010); Sarbajit Chaudhuri and Dibyendu Banerjee (2010), Deepak Kumar Adhana (2016); Christine Husmann and Zaneta Kubik (2019); B Fawaz (2009); U.Z. Khair, S. Hashim et al. (2006); Zingwena Taurai (2014); E. Asiedu (2002) T Brahmasrene and K Jiranyakul (2001).	Positive impact on investor decision
(3). Macro-economic environment	<ul style="list-style-type: none"> <li>- Market size</li> <li>- Economic growth</li> <li>- Inflationary</li> <li>- Exchange rate</li> <li>- Rate of return on invested capital</li> </ul>	M.A. Boermans, H. Toelfsma et al. (2011); N.P.Lan (2006), Chen Fei Fei (2009); Sarbajit Chaudhuri and Dibyendu Banerjee (2010); Le Tuan Loc and Nguyen Thi Tuyet (2013); A. W. Don (2007); Santangelo Grazia D (2017); Deepak	Positive impact on investor decision
(4). The social environment	<ul style="list-style-type: none"> <li>- Labor cost</li> <li>- Education level</li> <li>- Available labor</li> <li>- Ability to absorb and apply</li> <li>- Customs and habits</li> </ul>	M.A. Boermans, H. Toelfsma et al. (2011); N.P.Lan (2006), Chen Fei Fei (2009); Sarbajit Chaudhuri and Dibyendu Banerjee (2010); Le Tuan Loc and Nguyen Thi Tuyet (2013); A. W. Don (2007); Santangelo Grazia D (2017); Deepak	Positive impact on investor decision

<b>(5). Institutions and policies</b>	<ul style="list-style-type: none"> <li>- Administrative procedures.</li> <li>- Incentives.</li> <li>- Export policy.</li> <li>- Labor contract.</li> </ul>	<p>Kumar Adhana (2016)  A. Bevan, S. Estrin et al. (2004); R. Mudambi and P. Navara (2002); SAING Chan hang, HEM Socheth et al. (2012); Dadson Awunyo Vitor and Ruby Adjoa Sackey (2018); Lê Tuấn Lộc and Nguyễn Thị Tuyết (2013); C. Zhou, A. Delios et al. (2002); Christine Husmann and Zaneta Kubik (2019); Laura Carolia Pedraza Robles (2012)  Licai Lv, Simei Wen et al. (2010); A. W. Don (2007); K.E. Meyer and H.V. Nguyen (2005); Roderick Campbell, Tristan Knowles, et al. (2012).</p>	Positive impact on investor decision
<b>(6). Provincial Competitiveness Index (PCI)</b>	<ul style="list-style-type: none"> <li>- Market entry costs;</li> <li>- Index of Land Access and Land Use Stability;</li> <li>- Index of transparency and access to information;</li> <li>- Time costs to implement state regulations;</li> <li>- Informal expenses;</li> <li>- Fair competition;</li> <li>- The dynamism and pioneering of the provincial government;</li> <li>- Business support services;</li> <li>- Labor training;</li> <li>- Legal institution</li> </ul>	<ul style="list-style-type: none"> <li>- Nguyen Van Phuc et al. (2011); Nguyen Minh Ha et al. (2014)<sup>14</sup>; Nguyen Thach Dang (2017)<sup>15</sup>; Ho Thi Hien (2018)<sup>16</sup></li> </ul>	<ul style="list-style-type: none"> <li>- Nguyen Van Phuc and partners (2011): There are two indicators of FDI impact: Legal Institutions and Business Support Services.</li> <li>- Nguyen Minh Ha and partners (2014): there are 02 indicators of FDI impact: Access to land; legal institutions.</li> <li>- The remaining studies only focus on inheriting PCI data (no survey) and are not conclusive.</li> </ul>

Source: Compiled by the author.

## The Current Situation of Attracting Investment for the Development of Phu Quoc Smart City in the Recent Period

### *Phu Quoc Intelligent City Construction Project*

Developing Phu Quoc into a unique island city with different values; a center of tourism, resort, and high-quality services, attractive to domestic and international tourists. It will also be a regional and international trade and service center, a quality living space, and an area with a strategic location for national defense and security.

<sup>14</sup> Nguyen Minh Ha et al (2014), Components of the Provincial Competitiveness Index and their impact on attracting foreign direct investment in localities of Vietnam, Journal of Economics and Politics world number 5 (217) 2014.

<sup>15</sup> Nguyen Thach Dang (2017), Improving competitiveness to attract foreign direct investment in Hai Phong city, Asia-Pacific Economic Review (March 2017)

<sup>16</sup> Ho Thi Hien (2018), Improving the environment to attract foreign direct investment in Nghe An. Doctoral Thesis, Academy of Social Sciences.



In order to properly implement the goals and criteria of building a smart city, Phu Quoc needs to approach and implement the construction of a smart city, mainly with e-Government as the focus and more innovative development of several standards, conditions, and possible resources of Phu Quoc in each period, starting to orient and establish specific steps for the roadmap to becoming a smart city is necessary and meaningful, significant meaning in the cause of construction, sustainable and long-term development of the locality. Building Phu Quoc is a smart city by combining information technology as tools and innovative methods based on digital, telecommunications, and the internet to make the city government bright and smarter. The living environment and production and business activities become complete. In other words, building Phu Quoc smart city focuses on perfecting telecommunications - information technology infrastructure, perfecting e-Government, and focusing on criteria on urban management, transportation traffic, tourism, environment, ensuring safety, security, and social order.

According to the Phu Quoc Smart City Construction Project, the investment will be focused on modern and widespread infrastructure, anytime, anywhere, to satisfy the needs of using telecommunications - information technology to serve service packages to residents and visitors<sup>17</sup>, including the followings:

#### ***Smart Operation Center***

The Smart Operations Center helps Phu Quoc's leaders and authorities monitor and manage city services better by providing comprehensive information on daily operations through data management. Data centralization and analysis of information; help city agencies prepare for problems as they arise; allowing authorities to communicate, discuss, and synchronize information in real-time easily, perform tasks such as rescue, and respond quickly by sending accurate tasks to the sub-department. Information about time and place; facilitate cross-decision making between authorities since the Smart Operations Center is the convergence of information of the fields, thereby helping to improve the quality of services for citizens. At the same time, reduce cost and time; automatic abnormal event alerts between city agencies; Optimize operations from pre-planning, including ad-hoc operations, through comprehensive reports. Human resources participate in advanced administration, accumulate experience handling situations, and share information on a standard management system. Beneficiaries are individuals/organizations, tourists, and government agencies. It is straightforward with devices used to access App Safe City on mobile devices such as phones, computers, and laptops. Services are provided in such areas as security and social safety; Prevention of social evils; fire prevention, emergency response, search and rescue; domestic violence prevention and control; ambulance; tourism support and services; urban order; market management; food safety and hygiene; environment; management of information technology applications.

#### ***E-Government System***

It is an automatic connection between administrative levels and shared documents received directly at the one-stop online department, called online public service convenient for people and the government. This model allows linking records with transactions at related processing departments, helping all business processing information be encrypted according to each record. Users can use a friendly interface, ensuring simple access to popular Web browsers such as IE, Firefox, Chrome, Opera

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<sup>17</sup> People's Committee of Kien Giang Province (2017), Decision No. 830/QD-UBND on approving the Project of Building a Smart City in Phu Quoc, Kien Giang Province in the 2016-2020 period

***Smart Travel System***

Visitors will access tourism services easily through applications (App). The government can manage tourism resources such as destinations and historical sites. Continuous monitoring of festival activities and ongoing events; manage business activities of tourism services such as accommodation, catering, entertainment, and transportation; On the contrary, businesses have the opportunity to promote products and services closer to customers, thereby demonstrating responsibility and a sense of building image, brand, and prestige.

***Environmental Monitoring System***

A network of monitoring air quality and environmental quality will be built with this system. From there, analyze environmental data on Phu Quoc island. Warn air quality to know the actual status of pollution affecting human health; water quality warnings help state agencies manage more effectively.

***Evaluate Initial Results***

Up to now, the project to build a smart city in Phu Quoc has started to operate synchronously with the first phase components, such as Phu Quoc's e-government system provides nearly 450 public administrative procedures at district level 3; an intelligent traffic system; this system is monitoring and recording images of vehicles participating in traffic. In addition, this system also helps to monitor public areas and vital residential areas with many useful features such as surveillance, intrusion detection warning, and suspicious object monitoring. The system effectively supports ensuring security and order in the area. Next is the safe city solution with many mobile applications that help people report incidents (accidents, thefts, violations of urban security order) to management agencies and help responsible agencies and forces quickly receive, dispatch, and handle. The accommodation management has also been done online. The system has now been deployed and officially used for Phu Quoc police and accommodation facilities in the area. In Phu Quoc, four air monitoring stations and one water source monitoring station have been tested for the environment. Currently, the stations measure the main parameters for the air and the water source.

However, building a smart city is a long-term process with much work to be done shortly. Continue to implement the contents of the project in the next phase, ensuring it is consistent with the development trend, the actual situation in Phu Quoc, and the project's roadmap according to 6 groups of pillars/main characteristics of a smart cities project, including (1) innovative governance, (2) smart economy, (3) smart transportation, (4) innovative environment, (5) intelligent people, and (6) intelligent life.

***The Actual Situation of Attracting Investment to Build Phu Quoc Smart City***

Statistics show that as of December 20, 2020, Phu Quoc city has attracted about 372 investment projects, with a total registered capital of about 16.5 billion USD in investment from domestic and foreign investors. However, most of the capital inflows into Phu Quoc come from domestic investors such as large economic groups such as Vin Group, Sun Group, BIM Group, CEO group, MIK Group, and Milltol investing in tourism, and entertainment, hotels, restaurant services.

Table 2

*Attractive Local Investment in the Country in Phu Quoc - Kien Giang By Industry - accumulated as of December 20, 2020 (Source: Management Board of Phu Quoc Economic Zone-Kien Giang)*

Sectors	Quantity of Projects	Registered capital (Millions USD)	The proportion of total registered capital (%)
Real estate business	57	2.259	13.92
Accommodation and food service	31	294	1.81
Warehousing transportation	11	1345	8.29
Education and training	17	970	5.98
Agriculture, forestry, and seafood	23	123	0.76
Science and technology activities	6	24	0.15
Arts and entertainment activities	6	1.172	7.22
Water supply, wastewater treatment	11	278	1.71
Administrative, support services activities	6	131	0.81
Other service activities	170	9625	59.33
<b>Total</b>	<b>337</b>	<b>16.221</b>	<b>100%</b>

On December 20, 2020, there are 35 FDI projects in Phu Quoc, with a total registered capital of 278,844 USD for seven industries/fields from 14 countries and territories<sup>18</sup>, in the following industries/fields:

Table 3

*Foreign Direct Investment (FDI) In Phu Quoc - Kien Giang (By industry - accumulated as of December 20, 2020)*

Sectors	Quantity of Projects	Registered capital (Millions USD)
Trading, repairing cars and motorbikes	1	0.063
Accommodation and food service	6	55.685
Education and training	2	21.609
Other service activities	15	140.119
Agriculture, forestry, and seafood	2	33.500
Information and communication	1	0.030
Transportation, warehousing	8	27.837
<b>Total</b>	<b>35</b>	<b>278.844</b>

Source: Management Board of Phu Quoc Economic Zone-Kien Giang

### The Limitation

In order to continue to develop a smart city on step-by-step completion of telecommunications - information technology infrastructure, Phu Quoc will focus on attracting investment in the following projects/fields: (1) Optical fiber cable to optimize the system to connect the whole island, develop and expand 4G-5G network, deploy public Wifi Internet network and tourism - social portal; (2) Medical; (3) Education; (4) Forest fire monitoring; (5) Tourism; (6) Green technical traffic infrastructure; (7) Waste treatment, urban wastewater is mobilized from the State budget, domestic and foreign investors<sup>19</sup>.

According to the analysis data in Table 3.1, the investment capital poured into Phu Quoc is very large. However, the goals of these projects are mainly in the service sector, such as tourism, entertainment, and leisure areas. Maintenance, restaurants, hotels, and real estate account for a massive proportion of investment capital. At the same time, industries/fields that support intelligent city development such as science and technology, education and training,

<sup>18</sup> Phu Quoc Economic Zone Management Board (2020), Report on foreign direct investment in 2020. Phu Quoc - Kien Giang province.

<sup>19</sup> People's Committee of Kien Giang province (2019), Plan No. 43/KH-UBND dated March 19, 2019, on the development of green growth urban areas in Kien Giang province until 2030.

environmental treatment market, health care, telecommunications, and information technology have not appeared or account for a deficient proportion, considered insignificant.

The FDI sector, with the current status of 35 projects and the registered investment capital of the FDI sector with a total registered capital of about 16.5 billion USD, shows that FDI accounts for 9.4% of projects and about 1.69 % of total investment capital in Phu Quoc is too modest, hardly exploiting domestic and foreign capital flows in fields related to innovative city development.

### ***Limitations of Attracting Investment to Build a Smart City in Phu Quoc in the Past Period***

- The group of traditional restrictions of the locality includes: geographical location quite far from major city centers, where there is potential to link investors for Phu Quoc; the proportion of untrained workers is relatively high; environmental pollution; migration (mechanical increase in population) is increasing, putting pressure on local authorities; The infrastructure system has not kept up with the requirements of innovative city development.

- Mechanisms and policies to call for investment in the FDI sector in telecommunications and information technology infrastructure are still limited because this is a sensitive field related to national security. Currently, almost this field is prioritized for domestic telecommunications corporations.

- For the investment environment of Kien Giang province, as measured by the Provincial Competitiveness Index (PCI) in 8 consecutive years of decline, specifically 2013 ranked 3/63; 2014 ranked 9/63; 2015 ranked 11/63; 2016 ranked 13/63; 2017 ranked 20/63; 2018 ranked 31/63; 2019 ranked 35/63; 2020 ranked 62/63. Within the scope of the article, because there are no conditions to study how PCI affects the results of investment attraction, but considering that Phu Quoc is a locality with almost figurative elements of the province, the group of factors that cause obstacles and discourage investors, the author uses from published studies consistent with local PCI research results, including:

- *Access to land*: investors face difficulties finding suitable production and business premises. These difficulties make businesses lose investment opportunities and limit their ability to access credit capital because there is no collateral at the bank; enterprises feel insecure about long-term land use rights.

- *Business support services*: services that play a crucial role for businesses to succeed in business activities, such as market information search services, legal advice, assistance in finding business partners, trade promotion, technology, and human resource training for investors. This factor must involve the private sector, but because there are very few private enterprises in the province engaged in providing services to support businesses in the locality, there are no conditions like other businesses

- *Legal institutions*: investors' confidence in local legal institutions is still not high, and resolving disputes or complaints about corrupt behavior of local public officials is still available and unsatisfactory for enterprises.

### **Opportunities**

- Phu Quoc has outstanding factors in terms of natural conditions and tourism that make investors especially interested: new, many beautiful scenes, natural conditions of the island are pretty favorable, and few storms, so it is very convenient to develop diversified tourism products all year round; potential fishing grounds; The forest on the island is still preserved quite a lot, creating a natural landscape and a new environment.

- Phu Quoc still retains typical and famous traditional occupations such as making fish sauce, growing pepper, cultivating pearls, processing seafood, Phu Quoc dogs, cuisine, the fishing village

- The people are friendly and hospitable, maintaining the traditional festivals. Phu Quoc people are honest, naive, hard to learn, and familiar with foreign cultures due to exchanges from tourists international and local overseas Vietnamese.

- Since January 1, 2021, Phu Quoc has become the first island city in Vietnam. With this policy, the State has created an opportunity for Phu Quoc to accelerate its development on a par with the region and the world, becoming a modern, intelligent and dynamic city. Since then, there have been many expectations of investment capital choosing Phu Quoc as the place to build projects serving the pearl island.

### **Challenges**

- Too many investment projects in tourism with high speed, while the socio-economic conditions, infrastructure, and technical facilities are still poor and unable to meet the requirements, have created many challenges. The challenge of protecting natural resources, the environment, and the management of sustainable development for Phu Quoc in the future is a huge challenge.

- There are no incentive mechanisms and policies to attract investment in smart cities, especially FDI enterprises. Accompanied by inadequacies in tax policy, capital and business environment, planning, investment management, and land management are factors affecting the investment environment in Phu Quoc, reducing attractiveness and competition with other regions.

- Currently, Phu Quoc has developed with the appearance and shape of a modern, intelligent and dynamic city that many domestic and international tourists know. With that development, the challenge is that it is necessary to have a modern, high-level urban government apparatus capable of effectively implementing all management aspects in the area.

- Tourist islands in the region, such as Koh Samui - Thailand, Langkawi - Malaysia, and Cebu - Philippines, are constantly improving to compete with Phu Quoc. They have the advantage of developing earlier, have much experience in tourism, and have a better reputation globally. It puts Phu Quoc in front of a challenge to create a unique feature: turning Phu Quoc into a smart city.

- The budget capital for public investment allocation for innovative city development is still limited.

### **Some Solutions to Promote Investment Attraction to Build Phu Quoc Smart City Shortly**

For Phu Quoc, starting to orient and set specific steps for the roadmap to becoming a smart city is necessary and very important in the cause of construction, sustainable development, and long-term development. Kien Giang province needs to have an orientation to build a smart city on the perspective and foundation of industrial revolution 4.0 and a modern institution and administration to create an ecological living environment and production and business activities. The focus must be on perfecting infrastructure, including telecommunications infrastructure, perfecting e-government, and focusing on criteria on urban management, traffic, tourism, environment, safety, social security, and order. *Suggested specific solutions include:*

*Firstly*, to issue a policy framework for controlled testing for new technologies, products, services, and business models formed from the Fourth Industrial Revolution, information



technology, electronics, and Telecommunications associated with the digital economy applies to all economic sectors at home and abroad.

Research and propose to build a unique and breakthrough mechanism to create conditions for the construction of Phu Quoc smart city, creating a solid foundation to become a major tourist, commercial, and service center with four main pillars. : "entertainment industry, resort tourism, banking, financial services, and marine economy."

*Secondly*, local investment promotion agencies need to organize sightseeing and survey delegations in other localities and abroad; participate in and organize scientific seminars and investment forums on smart urban development projects. Investment promotion activities must be continuously improved with many combination forms (traditional and online), synchronizing with promoting the local image and investment environment to be effective.

*Thirdly*, investment support includes incentives for investment in taxes and fees, ensuring investors can freely do business and invest and feel safe in terms of investment capital, and, at the same time, encourage them to invest in areas that help Phu Quoc become an intelligent city.

*Fourthly*, improving the investment environment is most evident in the Provincial Competitiveness Index (PCI) survey results. The PCI index provides valuable information for provinces and city leaders, helping them identify the most effective areas and ways of economic management.

*Fifthly*, develop a modern infrastructure system, ensure fast transportation at low cost, ensure smooth communication relations, and develop the necessary infrastructure for a smart city.

*Sixthly*, developing and securing highly qualified human resources is vital for Phu Quoc to become attractive to investors. Therefore, localities that want to attract investment capital need to identify the needs and classify the laborers so that they can provide a timely, adequate and effective labor source to meet the needs of investors.

### **CONCLUSION**

The article aims to answer how to attract domestic and foreign resources to invest in developing Phu Quoc's smart city to help Phu Quoc achieve its goal of being a smart city. The article has collected data from 2015 to 2020 to analyze the current situation of investment attraction and evaluate the implementation results of the Phu Quoc smart city construction project. From that, to point out the limitations of the locality, identify opportunities and challenges as a basis for recommending local authorities to have orientations and solutions associated with the actual conditions of the locality to harmonize and combine strategies.

The study summarizes the development experience in the past time to propose several policy solutions in which the policies and solutions must be systematic and synchronous, creating a very favorable environment for business and investment. It is also necessary to promote investment attraction associated with the application and development of science and technology to create a solid foundation to build Phu Quoc into a smart city, becoming a friendly, modern destination.

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