

VIETNAM  
A STUDY  
ON  
THE CURRENT SITUATION OF PORTS  
AND STRATEGIES FOR OPTIMIZED  
CONTAINER PORT OPERATION  
IN SOUTHERN VIETNAM  
FINAL REPORT

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ON  
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Location Map

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## Summary

### ***Background and Purpose***

The Southern Focal Economic Zone (SFEZ), consisting of HCM City and 7 other surrounding provinces, is the fastest growing region in Vietnam after 1990s. Along with its booming growth and rapid industrialization, the region has been handling a rocket in freight transportation volume. Under that situation, the Southern ports were under threats of congestion as all of them were close to full capacity but there was little room at existing sites for expansion. In addition, the need of accommodate larger vessels, the rising opportunity cost of golden lands in city center and negative impacts on traffic and environment arisen from port operations required Vietnamese government to consider restructuring Southern ports.

From the mid of 2000s, a port reformation was carried out. River ports in HCM city was decided to be relocated to outside of city center. Besides, a 14 meter-depth sea port, Cai Mep, which determined as main international gateway port for Southern region, has been constructed in Ba Ria – Vung Tau (BRVT) province since 2007. However, the current circumstance is contrary to expectation and plan that results a large economic loss for Vietnam. Firstly, Cai Mep port has been put in operation 3 years but current performance is very poor with low utilization rate compared to designed capacity. Moreover, progress of port relocation in Ho Chi Minh was at a very slow pace even though the deadline has been passed since 2010.

In response to that circumstance, this study is conducted to investigate underlying issues and seek the most feasible solutions to optimize operation of Southern ports, especially in the situation that the capacity of Cai Mep Port is going to increase further when an additional port (ODA port), which is funded by JICA, will be completed and put in operation at the end of 2013.

### ***Current situation and issues***

The Southern port system can be divided into 3 port areas: HCM City, Dong Nai and BRVT. Ports located HCM city are all river ports. Meanwhile, BRVT has advantage of owning Cai Mep, the deepest and biggest sea port of the region. This report would like to put the focus on these two main port groups only as Dong Nai Ports are quite small in term of capacity and throughput.

Occupied 79% of the Southeast throughput, HCM City port group is considered as the busiest port of the region. It consists of 3 key ports of Saigon River ports, Cat Lai and Hiep Phuoc.

- Being the oldest ports, the current utilization of Saigon River ports is 64% and mainly for domestic transportation. However, the turnover was gradually decreasing as

shipping activities are moving to other ports. Moreover, located in the golden land areas of the city center, Saigon River ports have very limited possibility to expand and also cause serious traffic and environment issues for the city. Therefore, most of ports in Saigon River have been decided to be relocated to other location.

- Cat Lai, operated by Saigon Newport (SNP), which belongs to Ministry of Defense, is the busiest and most efficient one among HCM port group. Being relocated from city center to current location in 2006, Cat Lai has quickly expanded its operation and became the no.1 port in the region. Its throughput reached to 2.9 million TEUs in 2012, very high utilization of 80% with capacity of 3.6 mil TEUs. Under development plan, expansion progress is divided into 2 phrases. Phase 1 is already completed recently which increases Cat Lai's capacity to 4.2 million TEUs. In phase 2, the capacity will go further to maximum of 5.4 million TEUs by 2015.
- Contrary to performance of Cat Lai, Hiep Phuoc is facing extreme difficulty with low utilization rate at 20%. The reason is due to poor connecting roads to the port. Moreover, current shallow depth of Soai Rap River prevents the port from receiving the big ships of over 30,000 tons. According to HCM, the city is going to dredge Soai Rap River to the depth from negative 8m to 9.5m in phase 1 and 12m in phase 2, which increases Hiep Phuoc capacity to over 1.5 mil TEUs.

Accounting for only 19% of Southern throughput, the utilization of Cai Mep in BRVT is very poor at only 14%. At present, Cai Mep has 7 terminals with state-of-the-art facilities at huge capacity of 6.4 mil but only two terminals with support of shipping companies are survived (TCIT and CMIT). The others are temporarily closed or already switch bulk cargo purpose. Two key bottlenecks of low utilization at Cai Mep is limitation of shipping loops and high transportation cost. The loops at Cai Mep are very limited that make import/exporters very inflexible and passive on schedule. Moreover, Cai Mep is located too far from the main industrial zones and key trade markets of HCM city, Dong Nai and Binh Duong so the long distance plus only one-way transportation makes in-land transportation cost high significantly. The situation is even worse at the end of this year when Cai Mep's capacity is going to increase to 7.6 mil TEUs with open of new ODA Container Port (funded by JICA). The capacity of Cai Mep complex could increase further to 8.8 mil TEUs in the case the current suspended project of Germandept resumes construction in the future.

Despite the fact that the Southern port system currently in over-supply situation, every port group has its own expansion plan as described-above. This inefficiency is a result of over-optimistic forecast in Master Plan and conflict of interest among port stakeholders.

- The Master Plan was first established in 2005 and revised in 2011. Compared to the initial Master Plan, the target throughput proposed in second one was much higher. The reason is that it was made in the most booming period of Vietnam economy (2009-2011) with 20% annual growth. According to the Master plan, the highest target throughput that HCM City and BRVT could handle in 2015 is 4.9 and 3.9 million TEUs respectively. Based on optimistic of Master plan and commitment to support the port development of Government, many Vietnamese and foreign companies was over-confident in the bright future of port business, thus, rushing to invest in building new ports. Current capacities are already up to 5.8 and 6.4 for HCM ports and Cai Mep respectively, which are even higher than next 3 year target. Furthermore, the two these areas are scheduled to expand further as described-above will boost 2015 capacity to 7.8 and 8.8 million TEUs, higher than 2020 target.
- Another underlying reason of over-supply situation is caused from conflict interest of port stakeholders. Vietnam's port industry is controlled by many interest groups. Each interest group has pursued different interests on port development. MOT and VinaMarine are responsible for overall development of seaport system. Therefore, it wants to carry out the solution that is best for the whole country. Meanwhile, Saigon Newport would like to expand the current operation of Cat Lai port to keep position of number 1 port in region. On the other hand, BRVT province wants to expand Cai Mep port due to provincial revenue benefits. Within a very short time from Oct 2006 to Feb 2007, five investment licenses for development of container terminal were freely issued without control of government. Similar interest as BRVT province, HCM also want to keep the port activities in the city by attempting to expand Hiep Phuoc. Because MOT, BRVT and even Vice Prime Minister are lower power than MOD and HCM under Communist Party structure, the port matter cannot be settled.

It is going without saying that Southern Ports are currently facing the huge economic and social loss from mentioned-above inefficient port operation. The total investment for the unused ports is estimated at \$3 billion including \$1 billion for Hiep Phuoc and \$2

billion for Cai Mep. Moreover, another opportunity cost is from losing transshipment demand. At present, 50% of goods EU and the USA is handled at river ports in HCM city (Cat Lai and Hiep Phuoc) and has to be transshipped at Singapore, Hong Kong or Port of Tanjung Pelepas. Every year, about 1.2 million TEUs are transshipped and resulting the opportunity loss for Vietnam port industry up to US\$ 13 million. Moreover, once transshipped, export-import companies based in Vietnam will have to pay higher price for transshipment, making made-in-Vietnam products less competitive in terms of price. If the turnover was not increased as forecast and the oversupply situation keep remaining, Vietnam will suffer a huge social and economic inefficiency. Thus the question remained is how to realize the optimal role-division of container ports in Southern Vietnam to improve this oversupply situation.

### ***Proposal of Strategies***

For overall strategies to activate operation of Cai Mep port, three options are considered.

- (1) Shifting a part of demand from HCM to Cai Mep to create push force at beginning stage.

Three potential demand sources are USA and EU, inter-Asian and domestic demand. Among them, USA and EU are the most feasible source to attract thanks to the route feature of direct and long-distance that requires using mother vessels. The current key bottlenecks of this approach are the limitation of shipping loops and high inland transportation cost.

- (2) Expanding demand in BRVT province though building export-oriented industrial zones near the port. This approach will generate a sustainable demand source for long-term development. Laem Chabang port in Thailand is one of successful case studies in create new internal demand from industrial zone surrounding port area. At present, container throughput contributed from BRVT accounts for only 9% of total southern container shipment volume. The reason is that current main industries of this province are heavy industries of oil, gas, steel, electricity and small ship building which do not support for container port. It is strongly recommended to target companies in supporting industry that produce export-oriented goods, especially to USA and EU. However, this is a very difficult and needs clear and long-term plan, especially in current condition that most of companies in targeted industries have already built factories in other provinces or other countries.

- (3) Attracting transshipments demand from neighbor countries such as Cambodia and Thailand. However, feasibility or impact of this option is not high because of a number of reasons. The transshipment from Cambodia is possible but the volume is too small. Meanwhile, Cai Mep has only 9 shipping loops so it is difficult to attract transshipment from higher-volume countries such as Thailand at this moment.

### ***Action Plan***

Based on mentioned-above strategies, four actions are recommended.

- (1) Improve the competitiveness level of CM-TV port by increasing number of shipping loops in short term and enhancing infrastructure in the long term.
- In short term, a measure to increase number of shipping loops per week need to be taken. Current barrier of lacking loops prevent users from shipping goods from Cai Mep. Because of mutual economic benefits from this action, port operators and shipping companies should cooperate together to arrange the way to increase number of shipping loops. In addition, Government should have supporting action such as incentive policies or decreasing port charge to subsidy shipping company cover the loss from low turnover at the beginning periods.
  - In long term, construction progress of road and bridge infrastructure connecting between HCM city and BRVT need to be pushed faster, especially prioritizing 3 important projects of Ben Luc – Long Thanh Expressway, North-South vertical section port road and Phuoc An Bridge. Sufficient access infrastructure helps to save transportation time and cost for exporter and importer, hence, encouraging them to bring goods to Cai Mep. Moreover, BRVT should take action to enhance its logistic condition by building a logistic center near the port. Providing value-added services is a powerful way for ports to build a sustainable competitive advantage in long-run development.
- (2) Acquire demand from other ports in HCM city by developing connecting water way infrastructure in short term and proposing measures to limiting turnover at HCM ports.
- At present, another barrier restrains port users from using Cai Mep is high cost from transporting though long distance of 80km by land way from their factory location to the port. Besides constructing sufficient and shorter connecting in-land

infrastructure, the alternative action in short-term is developing waterway system. In comparison to transport by truck, barge-based waterway shows a huge cost-competitive advantage due to the larger load and higher density of container it allows. For that reason, improving barge service and building ICD system is the high priority action at the present time.

- In long-term, Government needs to have actions to strictly control development plan of river ports in HCM. Namely, Hiep Phuoc expansion plan should be stopped or postponed to avoid inefficient investment. Cat Lai and Saigon Port could be developed as current schedule but no more investment should be made afterward. By a strict monitor from government, over-capacity volume must be compulsorily moved to Cai Mep.

### (3) Expanding the demand from BRVT

- Even though BRVT has put a great deal of efforts into attracting foreign investment in recent years, the desirable outcome has not been attained.
- The province needs to change its direction of strategy in order to attract large corporation investment more effectively. It should focus the potential industries that support for port activities, identify target companies in that industries, approaching and negotiating to understand expectation of each target companies and, finally, considering appropriate policies and incentive to meet the needs of target companies.

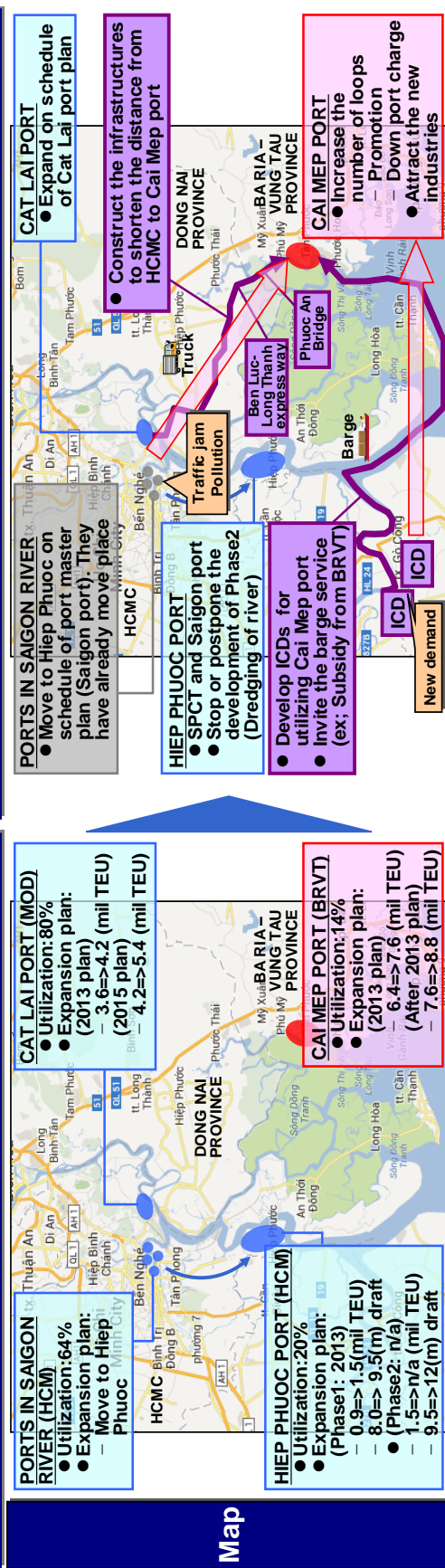
### (4) Establishing Port Authority

- As mentioned, Vietnam port management system is under control of different government ministries and local agencies. This complexity in administration led to conflict in interest and, thus, inconsistency in policies and development plan.
- For that reason, Vietnamese Government should establish a port authority to ensure the optimal role division of all ports in the region and prevent unnecessary economic losses for society.

# CURRENT SITUATION AND ACTION PLAN TO REALIZE OPTIMAL ROLE-DIVISION OF CONTAINER PORTS IN SOUTHERN VIETNAM

Purpose	Realizing optimal role-division of ports in southern Vietnam corresponding to completion of ODA port <ul style="list-style-type: none"> <li>Large social and economic inefficiency exists due to over-supply of the ports in southern Vietnam</li> <li>Under such situation, the ODA port funded by JICA will be completed in September 2013</li> </ul>
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## Current situation and issue



Area (mil TEU)	Turnover			Capacity			Investment		
	Current (2012)	MP target (2015)	Planned (2015)	Current (2012)	Planned (2015)	Planned (2015-)	Completed (-2013)	Planned (2015-)	Planned (2015-)
HCMC • Cat Lai • Hiep Phuoc • Saigon	Utilization 66% 3.9	4.9	4.1	5.8	7.8	500	500	570	
Ba Ria Vung tau • Cai Mep	Utilization 14% 0.9	3.9	2.7	6.4	8.8*	1,500	1,500	520	

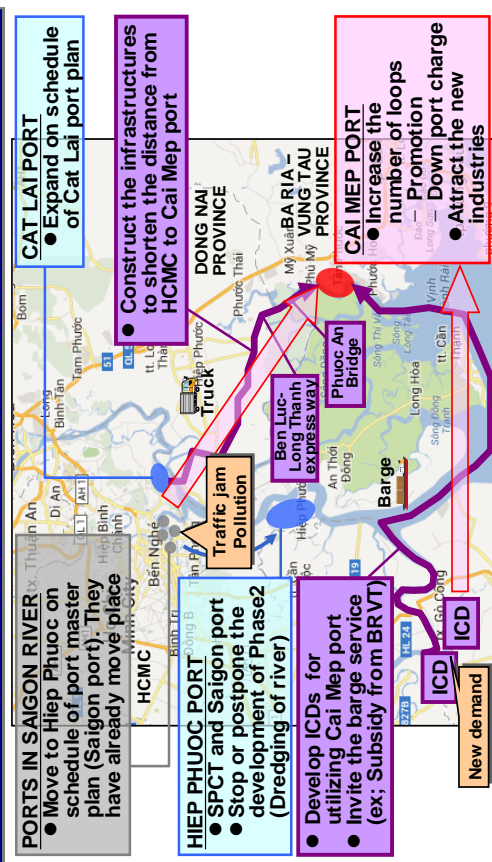
Oversupply compared with MP target turnover in 2015

Further expansion plan of the capacity in all ports

- Stakeholders are unorganized about the development of ports

\* ODA port (1.2million TEU)  
Gemadept port (1.2million TEU)

## Proposal



Action list	Short term		Long term	
	Improving the condition of CM-TV port	Acquiring the demand in other ports	Expanding the demand from BRVT	Establishing Port authority
	<ul style="list-style-type: none"> <li>Increase the number of loops</li> <li>Promote for co-operate with shipping companies</li> <li>Invite the new loops by policy</li> <li>Down port charge</li> </ul>	<ul style="list-style-type: none"> <li>Move the demand to support the access of Cai Mep- Thi Vai port</li> <li>Develop ICDs (Mekong Delta etc) for utilizing Cai Mep port</li> <li>Invite the barge service (ex: Subsidy from BRVT)</li> </ul>	<ul style="list-style-type: none"> <li>Construct the road and Phuoc An bridge to improve access</li> <li>Develop logistics center and utilize neighbor connecting berth to invite transshipments</li> <li>Move the demand compulsorily</li> <li>Put the cap on ports in HCMC because of traffic congestion and environmental pollution</li> <li>Stop developing Hiep Phuoc (maintain the current capacity)</li> </ul>	<ul style="list-style-type: none"> <li>Attract the new industries and corporations</li> <li>Consider the strategy and industrial policy with central government and Ba Ria-Vung Tau province</li> <li>Control and manage the development of ports</li> </ul>

## Chapter 1 : Introduction

### 1-1. Background of the study

The Southern Focal Economic Zone (SFEZ) comprising 8 provinces of Ho Chi Minh, Ba Ria-Vung Tau, Dong Nai, Binh Duong, Binh Phuoc, Tay Ninh, Long An and Tien Giang is the region which has been considered as engine of robust growth for Vietnam after 1990s.

Along with its rapid growth and industrialization, the region has been handling an increasing volume of freight in its ports. Namely, the total throughput has been rocketing from 28,720 tons in 2001 to 79,800 tons in 2010 with average annual growth of 11.3%. The volume of freight in SFEZ is equivalent to 52% of the volume of freight in Vietnam. In addition, the volume is expected to increase in the future, because about sixty industrial parks are operating or under construction now, and the occupancy rate is expanding favorably in this area.

In response to the mentioned-above circumstances, a Port Master Plan was prepared by Ministry of Transportation in 2009 (Decision No.2190/QD-TTg), which provides guidance to strategic direction of each port in the South East of Vietnam until 2020. According to this Port Master Plan, the volume of freight in Vietnam is expected to increase to 500-600 million tons per year in 2015, and to 900-1,100 million tons per year in 2020. Therefore, constructing efficient and competitive ports is indispensable to respond to the increasing demand of freight related to industrialization and modernization in Vietnam.

According to this Port Master Plan, the function of distribution in ports is planned to be transferred from the central city to the suburban areas, and the function of the ports in the central city is planned to be limited to a minimum volume of freight. This plan has been worked out for the purpose of facilitation of urban activities and for the environmental improvement. Thereby, river ports (Saigon port and so on) around HCM City are scheduled to close and the demand of freight in HCM City is scheduled to shift to Cai Mep district by 2020.

In parallel with formulating Port Master Plan, JICA provided international yen loan for the project of constructing Cai Mep-Thi Vai International Container Terminal in 2004, and Cai Mep-Thi Vai International Container Terminal is scheduled to be completed and put into operation in September 2013. At the present, it is in the stage of selecting a port operator.

However, the facilities of ports in Cai Mep district have been over-supplied and are running in a very low percent of the designed capacity, the first reason being the significant declining in freight demand in the Southern region of the country in recent years as a negative consequence from the economic crisis in European countries. Moreover, progress of port relocation in Ho Chi Minh was at a slow pace due to conflict interest among port operation and management stakeholders (Transportation Ministry, Ho Chi Minh Committee, Defense Ministry, etc.).

In response to that situation, this study is conducted to seek the most optimal and feasible solution in Southern ports for the purpose of realizing the optimized urban regional development and the efficient distribution (including Cai Mep ports).

#### 1-2. Objectives

In general, the Study is conducted for the purpose of proposing the policy (Optimized port operation) towards optimization of the ports for the Vietnamese government on the basis of the current situation of ports in Southern Vietnam.

The Study has two specific objectives as shown below:

1. To carry out the research about the current situation and issues of ports in Southern Vietnam (Cai Mep Port Complex, Cat Lai Port, Hiep Phuoc Port Complex, and other ports in HCM City)
2. To propose the policy (Optimized port operation) towards optimization of the ports in Southern Vietnam and present the policy to Vietnamese Government.

#### 1-3. Study area

Southern Vietnam region (Cai Mep Port Complex, Cat Lai Port Complex, Hiep Phuoc Port Complex, and other ports in HCM City)

## Chapter 2 : Current situation in southern container ports

### 2-1. Situation of utilization in southern container ports

#### 2-1.1 Container ports in southern Vietnam

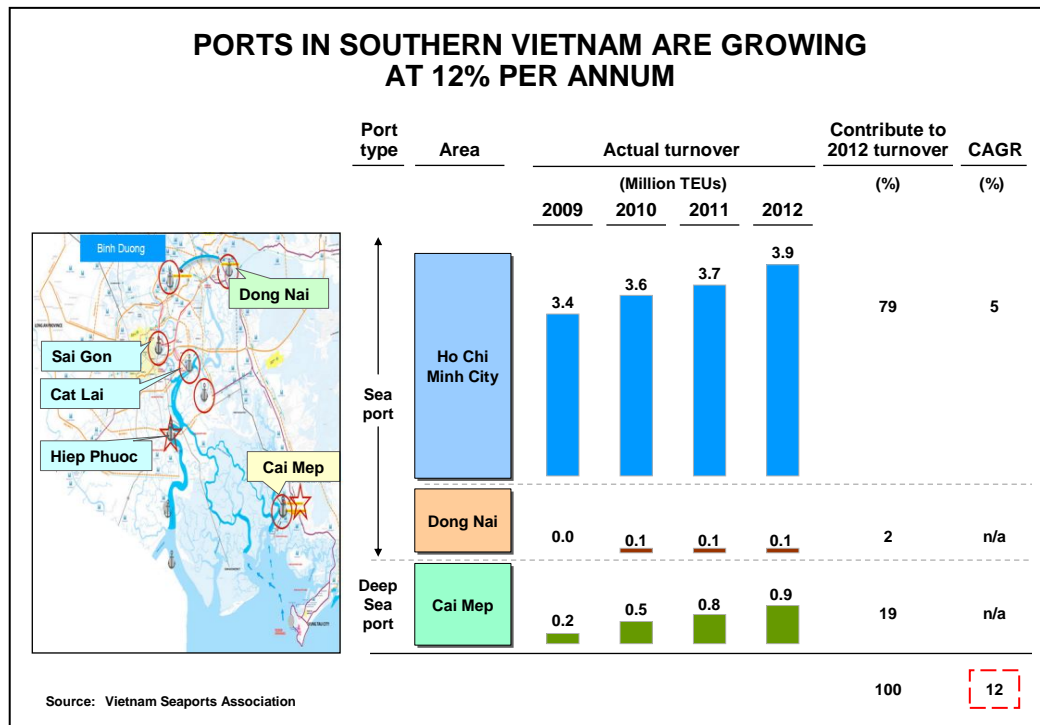


Figure 1: Throughput growth trend in South East port 2009 - 2012

Southeast port is the biggest port region of Vietnam, divided into 3 areas: HCM City Dong Nai and Ba Ria – Vung Tau.

- HCM has 3 sub-ports: HCM, Cat Lai and Hiep Phuoc : Sea port
- Dong Nai: Dong Nai port : Sea port
- BRVT: Cai Mep port : Deep seaport

Occupied 79% of the South East throughput, HCM City port is considered as the key port of the region, ports in Dong Nai and Cai Mep contributes 2% and 19% respectively. In the period of 2009 – 2012, the whole Southeast ports are growing at 12% per annum. Throughput of HCM City port increased 6% annually while Cai Mep port has much higher growth rate. Cai Mep achieved a higher throughput than HCM City in term of volume increase from 2009 to 2012, 0.7 million TEUs compared to 0.5 million TEUs. Not lasting long, this trend reversed in 2012, throughput increase in HCM City doubled Cai Mep; 200,000 TEUs compared to only 100,000 TEUs.

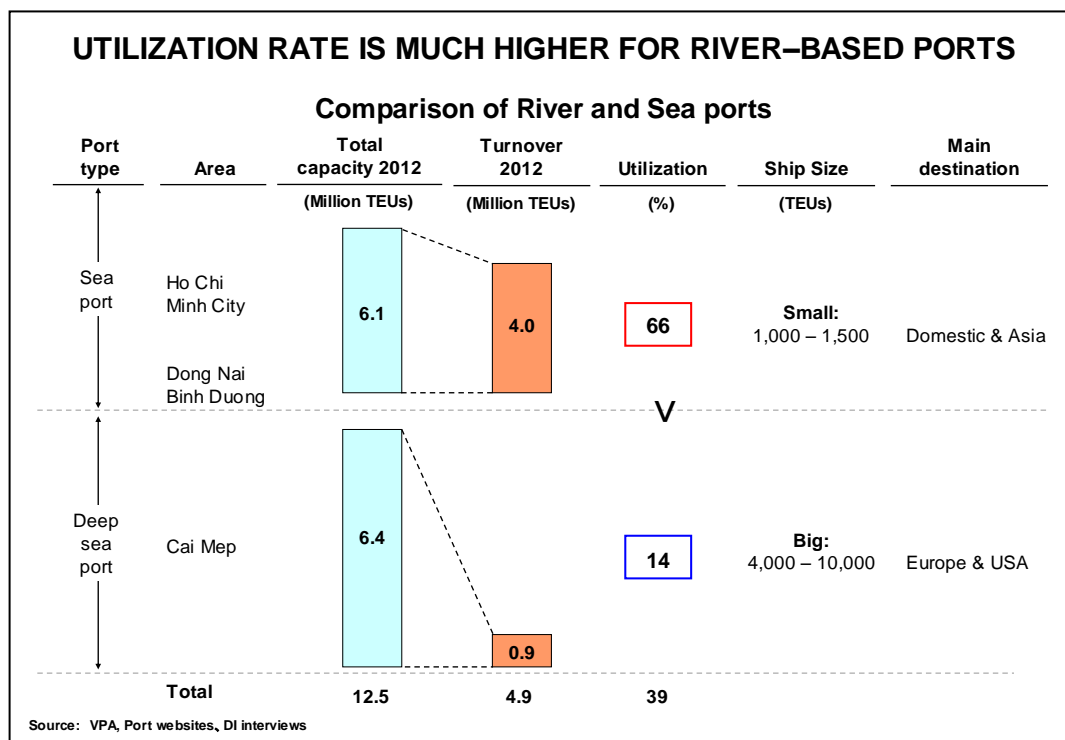


Figure 2: Utilization rate of sea port and deep sea port

The total capacity of seaport (HCM City and Dong Nai) is 6.1 million TEUs and has been utilized 66% with the actual turnover of 4 million in 2012. In contrast, the utilization of Cai Mep is only 14% after 4 years of operation despite the impressive growth; 2012 actual turnover was 900,000 TEUs over the capacity of 6.4 million. The utilization of Cai Mep could be worse when new ports put in operating; example is ODA port, funded by Japan ODA loan, open in 2013 will add an extra capacity of 1.2 million TEUs.

Located along Saigon and Dong Nai River with limited draft of 8.5 meter naturally and up to 12 meter after dredging, all ports of HCM City and Dong Nai can only accommodate small vessels with capacity of 1,000 to 1,500 TEUs. These vessels sizes can only transports short-haul cargo to domestic or Asian countries. On the other hand, the newly developed Cai Mep port (Cai Mep) in Vung Tau city has a natural water depth of 12 meters and up to 14 meter after dredging can serve 4,000 to 10,000 TEUs ships and able to transport long-haul cargo to US or EU.

#### 2-1.2 Sea ports (Cat Lai port, Saigon port, Hiep Phuoc port and others)

HCM City port group is a cluster of numerous port terminals operated by different state-owned enterprises or Joint Venture between Vietnamese and foreign companies. Despite the limited in draft and length, the ports in HCM City are very busy (Figure 3).

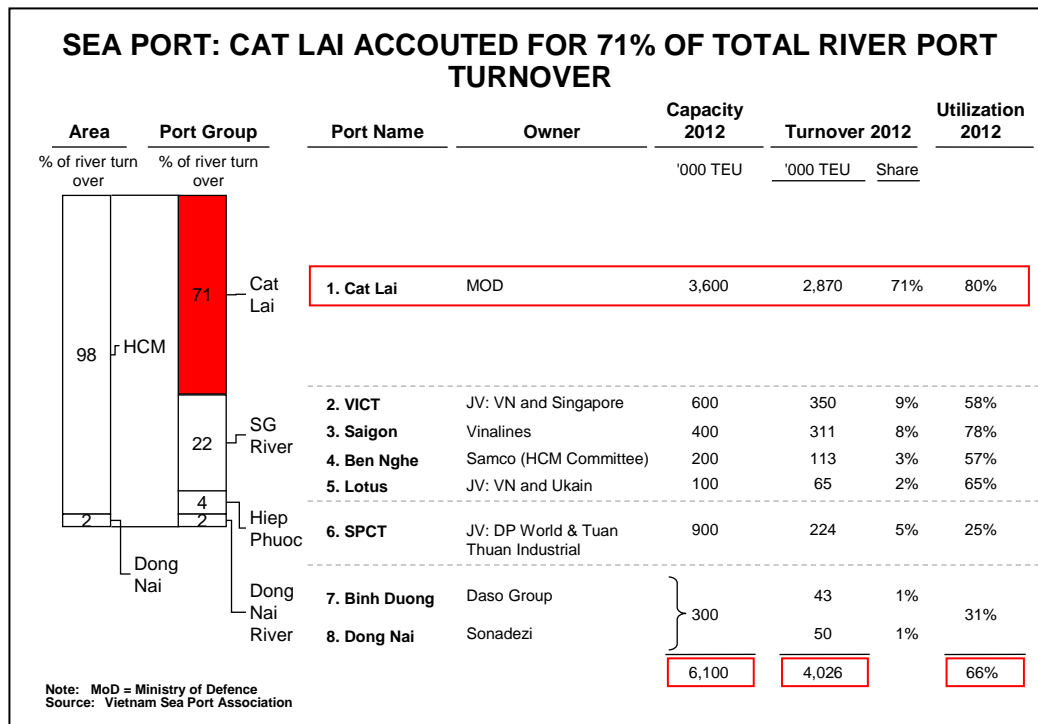


Figure 3: HCM & Dong Nai port utilization 2012

Among the 6 major ports in HCM City port group, Cat Lai is the newest, biggest and busiest one, which accounted for 71% of total seaport throughput. Being relocated to current location in 2006, Cat Lai quickly expanded its operation and became the number one; its throughput reached 2.9 million TEUs, in 2012. Capacity of Cat Lai is 3.6 million TEUs and 80% has already utilized. Cat Lai is operated by Saigon Newport (SNP), establish in 1989 by Ministry of Defense. SNP is the biggest port operator in the Vietnam, beside Cat Lai, SNP also owns 8 container terminals and various ICDs across the country. VICT is the second busiest port but its throughput is far below Cat Lai; 350,000 TEUs and contributes only 9% to the seaport throughput. VICT is the joint venture between state-owned Southern Waterborne Transport Corporation and the NOL Group of Singapore. Followed by two states-owned ports, Saigon Port, operated by Vinaline - Ministry of Transportation and Ben Nghe Port, ran by Samco - a subsidiary of Ho Chi Minh City Committee with 8% and 3% contribution respectively.

In Hiep Phuoc area, SPCT, located along Soai Rap River, is a new and modern port operated by Dubai World and Tan Thuan Industrial (another subsidiary of HCM Committee) but received a very low throughput of 224,000 TEUs. With the capacity of 1 million TEUs, the utilization of SPCT is only 25%. Reasons for this low utilization are: Firstly, the Soai Rap River is too shallow and narrow; Secondly No connection road to the port.

### 2-1.3 Deep Sea ports (Cai Mep port)

Opposite with the business of HCM City ports, Cai Mep has 7 ports operators with huge capacity and state-of-the-art facilities but only two are operating, TCIT and CMIT, others are temporarily closed or switch to do bulk cargo.

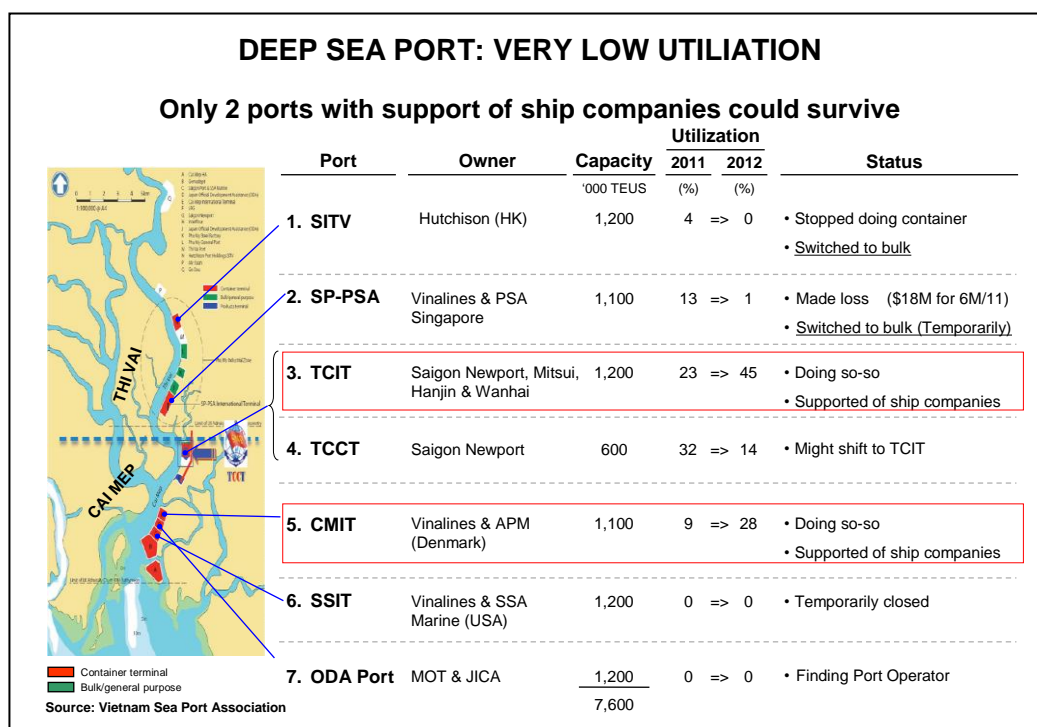


Figure 4: Cai Mep port utilization 2012

In the initial plan in 2002, Cai Mep port complex was proposed with a moderate capacity, eight container berths with total capacity of 2.7 million TEUs. However, current capacity is much higher: 13 berths with total capacity of 7.6 million TEUs. This over investment is a result of the confident in the growth of economy and the commitment of government to support the development of Cai Mep port complex by constructing necessary infrastructures. During the period of 2006 – 2007, Vietnamese port operators were eager to secure some lots and numerous world-class port operators were rushing to invest in this bright-future complex. One party has the land use right, one party has the strong financial capacity & port operation experience, jointventure ports were created with high expectation for future growth.

Thirteen berths are managed by 7 operators (Figure 4): TCCT (#4) is the only 100% domestic port, which is invested by Saigon Newport. Other six are joint venture between Vietnamese, foreign port operators and shipping lines. SITV (#1) was invested by Saigon Investment Construction & Commerce (SICC) and Hong Kong biggest port operator Hutchison Holding. Vinalines, beneficial from being the subsidiary of Ministry of Transportation, successfully

secured 3 lots in the complex and partnered with different world top international port operators. SP-PSA (#2) is a joint venture with Port of Singapore Authority (PSA). Partner with A.P.Moller Terminal - subsidiary of world biggest shipping line Mearsk, Denmark - in CMIT (#5). The third port of Vinalines is SSIT(#6), joint venture with SSA Marine (USA). TCIT (#3) is invested by Sai Gon Newport (operator of Cat Lai) and various shipping lines : MOL, Hanjin and Wanhai. The last port is ODA Port (#7), developed by MoT using ODA fund, local operator will be chosen through a tender process.

Among 7 ports, only CMIT & TCIT are surviving as they have been supported by shipping line partners. To make it more flexible for exporters, these ports also cooperate with ports in HCM City so that exporters can drop off the goods at Cat Lai or Saigon Port then barging to CMIT or TCIT. In 2012, TCIT handles 540,000 TEUs - 45% utilization; CMIT handled 308,000 TEUs - 28% utilization. SITV and SP-PSA were built as a container port but due to the low demand, it is currently switched to handle bulk temporarily. SP-PSA suffered a huge loss of \$18 million in six months in 2011. TCCT mainly receives barging throughput from HCM City Ports. SSIT is temporarily closed.

## 2-2. Reason of low utilization in Cai Mep port

### 2-2.1 Reasons of low utilization

Despite the fact that Cai Mep is the most modern port complex in the country and also being managed by world top operators, the utilization is still very low due to low demand from port users.

Two main reasons for low demand of Cai Mep port complex:

- (1) **Few loops:** The loops in Cai Mep are much less than Sea Ports in HCM City, 9 loops/week compared with more than 60 loops/week. The shipping services are not frequent so the users have to make sure the arrival time to the port. If the goods were late, they have to wait for another few days to the next shipping schedule.
- (2) **High road transportation cost:** Another disadvantage of Cai Mep is that it is located too far from the main industrial zones and also far from demand markets like HCM CITY, Dong Nai and Binh Duong so there are no imported throughputs. The far location plus only one-way demand makes the road transportation cost increase significantly

## FEW LOOPS AND HIGH TRANSPORTATION COST ARE MAIN REASONS FOR LOW UTILIZATION OF CAI MEP

### Economics for each company

<p>(1) FEW LOOPS</p>	<p><u>Few number of loops is a factor of inconvenient transportation</u></p> <ul style="list-style-type: none"> <li>Cai Mep port has much less loops than ports in HCMC, therefore shipper have to wait long time to transport in Cai Mep port <ul style="list-style-type: none"> <li>Cai Mep port has only 8 loops/week (once a week)</li> </ul> </li> <li>In contrast, ports in HCMC (especially Cat Lai) have so many loops that shippers can transport their shipment timely <ul style="list-style-type: none"> <li>Transportation for USA and EU is possible by utilizing transshipment in Singapore, Hong Kong or Malaysia</li> </ul> </li> </ul>
<p>(2) HIGH TRANSPORTATION COST</p>	<p><u>Utilizing Cai Mep port leads to high cost</u></p> <ul style="list-style-type: none"> <li>Ports in HCMC are closer to the most of industrial parks than Cai Mep <ul style="list-style-type: none"> <li>Shippers bear only one way fee from the industrial park to the port</li> </ul> </li> <li>In contrast, Cai Mep port is far from the most of industrial parks <ul style="list-style-type: none"> <li>Shipper must bear round-trip fee (even for one way demand), as there is no freight back from BRVT</li> </ul> </li> </ul>

Figure 5: Reasons of low utilization in Cai Mep port

## 2-2.2 Detail reasons

### 2-2.2-1 Limitation of number of shipping loops

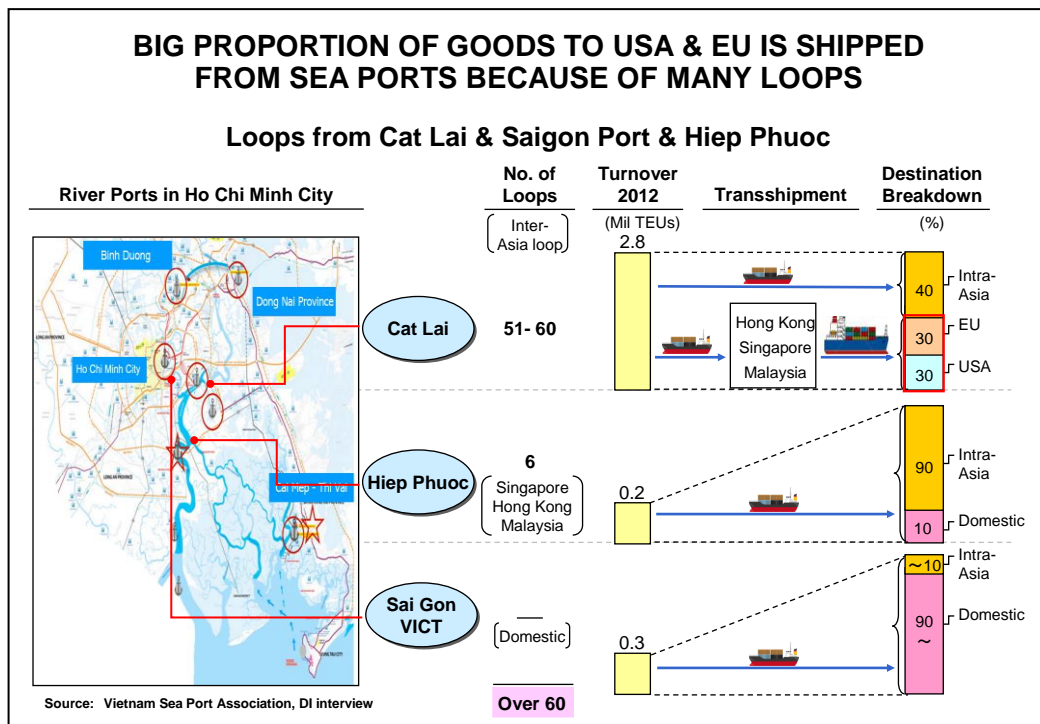


Figure 6: Loops in HCM City Ports

Southern ports have a clear role and division: Cat Lai, Hiep Phuoc are ports for short route service to Asian countries, other ports in HCM City area mainly serve for domestic demand; Cai Mep is the port for long route service to US or EU using big mother vessels.

As the busiest port in the region, Cat Lai has the highest number of loops; around 51 to 60 loops per week and all are short haul, which bound to Asian countries. However, only 40% throughput is the direct trade with those Asian countries. The rest 60% of the goods are transshipped at Hong Kong, Singapore or Malaysia, transferred to mother vessels and continue to go to the final market in US & Europe. Just opened in 2010, Hiep Phuoc has 6 loops, 90% of throughput bound to Asian countries, the other 10% are transported domestically. Opposite with Cat Lai and Hiep Phuoc, 90% of VICT and Saigon throughout are domestic. This is a sad story of VICT because it used to be the second busiest port just after Cat Lai. After the Phu My Bridge was built in the development plan of the eastern side of Saigon River, VICT experienced significant drop in throughput because big vessels cannot pass through.

IN CONTRAST, CAI MEP PORT HAS ONLY 8-9 LOOPS						
8-9 loops from Cai Mep						
CMTV terminal	Code	Shipping line	Departure ports	Stop-by ports	Destination	Ship size
TCIT	1. LP1	MOL	Japan	→ HK → CMTV → SIN →	EU	'000 TEUs 8.6 – 9.0
	2. PSX	MOL	Thailand	→ CMTV → HK →	USA (West)	6.2 – 6.7
	3. SVS	MOL	CMTV	→ HK → SIN →	USA (East)	4.5 – 6.4
	4. AW4	KL	HK	→ CMTV → SIN →	USA (East)	5.6 – 6.6
	5. PSI	HJN	Thailand	→ CMTV → HK →	USA (West)	5.8
	6. HS3	MOL	Indonesia	→ Malaysia → CMTV → HK →	Japan	4.0 - 4.5
	7. New loop	-	Thailand	→ CMTV → Philippines →	Japan	2.8
CMIT	8. AEX	OOCL	CMTV	→ HK → SIN →	USA (East)	5.3 – 6.7
	9. TP6	MSL	Malaysia	→ CMTV → China → HK →	USA (West)	7.7 – 10.2

Source: DI interview

Figure7: Loops in Cai Mep Ports

In contrast with the large number of loops in Cat Lai, Cai Mep port complex only has 9 loops per week. TCIT has seven loops per week, in which four are operated by MOL, one is operated by K-Line and one is operated by Hanjin. CMIT has 2 loops operated by OOCL and Mearsk Sea Line. About destination, 6 routes directly bound to USA, two to Japan and only one to Europe. Due to low number of loops, the shipping schedule in Cai Mep is not flexible thus it's

inconvenient and unattractive for exporters. The mother vessels only anchor for several hours per stopping and each shipping line only has one service to a specific destination once a week. Exporters have to transport and store their goods in the container yard waiting to be shipped. If for some reasons, transported goods miss out the sailing time, they have to wait for a week. While with more frequent services, the waiting time is much less when shipping in Cat Lai. Shipping lines can bear the loss in the initial period but if the demand is not increase or increase too slowly then can't bear the loss to keep loops forever. Mearsk Sea Line used to operate one loop to Europe in CMIT but due to low demand they already canceled.

#### 2-2.2-2 High transportation cost

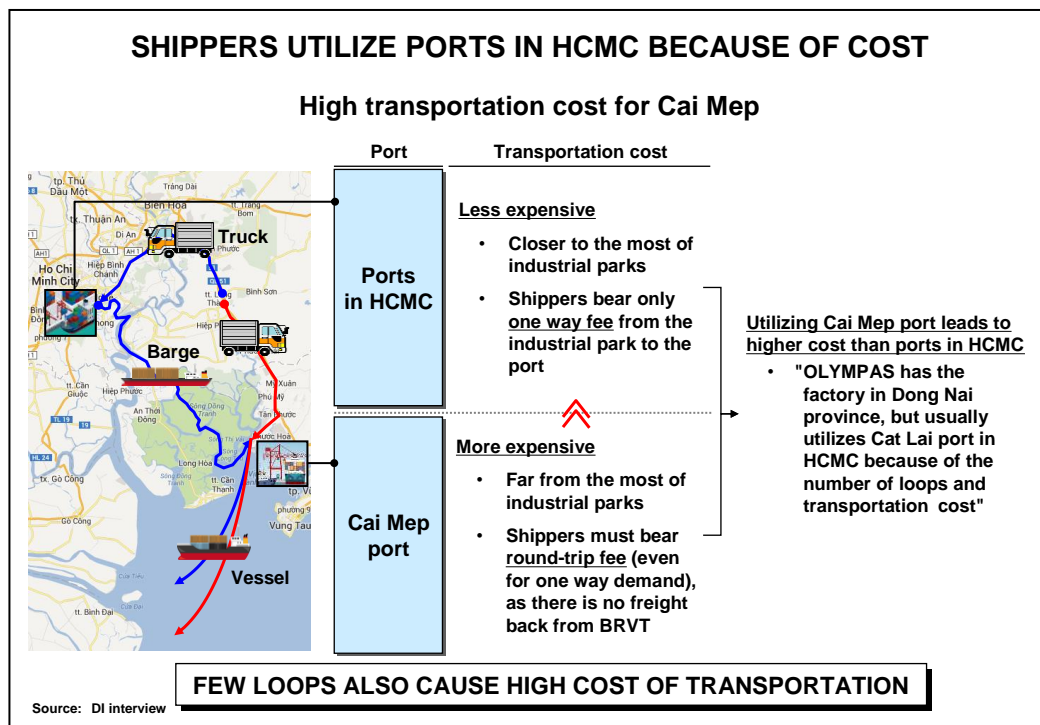


Figure 8: Reasons transportation cost to Cai Mep higher than Cat Lai

In addition, cost is also a big issue prevents the goods come to Cai Mep Port. There are two factors contribute to the high cost:

(1) Location is far from the main industrial zones:

- Bien Hoa, Dong Nai and HCM City are the main industrial zones of Southern area, where majority of the exported good originate. The distance between Bien Hoa, Dong Nai and CM - TV is 50km while it's only 25km to Cat Lai. It's further if going from HCM City, which is 80km but only 23km from HCM City to Cat Lai.

(2) Exporters have to pay two ways even though they only use one way:

- Cai Mep received very low imported goods so trucking companies only can run one way to Cai Mep. From the way back from Cai Mep, in most of the time their container trucks are empty. And for that reasons, exporters has to bear the cost for two way

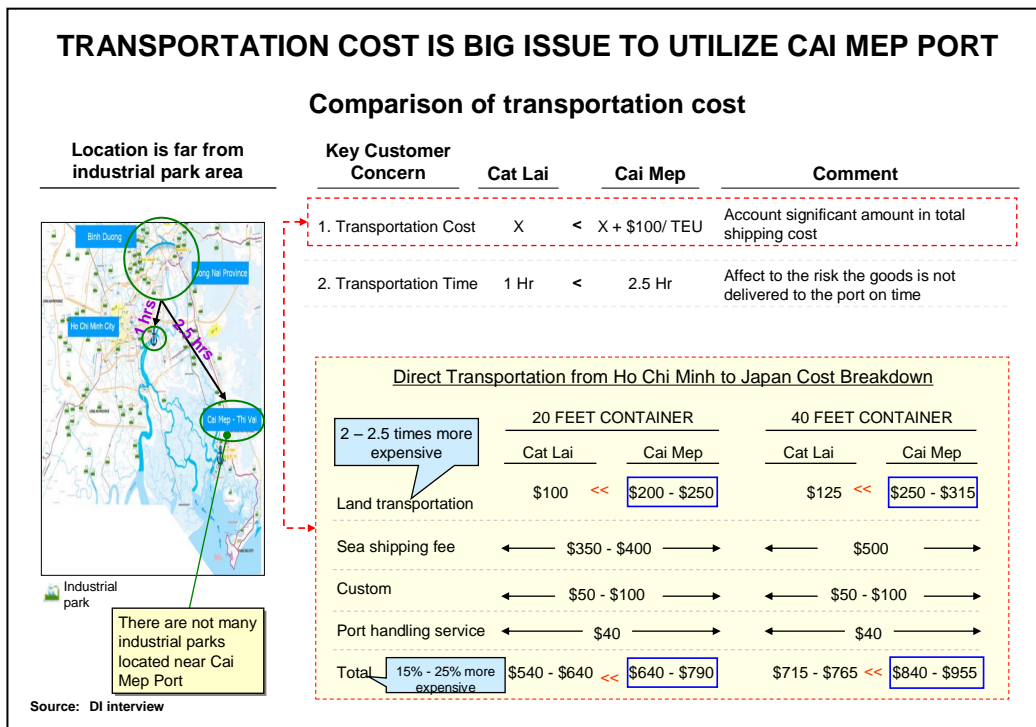


Figure 9: Comparison the shipping cost between Cai Lai and Cai Mep

The total shipping cost in Cai Mep is 15% to 25% more expensive than Cat Lai. Example, shipping the 20 feet container from HCM City directly to Japan at Cat Lai costs \$540 to \$640 while it's \$640 to \$790 at Cai Mep. Same service for 40 feet container costs 715 - \$765 at Cat Lai and \$840 - \$955 at Cai Mep. Total shipping cost comprises land transportation, sea shipping fee, custom and port handling service. There is no different in sea shipping fee, custom and port handling charge between Cat Lai and Cai Mep. However, land transportation cost to Cai Mep is significantly higher than transporting to Cat Lai, about 2 to 2.5 times. Trucking cost of 20 feet container from Bien Hoa to Cat Lai is only \$100 while it costs \$200 to truck to Cai Mep; for 40 feet container this cost is \$125 and \$250 respectively. Beside the expensive price, the transportation time to Cai Mep also take much longer: 2.5 hours from Bien Hoa comparing to only one hour if transporting to Cat Lai.

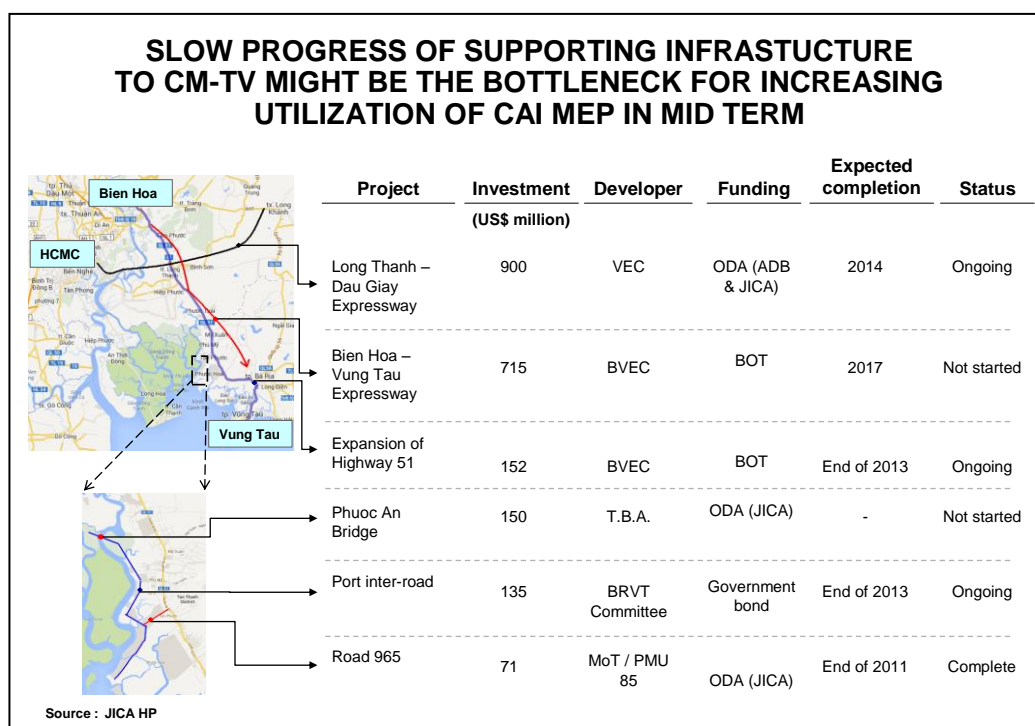


Figure 10: Status of supporting infrastructure

On top of two issues raised above, the slow progress of supporting infrastructure to Cai Mep could also be the bottle neck for increasing utilization of Cai Mep in mid-term. Cai Mep port complex started in early 2007 and many ports were opened in 2009. There are some infrastructure projects to support for the development of Cai Mep but only one of them is finished, 965 road. The 965 road connects the national high way and the port complex. The project is funded by JICA and expected to complete in late 2011 but it's actually just finished recently. The HCM City-Long Thanh-Dau Giay Expressway, which promises to cut the travel distances and increase speed, was scheduled to be completed at the end of 2012. However, this is already pushed back to 2014. The Bien Hoa - Vung Tau expressway is also in the development plan to shorten the transportation time and length between the main industrial zones to Cai Mep. This project will be funded by government bond and developed by BVEC, but until now the project is not started yet. The project that has the biggest impact on the transportation to Cai Mep is the expansion of national high way 51 because currently it's the only way to Cai Mep. However, the project improving NH51 was not launched until late 2009, which means some of the ports are ready to use but the only road connecting there is in a very poor condition. Trucking companies complain about their inability to carry heavy loads given the constrained capacity of the existing highways, speed limitations, and dangers posed by the mixing of four and two-wheeled vehicles. Phuoc An Bridge, funded by ODA fund, is proposed to cut the distance to Cai Mep but still have no specific starting date yet. Another delayed

project, which has serious impact on the port complex is the Port Inter-road, the road condition currently is so bad and very dangerous for heavy vehicles. Even the road couldn't reach some ports in the lower section of the port complex like SSIT. This is could also a reason why SSIT is temporarily closed. As the land infrastructure is so bad, barging appealed to be more attractive, more environmentally friendly and is less costly taking into consideration the cost of fuel and informal levies.

### 2-3. Overall structure of transportation in Vietnam southern ports

#### 2-3.1 Export

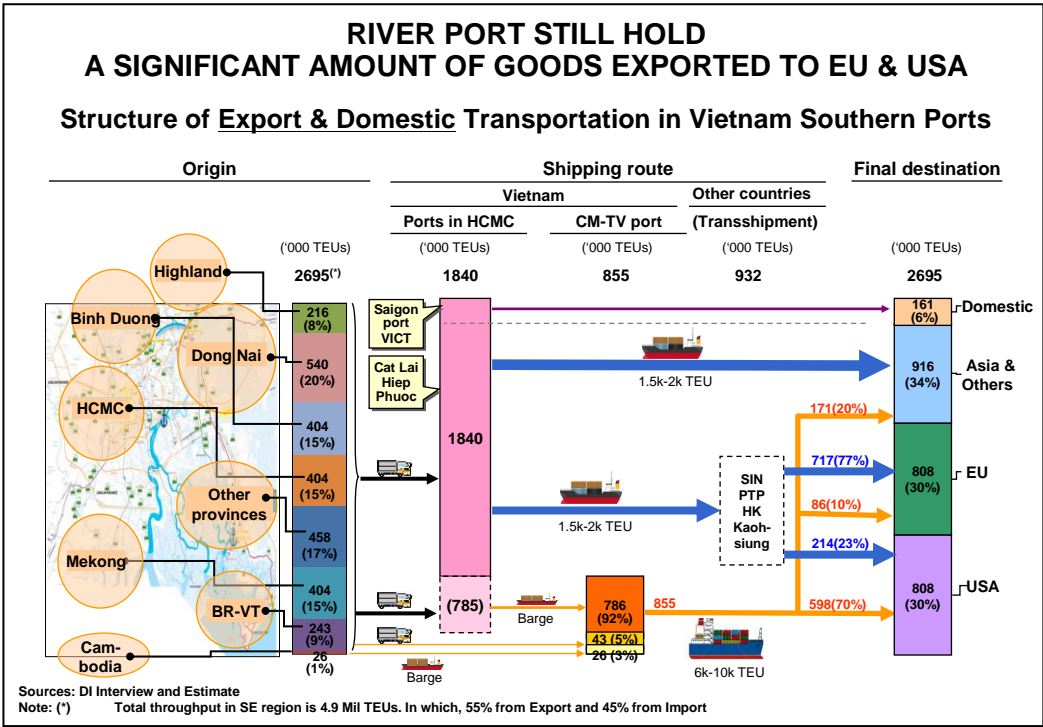


Figure11: Overall structure of transportation - Export

As mentioned above, the Southern port system supposed to have a clear role and division. Seaport is using for intra-Asia route while Deep Sea Port is used for long haul service to US and Europe. However this role-division has not been practiced well in the reality. There is still a significant amount to goods exported to US, EU shipped Cat Lai and transited at Hong Kong, Singapore or Malaysia. As being the export oriented countries, the export demand in Vietnam is quite large especially in the South. The total export demand in Southern Vietnam is about 2.7 million TEUs in 2012. Highland area contributes 8% to the export throughput and coffee is the main product. Half, 52%, is contributed by three big cities Dong Nai, Binh Duong and HCM

City, which are also the main industrial zones in the South. These provinces are the favorite location of international manufacturers to set up factories and produce for export purpose. Main products are manufactured or OEM products like shoes and apparel. The export goods from Mekong Delta is also high, 16%, with the main products are agriculture like rice and processed seafood. Ba Ria–Vung Tau only contributes 8% to the export throughput as their main industries are heavy industries and using specialized ports instead of container ports. The rest of the throughput comes from other provinces, 17%, and a little transshipment from Cambodia, 1%.

Look at the destination side of the goods transported from Southern ports, 6% shipped within Vietnam, 34% shipped to the direct trade market in Asian countries and 60% shipped to US and Europe with 30% each. For the domestic cargo, all are shipped from HCM City ports specifically are the small ports like VICT, Saigon Port or Lotus. The exported goods to Asian countries and others; like New Zealand or Australia; are also shipped from HCM City ports but the majority is from Cat Lai. A small proportion of this throughput was shipped from Cai Mep to Japan as Cai Mep has 2 loops per week to Japan. Majority of exported goods to Europe are shipped at Cat Lai and transited in Singapore, Malaysia, Hong Kong or Taiwan. Only a small proportion was shipped directly from Cai Mep. Opposite with Europe market, majority of exported goods to US were shipped directly from Cai Mep. Some proportion still have to transit in Asian countries mainly because Cai Mep does not have enough loops to offer more flexible shipping schedule for exporters.

About the transportation mode to the ports, 100% of the goods come to HCM City ports by road. In contrast, 95% of the goods come to Cai Mep by barging, in which 3% is the transshipment from Cambodia. Reasons of this different have been discussed above: high land transportation cost and slow progress of supporting infrastructure.

### 2-3.2 Import

The import throughput is not too much different from export, about 2.2 million TEUs in 2012. However, the origin of imported good is quite opposite with export, 88% of the imported throughput are from Asian and other countries (except US, EU). In term of container throughput, only 8% Vietnam imports from Europe and 4% from US. The importers prefer to receive goods at HCM City ports as they are located near the demand market; Binh Duong, Dong Nai and HCM City; as the imported products are mainly material for manufacturing. Location of Cai Mep is a real disadvantage for import side, there is no reason for importers to receive goods at Cai Mep and transport a long way back to Bien Hoa, Dong Nai or HCM City. As a result, Cai Mep only received 45,000 TEUs of imported goods in 2012, which is just 2% of total import. However, these goods still have to barge back to HCM City ports. The low demand for import makes it very inefficiency for trucking companies as it can only utilize one-way transportation.

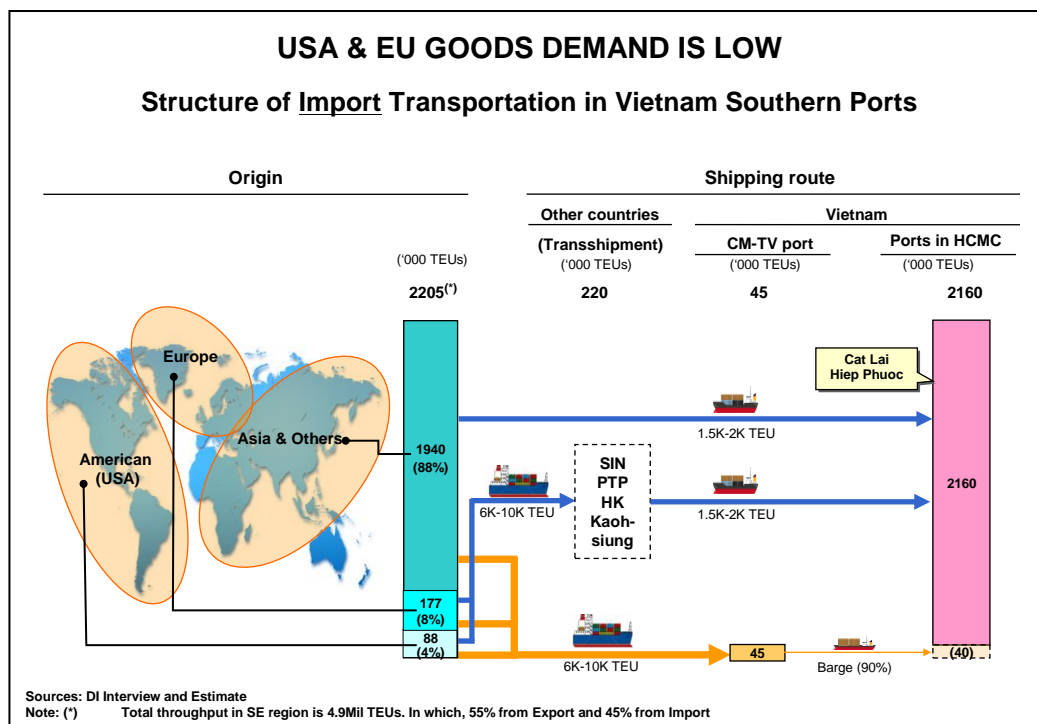


Figure12: Overall structure of transportation - Import

## Chapter 3 : Master plan of southern container ports

### 3-1. Outline of port master plan

#### 3-1.1 Process of establishing master plan

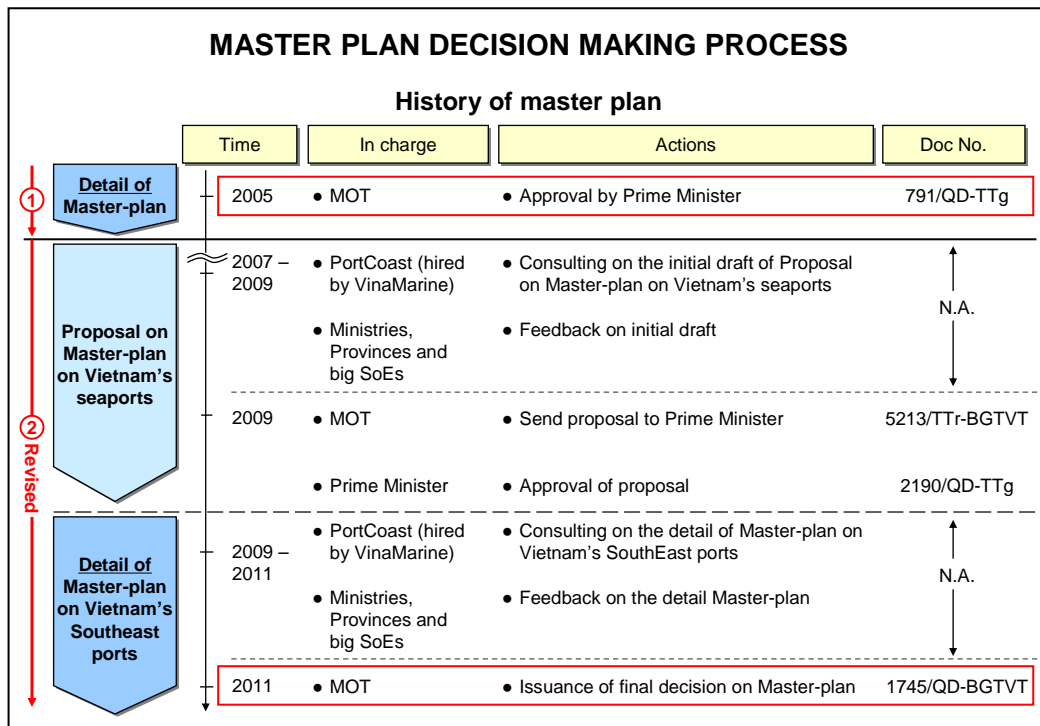


Figure 13: Master-Plan decision making process

The idea of relocating ports from HCM City center to other areas first started in the end of 1990s after some shipping lines' suggestions of potential traffic jam in the City. In 1999, the first proposal about the matter was raised. However, not until 2005 was a legal document approved about relocation as well as where new ports will be constructed. It took six years to finally get the initial Master plan approved due to complicated four-step process. Ministry of Transport's VinaMarine was hired to make the proposal.

For step one, three port consulting companies (PortCoast, TEDI and CMB) were hired by VinaMarine to consult on the initial draft of Proposal on Initial Master plan of total Vietnam's Seaports. The draft was then sent to related Ministries such as Ministry of Investment and Planning, Industry and Commerce, Finance and Defense and big State-owned Enterprises (SoE) related to ports for feedback. The feedback was collected for the purpose of improvising the proposal and submitted to VinaMarine.

For step two, Ministry of Transport submitted the improvised Proposal on Master Plan on Vietnam's Seaports to the then Prime Minister Phan Van Khai and was approved in 1999.

However, the Proposal was a very general plan on port development. A detail of the development plan as well as the detail of the Southeast area was still needed, which leads to step three.

For step three, PortCoast was again hired by VinaMarine to analyze the situation and come up with a detail plan of Southeast ports. Once again, PortCoast sent the draft on Detail Master plan to related Ministries and SoEs for feedback. The feedback and PortCoast's analysis and forecast was used to VinaMarine to make the detail Proposal on Southeast ports. The detail Proposal was submitted to Prime Minister in 2002.

However, it took the government three years to get the Proposal approved. In 2005, the then Vice Prime Minister Nguyen Tan Dung finally approved the detail Proposal with the document number 791/QD-TTg.

After the approval, two problems arose that led to the need of issuing new Detail Master Plan:

- Investment certificates on container ports were given so quickly that the capacity exceeded proposal
- Relocation process showed no progress

The process of second revised Master plan was much quicker and more ambitious than the initial one. The first three steps of the process still remain the same. However, the final one was approved by, instead of Vice Prime Minister as 2005 Master plan, the then Minister of Transports, Ho Nghia Dung. The whole process took two years, from 2009 to 2011. The two Master plans are so different in many aspects.

### 3-1.2 Comparison of master plan in 2005 and 2011

Compared to the initial Master Plan, the second one differs significantly in terms of target throughput as well as direction of strategy. In terms of throughput, since the second Master plan was made in 2009 during the peak of Vietnam's economic activities with a 20% annual growth, the result of the proposed was way higher than reality as well as the initial Master plan.

In terms of tonnage throughput, the revised Master plan's target for 2020 is 235 – 317 million tons, which over-doubles the one set by the initial Master Plan. Target for the year 2030 is even higher, 373 – 680 million tons. In terms of TEU throughput, while it is not stated in the initial Master plan, the second Master plan targets the level for 2020 at 4.8 - 7.0 million TEUs and 2030 at 8.6 - 17.6 million TEUs.

In terms of relocation plan, the two Master plans are quite similar. Five ports (Saigon Newport, Saigon Port, Than Thuan Dong, Veggie and Ben Nghe) and Ba Son Shipyard must be relocated to outside of the city center in order to reduce the traffic jam and pollution. Two other ports (VICT and Lotus), if re-location must take place, will be re-located after the other six.

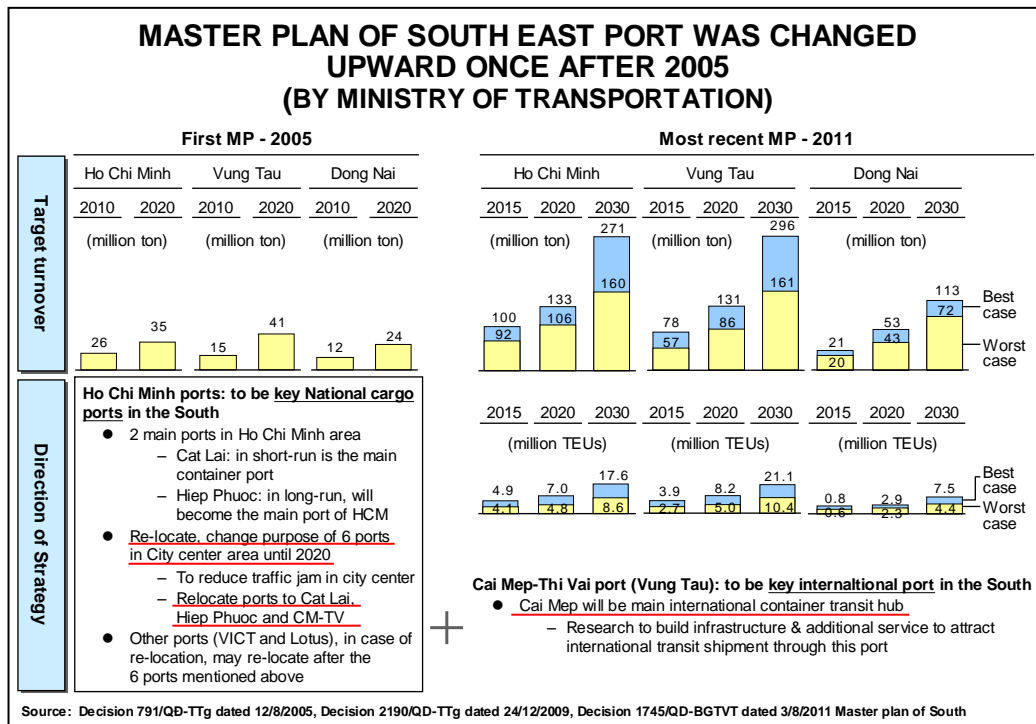


Figure 14: Most recent MP - 2011

However, the Master plans did not clearly say where these ports will be located to. Instead port operators can choose between Cat Lai, Hiep Phuoc and Cai Mep to be relocated.

- For Cat Lai, it should be the main container port in the short run.
- For Hiep Phuoc, it should be the main port of HCM City.
- For Cai Mep, this is the main source of controversy:
  - As indicated in the initial Master plan, Cai Mep would be the supporting ports to HCM City ports in the short run and main Southeast port in the long run
  - However, as indicated in the second Master plan, Cai Mep ports were planned to become key international port in the South with the goal of becoming the transshipment hub of the region

### 3-1.3 Port relocation plan in master plan

In order to realize the target, five ports and one shipyard within city center (which are Saigon New Port, Saigon Port, Tan Thuan Dong, Veggie, Ben Nghe and Ba Son Shipyard) must be relocated to Cat Lai, Hiep Phuoc and Cai Mep by 2020. Vietnam International Container Terminals (VICT) and Lotus may be relocated after the other six. However, the deadline for the two is not specified.

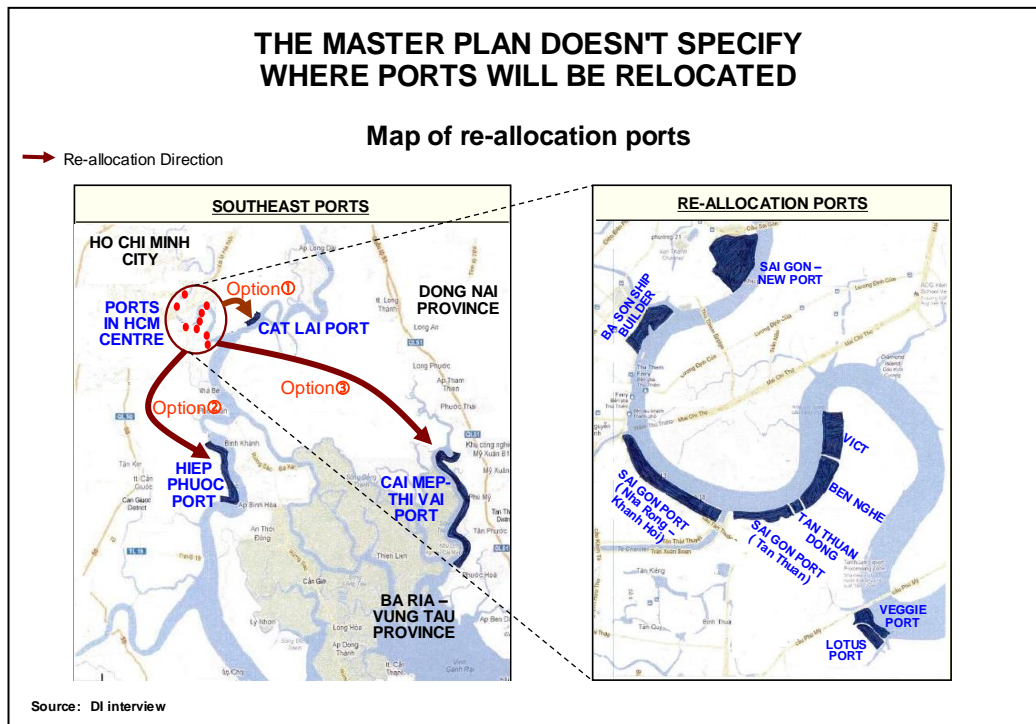


Figure 15: Map of re-allocation ports

After the initial Master Plan was approved, international port operators and shipping lines rushed to Vietnam to get Investment Certificate to operate ports in Ba Ria – Vung Tau. From October 2006 to February 2007, five Investment Certificates were granted to investors. Most notable among them are SP-PSA, SSIT, SITV, TCIT and TCCT. The capacity of the five terminals alone are 6.4 million TEUs (equivalent to about 70 million tons), far exceeding 2020 designed capacity of the province.

### 3-2. Development plan of each port

#### 3-2.1 Interest of each port

In reality, Vietnam's port industry is controlled by many interest groups, most notable of them may include:

- VinaMarine, an organization under Ministry of Transport
- Saigon Newport, Cat Lai port operator, a company owned by Ministry of Defense
- Ba Ria – Vung Tau province, the municipal in which Cai Mep is located
- HCM City, a powerful municipal in which Cat Lai and Hiep Phuoc ports are located

EACH STAKEHOLDERS HAVE CLEARLY DIFFERENT INTERESTS		
Interest of stakeholders		
Stakeholder	Interest about port	Reason
<b>MOT (VINAMARINE)</b>	Realizing optimal role-division of ports <ul style="list-style-type: none"> <li>● Stop or postpone development of Hiep Phuoc port</li> </ul>	<ul style="list-style-type: none"> <li>● Developing Hiep Phuoc port is over-supply for southern Vietnam <ul style="list-style-type: none"> <li>– Hiep Phuoc will be competitor with Cat Lai port and Cai Mep-Thi Vai port</li> </ul> </li> </ul>
<b>MOD (Saigon New port)</b>	Expanding <u>Cat Lai port</u>	<ul style="list-style-type: none"> <li>● Revenue in Cat Lai port is an important source for MOD <ul style="list-style-type: none"> <li>– MOD has plans to expand ICD in HCMC to acquire the new increasing demand</li> </ul> </li> </ul>
<b>BR-VT Province</b>	Expanding <u>Cai Mep-Thi Vai port</u>	<ul style="list-style-type: none"> <li>● BR-VT province wants to expand the port to activate industry in BR-VT <ul style="list-style-type: none"> <li>– BR-VT desires to attract new industries and corporations (especially Japanese company) by utilizing Cai Mep-Thi Vai ports</li> </ul> </li> </ul>
<b>HCMC</b>	Expanding <u>Hiep Phuoc port</u>	<ul style="list-style-type: none"> <li>● SPCT is the joint venture company by Tuan Thuan Industrial Promotion Company and Dubai Ports World <ul style="list-style-type: none"> <li>– Tuan Thuan Industria is the company under HCMC PC</li> </ul> </li> <li>● HCMC doesn't want to move ports to outside because of industrial outflow <ul style="list-style-type: none"> <li>– Industry (including port) is related to HCMC' s revenue indirectly</li> </ul> </li> </ul>

Source: DI interview

Figure 16: Interest of stakeholders

These interest groups have different perspectives and interests in port matters:

- VinaMarine is responsible for overall development of seaport system. Therefore, it wants to carry out the solution that is best for the whole country. According to VinaMarine, the development of Hiep Phuoc might be a waste of money and in the future, may post a threat to the development of Cat Lai as well as Cai Mep. What is optimal for the whole country is to postpone the development of Hiep Phuoc.
- Meanwhile, Saigon Newport does not really care about the development of Hiep Phuoc or Cai Mep ports since it is already the biggest and most known port in Vietnam. What Newport is doing now is to expand the current operation of Cat Lai port. At the same time, it is looking for a way to acquire new demand for the port by expanding ICDs.
- Ba Ria – Vung Tau province, on the other hand, wants to expand Cai Mep port. The province understands that it is extremely difficult to attract goods from Cat Lat to Cai Mep due to many reasons mentioned above. Therefore, the best way to increase the throughput of Cai Mep is to attract new industries and companies, especially Japanese ones, to invest in Ba Ria – Vung Tau.

- Similar to Ba Ria – Vung Tau province, HCM City’s purpose is also to expand ports based within the City itself. However, the reasons why the City wants to do such thing are slightly different from Ba Ria – Vung Tau:
  - First of all, Hiep Phuoc port (or SPCT) is a joint venture by Dubai Ports World and Tan Thuan Industrial Promotion Company (Tan Thuan IPC), which is a company owned by HCM City People’s Committee. Not expanding SPCT also means the investment in the port terminal is not efficient. HCM City, as many other investors, would not want this to happen.
  - The second reason is that if SPCT or any other ports are re-located to outside of the City, other industries would follow suit by moving close to port. Such movement would result in an industrial outflow, which is not favored by any other municipal

Although VinaMarine is responsible for the development of port, it cannot do anything about Saigon Newport or HCM City, The reason why Minister of Transport and even Vice Prime Minister Hoang Trung Hai’s effort might not be materialized is purely political as shown in the chart below:

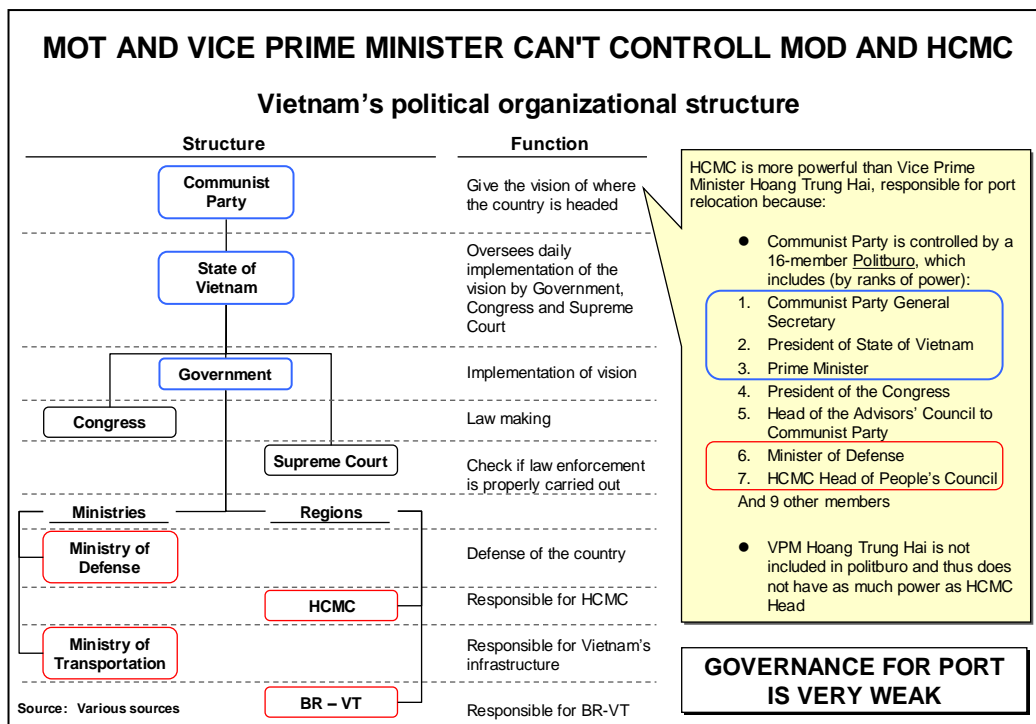


Figure 17: Vietnam's political organization structure

The highest authority in Vietnam is the Communist Party, which set up the vision for the whole nation. Under the Communist Party is the State which oversees the implementation of such vision. Under the State are Government which implements the vision, Congress which makes laws and Supreme Court which checks if the law is properly carried out. Under the Government are Provinces and Ministries.

The highest authority in Vietnam, Communist Party, is controlled by Politburo which is composed by the following 16 members:

1. General Secretary of the Communist Party, Mr. Nguyen Phu Trong
2. President of the State of Vietnam, Mr. Truong Tan Sang
3. Prime Minister, Mr. Nguyen Tan Dung
4. President of the Congress, Mr. Nguyen Sinh Hung
5. Head of Advisors' Council to the Communist Party, Mr. Le Hong Anh
6. Minister of Defense, Mr. Phung Quang Thanh
7. HCM City General Secretary, Mr. Le Thanh Hai
8. Head of Central Organization Committee, Mr. To Huy Rua
9. Hanoi City General Secretary, Mr. Pham Quang Nghi
10. Minister of Police, Mr. Tran Dai Quang
11. Vice President of the Congress, Ms. Tong Thi Phong
12. Principal of Central Governance Unit, Mr. Ngo Van Du
13. Head of Central Religion Preaching, Mr. Dinh The Huynh
14. Vice Prime Minister, Mr. Ngo Van Phuc
15. Vice President of the Congress, Ms. Nguyen Thi Kim Ngan
16. Vice Prime Minister, Mr. Nguyen Thien Nhan

The above 16 individuals basically seize all the highest power available within Vietnam. Minister of Transport, Vice Prime Minister Hoang Trung Hai and General Secretary of Ba Ria – Vung Tau Province although powerful are still not as superior as anyone in the Politburo. Therefore, they cannot direct Minister of Defense and HCM City General Secretary to relocate Cat Lai or to stop developing Hiep Phuoc ports. Political support for port is very weak. That is why it is difficult to adjust differences of opinion that each stakeholder has. Therefore, all ports have independent plan as the followings

### 3-2.2 Detail development plan

#### 3-2.2-1 Cat Lai port

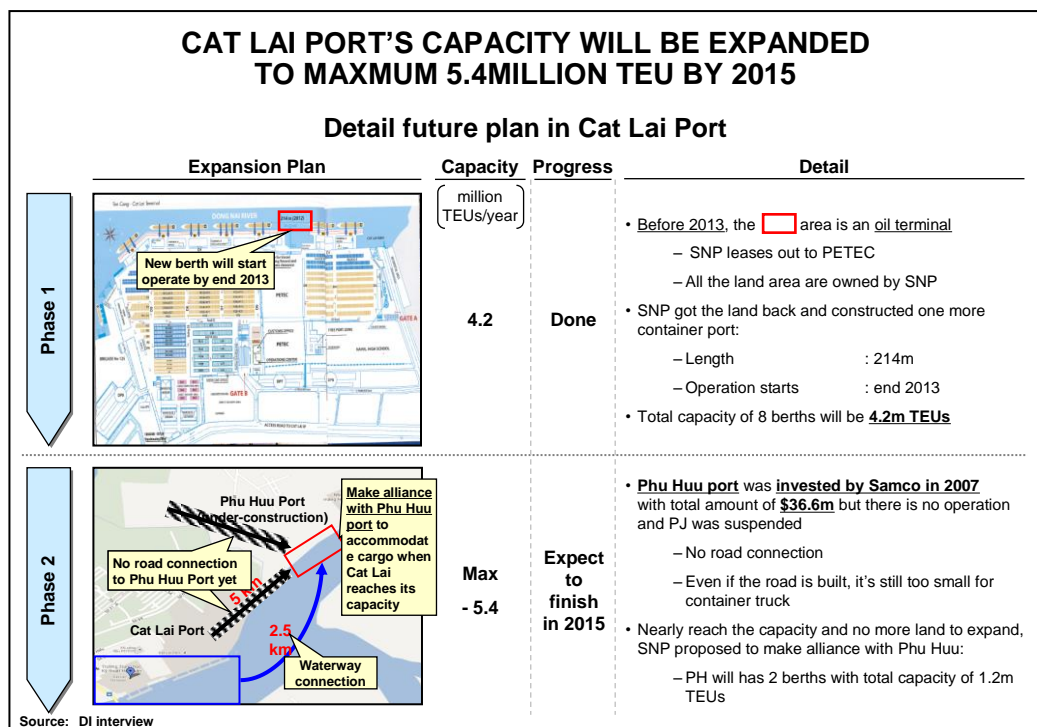


Figure18: Cat Lai development plan

Cat Lai Port capacity will be expanded to a maximum of 5.4 million TEUs by 2015. The development plan is divided into 2 phrases. Phrase 1 is already completed recently which increases Cat Lai's capacity to 4.2 million TEUs. As seen on the Figure 18, the red square box is the PETEC oil terminal, which is belong to Saigon New Port but it leased out. Due to the high increase in the container throughput recently, SNP took the terminal back and constructed another berth with the length of 214m, adding another 0.6 million TEUs a year to the current 3.6 million TEUs. Phrase 2 is not expanding in the Cat Lai itself but it's the alliance between Cat Lai and Phu Huu Port. Cat Lai can't expand further due to the limited land area so SNP make alliance with Phu Huu to utilize the ports by connecting through water transportation, which is only 2.5km away from Cai Lai. The alliance between Cai Lai and Phu Huu will need some further construction and expect to finish in 2015. Phu Huu will have 2 berths with the capacity of maximum 1.2 million TEUs a year and increase the Cat Lai – Phu Huu total capacity to 5.4 million TEUs. Phu Huu Port was invested by Samco in 2007 with the total investment amount of \$36.6million but the project was suspended as there was no connection road.

### 3-2.2-2 Cai Mep port

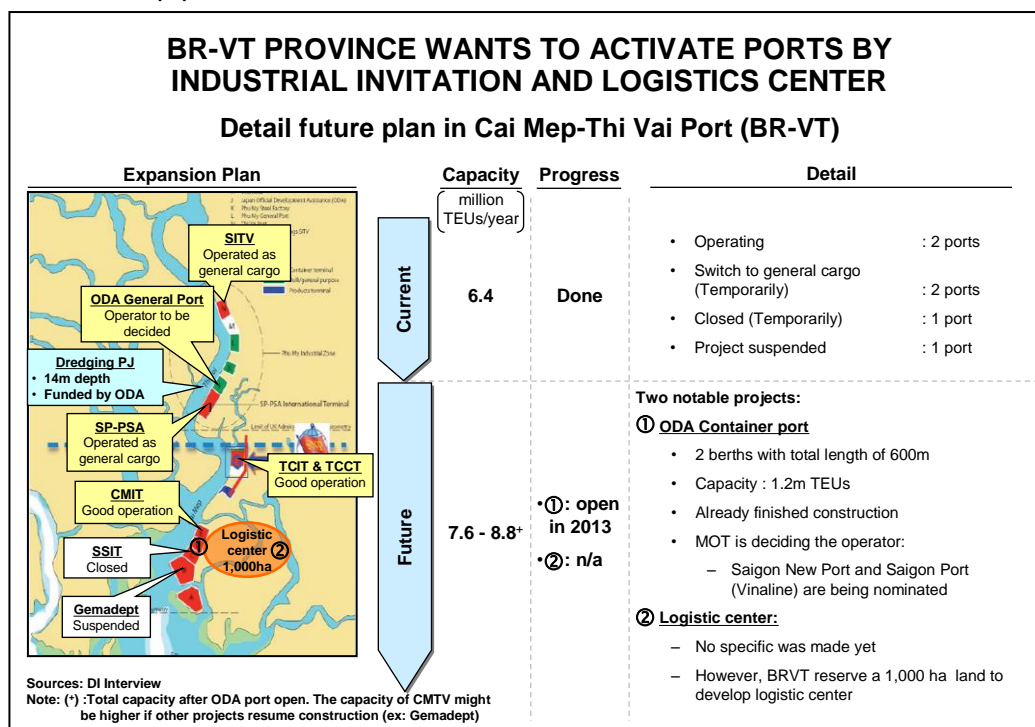


Figure19: Development plan in Cai Mep

Just to mention again, Cai Mep currently has 6 activate container ports with the capacity of 6.4 million TEUs. In which, two are operating: TCIT (including TCCT) and CMIT, two are switched to general cargo port: SITV and SP-PSA, one is temporarily closed, SSIT and one project is already suspended: Gemadept (the project have not started constructing so capacity is not counted).

Later this year, 2013, ODA Container Port will be opened which increases the total capacity of Cai Mep to 7.6 million TEUs. The port is funded by ODA fund and the local operator will be chosen to run the port. The capacity of Cai Mep complex could increase further if those suspended projects resume construction, example is Gemadept. The capacity is too excessive compared to real demand. For that problem, Ba Ria – Vung Tau tries to activate Cai Mep port complex by inviting industrial companies to set up factories surround the port complex. Provincial government also wants to develop a logistic center but they don't have any specific plan yet. A 1,000 ha land near ODA Container Port is reserved for foreign or local investors to develop.

### 3-2.2-3 Hiep Phuoc port

Hiep Phuoc port which is located in the south gate of HCM City, by the side of Dong Nai and Soai Rap River, is far from city center only 16km. Under HCM city plan, Hiep Phuoc will be

developed to become city's 2nd key port in the future.

At present, one port (SPCT) has been completed and brought into operation since 2010 with capacity of 0.9 mil TEUs. However, current utilization is very low due to poor connecting roads to the port and current shallow depth of Soai Rap River that prevents SPCT from receiving the big ships of over 30,000 tons.

According to HCM, the city has received ODA fund from Belgium and started dredging Soai Rap River to the depth of negative 12m. After the river is dredged, the SPCT will be able to handle bigger container ships which go to more distant destinations.

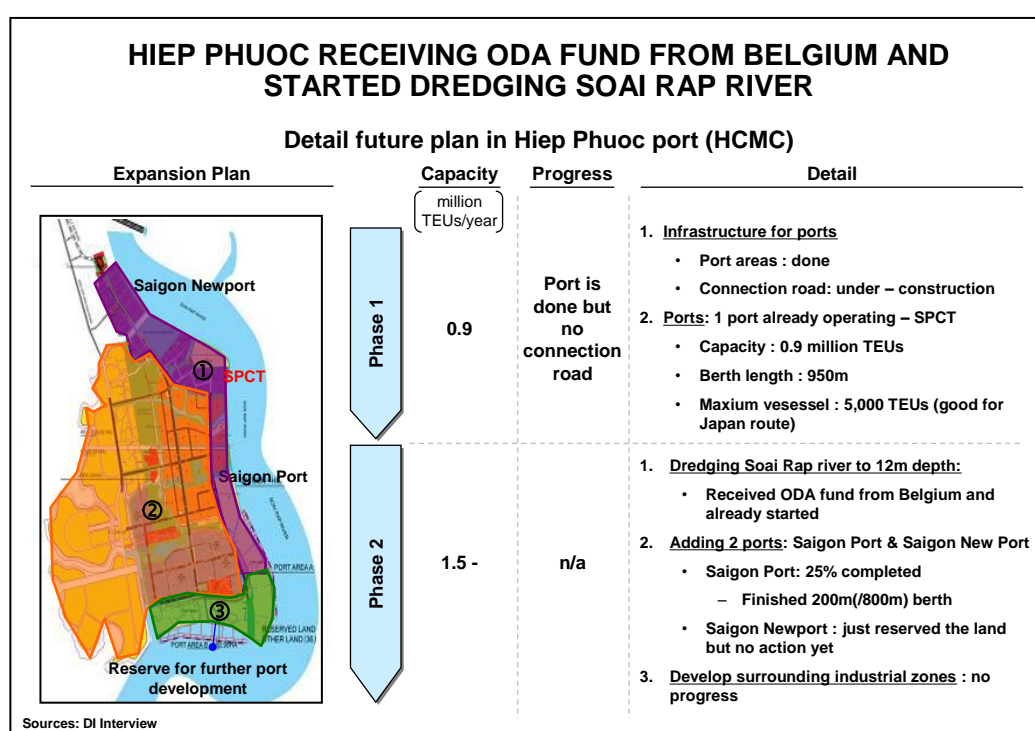


Figure 20: Development plan in Hiep Phuoc

Two other ports which also registered the land in Hiep Phuoc area are Saigon port and Saigon New port. Among which, Saigon port has finished 200/800m berth construction. The current port in Hiep Phuoc is new location of Saigon Port after relocation from HCM City center. Because the connection road is not fully developed, the relocation has been delayed from 2010. Meanwhile, Saigon Newport has no specific plan or action regarding the port they reserved in Hiep Phuoc area. It seems that Saigon Newport just reserves the land to hedge future demand. Besides Saigon Port and Saigon Newport, other ports such as Tan Thuan Dong and Veggie will have to be relocated to Hiep Phuoc area:

ALL PORTS ARE SCHEDULED TO MOVE TO NEW LOCATION IN HCMC							
	Port name	Ownership	Initial relocation plan		Current status of new location		
			Deadline	New location	Land	New Port construction	Relocation progress
<div>Reallocate before 2010</div> <div>Finished</div>	1. Saigon Newport	MOD	2010	Cat Lai	Received	Done	Done
	2. Saigon Port	PM, MOT	2010	Hiep Phuoc	Received	Under Construction	Not Yet
	3. Tan Thuan Dong	JSC	2010	Hiep Phuoc	Not yet	Not yet	Not Yet
	4. Veggie	Listed	2010	Hiep Phuoc	Not yet	Not yet	Not Yet
<div>Over-deadline</div>	5. Ben Nghe	HCMC	2020	Dist. 9	Received	Complete	Very slow
	6. Lotus	JV	2020	Not known yet	Not Yet	Not Yet	Not yet
	7. VICT	JV	2020	Not known yet	Not Yet	Not Yet	Not yet
<div>Re-allocate before 2020</div>							

Source: DI Research and Interview

Figure 21: Relocation progress of ports

Among 7 ports that are required to re-locate, 4 are required to do so before 2010: Saigon Newport, Saigon Port, Tan Thuan Dong and Veggie. Among the four, only Saigon Newport successfully relocated to Cat Lai, District 2; the other three all decided to move to Hiep Phuoc. However, none of the three are operational yet due to many different reasons. Ben Nghe, although not required to move soon, completed the construction of its new port in HCM City's District 9; and the relocation progress is very slow. The other two, Lotus and VICT, have not showed any intention yet.

### 3-2.3 Possibility of moving port from HCM City to Cai Mep

The uncertainty in relocating ports is pushed further by the Prime Minister's approval. At the moment, ports in HCM City are regulated by 3 different Master plans:

- Decision 24/QD-TTg on Approval of HCM City's general construction code proposed by HCM City and Ministry of Construction and approved by Prime Minister in 2010
- Decision 1745/QD-BGTVT on the Approval of Southeast port development. This is the current Master plan on ports, proposed by Ministry of Transports and approved by Minister of Transports in 2011
- Decision 568/QD-TTg on the Approval of HCM City's infrastructure plan proposed by Ministry of Transports and approved by Prime Minister in 2013

CONFLICT OF INTERESTS IS INDIRECTLY MADE FURTHER BY PM'S APPROVAL			
HCMC ports are regulated by 3 different master plans			
	Decision 24/QD-TTg	Decision 1745/QD-BGTVT (Current Port MP)	Decision 568/QD-TTg
Subject	● Approval of HCMC's general construction code	● Approval of Southeast ports development	● Approval of HCMC's infrastructure plan
Year approved	● 2010	● 2011	● 2013
Initially proposed	● HCMC and MOC	● MOT	● MOT
Approved by	● PM	● MOT (with consent from PM)	● PM
HCMC target Throughput (year)	● 200 ton (2025)	● 106 - 133 ton (2020) ● 4.8 – 7.0 TEU (2020)	● Up to 132 ton (2020)

Source: DI interview

Figure 22: Conflicts on Master Plan

Among the three Master plans, the Decision 24 proposed by HCM City posed its ambition to keep all the ports within the City. The Decision dictates that 2025 throughput through the city should be around 200 million tons, a 50% increase from 2020 level made from the other two master plans. This Decision 24 seems to be used by HCM City as a tool not to move ports out of the City.

Furthermore, HCM City also implies that the development of Hiep Phuoc ports can totally solve the problems of ports locating within city center. There are four limitations in the port Master plan(Decision 1745) that moving ports to Hiep Phuoc can solve:

- Moving ports to Hiep Phuoc can solve the shallow water level of current ports as well as land shortage to expand.
- Moving ports to Hiep Phuoc can solve the traffic jam and environmental matters that is a common matter within HCM City center
- Moving ports to Hiep Phuoc can prevent the industry outflows of HCM City
- Moving ports to Hiep Phuoc will not raise any limitation of bridge size over Saigon River since Hiep Phuoc is at the downstream of Saigon river. So the construction of bridges in HCM City will not have any effects on size of ships entering river ports.

<b>HCMC HAS INTENTION TO DEVELOP HIEP PHUOC PORT</b> <b>HCMC's interest for moving ports</b>	
<b>The reason moving port in Master Plan</b>	<b>Interests of HCMC</b>
1. River port in HCMC has certain limitations to expand <ul style="list-style-type: none"> <li>• Shallow water level of river port</li> <li>• Land shortage for expansion</li> </ul>	Moving ports to <u>Hiep Phuoc</u> <ul style="list-style-type: none"> <li>• HCMC dredges the river by Belgian ODA</li> <li>• Hiep Phuoc has enough space to expand</li> </ul>
2. River ports in HCMC located in city center area causing air/river pollution and traffic congestion	Moving ports to <u>Hiep Phuoc</u> <ul style="list-style-type: none"> <li>• Hiep Phuoc is a suburban area of HCMC               <ul style="list-style-type: none"> <li>- Environmental problems are not emergency in short term</li> </ul> </li> </ul>
3. HCMC loses opportunities to develop a port area for more commercial profits	Having many places to develop <ul style="list-style-type: none"> <li>• If moving port to CM-TV, there are low impact for HCMC (HCMC has much bigger revenue)</li> </ul>
4. Bridge construction over Sai Gon river will limit size of vessels to transport into ports	Moving ports to <u>Hiep Phuoc</u> <ul style="list-style-type: none"> <li>• Hiep Phuoc is south of Sai Gon river, so small influence to construct bridge</li> </ul>

Figure 23: HCM City's interest for moving ports

Many people have persuaded that if ports are moved out of HCM City, the city will have a lot of land bank to develop. However, according to DI's brief calculation, HCM City still benefits no matter where ports are relocated:

# HCMC BENEFITS BY MOVING PORT ARE ONLY \$300MILLION IN MAXMUM CASE

HCMC still benefits no matter where relocation destination is

4 options for relocation		What HCMC gains				What HCMC loses			Gain	
Cat Lai	Other ports in HCMC	LUR*	CIT	Land lease for new port location	Land lease if ports become RE	Land lease on current ports	Relocation support fee	Contribution of CIT to CG		
Move to Cai Mep	+	Stay	304	316	30	9.4	73	67	231	289
Move to Cai Mep	+	Move to Cai Mep	304	316	0	9.4	73	67	231	258
Stay	+	Stay	166	310	50	9.6	37	46	226	207
Stay	+	Move to Cai Mep	166	310	0	9.6	37	46	226	177

OUTFLOW OF INDUSTRY IS MUCH MORE IMPORTANT FOR HCMC

Source: DI estimates

Note: all units are discounted back to NPV and US\$ million

\* LUR (Land Use Right) is the fee real estate developer pays to HCMC if the developer wants to change the purpose of a piece of land from non-residential (ports for factories) to residential uses (office buildings or apartments)

Figure 24: Comparison of relocation options (Net Present Value)

If ports are relocated to Cai Mep, what HCM City gains are the followings:

- Land Use Right (LUR) fee**, which is the fee that a real estate developers pay to the City if the developer wants to change the purpose of the land from non-residential such as ports or factories to residential usage such as office or apartment buildings.  
This fee is calculate by the area used for residential purpose multiplied by LUR fee per square meter, and per square meter fee is different by location.  
Total LUR fee if all ports are relocated would be US\$ 304 million.
- Corporate Income Tax (CIT)**: which is the income tax real estate developers pay to the City if the company decides to develop a real estate project above the port sites.
  - The CIT is calculated by:
$$CIT = [(selling\ price\ per\ m2 * m2\ available\ for\ sales) - (Construction\ cost + LUR)] * tax\ rate$$
  - Total CIT if all port sites are developed would be US\$ 317 million.
- Land lease for new port location**: if ports decide to move to other places in HCM City, then ports will have to lease the land from the City.
  - Land lease is calculated by: *lease price per m2 \* m2 for lease.*

- Total NPV of land lease if all ports decide to relocate to other places in HCM City would be US\$ 50 million.
- **Land lease if port sites become real estate projects:** developers have to pay annual land lease for the City government.
  - Total NPV of land lease from port sites would be US\$ 9.6 million.

Besides the gains, HCM City would lose the followings:

- **Land lease on current ports:** if port sites become real estate projects, developers will pay land lease for real estate, which is much cheaper than as for ports. Total NPV of land lease on current ports would be US\$ 73 million.

- **Compensation for relocation:** amount that HCM City has given to support each port if port decides to relocate. The support amounts vary by each port. Not including VICT and Lotus, total compensation that HCM City has supported is US\$ 67 million up until now

**Contribution of CIT to Central Government:** each province or city is allowed to keep a certain percentage of tax contributable to Central Government. For HCM City, the retention rate is 27%, making HCM City's contribution of CIT to Central Government 73% of CIT, or US\$ 231 million

Maximum gain that HCM City can gain is US\$ 289 million, which is when Cat Lai moves to Cai Mep and other ports remain in HCM City. However, this gain and loss analysis does not take the outflow of industries from HCM City into consideration, which might be offsetting the US\$ 289 million gain. HCM City might do anything to prevent this from happening.

### 3-3 Future container port plan in southern Vietnam

In order to prevent the industry outflow out of the City, Ho Chi Minh would signal green light to the development of HCM City-based ports, specifically Hiep Phuoc and Cat Lai.

There are two ports in Hiep Phuoc area:

- SPCT, a Joint Venture between Tan Thuan Industrial Promotion Company (IPC – a State-owned company) and DP World. Current capacity of SPCT is 0.9 million TEUs/year.
- Sai Gon – Hiep Phuoc, which is owned by Saigon Port and is currently under construction. Upon completion of first phase, capacity of the port will be 0.6 million TEUs/year

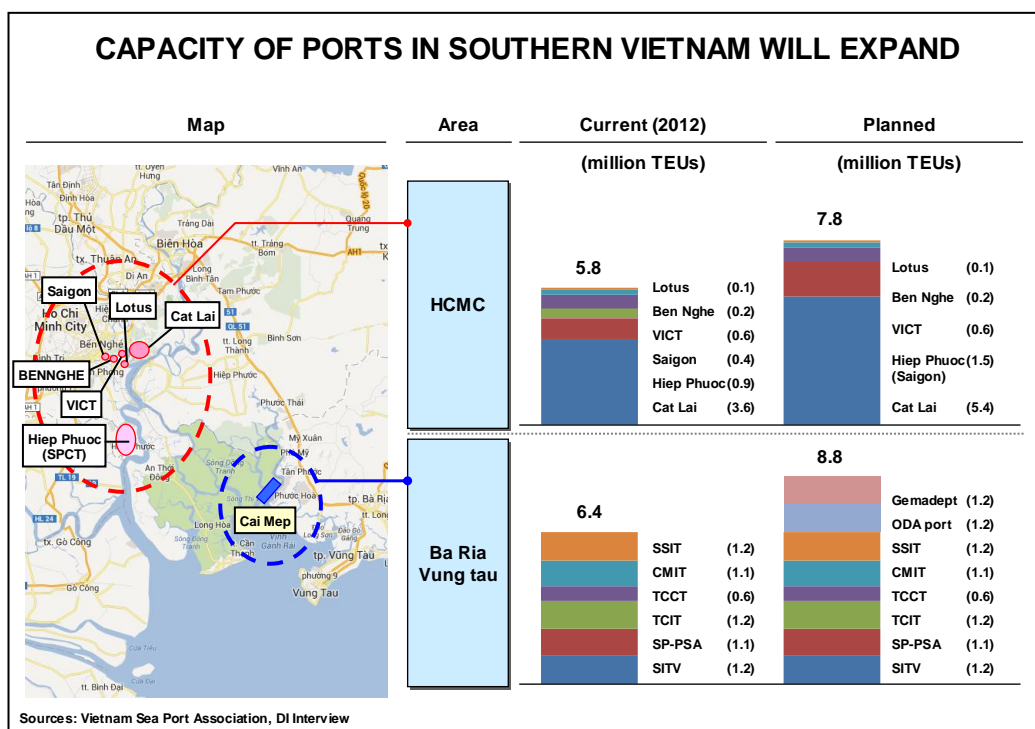


Figure 25: Future container port plan in southern Vietnam

Besides the development of ports in Hiep Phuoc area, Cat Lai is also expanding. It is estimated that within 2013, Cat Lai will complete its expansion plan from 3.6 million TEUs to 5.4 million TEUs per year. Along with the existing ports in HCM City such as VICT, Ben Nghe and Lotus, the Hiep Phuoc and Cat Lai will boost total capacity for HCM City from 5.8 million TEUs to 7.8 million TEUs.

Meanwhile, Cai Mep ports also seem to be expanding. Total capacity of the groups at the end of 2012 was 6.4 million TEUs. However, this number still seems short compared to the future plan – 8.8 million TEUs. The increase will come from two sources:

- The construction of ODA container port was complete in mid-2013 with the capacity of 1.2 million TEUs. At the moment, the port owner is looking for a capable operator.
- Gemadept Deep-water Seaport is also included in the plan. However, there is no sign that the project will be started soon. However, if it is, the port will contribute an additional 1.2 million TEUs to the capacity

## Chapter 4 : Problem of southern container ports

### 4-1. Difference between current situation and master plan

#### 4-1.1 Current situation

At the moment, the situation in HCM City and BRVT are very different from that in Dong Nai Province. While in HCM City and BRVT, supply of ports way exceeds 2015 target throughput made in 2011, which of Dong Nai is way below.

According to the Master plan, the highest target throughputs that HCM City and BRVT should handle in 2015 are 4.9 and 3.9 million TEUs respectively. However, the current capacities are already 5.8 and 6.4 in the two areas, which are higher than next 3 year target. Furthermore, the two areas are constructing other ports that will boost post-2015 capacity to 7.8 and 8.8 million TEUs, higher than 2020 target.

On the other hand, Dong Nai ports suffer shortage of port supply. Up until 2015, Dong Nai province will not develop any port projects, making 2015 capacity 300,000 TEU. This number is much lower than 2015 worst case (at 600,000 TEUs).

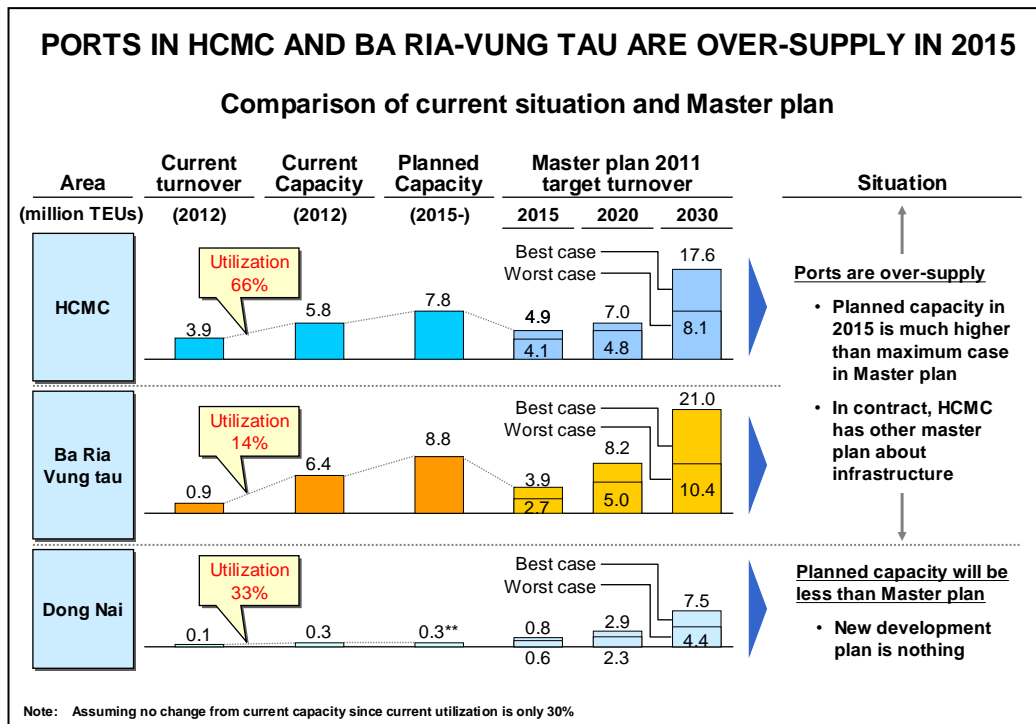


Figure 26: Comparison of current situation and Master Plan

#### 4-1.2 Future estimation

If HCM City is consistent in preventing industries from moving out of the City, then it might take a long time so that Cai Mep port can reach full utilization. 20 years is what it takes if no actions are taken, according to DI's brief calculation.

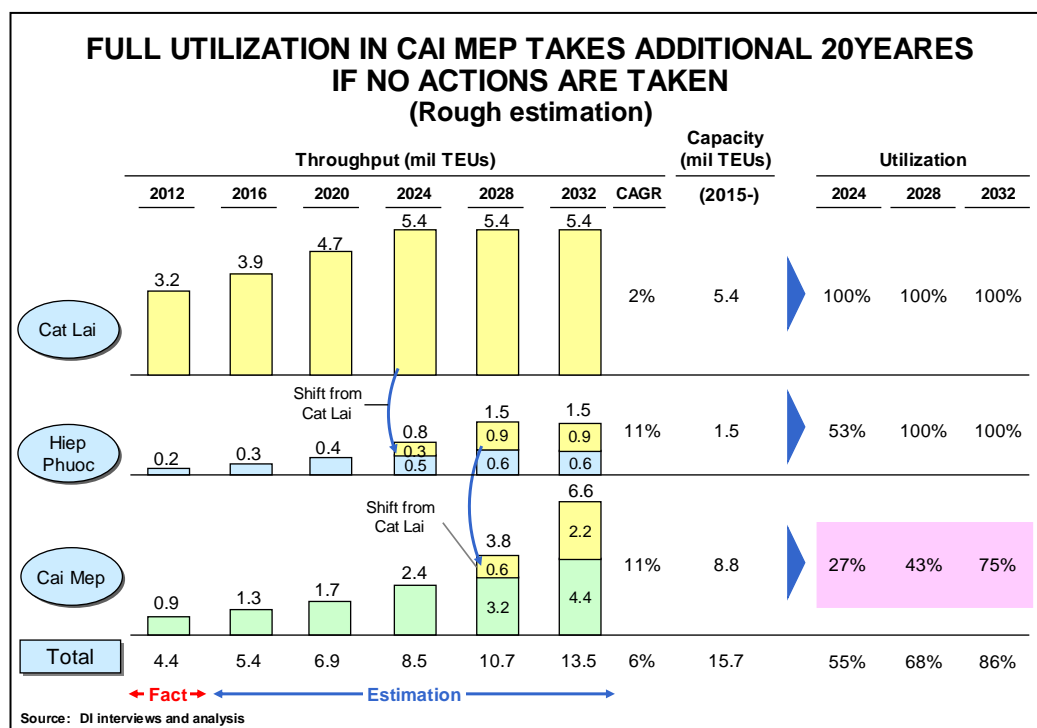


Figure 27: Future estimation

There are two assumptions involved:

- The first one is about capacity of each port:
  - Saigon Newport – Cat Lai's capacity will be 5.4 million TEUs: 4.2 million from the current one and 1.2 million from Phu Huu port
  - Hiep Phuoc ports' capacity will be 1.5 million TEUs: 0.9 million from SPCT – phase 1 and 0.6 million from Saigon Port – Hiep Phuoc , also phase 1
  - Cai Mep's capacity will be 8.8 million TEUs from current level of 7.6 million TEUs and 1.2 million TEUs from Gemadept, in case the terminal is developed
- The second assumption is about the growth of the Southeast ports: 5% for Ho Chi Minh ports(Cat Lai port and Hiep Phuoc port) and 8% for Cai Mep ports

In 2012, actual throughput to Cai Mep, Saigon Newport – Cat Lai and Hiep Phuoc ports are 0.9, 3.2 and 0.2 million TEUs consecutively. If initial assumption that Ho Chi Minh ports will continue to grow at 5% and Cai Mep at 8% as the reality for the past few years is applied, then

Saigon Newport – Cat Lai will reach full capacity of 5.4 million TEUs in 2020. From 2020 onward, cargo to and from Cat Lai will be directed to Hiep Phuoc. With natural growth of 5% plus goods from Cat Lai, Hiep Phuoc will also reach full capacity of 1.5 million tons in 2025. After 2025, cargo from Cat Lai will be directed to Cai Mep, until it reaches 2.0 million TEUs in 2032. Also in 2032, cargo that Cai Mep self-attracts will reach 4.4 million TEUs, making total cargo this hub handles 6.4 million TEUs. At 8.8 million TEU capacity, 2032 utilization rate will be 75%, which is a good level for many seaports. However, that is the story of a far future.

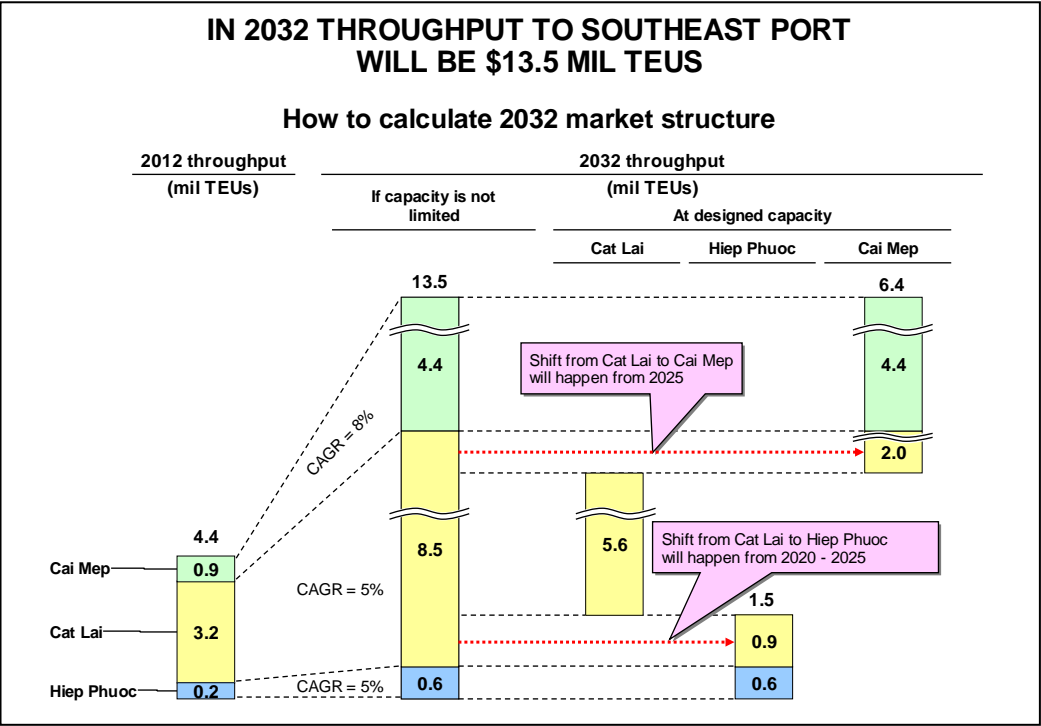


Figure 28: Calculation of market structure in 2032

## 4-2. Problem of southern container ports

### 4-2.1 Economic loss in Vietnam

Coming back to the story of present, ports in Southern Vietnam is far below the good level that is being dreamed of. Let's look at the forecast of 2016, the ports will face two big problems: the big supply of port capacity and an opportunity loss of acquiring transshipment demand. At the moment, total capacity of HCM City and Cai Mep is 12.2 million TEUs and is expected to boost up to 16.6 million TEUs after 2015. However, estimated throughputs to these ports are only 5.4 million TEUs, equivalent to 33% utilization rate. Clearly this is not what other countries often do.



waste of money would come from the 76% non-utilization, or US\$ 76 million. The waste coming from Cai Mep port is much higher. Total invested money in Cai Mep container ports is US\$ 1.5 billion. However utilization rate is only 14%, making wasted money at 86%, equivalent to US\$ 1.39 billion.

However, related parties such as Saigon Port and Gemadept are planning to construct their terminal in Hiep Phuoc and Cai Mep respectively. Total investment of the two terminals will be around US\$ 1.09 billion. Therefore, DI came up with the oversupply of port waste at around US\$ 2.456 billion. This number includes investment from SoEs and ODA funding. Therefore, these costs will be the burden of Vietnamese government in the future.

#### 4-2.2-2 Opportunity loss

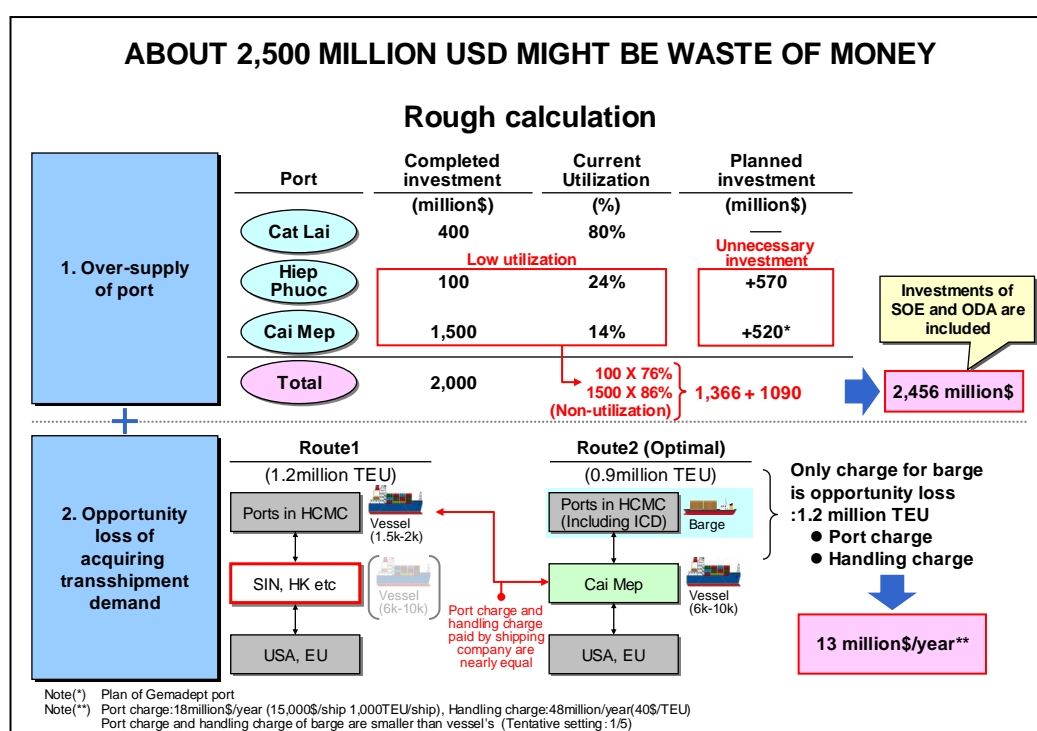


Figure 30: Estimation of opportunity loss

The opportunity loss is much more simple and less than the oversupply. According to DI's calculation, port charges and handling fee paid in Cai Mep by mother vessels or Ho Chi Minh by many smaller ones will be similar. Therefore, the loss comes from only one source: barge charged when transshipped in Singapore, Malaysia or Hong Kong.

Every year, about 1.2 million TEUs are transshipped in other Asian countries. Assuming the cost per barge TEU equals to 20% of vessel TEU, the cost per barge TEU will equal to US\$ 8, making the opportunity loss US\$ 13 million. This is why unused ports cause inefficiency of

Vietnamese government's investments, so Vietnamese government has to consider the optimal role division of Southern ports.

## Chapter 5 : Optimal role-division of southern container ports

### 5-1 Concept of role-division

In order to optimize the role of current ports in southern region and boost performance of Cai Mep Port, 03 development options are considered:

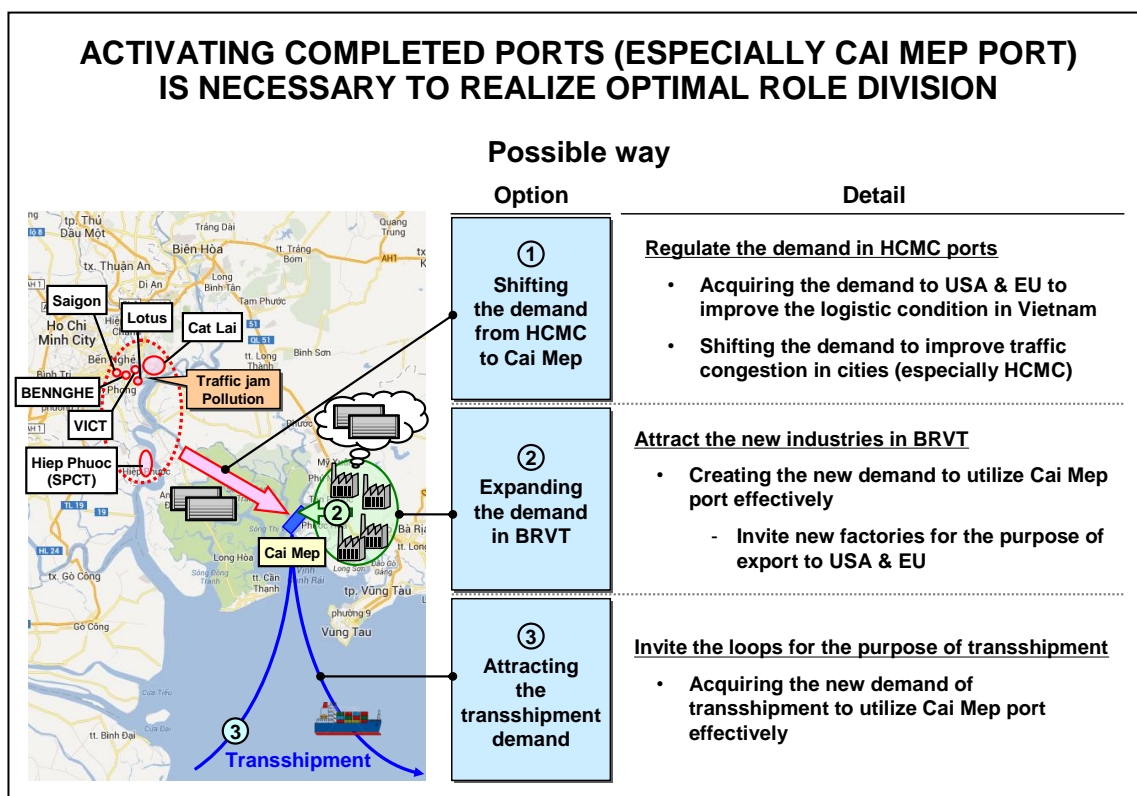


Figure 31: Possible ways to optimize role division of Southern ports

- Shift the demand, especially proportion to USA and EU, from HCM City to Cai Mep by regulating the demand of ports in HCM City. There are two key benefits from this option. Firstly, direct routes with bigger ships from Cai Mep can offer a cheaper cost and less time for export/import and shipping company. Therefore, it helps to improve Vietnam logistic condition to be more efficient and, therefore, more competitive. Secondly, current traffic congestion could be reduced by limiting container transportation volume in the city.
- Create new transportation demand from BRVT province by developing export-oriented industrial zones near Cai Mep port area. Favorable policies and specific investment attracting policy are highly necessary.
- Expand the transshipment demand by acquiring transshipment volume from neighbor

Asian countries such as Cambodia and Thailand to utilize Cap Mep port more effectively. The possible way to attract transshipment is increasing number of shipping loops

## 5-2 Result of study on each solution

### 5-2.1 Shifting the demand from HCM City to Cai Mep

There are 3 potential demand sources in HCM city that could be shifted to Cai Mep port.

The first source is current throughput volume of USA and EU routes.

- USA and EU are two of 15 largest export markets of Vietnam. Currently, only 50% goods to EU and USA are handled at Cai Mep. The remaining goes through river ports of Cat Lai or SPCT and transshipped at Singapore, Hong Kong or Malaysia. The reason is few loops available and high transportation cost prevents users to use Cai Mep port.
- The feasibility of this option is considered high. The reason is that direct cargo freight on mother ships from and to Cai Mep port is shorter and cheaper than current transshipment service. From shipping company's and exporter-importer's viewpoint, this helps to reduce the transportation cost considerably.
- The current bottleneck is limitation of number of loops and high transportation cost which can be removable by negotiating among port operators, shipping company and Vietnam government.

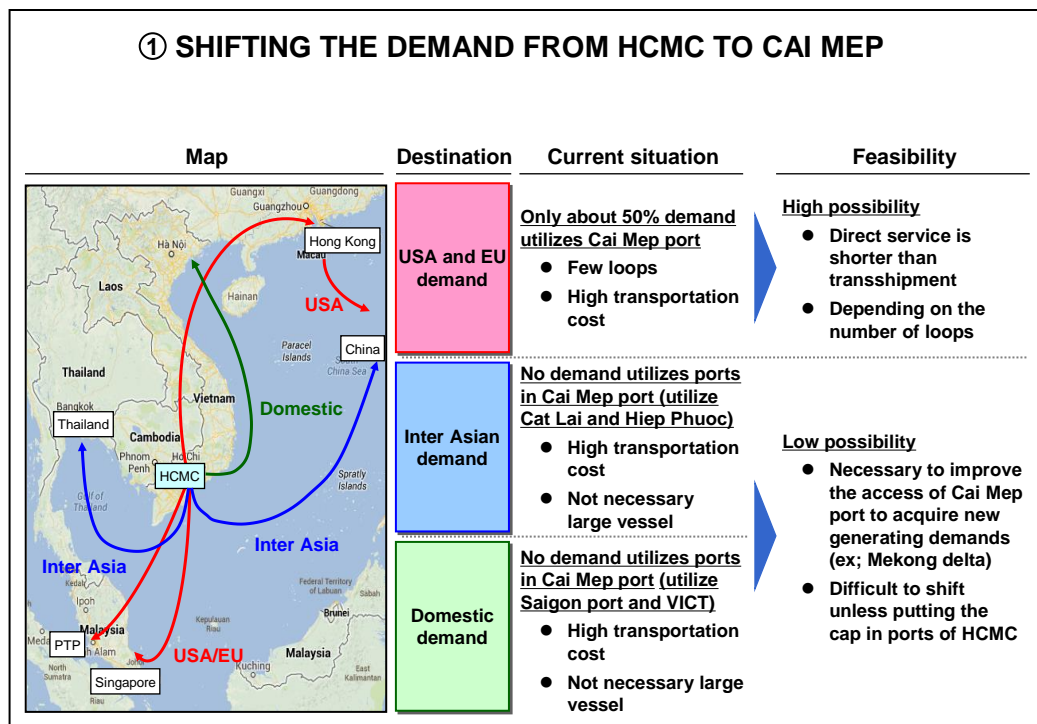


Figure 32: Option of shifting demand from HCM City to Cai Mep

Other 2 sources are inter-Asian and domestic demand.

- At present, all demand to two these destinations are currently passed through ports in HCM City. There are 2 main reasons. Firstly, the long distance from key economic industrial zones in Dong Nai, Binh Duong and HCM city to BRVT causes high transportation cost for exporters and importers. Secondly, due to features of high frequency and short distance inter-Asian routes, it is not necessary to use the large vessel for these routes. Using small ships is more economic efficient in term of timing flexibility.

Feasibility of these options is very low. In order to acquire new demand, developing the access road to Cai Mep port is required. Moreover, it is difficult to shift demand to Cai Mep port unless putting the cap in ports of HCM City which might be strongly opposed by ports in HCM city

### 5-2.2 Expanding the demand in BRVT

The second approach to activate Cai Mep port is expanding new demand from BRVT province. At present, container throughput contributed from BRVT accounts for only 9% of total southern shipment volume

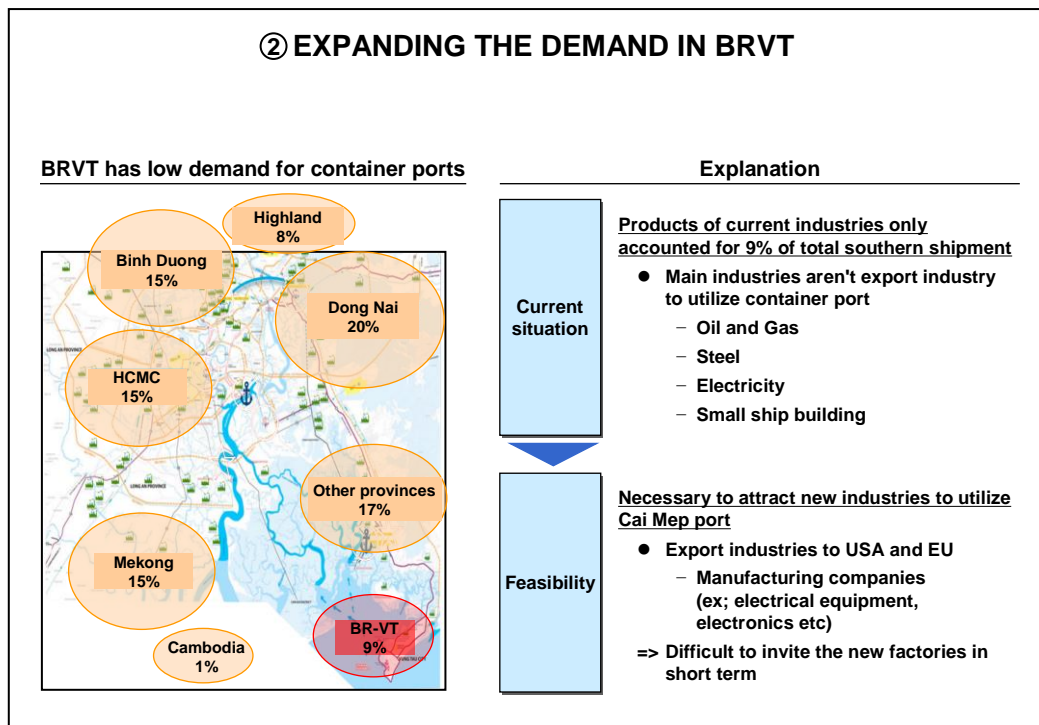


Figure 33: Option of expanding demand in BRVT

The reason is that current main industries of this province are heavy industries of oil, gas, steel, electricity and small ship building which do not support for container port. Supporting

industries have not been developed yet even though the province have been put a great effort in rolling out the red carpet to attract Japanese investors in recent years.

It is necessary to build specific and long-term strategy to be able to attract supporting industry companies that produce export-oriented goods, especially to USA and EU. This will help to boost demand supporting for container ports. However, this is a difficult and long-term plan which needs not only efforts of BRVT but also support from Vietnam Government in accepting proposal on special incentives for supporting industry.

### 5-2.3 Attracting the transshipment demand

The third approach to enhance performance of Cai Mep port is to attract the transshipment demand from Cambodia, Thailand and other countries.

- **From Cambodia:** The potential source is transshipment from Sihanoukville port which is one of major ports of Cambodia. This throughput can be transported to Vietnam by barges through Mekong rivers
- **From Thailand:** Ports of Thailand located in Gulf of Thailand, which is a shallow arm of the South China Sea, is far from main global shipping routes. It is possible for Thailand to utilize Cai Mep port for transshipment
- **Other countries:** Currently, Singapore, Hong Kong and Malaysia as the transshipments hub in the Southeast Asian region. Compared with the geographic location of these ports, Cai Mep is also located on main global shipping routes. If Cai Mep could offer a

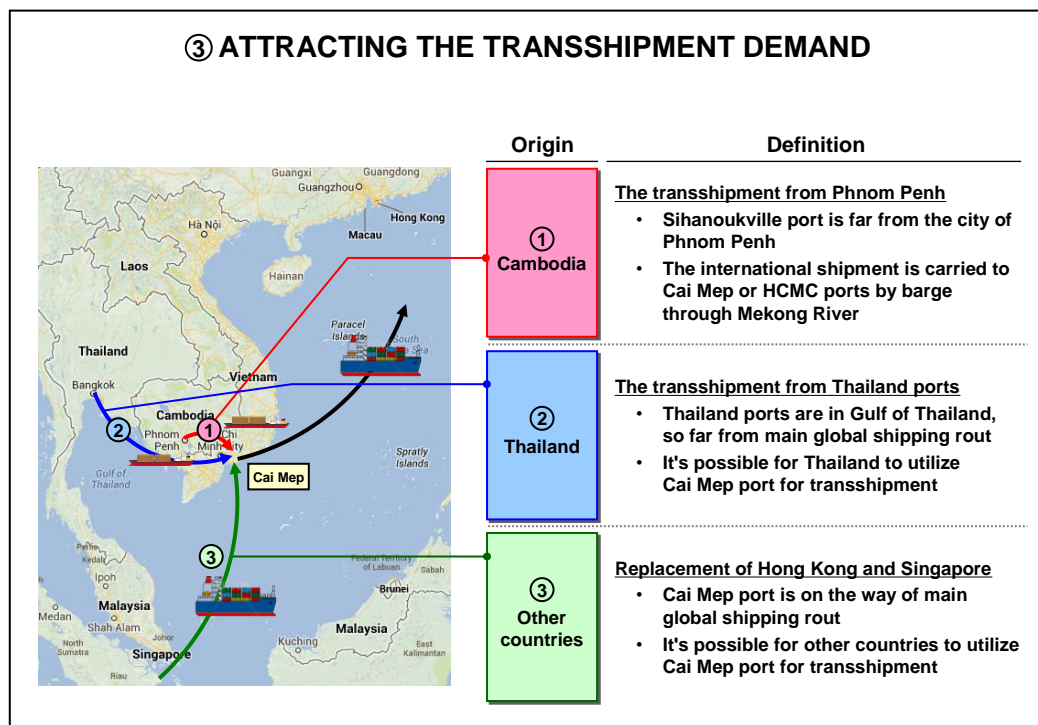


Figure 34: Option of attracting the transshipment demand

competitive price and high performance productivity, it can compete with Singapore, Malaysia and Hong Kong to receive transshipments from other countries.

### 5-2.3-1 Cambodia

Cambodia is a country of about 14 million people in Southeast Asia, importing everything, including raw materials. Its largest export is clothing manufacture, accounting for 90% of Cambodia's total exports.

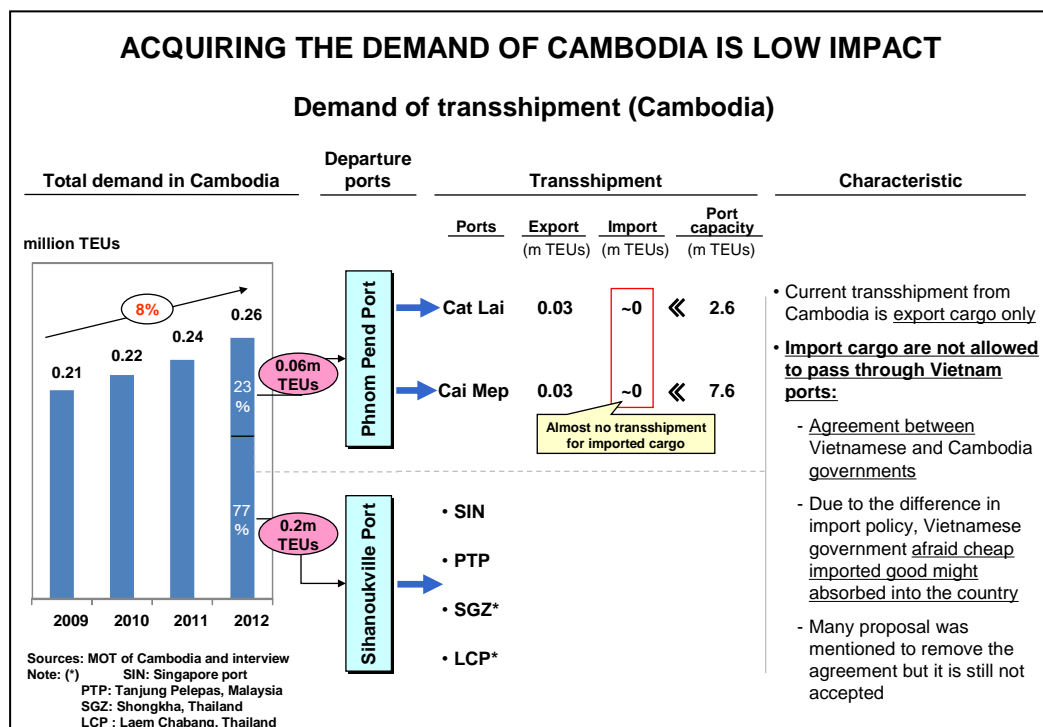


Figure 35: Possibility of acquiring transshipment demand from Cambodia

There are two sea ports in Cambodia, Sihanoukville and Phnom Penh. Total shipment demand of Cambodia in 2012 is 0.26 Mil.

- In which, 0.06 mil accounting for 23% of total Cambodia container throughput is passed through Phnom Penh Port. These volumes are already transited at Cai Mep and Cat Lai. However they are export cargo only. The import cargo is not allowed to pass through Vietnam because of agreement between Vietnam and Cambodia government. Due to the difference in import policy, Vietnam Government is afraid that cheap imported goods to Cambodia might be illegally brought into Vietnam. Even though there are many proposals to remove this agreement, it is still not accepted by Vietnam Government. Therefore, the possibility to get imports transshipment demand is low feasibility.

- Besides, the remaining Cambodia throughput of 0.2 mil is currently handled at Sihanoukville port and transited at Singapore, Malaysia, Thai Land Port. In the case that Cai Mep port could give attractive offers and gain all current transshipment at Singapore, Malaysia and Thailand, the impact is very low.

### 5-2.3-2 Thailand

Thailand location is far from main global shipping routes, however, it is difficult to acquire transshipment from this country. The reason is due to low competitiveness in number of operation loops available at Cai Mep comparing to Laem Chabang, a major port of Thailand.

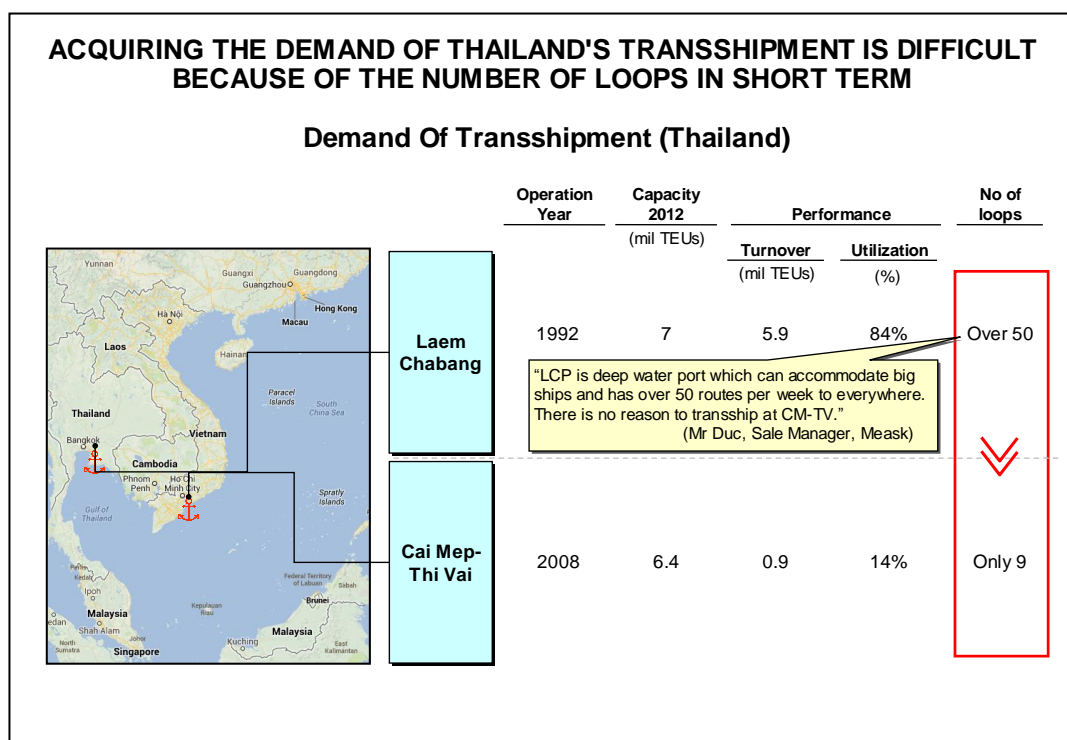


Figure 36: Possibility of acquiring transshipment demand from Thailand

Laem Chabang Port which operated since 1992 is the main deep sea port of Thailand. It offers over 50 loops per week to every important destination in over the world. Moreover, Laem Chabang Port has the modern state-of-art infrastructure and hi-technology facilities to support all services. It is also capable to handle largest vessels (Post Panamax). Meanwhile, Cai Mep port has been newly established and operates only 9 loops per week. With current condition, it is difficult for Cai Mep to compete with Laem Chabang port.

### 5-2.3-3 Other countries

Furthermore, high port cost in Cai Mep is less favorable for transshipment. Major cost in consideration of shipping companies to choose transshipment hub are port cost (include port charge and handling charge) and fuel fee (for ship refill) at hub. Port charge consists of navigation fee, pilotage fee, tonnage fee, which shipping companies pay to Vinamarine based on ship, handling charge is fee paid by port client to shipping companies. Compared to other transshipment hubs as Singapore and Malaysia, port charge and fuel fee in Cai Mep is the most expensive, handling charge is more affordable but will increase in near future. Thus high cost and fee decrease Cai Mep attractiveness of Cai Mep in consideration of shipping companies.

Cai Mep port charge 24,677 USD per TEU is 10 times higher than Hong Kong port, and 4.5 times higher than Singapore port. Handling charge of Cai Mep 28 USD per TEU is competitive than other port, but Vinamarine is considering to apply a ceiling price on handling charge which is expected to be higher than this level, to assist Cai Mep port operator from extreme competition in short term. This regulation could imply losing Cai Mep competitiveness in the longer term.

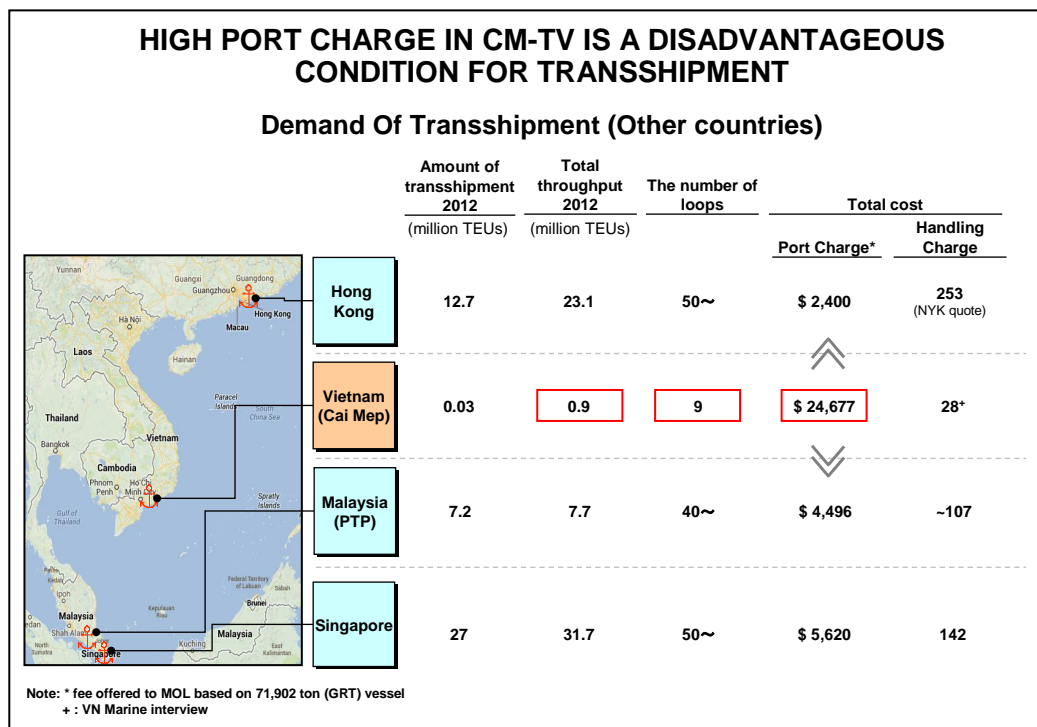


Figure 37: Possibility of acquiring transshipment demand from other countries

### 5-3 Concept of solution

In order to activate Cai Mep port, the demand in HCM ports has to be transferred gradually. The 03 key steps to activate Cai Mep port is proposed as below:

- **Shift the demand from HCM to Cai Mep:** Cai Mep port should be activated by increasing number of loops and construct necessary infrastructure to connect and serve higher demand in future. Cai Mep acquires demand from Mekong Delta and HCM by constructing infrastructure to connect and attract Mekong Delta good access to the port and force HCM port to move current demand it serves to Cai Mep.
- **Expand the demand in BR-VT:** Expand demand in BR-VT province by attract new industries and large corporation to place production base and business. The target industries should have significant demand of import, export materials and products to USA and EU, thus increase the usage of Cai Mep port.
- **Attract the transshipment demand:** Continuously improve the condition of Cai Mep in long term when demand reaches to higher level, to attract the transshipment activities from other global hub Hong Kong, Singapore... The improvement should include building connecting road, logistic center to support port activities and connect the existing berth to accommodate bigger ship for transshipment purpose.

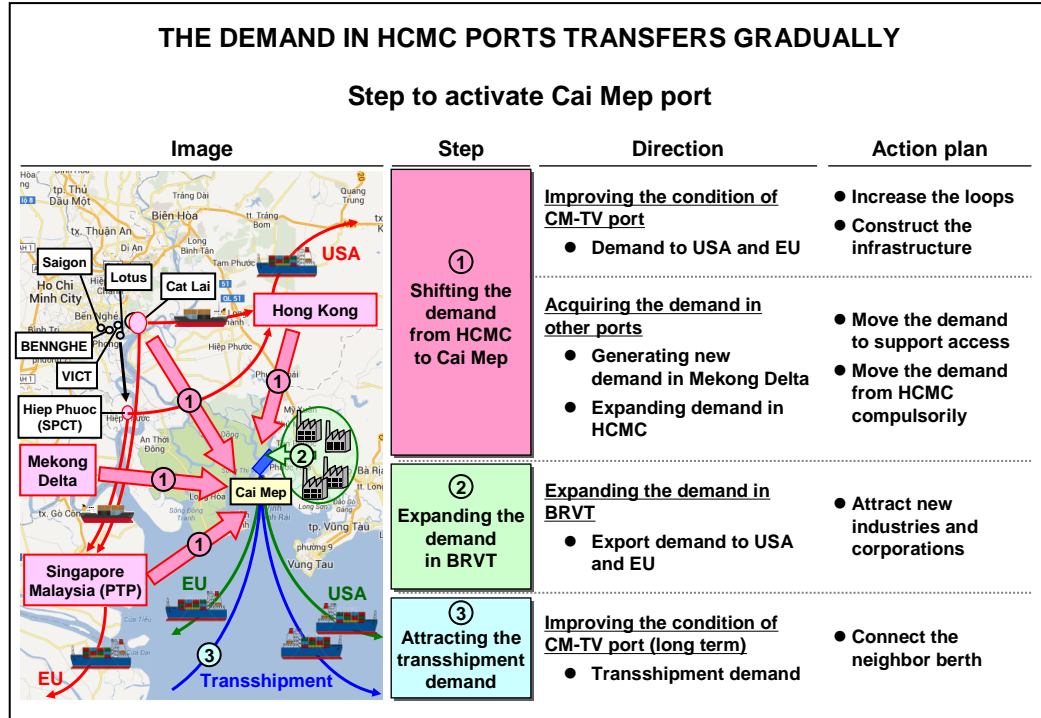


Figure 38: Possibility of acquiring demand from HCM City

## Chapter 6 : Action plan

### 6-1 Estimation of action plan

Further details of action plan will relate to a variety of stakeholders include public stakeholder (MoT, MoD, HCM, BRVT), private stakeholder (Shipping company, shipper) and the Vietnamese Government.

ESTIMATION OF ACTION PLAN									
Direction of strategy	Action plan	Public stakeholder				Private stakeholder		Vietnamese government	
○ Positive    △ Partly negative ✕ Negative    — Indifference		MOT	MOD	HCMC	BRVT	Shipping company	Shipper	(Action)	
Improving the condition of CM-TV port	<u>Increase the loops</u> • Promotion • Down port charge	Activate CM port	—	—	Increase demand	Expand choices	Expand choices	Consideration of incentive and policy • Subsidies • Tax reduction	
	<u>Construct the infrastructure</u> • Phuoc An bridge • Logistics center • Connecting berth	Activate CM port	—	—	Increase demand	Expand choices	Expand choices	Revision of plans for infrastructure • Express way • Phuoc An bridge • National road 51	
Acquiring the demand in other ports	<u>Move the demand to support access</u> • Develop ICDs • Invite the barge	Activate CM port	—	—	Increase demand	Expand choices	Expand choices	Consideration of incentive and policy • Subsidies • Tax reduction	
	<u>Move the demand from HCMC compulsorily</u> • Shut down the ports • Put the cap	Activate CM port	Decrease demand	Decrease demand	Increase demand	Narrow choices	Narrow choices	Consideration of regulation in HCMC • Cat Lai port • Hiep Phuoc port	
Expanding the demand from BRVT	<u>Attract new industries and corporations</u> • Consider the industrial policy	Activate CM port	—	—	Increase demand	Increase demand	—	Consideration of attracting industry • Industrial policy in BRVT province	

Figure 39: Estimation of Action Plan

(1) Improve the condition of Cai Mep port: This direction includes:

- Increase number of loops by promoting campaign and decreasing port charge, in which the Government should consider the incentive and policy (subsidies, tax reduction...) to realize this direction.
- Construct the infrastructure include bridge, logistics center and connecting berth. Government need to revise the infrastructure plans of express way, national road 51 and Phuoc An bridge.
- MoT, BRVT, shipping and shipper companies are positive about this increase as it leads to the activating of Cai Mep port, increasing demand and expanding choices for user, while MoD and HCM is indifferent as it does not affect the benefit of these parties.

(2) Acquiring demand from other ports

- Attract demand from other region by developing ICDs system near HCM and in Mekong Delta and promoting barge service to Cai Mep. Government need to consider incentive and policy (subsidies, tax reduction...) to realize this direction. In this case, stakeholder reaction is the same with the above action plan.
- Compulsorily move demand from HCM to Cai Mep by shutting down the ports or putting certain cap on its turnover. In implementation, the Government needs to consider the regulation in HCM City for Cat Lai port and Hiep Phuoc port. Private stakeholders are neutral because it narrows their choices of ports, but MoD, HCM strongly disagree with this direction as it causes decreasing demand of its ports.

(3) Expand the demand from BR-VT

- Attract new industries and corporations to BR-VT province to general internal demand for Cai Mep, in which the province need to consider to revitalize its industrial policy and the Government support it in granting favorable policies for investors. MoT, BRVT and shipping companies are positive with this direction as it increase demand in Cai Mep, while others are neutral.

In consideration of overall strategy direction to activate Cai Mep port, it is necessary to stop or postpone the development of Hiep Phuoc port. Investing in Hiep Phuoc port is inefficient in term of economics of logistic condition and urban/regional development. Below is detail analysis of 03 options related to future plan of Cat Lai and Hiep Phuoc port:

Option 1: Put the cap on Cat Lai port (reduce demand) and stop developing Hiep Phuoc

- In term of economics of logistic condition: this option is not acceptable for shipper because choice are limited, but it is efficient for shipping companies because Cai Mep is the deepest port in southern Vietnam, and utilizing large ship in Cai Mep could save cost and increase productivity. It also ensure the optimal division of port functions in the South East region, HCM port is used for domestic and inter Asian route while Cai Mep mainly for USA and EU.
- In term of urban/regional development: this option is the best for urban traffic condition because main traffic will shift to suburb rapidly, demand is decentralized to some ports outside HCM City. However it is the second best for urban city attractiveness because demand shift cause the industry decline and large land area still need further development.

TO STOP DEVELOPING HIEP PHUOC PORT IS NECESSARY					
View point of Vietnamese government					
Option	Economics of logistic condition			Urban / regional development	
	Economics for shipper	Economics for shipping company	Logistic condition in Vietnam	Urban traffic condition	Attraction as an urban city
<b>Put the cap on Cat Lai port (Reduce demand) + Stop developing Hiep Phuoc port</b>	<u>Unacceptable</u> • Choice are limited	<u>Efficient</u> • Utilizing large ship is efficient • Cai Mep is the deepest port in southern Vietnam	<u>Efficient</u> • Optimal division of functions → HCMC: domestic and inter Asian → Cai Mep: USA and EU	<u>Traffic will shift to suburb rapidly</u> • The demand will be decentralized to some ports	<u>Second Best</u> • Many lands for development exist • Shifting demand will be decline of industry
<b>Cat Lai port (Planned capacity) + Stop developing Hiep Phuoc port</b>	<u>Acceptable</u> • Ports will move gradually • Enough time to adjust the transportation	<u>Partly inefficient</u> • Utilizing Cai Mep port is efficient • Some demands move to Cai Mep port	<u>Partly inefficient</u> • Some demands from HCM to USA/EU will be taken by SIN or HK (outside VN)	<u>Traffic won't change</u> • Traffic jam will be improved by constructing road in long term	<u>Best</u> • Cat Lai remains, but it's far from the city center
<b>Current plan (Expand Cat Lai and Hiep Phuoc)</b>	<u>Best</u> • Best optimal way to transport can be chosen	<u>Inefficient</u> • Shipper will be dispersed • Dispersed demand is inefficient	<u>Losing opportunities</u> • Demands from HCM to USA / EU will be taken by SIN or HK (outside VN)	<u>Some traffic jam in the future in HCMC</u> • The demands will concentrate on HCMC	<u>Not nice</u> • The ports are over-supply (Hiep Phuoc)

Figure 40: Government viewpoint on development direction of Cat Lai & Hiep Phuoc

#### Option 2: Cat Lai port continues its expansion plan and stop developing Hiep Phuoc

- In term of economics of logistic condition: This option is acceptable for shipper as ports will move to outside HCM gradually and shipper has enough time to adjust its operation and transportation condition. But it is partly inefficient for shipping company as well as general logistic condition in Vietnam as (1) shipping lines still use Cat Lai port while utilizing Cai Mep is clearly more efficient and (2) demand from HCM to USA/EU is loosen to Singapore or Hong Kong which in turn, cause lost for local logistic industry
- In term of urban/regional development: it does not make significant change to urban traffic condition. However, it is the best option to ensure the attractiveness of urban city because Cat Lai remains far from the city center.

#### Option 3: Current plan (expand both Cat Lai port and Hiep Phuoc port)

- In term of economics of logistic condition: this option is the best for shipper to utilize the most optimal transportation way in HCM area, but it is the most inefficient option in other aspect. Shipper is dispersed, thus reducing productivity of shipping company, local logistic industry loose opportunity cost when Singapore, Hong Kong take transshipment demand from HCM to USA, EU
- In term of urban/regional development: this option is the worse option; it causes traffic jam in HCM in future because all ports concentrate in HCM City, and moreover port is over-supply in this area.

## 6-2 Success example in Thailand (Laem Chabang port)

### 6-2.1 Overview of Laem Chabang port and Bangkok port

Since 1947, Bangkok Port has been the main commercial port for Thailand with constantly improving services and technology. This facility, however, is unable to accommodate ships of size exceeding 12,000 deadweight tonnes (DWT), length greater than 172 metres, or draft of more than 8 metres in relation to the mean sea level. Consequently, the Port Authority of Thailand has had to seek a location for a deep-sea port to facilitate large ships in the interest of expanding contributions to the national economy. For that reason, Laem Chabang Port (LCP) which is situated in the districts of Sriracha and Banglamung of Chon Buri Province, at a distance of about 130 kilometers from Bangkok was started to construct in 1987.

On 21 January 1991, LCP was officially opened as the multi-purpose terminal. In 1997, the LCP hit the target of 1 million TEUs and became Thailand's busiest port. Much of the international shipping reaching Thailand goes through LCP. There are more than 30 cruises calling at this port. Ranked 23rd among the busiest international container ports by the World Shipping Council, Laem Chabang currently handles 5.8 million TEUs per year or 76% of Thailand's overall exports and imports.

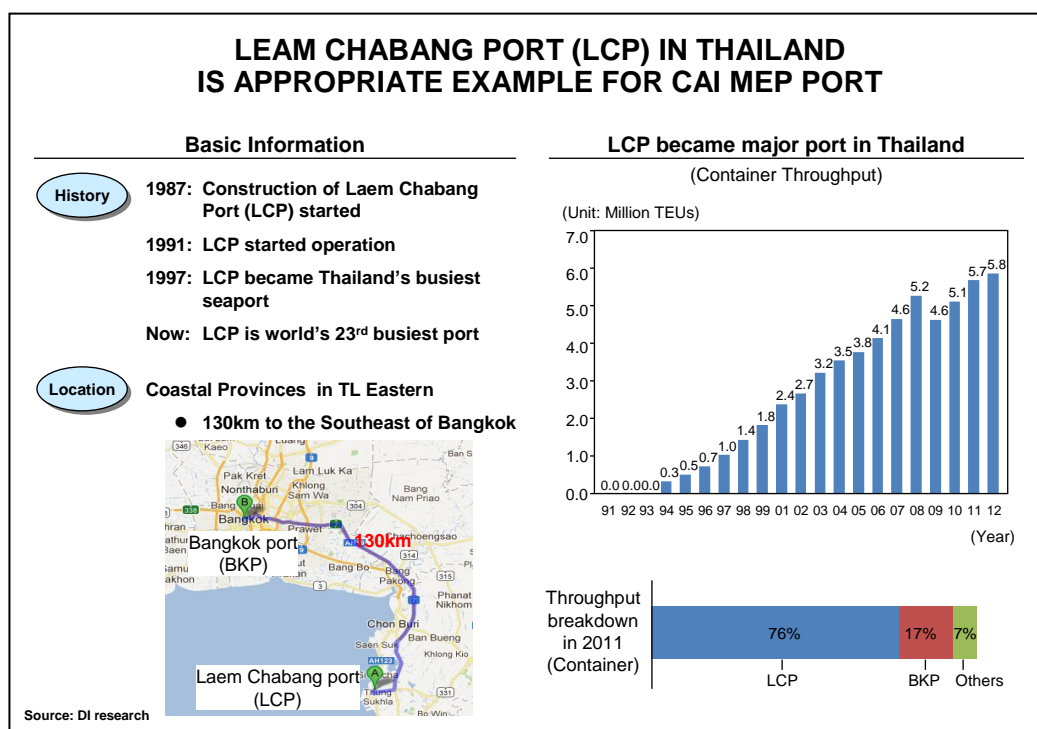


Figure 41: Overview of Laem Chabang port and Bangkok port

That success of LCP is contributed from combination of various policies and supports from Thailand government in the effort to seek the optimal balance of throughput between BKP and

LCP.

At the first few years of operation, the utilization of LCP is very low as the same current situation of Cai Mep Port. Even though the government has been build industrial zones near LCP area since 1982, the demand generated from these industrial parks was still low at that time. Meanwhile, BKP struggled with many problems arisen from overloaded situation. For that reason, an urgent solution of controlling turnover at BKP and shifting demand to LCP has been brought number of benefits for both ports.

- Relieve traffic congestion and environment issue in Bangkok
- Be able to handle big ships that go directly to long-distance destination such as EU and USA
- Enhance the possibility to become the hub-port of Southeast Asia Region

Besides, together with the action restraining BKP at 1mil TEUs, a modern ICD system and connecting infrastructure between Bangkok and Leam Chabang were constructed in 1996 to promote shifting goods to LCP. As a result, LCP's turnover has been experiencing a strong increase year by year. The capacity was also gradually expanded phase by phase to meet growth of demand.

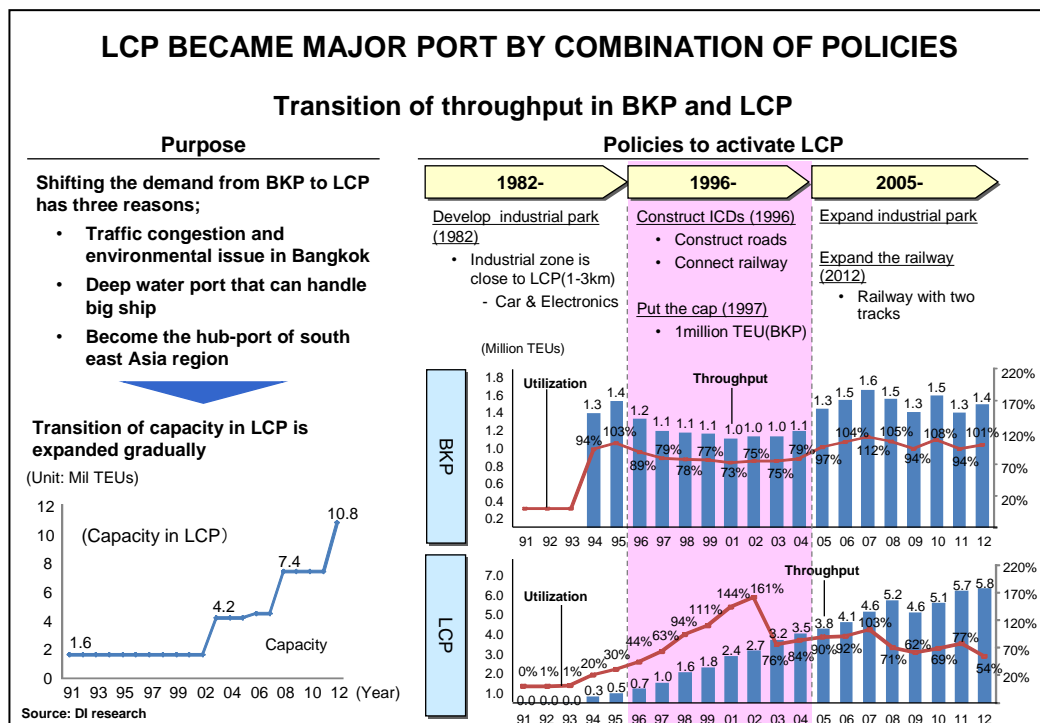


Figure 42: Transition of throughput between BKP and LCP

## 6-2.2 Action to activate Laem Chabang port

If external demand from Bangkok played an important role at the beginning period of operation, internal demand generated from Industrial Parks in near Laem Chabang port currently contributes the highest throughput proportion of up to 61%.

The policies to activate LCP could be divided into three groups.

### The first group of policies including those helps to acquire demand from Bangkok.

- **Developing Lat Krabang ICD (1996):**
  - **Policy:** With total area of 103 ha, Lat Krabang ICD is one of the most developed & advanced ICD in Asia. It is far from Bangkok only 30km. Moreover, large-size cars passing Lat Krabang ICD do not have to pay charge as one of regulation at Bangkok. With that advantage, nearly 100% goods shifted from BK and industrial parks near Bangkok to Laem Chabang have been handled through this ICD.
  - **Lesson for Vietnam:** Link to Cai Mep port situation, Vietnam could learn from this policy as the short-term solution. Developing an ICD system surrounding HCM city will reduce transportation cost for exporter/importer and shipping companies.
- **Constructing connecting infrastructure between Bangkok, ICD and Laem Chabang**
  - **Policy:** 118 km railway, four-lane motorway and six-lane Bang Na Expressway
  - **Lesson for Vietnam:** From Vietnam view points, the waterway cost is cheaper than land transportation. Therefore, improving barge service is high priority action in short-term. In long-term, enhancing connecting road infrastructure to Cai Mep ports is necessary.
- **Put the cap of 1mil TEUs on Bangkok port in 1997**
  - **Policy:** The over-capped amount must pay congestion charge
  - **Lesson for Vietnam:** In Vietnam case, put the limitation on HCM ports as Thailand policy is not highly feasible. However, suggestion of stopping developing the new ports might work to prevent social economic losses.

### The second group of policy to boost Laem Chabang performance is developing industrial zone nearby Laem Chabang port area

- Attract investment into industrial zone
  - **Policy:** Built in 1982 and filled up 100% since 1999, cargo generated from Laem Industrial Park currently accounts for the highest percentage (61%) in total

throughput passing LCP. Main industry's car and high-tech electronic devices that supports for growth of container port. The Free Trade Zone and the special tax incentive highly contributed to the success of this industry zone

- **Lesson for Vietnam:** Vietnam should learn from this policy. Special incentive policies should be considered to be able attract export-oriented industry investors to BRVT

Finally, one of important lesson in success of LCP is the role management organization

- Role of Thailand central government in general and Port Authority in particular
  - **Policy:** In Thailand, the main organization managing and supervising both central and regional ports is The Port Authority of Thailand (PAT). Under PAT management, master plan is created and carried out strictly.
  - **Lesson for Vietnam:** In Vietnam, there is an overlap power and responsibility in managing ports which leads to differences in general mater plan and province plan. Moreover, the carry-out progress is delayed and arises many management issues. For that reason, establishing a port authority as Thailand is highly necessary to control and manage port developments.

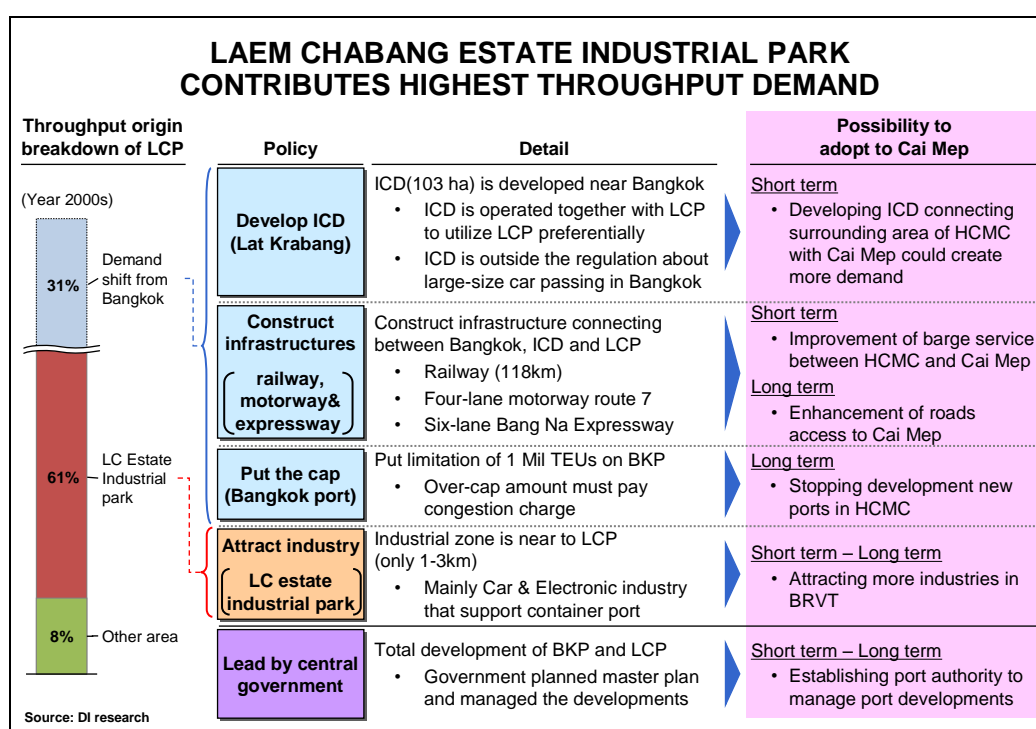


Figure 43: Action to activate Laem Chabang port

## 6-3 Action plan in Vietnam

### 6-3.1 Overall action plan

ACTION PLAN FOR ACTIVATING CAI MEP-THI VAI PORT				
Direction of strategy	Action list			
	Short term		Long term	
	Action	Player	Action	Player
① Improving the condition of CM-TV port	<b>Increase the number of loops</b> <ul style="list-style-type: none"> <li>Promote for co-operate with shipping companies</li> <li>Invite the new loops by policy</li> <li>Down port charge</li> </ul>	Port operator Ship company ↓ Vietnamese Government	<b>Construct the infrastructures</b> <ul style="list-style-type: none"> <li>Construct the road and Phuoc An bridge to improve access</li> <li>Develop logistics center and utilize neighbor connecting berth to invite transshipments</li> </ul>	Vietnamese Government + BRVT Province
② Acquiring the demand in other ports	<b>Move the demand to support the access of Cai Mep-Thi Vai port</b> <ul style="list-style-type: none"> <li>Develop ICDs (Mekong Delta etc) for utilizing Cai Mep port</li> <li>Invite the barge service (ex: Subsidy from BRVT)</li> </ul>	Port operator Ship company + Vietnamese Government	<b>Move the demand compulsorily</b> <ul style="list-style-type: none"> <li>Put the cap on ports in HCMC because of traffic congestion and environmental pollution</li> <li>Stop developing Hiep Phuoc (maintain the current capacity)</li> </ul>	Vietnamese Government
③ Expanding the demand from BRVT	<b>Attract the new industries and corporations</b> <ul style="list-style-type: none"> <li>Consider the strategy and industrial policy with central government and Ba Ria-Vung Tau province</li> <li>Develop residential and recreation to attract labor</li> </ul>			
④ Establishing port authority	<b>Control and manage the development of ports</b> <ul style="list-style-type: none"> <li>Consider the optimal role-division of ports</li> </ul>			

Figure 44: Action plan to activate Cai Mep Port

Overall action plan includes 04 main direction of strategy:

#### 1. Improving the condition of Cai Mep port

- In short-term: Increase the number of loops by i)promoting the co-operation between shipping companies and port operator ii) issue policy to invite new loops and decrease the port charge by Vietnamese Government
- In long-term: Vietnamese Government and BR-VT take action in constructing the infrastructures which include connection road, Phuoc An bridge to improve the access to Cai Mep and developing logistic center and utilize neighbor connecting berth to invite transshipments.

#### 2. Acquiring the demand in other ports

- In short-term: move demand from HCM to BR-VT to support Cai Mep port by i) developing ICDs system (eg. From Mekong Delta..) to utilize Cai Mep and ii) inviting more barge service (eg. By providing subsidy from BR-VT). This action could be done by the Government, BR-VT province with the cooperation of port operator and shipping company.
- In long-term: Compulsorily move demand from HCM to BR-VT by i) putting the

cap on ports in HCM due to traffic congestion and environmental pollution and ii) ceasing Hiep Phuoc development and maintain the current capacity. This action could only be done by the Government.

### 3. Expanding the demand from BR-VT

- On the other hand, attracting the new industries and corporations to establish factories in BR-VT to increase internal demand from the province. BR-VT should consider the strategy and industrial policy with central government to attract large corporations, and develop residential and recreation areas to attract and maintain more high skill labor.

### 4. Establishing port authority

- Vietnamese Government should establish port authority to control and manage the development of ports and ensure the optimal role division of all ports in the region as well as the country.

## 6-3.2 Detail action plan

### 6-3.2-1 Improve the condition of CM-TV port (Short term)

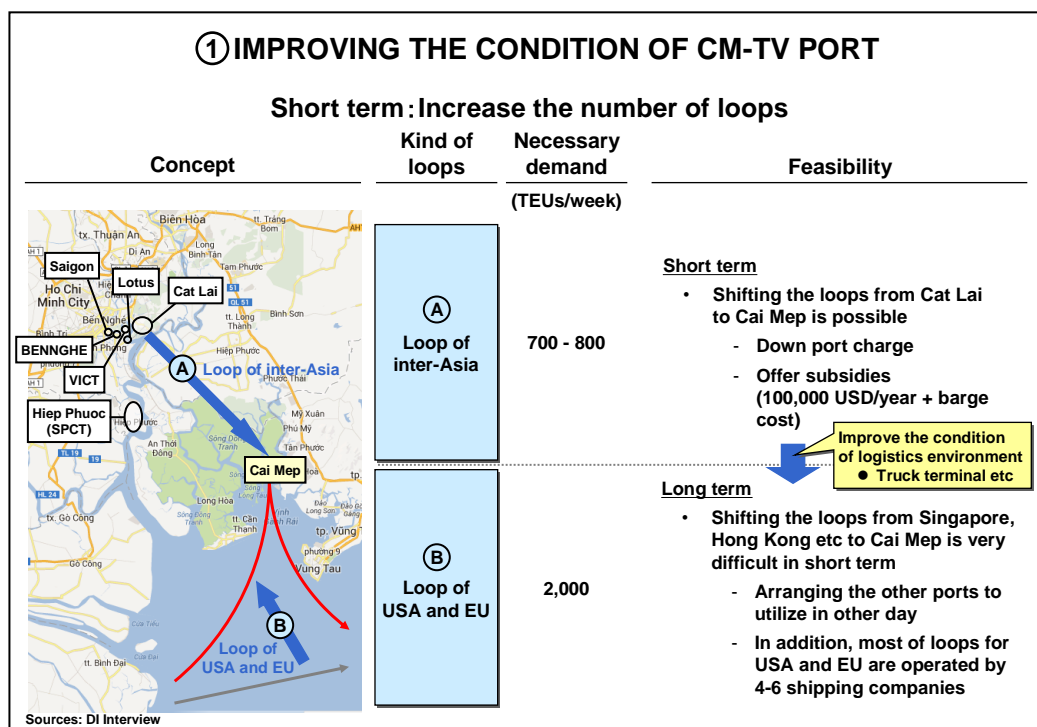


Figure 45: Improve condition of Cai Mep Port - Short term

In short-term, Cai Mep port condition could be improved by increasing the number of loops, which consists of Inter-Asia loop and USA, EU loop.

- **Inter-Asia loop:** Establishing 01 new loop need at least 700 – 800 TEU per week demand. In short-term Cai Mep loops could be increased by shifting the loops from Cat Lai to Cai Mep when Government decrease the port charge and offer subsidies to shipping companies. Initial estimated cost is 100,000 USD/year plus the barge cost. In the meantime, BR-VT should take action in improving the condition of logistic environment in Cai Mep such as building truck terminal, logistic center...
- **USA and EU:** Establishing 01 new loop need at least 2,000 TEU per week. In short-term to attract current loops from Singapore, Hong Kong etc.. to Cai Mep is very difficult. The main reasons are i) most of current loops for USA and EU are operated by 4-6 shipping companies and ii) some major transshipment hub is full, which made it difficult to rearrange ship schedule. Therefore USA and EU loops are invited in long-term

#### 6-3.2-2 Improve the condition of CM-TV port (Long term)

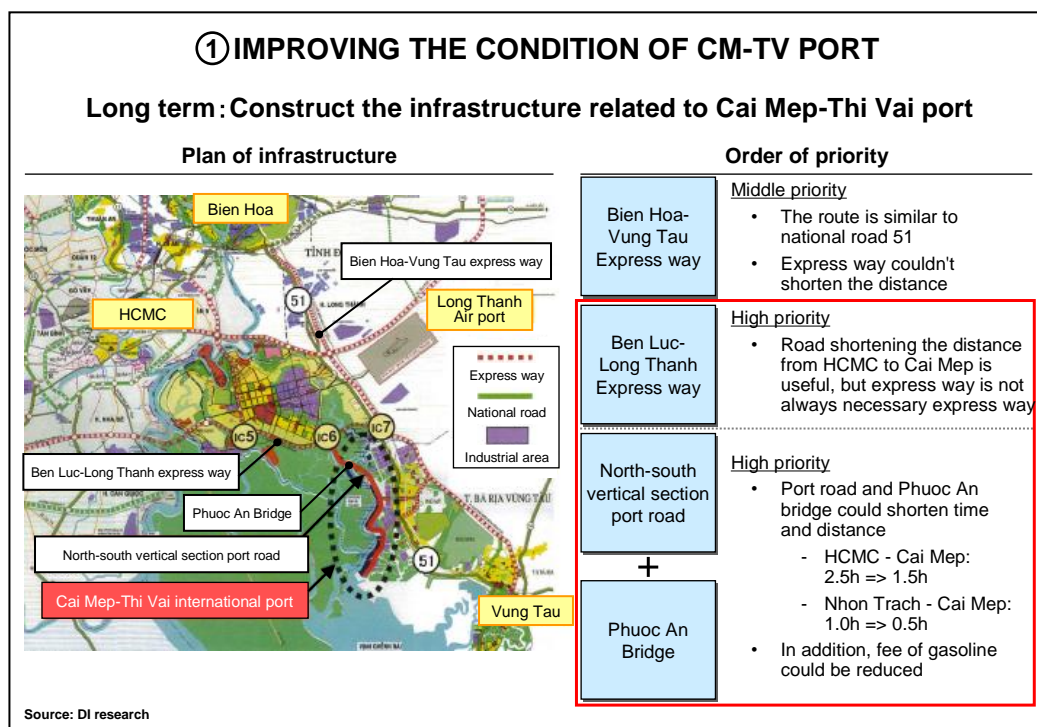
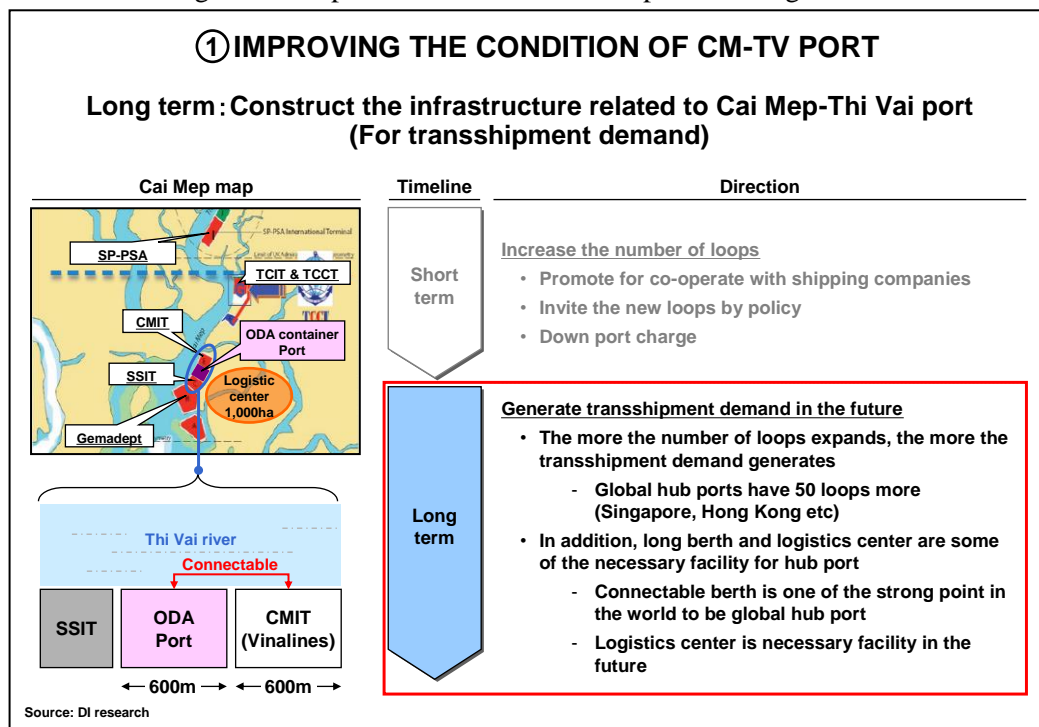


Figure 46: Improve condition of Cai Mep Port - Long term

In the long-term, the infrastructure connecting Cai Mep port should be constructed and improved. The first priority is 3 projects:

- Ben Luc – Long Thanh express way: This road shortens the distance from HCM to Cai Mep which is useful in reducing the road transportation cost.
- North-South vertical section port road and Phuoc An bridge could shorten time and distance to Cai Mep. From HCM to Cai Mep, time reduces from 2.5 hours to 1.5 hours, from Nhon Trach to Cai Mep time reduces from 1 hour to 0.5 hour. In additional, gasoline cost could be reduced.
- In contrast, Bien Hoa - Vung Tau has lower priority as this route is similar with national road 51

Figure 47: Improve condition of Cai Mep Port - Long term



In addition, to generate transshipment demand in the future, building logistic center and connecting berth is necessary. In the long term, the more number of loops expands, the more transshipment demand generates, thus when loops number reach a certain level, Cai Mep could become a hub port for shipping companies. Global transshipment hub ports such as Hong Kong, Singapore have over 50 loops.

To prepare for the future prospect, berths in Cai Mep should be connectable to be longer as this is one of the strong points in the world to be global hub port. Currently, ports locate next to each other without any connection, and nearby port such as ODA and CMIT could be connected to increase berth length from 600m each port to 1,200m to accommodate bigger ship. Besides,

logistic center should be built here to provide necessary facility to support the hub port

### 6-3.2-3 Acquire the demand in other ports (Short term)

The second option to activate Cai Mep port is to acquire demand from other ports. In the short run, this can be done by attracting demand from other areas in Vietnam by constructing ICDs and expanding barge service.

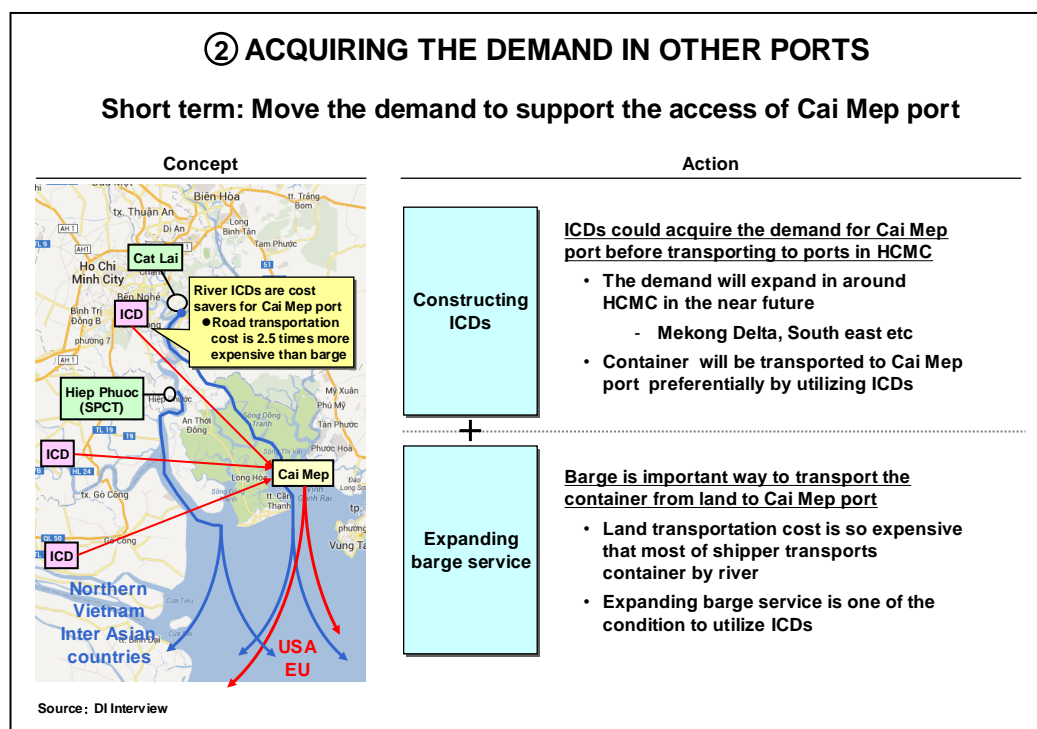


Figure 48: Acquire demand from other ports - Short term

ICDs, short for inland clearance depots, have three main functions: warehousing, containerization and transportation of goods.

- **For warehousing and containerization**, containers will be kept at ICDs to wait for consignees to come, or make goods.
- **For transportation**, ICDs provides waterway transportation service to and from deep water seaport. Since waterway transportation is much cheaper than land transportation, ICDs are utilized to acquire the demand for Cai Mep ports before transporting to HCM City ports.

According to Prime Minister's Decision 2223, South Vietnam should accommodate 3 ICD groups by 2020. However, at the moment the region has only 2 groups and consists of 10 ICDs:

ICD name	Location	Owner
----------	----------	-------

1. Phuoc Long	District 9	Gemadept
2. Transimex	Thu Duc	Listed
3. Tanamexco	Thu Duc	Ministry of Defense
4. Song Than	Binh Duong	Ministry of Defense - SNP
5. Tan Tao	Binh Tan	N.A.
6. Bien Hoa	Dong Nai	Tin Nghia Corp.
7. Long Binh	Dong Nai	Ministry of Defense - SNP
8. Ben Nghe	Thu Duc	HCM City
9. Sotrans	Thu Duc	Listed
10. Phuc Long	Thu Duc	Phuc Long container

On the contrary with seaports, demand to construct an ICD is big due to high utilization rate. All of the ICDs in the South have over 50% utilization rate, among which Phuoc Long, Transimex and Tanamexco are highest, over 75%.

Construction cost for ICDs is not high either. The average construction cost is US\$ 0.6 – 0.9 million/ha, which is much lower than for seaports. Among the construction cost:

- 50% is for infrastructure of the ICDs such as landfill, roads and warehouses, etc.
- 30% is for equipment
- 20% for others such as land lease or IT systems, etc.

However, when constructing ICDs there are two things investors should take into consideration: payback period and location.

Payback period for ICD is very long. Let's look at the case of Bien Hoa ICD. In 2011, its total revenue is about US\$ 1.2 million and net income only US\$ 0.18 million. This number is significantly smaller than its investment amount: \$ 11 million. So it might take over 60 years to break even. Or even longer, when ICDs in Southern Vietnam are competing against each other by lowering service price in order to attract shipping lines.

Location is another tricky part for ICD construction. According to Prime Minister's Decision 2223, new ICD must satisfy three criteria:

1. Located in the area with annual throughput of at least 30,000 TEUs
2. Location must be located along main national or international roads and bigger than 10 ha
3. Must satisfy regulations on environment, safety procedures and public safety

The two bottlenecks mentioned above must be done with the help of local government such as tax incentive or subsidy to shorten payback period and support to find location.

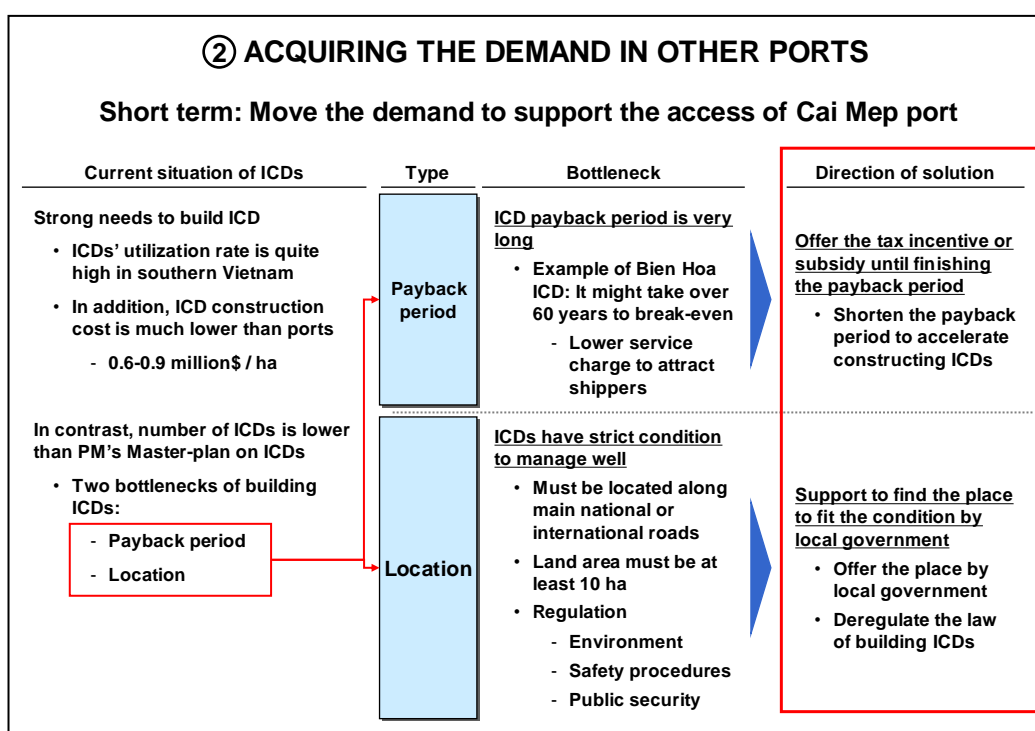


Figure 49: Acquire demand from other ports - Short term

#### 6-3.2-4 Acquire the demand in other ports (Long term)

In the longer term, the key direction is moving demand from HCM to BR-VT compulsorily. Ports in HCM include Cat Lai, Hiep Phuoc and other ports in Sai Gon river.

- Cat Lai port: The port is highly utilized at 80% its capacity and already had an expansion plan under construction. Expand further is difficult because of limited land in surrounding areas, thus only current plan is allowed to be executed. In future, when Cat Lai reaches its design capacity, exceed demand is forced to move to Cai Mep
- Sai Gon river ports has medium utilization level, some of them cause traffic congestion in connecting road to central CBD. These ports are scheduled to move to suburban area,

of which, only Sai Gon port moves to Hiep Phuoc (construction of new port completed), demand in other port will move to Cai Mep in long term.

- Hiep Phuoc port has low utilization with uncompleted connecting infrastructure. The expansion plan of this port is built by HCM CITY, and project already started with river dredging. But new development of the port should be stopped or postpone until its utilization reaches to higher level.

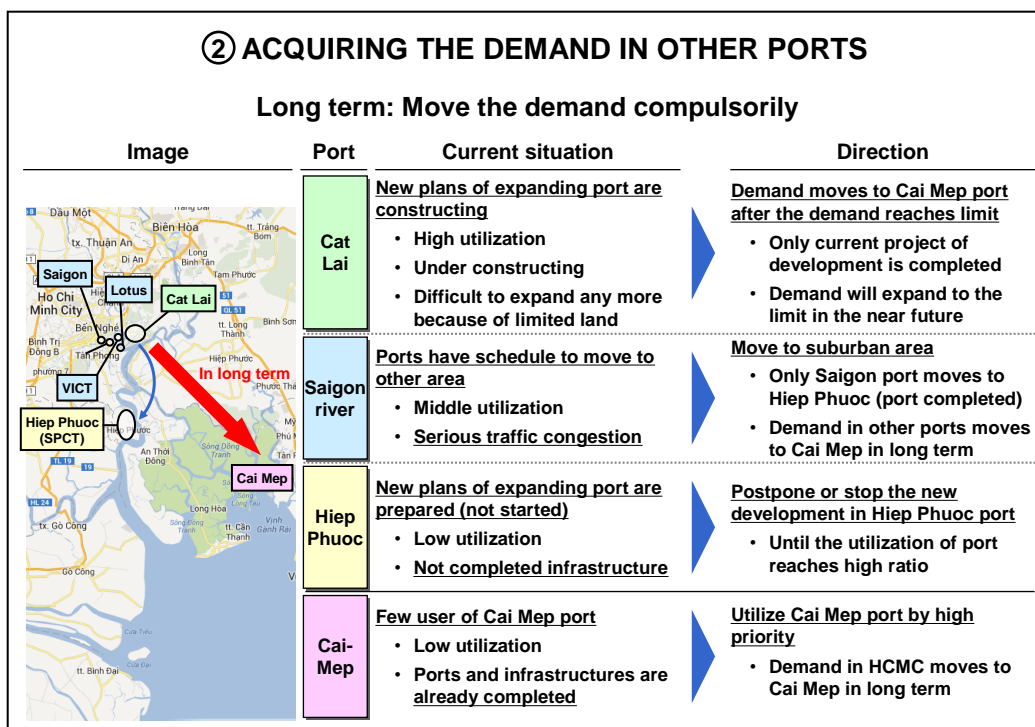


Figure 50: Acquire demand from other ports - Long term

#### 6-3.2-5 Expanding the demand in BRVT (Short-Long term)

BR-VT is 1 million-population province, with 2.64 billion USD government income in 2012. It has the highest GDP per capita among South East region's provinces with highest accumulated FDI as of December 2009 (23.6 billion USD). However, its industrial structure inclines toward primary industries of mining. 82.5% of the industries are crude oil exploitation and LPG, while only 17.5% is other industries, includes agricultural, stone mining, energy, steel, construction materials..., and most of the large FDI is in BR-VT for the oil business. The province supplies 40% of the total power capacity. Furthermore, less population and lack of skilled population is a bottle neck for the province to invite new industries

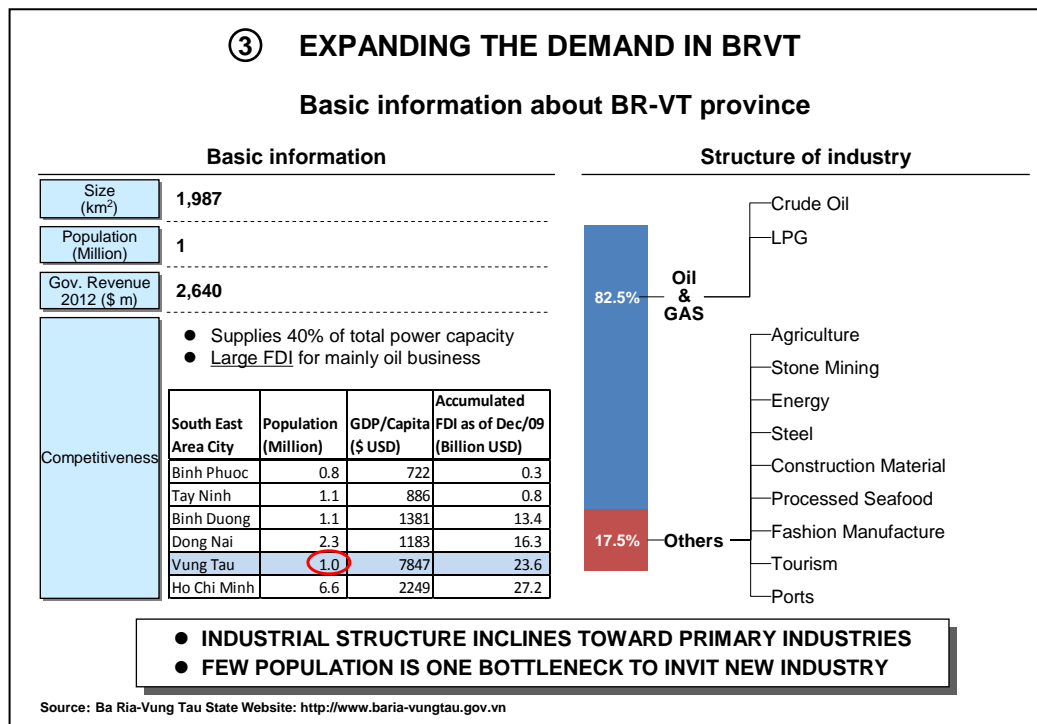


Figure 51: Expanding demand from BRVT

BR-VT province has taken many efforts to invite new industries and large corporation:

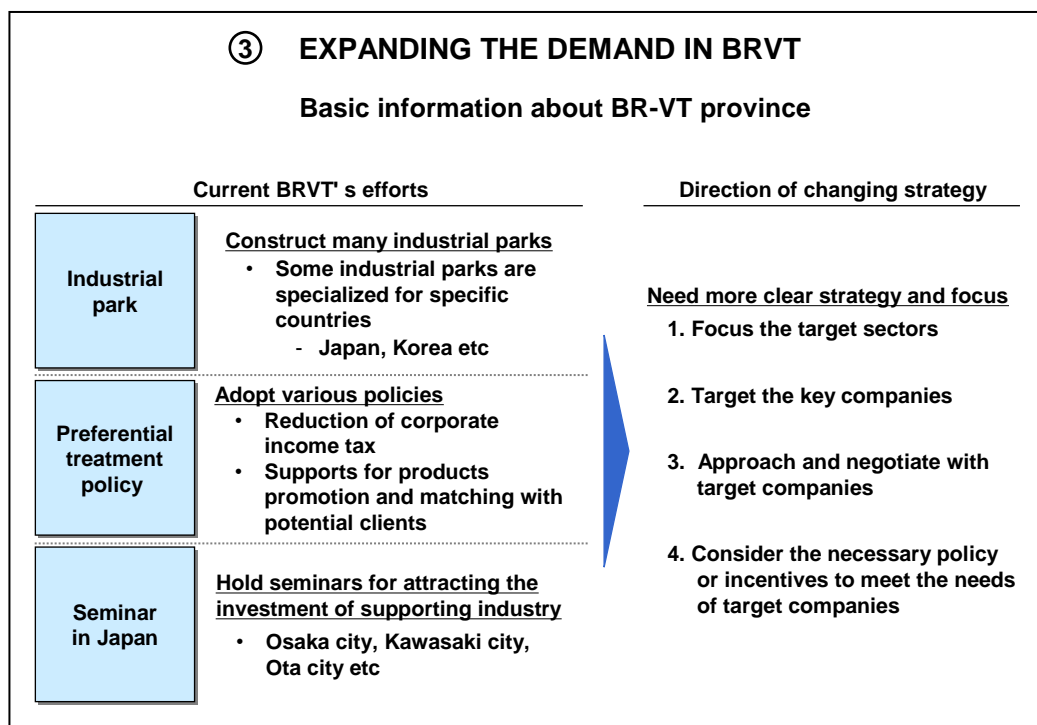


Figure 52: Effort of BRVT in creating demand

- It constructs many industrial parks, of which some industrial parks are specialized for specific countries such as Korea, Japan...
- It offers favorable policies to attract industry players by reducing corporate income tax, supporting product promotion and matching with potential clients.
- The province also held several seminars for attracting the investment of supporting industry in various Japanese cities (Osaka, Kawasaki, Ota..)

However, the province needs to change its direction of strategy in order to attract large corporation investment more effectively. It should only focus on negotiating and attracting large corporation of the key industries which generate higher demand for port sector. BR-VT should target certain sectors, target the key companies in each sector, then approach and negotiate with target companies selectively, and consider the necessary policy or incentive to meet the needs of target companies to invite them expand production and business base in BR-VT.