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Caofeidian Modern Service Industry – Development Strategy

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Table of Contents

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Thank you.
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Executive Summary

This report serves to assist Caofeidian Industrial Zone in its endeavour to develop its tertiary industry so as to help pave its way towards achieving its strategic vision of becoming a global leader. It briefly introduces Caofeidian before examining the theoretical background necessary for understanding the service sector which the area desires. It also provides an analytical perspective on issues which can be overcome by Caofeidian to arrive at a holistic and ideal developmental plan.

Its most important findings indicate that current demands for services are not met and hence, are indirectly hindering the growth of the tertiary sector. It is essential for such basic and public services to first be supplied in order to meet basic human needs so as to allow Caofeidian to move forward in its quest for a modern service industry.

Other significant findings include various challenges which are preventing Caofeidian from achieving its goals of retaining people and expanding its present population size. These threats and issues, together with case study models from Singapore and Tianjin, are then used to design our recommendations for Caofeidian.

Key recommendations are proposed to be implemented in two phases to ensure that both short and long term goals of Caofeidian are met. The most important recommendation suggests that Caofeidian establishes a strong foundation in the service industry by first ensuring all basic and public service needs and wants are met. Other significant recommendations include building a conducive business and living environment while rapidly innovating and utilising technology.

1.0 Introduction to Caofeidian (CFD)

The development of Caofeidian (CFD) is one of the largest scale eco-city projects directed by the China government. The area consists of an industrial development zone and a residential area in line with the philosophy of modern city planning with eco-friendliness in mind. This section of the report will provide background information of CFD and a brief description of how CFD has developed and its strategic vision.

1.1 Background Information

Located offshore to the south of Tangshan, Hebei province, CFD is a belt-like alluvial sandy isle that formed over 5,000 years ago under the lashing force of the ancient Luanhe River. Free from silt and frozen ice, the water and its bank are deep and steep at CFD. 500 metres offshore, the water depth reaches 25 metres. The trough in front of the isle, the deepest point of the Bohai Sea, is as deep as 36 metres. In addition, a 27-metre deep natural water channel amid the Bohai Sea extends from CFD directly into the Huanghai Sea. The deep trough and naturally-joint water channels provide enhanced advantages for over 400,000-ton deep-water terminals. On shore, over 1400km2 tidal flat land provides adequate land space for the development of port industries and cities through land reclamation.

In addition, CFD is advantageously located in the vital position of the Bohai circle, acting as the front door and strategic passageway to northeast Asia and Pacific Areas. It is also the starting point of the Asian-European continental bridge which links the Hinterland of China with Middle-Asia, West Asia and Europe. In China, CFD lies adjacent to the city cluster of Beijing, Tianjin and other cities in the Hebei province. It is serviced by well-developed and efficient transportation facilities and is conveniently located 80km off Tangshan downtown, 120km to Tianjin, 170km to Qinhuangdao and 220km away from Beijing.

CFD also boasts strong port logistics which radiate to broad areas of northeast, northwest and several other areas of China. Rich natural and social resources in those areas provide strong support for the logistics and the industry cluster construction of CFD. Furthermore, its close proximity to the heavy industries of Beijing, Tianjin and Tangshan allows CFD to enjoy the

benefits of the richest resources, concentrated industries and strongest economies in the Bohai Circle Region. The level of internationalisation, technological advantages and convenient transportation in this area is the vital impetus for the development of the port of CFD port-adjoining industries.

1.2 Brief History and its Development

In 1992, CFD, with humble beginnings, was introduced as a coastal port for the iron industry. Shortly after, in 2000-2001, CFD began to receive strong support from the Chinese government. This marked the start of better utilisation of its resources and the expansion of its deep water port to become a vital element in the tenth 5-year strategic development plan of Hebei province in China. In addition, CFD became the first of four projects implemented to "rejuvenate" Tangshan city in 2002.

Projects to develop CFD soon gained immense popularity amongst the Chinese population and was highly ranked in Hebei province, claiming the title of the 'number one project' in 2003. Continuous development in the area also witnessed the construction of buildings and roads, providing employment for residents from surrounding cities. By 2006, CFD had gained a significant role in the government's eleventh 5-year development plan.

Furthermore, the devotion and attention paid to the construction of CFD by national and provincial leaders was exceptional, allowing CFD to progress at a pace faster than it otherwise would. In 2006, the importance of the growth and development of CFD was further emphasised and supported by the Chinese central government. Mr. Hu Jintao, secretary-general of the Central Party Committee, declared CFD as a "golden land" with "great potential in the development of Tangshan and Hebei province, having an important status in [the] national economy". Additionally, Mr Wen Jiabao, premier of the state council, inspected CFD and expressed his hopes for the area to be built into a "shining pearl" with "high standards, high quality and high-level development".

Therefore, in the short span of less than ten years, CFD has grown quickly and is now an essential part of the development of Hebei province and the greater China. Under the

powerful support of the government and its people, CFD, together with its high standards of development, is undoubtedly and rapidly approaching success.

1.3 Strategic Vision and Current Service Industry

The overall vision of CFD is to be a world-renowned, modern, people-focused, prosperous, climate-neutral and environmentally sustainable society. Under the support of the Chinese government, together with its newly-announced environmental policies, CFD is moving quickly towards achieving its goals through rapid developments and significant levels of investments. In addition, many industrial projects which take into account the need to be eco-friendly have been attracted to CFD, consolidating its image as an eco-city.

However, since its beginnings, CFD has placed heavy emphasis on the growth and development of its manufacturing industries. With the advent of industrialisation and globalisation, CFD has, in recent years, noted the benefits of a developed modern service industry and have since strongly desired to develop and integrate the tertiary sector portfolio with its secondary industries. Unfortunately, despite the importance and demand for various services, CFD is experiencing several challenges and barriers which are hindering the growth of its tertiary sector. This report will therefore serve to help CFD in its venture to overcome these obstacles by assisting in the development of its tertiary industry.

2.0 Project Definition and Overview

This project is focused on studying and developing a strategy on the development of the service industry in CFD Industrial Zone for which demands and needs for services are not met. This report will thus provide solutions for the area to achieve its long term goals and demand for a Modern Service Industry to be integrated into its current manufacturing industries. It will consist of four main components:

- **Literature review:** By examining existing literature, we will provide theoretical background and insight into the importance of the tertiary sector and the modern service industry.
- **Analysis of CFD:** Through a thorough analysis of the area, we will identify key issues and opportunities for CFD to which we will base our recommendations on.
- **Comparison analysis:** This will allow us to demonstrate how similar areas have achieved success, and hence, how CFD, like the selected regions, can arrive at its goals on a more realistic basis and scale.
- **Implementation:** Based on our findings from the above elements, we will put forward recommendations and an action plan for CFD to realise both its short and long term goals and objectives.

2.1 Project Objectives

The main objective of this project is to address the issues which CFD Industrial Zone currently faces in order to determine recommendations and formulate a strategic plan for the area to overcome current challenges. We seek to provide CFD with suitable and appropriate strategies which can assist them in achieving their goals and strategic vision of creating a modern service industry. In doing so, CFD Industrial Zone will be able to reap long-term benefits from its tertiary sector while remaining in line with its eco-city concept. Therefore, we derive two set of strategies from both short-term and long-term perspectives, which would be beneficial to CFD in its quest to develop a modern service industry and become a global leader:

- Development of public and basic services, which provides a strong foundation, to establish a desirable living environment. A desirable living environment can increase the willingness of people to move to, stay and live in CFD; and
- Modern service industries can then be introduced and developed, by increasing its population size through attraction and further retention of more residents, businesses and visitors.

This paper will cover an analytical study of the current situation in CFD by undertaking a comparison against other successful industrial eco-ports. From the case studies, it will provide strategic recommendations on improving the availability and quality of current services in CFD. Finally, it will examine viable longer-term modern service options for further developmental purposes.

3.0 Literature Review

3.1 Service Industry

The service industry, also known as the tertiary sector, has experienced phenomenal growth in industrialised economies all over the world in recent decades (Kaynak 1986; Lovelock 2001; Sternberg 2010). Research has shown that services make up approximately 60% of global output, 30% of global employment and almost 20% of international trade (World Bank 2009). In addition, further examination on the industrial and economic structures of modern economies reveal a rapid decrease in the manufacturing employment and activities which has been parallel to elevated growth of service economies (Man, Zhang & Song 2008). Service industries now account for an estimated 80% of national GDP in developed countries (OECD 2010). These figures indicate that the standards and availability of a tertiary sector is positively related to trade and economic growth and development of a country (Australian Government Department of Foreign Affairs and Trade 2009).

According to Graedel (1998), similar to its manufacturing counterpart, services are subjected to four main life stages – site and service development, service provisioning, service performance and facility operations and lastly, site and service closure. However, unlike manufacturing industries in which added value is realised in a tangible manner and in the transfer of a material or commodity from one owner to another, the service industry undertakes different approaches towards customer needs and wants. Added value in services involves providing an intangible function or activity that does not encompass the transfer of material or finished physical products (Kandampully 2001).

Unfortunately, in many developing countries, demands and needs for services are often not met and/or neglected. This has also negatively impacted upon such economies in which demand for services has been escalating while existing supply has not been able to cope (Kaynak 1982). Unmet needs and expectations can often be a result of certain hurdles to boosting service economies which are common across many developing countries (Feldman et. al. 2006). For example, educational institutions which are vital in educating and producing productive service workers require time to build and establish. Also, issues such as trust, may

hinder the growth of service economies as it lowers the level of patronage and public support necessary for survival (World Bank 2009). Contrary to a manufacturing economy in which transactions are made in exchange for tangible products, a service economy requires cash to be handed over with the expectation that a service is performed sometime in the future (Kandampully 2001). In addition, developing economies add another potentially crippling barrier – politics. Strict policies and inadequate infrastructure prevent the development of service industries in developing nations (Sternberg 2010).

Nevertheless, it is of paramount importance that developing countries capture and optimise opportunities for maximising economic development and growth through the expansion of their service industries. The role of the tertiary sector needs to be fully recognised in developing economies as it contributes significantly by providing employment and generating income. This aids in raising standards of living and contributes to economic growth through higher investment and revenue levels (Dowling et. al. 2009). Furthermore, with the advent of globalisation and technology advancements, there is now high feasibility and advantages of expanding the service sector in developing countries (Garbackz & Thompson Jr. 2007). Therefore, it is imperative for developing nations to overcome their respective barriers in order to expand their presence on the global stage.

There are three main categories of services in the tertiary sector (Chaoxian Li 2006):

- **Production services:** including finance, e-business, agriculture support service as well as professional service including brokerage and consulting service.
- **Consumer services:** including education, medicine and health, boarding, ·food and beverage, culture and entertainment, travel, real estate, retails.
- **Public services:** including public management service, basic education, and public health, Medicare and general information service of government.

For the purpose of this project, we will refer to “basic services” as fundamental services comprising of all three categories mentioned above.

3.2 Modern Service Industry

The term “Modern Service Industry” was first used in the report of the 15th Central Committee of the Communist Party of China in 1997. It refers to a service industry characterised by its intensive utilisation of technology and knowledge. Together with widespread industrialisation and joint innovations in information technologies and modern management concepts, the modern service industry has evolved dramatically (ref). A key feature of the modern service industry is the focus and emphasis on raising value-addedness in the entire industry to enhance the overall quality of economies.

Like its traditional counterpart, the modern service industry plays an important role in promoting economic growth and sustainable social development across nations. However, development of such an industry requires large-scale quality talents equipped with comprehensive knowledge in business, management and information technology who can assist in transforming and integrating both old and new skills. Competition is also necessary to help businesses constantly raise new value for customers through the provision of differentiated offerings.

In this way, the development of the modern service industry allows for more jobs to be created while raising living standards and quality of life for people. Unfortunately, in comparison with its developed counterparts whose service industries make up an estimated 80 percent of national GDP, China’s current service industry accounts for only 40 percent of its GDP. However, with the direct support of the Chinese government through the implementation of government policies such as the eleventh 5-year plan, China’s tertiary industry will make up over 50 percent of its GDP by 2020 (Baron JC Pfetten, Iseux 2009).

4.0 Approach

The approach undertaken for this project comprised of four activities with the main purpose of gathering as much relevant information as we can from various sources to assist us in providing CFD with a more holistic proposal in overcoming existing issues as it strives towards achieving excellence. The following four activities are carried out to let us know more about Caofeidian and the situation of its modern service.

- Pre-trip research
- Interview
- Questionnaire
- On-site observation

4.1 Data Collection Plan

Objectives and Scope:

This data collection plan is a plan to investigate and gather information of the modern services in Caofeidian (CFD) through different data collection activities. Collected data can facilitate us to have a better understanding of existing CFD and its future. Findings are used to analyze and define our strategic plan on developing modern services industry in CFD.

Stakeholders:

CFD's residents play significant roles to its future development, thus, their values must be recognized. Stake parties in this project include; government, corporations, employees and their families. The utmost benefits accounting for all parties have to be realized for the success of the proposed strategy. Due to time is limited in this research, only the government, government officers and employees of state-owned enterprises are included in this study. There may be a bias on the preference analysis of CFD in this study.

Period of Data Collection Activities:

Background researches on CFD and other industrial zones are conducted from 15 May 2010 to 25 June 2010. On-site data collection is conducted from 28 June 2010 to 29 June 2010. *(Please refer to section 10.1 in the appendices for the detailed our activities log.)*

List of Collection Items:

Item ID	Collection item name	Inputs	Outputs	Related clients
BR	Pre-trip research	Research papers of modern service industries Research papers of CFD and official information provided by CFD Research papers of other industrial eco-ports Emails from CFD government officers	Understanding on CFD, the history and strategic plans of other industrial eco-ports, and modern service industries.	Government office
IP	Interview Protocols	Interview questions	Answers provided by Interviewees	Government officers
QP	Questionnaire Protocols	Questionnaires	Scored preference analysis (the indexes of the satisfactions on residents' living standards, their current needs and future needs in CFD), BCG matrix.	Government officers, employees of state-owned enterprises.
OB	On-site Observation	Observe the living standard and the environment of CFD.	Reports, Photos	

(Please refer to section 10.2 in the appendices for check list of collection items.)

4.2 Pre-trip Research

Before the trip to CFD, we sourced through available CFD documents, its official website and other journal articles which supplied us with the background information necessary for understanding CFD, the Chinese government and its business environment. In addition, we selected to analyse Singapore and Tianjin to act as case studies and possible role models for recommendations towards the development of the service sector in CFD. Singapore and Tianjin, highly similar to CFD in many aspects, would provide us with key success factors which could be applied to and potentially help CFD achieve its goals in a manner parallel to that of the two cities.

4.3 Interview Protocols

As the time of this residential trip is very limited in CFD, we focus on the in-depth interviews with CFD contact person for modern service industry. She helps to collect and collaborate the information from different bureaus.

Key Interview Data	
Name of Interviewee	柳岩　(Liu Yan)
Title/ Department	發展改革局 (Development and Reforrmation Bureau)
Date and Time of Interview	28th June p.m., 29th June p.m.
Duration	Around 5 hours
Location of Interview	Office of the Development and Reformation Bureau
Name of interviewer	Sherry, Catherine, Gary, Madeline
Objectives/Desired Outcomes	
Objectives	Identify the challenge of CFD's modern service industry. Gather the statistic information of CFD. Gather the information of their planned service development projects and infrastructural planning. Gather the information of CFD's supportive strategy on inviting private or foreign enterprises.
Background on the Interviewee	
Scope of Responsibility	Draft and organize the implementation of the regional economic and social development plans and annual guidance program. Propose strategies on regional economic development, investment and financing for building an industrial area of scientific development and circular economy demonstration area. Plan, implement and supervise the key projects for regional development. Be responsible for the administration work of CFD industrial area, and the economic and social services management system. Research and reform their operational mechanism. Be responsible for the population, statistics, living environment, technology, culture, education, health, sports, civil defense, hydrological and meteorological issues in CFD.

Documentation Plan	
How will the data be used?	To illustrate key information of the existing situation and undergoing project status. To provide solid baseline at proposed solutions with concrete quantities.
How does this information relate to the analysis?	Identify which service industries are the most essential to CFD. Indentify the gap between current situations and expected situations. Provide a measurable indicator and numerical information for the baseline and target.
Questions / Topics are covered *(Please refer to section 10.3 in the appendices for the interview log.)*	
Questions	1. Populations and statistics in CFD: e.g. Ratio of mobile residence; ratio of service industry employees; percentage of mobility 2. Supportive infrastructure: e.g. Power, water supply, telecommunications 3. Current situation of services provided in CFD: e.g. residential area, public transportation 4. Concern on further industry development: e.g. Eco-friendly concern, foreign investment strategy, government macro-control

4.4 Questionnaire Protocol

As the time of this residential trip is very limited in CFD, we deliver our questionnaires to the government officers and the employees of state-owned enterprises only.

Key Questionnaire Data	
Targets of Questionnaire	50 government officers and 50 employees of state-owned enterprises
Date and Time of Interview	28th June and 29th June
Duration	2 days
Objectives/Desired Outcomes	
Objectives	Gather the information of the satisfactions on residents' living standards, their current needs and future needs in CFD.
Documentation Plan	
How will the data be used?	To estimate the satisfaction indexes of CFD residents'

	living standards and modern services.
How does this information relate to the analysis?	To prioritize the services for satisfying the needs of CFD residents.
Questions / Topics to be covered *(Please refer to section 10.4 in the appendices for the questionnaire sample.)*	
Questions	1. How satisfied to their current living standards in CFD. 2. How satisfied to the modern services in CFD. 3. Which services should be improved to raise the standard of living? 4. Which services should be improved to enhance levels of recreation?

4.5 On-Site Observation

A visit to CFD was conducted during the period of 27th June to 2nd July. During this time, we participated in a multitude of activities which further enabled us to understand and witness not only the existing obstacles which CFD is experiencing, but also the ongoing development of the Industrial Zone. By doing so, we came to understand the business environment in CFD and the various procedures involved in setting up service.

5.0 Case Studies

5.1 Singapore

Singapore was selected to serve as a case study due the many similarities it shares with CFD Industrial Zone. Both cities not only witness strong governmental support in regards to development efforts, but each also enjoys a strategic location and act as important ports in their respective regions. Furthermore, as a global port and leader in the environmental and corporate world, Singapore was once where CFD stands today. Therefore, it was selected to be a showcase for sustainable development in CFD and also as a template and guide for our recommendations which will aid CFD in its struggle for rapid economic growth.

A SWOT-PESTEL analysis of Singapore was performed in the same manner as that of CFD's. From it, the key drivers of success were derived and summarised in the following table.

Singapore's Modern Service Industry – Key Drivers of Success

Aspect	**Key Drivers of Success**	**How they Enable Success**
Political	Open and liberal policies Strong governmental support	Encourage and attract/increase foreign investments High proportion of foreign talent who brings with them expertise, skills and knowledge, contributing to a more productive workforce
Economic	Established business environment Sound economic policies Stable Singapore Dollar	Many services in the service industry resulting in competition Raises quality and standards of services Decreases prices for consumers
Social	Well-educated population High standards of living Safe – low crime rates	Retains foreign talents Benefits the service industry which often has high turnover rates
Technological	High-tech society Utilisation and availability of rapid advancements in products and services	Drives efficiency Advanced information gained by electronic means puts Singapore in the lead with the latest developments in its service industry eg. the newly built IRs
Environmental	Good geographical location	Sustainable and respectable business practices

	"Green city"	Satisfies growing demand and expectations of environmental concern
Legal	Strict laws	Discourages corrupt business practices Allows service industry to flourish without deterring potential investors

5.2 Tianjin

Like Singapore, Tianjin was selected as a case study due to the similarities it shares with CFD. Tianjin Economic - Technological Development Area (TEDA) is an area similar to CFD; acted as sea port for logistic, a member of Bohai economic circle, it is world recognized of its success, thus, CFD should gain insight learning from TEDA's development path. Furthermore, TEDA and CFD are located not far from each other; both located in Hebei province, acting as a 'Jin triangle' accounting Beijing. Being in the same province and country suggest similar structures in terms of its political, economical, social, technological, environmental and legal influence. This leaves CFD in an advantageous position as it can leverage the benefits Tianjin currently enjoys by learning from Tianjin's experiences and developmental process.

The Tianjin from 30 years ago is a reflection of the current CFD. Therefore, the history of Tianjin's development acts as lessons which CFD can apply to its current strategic planning process. As of now, CFD is also a player of Bohai economic circle, with Tianjin as a co-operative partner. CFD's weakness illustrated in the economic, social and technological aspect are; the tension of nurturing businesses and trades, the low retention and attraction rates of talents due to low living standard and weaknesses in utilizing high end technology to facilitate the efficiency in service sector. The application of the Tianjin's comparison will assist CFD in overcoming its chief threats and problems while providing valuable insight for CFD's strategic planning development.

A SWOT-PESTEL analysis of Tianjin was performed in the same manner as that of CFD's. From it, the key drivers of success were derived and summarised in the following table.

Tianjin's Modern Service Industry – Key Drivers of Success

Aspect	Key Drivers of Success	How they Enable Success
Political	Strong governmental support	Encourage and attract/increase investments High proportion of talents who bring with them expertise, skills and knowledge, contributing to a more productive workforce
Economic	Highly sophisticated business network	Generates strong business opportunities Attracts talents Results in strong economic growth
Social	Numerous highly-ranked educational institutions Educated population High standards of living	Retains talent and human resources Benefits the service industry which often has high turnover rates
Technological	High-tech society Utilisation and availability of rapid advancements in innovative products and services	Drives efficiency Drives innovation Raises quality and standards of services provided
Environmental	Good geographical location "Green city"	Sustainable and respectable business practices Strong efforts are satisfying growing demand and expectations of environmental concern

6.0 Analysis

This section will briefly describe our analysis to Caofeidian Industrial Zone with providing the background search from our literature review on service industry and case studies of world-class ports. With the analysis of our collected questionnaires and other factual information we have collected in on-site visiting, we carry out 6.2 SWOT Analysis of CFD, as well as 6.3 Comparative Analysis. These analyses assist the process of deriving service industry development strategies.

6.1 Questionnaire Data Analysis

The questionnaire is designed to quantify the satisfaction of service in CFD, aimed to establish a Key Performance Index (KPI) – named Population Satisfaction Index (PSI) – for future reference. This PSI will reflect the hypothesis for the services needed for in CFD and indicates the urgency of the services needed.

The questionnaire is conducted under random sampling techniques, the samples consist of 72 people; 30 and 42 people are government officials and corporate employees respectively. This questionnaire targets CFD's population living standards, thus, the analysis is considering corporate employees as foundation. In order to align with the project objectives; to retain and attract population to CFD, the PSI (on a scale of 1-9, being 9 are most satisfied) should maintain at least 6.5. The comparison analysis of the two sectors will provide insight to the decision makers (i.e. government officials), reflecting the suitability of current strategy on service industry.

Nevertheless, there are some limitations to these samples, which only reflect the minority of the population in CFD. The samples of this questionnaire are insufficient to make a sound conclusion of the actual needs and wants for the majority of the population in CFD. As well as, there might be human errors and biases included (e.g. corporate employees are not necessary the primary user of services). Most importantly, the sample only taken in two companies, thus, the span of the samples is not in-depth. Therefore, a further investigate is recommended to provide a holistic view of CFD's population needs and wants.

In order to create a strategy that could achieve project objectives; retain and attract talents to CFD, demographic information is first considered, this information depicts the population necessity based on the human life cycle theory (Hogan, 2009, & Westermeyer, 2004). In turn, provides an intelligent estimation of proposed services to be developed. According to Hogan (2009) and Westermeyer (2004), young adult (CFD's current population) requires a warm family environment, a mentor relationship, favourable peer group relationships, and most importantly, avoids big downward swings in their standard of living. Thus, CFD needs to provide services that create a stable environment and maintains a satisfactory level of living standards for current population, then further attracts talents from areas that has lower standard of living.

Result from the questionnaire shows majority of the population at CFD possesses high level education; 86% have a tertiary degree or higher, 14% have diploma or associate degree, and age dominantly at 26-30 years old (refer to Figure 1). This information are in line with the interview responses, the majority of the population in CFD is account as young adults, the consideration of housing services can be predicted from the Erikson's model (Westermeyer, 2004). Also, among the population, the gender of 54%, 46% male and female respectively, is a good mix that can fosters a harmonious environment for creating families and mentor relationships.

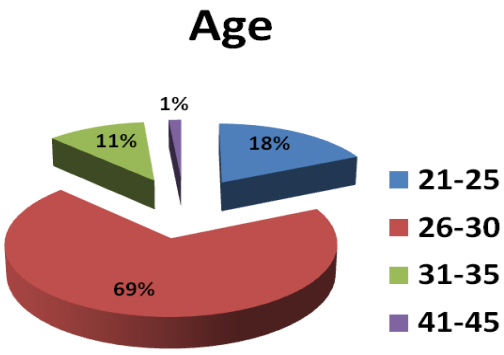


Figure 1

PSI's attributes was specifically designed to portrays the significances of the direct and indirect dimension of the services provided to CFD's population, which correlates with the project

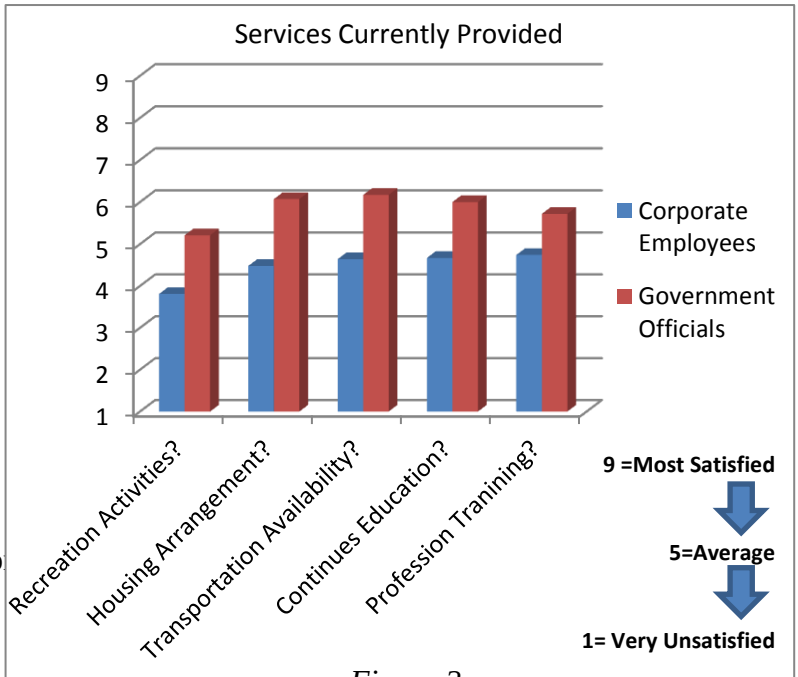


Figure 2

objectives; the satisfaction level of 'services currently provided' (the direct dimension to service industry; refers to Figure 2) will exemplifies the effectiveness of particular service sectors in achieving talent retention.

The indirect dimension attributes (refers to Figure 3 & 4) are services' that concerns with suitability and sustainability for CFD, which span across all industrial sectors (e.g. future prospect); with stochastic properties and is highly intercorrelated, that shouldn't be categorized into service classes. In related to the project scope, the indirect attributes are spanned over multiple aspects – industries, time, location, end users, etc., not only accounts the need of services now, but must also considers for the future sustainability and growth. Furthermore, the indirect attributes carries a time value (current – future). The current aspects refer to overall living standards at CFD, where this is a significant factor to retain talents, whereas, the future potential is an essential element that attracts talents (the second project objective). Nevertheless, for aptness of this study and the ease of analysis, services are classed into three major groups; Public, Consumer and Production.

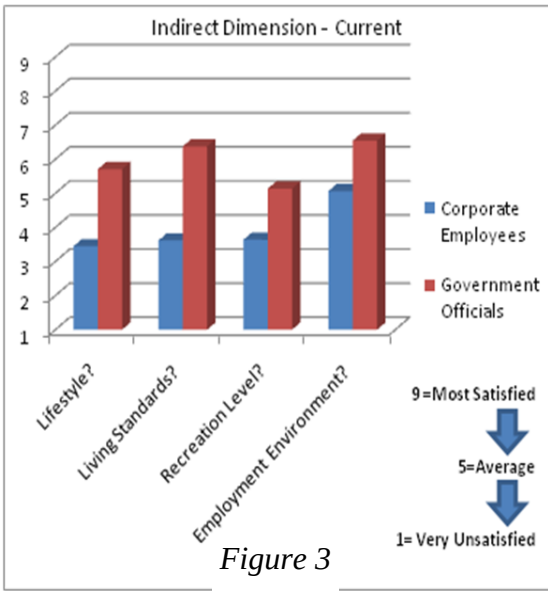


Figure 3

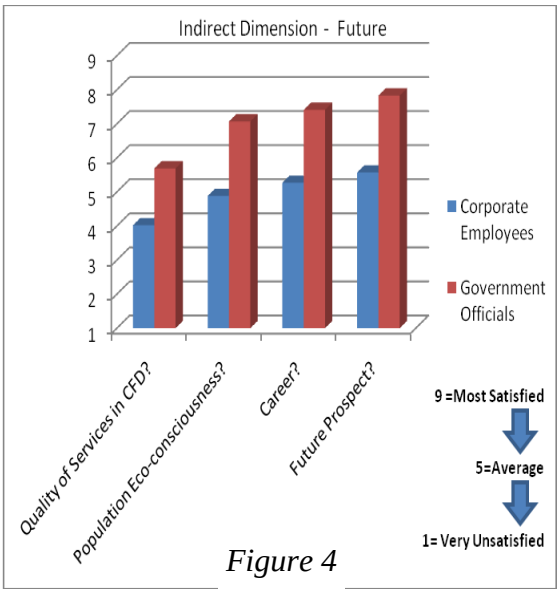


Figure 4

The results from PSI (Figure 2, 3 & 4) shows an interesting phenomena; government officials' PSI rating exceeded corporate employees' PSI in every attributes, this suggests when government officials doesn't experience the same living standard with the other workers, thus, while planning and implementing strategy for service, there is a potential blind spot, so constant review of the strategic blueprint is recommended. Becoming knowledgeable

about servicing population, and provide solutions to cater those needs and expectation will directly increases satisfaction, further, "satisfaction is found to be an important influence on retention" (Ennew & Binks, 1999, pp 121). Thus, by catering the most unsatisfying attributes (i.e. recreation, housing and transport) directly, will help to retain current population. From the indirect dimension of the PSI, the attributes consider current (satisfaction) and future (attraction; based upon Law of Attraction (Nees, 2008)) needs and wants, determining the urgency and direction for development. From Figure 3, shows there are dissatisfaction (minimum PSI; 3.45) within the corporate employees, especially the life style and living standard aspects. It is also important to note, the averaged Figure 3 PSI (value at 3.9) among the two other figures (PSI of 4.5 & 4.9 for Figure 2 & Figure 4 respectively) possesses the lowest value, and this illustrates the dissatisfaction of the incompleteness of the service in CFD. In Figure 4, it is the highest PSI group, the 'future prospect' – the vision – of CFD are the anticipated key elements that preserve and magnetize population, despites the strong support from China government and rapid fostering trade environment. According to Ennew & Binks (1999), 'Quality of Service' directly adds value to customer satisfaction and retention, further becoming a selling point for customer attraction. Therefore, CFD's official can consider repackaging CFD's vision to current and potential talent to achieve the 'attract of talent' objective.

To further gain more insight from the knowledge collected, the 'services needed urgently' (Figure 5) is compared; a matrix is constructed against the service industry and PSI (current – refers to Figure 2 &3), forming a decisive framework based on BCG's matrix (refers to Figure 6) for the prioritization of implementation.

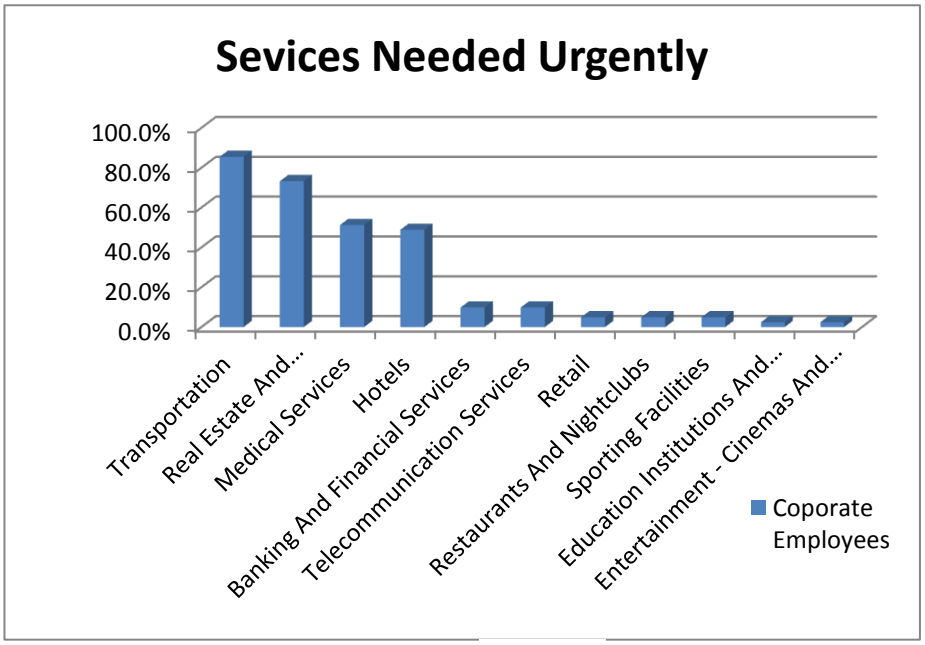


Figure 5

PSI – BCG (current)

PSI High	Education Institutions and Services Entertainment – Cinemas and Theatres	Banking and Financial Services Telecommunication Services
	Retail Restaurants and Nightclubs Sporting facilities	Transportation Real Estate & Accommodation Services Medical Services Hotels
Low	Service Demand	High

Figure 6

Figure 5, 6, 7 & 8 only considers the corporate employees' data, this provides a closer to reality of the needs for end users, the dilution of government officials' information have a significant impact due to the small sample size, therefore, a deliberate neglect of government official's responds is required. Additionally, for a more accurate analysis, a further investigation is required.

Figure 5's information shows a trend for demand within CFD's population, the highest need are; Transportation, Real estate and accommodation, Medication and Hotel, the higher demand would have advanced priority in urgency factor. It is attractive to see the demands

needed – accounts for the public services area – are similar to the PSI – Services Currently Provided (Figure 2) – attributes, which in lines with the anticipated hypothesis; to provide public services to raise living standards. From Figure 6, the merge of PSI and Demand of population will prioritize the actual needs and strategy for implementation under project management techniques and total quality control tools (Sandras, 1993). The framework suggested the higher demand and lower satisfaction properties should be at the highest priority to be first implemented, thus, transportation, real estate, medication and hotel are the first industry that needed to be develop, further, establishes a strong foundation in public services sector to support the predictable growth in CFD. Whereas, the high demand and high satisfaction or low demand and low satisfaction services could be developed at a later stage, or once the demand or satisfaction ratio has indicated there is an urgent need, thus, ongoing monitor of needs and satisfaction is required, to cater for the emerging forces.

In accordance with Ennew & Binks' (1999), there are correlational factors between future expectation and current satisfaction. Therefore, the PSI (Figure 4) factors can be comparing with future services (Figure 7) to construct Strategic Grid (also known as 'McFarlan & McKinney framework') and provides the direction for strategic planning, which forms the roadmap (preparing the foundation for the future) for the CFD's vision.

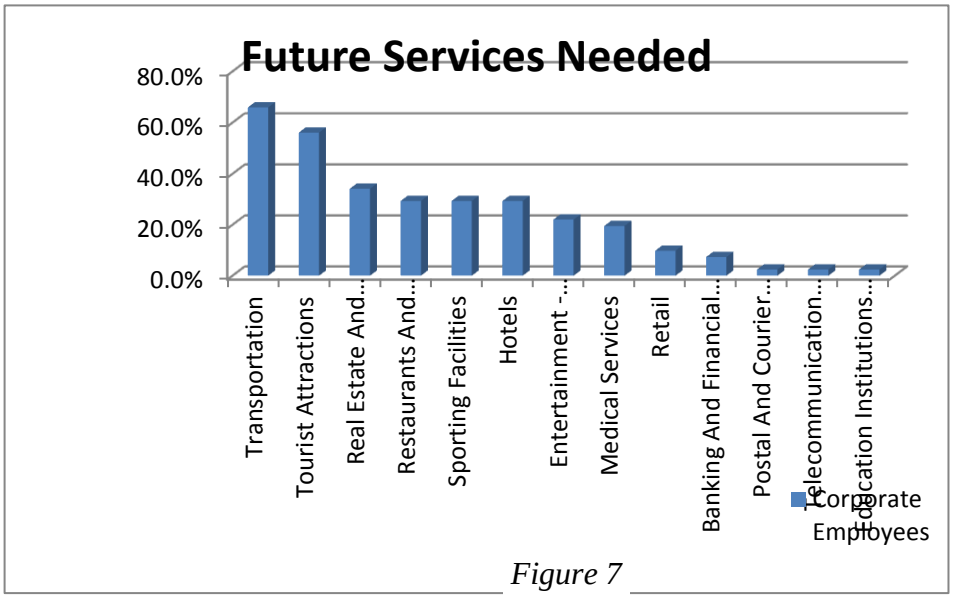


Figure 7

In Figure 7, the demand in future for a particular service is now diminished and distributed more evenly compares with the current demand, this depicts the trend of moving away from

relying heavily on public services to consumer services and production services, which confirms the progression to CFD's development to modern services. Nevertheless, the effectiveness and efficiency of public services (transport and housing) is still a major concern of CFD's population (refers to Figure 4). Furthermore, the quality of services factor is also a vital element to met satisfaction expectations, which contributes to the preservation and attraction of talents.

PSI – BCG (Future)

PSI		
High	Education Institutions and Services Telecommunication Services Postal and Courier Services	Sporting Facilities Hotels Entertainment – Cinemas and Theatres
	Retail Medical Services Banking and Financial Services	Transportation Tourist Attractions Real Estate and Accommodation Services
Low	Service Demand	High

Figure 8

Similar to Figure 6, Figure 8 explains the highest priority for future needs are; Transportation, Tourism, and Housing, and it is fascinating to note, the consumer services are in high demand as well, where, there are stipulated beliefs that CFD will develop into a modern service port, which submerges the current misalignments in the CFD's 'vision'.

6.2 Key Strengths, Weaknesses, Opportunities and Threats of CFD

From the SWOT-PESTEL analysis performed above, the internally focused strengths and weaknesses, and externally focused opportunities and threats of developing a service industry in Caofeidian Industrial Zone were identified. The table below outlines the vital highlighted aspects from the analysis.

Strengths	**Weaknesses**
♦ Strategic geographical location ♦ Strong government support ♦ Adequate supporting infrastructure	♦ Lag in provision of basic and public services ♦ Lack of regulations ♦ Lack in marketing efforts

Opportunities	Threats
♦ Increasing demand for services ♦ Large pool of potential talent ♦ Becoming a Free Trade Zone	♦ Regional competitive pressures

6.2.1 Strengths

Strategic Geographical Location

Neighbouring the capital city, Beijing and World-class port, Tianjin, CFD Industrial Zone is provided with a solid resource base for its service industry development including material resources, financial resources, technological resources and human resources which can easily be derived from the region.

Strong Government Support

CFD is blessed to have strong support and attention from both central and provincial governments. At a macro level, CFD Industrial Zone was placed on China's list of pilot areas for recyclable economy in October 2005; several national leaders have visited the zone, including Chinese President Hu Jintao and Premier Wen Jiabao. Strong government support provides a substantial ground for the development of the tertiary industry.

Adequate Supporting and Ongoing Infrastructure Construction

Development planning for an integrated service area within the CFD Industrial Zone has recently been formulated. Supporting infrastructure including water supply, electricity supply and telecommunication projects are completed and have begun operations since the end of 2006. To accelerate the development of public services in CFD, constructions of infrastructural facilities have started and have been ongoing since 2003. Current infrastructure is considered to be of world-class standards while future infrastructure construction will serve to meet needs as demands as the city grows.

6.2.2 Weaknesses

Lag in Provision of Basic and Public Services

CFD Industrial Zone possesses significant industrial advantages. However, its basic and public services are greatly lagging behind. Based on data gathered from the questionnaire and

interviews, existing basic and public services are not able to satisfy the current needs of the employees; medical service, educational service, recreational service and public transportation service within the zone are either not fully functioning or not provided to the residents yet.

Lack of Regulatory Rules

As a new developing area, specified policies for encouraging service industry development have not been introduced, necessary and relevant comprehensive legal frameworks have not been fully established. This may induce difficulties in developing service industry and cause psychological barriers for potential investors.

Lack in Marketing Efforts

Efforts in marketing CFD Industrial Zone outside Hebei Province appear to be relatively limited. It is also lacks the use of the internet and well-developed information platforms for disseminating and sharing information regarding the service industry in the zone. This weakness limits the range of potential tertiary industry investors.

6.2.3 Opportunities

Increasing Demand for Services

According to the country's new requirements in the layout of the heavy industries, big steel and iron enterprises will mainly be located near ports and CFD more than this requirement. On February 2005, the National Development and Reform Commission (NDRC) approved the plans for Shougang's move to CFD. The Zone has becoming a prime new location for many industrial enterprises. This trend increases the population in the zone and will in turn increases the demand of various services. It can be viewed as an opportunity to attract new business ventures which will service expanding demand, optimising economic structure whilst increasing living standards.

Large Pool of Potential Talent from Neighbouring Cities

CFD industrial zone has an opportunity to tap into the large talent pool of Beijing and Tianjin. Its potential attracts at both national and multinational levels. High-end talents who bring with them transferrable skills and knowledge would be the major contributors in improving modern service industry.

Becoming a Free Trade Zone

With more and more countries establishing free trade relations with China, it should be viewed as an opportunity instead of threat for CFD to become a free trade zone or to further establish free trade relations with other countries. This will provide business opportunities for tertiary industry development.

6.2.4 Threats

Regional Competitive Pressures

Although also a strength and opportunity, CFD's location can also act to its disadvantage. CFD Industrial Zone faces competition from regional competitors. The existing competitors are the service providers in Tanghai and Tangshan City; whilst the major potential competitor for developing an integrated service area within the industrial zone is the ongoing CFD International Eco-city construction.

6.3 Comparative Analysis – Key Success Factors

The following table summarises the key success factors which both Singapore and Tianjin share. They have contributed to the success of both cities and therefore may potentially lead CFD to triumph in a similar manner. The table also identifies and indicates that CFD already possesses some of these features and hence, demonstrate great prospective in achieving its strategic vision of becoming a world-class leader through the development of its tertiary sector. For the purpose of this report, we will analyse the more important factors (highlighted in bold in the table below) which will act as a guiding template for our recommendations in order to contribute to a flourishing service industry in CFD Industrial Zone.

Key Success Factors Compared

		Singapore	CFD	Tianjin
Political	Strong governmental support	✓	✓	✓
Economic	**Established and conducive business environment**	✓		✓
	Strong and continuous strategic planning	✓	✓	✓
	Strong push for private and foreign investments	✓		✓
Social	**High living standards**	✓		✓
	Conducive living environment	✓		✓
Technological	High-tech	✓	✓	✓
	Rapid technological advancements and utilisation	✓		✓
Environmental	Strategic geographical location	✓	✓	✓
	Abundant natural resources	✓	✓	✓
	"Eco-city"	✓	✓	✓

6.3.1 Established and Conducive Business Environment

With the advent of globalisation, conducive business environments are now becoming more significant than they ever were. This is due to the fact that investors now have more choices as markets all over the world open up. For CFD to remain competitive in its region, it needs to consider and establish services which can help facilitate an environment worthy of attracting both talent and investors alike.

Furthermore, when large amounts of investments are continually being made in CFD, it is inevitable that visitor numbers will rise as physical visits are paid to the area. This, in turn, will result in a hike in demand for a myriad of consumer and producer services. Therefore, constructing a suitable corporate environment will not only enable CFD to meet demands for particular services, but also attract the investors which CFD desires.

6.3.2 High Living Standards and Conducive Living Environment

In a similar manner, high living standards and a conducive living environment can serve to attract human resources and potential residents who may drawn to the superior levels of service provision in neighbouring cities. Singapore and Tianjin have both managed to provide their citizens with relatively high levels of living standards. Together with a large variety of lifestyle and hospitality services, they have successfully and are continually gathering human resources necessary for growth and development. Therefore, by offering better services which meet needs and enhance lifestyles, CFD will stand to gain a competitive edge over its competitors when attempting to pool and retain talent.

6.3.3 Rapid Technological Advancements and Utilisation

In this age of modernisation and constant technological developments, knowledge and information can easily and quickly be shared through various forms of inexpensive media. The extensive use of the internet and advanced technological innovations in both Singapore and Tianjin has allowed information and services from both cities to be disseminated and offered in an accurate and efficient manner. It is therefore essential that CFD consider placing itself on such platforms and taking advantage of developed and advanced technologies to emerge victorious in its service development endeavour.

7.0 Key Issues and Findings

From our analyses and data collected, we have derived significant findings which impact on the development of the tertiary industry in CFD Industrial Zone. This section of the paper will discuss the key issues we found from our research, interviews, questionnaire and site visit.

7.1 Current Situation

CFD is one of the demonstration eco-cities of Scientific Development which will drive and stimulate the economic growth of the Bohai economic circle. Its current primary manufacturing industrial development is experiencing high and rapid growth. This, in turn, has resulted in heightened demand for an established service industry. Unfortunately, the demands and needs of current service industry cannot be met in CFD now.

The lagged service industry becomes a bottleneck of sustainable development in CFD and prevents its economic growth. Present human resources in CFD are largely dissatisfied with their housing environment, medical services, public transportation and education for their family etc. This ultimately impacts negatively on CFD as it decreases the willingness of such talents to stay and develop their career in CFD Industrial Zone.

Current services provided in CFD are of the most fundamental level, failing to meet the needs of its residents and workers, and also preventing talents and potential residents from wanting to remain and reside in CFD. Talents and a permanent population are crucial elements for further developing its modern service industry. This is because the lack of a population suggests the lack of people and hence, indicates the absence of customers who demand and consume these services. Insufficient demand will lead to low or inadequate supply of such services and consequently, it becomes a negative-effected cycle hindering further development of CFD's tertiary sector.

Therefore, In order to sustain its competitive advantage from its manufacturing industrial developments, it is essential to attract new talents while retaining existing ones to ensure they

remain and live in CFD Industrial Zone. Therefore, for CFD to attain its long term goal, the provision of basic and public services is highly crucial at this stage of development in the service industry.

7.2 Provision of Basic and Public Services

Multiple public services need to be offered to Caofeidian Industrial Zone residents to create a safe, convenient and positive living environment. Without basic and public services, it could potentially be a dangerous and unhealthy place to live. The most important public services such as public transportation, housing, healthcare service, educational service, police service and fire brigade service should be made available to residents provided to the residents in the zone on a daily basis. A sound public service system in particular, will aid in providing substantial ground for the future development of modern service industry, such as financial service, retailing service and various recreational services.

Public transportation plays an important social role to ensure that all the residents and visitors in are able to travel within this large industrial zone, groups included are the young, the old, the poor and those with medical conditions. Public transportation is crucial to the economy; it creates and retains jobs, and stimulates commerce. Studies have also shown that "public transportation equals a stronger economy, a cleaner environment, and greater energy independence – which add up to a better quality of life" (APTA 2010).

In addition, decent and affordable housing is important to the residents living in Caofeidian Industrial Zone. It fulfils a basic human need for shelter and also contributes to the well-being of the families. By providing families with greater residential stability, it can reduce stress and related adverse health outcomes which leads to improvements in both physical and mental health (Cohen, 2007). From an educational perspective, it has been proven that "stable, affordable housing may provide children with enhanced opportunities for educational success" (Brennan 2007). Housing is also important to the economic vitality of Caofeidian Industrial Zone, "by making affordable housing a priority, local officials can ensure the residents at all income levels are able to live in and enjoy the city" (Woodwell, Germansese & Seeger 2006).

Health care too, a service that dedicates to improving the health of individuals should be available to all in Caofeidian Industrial Zone. The delivery of basic health care will lead to a healthier work force and will increase the productivity. Ensuring a healthy life of the residents in the zone should be prior to the provision of modern services such as recreational services.

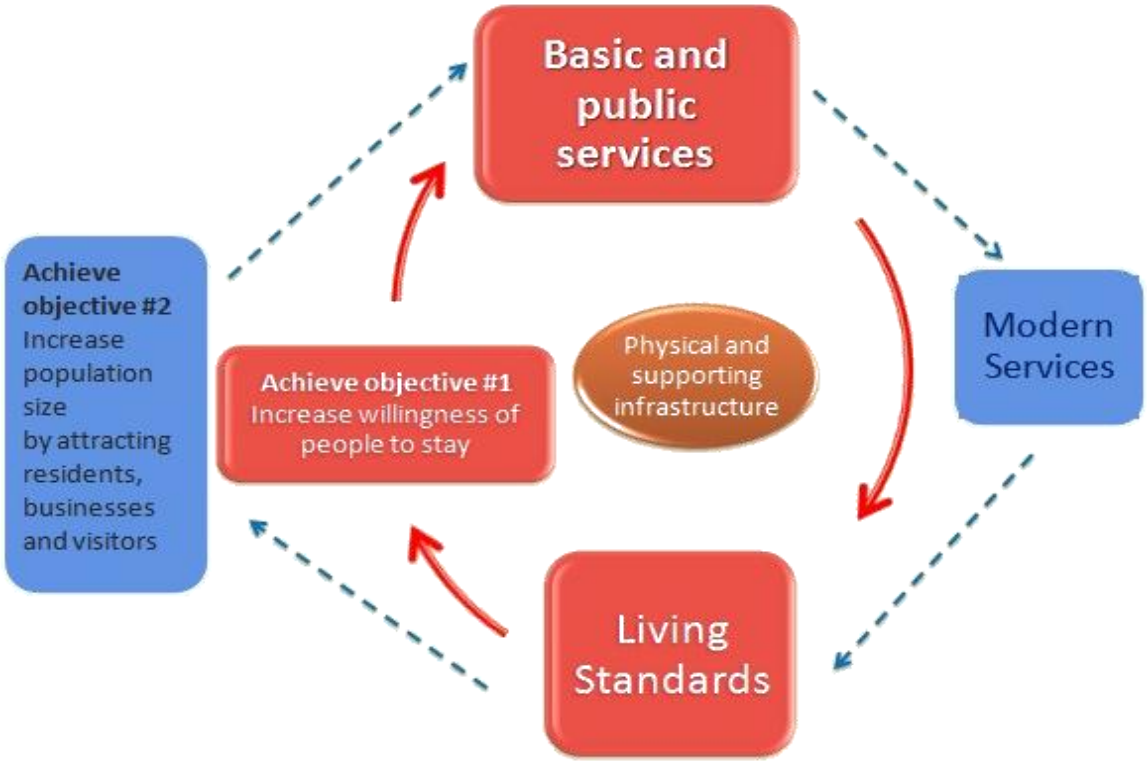
Of other basic services, educational service is necessary in developing Caofeidian Industrial Zone into a thriving and booming region. School attendance is compulsory till junior middle school in China. It is therefore vital for CFD to provide educational services to residents in order to offer all a chance to learn and possibly become successful in life.

Lastly, other fundamental services which developing areas such as CFD should consider include those which can satisfy the safety needs of people. These refer to public services like the fire brigade and police force. They are necessary for ensuring safety of the residents and minimising losses during times of disasters or trouble in the zone.

The positive relationship between public services and economic development in the jurisdiction providing those services can be proven and measured by changes in population, income or the number of firms. Studies have also shown that public services are estimated to exert a positive and statistically significant effect on economic development (Munnell 1992). Therefore, such services need to be offered and provided to all visitors and potential residents of CFD. In doing so, the area would be able achieve its aim in capturing and raising the level of staying power in people entering or working in the zone by convincing them that CFD has what it takes to offer them an attractive lifestyle.

7.3 Benefits of a Tertiary Industry for CFD

As briefly mentioned above, a service industry is highly essential in helping CFD Industrial Zone grow and develop. From our analyses, we have found that CFD is in a good position in which it is likely to progress in the manner of an upwards spiral if it begins by satisfying current service needs and wants of its customers. The following diagram illustrates this point.



First and foremost, the illustration indicates that the main benefit CFD Industrial Zone will be able to reap is the ability to meet its growth and development objectives through the attraction and retention of people.

It is important to note that CFD Industrial zone has the physical and supporting infrastructure, such as buildings and roads, which are fundamental to the provision of services. Unfortunately, it is somewhat "trapped" in a cycle as our findings suggest that the needs of the current (working) population at CFD are not met. The inner (red) circle shows that when these expectations and wants are satisfied, CFD Industrial Zone will be able to achieve its first objective of increasing the willingness to stay in people.

Economically, a permanent population would ultimately mean that the available basic services would be consumed as there is demand for them. When demand for these services rise, it would be ideal for CFD to be ready to supply and cater to these needs. Overtime, as basic human needs are being satisfied, expectations for more value-added services such as recreational ones may begin to surface. CFD can then embark on the development and

provision of modern services in order to move towards attaining its second objective of increasing its population size. This is indicated by the blue cycle in the diagram above.

In short, for CFD Industrial Zone to reap the full benefits of having a tertiary industry, it is important to first satisfy basic needs and wants of people. In doing so, it will be able to retain talents who will serve as crucial elements in facilitating the growth and development of its service industry. This industry, unlike its manufacturing counterpart, comprises largely of people. Therefore, by satisfying consumers of services, CFD Industrial Zone will be able to in turn, satisfy their objectives of retaining whom they have now while attracting more talents into the region through the provision of both basic and modern services.

7.4 Current Challenges/Problems/Threats

In previous sections, we completed the literature review on modern service industries, benchmarking other successful eco-ports and on-site analysis. As mentioned, the modern service industry is lagging behind the CFD industrial development, and becomes a bottleneck to sustainable development. This section identified the following challenges and weaknesses of CFD's modern service industries development.

Finance

CFD is a newly developing industrial port. Tons of government projects, including infrastructure and public services, are undertaken and started in a close timeframe. Should all basic and public services be financed and provided by government? Can the quality and effectiveness of public services delivery be guaranteed if provided by private sectors? Basic and public service development financing is a critical issue to be concerned and has been studied by our financing strategy team. Further analysis is suggested to refer the financing team's strategy report.

Misalignment between the needs for public services between government and residents

From the on-site analysis, a small expectation misalignment of public services was found between CFD's officers and its residents. Misunderstand may lower the effectiveness of decision making of CFD's officers. If the public services provided by CFD government are not the urgent needs of its residents, the services cannot improve and raise the willingness of

residents to stay in CFD. Therefore, understanding residents' needs are important in strategy planning.

Dissatisfaction with current basic and public services

The infrastructure of modern service industries is well-developed. However, from the on-site analysis, the basic needs of CFD residents have not been satisfied. Public transportation, housing and health care are the urgent needs according to the analysis. Satisfying residents' urgent needs on basic and public service is essential to keep them in CFD. Other basic services, such as education, fire services, security services and welfare service, should also be developed and provided for a safe and basic living environment.

Unsatisfied basic and public services are the comparative disadvantages for CFD to recruit and keep talents, comparing with its nearby cities such as Tianjin. Low population then further limits the development of modern service industries.

Under-utilisation of Information Technology

The technology applied in CFD's public services is very limited. It only has an official information platform to broadcast limited CFD news. Knowledge and technology are essential in modern service industry formation. However, information and knowledge in CFD public services sectors have not be shared to related interested parties in a timely mode. Besides information not shared, public services are usually delivered in low-level. Low-level public services involve many manual works without the aid of IT and are delivered inefficiently and ineffectively.

Intense residential growth

More large enterprises will locate their quarters in CFD and more workers will move in CFD, as long as the growth of CFD's industrial development. The needs of basic and public services in CFD will become more critical and obvious. In the initial stage, basic and public services are mainly provided by the government. How to ensure the efficiency of public service and effective use of government funding? It is an important issue to be considered in development planning. Both of idling infrastructure due to over-estimation or re-structure due to under-estimation are wasting resources. Therefore, accurate estimation and evaluation schemes are required from the city planning stage to further development.

Free Ports

Referring another Chinese free ports Tianjin, free trade agreements is an efficient way to form and raise its service standards, and to diversify its service industries. More foreign investments and trades, which fulfil extensive commercial benefits, can also catalyst the quality of service industries to have international standards and frameworks. CFD government is suggested to grant the China government approvals and gain more Free Trade Agreement (FTA) with foreign cities.

8.0 Implementation

Upon analysing the issues which CFD Industrial Zone is currently experiencing, a two-phased service development strategy, aligned with CFD's goals and vision, is suggested. Each phase has different targets and can be implemented at the same time.

Phase 1:

First, basic and public services should meet the current needs of CFD's residents in order to retain talents in CFD. By enhancing their current living standards and keeping more talents, a conducive environment will be created for potential businesses and residents with well-developed public services.

Phase 2:

After basic and public services are well-developed, new tertiary services would be introduced to attract more talents and investments. New modern services can further raise the quality of life and the standard of living in CFD.

8.1 Recommendations

CFD is one of the Scientific Development demonstration areas in circular economic in China. Its journey, being an international service port, has just started. It has rich raw resources, such as petrol and deep coast line, and strong support from the China government. Its manufacturing industries and the infrastructure of the city are planned and developed in a high-standard. However, the modern service industry of CFD is lagging behind its manufacturing counterpart.

In order to sustain its advantage in harbor city, the challenges mentioned in previous section must be overcome. Our recommendations have two focuses, which integrate service industries into the city development in the near future. First focus is how to maintain existing talents by building a satisfied living environment for them and their families. After first focus is basically achieved, talents are more willing to stay and the second focus can then be

implemented. Talents can catalyst the formation and development of new business; and new business can further attract more new talents.

8.1.1 First Focus: Recommendations for a Positive Living Environment for Existing Residents

Financing

Public services can be delivered by different arrangements, by government or private sectors. Which arrangement of public service financing can provide the most effective public service delivery? Our financing strategy team will provide a professional analysis and recommendations on it.

Satisfy its residents' needs

In order to satisfy the resident needs, appropriate and professional public services should be provided. First, CFD government should have better understanding on the needs of residents. Alignment between the expectations of residents and CFD officers can improve the effectiveness of public service delivery. Continuous performing questionnaires and interviews from its residents is a clear and effective way of communications.

Second, specific public services departments should be established to provide and operate professional service developments. Other than better communication and understanding on expectations, the quality of public service delivery is another issue which should not be ignored. There are a variety of basic and public services, therefore different knowledge and considerations will be required.

Strengthen and provide complete basic and public services

The infrastructure of modern service industries is well-developed. However, from the on-site analysis, the basic needs of CFD residents have not been satisfied due to their misalignment. Satisfying residents' urgent needs on basic and public service, public transportation, housing and health care, is essential to keep them in CFD. Besides that, a safe and desirable living environment should include more than these three public services. Other basic services, such as education, fire services, security services and welfare service, should also be developed and provided.

Information Technology Support

Information Technology (IT) can automate the public services and increase the effectiveness of service delivery. It also can further facilitate knowledge sharing and reform the public services into modern services. An Information Technology Department is suggested to be established and designated to investigate how IT can facilitate.

Anticipate and be ready to supply for future needs

The future needs and growth should be considered in the city development planning. Appropriate supportive infrastructures and services should be well-estimated, such as waste and recycling management system, to avoid wasting government funds. Continuous performing population census and capacity assessments are suggested. Performing population census can help to predict the population growth.

8.1.2 Second focus: Recommendations for a Desirable and Multidimensional Living Environment to Attract New Talents and Businesses

Talents recruitment

When the living environment and standard becomes desirable in CFD and comparable to other big cities, people will be willing to stay and develop in CFD. More service industries will be generated, which will require different varieties of talents. CFD government should understand, forecast and recruit the right types of talents for its future developments. Career packages can be adjusted to attract target talents, such as providing income allowance and child education allowance.

Worldwide marketing and promotion for CFD's potentials and future prospects

CFD official information platform is an important platform to present CFD to the world. And it broadcasts and centralized controls the released information of CFD. Therefore, CFD government should fully utilize its platform to promote CFD's potentials and future prospects to all interested parties though Internet.

Become a Free Trade Area

More foreign investments and trades, which fulfil extensive commercial benefits, can catalyst the quality of service industries to have international standards and frameworks. CFD government can grant the China government approvals to gain more Free Trade Agreement (FTA) with foreign cities.

Modern services industries development

When more people are willing to stay in CFD, more value-added services will be expected. With the readiness of talents and technology, modern service industries such as hospitality and tourism can be generated. CFD government can provide some attractive strategies or policies to encourage targeted modern service developments.

8.2 Action Plan

From our recommendations, an implementation plan has been derived for the actions to be taken to achieve the objectives. The action plan is separated into two sub-sections, correspond to our project scopes. This two-section action plan is designed under the project management framework and support with balance scorecard (BSC) in details. *(Please refer to section 10.5 in the appendices for Balanced Score Card.)*

The BSC highlights the different initiatives, measurements, targets, and prospective to achieve our goals. From the analysis above, we know that the development of services and assurance of the service quality are the keys for CFD to attain its vision. It mainly focuses on establishing Public Service Management Department (PSMD), to ensure the ongoing development of service industry and provide indicator for areas of improvement.

Phase 1: In the Short Run (2011-2015)

This action plan will serve to satisfy our first focus for CFD Industrial Zone, i.e. to build a living environment which can satisfy the needs of existing CFD talents and residents. The suggested timeframe for this plan is in line with the present 5-year development plans and is proposed to be undertaken from the year 2011 to the year 2015.

Recommendation	**Proposed action**	**Pre-requisite**	**Outcome measurement**	**How to evaluate**
Financing	For details, please refer to financing team's suggestions.	N/A	Provide effective and efficient public services.	By monitoring the usage and the return of public services.
Satisfy Residents' Needs	To perform continuous questionnaires, interviews with residents to know residents' needs. To establish Public Service Management Department (PSMD) to take the responsibilities of specific public services development.	N/A	Public services are provided in an efficient and professional manner. Better understanding residents' needs, narrow the gap between the expectations of officers and residents.	By performing questionnaire and interviews and conducting the Population Satisfaction Index (PSI). By monitoring the facilities of service provided.
Strengthen Basic and Public services	To satisfy the urgent needs of CFD residents by providing the following basic and public services: - Housing - Health Care service - Public Transportation service Besides the residents' expectations, other not listed public service should also be provided to create conducive living environment. Such as - Education - Fire service - Security service - Welfare service	N/A	All basic and public services of a basic and safe living environment are provided.	By performing questionnaire and interviews and conducting the Population Satisfaction Index (PSI). By monitoring the facilities of service provided.

Information Technology Support	To establish and designate an Information Technology Department to investigate how IT can facilitate and help the existing services.	N/A	Automate and enhance the effectiveness of public service with technology. Provide the technology infrastructure to develop modern service.	By performing online questionnaire. By monitoring and measuring the ratio of technology used.
Readiness for future needs	To count the future needs in the strategy planning and the design phase of city development. To perform the population census.	N/A	The infrastructure and city plan can facilitate the growth of populations and industries developments. Less restructure is required.	By performing capacity assessment and usage monitoring.

Phase 2: In the Long Run: (2016 and Beyond)

The following action plan will address our second focus for CFD, i.e. to build a desirable and multidimensional living environment which will attract new talents businesses into the region. This will assist CFD in achieving its objective of raising its population size. The suggested timeframe for the implementation of this plan will provide a long term solution from the year 2016 onwards.

Action	**How to contribute**	**Pre-requisite**	**Outcome measurement**	**How to evaluate**
Talents recruitment	To promote CFD's potential and future needs to appropriate talents. To provide "Talent" rebate policy, such as income allowance and child education allowance.	Better living environment and standard.	Targeted talents are recruited and stayed in CFD.	By monitoring the quality and quantity of professionals in different service industries.
Worldwide presentation and promotion for CFD's potentials and future prospects	To enrich the information in existing CFD's information platform. To broadcast CFD's potential and latest news to all interested parties though Internet.	Fully supported by Information Technology Department and Marketing Department.	Fully utilization of existing information platform. CFD's news and future prospects are broadcasted effectively and timely. Information flow of CFD's news is centralized and controlled.	By monitoring the hit rate and tracing the hit pages. By performing online questionnaire.
Free Ports	To sign Free Trade Agreement (FTA) with foreign cities. To provide some attractive strategies for foreign in To create a conducive business environment.	Policies supported by the Chinese Government. Infrastructures of inter-states, inter-cities and inside CFD are well-developed.	More foreign business activities are traded. More FTAs are signed.	By monitoring the ratio of foreign investments. By monitoring the trade between CFD and foreign cities.

Modern service development	To further develop the modern service industries, which require more advanced knowledge and technology. Tourism, recreations and restaurants are the examples. To provide some attractive strategies for targeted modern service development.	Talents and IT are ready in CFD	CFD's living standard is raised by modern services.	By performing questionnaire and interviews. By measuring the GDP. By monitoring the variety and the diversities of modern service provided.

9.0 Conclusion

Studies have shown and emphasised the importance of a tertiary industry for any developing economies. The industry is imperative to the growth and development of not only the city and its economy, but also its people. This is indicated by the high proportion of GDP which is associated with service sectors in developed countries. Therefore, it is necessary for CFD Industrial Zone to undertake and implement appropriate steps to build up a strong foundation for future progress in the modern service industry.

From our analyses and key findings, it is apparent that CFD has vast potential and ability to reach its strategic vision of having a modern service industry and becoming a global leader in the area of service development. However, it was found that present needs and demands are mainly basic and yet are not being satisfied. This is acting as a barrier hindering the growth of the industry and hence should be overcome first.

To conclude, we propose that CFD moves forward in a systematic manner – first satisfying urgent demands to retain existing talents and residents before advancing with its endeavours in the service industry. In the short term, this will assist CFD in realising its objectives of talent retention while in the long run, CFD will be able to accomplish its goals of expanding its population and visitor arrivals. Other key recommendations such as to fully utilise information technology platforms and to anticipate the growing and future needs of people should also be taken into consideration and implemented to facilitate the development of a modern service industry.

10.0 Appendices

10.1 Activity Log

Item no.	Item	To be completed by	Completion Date
1	Project team formation		
1.1	Elect project team leader	Team	15 May 2010
1.2	Perform kick-off meeting of project team	Team	15 May 2010
2	Background research		
2.1	Perform the background research on CFD	Team	29 May 2010
2.2	Study the modern service industry of other ports	Catherine, Gary	4 June 2010
2.3	Analyse the modern services in Singapore	Madeline	14 June 2010
2.4	Analyse the modern services in CFD	Sherry	23 June 2010
3	Project proposal preparation	Team	12 June 2010
3.1	Define tentative project scope	Team	12 June 2010
3.2	Revise project scope according to the information gathered from observations and first interview	Team	28 June 2010 evening
3.3	Suggest tentative strategy and approach for CFD	Team	23 June 2010
3.4	Prepare and submit the preliminary draft of report & project proposal	Team	27 June 2010
4	On-site field trip		
4.1	Define and submit the on-site interview plan	Catherine	21 June 2010
4.2	Design and submit the questionnaire	Madeline, Gary	23 June 2010
4.3	Arrive CFD	Team	27 June 2010 evening
4.4	Prepare and present project proposal	Team	27 June 2010 night
4.5	Have a kick-off meeting at CFD presented by project sponsors	(Presented by project sponsors)	28 June 2010 morning
4.6	Have on-site observations	Team	28 June 2010 morning
4.7	Interview with Ms. Liu Yan, to identify the project scope and gather the basic information of CFD	Team	28 June 2010 afternoon
4.8	Revise the interview plan for next day	Team	28 June 2010 evening
4.9	Report Project progress	Team	28 June 2010 night
4.10	Collect distributed questionnaires	(Assisted by Ms. Liu Yan)	29 June 2010 morning
4.11	Perform “Gap analysis” between CFD vs. Singapore	Sherry, Madeline	29 June 2010
4.12	Perform data analysis from collected questionnaires	Gary	29 June 2010
4.13	Interview with Ms. Liu Yan, to identify the project scope and gather the basic information of CFD	Sherry, Catherine	29 June 2010 afternoon

4.14	Perform data analysis from interviews and observations	Sherry, Catherine	29 June 2010 afternoon
4.15	Report Project progress	Team	29 June 2010 night
4.16	Perform “Gap analysis” between CFD vs. TianJin	Gary, Catherine	30 June 2010
4.17	Have a group brainstorm on recommendations	Team	30 June 2010
4.18	Prepare project presentation material	Team	30 June 2010
4.19	Perform preliminary project presentation rehearsal	Sherry	30 June 2010 night
4.20	Finalize presentation materials	Team	1 July 2010
4.21	Perform final rehearsal of project presentation	Sherry	1 July 2010 night
4.22	Perform project presentation	Sherry	2 July 2010 morning
5	Closing project		
5.1	Revise the strategy plan or implementation plan according to the feedback from stakeholders, if any	Team	2 July 2010
5.2	Submit strategy report (English)	Team	30 July 2010
5.3	Submit finalized and revised strategy report (English and Chinese)	Team	8 August 2010

10.2 On-site Activities

Sequence	Activities	IP	QP	OB
1	Environment and Infrastructure			
1.1	Electricity and power supply	■	☐	☐
1.2	Water supply	■	☐	☐
1.3	Living environment	■	■	■
2	Modern service industry			
2.1	Basic and public services, such as medical service and transportation	■	■	■
2.2	Consumer services, such as tourism and professional education	■	■	■
3	Stakeholders			
3.1	Representation of Government	■	☐	☐
3.2	Employees worked in CFD	☐	■	☐

10.3 Interview Log

Interview with Ms. Liu Yan - Questions and answers

1. Q: How much of the population in CFD? How many of them are mobile residence?
   A: We do not have currently registered residence, in theory there is no fixed population. No detailed demographic data, most of our population is mobile. The population of CFD in 2010 is about 60,000.

2. Q: There are many projects under construction in CFD, whether they are planed before the start of commercial operation?
   A: The Government's stringent review and go though the project construction and operation of the proposal before their approval.

3. Q: What is the construction progress of CFD's service industry?
   A: CFD Hospital project - construction area of 53,800 square meters, currently being pile foundation.
   Integrated Service Area Services Network Project - Main Construction declares, shopping malls and other service facilities, with a total construction area of 14,500 square meters, currently being pile foundation.
   Sports & Leisure Square project - construction of multi-functional stadium with construction of parks, covering about 7,400 square kilometres, in May has started.
   Nine-year schools - including 24 class primary section 45, the secondary section 12 of 50 classes each class, office, gymnasium, and back rooms and other facilities. The total construction area of 14,800 square meters.
   Cultural Centre Project - Main Gallery and the use of functions, including the city archives, with a total construction area of 37,127 square meters.

4. Q: How big the CFD Industrial Zone is? What is the ratio of employees in service industry or other industrial employees?
   A: CFD, covers a sea area, its total area is 380 square kilometres. Has not been used a lot of land resources, industrial area of significantly more than the industry area, industrial workers were more than service workers.

5. Q: Where do the workers live in CFD? What is the relevant government to consider?
   A: Local staffs live in TangShan or Tang Hai, and foreign employees live in enterprises' dormitories. Government invests residential buildings for the accommodation of large enterprise's employees at the beginning stage. Centralised residential area can facilitate the further development of service industries.

6. Q: How about the government macro-control on basic services?
   A: Government's macro-control focuses on larger, basic services, which are provided mainly from government investment and management.

7. Q: Do CFD have its public transport?
   A: CFD Government does not have its own public transport system. Current transportation is provided by Tangshan companies or enterprise itself. Shuttle services run between to and from the CFD and Tangshan.

8. Q: What is the main concern in developing the service industry?
   A: CFD is a start-up economic development zone. It is difficult to attract and retain qualified personnel. Recruiting qualified teachers for new schools is an example. We lack basic services and facilities; teachers are more willing to teach in other cities.

9. Q: Do CFD welcome to have foreign service investment?
   A: CFD, as the service sector, is currently in the development of progressive stages. There are difficulties in attracting foreign investment. We have less advantage when comparing with other cities, such as Tianjin.

10. Q: What is the price and efficiency of CFD's power supply?
    A: 2009 CFD, the maximum power load of 1.9 million KW, the price of industrial electricity sub-peak, peak and trough level segment. From 1.423 RMB/ kWh to 0.2927 RMB/ kwh range.

11. Q: How about the coverage of CFD's fixed or mobile telecommunications?
    A: Network coverage and infrastructure support are complete. The growth of needs has been taken into account in the beginning of infrastructure construction.

12. Q: How about the cost of doing business in CFD?
    A: The business costs and land price are low here.

13. Q: Whether CFD, recycling of water resources?
    A: CFD with circular economy system resources to maximize recycling.

14. Q: Is there any indicator as the CFD's living standards? What is the average income level?
    A: No exact index of living standard. The average income is similar to that of Hebei Province.

10.4 Questionnaire

Caofeidian Residents Satisfaction Survey on Modern Service
曹妃甸居民对现代服务业满意程度调查
(香港城市大学．澳洲昆士兰大学)

Gender 性别 : o Male 男 o Female 女

Age 年龄 : o 16-20 o 21-25 o 26-30 o 31-35 o 36-40
o 41-45 o 46-50 o 51-55 o 56-60 o 60+

Educational level 学历: o Primary 小学 o Secondary 中学 o Tertiary 大专
o Other 其他 (please specify 请列出) _____

How satisfied are you with regards to your current : 请选择您对下列各项现状的满意程度:

	(1) 非常不满意	(2)	(3)	(4)	(5) 一般	(6)	(7)	(8)	(9)非常满意
Living standards 生活水平	o	o	o	o	o	o	o	o	O
Lifestyle 生活娱乐方式	o	o	o	o	o	O	o	o	O
Recreation level 娱乐水平	o	o	o	o	o	O	o	o	O
Recreation activities 休闲/ 娱乐活动	o	o	o	o	o	O	o	o	O
Quality of lifestyle services in Caofeidian 曹妃甸生活性服务的总体质量	o	o	o	o	o	O	o	o	O
Employment environment 就业环境	o	o	o	o	o	O	o	o	O
新 Future prospect 未来展望	o	o	o	o	o	O	o	o	O
Housing arrangement 房屋安排	o	o	o	o	o	O	o	o	O
Transportation availability 交通	o	o	o	o	o	O	o	o	O
Career 职业展望	o	o	o	o	o	O	o	o	O
Continues education 持续性教育	o	o	o	o	o	O	o	o	O
Professional training 专业培训	o	o	o	o	o	O	o	o	O
Population eco-consciousness 生态意识	o	o	o	o	o	O	o	o	O

Which services would you like Caofeidian to improve on and/or have in order to raise your standard of living? (Please select 3.)
为了提高您个人及家人在曹妃甸的生活水平及满意度，您认为下列哪几项服务业类型需要优先被提高？（请选择三项）

o Banking and financial services 银行与其他财经服务	o Hotels 酒店	o Recruitment agencies 招聘中介	o Telecommunication services 电信服务 (包括通话与网络)
o Business consultancy services 商业咨询服务	o Medical services 医疗服务	o Restaurants and nightclubs 餐厅与夜间娱乐场所	o Tourism 旅游业
o Educational institutions and services 教育与研究	o Postal services 邮政服务	o Retail 零售业	o Transportation 公共交通

o Entertainment - Cinemas and theatres 电影院与戏剧院	o Real estate and accommodation services 房地产业与住房供应	o Sporting facilities 体育基础设施	o Other 其他 (please specify 请列出) _____

Which services would you like Caofeidian to improve on and/or have in order to enhance your current activities and levels of recreation within 5 years? (Please select 3.)
为了提高您个人及家人在曹妃甸的娱乐水平及满意度，您认为下列哪几项服务业类型需要於未來 5 年內优先被提高？（请选择三项）

o Banking and financial services 银行与其他财经服务	o Hotels 酒店	o Recruitment agencies 招聘中介	o Telecommunication services 电信服务 (包括通话与网络)
o Business consultancy services 商业咨询服务	o Medical services 医疗服务	o Restaurants and nightclubs 餐厅与夜间娱乐场所	o Tourism 旅游业
o Educational institutions and services 教育与研究	o Postal services 邮政服务	o Retail 零售业	o Transportation 公共交通
o Entertainment - Cinemas and theatres 电影院与戏剧院	o Real estate and accommodation services 房地产业与住房供应	o Sporting facilities 体育基础设施	o Other 其他 (please specify 请列出) _____

In your opinion, how else can Caofeidian contribute to your current standard of living?
您认为是否有其他方式或途径可以进一步提高您与您的家人的总体生活水平？

_____
_____

In your opinion, what other services should be provided or offered to you in Caofeidian? Why?
请指出您认为需要被提供的其他还未存在服务类型？请说明需要的原因。

_____
_____

Thank you for your participation! 非常感谢您的参与！

10.5 Balanced Score Card

Public service	Objectives	Measurement	Targets	Initiatives
Finance (Investors and local enterprises)	• Meeting stakeholders needs • Develop & optimise facilities for future growth • Establish and raise standard of business operation, but to maintain low cost of operation • Creates a conducive business environment • Provides inter-state, inter-city, and inter-enterprise project/ business opportunities • Maintain a healthy investment ratio for public service (FDI and government funded) project • Maintain government control for public service projects.	• Population Satisfaction Index (PSI) • No. of facilities and usage rate • No. of international certificate achieved • GDP/ capita, HDI • No. of joint venture/ integration project • ROI/ payback period/ IRR, and other financial indicators • Maintain at least 51% of stock withholding to government body	• At least 60% population in 'very satisfied' zone in 2015 (PSI) • At least 1 facilities for every service identified, with 65% usage rate • At least 25% of the companies achieved international standard (ISO, HACCP, etc) • Maintain a stable growth of 3% per annual (CPI, HDI, etc) • At least 3 project undergoes implementation phase for each service identified in 2015 • The services maintain a positive ROI within 5 years • All company is either SOE or government department	• Build public/ consumer service facilities, such as; hospital, roads, school, market, and transportation, etc. • Establish public service management department (PSMD) • Government funded projects • To develop and built facilities to ensure solid foundation for achievement for long term vision & goal • Strengthen communication with stakeholders • The transportation system must be set up for immediate use • Determine the profitability of services for finance strategy (such as BOT, BOO, DBFM… refer to financial team recommendation) • Establish SOE to transfer investment risk and increase the effectiveness and efficiency in service quality.
Internal Business Processing	• Increase and ensure customer satisfaction • Provide basic facilitates / area for residents and enterprises (school, hospital, etc…) • Establish and refine current services, to ensure service quality	• PSI • No. of integrating project • No. of facilities developed • PSI • +Δ of population • No. of student	• PSI (as above) • At least 90% of 12-5 proposal is completed in 2015 (derived from appraisal), i.e. total No. of facilities built • PSI (as above) • Maintain at least 10% annual population growth	• Build public/ consumer service industry to cater for immediate needs • Strategic planning aligned to master (12-5) plan • PSMD monitor and control industry through market sensing • Marco manage the ROI of current service industry – neoclassic approach

	• Recruit talents from local institution and proximity cities • Provide investment projects on international/ national platform • Facilitate services with ICT platform • Create job position in the service industry	recruited • Company listed on stock exchange • No. of joint venture project (SOE) • No. of integrate platform/ and platform users • No. of job position available (vacant and occupied)	• Recruit at least 3000 undergraduate student per year • Listed on stock market at 2010 • At least 3 joint venture per year • At least 3 IT/ ICT platform and maintain at least 17% active users • At least 50,000 position in service industry at 2015	• Implement business opportunities network, platform & symposium • Promote CFD's vision at other location; university, proximity cities, inter-state and foreign country, through articles, news, exhibition, and information exchange • Provide bid projects for foreign and local enterprise for joint venture (refer to financial team) • Utilise existing platform (refer to logistic team) to extend service level, allowing to leverage existing resource and capability • Develop platform via ITO and create user network within local enterprises • Initiate integration platform via the creation of e-government website • Create job vacancy by acting as services industry catalyst
Customer (residents, working population and potential population)	• Attract and retain population • Satisfy immediate needs and wants • Provides a satisfying environment for local population • Provide a conducive environment for living • Lower cost of living	• No. of population • PSI • Average earning/ capita • No. of consumer service project and its usage • CPI	• At least 200,000 population at 2015 • PSI (as above) • PSI (as above) • At least 30% of all services is consumer service by 2015, and average annual usage rate of 60-70% • Maintain a 1-3% CPI	• Provide consumer service, such as; hospitality, employment agency, real estates, etc… • Promote the attractiveness of CFD in 1st line cities • Balance demographic diversity • Create recreational area • Provides education facilities; diversification in location & area of interest • Provide career expo, industrial zone tour, community of practices, symposium etc… • Government funded public services

Learning and growth	• Maintain a stable growing environment in investment, population, eco-sustainability and training • Identify projects and opportunities to attract talent • Switching from basic service to high end service gradually • Refine and designate continues education and training to raise population quality	• Δ of all indexes; CPI, GDP, HDI, PSI, etc… • +Δ of population • +Δ % of high end service project • GDP/ capita	• Maintain at least an annual rate of 9% growth (except CPI & HDI) • Maintain 20-30% annual growth till 2015 • At least 2-5% annual growth in high end service till 2015 • Maintain a stable positive growth of 3-10% per annum	• Provide housing arrangement for employees, later open real-estate market • Provide progression upgrade in service quality • Open market exchange facilities, and promote free trades • 'Talent' rebate policy • Develop high end service industry, such as; tourism, ITO, financial service, etc… • Periodic market sensing; for micro adjustment • Educate employees/ population

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