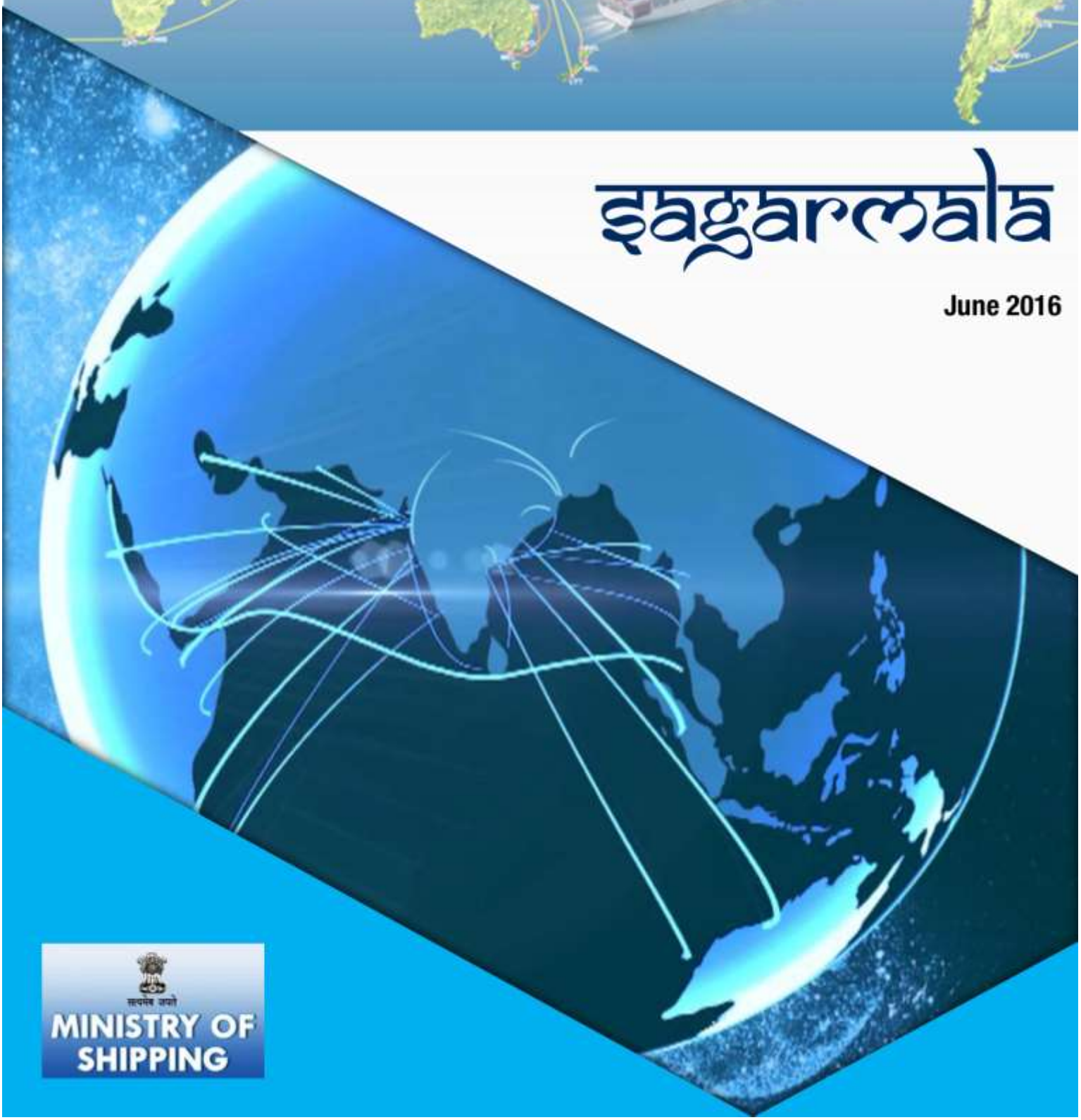
Report on government imperatives including financing plan

Indian Ports Association, Ministry of Shipping

sagarmala

June 2016



सत्यमेव जयते

MINISTRY OF SHIPPING

Contents

1. Context

The Sagarmala initiative was conceived by the Government of India to address the challenges and capture the opportunity of port-led development comprehensively and holistically. Sagarmala is a national programme aimed at accelerating economic development in the country by harnessing the potential of India's coastline and river network.

McKinsey and Company was appointed by Ministry of Shipping, Government of India/ Indian Ports Association as Strategy & Programme Management consultant for conducting Sagarmala study. Table below lists down the deliverables to be submitted during the course of the study.

S. No	Deliverable
1	Inception report depicting the methodology, variances if any, timelines, work plan
2	Draft report on cargo traffic projections & logistics bottlenecks
3	Final report on cargo traffic projections & logistics bottlenecks
4	Draft report on capacity enhancement / shelf of projects (including report on National Multi-Modal Transportation Grid) with high level cost estimates for major ports
5	Final report on capacity enhancement/shelf of projects with high level cost estimates for major ports
6	Report on identification of sites for new port development
7	Report on government imperatives including financing plan
8	Report on PMO structure
9	Perspective plan for Port-led Industrial Development of the Coastal Economic Clusters
10	Draft Final Report covering all elements
11	Final report based on stakeholder consultations

This report focuses on deliverable 7 – Report on government imperatives including financing plan. This report covers parts of Section H of Terms of Reference (TOR). Extracts from TOR pertaining to this deliverable are highlighted below in Table.

Scope of work	Coverage in deliverable
Lay out key government imperatives to ensure speedy and efficient implementation of capacity enhancement roadmap including funding requirement, regulatory changes, structural changes etc	This has been covered in the section 3 of this deliverable
Project the funding requirements for the capacity enhancement plan.	This has been covered in the section 3 of this deliverable
Suggest regulatory changes required to tap the complete potential of the master-plan	This has been covered in the section 4&5 of this deliverable
An implementation and institutional framework and governance architecture	This has been covered in the section 6 of this deliverable
Business Plan for the Sagarmala Development Company	This has been covered in the section 8 of this deliverable

2. Executive summary

The Sagarmala Programme envisions India's ports as drivers of economic development in coastal areas. A Government of India initiative, Sagarmala intends to comprehensively and holistically address the challenges and capture the opportunities of port-led development. The programme will work to optimize the use of existing and future transport assets, develop new lines/linkages for transport (including roads, rail, inland waterways and coastal routes), set up logistics hubs, and establish industries and manufacturing centres to be served by the ports in EXIM and domestic trade.

Implementing a project of such scale and achieving the desired impact calls for many interventions at the regulatory level, coordination between multiple stakeholders, and ascertaining alternative measures. This report looks at the key government imperatives for Sagarmala—the five crucial levers that can determine the success of the programme:

1. A cost effective funding plan for implementing the program
2. A robust environment for Public Private Partnerships
3. Transparent business friendly and stable regulations policy
4. Creating an enabling environment for attracting investors into port led development industrialization projects
5. Setting up the right institutional architecture for delivering the Sagarmala program, including Setting up Sagarmala Development Company and liaising with other stakeholders e.g line ministries and state governments

2.1 Cost Effective Funding Plan For Implementing The Program

Around 400 projects, including projects under construction, have been identified under the Sagarmala programme for port-led development in the country, requiring an investment of roughly INR 4.5 lakh crore. Out of the 397 projects, 111 project are under implementation and 83 projects will be taken up only after FY20. Thus, financing for 203 projects worth INR 2, 86,000 Crore needs to be identified. The breakup of the funding needs is as follows:

- Around **75 road projects, worth INR 150,000 to 175,000 cr**. will be primarily funded on a 50% basis by National Highways Authority of India
- Around INR 35,000 to 50,000 cr will be required for 44 rail projects

- Around **INR 4,500 to 6,000 cr** is the estimated need for a **heavy-haul railways** corridor from Talcher to Paradip Port, which is suggested to be implemented in non-government railway mode
- The development of new ports, such as Paradip outer harbor, Vadhavan, Sagar and Enayam, is estimated to cost around INR 25,000 to 35,000 crore, and is suggested to be implemented on a landlord basis

While multiple agencies take ownership of the projects under their purview, it is recommended that the major ports leverage alternative financing tools and their lower interest rates. These include **dollar-denominated loans** and **development bank financing**.

Globally, dollar-denominated loans are a commonly used phenomenon, but in India only the Jawaharlal Nehru Port Trust has used these. Similarly, development banks such as the World Bank, Asian Development Bank and China EXIM Bank provide funding—loans as well as grants—for developing infrastructure related to ports. Both these forms of finance can be much cheaper (1.5 to 2.5 per cent compared to >12 per cent) compared to domestic market loans or capital markets.

2.2 A robust environment for Public Private Partnerships

While PPPs have driven a lot of activity in the ports sector, the ecosystem is still nascent. Various challenges along the project lifecycle have meant that of the planned **91 total projects, only 35 have been completed, 27 are under construction, another 27 are in the pipeline**, while two projects have been terminated. Certain shifts are necessary to develop a conducive ecosystem:

- Provide flexibility for reviewing cargo to be handled
- Explore traffic risk taken out of developer scope (eg. HAM in highways)
- Ensure selection processes are modified to select good quality consultants (ed. QCB's, TI)
- Ensure land & key clearances are in place before award (eg. Environmental clearance
- For projects with dependency on external connectivity, explore conversion to PPP after the project is in place
- Review TAMP and explore options for mitigation to common light touch regulatory regime

2.3 Transparent business friendly and stable regulations policy

Efficient logistics for the evacuation of cargo require plugging some regulatory and process gaps. For example, the taxes levied on coastal shipping make it around 30 per cent costlier than comparable shipping costs in other countries. Similarly, the time taken for customs processes can vary widely compared to best in class examples (China). This increases storage time, necessitates more planning for the cargo receiver and shipper, and thereby translates into higher inventory-holding costs.

- To maximise the potential of coastal shipping, bunkering and service taxes levied on coastal shipping need to be moderated
- Customs processes need to reduce manual intervention and specify separate scrutiny and clearances for EXIM and coastal cargo
- Coastal Regulations Zones should be made separately for the east and west coast, taking into account the different topography and tidal cycles, with flexibility on exemptions and exceptions on a special case basis
- The port-land allocation policy is recommended to shift from an H1 (highest-price bidder) to an integrated development—the lease price can be benchmarked with the nearest industrial development zone, giving weightage to the contribution to throughput, the investments made and the employment generation potential

2.4 Enabling environment for attracting investors into port led development industrialization projects

Ports play a crucial role in reducing domestic logistics costs and facilitating EXIM-oriented manufacturing by reducing logistics time and variability. China is a best-in-class example of such an approach. While industrial zone development has been a prevailing concept in India, Greenfield industrial zones (SEZs, FTZs) have not been as successful as traditional industrial agglomerations.

Taking into account learnings from the past, proposed industrial unit locations have been mapped to the relevant major and non-major ports in the region that can most optimally facilitate the movement of their cargo. Reducing overall logistics cost has been the overarching rationale for shortlisting industries and locations for port-led industrialization.

2.5 Setting up the right institutional architecture

The programme consists of a diverse set of projects and initiatives with multiple stakeholders at the state and central level. Key enablers for delivering such a programme consist of the governance framework, institutional set-up and financing plan, including PPPs. It is therefore suggested that:

- The coastal economic zones (CEZ) programme should be spearheaded by the NICDA, to kick start the program
- Promoting ease of doing business should be a priority. This calls for changes in policies for compliance, streamlining trade clearance processes, ensuring implementation through a risk-based model, and appointing a secretary level empowered Nodal Officer for the top five investment sources/industries.
- A marketing cell, dedicated to marketing industrial and infrastructure projects, should be created within the ambit of the Ministry of Shipping. It can operate with a lean team and work through a geography-based model. An external marketing consultant can be brought on board on a retainer basis to create a roadshow and branding theme for the programme.

2.6 Setting up Sagarmala Development Company

To fast-track the journey to achieving the objectives of Sagarmala, it is proposed to incorporate the Sagarmala Development Company (SDC). The company shall be under the administrative control of the Ministry of Shipping, which will monitor the implementation of projects identified under the National Perspective Plan (NPP) and provide experts in the field of technical, financial and project restructuring to various stakeholders, including the partner states/maritime boards.

The SDC shall

- Create a road map of projects identified through the National Perspective Plan and prepare a coherent development strategy to develop the port sector in India
- Augment capacity to cater to increased cargo traffic at the ports through improved efficiency, mechanization and building new terminals, and building six to eight greenfield ports
- Liaise with various central line ministries to facilitate effective administrative coordination in order to ensure all identified projects are completed within a time bound manner;

- Complete all residual projects in the minimum time period through participation by Sagarmala Development Company

SDC will be led by an MD/CEO on a deputation or hired from outside. Keeping in mind its mandate, it will comprise four teams: Finance, Strategy and Business Development and project management unit.

These enablers are the key to the smooth execution of the Sagarmala Programme. While the Ministry of Shipping has been appointed as the nodal ministry for the program's implementation, all relevant stakeholders—line ministries, state governments and private participants—must make a synergized and consolidated effort to ensure that Sagarmala realizes its vision in the coming years.

3. Cost effective funding plan for projects under the National Perspective Plan

Financing of projects is one of the key enablers for the Sagarmala initiative's success. This section discusses the funding needed for projects identified under the Sagarmala Programme along with the implementing agencies and financing models for each type of project. It also mentions some of the challenges affecting PPPs in ports with potential measures to resolve them, since PPPs will be critical for the financing of port projects.

Financing of projects is one of the key enablers for the Sagarmala initiative's success. This section discusses the funding needed for projects identified under the Sagarmala Programme along with the implementing agencies and financing models for each type of project. It also mentions some of the challenges affecting PPPs in ports with potential measures to resolve them, since PPPs will be critical for the financing of port projects.

3.1 Funding needs and allocation

Around 400 projects, including projects under construction, have been identified under the Sagarmala programme for port-led development in the country, requiring an investment of roughly INR 4.5 lakh crore, from different stakeholders, including the Ministry of Shipping, Ministry of Commerce, state governments and other central agencies, e.g., the NHAI and Indian Railways. In addition, contribution from the private sector, e.g., through PPPs, is also expected. These projects are categorized across four pillars: port modernization, port connectivity, port-led industrialization and coastal community development.

Out of the 397 projects, 111 project are under implementation and 83 projects will be taken up only after FY20. Thus, financing for 203 projects worth INR 2,86,000 Crore needs to be identified (Exhibit 1).

Exhibit 1

Overview of shelf of projects under Sagarmala

Category	Number of projects	Cost (in INR Cr)
Total projects	397	~448,212
Projects under implementation	111	~59,430
Long term projects	83	~102,189
Focus projects	203	~286,593

Exhibit 2, 3 and 4 give a summary of funding needs and the corresponding financing models.

Exhibit 2

Financing plan for identified focus projects

Internal resources might not be enough to fund projects

S. No.	Agency	Sector	Financing[1]	Financing plan	Remarks
1	Major Port Trusts	54 Port Expansion projects	Rs 19,000 Cr	• Rs 14,000 Cr through PPP • Rs 5,000 Cr through internal resources	• Only profitable ports to finance non PPP projects • Major ports in India are profitable and have surplus available • In addition money can be raised through dollar denominated bonds by leveraging foreign currency earnings
		7 New Mega Ports	Rs 31,000 Cr	• Rs 15,500 Cr through internal resources • Rs 15,500 Cr through PPP	
		6 Internal Road projects	Rs 460 Cr	• Rs 460 Cr through internal resources	
		3 Internal Rail projects	Rs 145 Cr	• Rs 145 Cr through internal resources	
		2 CEUs	Rs 5,000 Cr	• Rs 2,000 Cr through PPP • Rs 3,000 Cr through internal resources	
2	Indian Railways	6 Rail projects	Rs 12,800 Cr	• Rs 12,800 Cr through internal resources	• Railway capital expenditure for FY 16 was Rs 94,000 Cr.
3	NHAI	25 Highway projects	Rs 16,000 Cr	• Rs 5,000 Cr through PPP • Rs 11,000 Crore through internal resources	• Budget for highways development in FY 16 was Rs 55,000 Cr • In addition Rs. 42,000 Crore of toll generation is expected over 3 years • Rs. 75,000 approvals sought under Bharatmala for border and coastal roads
		10 Expressways	Rs 125,000 Cr	• Rs 45,000 Cr through PPP • Rs 80,500 Crore through internal resources (includes land acquisition)	• Rs. 150,000 proposed by MORTH under Bharatmala for Expressways project

1 Only includes total cost of focus projects to be initiated in next 3 years

Exhibit 3

Financing plan for identified focus projects

Internal resources might not be enough to fund projects

S. No.	Agency	Sector	Financing[1]	Financing plan	Remarks
4	IWAI	3 Waterway projects	Rs 7,515 Cr	▪ Rs 7,515 Cr through internal resources	▪ A separate budget for development of inland waterways will be needed of about Rs. 7,500 Crore
5	MOPNG	2 Refinery projects	Rs 8,400 Cr	▪ Rs 8,400 Cr through internal resources of which ~ Rs. 4,200 Cr needed as equity	▪ Surpluses with PSU OMCs is Rs. 56,000 Crore[2]
6	CONCOR	2 Multimodal hub projects	Rs 170 Cr	▪ Rs 170 Cr through internal resources of which ~ Rs. 85 Cr needed as equity	Surpluses available with CONCOR is Rs. ~3,000 Crore
7	IPRCL	1 Road project	Rs 350 Cr	▪ Rs 350 Cr through internal resources	IPRCL current budget allocation might be insufficient to meet the financing needs
		22 rail projects	Rs 11,000 Cr	▪ Rs 11,000 Cr through internal resources (some equity can come from port as well)	

1 Only includes total cost of focus projects to be initiated in next 3 years
2 Includes current investments, cash and cash equivalents, and short term loans and advances

Exhibit 4

Financing plan for identified focus projects

Internal resources might not be enough to fund projects

S. No.	Agency	Sector	Financing[1]	Financing plan	Remarks
8	DIPP	12 Discrete clusters	Rs 34,000 Cr	▪ Rs 24,000 Cr through internal resources and PPP	▪ A separate budget for development of CEUs and clusters under the CEZ program will be needed of about Rs. 25,000 Crore
		1 CEU	Rs 2500 Cr	▪ Rs 2500 Cr through internal resources and PPP	
9	Tourism	2 Tourism projects	Rs 120 Cr	▪ Rs 120 Cr through internal resources	▪ Budgetary allocation to Ministry of Tourism for FY 16 was ~Rs. 1600 Cr
10	SDC Projects	37 projects	Rs 7,500 Cr	▪ Rs 1500 Cr through internal resources ▪ Rs 4,000 Cr as equity from states/ports ▪ Rs 2,000 Cr through PPP	▪ SDC's current allocation is Rs. 450 Cr which if extrapolated over 3 years will be ~ Rs. 1500 Cr
11	Other state projects including private port projects	8 projects	Rs 5,800 Crore	▪ Rs 5,800 Cr through internal resources ▪ Private ports can also fund a part of the investment	▪ Small projects in Gujarat and Maharashtra that can be funded by state budgets ▪ Other projects need to be funded by private port developers

1 1 Only includes total cost of focus projects to be initiated in next 3 years

Exhibits 5 and 6 show the total project capex needed by categories and the financing needed for each year for the next 10 years.

Exhibit 5

Yearwise funding requirement for the projects (1/2)

		Yearwise funding requirement											
		# of projects	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	T
Port Trust	Port Modernization - Major Ports	54	-	3,726	5,678	4,513	3,237	1,769	-	-	-	-	18
	New Ports	7	-	-	-	4,074	6,611	10,148	7,012	2,475	418	-	30
	Last Mile Road projects	2	-	114	211	-	-	-	-	-	-	-	32
	Internal Port Road Projects	4	-	74	86		-	-	-	-	-	-	16
	Internal Port Rail Projects	3	100	20	9	16	-	-	-	-	-	-	14
	CEU	2	-	-	1,750	3,250	-	-	-	-	-	-	5,
Indian Railways	Port Rail Connectivity Projects	6	-	894	1,616	1,178	1,767	2,170	2,790	2,325	-	-	12
	Internal Port Rail Projects	0	-	-	-	-	-	-	-	-	-	-	-
NHAI	Last Mile Road projects	8	-	231	467	87	-	-	-	-	-	-	78
	Internal Port Road Projects	0	-	-	-	-	-	-	-	-	-	-	-
	Port Road Connectivity Projects	17	-	2,914	3,647	3,191	2,095	2,033	972	360	-	-	15
	Expressways Projects	10	-	-	-	18,825	31,375	50,200	25,100	-	-	-	12

Exhibit 6

Yearwise funding requirement for the projects (2/2)

		Yearwise funding requirement											
		# of projects	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	T
IWAI	Inland Waterways Projects	3	-	-	500	1,002	1,377	2,003	2,005	629	-	-	7,
MoPNG	Refineries	2	-	-	-	840	1,260	1,680	2,520	2,100	-	-	8,
CONCOR	Multi Modal Hubs	2	-	-	-	34	77	60	-	-	-	-	17
IPRCL	Last Mile Road projects	0	-	-	-	-	-	-	-	-	-	-	-
	Internal Port Road Projects	0	-	-	-	-	-	-	-	-	-	-	-
	Port Road Connectivity Projects	1	-	123	228	-	-	-	-	-	-	-	35
	Port Rail Connectivity Projects	10	-	150	2,282	5,139	2,686	-	-	-	-	-	10
	Internal Port Rail Projects	12	-	402	251	179	-	-	-	-	-	-	83
DIPP	Discrete Cluster Projects	12	-	-	-	3,393	5,089	6,785	10,178	8,482	-	-	33
	CEU	1	-	-	-	875	1,625	-	-	-	-	-	2,
Ministry of tourism	Tourism Projects	2	-	-	-	42	78	-	-	-	-	-	12
SDC	Projects	37	-	1,224	2,383	1,370	1,322	764	134	67	-	-	7,
Other state projects	Projects	8	43	176	1,756	3,163	608	-	-	-	-	-	5,
Total		**203**	**143**	**10,046**	**20,862**	**51,178**	**59,205**	**77,611**	**50,711**	**16,437**	**418**	**-**	**28**

The funding plan for each category of projects is below:

3.1.1 Roads

Around 55 projects have been identified for improving port connectivity to major industrial clusters. National Highways Authority of India will be key agency responsible for the implementation of these projects. The estimated cost is approximately INR 140,000 to 150,000 crore, of which 35 per cent will be financed by the PPP model while the remaining 65 per cent will be publicly funded.

3.1.2 Rail

The Indian Railways will be responsible for the funding and implementation of various rail projects, such as installing additional lines on existing routes and setting up new lines for improving connectivity and decongesting the rail network. Funds of roughly INR 25,000 to 31,000 crore will be required for 38 projects identified as part of the initiative.

Heavy haul railways corridor: A heavy-haul railways corridor from Talcher to Paradip port will be one of the pioneering connectivity initiatives of the Sagarmala Programme. The cost of the corridor from Salegaon to Paradip port is estimated INR 3,000 crores.

The Non-Government Railways model is being evaluated for implementing this project. Under this model, 70 per cent is proposed to be financed through debt and the remaining 30 per cent through equity shared between Paradip port, MCL, IRPCL and RITES as a representative of Indian Railways.

3.1.3 Dry ports and multi-modal hubs

New Inland Container Depot development in Central Rajasthan (Nagaur) and North Madhya Pradesh/Chhattisgarh border (Singrauli) will require a total investment of around INR 170 to 200 crore. These projects could be financed through a mix of investments from CONCOR (container handling agency) and private investments, e.g., private container train operators.

3.1.4 New ports

Development of new ports, Vadhavan, Sagar and Enayam, has been proposed as part of the Sagarmala initiative. The total cost of these projects is estimated to be around INR 25,000 to 35,000 crore, of which 50% can be funded through PPP route. The Ministry of Shipping will be responsible for preparing the DPR for these projects, which would amount to about 10 per cent of the overall cost. Private funding could be employed for berth and terminal development whereas state funds could be used for providing the basic infrastructure.

3.1.5 Existing ports

The Ministry of Shipping will be the nodal agency for 54 modernisation projects at existing ports, to be largely implemented through respective port trusts. These port trusts will also be responsible for preparing the DPR preparation, estimated at about 5 to 10 per cent of the total cost. The required investment of around INR 19,000 to 24,000 crore can be financed mainly through the PPP model.

3.1.6.1 CEZ and CEUs

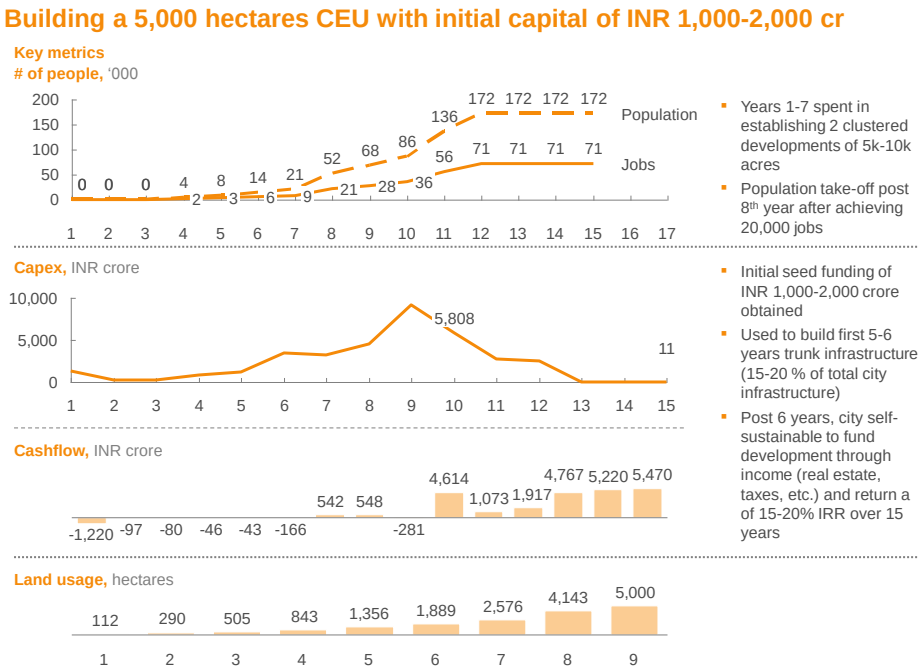
Projects spanning across 13 industries have been identified for port-led industrialisation through coastal economic zones (CEZs). These include bulk and discrete units such as shipbuilding and automotive, food processing parks, science and technology parks, apparel and textile parks and leather and footwear parks. Around INR 50,000 to 60,000 crore will be required for these projects,

which could be funded equally by state governments and the central government. The Centre along with state governments will jointly undertake the basic infrastructure development for three to four pilot CEUs. While the financing could be largely through budgetary sources, it is estimated that PPPs in individual components of CEUs can fund up to 40 per cent of the project cost. In addition, some of the CEUs can also be developed by private developers

Innovative models can be leveraged for financing CEU projects using a land monetisation strategy which minimises investment in upfront capex.

Exhibit 7 illustrates how a 5,000 hectare CEU can be sustainably developed with a seed capital of only INR 1,000 to 2,000 crore.

Exhibit 7



3.1.6.2 Bulk clusters

2 bulk clusters have been identified in the sector of refinery and petrochemical with total investment requirement of INR 8,000 to 10,000 crore. Funding of the project cost could be through public sector units.

3.1.6.3 Maritime clusters

Two clusters have been identified in Saurashtra and Ennore with a total investment requirement of INR 8,00 to 1,000 crore. These clusters could be funded by the Ministry of Shipping. Similar to CEUs, PPPs in individual components of maritime clusters can fund up to 40 per cent of the project cost.

3.1.7 Community development

An important element of port-led development is coastal community development. Around 10 projects have been identified with a total project cost of around INR 1,000 to 1,500 crore. Implementation of projects will be handled by the Ministry of Shipping, Ministry of Tourism, and Ministry of Agriculture, the Department of Animal Husbandry, Dairying & Fisheries, Port Trusts and Maritime boards. Among the various projects proposed, majority of them would be publicly funded.

3.2 Alternative and innovative funding mechanisms

Private investment activity especially in infrastructure is constrained by stressed balance sheets. The domestic banking system is also affected by high levels of non-performing assets. Thus, the need to find alternative and innovative financing models is necessary to finance the large shelf of projects identified under the Sagarmala Programme. Two such methods which can be leveraged are:

- Dollar-denominated loans
- Development banks

3.2.1 Dollar-denominated loans

For companies or investors managing multiple currencies, and earning a certain part of their income in international currencies (like USD), dollar-denominated loans can be used to raise financing.

In the Indian context, vessel-related charges, such as port dues, berth hire fees and pilotage, are paid by ships calling at a port. Such charges for foreign-going vessels are denominated in dollars, but collected in rupees after applying the prevailing exchange rate, according to a practice followed since 1991. On the other hand, cargo-related charges at ports, such as wharfage, crane hire, storage, warehouse, demurrage and estate rentals, are denominated and collected in rupees.

Two ports in India, JNPT and Adani, have raised dollar-denominated loans (Exhibit 8) to benefit from low borrowing costs, i.e., 2.5 per cent compared to the roughly 12 to 15 per cent available in the domestic market

Exhibit 8

Only 2 ports in India have raised dollar denominated loans and dollar bond issue to take advantage of lower borrowing cost

Concept	$ denominated debt	$ bond issue
Port	JNPT	Adani Ports
Amount Raised	$ 400 mn (~INR 2,660 Cr)	$ 650 mn (~INR 4,100 Cr)
Date	16-Mar	15-Jul
Interest Rate	2.36%	U.S. Treasury Rate + 195 bp[2]
$ Denominated revenue	INR 236 Cr (2013-14)	N.A.[1]
Purpose of funds	Enhancing road connectivity to port	Refinance foreign currency denominated external commercial borrowings and fund capital expenditure

Foreign currency denominated funds provide access to much cheaper sources of funding than domestic loans

1 Information unavailable
2 10 year U.S. Treasury Bond rates on 01 July 2015 was 2.43%

This can be emulated across other 11 major ports in the country with the potential of raising around INR 18,000 crore cumulatively based on present value (Exhibit 9). Specifically, during FY 2014, the Kolkata port trust and Paradip port had dollar-denominated revenues of more than INR 250 crore, making them the top contenders for raising the loans.

Exhibit 9

11[1] major ports in India have a total potential of dollar denominated debt of ~ INR 16,000 Cr

Port		Dollar denominated revenue (FY 2014, INR Cr)	Present value
KOPT	Kolkata	277.87	2,145.64
PPT	Paradip	265.98	2,053.83
VPT	Visakhapatnam	195.63	1,510.60
KPL	Ennore	111.33	859.66
CHPT	Chennai	187.13	1,444.97
VOCPT	Tuticorin	97.08	749.63
COPT	Cochin	92.88	717.19
NMPT	New Mangalore	114.04	880.59
MGPT	Mormugao	58.53	451.95
MBPT	Mumbai	399.84	3,087.46
JNPT	JNPT	236.29	1,824.57
KPT	Kandla	350	2,702.61
Total[1]		**2,150.31**	**16,604.12**

Major Assumptions
- Loan period – 10 years
- Interest rate – 5.0% p.a.

1 Excluding JNPT due to the recent debt raised (March 2016)

SOURCE: Client Data, Team analysis

3.2.2 Development banks

Development banks such as the World Bank, Asian Development Bank (ADB) and Japan International Cooperation Agency (JICA) provide funding in the form of loans as well as grants for developing infrastructure related to ports.

Development banks fund activities, which include:

- Construction of port facilities to increase cargo-handling capacity
- Maintenance activities to extend the life of the port and enhance safety and efficiency of operations
- Construction of berths
- Technical assistance in preparation of master plans
- The funding is provided for long repayment periods (of 20 years or more) with interest rates linked to the LIBOR or rates as low as 1.5% - 2%. Interest free or reduced interest grace periods are also part of the terms.

Below table provides certain examples of development banks funding port development activity globally.

Developmen t Bank	Project	Brief scope of Project	Date	Country	Amount Funded	Terms of Financing
Asian Development Bank (ADB)	Lae Port Developmen t Project	Construction of port facilities, and consulting services for project management to expand the cargo handling capacity of the port	2007	Papua New Guinea	USD 100 mn	60% as loan from LIBOR based lending facility for 24 years and rest as ADF loan for 32 years at 1.5% interest rate
Asian Development Bank (ADB)	Avatiu Port Developmen t Project	Expansion of the port, to extend the life of the port by 30 years and enhance safety and efficiency of operations.	2009	Cook Islands	USD 20.71 mn	LIBOR based variable lending rate for 25 years with a five year grace period
China EXIM Bank (Export– Import Bank of China)	Kribi Deep Sea Port Project	Construction of a multipurpose berth and container berth, loading and unloading	2015	Cameroon	85% of the total project value	Loan maturity period of 20 years with interest rate of as low as 2%

		equipment, rear stack yard, electro-mechanical facilities and other auxiliary buildings and devices etc.				p.a.; interest free grace period of seven years
Asian Development Bank (ADB)	Ports Developmen t Master Plan	Technical assistance (TA) to prepare a ports development master plan	2015	Samoa	USD 500,000	Financed on a grant basis by ADB's Technical Assistance Special Fund (TASF-Others)

Indian major ports could also partner with Development to arrange for funding of Greenfield ports; port connectivity and port modernization projects. The funding is available as a grant or a long term loan which can enable development.

3.3 Potential of transforming major ports from the state-owned to landlord model

The Indian government owns all major ports in the country. The cargo-handling berths/ports are managed either by private operators or the port. Of the total 240 berths at the major ports, categorised as per majority cargo, currently 66 berths are on PPP owned and 174 berths are state owned.

Some of the major ports globally follow the landlord model of ownership, wherein the berths owned and operated by private operators, with revenue sharing to the state.

In order to create more efficient ports, it is necessary to evaluate the PPP potential of ports/berths to migrate to the landlord as well as other PPP models.

3.3.1 Potential of state-owned ports/berths for PPP

The PPP potential for the 174 state-owned berths can be gauged on the following four parameters:

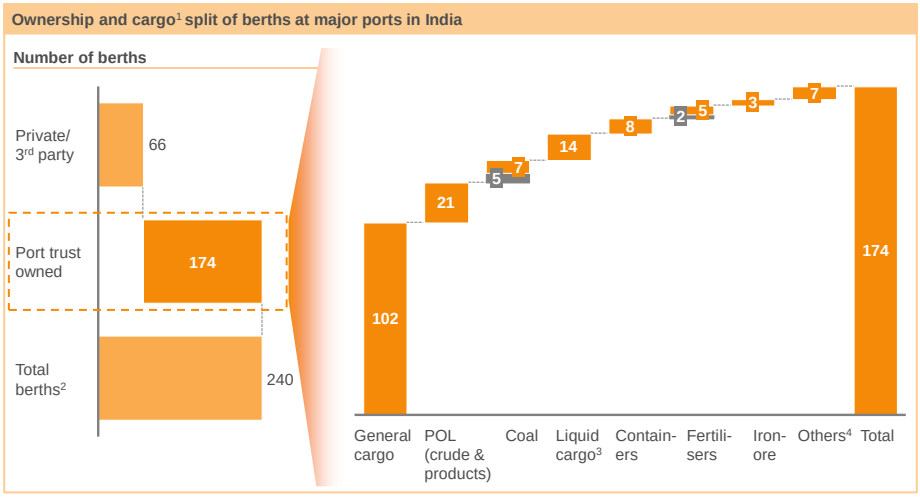
- Traffic projections/cargo growth for next 10 years (until 2025): Berths with estimated steady cargo growth of more than 6 per cent seem to have more potential for PPP.

- Dedicated cargo berths: Currently, around 104 berths of the 174 are used for multiple or general cargo. To build financial returns, berths with dedicated cargo have greater potential for PPP.
- Mechanised/conventional: Current mechanised berths as well as berths with scope for mechanisation have more potential for PPP since it ensures larger cargo handling and throughput.
- Port health (profitability): Berths in ports with overall strong financials, i.e., with over 20 per cent PAT, seem to have higher potential for PPP. This is reassuring for prospective investors interested in higher returns.

Currently, only around 28 per cent of 240 all ports/berths are on PPP. Of the 174 Port trust berths, 102 berths (around 60 per cent) are used for general cargo Exhibit 10. Since berths dedicated to a single cargo or product have more potential for PPP, the PPP potential of the remaining 72 berths needs to be gauged.

Exhibit 10

~60% of port trust owned berths are dedicated to general cargo; with only ~28% of total as privatized



1 In case of mixed use categorised as per majority cargo in 2014-15
2 Excluding SBM's and transhippers
3 Edible oil and liquid fertilisers
4 General cargo/Passenger/RoRo etc.

SOURCE: Indian Ports Association; Project Unnati

3.3.2 Suggested concession models for migrating major ports to the landlord model

In the past PPP's for major ports, terminals have been through revenue sharing mode since these projects were viable on a standalone basis. However some of the berths with potential for PPP may be constrained by revenue potential. New models may be explored for such berths as below:

The following three models may be considered for privatising the identified ports/berths, based on their suitability:

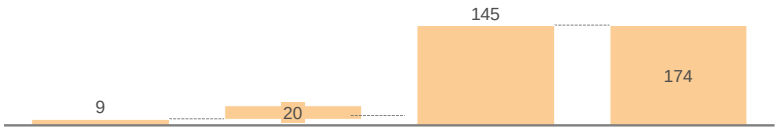
- Viability gap funding (VGF): This model can be used if revenue form the berth is inadequate to service the capital expenditure. In such cases, VGF can be provided by the centre to make the berth PPP investment viable. This is commonly availed in BOT (Toll) projects of NHAI
- Annuity: This model can be used to remove traffic and revenue risk for PPP projects. In such cases, (a) the port authority can pay a fixed semi-annual fee to the concessionaire to compensate for capital cost and operational expenses, along with an assured per cent age of returns. (b) Also, the concessionaire will not have the right to any charges levied on cargo. A variation of this model is the Hybrid Annuity Model of National Highways Authority of India under which a 40% capital support is provided and annuities are replaced by fixed cash flows that mirror developer cash out flows
- Management contract: In case a berth has no potential for PPP concession, it can enter into an O&M contract for operations management with O&M fees charged annually

As per an initial analysis based on these factors, around 10 berths have the potential to undergo PPP in the next five to seven years through the revenue sharing models. Details of berths at major ports with PPP potential is mentioned in the following exhibit 11

Exhibit 11

~9 berths have potential to move to PPP through revenue sharing

Privatisation opportunity and anticipated model of berths at major ports



Probability of shifting to PPP	High	Medium	Low	Total
Berth details	▪ Ennore – Coal ▪ Goa – Iron ore, Liquid cargo ▪ Kandla – v.oil ▪ Paradip – coking coal, iron ore, POL ▪ VOC – Coal, liquid cargo	▪ Chennai – fertiliser ▪ Kandla – coal (unloading) ▪ JNPT – container(3) ▪ Goa – coal (unloading)	▪ Multiple – General cargo – Passenger – Ro-Ro.	
Model	▪ Revenue sharing	▪ Viability Gap funding and Annuity	▪ O&M contracts	

1 Without TAMP

3.4 Sub-programmes with a ring-fenced budget

As per the recommendations of the Cabinet Note of Sagarmala, projects emerging from the Sagarmala Programme will be executed by respective line ministries. Extensive discussions have taken place with key ministries, especially Railways, Road Transport and Highways and Commerce, to understand their willingness of to take up and execute these projects and the status of budgetary sanctions. These Ministries have consented to undertake several of these projects.

To enable line ministries prioritise the implementation of these projects and streamline coordination and monitoring of the Programme, the creation of a sub-programme under each key line ministry, especially Railways, MoRTH and DIPP, with a nodal officer within the respective ministry responsible for reporting and delivering these projects has been proposed. It is also suggested that a dedicated ring-fenced budget be carved out for implementation.

4. A robust environment for Public Private Partnerships: Lessons and recommendations

Public–private partnerships (PPPs) have been integral to the financing of port projects in the country. PPPs have historically been the predominant mode of financing port projects in the past 10 years across both major and non-major ports.

The port expansion projects identified under the Sagarmala Programme could be mainly financed through PPPs. The landlord model (privately owned berths at ports) could be used for new ports, whereas breakwater and dredging works could be funded by the government, while other projects could be executed entirely through PPPs.

While PPPs in ports have been more successful than in other sectors, several bottlenecks, including implementation issues, continue to impede efficiency. Of the 91 total projects planned to be executed through PPP, only 35 were complete[1] as of March 2014, 27 each are under construction and in the pipeline, while two projects have been terminated.

This chapter examines the state of PPPs in the port sector, current challenges and potential solutions for resolving them.

4.1 Tapping the power of PPPs in india's port sector

India has a lot of activity in the form of PPPs in the ports sector, but the ecosystem still needs to evolve significantly. In India's Maritime Agenda for 2010–20, the government has envisaged around 60 per cent contribution from the private sector to ensure faster capacity augmentation and improve hinterland connectivity. But as of March 2014, PPP projects in ports contributed only 35 per cent of the total expected capacity addition. Creating an ecosystem that can truly tap into the power of PPPs for the ports sector is crucial for future success.

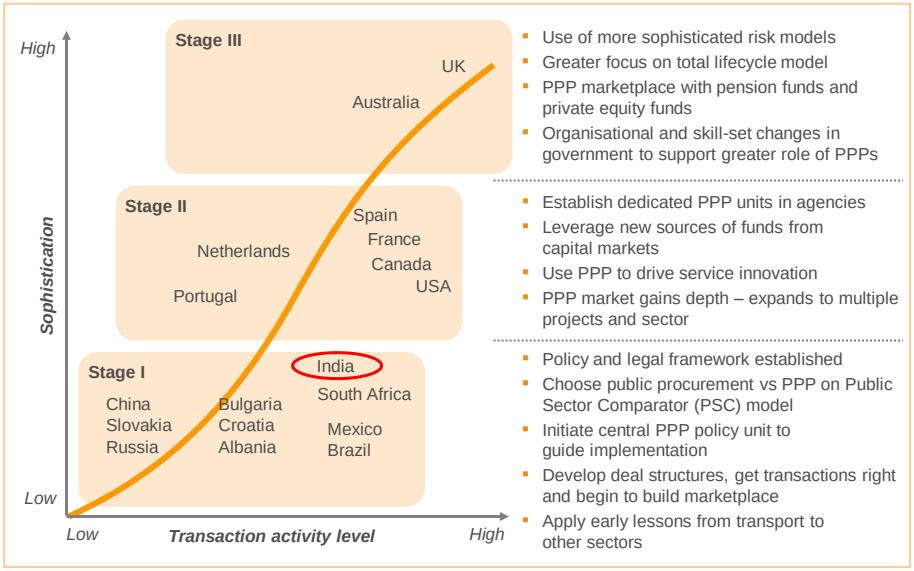
The World Bank research shared in 2014 ranked India quite low in having a sophisticated PPPs ecosystem, even though transaction activity is on the higher side (Exhibit 12).

[1] PPP in India: Ministry of Finance

Exhibit 12

India scores high on activity levels in the PPP sector, but the ecosystem can be far more sophisticated

SCHEMATIC



SOURCE: World Bank, January 2014

This sort of sophistication is essential to fulfil the government's goals for port-led development. It can only be built up through strategic governance initiatives to put in place three pillars

- **Commitment**: The government is eager to fully tap into the power of PPPs for the ports sector, but to truly demonstrate its commitment it needs to ensure three things
  - A clear vision for the role of PPPs in infrastructure delivery
  - A robust and transparent pipeline of viable PPP projects
  - Positive perception of PPPs among all key stakeholders
- **Effective governance:** Much needs to happen on this front to create an environment conducive for PPPs
  - A robust legal and institutional framework and regulations
  - Standardised PPP models with clear parameters for project selection
  - Effective, capable government institutions
- **Executional excellence:** India still needs to resolve the roadblocks in execution
  - Robust business plans with attractive and stable risk allocation
  - A transparent and robust tendering process
  - Effective controlling and feedback process

However, in reality a number of PPP projects are peforming below par. The troubled performance of these projects is affecting private sector investment and involvement in the sector. It is necessary to closely examine the challenges that are hampering PPP project performance.

4.2 Challenges impacting PPP projects

Based on the analysis of PPP projects (operational and under execution in Major ports) in the ports sector. Following exhibits (13-15) outline the identified challenges in current PPP projects in Major Ports.

Exhibit 13

Troubled PPP projects in Major Ports – Operational

Project	Concessionaire	Capacity MMTPA	Cost Rs Cr	Key issues
Coal handling at EQ-1 Inner harbor at VPT	Adani	5.25	323	▪ Required draft of 16.1 m unavailable; cannot sail 80K DWT vessels;
Multi-purpose cargo berth 13 & 15 at KPT	RAS & JRE Infraport Pvt Ltd.	3	378	▪ Rail connectivity between hinterland and port, poor project structuring (risk sharing)
Mechanized coal handling at GCB-VPT	Vedanta	10.18	444	▪ Delayed EC; issues with storage space
NSICT terminal at JNPT	DP World	13.2	750	▪ Issues with stackyard space availability
GTI terminal at JNPT	APM	15.6	1,078	▪ Issues with stackyard space availability

SOURCE: Team analysis, Expert interviews

Exhibit 14

Troubled PPP projects in Major Ports – Operational

Project	Concessionaire	Capacity MMTPA	Cost Rs Cr	Key issues
International Container T/S Terminal- CoPT	DP World	40	2,118	▪ Low draft (11m), issue with trucker's union
Coal handling terminal (Berth 7)- Mormugao	Adani	4.6	406	▪ Issues in handing over project land, Issue in shifting of POL and other service pipelines
Container terminal- Berth 11 & 12- KPT	ABG & PSA	7.2	447	▪ 12.8 m draft not available, absence of night navigation facilities

SOURCE: Team analysis, Expert interviews

The poor performance of PPP projects in the ports sector can be attributed to four factors.

Exhibit 15

Preliminary analysis: Troubled PPP projects in Major Ports – Under construction

Project	Concessionaire	Capacity MMTPA	Cost Rs Cr	Key issues
4th Terminal at JNPT	PSAMIPL & ABGPPL	60	7,915	▪ Intense competition resulting in high revenue share bid; eventual cancellation of LoA by JNPT after delay of 14 months
Deep draft coal berth at PPT	ESSAR	10	479	▪ Dispute with mines department and existing iron-ore plot allottees; poor project planning

SOURCE: Team analysis, Expert interviews

4.2.1 Imbalanced risk-sharing

In the current ownership pattern, the concessionaire bears greater risk than the concessioning authority (Exhibit 16). Even where the concessioning authority is liable for ensuring enablers for the project, such as connectivity or land availability, the concessionaire has to bear a part of the risk because any delay significantly impacts the investments due to opportunity cost.

Exhibit 16

Potential risks in PPP projects and current ownership pattern

Imbalanced risk sharing

Risk impact[1]	Risks	Majority risks owned under current scenario: Concessioning authority	Majority risks owned under current scenario: Concessionaire
High	DPR correctness and adequateness		✓
High	Land unavailability/delay	✓	
High	Delay in land side connectivity[2]	✓	✓
High	Delay in shore side connectivity[2]	✓	✓
High	Traffic below forecasts		✓
High	Delay in environmental clearances	✓	
High	Changes in tariff		✓
High	Risky financial structure		✓
High	Delay in security clearances		✓

1 Risk impact is the relative impact of the risk on project viability
2 Risk is shared by both parties if the connectivity is included as conditions precedent in the CA, else concessionaire bears the risk

SOURCE: Expert interviews, McKinsey analysis

Other risks, such as those associated with design and scope changes, are borne by the concessioning authority only till the nominal allowed limit of 20 per cent

cumulative. Changes beyond that are not allowed even if necessary for improvements in project facilities or for keeping pace with the technological improvements.

A comparison with international norms (such as Australia, the UK, South Africa and Chile[2]), on managing risks and balancing them between both parties (Exhibits 17 and 18) reveals that

- There is no provision for the government to intervene in case of macro-economic shocks
- The concessioning authority is liable to pay damages only in case of non-fulfilment of conditions ascertained and agreed on before site availability and procurement of clearances (other conditions vary between projects)
- There are no mechanisms to mitigate risks associated with the risky financial structure of concessionaire or naïve lending

Exhibit 17

International comparisons on managing risks and balancing between parties (1/2)

Issues	International experience[1]		India (current)
	How dealt with	Contractual form	How dealt with in MCA
Macro-economic shocks	No trigger unless loan covenants breached: private party risk	Lender step in and substitution	Not covered
	Purchase of equity by Government to enable financing in financial crisis	Renegotiation	
Delay to completion	If public party then compensation for delay to place private party in no-better-no-worse position	Compensation event	If site related- then completion date extended
	If no fault then relief on completion date granted	Relief event	If force majeure then completion date extended
	If private party fault then relief on completion granted and liquidated damages payable	Private party risk- no change	If private party then liquidated damages payable

1 International refers to comparative cases in Australia, UK, South Africa and Chile

SOURCE: Developing a framework for renegotiation of PPP contracts – DEA, Expert interviews

2 Considered successful countries in execution of PPP projects in ports

Exhibit 18

International comparisons on managing risks and balancing between parties (2/2)

Issues	International experience[1]		India (current)
	How dealt with	Contractual form	How dealt with in MCA
Naïve lending	Lenders bear loss on sale of concessionaire, so due diligence is thorough	NA	Limited ability to exclude bids with high risk to lenders
Financial structure	Debt/equity ratios assessed by Treasury commercial viability tests	NA	Limited commercial viability testing
Factors outside concessionaire's control	Private party bears financial risks but relieved from completion and liquidated damages	Relief event	Not covered unless political or indirect political event

1 International refers to comparative cases in Australia, UK, South Africa and Chile

SOURCE: Developing a framework for renegotiation of PPP contracts – DEA, Expert interviews

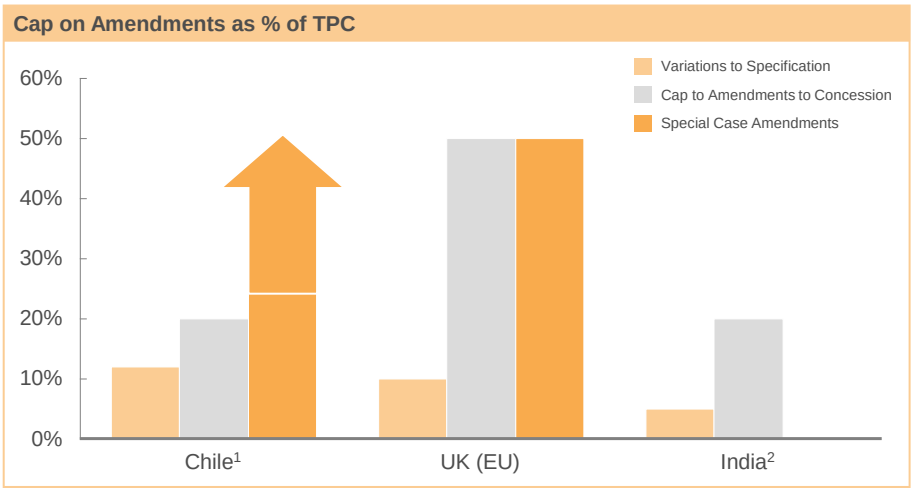
4.2.2 Rigid concession agreements

The rigidity of concession agreements (CAs) is also a challenge. India has the lowest cap on amendments allowed in concession agreements among comparator countries (Exhibit 19).

CAs are prescriptive in terms of which commodity is to be handled—with no provision for handling volatility in the traffic of commodities that tend to significantly impact project viability. CAs also do not permit any deviation in the types of equipment during the concession period. A renegotiation is only possible in case of "change in law".

Exhibit 19

India has the lowest cap on amendments allowed in Concession Agreements amongst comparator countries



Note: Australia and South Africa allow a greater range of discretion by using the concept of "materiality" or "significance"
1 Chile permits special case amendments above 25% subject to approval
2 In India the cap on amendments relates to change in traffic demands only

SOURCE: Developing a framework for renegotiation of PPP contracts- DEA

A comparison (Exhibit 20) on amendments to CAs in India as opposed to other countries, such as Australia, the UK, South Africa and Chile[3], indicates that:

- The concession period in most cases extends for 30 years and beyond
- Limits on amendments to CAs cause PPP projects to suffer in case of major market changes
- Amendments are allowed in only a few limited cases, such as "change in law" or "force majeure"

[3] Considered successful countries in execution of PPP projects in ports

Exhibit 20

International comparisons on amendments in CAs

Issues	International Experience[1]		India (Current)
	How dealt with	Contractual form	How dealt with in MCA
Design and scope changes	Through specification committee (if zero cost increase) or variation (if cost increase)	Variation	Change in scope within 5% of TPC
Changes in operating requirements	Variation	Variation	Change in scope within 5% of TPC
Variations with cost increases	Public party ordered then costs as per schedule or no-better-no-worse	Variation	Change in scope within 5% of TPC
Amendments	Can be made by the public party and paid for to leave private party no-better-no-worse	Renegotiation	Change in scope within 5% of TPC or change in law

- In most cases, Concession period extends for 30 years and beyond
- Due to limits on amendments of CAs, PPP projects suffer in scenarios of major market changes
- Amendments are allowed in CAs only in a few limited cases- "Change in Law" and "Force Majeure"

1 International refers to comparative cases in countries of Australia, UK, South Africa and Chile

SOURCE: Developing a framework for renegotiation of PPP contracts- DEA, Expert interviews

Volatility of traffic in terms of the commodity handled, is another key issue impacting the project's viability. Volatility in traffic of coal and iron ore, for example, has been a major issue for the dedicated berths handling these commodities. Traffic has slowed down due to regulatory and cargo-specific issues:

- Iron ore: Government restrictions on mining and export caused a drop in all-India export volumes, from 130 mn tonnes (MT) in 2008–09 to around 100 MT currently..
- Coal import: Coal import volumes have decline in recent times mainly due to higher domestic production by Coal India limited

International comparisons on handling traffic volatility indicate that (Exhibit 21):

- Concession periods are extended in case traffic demand is lower than forecast due to regulatory changes and connectivity issues
- Projects get stalled in the absence of any provisions of renegotiation/compensation

Exhibit 21

International comparisons on handling traffic volatility

Issues	International Experience[1]		India (Current)
	How dealt with	Contractual form	How dealt with in MCA
Traffic demand below forecast	1) No trigger unless loan covenants breached then lender step in/liquidation/ termination	Lender step in and substitution	For every 1% decrease in traffic 1.5% increase in concession period (cap of 20%)
	2) Loan to private company to make good shortfall, repaid once debt service complete	Renegotiation	
Actions that divert traffic away (connectivity)	Triggers compensation or renegotiation on no-better-no-worse basis	Compensation Event	Increase in concession period

- In case of traffic demand being below forecast due to regulatory changes and issues with connectivity, concession periods are extended which does not solve the immediate problem of cashflows
- In absence of any provisions of renegotiation/ compensation projects get stalled

1 International refers to comparative cases in countries of Australia, UK, South Africa and Chile

SOURCE: Developing a framework for renegotiation of PPP contracts- DEA, Expert interviews

4.2.3 Inadequate project preparation

Various bottlenecks or challenges plague the entire lifecycle of a project, from planning and contract award phase to construction and then to operations (Exhibit 22).

Exhibit 22

Poor planning and execution impact performance across project life cycle

PPP project life-cycle	Planning and contract award	Construction phase	Operations phase
Challenges	▪ Aggressive bidding ▪ High risk financial structure ▪ Delays in financial closure and furnishing performance guarantee ▪ Delays in obtaining security clearance ▪ Delays in obtaining approval from PPPAC and competent authority ▪ Delays in obtaining EC	▪ Cost and time overruns due to change in scope/design ▪ Cost and time overruns due to incomplete/ inadequate project DPRs ▪ Delay in providing road/ rail connectivity ▪ Delay in providing promised draft ▪ Delay in handing over project sites	▪ Delays in conflict resolution ▪ Changes in market scenario requiring changes in operating requirements which are difficult to achieve
Causes	▪ Absence of mechanism to check on aggressive bidding and high risk financial structure ▪ Absence of inter-ministerial coordination	▪ Poor quality of DPRs ▪ Unavailability of professional support/training in managing projects ▪ Absence of robust regulatory mechanism for timely resolution of issues ▪ Absence of review mechanism of clauses to cater to changing dynamics	

SOURCE: Team analysis, Expert interviews

4.2.4 Tariff risk & multiple tariff for same cargo at same port

The presence of four different tariff regimes results in widely varying computations of tariff at a port. There is no level playing field among operators under different TAMP (Tariff Authority for Major Ports) regimes and operators in non-major ports. The non-major ports are free to set their own tariffs, creating immense competitive pressure for major ports which are restricted from doing so by TAMP.

4.2.5 Lack of financial capacity of developer

The screening criteria for a project concession does not entail strict financial norms which can bar developers with weak financial performance to bag the contract. Also, the current agreement does not specify the rights to re-claim the project in case of non- execution in a stipulated time period.

4.3 Recommendations to enhance PPP effectiveness in the ports sector

Specific actions to address the challenges described in Section 4.1 can boost investor interest in PPPs in the ports sector.

4.3.1 Balanced risk-sharing between parties

A big area of concern is that the concessionaire is more liable for risk than the concessioning authority. The government needs to introduce mechanisms to better balance out this risk between stakeholders:

- The concessioning authority could share the risk of incorrect or inadequate detailed project report if it results in cost and time overruns for the concessionaire
- Delays in setting up road/rail connectivity could be compensated both through extending the concession period and recovering the damages payable
- Clauses may be introduced to renegotiate the revenue share payable to the concessioning authority, applicable in cases where traffic is below forecast consistently for five years due to reasons beyond the control of the concessionaire

4.3.2 Flexibility in CAs

Permitting greater amendments to CAs can ease the challenges affecting PPP performance:

- CAs may include a provision for renegotiation under specified cases
- The assumptions for project design may be outlined clearly so that any changes over the project lifecycle can be identified and used as a trigger for renegotiation
- The cap on amendments may be increased from 5 per cent of total project cost (TPC) for a single "change of scope" to 10 per cent and cumulatively during the concession period from 20 per cent of TPC to 40 per cent
- A process could be established to review clauses in a timely manner in light of changing market scenarios

4.3.3 Facilitating more efficient execution

Bottlenecks in execution have been some of the biggest challenges affecting the performance of PPP projects in the ports sector. The following best practices can help ease execution and implementation in the future:

- Ensure accuracy and comprehensiveness in DPR preparation
- Set up a Centre of Excellence in PPP that can assist with policy implementation and regulatory issues; enable research and development of sophisticated models in PPP; and provide training for government authorities in PPP project management
- Set up a Facilitation Committee for inter-ministerial issues to help create alignment between state and central governments and different ministries and also to assist with timely clearances
- Adopt project management best practices such as:
  - Obtaining EC before issuing requests for proposals
  - Ensuring that the majority of land is available before issuing RfPs and that the remaining land is made available before award of contract
- Adopt best practices learnt from PPPs in highways such as:
  - A policy on one-time fund infusion by the National Highways Authority of India for languishing projects (on a case-to-case basis)
  - Rationalized compensation to concessionaires for delays which were not under the scope of activities covered by them prioritizing these various initiatives can transform the way PPPs operate in the ports sector.

As more projects go from planning to completion with minimal delays and challenges, the PPP sector will be reinvigorated and will help meet the government's vision for port-led development in India.

5 Transparent business friendly and stable regulations policy

5.1 Reduction in taxes and duties for coastal shipping

Indian coastal shipping costs are relatively higher compared to international standards due to additional duties taxes and taxes levied on them. While the Ministry of Shipping has moderated the tax on seafarer's income; additional taxes such as tonnage, bunkering duty and service tax may be revisited/moderated for increasing the gap between cost of coastal shipping and other modes and bring it closer to the international benchmarks.

The following exhibits (23&24) detail out the taxes & services applicable on Indian coastal shipping.

Exhibit 23

Cabotage law makes coastal shipping on Indian flag ships to be ~30% costlier than foreign flagged ships …

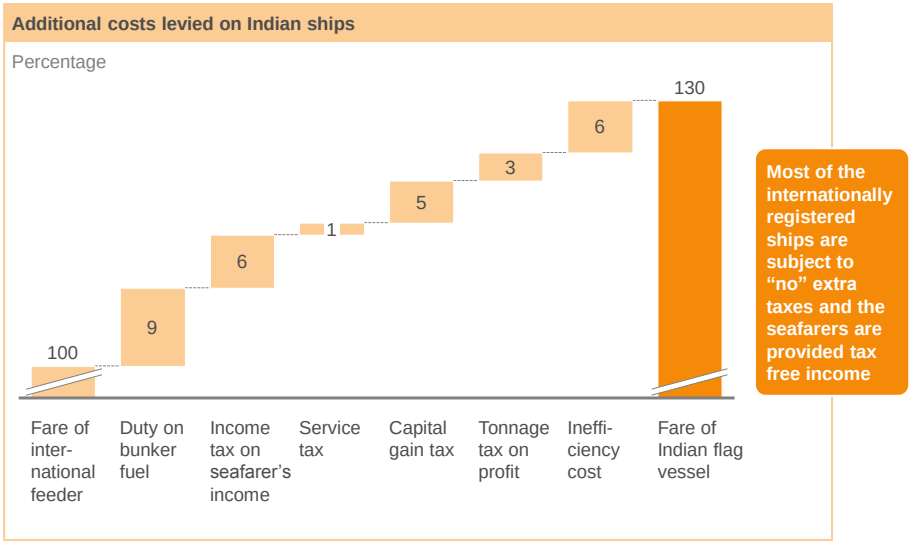


Exhibit 24

… thus, higher cost of coastal shipping needs to be addressed to make Indian transshipment port competitive

Cabotage restrictions along with additional levies results in 30-40% higher cost of coastal trade

- Higher employee cost due to income tax on sea fares
- Additional Tonnage (1-2%) tax on Indian flag vessels vs International flag vessels
- Regulations on minimum number of Indian employees for Indian vessels
- Additional service tax / duties (25-30%) on bunkers
- Service tax (14%) on services availed for Indian flag vessels
- Capital gains tax of 20% levied on the proceeds of ships sold
- Scale advantage for international operators

5.2 Streamlining Customs processes to optimize container transit time within ports

India's container movement was 10.7 mn TEUs in 2013–14 and is estimated to grow to 22 to 25 mn TEUs by 2025.

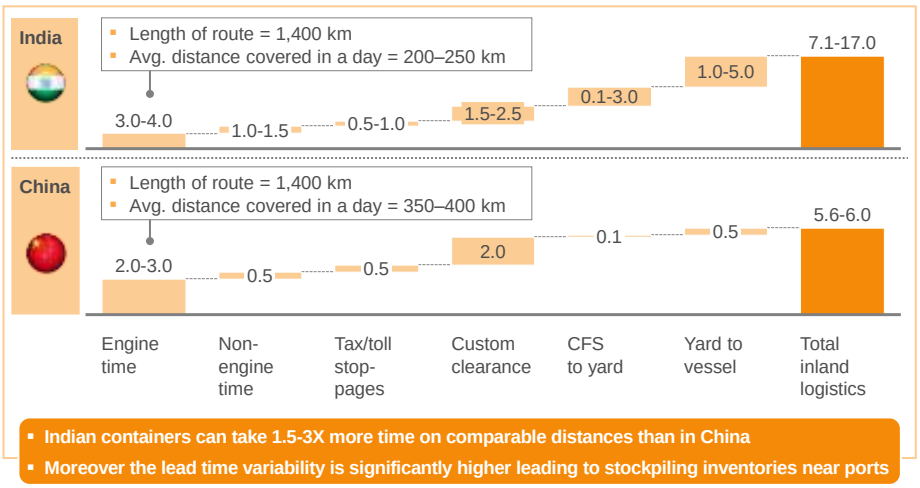
Reducing cost and time for moving containers will be critical for unlocking the potential of export-oriented manufacturing in India. Studies on container movement revealed a high time variability in exporting containers from India (Exhibit 25). In comparison to China (similar route length) Indian containers can take 1.5-3X more time. Moreover the lead time variability is significantly higher leading to stockpiling inventories near ports.

Exhibit 25

Comparison of end-to-end time of transporting a container in India and China by road on similar routes

BOTTOM UP ANALYSIS FOR ROAD TIME

Days/TEU



- Indian containers can take 1.5-3X more time on comparable distances than in China
- Moreover the lead time variability is significantly higher leading to stockpiling inventories near ports

1 Ocean distance = 6,658 NM

Simplifying Customs procedures could help in reducing the time taken in custom clearances. Initiatives such as the rollout of electronic documentation, implementation of en-block movement in selected ports and introduction of a Risk Management System (RMS) have greatly improved India's perception as a facilitator of international trade. There is further scope for improvement in terms of the documents and signatures required, indicating the immediate need for automated and integrated systems. A comparison of the efficiency of Customs procedures at Indian ports with selected countries is shown in Exhibit 26.

Exhibit 26

Indian custom processes needs to be simplified and brought at par with competing ports

Performance indicators	Indian ports	Klang	Singapore	Jebel Ali	Colombo
Rank as per perception of customs process	**78**	14	1	3	72
Average number of documents – Import	**10**	4	3	5	7
Average number of documents – Export	**7**	4	3	3	7
Average number of signatures required – Import	**27**	5	3	3	10
Average number of signatures required – Export	**22**	3	3	3	13
Clearance Lead Time in days – Import	**2**	1	1	2	2
Clearance Lead Time in days – Import	**2**	1	2	2	2

The following section outlines the preliminary findings to reduce variability related to Customs clearance procedures at Indian ports, especially with reference to containers.

5.2.1 Suggestions for reducing the time taken in customs procedures for container exports

Based on multiple interactions with port authorities, importers, exporters, shipping lines, transporters, freight forwarders, Customs handling agents, former Customs officials and container freight station officials, the following issues were identified.

- Manual filing of Import General Manifest/Export General Manifest/SMTP even after electronic filing/generation in ICE GATE and separate submission of documents to different authorities. In the current process
  - The IGM form has 84 inputs for completion, including around 30 mandatory fields. It requires manual filing, e.g., eight hard copies need to be submitted at various Customs sections at JNPT
  - The Sub-Manifest Transshipment Procedure (SMTP), generated automatically at ICE GATE and transmitted automatically to all concerned parties, still needs to be printed and signed by Customs officials and sent by courier to ICD operators by shipping lines. Each vessel has more than 20 hard copies of SMTP
  - The current electronic data interchange (EDI) system has limited provisions of attaching supporting documents. As a result, physical copies of the Bill of Entry along with supporting documents are submitted to multiple parties, including the Customs house, port authority and regulators like FSSAI, leading to delays in the clearance process

The proposed solution

- Develop a robust Electronic Signature (ES) module at the ICE GATE for submission of the hard copy
- Activate all modules of ICE GATE especially the generation of rotation number and port clearance
- Make provisions for submitting documents online with access to all concerned authorities including different ministries, regulators and ICD operators. Eventually move towards a port community system, e.g., the HAROPA system developed by SOGET in France, with integrated access to shipping lines, port authorities, Marine Department and Customs and Traders

- Ensure qualified and committed manpower and infrastructure with Directorate General Systems in the Central Board for Excise and Customs (CBEC) to ensure robust automation of Customs clearance procedures

- Long manual procedure for rectifying errors in filing EGM/IGM. In the current process, a physical application (hard copy) along with fee is submitted to the Customs department for any modification required to the EGM/IGM for all fields. Customs needs further verification from the port of landing after which the BoE has to be resubmitted. The proposed solution is to classify fields into sensitive and non-sensitive, with the provision for modification of non-sensitive fields online without any permission from Customs or the need for resubmission
- Submission of Form 13 at port gate: Currently, in ports where en-block movement has been identified, e.g., JNPT, Form 13 has to be submitted in the presence of a Container Freight Station agent and Customs officer for gate movement of goods. This leads to a congestion of up to six to eight hours at the gates. The proposed solution is to use OCR technology to avoid paper form submission while still allowing tracking of vehicles and containers in and out of ports
- There is a lack of a specialised clearance system for accredited importers/exporters. Accredited importers have to go through the regular method for movement of cargo until it reaches the CFS, after which they are able to clear the cargo immediately through the Customs green channel procedure. Around 200 documents are also required to become an accredited importer/ exporter. The proposed solution is to (a) allocate a separate area within port premises to enable faster delivery of cargo of accredited importers/ exporters. (b) Simplify the process of becoming an accredited player, e.g., history of trade, number of containers imported and exported to be taken into account to register for factory stuffing and self-sealing of containers
- Limited resources not only for scanning the increased quantity of containers but also for providing factory stuffing to accredited importers/exporters. Going forward, ports should supplement the CBEC in providing necessary scanning equipment according to the guidelines issued by the CBEC
- Same rules for checking coastal and EXIM cargo. In the current process, the Customs treats coastal cargo in the same manner as EXIM cargo which is time consuming. Coastal cargo is given the last preference as Customs considers it to be unimportant cargo. However, India is part of the World Customs Organization, wherein coastal cargo is not subject to the same clearances as EXIM cargo. The Indian Customs Act also does not force

coastal cargo to undergo the same scrutiny as EXIM cargo. Going forward, coastal and EXIM cargo should not be subject to the same rules for scrutiny and preference. The benchmarking should be done based on international examples, such as the Port of Antwerp, where coastal and EXIM cargo are segregated in a manner similar to airports

Alignment and coordination between the stakeholders involved is critical for efficient customs clearances of containers. Therefore, the immediate action plan involves creating working groups with representatives of the key stakeholders, such as CBEC, port authorities, Ministry of Shipping, Indian Railways, CONCOR and other CTOs and the Indian port rail company limited

5.3 Reforms and changes needed in the coastal regulatory zone policy to establish CEZs

Coastal regulatory zones (CRZs) are classified in the following three different categories subjecting them to different limitations:

Category	Definition	Regulations
CRZ 1	■ Areas between the low tide line (LTL) and high tide line (HTL) ■ Ecologically sensitive and important areas ■ Areas of “outstanding natural beauty” ■ Areas rich in genetic biodiversity ■ Historical and heritage areas ■ Areas likely to be inundated due to rise in sea levels	■ No new construction permitted within 500 m of the HTL

CRZ 2	■ Area that has already been developed up to the shoreline ■ Areas within the municipal limits which is already substantially built up and been provided with drainage, roads and other infrastructure	■ No buildings promoted on the seaward side of the existing roads or of the proposed roads ■ Existing authorised structures to be subject to local town and country planning regulations ■ Reconstruction of authorised buildings to be permitted subject to existing FSI/FAR norms ■ The design and construction of buildings has to be consistent with the surrounding landscape and architectural style
CRZ 3	■ Areas that are relatively undisturbed and which do not belong to CRZ 1 or 2	■ The area up to 200 m from the HTL is a "No Development Zone". Only repairs of existing authorised structures is permitted. ■ Construction and development related to Agriculture, horticulture, gardens, pastures, parks, play fields, forestry and salt manufactured from sea water is however permitted in the area up to 200 m from the HTL ■ Development of vacant plots between 200 and 500 m of HTL in designated areas of CRZ 3 is permitted with prior approval of the Ministry of Environment ■ Forests permitted for construction of hotels/beach resorts for temporary occupation of tourists / visitors ■ Construction/reconstruction of dwelling units between 200 m and 500 m of the HTL is permitted so long as it is within the ambit of traditional rights and customary uses and will be subject to the conditions that the total member of dwelling unit should not be more than twice the number of existing units ■ Total area covered on all floors should not exceed 9 m and construction shall not be more than two floors

Apart from the above, none of the following activities can be undertaken in the currently reserved CEZs

- Manufacturing, handling or disposal of hazardous substances
- Setting up new industries and expansion of existing industries, except those directly related to the waterfront or directly needing foreshore facilities
- Setting up and expansion of fish processing units including warehousing
- Setting up and expansion of units/mechanism for disposal of waste and effluents into the water course
- Discharging effluents from industries, cities or towns and other human settlements
- Undertaking construction activities in ecologically sensitive areas
- Mining of sand, rocks and other substrata material not allowed outside CRZ areas
- Dumping city or town waste for the purposes of land filling or otherwise
- Dumping ash or any wastes
- Engaging in land reclamation, building or disturbing the natural course of sea water with similar observations
- Harvesting or drawl of groundwater and construction of transfer within 200 m of HTL. In the 200 to 500 m zone, it shall be permitted only when done manually through ordinary wells for drinking purposes, horticulture, agriculture and fisheries
- Engaging in any construction between LTL and HTL except facilities for carrying treated effluents and waste discharges, oil, gas and similar pipelines and dressing or altering of sand dunes, hills, natural features including landscape changes for beautification, recreational and other such purposes

5.3.1 Suggested changes in CRZ regulations

Coastal regulations are currently followed indiscriminately and are applied to both the East and West coasts with no differentiations made on the basis of geography and severity of cyclonic activities. It is, therefore, recommended that CRZ regulations are revisited on the basis of occurrences of tidal activity.

5.4 Port land allocation policy for industrial development

One of the important means of fast-tracking port-led industrialization is to leverage port land for industrial use. Currently, in India, the highest bidder (H1) is offered the lease for industrial development. However, leading ports across the world allocate land based on the economic value added in terms of investments and jobs created.

This policy of selecting investors for industrial development on port land needs to be changed from a price-based evaluation to a more global model that considers project quality and community development. (Exhibit 27) The focus of the proposed policy should be on integrated and coastal community development to generate more cargo and also create more employment opportunities.

Exhibit 27

A point based mathematical system for investor selection is not practiced globally across ports

✗ Not considered
✓ Considered as primary
✓ Present, but not a deal breaking criteria

Parameter	Port of Antwerp	Singapore Port	Port of Dampier	Port of Hamburg	KIZAD, Abu Dhabi Port
Lease price payable	✗	✓	✓	✗	✗
Increase in cargo volume due to activity proposed	✓	✓	✓	✓	✓
Total planned investment/Built up area	✓	✓	✓	✗	✗
No. of employees proposed	✓	✓	✗	✓	✓
Environmental initiatives	✓	✗	✓	✓	✓
Economic returns to State	✗	✗	✓	✓	✗
Efficient use of space (Density of development)	✓	✗	✗	✗	✗
Transfer of expertise	✗	✓	✗	✗	✗
Social Infrastructure proposed	✗	✗	✓	✗	✗

Multiple parameters including the judgement on qualitative factors are used to allocated industrial port land

SOURCE: Expert Interviews, Port Authority Websites

5.4.1 Criteria followed by international ports for selecting investors

A point-based mathematical system for investor selection is not practiced globally across ports. But international ports such as Antwerp, Singapore, Dampier, Hamburg and KIZAD (Abu Dhabi port) use a range of parameters—lease price payable, increase in cargo volume due to activity proposed, total planned investment/built-up area, number of employees proposed, environmental initiatives, economic returns to the state, efficient use of space (density of development), transfer of expertise, and social infrastructure

proposed—for selecting investors and allocating port land for industrial development.

For example, the port of Hamburg considers factors such as type of activity, returns to state, employment generation, value addition, and environmental initiatives, while evaluating an investment proposal for industrial sites. On the other hand, the port of Singapore considered price, total planned investment, employment generation, cargo volume generated, and transfer of expertise to select an investor for the processing plant in the oil and gas terminal. Unlike these two ports, employment generation is not one of the factors for selecting investors at the port of Dampier.

However, of the parameters mentioned, increase in cargo volume due to activity proposed, total planned investment/built-up area and number of employees proposed, along with environmental initiatives are seen as the main criteria. Antwerp is considered to be the best example of a global port that effectively follows these criteria during the selection of investors.

The Antwerp Port Authority has very specific criteria for the selection of the concessionaire:

- Company's financial position: The potential concessionaire needs to have the necessary financial strength to complete the project
- The aim or the nature of activities: Projects that generate additional maritime traffic for the port are preferred
- Proposed investment amount
- Direct or indirect employment perspectives
- Optimum and efficient use of the available space
- Overall quality of the project
- Compliance with the strategy and vision of the concession policy: Maintain the homogeneity of the cargo a port handles as an industrial area and increase its competitiveness

The concession period is determined by the amount of investment proposed per built-up area and quality of infrastructure offered, with a market-linked concession fee (Exhibit 28)

Exhibit 28

Concession period and fee in the Port of Antwerp are determined based on the proposed investment and quality of infrastructure offered

Concession period is determined by the amount of investment per built up area proposed

Investment work	Term (extension)
Investment >= 375 EUR/m² built-on area	40 years (5)
225 EUR <= investment < 375 EUR/m² built-on area	35 years (5)
175 EUR <= investment < 225 EUR/m² built-on area	30 years (5)
150 EUR <= investment < 175 EUR/m² built-on area	25 years (5)
125 EUR <= investment < 150 EUR/m² built-on area	20 years (5)
100 EUR <= investment < 125 EUR/m² built-on area	15 years (5)
25 EUR/m² <= investment < 100 EUR/m² built-on area	10 years (3)
0 EUR/m² <= investment < 25 EUR/m² built-on area	Quarter (0)

Concession price for industrial land in the Port of Antwerp is fixed and uniform across sites, with a premium being charged only for quality of the site (paved vs. unpaved)

Tariff 2016 (EUR/m²/year)

Churchill Industrial Zone and Delwaide Development Zone, Port of Antwerp	Unpaved Site	Paved Site
Processing and industrial companies	2.51	4.39

SOURCE: Port of Antwerp Authority Website

The concession price/fee for industrial land is fixed and uniform across sites, with a premium charged only for the quality of the site, i.e., paved vs. unpaved. For example, as per Tariff 2016, at the Churchill Industrial Zone and Delwaide Development Zone at Antwerp, the premium for processing and industrial companies is EUR 2.51/m2/year for unpaved sites and EUR 4.39/m^2/year for paved sites. (Exhibit 29)

Exhibit 29

Globally, ports lease industrial land for long periods, at market linked concession fee

	Port of Antwerp	Port of Dampier	Abu Dhabi Port
Concession Period	Linked to the proposed total investment per built up area	Fixed, with a minimum of 10 years	Fixed as per client requirement, minimum of 15 years
Concession Fee	Market linked	Marked linked (determined by independent valuation)	Market linked (annual benchmarking exercise is done)

SOURCE: Expert Interviews, Press Search

5.4.2 Proposed selection criteria for investors for industrial projects in India

Based on the criteria followed by international ports, it is therefore recommended, that for selecting investors for industrial development of port land in India, may include total investment proposed, direct employment generated and environmental initiatives (no weightage in proposal) offered. The selection will be done on the basis of the weight awarded to a particular parameter:

- Incremental cargo volume generated is given 50 per cent weightage
- Five-year fixed assets investment: (a) Plant and machinery; (b) Building and Civil, is given 35 per cent weightage
- Direct employment generated, given 15 per cent weightage

In the proposed policy change, the concession fee or lease payment for land parcels in the industrial zone will be a fixed market-linked fee with no premium or bidding. The minimum rate will be benchmarked to current rates in the nearest industrial centre under a particular state industrial development corporation, e.g., SIPCOT and MIDC. Other factors to be considered for final land rates will include location in the industrial zone and present condition of the site.

6. Enabling environment for attracting investors into port led development industrialization projects

Port-led industrialization is the third pillar of the port-led development model. Ports play a crucial role in reducing domestic logistic costs and facilitating EXIM-oriented manufacturing by reducing logistics time and variability. Many countries with large coastlines like China have leveraged ports for aiding industrialisation.

Ports create significant economic payoffs for their city and state—they help generate jobs, add value, mobilise new investment, bring in tax revenues and support trade by reducing logistics costs (Exhibit 30). One tonne of port throughput is associated with a value addition of USD 100, and a 1 mn tonne increase in port throughput is associated with 300 new jobs being created in the port region in the short term[4].

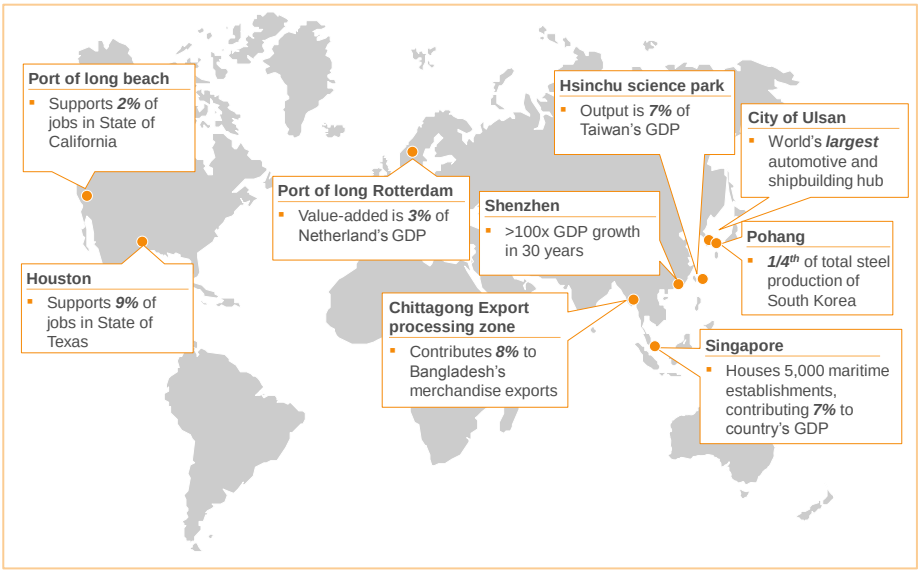
Many countries with long coastlines have leveraged ports for supporting industrial growth. Some examples of success stories include the refinery and petrochemical complex in Rotterdam, the steel cluster in Pohang, and the electronics manufacturing cluster in Shenzhen.

---

[4] Based on The Competitiveness of Global Port Cities: Synthesis Report by OECD

Exhibit 30

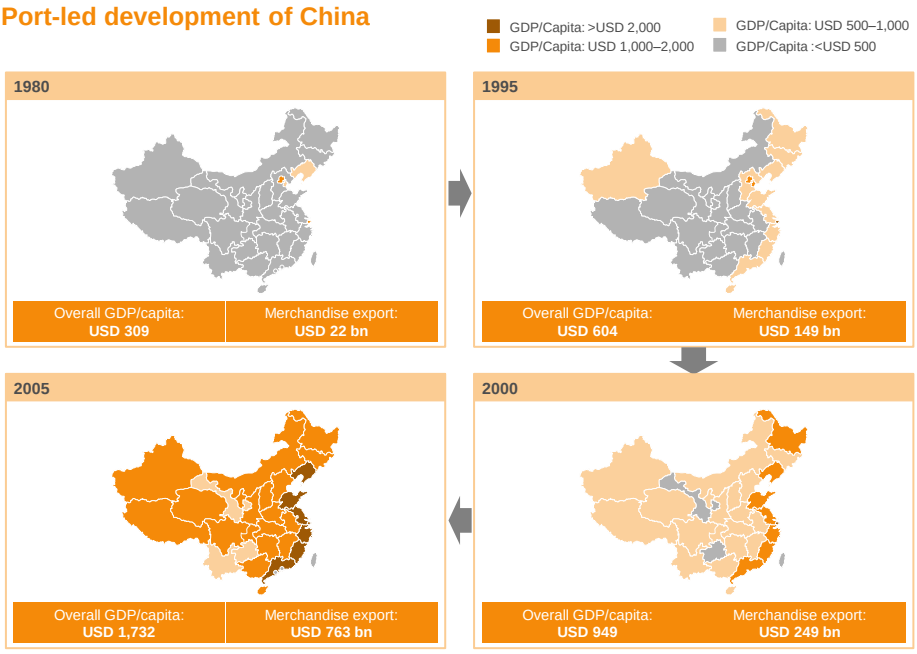
Globally, ports have had a significant economic impact



Countries with long coastlines have successfully used ports and maritime sectors to usher in broader economic development and improve the living standards of their people. China and the US, for example, leverage their coastlines to effectively boost export manufacturing, leading to economic prosperity for their countries. (Exhibit 31)

Exhibit 31

Port-led development of China



6.1 Learnings from industrialisation in China

6.1.1 Learnings from Shenzhen

The Shenzhen Export Processing Zone or SEZ is a special closed area in Shenzhen city supervised by the Customs department with the approval of the State Council. Set up in 1980, it was the first SEZ in the country (Exhibits 32).

Exhibit 32

Overview of Shenzhen

Key facts and figures

- **Location:** Shenzhen, China
- **Established:** 1980
- **Land area:** 2,000 sq.km
- **Population:** 10.6 mn (2013)
- **SEZ area:** 400 sq.km (benefits extended to whole city post 2010)
- **No. of units:** 6,500 large-scale enterprises(>20 mn revenue), 59,000 small & micro entities
- **No. of workers in manufacturing:** 4 million
- **Sector focus:** Computer software, IT, microelectronics and components, High Tech and medical instruments, etc.
- **Industrial zones:** Many industrial zones (1 to 5 sq km) within Shenzhen, each dedicated to an industry

Competitiveness of Shenzhen

Geography

Shares a common border with Hong Kong: Serves as a cost-efficient alternative for manufacturers

Infrastructure

Owns seaports, airport and land ports

- Expressways link Hong Kong, Shenzhen and inland cities
- Connected via multiple inland waterways
  - Seaports – 9
  - Airports – 1
  - Railway – 3,200 km
  - Metro – 2 lines
  - Road – 1,600 km

Talent

Strong coverage and supply of talent

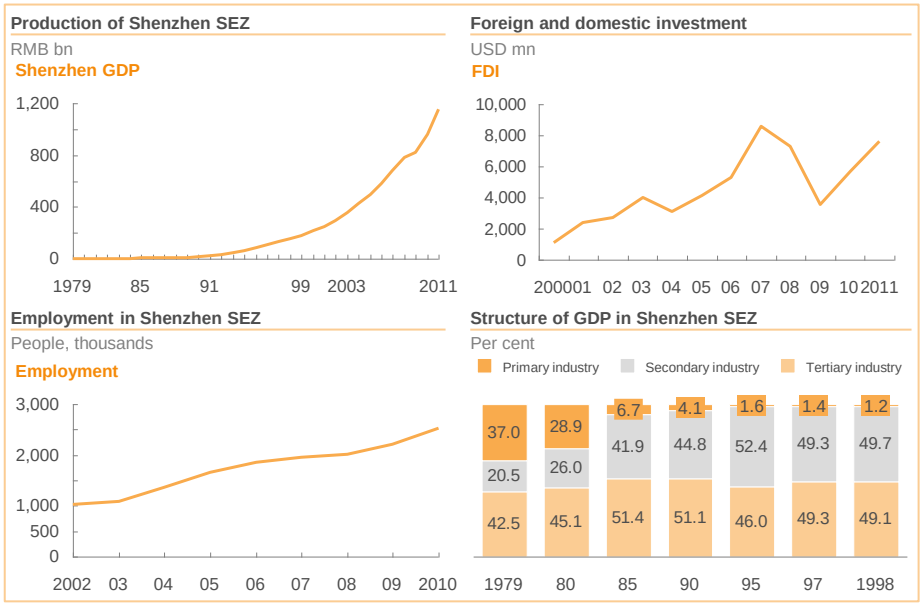
- 3,800 state-level high-tech enterprises
- 1,313 preschool institutions
- 335 primary schools
- 10 full-time and one part-time institute for higher education

Developing Shenzhen SEZ

Between 1980 and 1986, infrastructure and service facilities were developed in the Shenzhen SEZ. Construction also doubled in this period. There were reforms in capital raising, pricing, finance and investment, and wages and employment systems. In the years between 1986 and 1992, the SEZ pursued an export-oriented and an open-door policy. State-owned enterprises and systems were created during this time. Hong Kong accounted for 66 per cent of the overall FDI in Shenzhen. In the next few years until 2010, the SEZ established and consolidated its investment environment and upgraded the economic development model. The value of exports increased from USD 900 mn in 1978–79 to USD 101,518 mn in 2005. Exhibit 33 shows how Shenzhen impacted China's national economy, especially through FDI.

Exhibit 33

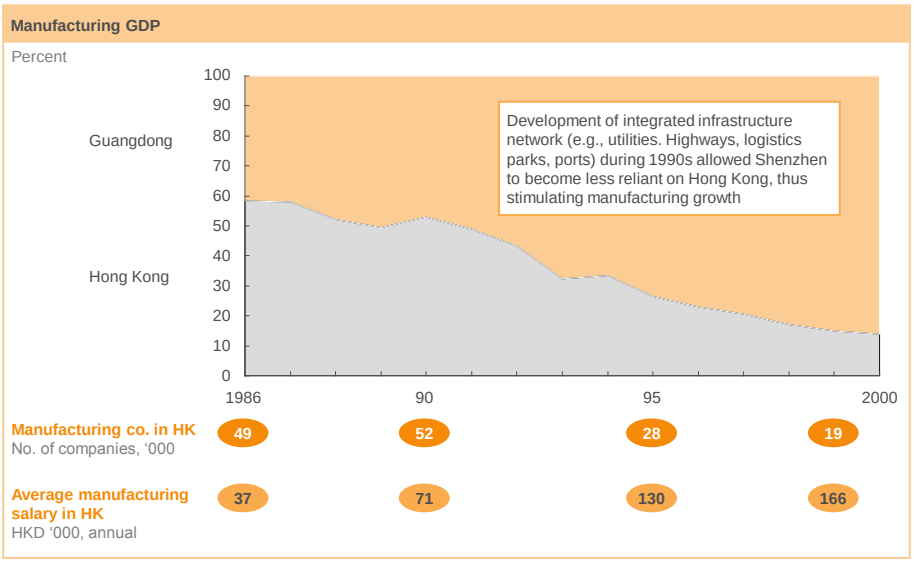
Shenzhen had a substantial impact on China's national economy



The development of an integrated infrastructure network, e.g., utilities, highways, logistics parks and ports, during the 1990s allowed Shenzhen to become less reliant on Hong Kong, thus stimulating manufacturing growth. The Hong Kong–Guangdong manufacturing shift seems to indicate that shifts can be gradual, while the Taiwan and mainland China shift in the 1990s indicates a precedent for step change (Exhibits 34 and 35).

Exhibit 34

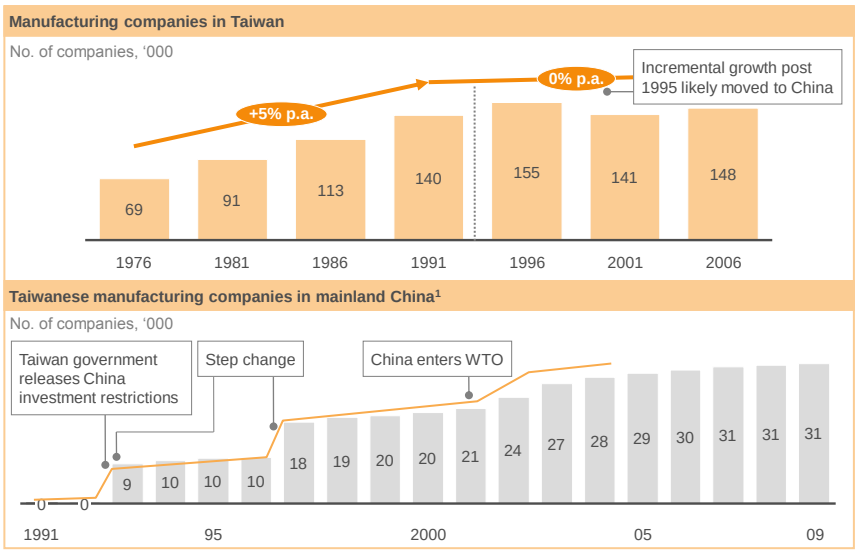
Hong Kong Guandong manufacturing shift



SOURCE: CEIC; Hong Kong Census and Statistics Department; team analysis

Exhibit 35

Taiwan-mainland China shift in manufacturing



1 No. of applications as proxy

SOURCE: Directorate-General of Budget, Accounting and Statistics

Governance model of Shenzhen SEZ

In Shenzhen, a professionalised state-owned enterprise was responsible for developing, operating, and promoting the SEZ.

- Governance structure
  - Municipal government established with relative independence for local planning
  - Local government had direct access to provincial and central level planning units
  - One-stop shop provided a single interface to investors; key transfers, e.g., land, approved at central or provincial government level
  - **Shenzhen investment promotion bureau** set up at the SEZ government for high-level promotional activities
- Zone services and fees
  - State-owned enterprise responsible for zone infrastructure development and operations
  - Type of services offered by zone operator determined by Shenzhen SEZ industrial strategy

- Coordinated promotion at the level of central and local governments and at zone level

At the provincial level, the Guangdong Provincial Administration of Special Economic Zones (GPASEZ) looked after the administration and coordination of Shenzhen SEZ. Assisted by the Guangdong Provincial Special Economic Zone Development Company, the GPASEZ dealt directly with the SEZ, independent of the pre-existing Guangdong administration, and was responsible for:

- Drawing up development plans and organising their implementation
- Examining and approving investment projects of investors
- Handling registration of industrial and commercial enterprises and land allotment
- Coordinating working relations among different departments, such as banking, insurance, taxation and customs; providing enterprises with staff members and workers, and protecting the legitimate rights and interests of these workers
- Establishing educational, cultural, health and various public welfare institutions
- Maintaining law and order

The Shenzhen SEZ Development Company was also responsible for locating appropriate Chinese partners for joint ventures (JVs) and attracting Chinese capital for investment. The company worked together with the municipality, which looked after the legal aspects of development and oversaw the general planning of the zone.

The Shenzhen Municipal authority has authorities within the SEZ, instead of the GPC. Since 1992, Shenzhen Municipal has managed the SEZ.

Exhibits 36 and 37 highlight different activities along with the departments or operators responsible for these under the governance structure.

Exhibit 36

Shenzhen – Governance model

Stages	Activities	Responsibility
Zone set up	National zones strategy	Shenzhen Municipal People's Government
	Setting up new entities	The Shenzhen Municipal industrial and commercial administration department
	Provide land	Shenzhen Municipal People's Government
	Partner selection	Zones Corp
	Partner coordination and master planning	Zones Corp
	In-zone infrastructure planning	Shenzhen City People's Government
	Infrastructure development (standard)	Shenzhen City People's Government
	Infrastructure financing for large projects	The Municipal Government
	Infrastructure development large projects	Shenzhen City People's Government
	Country marketing (parallel)	The Administrative Department of Industry and Commerce of Shenzhen Municipality
	Anchor tenant attraction	Zones Corporation
	Other tenant attraction	Private sector operator

Exhibit 37

Shenzhen – Governance model

Stages	Activities	Responsibility
Zone operations	Provide services to tenants	Private sector operator
	One-stop shop	Zones Corp
	Improve doing business	Investment Promotion Agency
	Financing – facilitation	The Municipal Government
	Financing – provision	The Municipal Government
	Logistics	Private sector logistics company
	Other services	Other private sector companies
	Daily zone operations	The Municipal Government
	Steer zone strategically	Zones Corporation

Macro-level regulations in Shenzhen

- Regulations on Special Economic Zones in Guangdong Province, the Standing Committee of the National People's Congress, Guangdong Provincial Committee, 1980.

The purpose of this regulation: In order to develop economic cooperation and technical exchanges with foreign countries and to promote the socialist modernisation programme, certain areas shall be delineated respectively in the three cities of Shenzhen, Zhuhai and Shantou in Guangdong Province for the establishment of special economic zones (hereinafter referred to as “special zones”).

- Through this regulation, enterprises and individuals in the special zones must abide by the laws, decrees and pertinent provisions of the People's Republic of China. Where there are specific provisions in these regulations, they shall be observed accordingly
- A Guangdong Provincial Committee for the Administration of Special Economic Zones shall be set up to exercise unified administration of the special zones on behalf of the Guangdong Provincial People's Government
- Investors may open accounts and conduct their foreign exchange transactions with the Bank of China established in the special zones or with other banks established there with the approval of the Chinese side
- Investors may operate their enterprises independently in the special zones and employ foreign personnel for technical and managerial work

■ Regulations on Special Economic Zones in Guangdong Province, the Standing Committee of the National People's Congress, Guangdong Provincial Committee

The main purpose was to allot land to investors at a reasonable rate. Land use rights came into the country quite late as compared to the US. There is absolutely no private ownership of land in China. The State owns land exclusively in urban areas and agricultural collectives own land in the countryside.

■ Land Administration Law of the People's Republic of China, the State Council, State Authorities, State Government

This Law is enacted in accordance with the Constitution for the purpose of strengthening land administration, maintaining the socialist public ownership of land, protecting and developing land resources, making rational use of land, effectively protecting cultivated land and promoting sustainable development of the society and the economy.

- Ownership by the whole people means that the right of ownership in State-owned land is exercised by the State Council on behalf of the State

- No units or individuals may encroach on land or illegally transfer it through buying, selling or other means. However, the right to the use of land may be transferred in accordance with law
- The State applies a system of control over the purposes of use of land
- The land administration department under the State Council shall be in charge of unified administration of and supervision over the land throughout the country

Micro-level regulations in Shenzhen

- Regulations of the Shenzhen Special Economic Zone on Land Management, the Shenzhen Municipal People's Government

These regulations were formulated in accordance with the Law of the People's Republic of China on Land Management and other relevant laws in order to improve the management of land in the Shenzhen Special Economic Zone (hereinafter referred to as the “Special Zone”), to exploit the resources of the land and to implement rational utilisation of the land.

- The Special Zone shall practice a system of compensatory usage and compensatory assignment of State-owned land
- Municipal Government should be responsible for the uniform management of all areas of land, mineral reserves, waterways, mountain forest and other natural resources
- A land user unit or individual shall only have the right of use of its allotted piece of State-owned land and shall not be authorised to alter the purpose of usage of the land without approval

- Regulations of the Shenzhen Special Economic Zone concerning the management of commodity house property, the Shenzhen City People's Government

The present regulations are formulated in line with relevant laws land decrees of the People's Republic of China and the “Regulations Concerning the Special Economic Zones in Guangdong Province”, in order to strengthen the management of commodity house property in the Shenzhen Special Economic Zone and protect the legitimate rights and interests of house property managers and householders.

- The Shenzhen City People's Government encourages overseas firms to engage in house property management (e.g., construction, sales and renting of houses) in the Shenzhen Special Economic Zone independently or jointly with state-owned enterprises authorised by the Shenzhen City People's Government to manage house property. Overseas

firms are encouraged to buy house property. The Shenzhen City People's Government shall allow the people to transfer their house property rights to others.

6.2 Incentives to attract investors

China provides numerous incentives – economic or tax, labour, administrative, market – to attract investors for FDI.

- Economic or tax incentives include access to tax breaks, free or low duties on imported equipment and production materials, free or low-rent business accommodation as well as depreciation allowances
- Labour incentives offer flexibility in employing workers. Foreigners working within the SEZ are given residence and work permits as well as income tax exemptions. A labour services company provides manufacturers with ideal candidates as employees
- Administrative incentives help in streamlining the administrative process for business registration. These also provide investment and financial consultation
- Market incentives also negotiate the limited access to domestic Chinese markets for goods produced within SEZs

These are further categorised into hard and soft incentives. Hard incentives include:

- Economic/tax: Shenzhen offers a company tax rate of 15 per cent compared to the 30 per cent in rest of China. For enterprises whose export value is more than 70 per cent of total product value, it provides tax exemption on remitted profits. It also exempts exports and imports from custom duties
- Labour/labour laws: Wages set by the market are free from the rigid Chinese centralised wage-setting system. It also involves less bureaucracy and red-tapism
- Location/infrastructure: Only SEZ to own seaports, airport and land ports in China. With 797 post offices, Shenzhen functions as the centre for express mail on the southern mainland. It also has a developed telecommunications system, with around 5 mn fixed telephone users, 25.5 mn mobile users 4.3 mn broadband users in 2013

Soft incentives are

- Livability readiness: Shenzhen ranks 14 in the overall living standards index, out of 207 cities. It has an efficient government service system and

an advanced information network. It provides easy access to residential accommodation, healthcare, shopping and entertainment services. It has a “special passage” for the convenience of passengers to and from Hong Kong and Macau. Cars with Hong Kong license plates have easy access to the special zone. Foreigners who have investment or residential housing in Shenzhen can apply for multiple entry visas

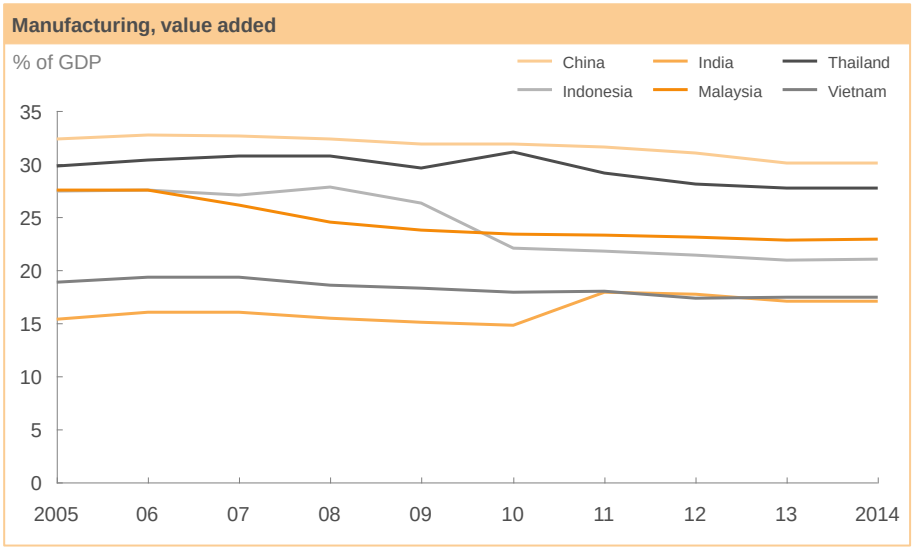
- Administration: All investments below 100 mn Yuan can be approved by the Shenzhen SEZ. For light industries, investments need to be under 30 mn Yuan and for heavy industries, under 50 mn Yuan. Furthermore, the SEZ is also authorised to approve applications by Chinese citizens who wish to travel abroad
- Financial stability: Qianhai in Shenzhen will allow for China's Yuan liberalisation and financial reforms and reduce financial and trade restrictions, with cross-border interbank Yuan lending and customs integration as the key areas in need of further reforms

6.3 Port led industrialisation in India

India's economic growth over the past decades have been by the dynamism in its service sector, while the manufacturing sector has remained stagnant. This is in contrast to the case of many developed economies across the globe and that of China, where a robust manufacturing sector led to growth. The Indian manufacturing sectors contribution to GDP has stagnated at 17%, which is lower than the corresponding share in economies such as China, Thailand and Malaysia.

Exhibit 38

Manufacturing sector contribution to GDP in India has lagged other economies in the region

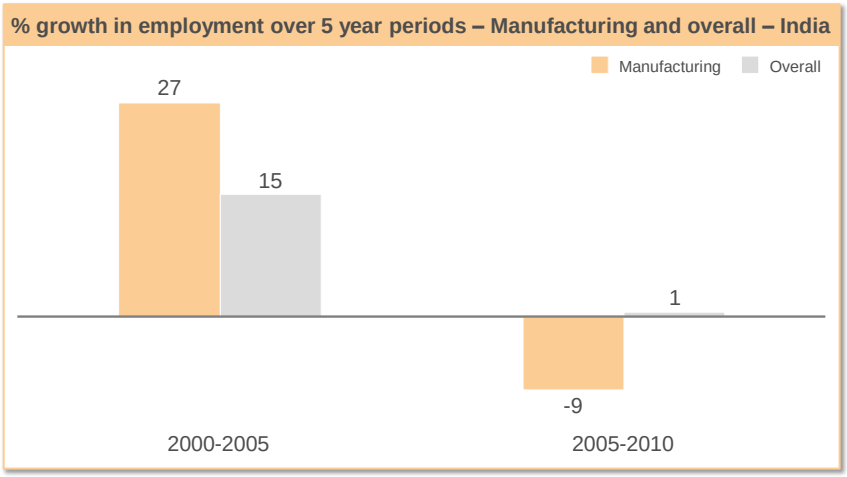


SOURCE: World Bank World Development Indicators

The relatively lower contribution from the manufacturing sector has meant that employment growth in India has failed to keep pace with the economic growth.

Exhibit 39

Growth in employment generation in India is strongly correlated to growth in manufacturing sector employment growth

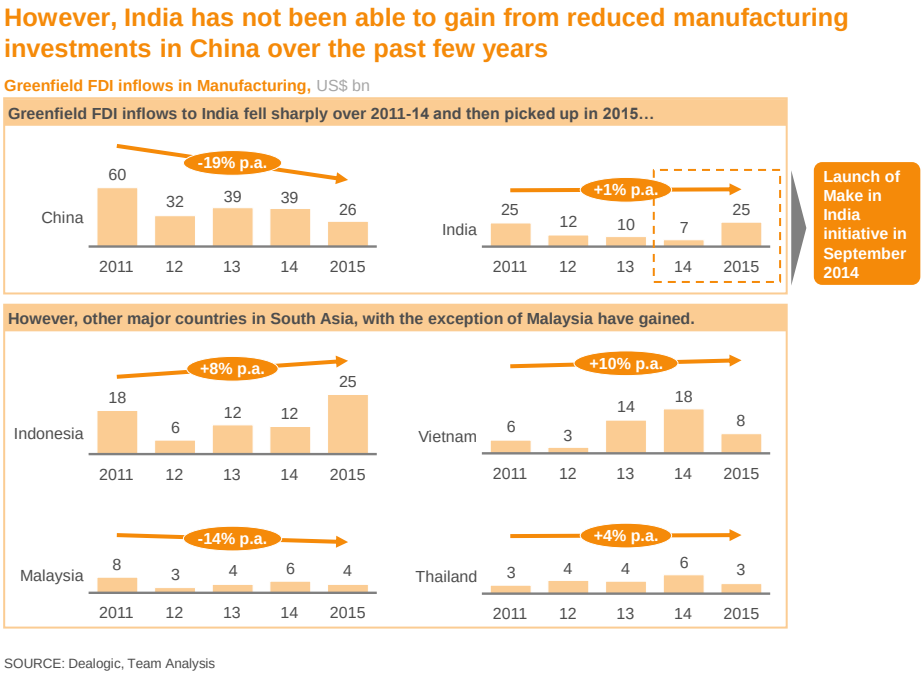


SOURCE: Twelfth Five Year Plan (2012–2017) Economic Sectors Volume II, Planning Commission, Government of India

McKinsey analysis estimates that if India's manufacturing sector realized its full potential, it could generate 25 to 30 percent of GDP by 2025, propelling the country into the manufacturing big leagues, along with China, Germany, Japan, and the United States. Along the way, India could create 60 to 90 million new manufacturing jobs and become an attractive investment destination for its own entrepreneurs and multinational companies.

Also, India has not been able to capture the investments moving away from China, while the South East Asian countries have been able to capture the same by investing in providing incentives to attract investors. (Exhibit 40)

Exhibit 40



SOURCE: Dealogic, Team Analysis

6.4 Challenges confronting industrial zones in India

India has made several attempts to develop industrial zones and corridors but with moderate success. It would be useful to look back at past initiatives and draw relevant learnings for the proposed CEZs.

Export processing zones

India's experiment with industrial zones commenced with the Export Processing Zones set up from 1965. These state driven projects were moderately successful (e.g., SEEPZ, MEPZ) but lacked the scale to deliver large scale employment and investment impact (e.g., SEEPZ is only 110 acres versus 10,000 acres for SEZs in China)

Special economic zones

A more ambitious experiment was the Special Economic Zones Act of 2005. The Act envisaged a private led development with a larger scale of 2500 acres and above although industry focused zones could be as small as 25 acres.

However the SEZ Act failed to completely fulfill expectations. While a number of SEZs have come up since the Act most of them are IT SEZs of < 100 acres size most of which have been set up with the objective of availing tax incentives. However handful of SEZs with reasonable scale have come up (e.g., Mundra SEZ and Mahindra World City SEZs at Chennai and Jaipur)

Issues which held back the potential of SEZs are listed below

- The private sector led development model was not wholly effective since the financial returns from industrial infrastructure creation are fairly low and the capital required is substantial. To some extent this was mitigated by the opportunity to develop real estate in the Non Processing Area (50%) of the zone. However, restrictions on selling units (space can only be leased under the SEZ Act) and subsequent erosion of tax breaks, significantly limited this upside
- Attractive tax breaks to developers of SEZs were mostly rolled back. The 2011 budget which imposed MAT on SEZs effectively terminated developer interest in the sector
- The economic recession of 2008 – which came within 3 years of the SEZ Act came at an inopportune moment – in particular, the negative impact of the recession on the real estate business destroyed the economics of many SEZ business plans
- The SEZ Act in its final form scaled back many of the administrative provisions in the initial drafts which would have facilitated higher ease of doing business. A more investment friendly labour regime, exchange rate convertibility, exemptions from state government levies and repatriation of profits were some of these provisions

The Industrial Corridors Projects

The government launched the Delhi Mumbai Industrial Corridor project in 2007 – also through the Ministry of Commerce. The development model is public sector model with substantial development funding support. Individual components of projects could be taken up on PPP basis. The DMIC projects are along the alignment of the proposed Dedicated Freight Corridor (DFC) between Delhi and Mumbai which is currently under construction.

7 early bird projects have been identified for initial development. Other similar projects are planned along other DFC projects including the Amristsar Delhi Industrial Corridor, Vizag Chennai Industrial Corridor, Chennai Bangalore Industrial Corridor and the Bangalore Mumbai Economic Corridor.

The industrial corridor projects correct some of the short-comings of previous approaches by (a) Adopting a public sector led approach and (b) Envisaging significantly larger scale than in previous industrial infrastructure projects.

While the industrial corridor projects have been making good progress, some of the development considerations may be worth noting.

6.4.1 Lessons learnt

Based on the lessons learnt from past experience and the overall context of port led development the following key enablers could be considered for effective development of CEZs and CEUs

1. Manufacturing locations integrated with social and connectivity infrastructure:

- Access to land, skills, social facilities, urbanisation and an industrial base is important to gain momentum quickly. Most successful programmes get going with "pilot" CEU equivalents in established manufacturing areas, with existing, large container ports where land is available. For example, Shenzhen's proximity to Hong Kong helped provide it a strong start by attracting manufacturers from the region.
- CEUs will distinguish themselves by their strong integration with ports. The master plan of the CEU could fully integrate the CEU with the Port through seamless physical connectivity. In addition, the CEUs shall also be integrated with ports in terms of documentation and IT systems. For example, the CEU could be a part of the Port Community System and has customs bonded status similar to SEZs, CFS' and ICDs.
- An integrated master plan needs to be developed for each CEU including external infrastructure and port connectivity. The master plan could provide for urban access as well as word class social infrastructure to enable expatriate talent flow

2. Create land banks and leverage existing land parcels:

- Land acquisition easier for ~ 500-1000 acres; this needs to be balanced with minimum scale for identified industry clusters

- States can be incentivized to acquire land through a challenge fund where Centre makes equity contributions to eligible projects; states can contribute land as equity
- Finally existing land banks with central, state and private sectors can be leveraged to circumvent the time consuming process of land acquisition

3. Special administrative dispensation

- Based on benchmarking with Chinese and other SEZs, a special dispensation could be created for approved CEUs under each CEZ that result in "Ease of Doing Business" metrics that are comparable with world class standards. Some critical elements include approval and clearance processes, inspections, labor regulations, fiscal incentives and currency exchange and repatriation
- One of the ways in which this can be achieved is by leveraging provisions of the Constitution and specific State laws pertaining to town and country planning, municipalities and industrial development. For example the Andhra Pradesh Infrastructure Investment Corporation (APIIC) is empowered to undertake certain municipal functions and retain some of the taxes under the APIIC Act. Recently Punjab has set up the Punjab Investment Board which is seen as a good example of a Single Window clearance agency. Specific interventions in this regard may include
  - Delegate administrative power – especially Municipal and Town and Country Planning functions - to CEU SPV
  - Reforming and streamlining single window system such that approvals for setting up new enterprises
  - Enabling a more investor friendly inspection regime

Recommended model for Coastal Economic Units in India

Major industrial developments in India are much smaller when compared to those in China. The following table summarizes the major findings from case studies of industrial developments from different countries. (Exhibit 43)

Exhibit 41

Major industrial developments in India are much smaller when compared to those in China

	Shenzhen City Shenzhen	Lingang Industrial Area Shanghai	Ras Al Khaimah Free Trade Zone Ras Al Khaimah	Hemaraj Chonburi Industrial Estate Thailand	Sri City Andhra Pradesh	Mahindra World City Chennai
Total Industrial Area (sq.km.)	400	315	2.5	8	30	7
No. of Units	6,500 large scale enterprises, 59,000 small & micro entities	More than 9,000		~130	More than 100 currently operating;	More than 50 currently operating
Established Date	1980	2003	2000		2007	2002
Major Industries	Computer software, IT, Microelectronics and components, High Tech and medical instruments	Heavy equipment manufacturing, telecommunication, information technology and logistics services	Automotive, industrial manufacturing, food processing	Manufacture of steel, electronics, power, auto parts, logistics and export-oriented industries	Automotive, Engineering, Apparel & Fashion, Electronics H/W, Pharma, Food Processing, Renewable Energy, IT/ITES, Logistics & Warehousing	IT, Auto ancillary, Textile

The proposed CEUs should have industrial areas having total extend of 1,000 – 1,500 acre, having capacity to accommodate 150 – 200 units and the required supporting and social amenities

SOURCE: Press search, Team analysis

Based on these case studies, the following structure is recommended for the proposed CEUs in India

- The proposed CEUs should have industrial areas having total extent of 1,000 – 1,500 acre, having capacity to accommodate 150 – 200 industrial units and the required supporting and social amenities
- In order to ensure that the availability of trained talent does not limit the attractiveness of these units, it is recommended to develop relevant skill development centres as part of the CEZs

The focus for the initial years would be on developing the infrastructure and increasing visibility, with 10 – 15 units being added per year per CEU. The following activity timeline indicates the 15 year vision for each CEU being proposed to be developed: (Exhibit 44)

Exhibit 42

The focus for the initial years would be on developing the infrastructure and increasing visibility, with 10 – 15 units being added per year per CEU

Activity Timeline

- Focus on developing infrastructure
- Increase visibility
- About **30% (50 – 60) units** setup operations

- Strengthened efforts on marketing of industrial areas
- Total number of **operating units to increase to 80% (150 – 160)**

- All infrastructure and key anchor tenants in place
- Established global visibility
- Further focus on reaching out to players from new geographies
- **Remaining 20% units** in the industrial area to be marketed

Year 0 | **Year 5** | **Year 10** | **Year 15**

The proposed CEUs should have industrial areas having **total extent of 1,000 – 1,500 acre**, having capacity to accommodate **150 – 200 industrial units** and the required supporting and social amenities

In order to ensure that the availability of trained talent does not limit the attractiveness of these units, it is recommended to develop relevant **skill development centres** as part of the CEZs

SOURCE: Case studies, Expert interviews

6.5 Enablers for Port-led industrialisation in India

6.5.1 Inter- ministerial committee for CEZ's

As an enabler for port-led industrialisation, each CEZ will consist of multiple CEUs for setting up industrial/manufacturing facilities. While CEZs shall largely be planning units, comprising a few coastal districts or districts with a strong port linkages, similar to industrial corridors such as the Delhi Mumbai Industrial Corridor, CEUs will be specific industrial estate projects with a demarcated boundary similar to the DMIC nodes. Both CEZs and CEUs will emerge as one of the prime movers of the "Make in India" initiative. Manufacturing growth in countries like China has largely been positive through such port-led industrialisation initiatives.

As part of the NPP, 27 bulk and discrete manufacturing clusters have been proposed. While bulk clusters will be implemented by respective line ministries and PSUs and will form a CEU in itself owing to its size, discrete manufacturing clusters will be implemented through CEUs. More than one industrial cluster can be housed within a CEU and within each cluster there will be several manufacturing units.

The proposed NICDA, currently awaiting the Cabinet's approval, could be responsible for setting up the discrete manufacturing clusters and CEUs. The NICDA could create a sub-programme, on the lines of DMIC and Vizag

Chennai Industrial Corridor, entitled “Sagarmala Coastal Economic Zones” and, if necessary, a separate entity too on the lines of the DMICDC for this purpose.

To accelerate the development process, it is suggested that CEUs be prioritised in locations where land parcels are available in areas close to a deep draft port and with strong potential for manufacturing. Such “pilot CEU locations” have been identified in Kandla, Paradip and JNPT ports where the concerned port trust owns adequate land. In addition, the Salt Department owns about 5,000 acres of land near Ennore port. Since this is prime industrial land, it is highly desirable that this be developed as a CEU.

As some of the CEUs may be export oriented, CEUs meeting all the qualifying criteria for SEZs should also be approved as SEZs and benefits under the Programme should available to them.

The formation of an inter-ministerial committee is suggested for implementing the CEZ programme. This proposed committee will comprise the Ministries of Commerce (DIPP), Shipping and Finance (Expenditure, DEA and Revenue), Railways and MoRTH. Concerned state governments and Ministries responsible for key bulk industries, such as chemicals and fertilisers, petroleum and natural gas, power, steel and cement could be special invitees.

6.5.2 Setting up an industrial marketing cell dedicated to CEZ’s

Attracting investors for port-led industrial development is a crucial task in the near future. This calls for a strategic organisational structure for the marketing cell, and a focused marketing approach through four levers.

Global research indicates that several organisations—such as Singapore Economic Development Board (SEDB), Malaysian Investment Development Authority (MIDA), Khalifa Industrial Zone, Abu Dhabi (KIZAD), Ras al Khaimah Free Trade Zone and the Investment Promotion Centre for Central Vietnam – have successfully followed a structured marketing approach. (Exhibit 45)

Exhibit 43

Participation in events and forums and key account management are key elements for attracting investors to industrial developments

Very important	Activity	Sri City	Mahindra World City	Mundra Port SEZ	IPCC Vietnam	Singapore EDB	IDA, Malaysia	MODON, KSA	Abu Dhabi DED	FTZ, Ras Al Khaimah	KIZAD, Abu Dhabi
	Forums/Events/ Exhibitions	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓
	Key Account Management	✓	✓	✓	✗	✓	✓	✗	✗	✓	✗
	Media advertisements	✓	✓	✗	✓	✓	✓	✗	✓	✓	✓
	International Offices	✗	✗	✗	✓	✓	✓	✗	✗	✓	✗
	One Stop Shop	✗	✓	✓	✓	✗	✓	✗	✗	✗	✗
	Overseas client development visits	✗	✗	✗	✗	✗	✓	✗	✗	✗	✗

Optional

✗ Not relevant ✓ Very relevant ✓ Partially relevant

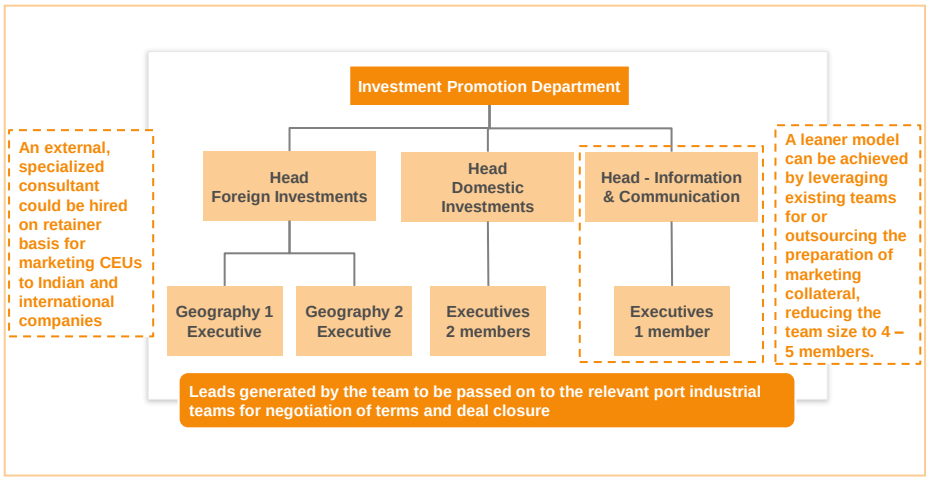
SOURCE: Expert Interviews, Authority Websites

Organizational structure for the marketing cell

It will be best to have geography-focused teams that can prioritise relationship-building with the relevant priority investors or tenants and government agencies (Exhibit 46). It is suggested that an external consultant be hired on a retainer basis who can develop a roadshow and a branding campaign for the program.

Exhibit 44

A 5 member team with geography focus, working together with an external specialized consultant should handle the marketing of the CEUs (2/2)



Marketing levers

The efforts to attract investors for port-led industrial development can focus on four strategic levers:

- Forums/events/exhibitions: The cell representatives to organise and participate in exhibitions, trade fairs and other events to improve visibility and increase networking opportunities.
- International offices for client development: Regularly interact with potential investors and key stakeholders through international offices and frequent visits to those offices.
- Key account management: Have dedicated teams for key existing and potential clients to track and understand their future plans and potential opportunities.
- Advertising on media: Conduct targeted promotions in well-read, reputed and relevant publications, choosing the right placement and timing of the promotions for maximum impact.

6.5.2.1 Global case studies of successful industrial marketing

1. Singapore Economic Development Board (SEDB)

An agency that has successfully attracted investment through a focused marketing approach is the Singapore Economic Development Board (SEDB). Established in 1961, it facilitates and supports local and foreign investors in the country. It attracts investments, nurtures the growth of industry verticals, enhances the business environment by ensuring efficient and competitive business infrastructure, and sets the direction for the Singapore of the future.

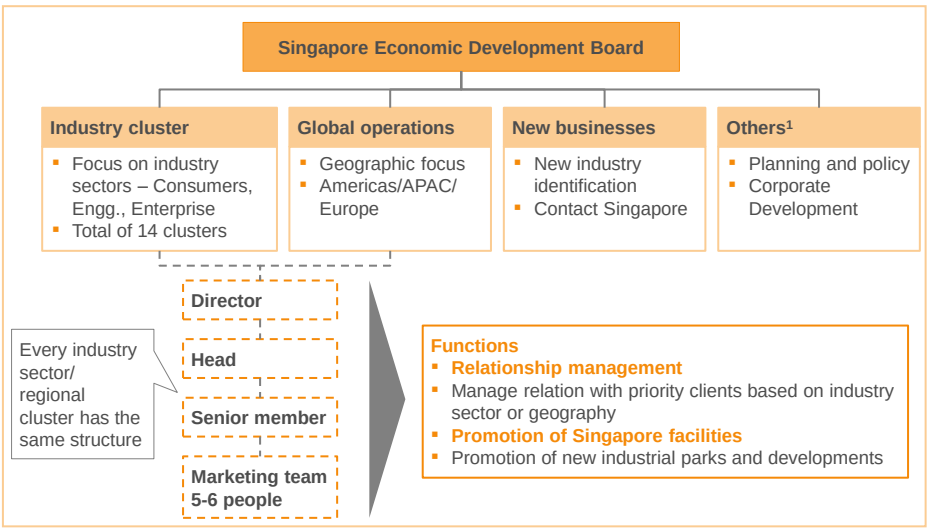
SEDB's marketing strategy has four major components that have supported its success:

- Key account management: SEDB has a carefully structured team that manages priority and potential investors, working with them on a continuous basis.
- International offices and outreach: SEDB set up offices in Hong Kong, New York, Zurich, Paris, Osaka and Houston and also visited foreign ministers to promote Jurong Island as an attractive investment destination with ready infrastructure, factories and skilled manpower.
- Participation in forums and events: SEDB uses these platforms to actively promote industrial zones.

- Ease of doing business: SEDB procures and shares industry feedback with government agencies. While Singapore already offers attractive tax incentives and a business-friendly environment, constant feedback can help to ensure that Singapore remains competitive.
- SEDB's organization structure comprises of a global and domestic-industry wise cut. Each team comprises of 5-6 members who engage in relationship management and promoting specific zones assigned to them. (Exhibit 47)
- Global outreach & targeted promotion by SEDB was critical in the attracting tenants to Jurong Island. The organization set up Jurong Town Corporation (JTC) which led the management and operation of Jurong island

Exhibit 45

The SEDB promotes industrial investments through its industry clusters and global operations teams



1 Planning and policy – Business environment, Finance, Legal, Research
Corporate Development – Administration, Human resources, IT

SOURCE: Expert Interviews, SEDB Website

2. Malaysian Investment Development Authority

MIDA was established in 1967 by the Government of Malaysia to attract export oriented FDI to the country's Free Industrial Zones.

Current functions of MIDA include:

- Promote investments in the manufacturing and services sector in Malaysia
- Undertake planning for industrial development in Malaysia
- Recommend policies and strategies for industrial promotion and development

- Evaluate applications for manufacturing licenses, incentives and duty exemptions
- Assist investors with implementation and operation by providing consultancy services, training and technical assistance
- Assist Malaysian companies in seeking technology and investment opportunities abroad
- Facilitate and assist the activities of other institutions engaged in or connected with industrial development

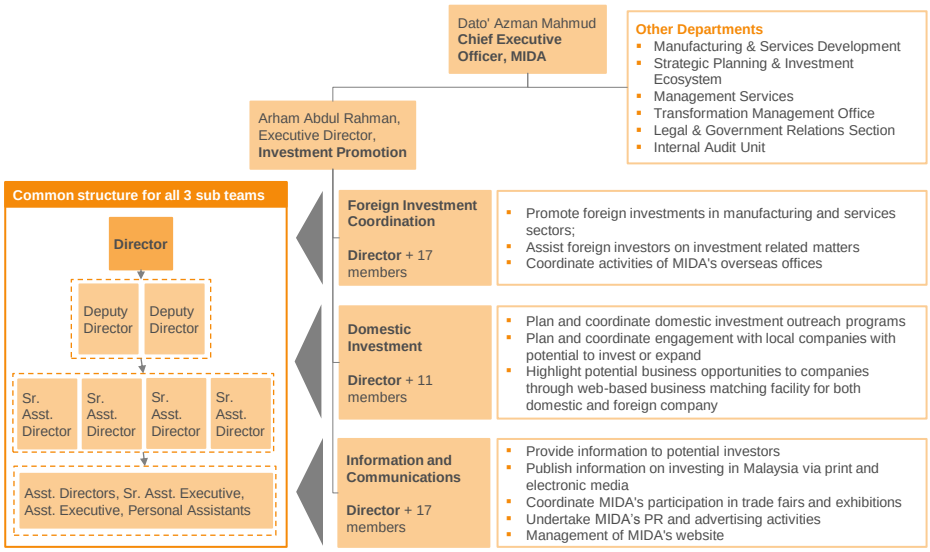
MIDA's promotion strategy to attract investments in manufacturing and services to Malaysia has 4 major components:

- **Overseas client development visits**: Minister led overseas investment missions to Asia, Europe, and North America
  - Organizing seminars on business opportunities in Malaysia and
  - Inviting Malaysian firms for testimonial purposes and facilitation of possible joint-venture opportunities
- **Targeted meetings:** Targeted meetings with potential investors in the high technology, high value added and knowledge-based industries
  - Follow-up visits arranged to firms that express an interest in investments
- **Advertisements:** Industry focused promotion for "Investing in Malaysia", success stories of MNCs that setup facilities
  - The campaigns are run for a short time prior to major industrial events happening in the Americas, Europe and Asia
- **Forums / Events / Exhibitions:** Participation in trade exhibitions both at home and abroad
  - World Heavy Engineering Show, Langkawi International Maritime & Aerospace Exhibition

The Investment Promotion team in MIDA has 3 sub teams with a total size of ~ 50 members, with 3 specific departments- Foreign Investment Coordination, Domestic Investment and Information and Communications. Details of each are provided in the attached Exhibit 48.

Exhibit 46

The Investment Promotion team in MIDA has 3 sub teams with a total size of ~ 50 members (3/3)



SOURCE: MIDA Website

The establishment an industrial marketing unit within the Indian ports association/Ministry of Shipping is highly recommended. This could be an industrial marketing unit with a lean team of around four senior people recruited specifically for the marketing cell who can liaise with potential investors, while marketing activities like roadshows are looked after by an external consultant, hired on retainer basis.

The relevant marketing consultant could be held accountable against the following parameters (Exhibit 49).

Exhibit 47

Total investments generated is the most important KPI for marketing teams in industrial developments

Roles and responsibilities

- Leading business development and providing strategic direction in building strong sales & marketing network
- Planning & undertaking destination building activities and working out strategies to develop a robust sales pipeline for the projects
- Undertaking marketing research for various business requirements & working on customized solutions for the companies and prospective investors
- Developing solutions for 'Smart City' concepts with cross functional & cross border teams and establishing operational protocols for the projects

Key skills required

- B2B Business Development
- Trade & Investment Promotion
- Industrial Parks, SEZ & Economic Clusters Selling
- Customer Relationship Management
- Negotiation
- Team management

Prior Experience

- Total of 15+ years in Real Estate and Marketing
- Experience of working with/for Government agencies to be given preferential weightage

Key results area	Key performance indicators	Description
Revenue	Investment/leads Generated	▪ Total value of investments signed during the year ▪ No. of leads and enquiries generated (pipeline generated)
Marketing	Marketing Activities	▪ No. of new relationships developed ▪ No. of meetings attended with target companies ▪ No. of conferences and exhibitions attended ▪ New marketing and promotion campaigns launched
	Reporting	▪ Regular maintenance of MIS ▪ Regular presentations to CEO
Knowledge Development	Industry reports	▪ No. of periodic reports on different industries that can be used for knowledge development and as marketing material
	Seminars and trainings	▪ No. of industry relevant seminars and training programs attended

SOURCE: Expert Interviews

6.5.3 Promoting ease of doing business

India ranks 130 overall on ease of doing business as per the World Bank's "Ease of Doing Business Report 2016" (Exhibit 50).

Exhibit 48

Ease of doing business ranking for India

	2015	2016	
Overall ranking	134	130	↑
Starting a business	164	155	↑
Dealing with the construction permits	184	183	↑
Getting electricity	99	70	↑
Registering property	138	138	↔
Getting credit	36	42	↓
Protecting minority investors	8	8	↔
Paying taxes	156	157	↓
Trading across borders	133	133	↔
Enforcing contracts	178	178	↔
Resolving insolvency	136	136	↔

Multiple steps, to improve the ranking, have been taken at the central government.

- Using the single window concept is helping speed up clearances across multiple areas:
  - CBEC has launched the SWIFT project, integrating the requirements of six agencies into one, which enables importers to seek a single approval instead of nine separate ones.
  - Manufacturers can now register online at the Shram Suvidha portal and file a self-certified single compliance report for eight central labour laws.
  - MAITRI initiative (by the Maharashtra government) functions as a clearing house for all investment-related information besides coordinating among various government departments across the business cycle. It provides a common interface for business users and government officials to issue 31 clearances and approvals required for setting up of industries.
- Streamlining policies and procedures is making compliance easier:
  - More than 1,000 obsolete laws have been repealed in last two years to reduce operational complications.
  - Directorate General of Foreign Trade has reduced the number of mandatory documents required for the import and export of goods to three each, from 10 and seven respectively.
- Launching computerized risk-based inspection in various states has reduced the processing time
- Ensuring that the delivery time for big ticket projects improves. Some state governments have followed the Centre's directive to put in place a specialized team to fast-track approvals and manage issues.

Business houses from the country have identified the following levers which can improve the rankings across parameters:

- Supporting "Ease of Entry" initiatives to attract new investments
- Developing a legal environment to ensure enforcement and fast recourse
- Building adequate infrastructure to support business growth
- Ensuring predictability and stability in the taxation system
- Simplifying and streamlining policies and the compliance regime
- Enabling trading across borders—global supply-chain competitiveness

- Improving efficiency and responsiveness of the government and regulatory bodies

Taking specific action on three particular levers can improve India's "ease of doing business" ranking and increase foreign investment inflows

- Simple policy and compliance regime:
  - Move from a "prescriptive" to a "compliance" regime for contracting and procurement
  - Institutionalise a mechanism to issue notices prior to the implementation
  - Leverage technology to remove overlaps and speed up compliance
  - "Learn by doing" using accelerators to simplify policies
- Global supply-chain competitiveness:
  - Streamline trade clearance processes—ensure implementation through a risk based model
  - Enable participation in trade facilitation schemes
  - Rapidly adopt global product standards and best practices
- Accessible and responsive governance:
  - Appoint a secretary-level empowered nodal officer for the top five investment sources or industries
  - Transform the government's project management and execution capabilities
  - Develop specialised talent and conduct rigorous performance management

7. Setting up the right institutional architecture

Sagarmala is a complex programme consisting of a diverse set of projects and initiatives with multiple stakeholders at the state and central levels. Key enablers for delivering such a programme consist of the governance framework, institutional set up and financing plan, including PPPs.

This section discusses the proposed institutional structure required for implementation.

7.1 Institutional Set-up

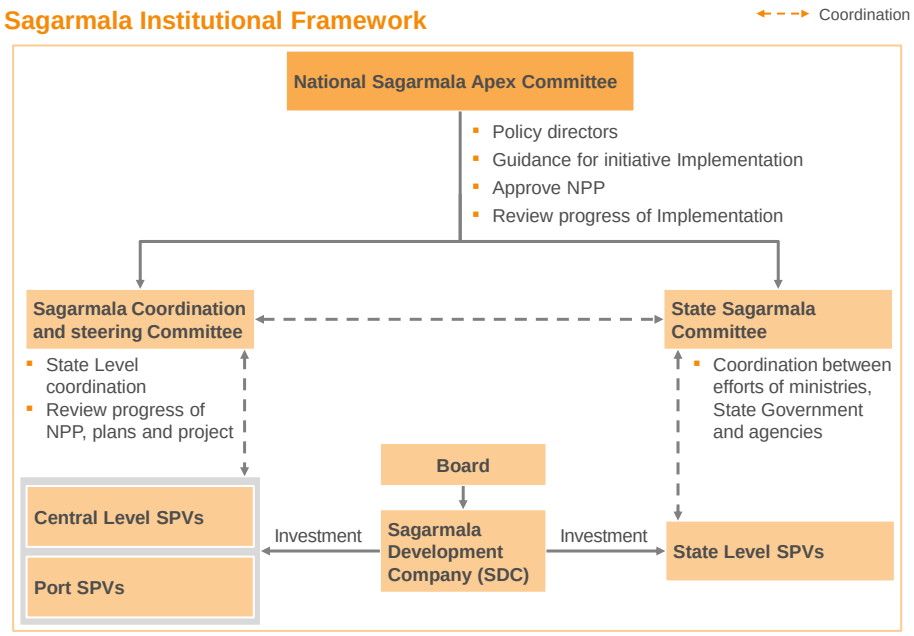
7.1.1 Overall structure

The overall institutional set up of the Sagarmala could consist of the following key bodies

1. National Sagarmala Apex Committee (NSAC): This is an apex inter-ministerial body for driving the Sagarmala Program with Minister level representations from the Ministries of Home Affairs Coal, Petroleum and Natural Gas, Steel, Defence, Environment, Forest and Climate Change, Road Transport & Highways and Tourism
2. Sagarmala Coordination and Steering Committee (SCSC): The SCSC consists of Secretaries from the central ministries of Home Affairs Coal, Petroleum and Natural Gas, Steel, Defence, Environment, Forest and Climate Change, Road Transport & Highways and Tourism
3. State Sagarmala Committee: This institution would be the primary driver of the Sagarmala program at the state level
4. Sagarmala Development Company: The Sagarmala Development Company will be the main development agency of the Ministry of Shipping
5. Special Purpose Vehicles: SPVs as needed for specific projects would be formed at the central and state levels
6. Inter-Ministerial Committees and Working Groups for taking forward key themes and initiatives (e.g., Inter-Ministerial Committee for coastal shipping)

The structure is presented below (Exhibit 51)

Exhibit 49



7.2 Concept of CEZs and CEUs

To boost economic trade and tap into the advantages of the many port/coastal regions in India, the government intends to establish 14 CEZs across the country. The CEZs shall largely be planning units, like the upcoming industrial corridors, e.g., DMIC, comprising a few coastal districts or districts with a strong port linkages. Planning of ports, connectivity infrastructure, industrial zones and corresponding social infrastructure could be done within the context of the CEZ to create complete convergence. Currently, 14 CEZs have been identified across the coastal states.

7.2.1 Coastal economic zones

Each of India's coastal districts will be included in one of the 14 CEZs, and each CEZ will be aligned to the relevant port in the state. Some states with multiple ports may even have two or three CEZs. As an enabler for port-led industrialisation, each CEZ will consist of multiple coastal economic units for setting up industrial/manufacturing facilities. A CEZ could be around 500 km long and located up to 200 km within the coastal boundary.

The program can be taken up under the National Industrial Corridor Development Authority. Which could create a separate development entity for the preparation and implementation of the masterplan for each CEZ. This

includes the identification and project preparation of industrial clusters and coastal economic units that are within or proximate to ports.

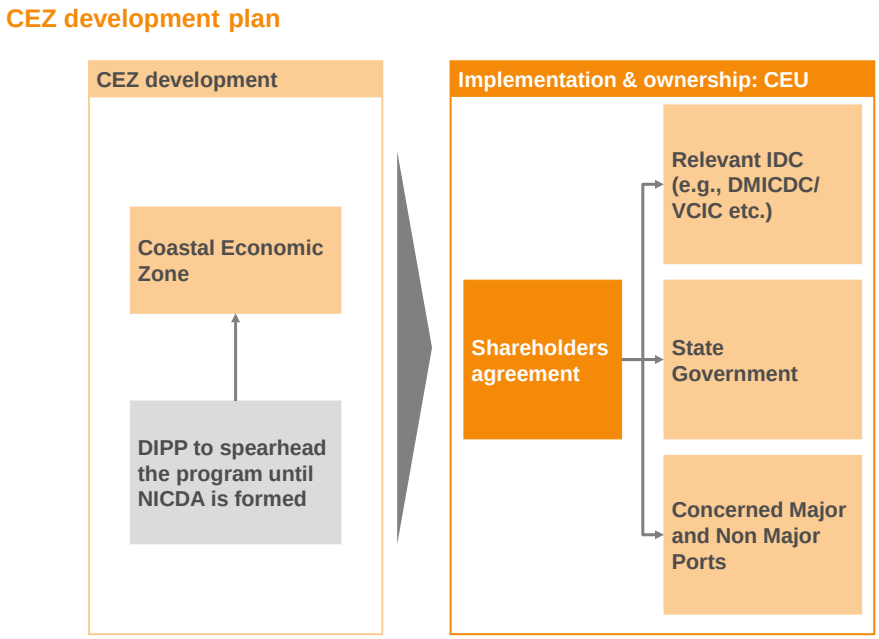
A CEU is a discrete land bank based on the concept of free trade zones, such as those in China which focuses on certain specific types of industries. There are two types of CEUs:

- A contiguous parcel of land within a CEZ having a minimum area of 1,000 acres
- Or, non-contiguous areas of land within a CEZ district, each having a minimum area of 200 acres and jointly adding up to a minimum of 1,500 acres.

7.2.2 Institutional architecture for delivering CEZ masterplan in coordination with states and central ministries

A separate development entity needs to be created for the preparation and implementation of the masterplan for each CEZ. This includes the identification and project preparation of industrial clusters and coastal economic units that are within or proximate to ports. The programme should be driven by DIPP with the help of SDC. The SDC can bring in a port focus as well as some strategic land parcels near ports. The DIPP can contribute in its institutional capacity in developing industrial corridors (Exhibit 52).

Exhibit 50



The institutional structure of the CEZs will follow certain design principles:

- They will operate within the ambit of existing institutional structures and build on work done by other ministries: The CEZs will work within the industrial corridors programme of the DIPP and NICDA.
- They will leverage existing laws and regulations: The SEZ Act will be amended to include the qualifying CEUs. The Shareholders Agreements of DMICDC with key states such as Gujarat and Maharashtra will also help to address key areas of zone administration and governance.
- They will leverage existing land parcels near ports to minimise lead time in acquiring land. They will also reduce to a minimum the contiguous land requirement (200 acres) and empower the SPVs formed for CEU development to acquire land.
- They will prioritise most prime port-based manufacturing locations for establishing a demonstration effect in the first set of CEUs, through three or four pilots in available land parcels near JNPT, Ennore, Kandla and Paradip ports.
- They will adopt a public-led financing model while keeping the flexibility to accommodate private-led industrial zones. In this context, they can explore the possibility of tweaking the DMIC model.

Kickstarting CEZs in India

Some immediate initiatives can help to kick off the formation of CEZs in India:

- Regulatory and governance enablers:
  - Include CEZs under DIPP/NICDA programme
  - Enter into shareholders' agreements with key states along the lines of DMIC
  - Amend the SEZ Act to include CEUs
  - Empower SPVs for land acquisition
- Launch of first phase (priority CEZ projects)
  - Master plan for specific phases
  - Budgetary support and approval from relevant bodies

8. Business plan for Sagarmala Development Corporation

8.1 Vision

Under the ambit of the Sagarmala Project, the Sagarmala Development Company (SDC) strives to reduce logistics costs for both domestic and EXIM cargo. It intends to create ports and a transhipment hub of international standards to generate economic activity hubs all along the Indian coastline, with the participation of coastal communities.

8.2 Mission

The SDC is committed to

- Creating a pipeline of projects through project development activities either by itself or by assisting stakeholders through the Project Development Fund
- Building port capacity with world-class quality and right quantity to enhance port efficiency and cargo evacuation. Towards this, it will accelerate the pace of implementation of requisite infrastructure projects
- Identifying projects across pipeline, water, rail and road that are essential for enhancing logistics connectivity within the hinterland. This will reduce logistics costs for both domestic and EXIM cargo
- Implementing residual infrastructure projects through equity participation. This will create the most optimal mode of evacuation to/from ports for EXIM and domestic cargo
- Plan for development of coastal districts by facilitating setting up of coastal economic units
- Assisting in implementing socially important projects by participation through Community Development Fund
- Developing coastal communities and match their skills with opportunities
- Increasing the economic output and ranking on the human development index of Coastal Districts

8.3 Objectives

The SDC will aim to

- Create a road map of projects identified through the National Perspective Plan and prepare a coherent development strategy to develop the port sector in India
- Augment capacity to cater to increased cargo traffic at the ports through improved efficiency, mechanisation and building new terminals, and building six to eight greenfield ports
- Liaise with various central line ministries to facilitate effective administrative coordination in order to ensure all identified projects are completed within a time bound manner
- Complete all residual projects in the minimum time period through participation by Sagarmala Development Company (SDC)
- Align Sagarmala Project with other initiatives of Government of India (Industrial Corridor, Bharatmala, etc.) to achieve synergy and assist in implementation of projects wherever possible
- Prepare detailed master plans for the identified Coastal Economic Zones (CEZs) within a period of two years
- Manage the Community Development Fund (CDF) for providing grants to coastal community development projects considered under Sagarmala
- Develop or assist in development of maritime activity–based economic clusters in all coastal states, involving the coastal communities through inclusive skill development programmes
- Focus on integrating the coastal communities in Smart City development initiatives through innovative master planning which optimises land use and eschew resettlement

To achieve the objectives of Sagarmala and fast-track the implementation of the port-led development initiative, it is proposed to incorporate a Sagarmala Development Company (SDC), set up under the Companies Act, 2013 to assist the state level/zone level special purpose vehicles (SPVs) and SPVs to be set up by the ports, with equity support for implementation of the projects they will undertake. The project implementation shall be done by the line Ministries, State Governments/ State Maritime Boards (SMBs) and SPVs and the SDC will provide funding window and/or implement only those residual projects that cannot be funded by any other means/mode. Those projects that can be taken up by State governments, Ports, line Ministries as a part of their budgetary planning process will not be under the purview of SDC. Hence, only such residual

projects that cannot be taken up by the above mentioned agencies will be supported by SDC by equity participation

The proposed company shall be under the administrative control of the Ministry of Shipping, which will monitor the implementation of projects identified under the NPP and provide experts in the field of technical, financial and project restructuring to various stakeholders including the partner states/maritime boards. The SDC shall play the role of a project development partner and knowledge partner to the entire project, specific SPVs and state governments/state maritime boards. The proposed company shall also help to continuously disseminate the learning from various successful port-led development projects undertaken globally and in the country, and also create an effective management information system for better planning and implementation. SDC shall support and synergize infrastructure development by other agencies such as the proposed National Industrial Corridors Development Authority (NICDA) and will ensure that there is no duplication of projects/infrastructure development.

The SDC shall raise funds as debt/equity as per requirements, leveraging the resources provided by the Government of India and providing equity/debt to the SPVs formed in the joint venture with the state governments/other stakeholders to implement port-led development projects. The company can also raise long-term capital from the financial institutions and after due approvals garner funds through appropriate debt instruments, tax-free bonds, capital-gain bonds, credit enhancement, etc. to support the development of projects to be taken up under Sagarmala initiative.

Various state and central government agencies are responsible for implementing various projects with mid-term or long-term perspective plans under their own scheme. However, some of these already planned projects may need to be realigned and expedited under Sagarmala depending on the demand–supply gap analysis of the infrastructural requirement of the region, which will only be known after the NPP is complete.

8.4 Role of SDC

SDC will assist SPVs set up by state, central agencies and ports to provide equity support for implementation of projects undertaken by these SPVs. The company will work with the SCSC as part of the Sagarmala Institutional Framework (Exhibit 2) to execute projects under Sagarmala. SDC will provide equity support for SPVs based on the requirement and availability of funds, while SCSC will coordinate between central and state ministries for all SPVs under Sagarmala.

The registered office of the SDC shall be at New Delhi to facilitate effective administrative coordination with various central line ministries, NITI Aayog, and state governments / state planning boards / state maritime boards. The corporate office will also be located at New Delhi to facilitate effective business coordination and functioning.

SDC will be incorporated with an initial authorized capital of INR 1,000 cr, as recommended by EFC, and which may be increased subsequently, if required, and a subscribed share capital of INR 90 cr. The entire cost towards authorised capital for the Company with initial subscribed share capital will be borne by the Ministry of Shipping.

The affairs of the SDC will be administered by the Board of Directors comprising the Managing Director, two other Functional Directors, one Government Director and one Non-Official (Independent) Director. The two Functional Directors will consist of the Director (Finance & Admin.) and Director (Projects) of SDC. Secretary (Shipping) will be the ex-officio Chairman of the Board and shall act as a non-executive Chairman.

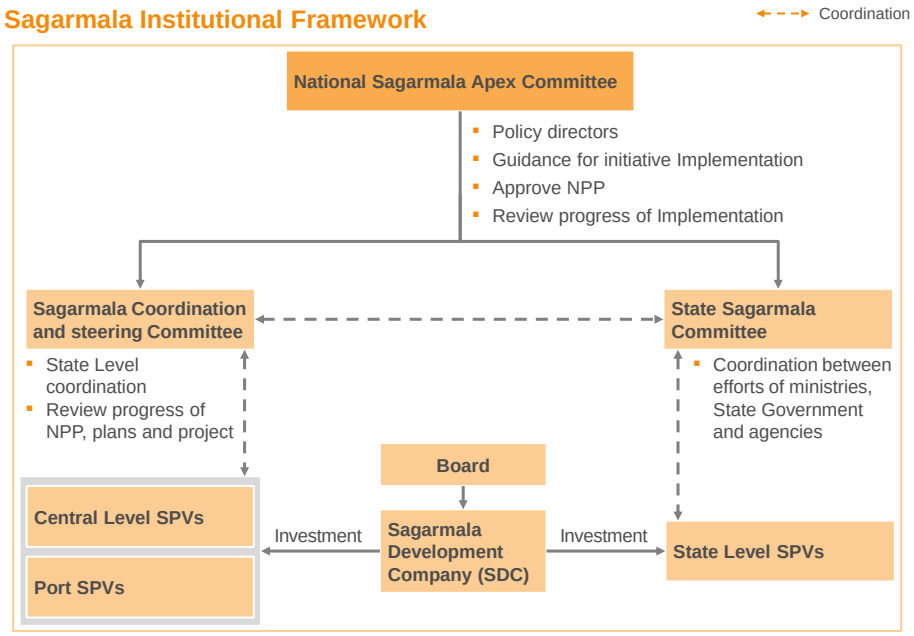
8.5 Institutional Framework of Sagarmala

As per the recommendations of the Cabinet Note on Sagarmala, a National Sagarmala Apex Committee (NSAC) will provide overall policy guidelines and high-level coordination. The NSAC will be chaired by the Minister in charge of Shipping with cabinet ministers from stakeholder ministries and the Chief Ministers/ministers in charge of ports of maritime states. The committee shall:

- Provide policy guidance for implementing the initiative
- Approve the overall NPP
- Review progress and implementation of these plans

A Sagarmala Coordination and Steering Committee (SCSC) will be constituted under the chairmanship of the Cabinet Secretary. Members will be the Secretaries of the Ministries of Shipping, Road Transport and Highways, Tourism, Defence, Home Affairs, Environment, Forest and Climate Change, Departments of Revenue, Expenditure, Industrial Policy and Promotion, Chairman Railway Board and CEO NITI Aayog. The Chief Secretary for the state—projects for which are included in the agenda for a particular meeting—shall be co-opted as members for relevant meetings. The SCSC will coordinate the efforts of various ministries, state governments and agencies connected for implementation and review of implementation progress of NPP, detailed master plans and projects. (Exhibit 53)

Exhibit 51



8.6 Scope of Activities of SDC

1. Act as the custodian for Sagarmala vision and National Perspective Plan (NPP)
   a. Ensure that projects are conceptualized and prioritized in line with the NPP
   b. Periodically review the NPP and update it based on progress and future projections
   c. Align with national priority programmes of the central government including development of smart cities, national waterways, Make in India
   d. Disseminate knowledge and information on best practices available within the country as well as internationally
   e. Provide funding window for residual projects that have no other access to funding; these include important/pilot/path-breaking projects with high ERR but low IRR
2. Finance and implement projects related to
   a. Road connectivity projects that provide last-mile connectivity to the port and which ease congestion at roads/junctions leading to the port
   b. Dredging to enhance the port's vessel handling capacity

c. Parking terminals to ease congestion on roads and junctions leading to port

d. Development of stack yard for storage of container and other cargo

e. Tourism-related projects in coastal area e.g. construction of passenger jetties and cruise terminals

f. Lighthouse development projects to increase the tourism potential of coastal districts

g. Skill development programmes to enhance employment opportunities for coastal communities

h. Mechanisation of berths for more effective and efficient cargo handling at ports that need equity support

i. Projects to transform the ports into green ports through maximum use of renewable energy

j. Development activities (preparation of feasibility/DPR, etc.) for related projects, industrial clusters and zones

k. Detailed master plans for the identified Coastal Economic Zones (CEZs) within a period of two years

l. Other infrastructure (internal or external) projects that enhance the cargo-handling capability and capacity of a port and for which the port needs equity support

3. The SDC shall identify and develop infrastructure projects with the additional objective of giving the private sector an opportunity to invest in and implement such projects

   a. SDC will undertake due diligence, analyse, examine and appraise proposals, assist stakeholders in structuring proposals in the SPV mode, and also assist in the monitoring of such projects. It will also assist each project SPV in translating the vision to reality through identifying port-led development projects, undertaking project preparatory activities like preliminary project reports, feasibility studies, preparation of Detailed Project Reports (DPRs), development of projects, bidding out projects for private participation and help SPVs to

      1) Put in place suitable risk-management measures for strategic projects cutting across the states/regions, such as power plants, water supply, transportation and logistics parks

      2) Legally vet documents and obtain requisite approvals from the competent authority

3) Finalise commercial arrangements like off-take agreements/substitution agreements, etc.

4) Obtain viability gap support from the state and central governments

b. For early impact, the SDC may also take up ready projects based on existing reports carried out by leading firms on behalf of government agencies

c. Each project shall be structured to access strategic investors, PE investors and the capital market at an appropriate juncture

d. Undertake studies related to assessment of port capacity, selection of projects, shortlisting of suitable port locations, development of roads, waterways, etc. and help with obtaining project clearances, economic and trade consequences, challenges faced by maritime sector and interventions required, international port-building techniques

e. Conceptualise, structure and finance projects, conduct investor consultations

f. SDC shall assist SPVs in the selection of developers and O&M players, in obtaining viability gap funding where required and finalising commercial arrangements

g. Review project financials to develop innovative financing and implementation mechanisms for Sagarmala projects and assist SCSC to finalise project implementation model—PPP, annuity, hybrid or EPC/rate contract

h. The SDC will begin with less complex projects and gradually move to more complex projects after capacity building in the SDC and building up supportive links with other stakeholders

i. It will function as a pass-through entity for specific projects and raise capital through various financing instruments.

j. SDC shall also act as Fund Manager of the Community Development Fund which the Ministry of Shipping will be incorporating for the development of coastal communities.

4. Act as holding company for MoS's investments in SPVs for projects being undertaken by other line ministries/agencies/state governments/ports

a. Hold shares in SPVs undertaking projects at state/central level

b. SDC shall empanel consultants experienced in the preparation of feasibility studies, detailed project reports through which SDC shall provide project development services and project management services to the SPVs

c. Develop suitable risk allocation frameworks for the SPVs
d. All expenditures incurred by the SDC on the project will be capitalised in a manner and form determined and approved by the Board of Directors of the SDC

8.7 Organisation Structure of SDC

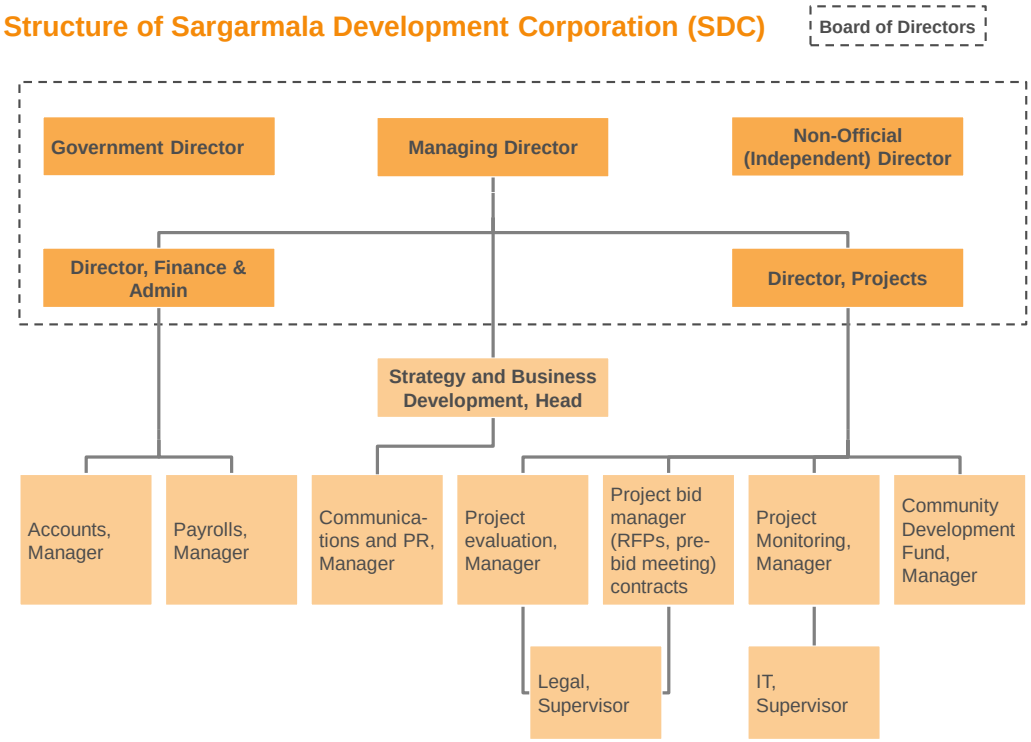
SDC is envisaged as a multi-disciplinary professional company with high-quality technical, financial and management expertise which will channel central and institutional funds, ensuring the development, planning and implementation of the various projects undertaken under the Sagarmala initiative in line with the NPP.

SDC will be led by an MD/CEO on a deputation or hired from outside. Keeping in mind its mandate, it will comprise three teams (Exhibit 54)— Finance, Strategy and Business Development and project management unit.

The company envisages an initial skeletal deployment of 13 employees to commence operations. Additional Secretary (Ministry of Shipping) and JS (Ports) are to be permanent invitees for all meetings of the board. Secretaries of the appropriate state departments will be invited to the Board meetings where specific state project(s) will be discussed.

SDC will be a “lean” company with skeleton staff to carry out its functions. Other functionalities of SDC shall be decided by the Ministry of Shipping in consultation with the Ministry of Finance.

Exhibit 52



8.7.1 Board

SDC will be administered by the Board of Directors comprising the Managing Director, two other Functional Directors, one Government Director and one Non-Official (Independent) Director. The Secretary (Shipping) will be the ex-officio Chairman of the Board and shall act as a non-executive Chairman.

The two Functional Directors will consist of the Director (Finance & Admin.) and Director (Projects) of SDC. The Directors of SDC shall be appointed as follows:

The Managing Director and the two Functional Directors of the Company shall be appointed by the Ministry of Shipping through a Search-cum-Selection Committee chaired by the Cabinet Secretary, with the Secretary (Shipping), Secretary (DOPT) and an expert (to be nominated by the Ministry of Shipping) as its members. The Managing Director of the Company shall have relevant experience in ports/highways/railways/urban and industrial development and project execution/project financing/risk management and portfolio management. The Managing Director's remuneration will be fixed as per market-based salary levels.

The Government Nominee and the Non-Official (Independent) Director, on the Company Board shall be appointed by the Ministry of Shipping. The Non-

Official (Independent) Director shall be selected from among individuals competent and experienced in project planning and execution, financial management, shipping and maritime affairs, logistics planning, etc.

For the purpose of incorporation, as a short-term measure, the Ministry of Shipping will nominate interim Directors of SDC, prior to the selection of the Directors. The interim Directors will resign once the actual Directors have been selected/nominated.

8.7.2 SDC team

The SDC working team will primarily be responsible for identifying projects, implementing them through agencies and tracking their progress.

Managing Director: The Managing Director is responsible for all company functions. He liaises with the board and the Ministry of Shipping and ensures that the company functions on the principles decided by the Board. He works with the planning department and PMO and establishes the target and goals for each project. He reviews and evaluates the progress at each stage and informs the Board of any issues. He is also ultimately responsible for ensuring compliance with company policies and norms besides facilitating information flows between the various functions.(Exhibit 55)

Exhibit 53

Managing Director

1. JOB DETAILS

- **Position Title:** Managing Director
- **Reports to:** Board of Sagarmala Development Company
- **Location :** Corporate office

2. JOB PURPOSE

- Provide leadership and direction for Sagarmala Development Company, overseeing operations and formulating short, medium and long term strategy of SDC through active engagement with the Board and Ministry of Shipping

3. KEY RESPONSIBILITY AREAS

- Set objectives for financial and operational targets for SDC in line with strategic plans developed by Ministry of Shipping
- Provide strategic advice and inputs to the Board to ensure the institutionalization of the right systems and policies to meet the company's objective while complying to all the statutory norms and regulations
- Provide leadership to the day to day operations of SDC while maintaining focus on the company's strategic goals
- Liaise with various industry bodies and develop relationships with key port personnel and officials from different line ministries (MoRTH, Railways, MoP&NG) etc
- Represent the company at all major external events and platforms
- Build strong and motivated subordinate teams by supporting direct reports in professional development; instructing and mentoring to develop required knowledge and skills for better performance and succession planning
- Manage and resolve conflicts between various departments to ensure smooth functioning of projects

4. EDUCATION/EXPERIENCE

- Minimum Qualification: University degree in General Management/Engineering/Finance from a recognized university; MBA is a plus
- Minimum Experience: 10+ years' experience preferably in relevant industry or function role; Minimum 3 years as head of another organisation

Director, Finance and Admin: He oversees the sourcing and disbursement of funds, ensuring that ministry grants are received on time. He also plays an important role in negotiating with the project stakeholders to decide on SDC's equity in projects. He formulates the administration of the company's financial policies and developing long-term financial goals. He directs all key finance departments within the group (accounting, taxation, audit, AR/AP and treasury operations). He also identifies the financing route for the residual projects to be implemented directly by the SDC and opportunities for equity participation in projects being executed by Ministry of Shipping, the line ministries and central and state agencies. (Exhibit 56)

Exhibit 54

Director, Finance and Admin

1. JOB DETAILS

- **Position Title:** Director, Finance and Admin
- **Reports to:** Managing Director
- **Location :** Corporate office

2. JOB PURPOSE

- Act as a key advisor and strategic partner to SDC's Board and MD on finance-related matters. Participate in development of strategic plans to increase profitability, mitigate financial risks and increase economic value.

3. KEY RESPONSIBILITY AREAS

- Oversee the formulation and administration of SDC's financial policies and developing long-term financial goals
- Support MD, Board of Directors and Senior Management Team in making strategic finance-related decisions
- Lead the development of annual financial and operating budgets and manage the finances of the firm
- Negotiate with stakeholders to decide on equity stake to be taken up by SDC in residual and PPP projects
- Steer and oversee development and approve finance-related guidelines, policies and procedures
- Confers with MD and other department heads to review achievements and discuss required changes in goals or objectives resulting from current status and conditions
- Directs all key finance departments within SDC i.e. accounting, taxation, payroll etc

4. EDUCATION/EXPERIENCE

- Minimum Qualification: High ranking Chartered Accountant with additional ICWA, ACS etc qualifications a plus; Graduation and post graduation in finance and accounting preferred
- Minimum Experience: 5+ years' experience in Finance or General Management field; 2+ years in in progressive senior financial roles

Accounts Manager: He is responsible for the actual disbursement of funds and maintaining accounts. He prepares reports that summarise and forecast company business activities and financial position in areas of income, expenses and earnings based on past, present and expected operations. He helps the Finance Head in the annual business planning process including projects and corporate projections on revenue, costs and synthesises the same into the organisational budget. (Exhibit 57)

Exhibit 55

Accounts Manager

1. JOB DETAILS

- **Position Title:** Account Manager
- **Reports to:** Director, Finance and Admin
- **Location:** Corporate Office

2. JOB PURPOSE

- Responsible for accuracy of books of accounts of SDC and adherence to accounting principles
- Prepare accurate and timely financial information for internal and external reporting
- To provide financial, clerical and administrative services to ensure efficient, timely and accurate payment of accounts under his or her control

3. KEY RESPONSIBILITY AREAS

- Standardise operations and create policies and procedures for accounts function
- Create and monitor a system of controls, procedures, and forms for the recording of investments in various projects
- Coordinate with Finance, head to ensure adequate liquidity by aligning funds disbursement dates with other operational needs
- Ensure timely and accurate preparation of required statutory financial reports and annual consolidated results in accordance with accounting standards
- Manages monthly closing of SDC financial records and posting of month end information

4. EDUCATION/EXPERIENCE

- Minimum Qualification: Degree in Accounting, Finance or related discipline; CPA or other professional qualification would be a plus
- Minimum Experience: 5+ years' ledger, accounting and treasury experience; 2+ years' in a supervisory position\

Payroll Manager: His role is to lead and coordinate all HR activities relating to recruitment, planning, performance management cycle, training and development, policies, HR-related communication, activities for employee engagement and HR procedures. He is also responsible for salary disbursement to SDC employees. (Exhibit 58)

Exhibit 56

Payroll Manager

1. JOB DETAILS

- **Position Title:** Payroll Manager
- **Reports to:** Director, Finance and Admin
- **Location:** Corporate office

2. JOB PURPOSE

- Responsible for compensation and benefits across SDC
- Sets strategy and policies for performance management

3. KEY RESPONSIBILITY AREAS

- Oversee the development and refinement of pay administration policies and procedures for SDC employees
- Reviews national, regional and local compensation surveys and propose adjustments to compensation for SDC employees accordingly
- Ensures proper integration of salaries and benefits as part of the company's compensation package
- Be aware of emerging trends and as well as changes to legislations and requirements across different regions
- Develops and oversees implementation of performance evaluation systems and policies
- Assist in recruitment of future SDC employees and generate their monthly payslips/taxslips

4. EDUCATION/EXPERIENCE

- Minimum Qualification: Masters' / Graduate degree with strong emphasis on Human Resources is recommended
- Minimum Experience: 5+ years' experience in Human Resources, including 3 years in strategic Human Resources practices and/or compensation & benefits roles

Strategy and Business Development Head: This person decides on the kind of projects the company will undertake and the overall company strategy. He meets with stakeholders at all the ports and the line ministries to identify projects. He identifies potential opportunities for new projects and develops a business case for all the projects to be taken up in a year.(Exhibit 59)

Exhibit 57

Strategy and Business Development Head

1. JOB DETAILS

- **Position Title:** Strategy and Business Development Head
- **Reports to:** Managing Director
- **Location :** Corporate office with frequent visits to project locations

2. JOB PURPOSE

- Develop and communicate SDC's strategic vision, identify projects and initiatives to drive growth and value creation. Lead projects in the pre-execution stages: (1) fund availability, (2) project initiation, (3) concept definition, (4) project definition - within the constraints of schedule, budget, and scope. Ensure realization of the strategic, operational and financial objectives set for the project

3. KEY RESPONSIBILITY AREAS

- Initiate and drive business development, growth opportunities across SDC in conjunction with the board of directors and the senior management team
- Responsible for liaising with ports and government stakeholders to identify residual projects
- Translate MoS strategy into actionable set of initiatives and lead the development of a project business plan with revenue and cost side view of the project from the point of project conceptualisation till initial document preparation
- Liaise with internal and external stakeholders, including government authorities and JV Partners to obtain required permits and approvals for successful project execution
- Responsible for managing the reputation of the company across its wide stakeholder group and developing, leading and executing robust and fully-integrated communications that both promote and protect the reputation of SDC

4. EDUCATION/EXPERIENCE

- Minimum Qualification: Masters/Graduate degree in general management, economics, engineering or other related field
- Minimum Experience: 5+ years' experience in General Management, Strategy, Business Development or Finance; Experience of working with multiple government stakeholders; Work in Port sector/Roads/Railways a plus

Communication and PR Manager: He is responsible overall for enhancing the profile of Sagarmala and ensuring that the work done is effectively broadcasted in the media. He is responsible for appointing the PR agency and overseeing their work. He will develop new strategies, tactics, and plans to get wider alignment on the concept of Sagarmala, create a buzz around four or five large themes, ensure visibility of Sagarmala outside the ambit of the MoS and leverage new media for more impactful communication.(Exhibit 60)

Exhibit 58

Communications and PR Manager

1. JOB DETAILS
- **Position Title:** Communications and PR Manager
- **Reports to:** Head of Strategy and Business Development
- **Location:** Corporate Office

2. JOB PURPOSE
- Responsible for all internal, external and marketing communications for SDC
- Principle person responsible for promoting Sagarmala initiatives

3. KEY RESPONSIBILITY AREAS

Corporate Communications:
- Responsible for corporate communications in promoting Sagarmala brand
- Create and manage relationships with a broad range of key stakeholders, both internal (by establishing champions and creating business partners across the network) and external

Strategic Planning:
- Develop a coherent and comprehensive communications strategy that support the overall strategic direction of Sagarmala
- Provide expertise and share knowledge on appropriate response to issues according to directions of Ministry of Shipping

External Communications
- Creates and manages channels, including social media, for engaging with audiences on Sagarmala story
- Direct and manage the company website and portal and lead the introduction of new social media channels
- Create an effective system for managing relationships with external communications consultants and partners such as advertising, creative and PR agencies

4. EDUCATION/EXPERIENCE
- Minimum Qualification: : Masters' / Graduate degree with strong emphasis on Communications is recommended
- Minimum Experience: Experience in strategic planning, corporate communications, advocacy and stakeholder management, and business management

Director, Projects: He is responsible for predicting and planning the delivery of projects, completion of various stages and monitoring progress at the sites to ensure a timely completion. He plans, executes, and finalizes projects according to strict deadlines and within budget. He oversees the development of transparent, regular (at least monthly) project progress reports. He ensures appropriate risk assessments, management plans and mitigation measures are in place for smooth project delivery. He also facilitates information flow between the actual execution work at sites and the management teams.(Exhibit 61)

Exhibit 59

Director, Projects

1. JOB DETAILS

- **Position Title:** Director, Projects
- **Reports to:** Managing Director
- **Location :** Corporate office

2. JOB PURPOSE

- Responsible for overall planning, construction, testing and handover stages to ensure project delivery within the set project cost, time and quality outcomes for SDC and non-SDC projects

3. KEY RESPONSIBILITY AREAS

- Oversee the planning of construction schedules, costing and all related inputs of SDC and non – SDC projects being implemented by other agencies but identified under National Perspective Plan
- Plan, execute, and finalize projects according to strict deadlines and within budget. This includes acquiring resources and coordinating the efforts of team members and third-party contractors and consultants in order to deliver projects according to plan
- Overall accountability for outcomes set in the development business plans on all aspects of design and construction
- Review and evaluate tenders and proposals to ensure that the right vendor and contractor are chosen with a focus on timeliness and cost control
- Oversee the development of transparent regular (at least monthly) project progress reports to ensure rigorous construction planning and monitoring of all projects
- Oversee the community development fund manager to ensure that amount sanctioned under CDF is spent on projects that are aligned to Sagarmala's vision

4. EDUCATION/EXPERIENCE

- Minimum Qualification: Preferably an engineer with a Masters/Graduate degree in general management
- Minimum Experience: 10+ years of experience in construction and handling contract execution; Led at least 2 projects of 100 Cr from start of construction to handover; Formal training in project management a big plus

Project Evaluation Manager: He reviews drawings and technical specifications for the purpose to pinpoint potential constructability issues, deviations from industry norms and standards, customer requirements and commitments to customers. He works with the project team and relevant departments to create a project master program, identifying all parts of the projects, detailing design and construction milestones, summarising all activities (including those of the consultant, contractor and other specified direct material suppliers). (Exhibit 62)

Exhibit 60

Project Evaluation Manager

1. JOB DETAILS
- **Position Title:** Project Evaluation Manager
- **Reports to:** Director, Projects
- **Location:** Corporate Office

2. JOB PURPOSE
- Oversee preparation of investment documents and project proposals
- Responsible for DPR preparation of projects under scope of SDC and master plan preparation for CEZs

3. KEY RESPONSIBILITY AREAS
- Ensure preparation of preliminary studies for new concepts including the detail design and permitting of new projects
- Drive preparation of feasibility studies, including costs and timetable preparation for proposed capital projects
- Review and evaluate the DPR prepared by consultants to ensure quality and timely delivery of documents
- Review project technical specifications for the purpose of identifying potential issues and any deviations from norms
- Review project financial estimates including traffic studies, IRR calculations to identify projects that fir into SDC's gambit
- Ensure all local and/central statutory requirements are taken into account for evaluating project feasibility
- Ensure complete compliance to document management process in accordance with processes followed at Government of India (specifically Ministry of Shipping)
- Champion the master plan preparation of coastal economic zones liaising with state industrial development corporations

4. EDUCATION/EXPERIENCE
- Minimum Qualification: Masters' / Graduate degree in Business Management; Architecture degree is a plus
- Minimum Experience: 5+ years management experience within contracting function; Worked on large scale projects

Project Bid Manager: He formulates reviews and evaluates tenders and proposals to ensure that the right vendor and contractor are chosen, with a focus on timeliness and cost control. He oversees the drafting, evaluation, negotiation and execution of all construction contracts, sub-contracts and specialised construction contracts. He reviews and evaluates invitations to tender and proposals to ensure transparency and accountability in the process followed, while also selecting contractors and entering contracts which will help to reduce overall construction costs. In addition, he ensures compliance with company policies and norms while inviting tenders, releasing proposals and awarding contracts, etc. (Exhibit 63)

Exhibit 61

Project Bid Manager

1. JOB DETAILS
- **Position Title:** Project Bid Manager
- **Reports to:** Director, Projects
- **Location:** Corporate Office

2. JOB PURPOSE
- Oversee bid management process from project document preparation to actual start of construction

3. KEY RESPONSIBILITY AREAS
- Oversee drafting, evaluation, negotiation and execution of contracts including bidders shortlisting, tenders, selection and award processes.
- Due diligence and vetting of local contractors/vendors and approve project contracts and changes in contracts.
- Review and evaluate invitation to tender and proposals to ensure transparency and accountability in the process followed while also selecting contractors and entering contracts which will help reduce overall costs
- Ensure compliance with company policies and norms while inviting tenders, releasing proposals and awarding contracts etc.
- Monitor and track the mobilization schedules of contracts in order to ensure achievement of project milestones agreed
- Ensure that the scope of work in the contract reflects the full scope of work to be executed on site and incorporates inputs from the site teams to limit out of contract costs and change orders
- Manage relationship with contractors and ensure adherence to agreed terms and conditions

4. EDUCATION/EXPERIENCE
- Minimum Qualification: Masters' / Graduate degree in Business Management
- Minimum Experience: 5+ years management experience within contracting function; Worked on large scale projects

Project Monitoring Manager: He follows up with implementing agencies (line ministries, port trusts, state maritime boards, etc.) to track project status. He monitors and controls the schedule and generates relevant cash flows to assist in financial planning. In addition, he reports the status of individual projects on a monthly basis, identifies any gaps between the planned and actual completion schedule and updates the plan in accordance with the current status. He generates monthly reports on the development and construction status of each project in accordance with the planned timelines. (Exhibit 64)

Exhibit 62

Project Monitoring Manager

1. JOB DETAILS
- **Position Title:** Project Monitoring Manager
- **Reports to:** Director, Projects
- **Location:** Corporate Office

2. JOB PURPOSE
- Review and evaluate the SDC progress at each stage and inform the Projects, Head and senior management of any issues
- Identify any gaps between the planned and actual completion schedule of projects

3. KEY RESPONSIBILITY AREAS
- Follows up with the implementing agencies (Line ministries, port trusts, state maritime boards etc) to track the projects for their status
- Generates monthly reports on the development and the construction status of each project in accordance to the planned time lines
- Manage and resolve conflicts between various stakeholders of projects to ensure smooth functioning of projects
- Conduct regular project review and highlight progress and performance to the senior management
- Inspect project sites to identify deviations from quality standards based on specifications, industry norms and standards
- Develop planning and micro-planning templates using the IT tool which are easy to use and help project teams identify issues

4. EDUCATION/EXPERIENCE
- Minimum Qualification: Masters' / Graduate degree with strong emphasis on Project Management is recommended
- Minimum Experience: 5 years or more experience in senior planning and scheduling roles with at least 2 years of supervisory experience in planning and scheduling

Legal Supervisor: He drafts, reviews and amends, as applicable, agreements, legal documents, legal correspondence, contracts and other legal terms and conditions for any business activity. He also ensures the quality of documents prepared for sanctions and approvals. (Exhibit 65)

Exhibit 63

Legal Supervisor

1. JOB DETAILS

- **Position Title:** Legal Supervisor
- **Reports to:** Project evaluation and Project bid Managers (Dual reporting)
- **Location :** Corporate office

2. JOB PURPOSE

- Drafts, reviews and amends, as applicable, agreements, legal documents, legal correspondence, contracts and other legal terms and conditions for any project undertaken by SDC

3. KEY RESPONSIBILITY AREAS

- Assist project evaluation manager and project bid manager with the legal aspects of project documents, corporate governance and policies
- Advise on the litigation risks of taking up possible projects, providing preventive counselling with respect to the legal risks
- Offers guidance to business leaders on negotiation of claims and contracts
- Drive the creation of a portfolio of standardized legal contracts to support the projects taken up by SDC
- Assist with or monitor negotiations of team members with contract agreements and bid documents and proactively resolve escalated business and legal issues
- Ensure process efficiency and accurate and timely completion of deliverables
- Overall scope is broad and covers commercial/contractual issues, litigation/dispute management, employment/labor law matters, corporate law, regulatory compliance and proactive risk management advice & training

4. EDUCATION/EXPERIENCE

- Minimum Qualification: JD, LLB or equivalent degree from an accredited law school
- Minimum Experience: 5+ years of legal experience gained in an infrastructure firm

IT Supervisor: He is responsible for implementing the project tracking IT tool at various ports, reviewing the tool, and handling other IT-related queries. (Exhibit 66)

Exhibit 64

IT Supervisor

1. JOB DETAILS

- **Position Title:** IT Supervisor
- **Reports to:** Project monitoring, Manager
- **Location :** Corporate office

2. JOB PURPOSE

- Ultimate global responsibility for all IT Systems and applications across the entire organization

3. KEY RESPONSIBILITY AREAS

- Troubleshoot problems in the project monitoring tool and assist project monitoring manager in collating the data and generating reports
- Technically support the SDC's IT infrastructure and identify need for changes and/or enhancement to architecture
- Review servers, Storage, Networks, Backup and other aspects of IT infrastructure periodically and identify areas of improvement
- Works on special IT projects as needed
- Maintain and foster collaborative efforts with IT staff of Ministry of Shipping to ensure issues related to cyber security are taken care of

4. EDUCATION/EXPERIENCE

- Minimum Qualification: Master/Graduate degree in Computer Science, Computer Engineering, or Information Management
- Minimum Experience: 2+ years of experience in IT in a reputed firm

Community Development Fund Manager: He manages the Community Development Fund, from the identification of projects to the disbursement of funds. He coordinates with other government ministries to ensure that funds do not get duplicated to programmes outside the ambit of SDC. He suggests new schemes to train the coastal community with the right set of skills by undertaking skill-gap studies, etc. He liaises with the state government's skill development programmes and ensures timely execution of beneficiary projects taken up under the CDF. (Exhibit 67)

Exhibit 65

Community Development Fund Manager

1. JOB DETAILS

- **Position Title:** Community Development Fund Manager
- **Reports to:** Director, Projects
- **Location :** Corporate office

2. JOB PURPOSE

- Overall accountability, responsibility and authority for the management of CDF in accordance with the strategic plan of SDC and MoS. The CDF Head spearheads initiatives for coastal communities and leads skill development programmes.

3. KEY RESPONSIBILITY AREAS

- Obtaining the approval of the Board, implementing the initiatives identified for funding under CDF and keeping the MD informed in a timely manner of the progress of the initiatives
- Instituting transparency in implementation of initiatives and projects identified under National Perspective Plan for development of coastal communities and provide the highest level of service to the public.
- Partnering with other national level schemes and foundations to understand the best practices for executing such type of programmes
- Manage the Community Development Fund from identification of projects to disbursement of funds.
- Launch new schemes to train the coastal community with the right set of skills by undertaking skill gap studies etc.
- Liaison CDF with state government's skill development programmes and ensures timely execution of beneficiary projects taken under CDF

4. EDUCATION/EXPERIENCE

- Minimum Qualification: Preferably an engineer with a Masters/Graduate degree in general management
- Minimum Experience: 5+ years' experience of working in a non-profit setting; led roll out of government skill development programmes in the past; work in port sector is a plus

8.8 Financial plan

The primary funding source for SDC will be equity/grants from the Ministry of Shipping (MoS). SDC may also borrow money from banks/ financial institutions and raise capital through various financial instruments.

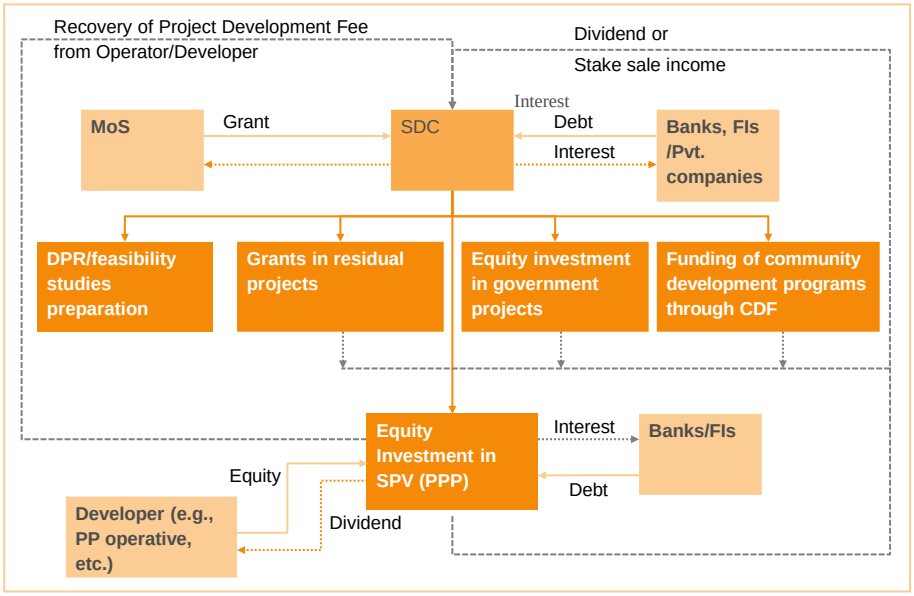
Execution model of projects taken up by SDC

Residual projects or part financial projects undertaken by the SDC can have the following execution model:

- Grant projects: Grants would be provided for projects which have limited revenue stream. No separate SPV is usually needed for such projects – it is usually paid to the concerned implementing agency for execution of specific works.
- Equity in government projects – For larger projects and those having some revenue streams, the SDC can take an equity stake in the project SPV. The co-investor in the project would be other central or state government entities. At a later stage there may be potential to monetize the project by bringing in external equity or private developers
- PPP projects undertaken by private developers: These will primarily be larger projects where there is a clear demarcation of revenue streams and the majority control of the project is with a private developers. Most of these projects will have sound financial returns, with or without VGF funding. Private sector design efficiencies will also be leveraged in this project.
- Innovative financing: If at any stage an appropriate model (as per project suitability) has been devised by SDC, it will be adopted after due diligence and approval by the Board.
- CDF community development projects: Most community development projects funded by the CDF involve non-capital spend (such as skill development). Once again there is no revenue stream from this project. Such projects will typically be implemented by government agencies through relevant specialist agencies. In some cases small size infrastructure works may be needed which will be implemented in a manner similar to Grants

Exhibit 66

Funding and investment mechanism of SDC



Future projections

The funding available from the MoS to SDC may be around INR 1,000 cr per annum in a four to five year timeframe. It is to be noted that this amount also includes the funds to be disbursed for community development programmes. [5]

The analysis assumes that the SDC shall identify over 20 new projects every year from various sectors/states to take up for project development activities. As most of these will be residual projects, the average cost of these projects has been assumed at INR 80 cr.

Assumptions

Project Development	
Ratio of PPP able/ non-PPP able projects	20:80
Debt equity ratio in PPP projects	70:30
Equity taken by SDC in PPP projects	26% of total equity

[5] The funding available from the MoS for 2016–17 is INR 450 crore

SDC share in a non-PPP project	40% of total project cost
Revenue from a non-PPP project in a financially constrained port	12% ROE ramped up in 3 years post construction
Revenue from last-mile road/rail project	10% ROE ramped up in 4 years post construction
Revenue from other projects (tourism, passenger jetty, Ro Ro)	5% ROE ramped up in 3 years post construction
Depreciation time	10 years
Average salary	INR 15 lakh per annum
Rent per month	INR 1 lakh
Incorporation expenses	INR 1 crore p.a.
Other expenses	INR 1 crore p.a.

It is further assumed that equity participation by SDC is required in projects which are above a certain threshold project cost. Considering a D/E ratio of 1:1 and that the government would like to keep the controlling stake during the initial years, the SDC shall take up about 26 per cent of equity investment in these projects. The ratio of state government/central ministry's equity and that of the private player, if any, will depend upon the project contours. SDC's equity will also be disbursed in the first two years of SDC taking up the project.

Yearwise Projects									
Year	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**
Projects taken up by SDC	12	20	25	30	30	30	30	30	30
Total project cost	960	1,600	2,000	2,400	2,400	2,400	2,400	2,400	2,400
PPP Projects	2	4	5	6	6	6	6	6	6
Total equity in a PPP project	55	77	108	132	144	144	144	144	144
SDC equity in a PPP project	14	20	28	34	37	37	37	37	37
Non-PPP Projects	10	16	20	24	24	24	24	24	24
SDC equity in non PPP projects	294	410	576	704	768	768	768	768	768
Total SDC equity	309	430	604	738	805	805	805	805	805
Community Development Fund	100	100	100	100	100	100	100	100	100

8.8.1 Financial statements

Income Statement

	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
I. INCOME									
Non-PPP projects (financially constrained port)	0.00	0.70	3.69	10.24	20.04	33.33	49.98	68.64	87.97
Last-mile road projects	0.00	0.88	5.05	14.45	31.17	55.00	85.61	121.85	161.12
Other projects (tourism, passenger jetty, Ro Ro)	0.00	0.53	2.54	6.79	13.12	21.66	32.29	44.13	56.39
Total income	**-**	**2**	**11**	**31**	**64**	**110**	**168**	**235**	**305**

II. EXPENDITURE	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**
Depreciation	20	47	85	132	183	234	285	336	387
Number of employees	5	13	13	13	13	13	13	13	13
Total salary outflow	1	2	2	2	2	2	2	2	2
Office rental	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
General expenses	1	1	1	1	1	1	1	1	1
PDC	23	-	-	-	-	-	-	-	-
Incorporation expenses	1	-	-	-	0	0	0	0	0
Total	**45**	**50**	**88**	**135**	**186**	**237**	**288**	**339**	**390**
PBDIT	**-45**	**-48**	**-77**	**-103**	**-122**	**-127**	**-120**	**-104**	**-85**

Depreciation _Roads	14.67	35.07	63.76	98.83	137.09	175.35	213.61	251.87	290.13
Depreciation Other	5	12	21	33	46	59	71	84	97

The financial analysis suggests that while the SDC will create a host of investment opportunities for different sets of investors and developers, it should not expect short-term returns on investment given the nature of these projects.

Cash-flow statement

	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Source of funds									
Grant from Ministry of Shipping	350	550	750	900	900	900	900	900	900
Community Development Fund	100	100	100	100	100	100	100	100	100
Revenue	0.00	2.11	11.27	31.49	64.34	110.00	167.87	234.62	305.48
Total	**450**	**652**	**861**	**1,031**	**1,064**	**1,110**	**1,168**	**1,235**	**1,305**

Application of funds	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**
SDC equity	309	430	604	738	805	805	805	805	805
Coastal community development programmes	100	100	100	100	100	100	100	100	100
Expenses	26	3	3	3	3	3	3	3	3
Total	**435**	**533**	**707**	**841**	**909**	**909**	**909**	**909**	**909**
Net cash flow	**15**	**119**	**154**	**190**	**156**	**201**	**259**	**326**	**397**

The SDC is envisaged to remain a project development vehicle, creating infrastructure investment opportunities for a diversified set of investors. This implies that it can explore the option of part exit in favour of financial institutions and infrastructure companies interested in the project pipeline once SDC's operations are streamlined and substantial funds have been invested.

8.9 Draft guidelines for disbursement of funds under Sagarmala Programme

Under the Sagarmala Programme, SDC (the Cabinet note for its formation is under approval) can take equity in projects and SPVs formed for the purpose of implementation of an infrastructure project—port infrastructure, connectivity infrastructure or other related infrastructure which will assist in enhancing the efficiency of the port evacuation or port-led development initiative.

The Ministry of Shipping has specialised entities under its ambit for implementation of rail projects, projects related to development of waterways and port trusts which have the authority to undertake infrastructure projects within their respective ports. However, maritime states/UTs manage to operate/develop minor ports through the state maritime boards or port department. The number of minor ports has also been developed and is being operated by private entities or under the PPP model. The port infrastructure, connectivity and any other port-led development for non-major ports can also be funded under the Sagarmala Programme—which necessitates the formation of the following guidelines for taking the equity in projects and SPVs:

- Funds will be released for projects that are related to port connectivity, efficiency improvement and port related infrastructure.
- The preferred mode of working with the State Government for port related projects will be through the state maritime board.
- Maximum financial assistance to any project is limited to 50 per cent under the Sagarmala Programme.
- Funds will be sanctioned for projects having project documents (TEFR/DPR) with the financial analysis duly approved by the competent appraising and administrative authorities.
- The project will be implemented through an SPV incorporated for the purpose of implementation, operation and management of the project.
- Projects having high social impact like a fishing harbour, skill development, etc. can be funded for implementation under EPC mode. The maximum financial assistance to these projects will also be limited to 50 per cent only (from all sources/schemes of Government of India). Skill development of the coastal community will also be funded under the Sagarmala Programme either completely or through a convergence scheme with any other related ministry. Such a project will subsequently be funded through the CDF after its inception.
- Funds released for a project being proposed by any other ministry for funding assistance after its appraisal and approval cannot be higher than the

approved limited under Central Sector Scheme (CSS) to ensure a convergence of scheme under Govt. of India.

- Projects for which SPV can be/have been created will be given preference for the disbursement of funds.
- SDC can also take equity in the umbrella SPV—either existing or newly incorporated—for the development of port connectivity and port-related infrastructure, provided it has been duly approved by the competent authority.
- Priority funding shall be given to projects which may be implemented immediately, or big-ticket projects like new port development which ensure healthy return on equity over a period of five to seven years. The realisation of value in case of equity disinvestment will also be much more in these large projects. It is important to have a framework for taking equity in existing and newly formed SPVs.
- SDC can take up an equity contribution in existing as well as new SPVs formed by states/maritime boards/ports, etc. provided that these SPVs have projects that are ready for implementation. This is important as SDC's revenue will depend on the revenue of these projects.
- SDC shall take only token equity to initiate/assist with project development in those SPVs that are scouting for projects or have projects under development stage only.
- For an umbrella SPV level, it will always be difficult to ascertain the revenue flow from a particular project. Separate accounting for each project will therefore be an important clause in the SPV contract document.
- For each SPV, "waterfall model" for the priority of revenue sharing should be finalised and placed as an annexure to the SPV contract document.
- Participation in the umbrella SPV will not restrain SDC from taking part in any other SPV by any other state agency for the implementation of their sector-specific projects.

Annexure

Definition of residual projects

The mandate for the Sagarmala Development Company is to provide a funding window and/or implement only those residual projects that cannot be funded by any other means. These residual projects are typically those projects that are not getting implemented because of various issues but are critical and important for port-led development, with the non-completion of these projects hampering the capability of ports to work efficiently and effectively. By assisting the line ministries, ports, state governments/state maritime boards (SMBs) and SPVs in implementing these residual projects, the SDC shall significantly reduce the logistics cost, turnover time, pilferage, etc. and thereby the cost of conducting business at ports.

9. Actionable roadmap

- **Financing**

Topic	Suggested action points
Dollar-denominated loans	Learning from examples of JNPT and Mundra port; this can be emulated across other 11 major ports in the country with the potential of raising around INR 18,000 crore cumulatively based on present value (Exhibit 9). Specifically, during FY 2014, the Kolkata port trust and Paradip port had dollar-denominated revenues of more than INR 250 crore, making them the top contenders for raising the loans.
Project partnership with development banks	Indian major ports could also partner with Development banks to arrange for funding of Greenfield ports; port connectivity and port modernization projects. The funding is available as a grant or a long term loan which can enable development. Specific development which are present in India, and are willing to fund/support port projects.
Sub-programmes with a ring-fenced budget	To enable line ministries prioritise the implementation of projects and streamline coordination and monitoring of the Programme, the creation of a sub-programme under each key line ministry, especially Railways, MoRTH and DIPP, with a nodal officer within the respective ministry responsible for reporting and delivering these projects has been proposed. It is also suggested that a dedicated ring-fenced budget be carved out for implementation

- **PPP**

Topic	Suggested action points
Potential of state-owned ports/berths for PPP	As per an initial analysis, around 10 berths have the potential to undergo PPP in the next five to seven years through the revenue sharing models. The following three models may be considered for privatising the identified ports/berths, based on their suitability: ■ Viability gap funding (VGF): This model can be used if revenue form the berth is inadequate to service the capital expenditure. In such cases, VGF can be provided by the centre to make the berth PPP investment viable. This is commonly availed in BOT (Toll) projects of NHAI ■ Annuity: This model can be used to remove traffic and revenue risk for PPP projects. In such cases, (a) the port authority can pay a fixed semi-annual fee to the concessionaire to compensate for capital cost and operational expenses, along with an assured per cent age of returns. (b) Also, the concessionaire will not have the right to any charges levied on cargo. A variation of this model is the Hybrid Annuity Model of National Highways Authority of India under which a 40% capital support is provided and annuities are replaced by fixed cash flows that mirror developer cash out flows Management contract: In case a berth has no potential for PPP concession, it can enter into an O& M contract for operations management with O&M fees charged annually
Making PPP more effective	**Balanced risk-sharing between parties** ■ The concessioning authority could share the risk of incorrect or inadequate detailed project report

	if it results in cost and time overruns for the concessionaire ■ Delays in setting up road/rail connectivity could be compensated both through extending the concession period and recovering the damages payable Clauses may be introduced to renegotiate the revenue share payable to the concessioning authority, applicable in cases where traffic is below forecast consistently for five years due to reasons beyond the control of the concessionaire **Flexibility in CAs** ■ CAs may include a provision for renegotiation under specified cases ■ The assumptions for project design may be outlined clearly so that any changes over the project lifecycle can be identified and used as a trigger for renegotiation ■ The cap on amendments may be increased from 5 per cent of total project cost (TPC) for a single "change of scope" to 10 per cent and cumulatively during the concession period from 20 per cent of TPC to 40 per cent ■ A process could be established to review clauses in a timely manner in light of changing market scenarios **Facilitating more efficient execution** ■ Ensure accuracy and comprehensiveness in DPR preparation ■ Set up a Centre of Excellence in PPP that can assist with policy implementation and regulatory issues; enable research and development of sophisticated models in PPP; and provide training for government authorities in PPP project management ■ Set up a Facilitation Committee for inter-ministerial issues to help create alignment

	between state and central governments and different ministries and also to assist with timely clearances ■ Adopt project management best practices such as: – Obtaining EC before issuing requests for proposals – Ensuring that the majority of land is available before issuing RfPs and that the remaining land is made available before award of contract ■ Adopt best practices learnt from PPPs in highways such as: – A policy on one-time fund infusion by the National Highways Authority of India for languishing projects (on a case-to-case basis) – Rationalized compensation to concessionaires for delays which were not under the scope of activities covered by them prioritizing these various initiatives can transform the way PPPs operate in the ports sector.

■ **Policy recommendations**

Topic	Suggested action points
Reduction in taxes and duties for coastal shipping	Indian coastal shipping costs are relatively higher compared to international standards due to additional duties taxes and taxes levied on them. While the Ministry of Shipping has moderated the tax on seafarer's income; additional taxes such as tonnage, bunkering duty and service tax may be revisited/moderated for increasing the gap between cost of coastal shipping and other modes and bring it closer to the international benchmarks

Streamlining Customs processes	**Reduced manual intervention** – Develop a robust Electronic Signature (ES) module at the ICE GATE for submission of the hard copy – Activate all modules of ICE GATE especially the generation of rotation number and port clearance – Make provisions for submitting documents online with access to all concerned authorities including different ministries, regulators and ICD operators. Eventually move towards a port community system, e.g., the HAROPA system developed by SOGET in France, with integrated access to shipping lines, port authorities, Marine Department and Customs and Traders – Ensure qualified and committed manpower and infrastructure with Directorate General Systems in the Central Board for Excise and Customs (CBEC) to ensure robust automation of Customs clearance procedures ■ Classify fields into sensitive and non-sensitive, with the provision for modification of non-sensitive fields online without any permission from Customs or the need for resubmission ■ Use OCR technology to avoid paper form (Form 13) submission while still allowing tracking of vehicles and containers in and out of ports ■ Going forward, coastal and EXIM cargo should not be subject to the same rules for scrutiny and preference. The benchmarking should be done based on international examples, such as the Port of Antwerp, where coastal and EXIM cargo are segregated in a manner similar to airports.
Coastal regulatory zone policy	Coastal regulations are currently followed indiscriminately and are applied to both the East and West coasts with no differentiations made on the basis of geography and severity of cyclonic activities. It is,

	therefore, recommended that CRZ regulations are revisited on the basis of occurrences of tidal activity
Port land allocation policy	Based on the criteria followed by international ports, it is therefore recommended, that for selecting investors for industrial development of port land in India, may include total investment proposed, direct employment generated and environmental initiatives (no weightage in proposal) offered. The selection will be done on the basis of the weight awarded to a particular parameter: ■ Incremental cargo volume generated is given 50 per cent weightage ■ Five-year fixed assets investment: (a) Plant and machinery; (b) Building and Civil, is given 35 per cent weightage ■ Direct employment generated, given 15 per cent weightage In the proposed policy change, the concession fee or lease payment for land parcels in the industrial zone will be a fixed market-linked fee with no premium or bidding. The minimum rate will be benchmarked to current rates in the nearest industrial centre under a particular state industrial development corporation, e.g., SIPCOT and MIDC. Other factors to be considered for final land rates will include location in the industrial zone and present condition of the site.

- **Port led industrialization**

Topic	**Suggested action points**

Interventions/policy changes to be initiated by Govt.	**Manufacturing locations integrated with social and connectivity infrastructure:** ■ Access to land, skills, social facilities, urbanisation and an industrial base is important to gain momentum quickly. Most successful programmes get going with "pilot" CEU equivalents in established manufacturing areas, with existing, large container ports where land is available. For example, Shenzhen's proximity to Hong Kong helped provide it a strong start by attracting manufacturers from the region. ■ CEUs will distinguish themselves by their strong integration with ports. The master plan of the CEU could fully integrate the CEU with the Port through seamless physical connectivity. In addition, the CEUs shall also be integrated with ports in terms of documentation and IT systems. For example, the CEU could be a part of the Port Community System and has customs bonded status similar to SEZs, CFS' and ICDs. ■ An integrated master plan needs to be developed for each CEU including external infrastructure and port connectivity. The master plan could provide for urban access as well as word class social infrastructure to enable expatriate talent flow **Create land banks and leverage existing land parcels:** ■ Land acquisition easier for ~ 500-1000 acres; this needs to be balanced with minimum scale for identified industry clusters ■ States can be incentivized to acquire land through a challenge fund where Centre makes equity contributions to eligible projects; states can contribute land as equity ■ Finally existing land banks with central, state and private sectors can be leveraged to

	circumvent the time consuming process of land acquisition **Special administrative dispensation** ■ Based on benchmarking with Chinese and other SEZs, a special dispensation could be created for approved CEUs under each CEZ that result in "Ease of Doing Business" metrics that are comparable with world class standards. Some critical elements include approval and clearance processes, inspections, labor regulations, fiscal incentives and currency exchange and repatriation
Nodal agency for CEZ's	**Inter- ministerial committee for CEZ's** The formation of an inter-ministerial committee is suggested for implementing the CEZ programme. This proposed committee will comprise the Ministries of Commerce (DIPP), Shipping and Finance (Expenditure, DEA and Revenue), Railways and MoRTH. Concerned state governments and Ministries responsible for key bulk industries, such as chemicals and fertilisers, petroleum and natural gas, power, steel and cement could be special invitees
Industrial marketing cell dedicated to CEZ's	It will be best to have geography-focused teams that can prioritise relationship-building with the relevant priority investors or tenants and government agencies (Exhibit 46). It is suggested that an external consultant be hired on a retainer basis who can develop a roadshow and a branding campaign for the program. The efforts to attract investors for port-led industrial development can focus on four strategic levers: ■ Forums/events/exhibitions: The cell representatives to organise and participate in exhibitions, trade fairs and other events to improve visibility and increase networking opportunities.

	■ International offices for client development: Regularly interact with potential investors and key stakeholders through international offices and frequent visits to those offices. ■ Key account management: Have dedicated teams for key existing and potential clients to track and understand their future plans and potential opportunities. ■ Advertising on media: Conduct targeted promotions in well-read, reputed and relevant publications, choosing the right placement and timing of the promotions for maximum impact.
Ease of doing business	■ Simple policy and compliance regime: – Move from a "prescriptive" to a "compliance" regime for contracting and procurement – Institutionalise a mechanism to issue notices prior to the implementation – Leverage technology to remove overlaps and speed up compliance – "Learn by doing" using accelerators to simplify policies ■ Global supply-chain competitiveness: – Streamline trade clearance processes—ensure implementation through a risk based model – Enable participation in trade facilitation schemes – Rapidly adopt global product standards and best practices ■ Accessible and responsive governance: – Appoint a secretary-level empowered nodal officer for the top five investment sources or industries

	– Transform the government's project management and execution capabilities – Develop specialised talent and conduct rigorous performance management

- **Institutional architecture**

Topic	Suggested action points
Institutional architecture for delivering CEZ masterplan	A separate development entity needs to be created for the preparation and implementation of the masterplan for each CEZ. This includes the identification and project preparation of industrial clusters and coastal economic units that are within or proximate to ports. The programme should be driven by DIPP with the help of SDC. The SDC can bring in a port focus as well as some strategic land parcels near ports. The DIPP can contribute in its institutional capacity in developing industrial corridors
Immediate action points for CEZ development	■ Regulatory and governance enablers: – Include CEZs under DIPP/NICDA programme – Enter into shareholders' agreements with key states along the lines of DMIC – Amend the SEZ Act to include CEUs – Empower SPVs for land acquisition ■ Launch of first phase (priority CEZ projects) – Master plan for specific phases

	– Budgetary support and approval from relevant bodies

ANNEXURE TO THE REPORT

Case studies of major industrial developments in India

1. Sri City, Andhra Pradesh

Sri City is a privately owned and developed 7,000 acre integrated township comprising SEZ, FTWZ and DTZ areas and support facilities such as residential, commercial and social infrastructure. It is located in Andhra Pradesh. The following table gives information on its major features.

Sri City - Overview

Total area	~ 7,000 acres
Nearest city	Chennai (55 km)
Nearby highway	NH 5 / Chennai-Kolkata Highway (adjacent)
Proposed nearby infra	Chennai Bangalore Industrial Corridor
Project details	Integrated township comprising SEZ, FTWZ and DTZ areas and support facilities such as residential, commercial and social infrastructure.
Start date	2008
% land for industries	~70%
Target industries	Automotive, Engineering, Apparel & Fashion, Electronics H/W, Pharma, Food Processing, Renewable Energy, IT/ITES, Logistics & Warehousing & other ecofriendly industries
Target Population upon completion	150,000 (employment) 450,000 (resident population)

Currently, Sri City is under development and partly operational. Major tenants include Alstom, Kobelco, Lavazza, Control Components Inc, Amphenol, Venture, BFG, Al-Reyami/Rockworth.

Overview of land usage

Approx. 5,000 out of the total 7,000 acre in Sri City is intented to be used for different industrial developments under SEZ, DTA and multiple use zones.

Key Success Factors

The following factors have been vital in ensuring the success of Sri City:

1. Product offering

- **Developed infrastructure**: Common infrastructure such as internal roads and power and water supply are in place

- **Low cost land**: Sri City has been able to offer industrial land at much cheaper rates compared to competing locations in Chennai.
- **Single window clearance for approvals**: The Sri City management acts as the nodal agency and co-ordinates the approval process with the Government on behalf of its clients

2. Location and connectivity

- **Multi-modal connectivity**: Sri City is well connected by Road (NH 5, Tada – Tirupati Road), Rail (Tada station – 800 m) and Air (Chennai and Tirupati)
- **Krishnapatnam Port**: Proximity to the Krishnapatnam ports has given Sri City the advantage over Chennai. The Krishnapatnam port currently has handling capacity of 25 mn tonnes, which on completion by 2020 will increase to 100 mn tonnes. The Chennai port currently has a capacity of 55 mn tonnes, but high demand leads to delays

Challenges and learnings

Sri City has also had to overcome many challenges during the past 8 years. Some of the important ones are listed below

1. Slowdown in economy during 2008-09

- The global financial slowdown in 2008-09 happened as Sri City was getting launched and severely slowed down tenant interest in such developments
- However, with backing from private equity funding, Sri City was able to focus on developing the infrastructure
- This meant that once the demand picked up later, Sri City was able to market itself better, with ready infrastructure

2. Lack of skilled human resource in the vicinity; social infrastructure lacking to attract them as well

- Currently, skilled resource for the operational units in Sri City, especially for management roles is being sourced from Chennai and Nellore
- Lack of organized residential and social infrastructure (shopping, healthcare, education etc.) in the vicinity has held back employee interest
- Sri City is currently focusing on improving the soft infrastructure to tackle this, developing residential and social infrastructure

2. Case Study II - Mahindra World City, Chennai, Tamil Nadu

Mahindra World City Chennai is India's first integrated business city, established as a PPP venture between the Mahindra Group and TIDCO (Tamil

Nadu Industrial Development Corporation). It is spread across ~ 1,550 acres in Chengalpettu, about 60 km from Chennai. Currently, 60+ industrials customers (including Infosys, Wipro, BASF, Renault-Nissan, BMW, TVS Group and Capgemini) have been confirmed with 50+ currently operational. About 37,000 people are employed and 700 families reside within MWC Chennai.

Mahindra World City, Chennai – Overview

Total area	1,550 acres
Nearest city	Chennai (60 km)
Nearby highway	NH 45, Chennai Trichy Highway
Proposed nearby infra	Peripheral Ring Road
Developer	Mahindra World City (MWC) Chennai is a Public Private Partnership between the Mahindra Group (89%) and TIDCO (A Govt. of Tamilnadu undertaking, 11%)
Start date	2002
% land for industries	~75%
Target industries	IT, Auto ancillary, Textile
Target Population upon completion	~ 8,000 families

Current status: Currently operational; 95% industrial land leased, residential and social developments ongoing

Overview of land usage

MWC Chennai offers 4 products for industrial and residential use

Exhibit 67

Mahindra World City Chennai offers 4 products for industrial and residential use

1	**Sector specified SEZs**	▪ 420 acres dedicated to three sector specific SEZs with dedicated zones for IT (services and manufacturing), Auto ancilliaries, and Apparel and fashion accessories ▪ Tax benefits offered to units in SEZs
2	**Ready to move office space – Cybervale**	▪ A technology park, developed in partnership with Ascendas, with 1 Mn sq. ft. office space spread over 4 buildings spread over 18.5 acres ▪ Four companies, including Tech Mahindra, Mindtree, Helios and Matheson and Renault-Nissan have taken up the entire space
3	**Domestic tariff area**	▪ A 423 acre area with multiple tenancy formats, plug and play infrastructure, well connected road network and fail safe utilities to support any line of business
4	**Residential space**	▪ A 289 acre area planned to support ~8000 families across various segments with residential space and other social infrastructure which includes schools, hospitals, hotels, clubs, parks, community center etc.

SOURCE: Press search; MWC Jaipur website

Approx. 75% of the land area in Mahindra World City, Chennai is dedicated towards industrial zones – SEZ (IT, Apparel or Auto) and Domestic Tariff Area.

Exhibit 68

Overview of land usage – ~75% of the land area in Mahindra World City is dedicated for industrial activity

Area Acres (% of total)		Leased (%)	Details	Key tenants
IT SEZ	279 (25%)	100%	▪ Houses 16,000 software professional across 8 big names in IT industry	Capgemini, Infosys, Mindtree, Wipro
Auto SEZ	93 (8%)	100%	▪ SEZ harnesses natural advantages of the location being in proximity of a port	Mahindra, TIMKEN, TVS
Apparel SEZ	51 (4%)	100%	▪ A clean and green space with the best infrastructure for this industry	Manyavar, ROVERCO, Lunea Fashion, Capella
Domestic tariff area	423 (37%)	89%	▪ Conceived to cater to MNCs interested in setting up business in India	Mahindra, Parker
Residential and social infrastructure	289 (25%)	10%[2]	▪ Social infrastructure to support 8,000 families	
Total	1,135[1]			

1 Out of total land area of 1,558 acre, the saleable/leasable area is 1,135 acre 2. 700 units out of total expected 8,000 units have been sold

SOURCE: Press search, MWC website, Investor presentation

Key Success Factors

The following factors have been vital in ensuring the success of Mahindra World City Chennai

(i) Partnership with government

- Mahindra World City Chennai was developed as a PPP venture between Mahindra Group and TIDCO.
- This helped in accelerating the approvals and clearances process for the city as well as for individual tenants.
- The TN Government offered incentives to BMW (one of the early key tenants) to deter the automaker from going to Maharashtra.

(ii) Contracts were designed to avoid speculative investments by having clear terms on setting up of the facility and operations with prohibition on transfer of vacant land

(iii) Proximity to transport corridor and connectivity nodes

- Chennai (~ 60 km) connected via NH 45, Railway connectivity via Chengalpattu station (~ 10 km), proximity to Airport (Chennai international airport ~ 35 km) and Seaport (Chennai port ~ 60 km)

Challenges and learnings

Mahindra World City Chennai has also had to overcome many challenges during its development. Some of the important ones are listed below

(i) Long period of inactivity during initial development stage

- 8 years gap between start of land acquisition (in 1996) and signing of first tenant (in 2004)
- This period of inactivity saw early investors such as IL&FS (which had 38% stake) exit from the project

(ii) Changing economic conditions during early stages of development forced MWC to modify project scope

- To address MNCs' growing interest to enter Indian market, MWC changed its model to dedicate 50% of the industrial area to DTA (against full SEZ as planned)
- MWC also modified its offering in residential space to focus on affordable housing

Learnings from Shanghai Lingang Industrial Zone

The Shanghai Lingang Industrial Area was established in 2003 over an area of 315 sq.km. in Shanghai. Currently, it has more than 9,000 industrial units operating out of it in various sectors such as heavy equipment manufacturing, telecommunication, information technology and logistics services. The area has

industrial units established by such tenants as Shanghai Automobile Industry Corporation, Shanghai Electric, Siemens, Volvo, Caterpillar and Kalmar.

Overview – Lingang industrial Area

Location	Shanghai, China
Established	2003
Land area	315 sq.km
# of units	9,000+ enterprises operating in the industrial area
# of workers in manufacturing	N.A.
Sector focus	Multiple zones catering to different industries such as heavy equipment manufacturing, telecommunication, information technology and logistics services
Industrial Zones	6 development zones, each having a different set of target industries

Shanghai Lingang Industrial Area – Development zones

The Shanghai Lingang industrial area has 6 development zones, each having a different set of target industries. The following table gives information on the extent and key features of each of these zones.

Urban Area	68 km²
	Finance, trade, commerce, convention and exhibition, education, R&D and tourism
Heavy Equipment Manufacturing Zone	65 km²
	Technology-intensive industries including new energy, power equipment, large ship equipment, automobile and parts, offshore engineering, logistics engineering, construction equipment, civil aviation equipment as well as equipment remanufacturing
Compound Zone	41 km²

	Mix of industries and urban facilities including light manufacturing and services to producers with focus on telecommunication, information technology, photoelectron, electromechanical equipment, civil- aviation-related
Logistics Zone	16 km²
	Sub-area adjacent to the onshore part of the Yangshan Section of China (Shanghai) Pilot Free Trade Zone, aims to become a world-class logistics terminal for the coordinated development of port logistics, logistics services for industries and special-need logistics
Greater Industrial Zone	108 km²
	Extended area of the Heavy Equipment Manufacturing Zone as well as new major concentrated area for Emerging Industries of Strategic Importance such as civil aviation and new energy as well as services to producers
Fengxian Zone	17 km²
	Targets to become a comprehensive and self-operating industrial cluster and city in which the industries will correspond to those in the Heavy Equipment Zone, or high-end manufacturing, new energy, logistics and trade as well as commercial services

Shanghai Lingang Industrial Area – Incentives offered to investors

The Shanghai Lingang industrial area offers many incentives to its tenants to attract investments from industries globally. Broadly, these can be classified as financial (tax rebates, subsidies and grants), personnel (for attracting and retaining talent) and land related. The following table summarizes the major incentives offered by the area:

Financial	Special Industrial Development Fund Pool	Promote strategic, emerging industry projects, key technological transformation projects, energy-saving and emission-cutting projects
	Lingang Seed Fund and Lingang Industrial Fund	Promote industrial developments in Lingang
	Financial support for Development of Key Industries	Maximum 60% the fiscal contribution by equipment manufacturing industries to Pudong to be returned to facilitate their development
	Support for Strategic Emerging Industries	Projects that are recognised as national-level or municipal-level strategic emerging industry projects can enjoy an extra bonus of maximum 10% of the project's equipment investment
	Support for Key Technological Transformation, Energy Saving and Emission Cutting Projects	Eligible projects to earn extra bonus of maximum 10% of the awarded benefit from the Special Industrial Development Fund
	Support for Corporate Innovation	Eligible projects to earn extra bonus of maximum 10% of the awarded benefit from the Special Industrial Development Fund
	Support the Development of High-tech Companies	Lump-sum bonus of up to RMB 500,000 for eligible companies, products or projects
	Congregation of Innovation Participants	Lump-sum bonus of up to RMB 1 million for innovation participants recognised as at least a municipal-level public platform of services to R&D, a research institution, a strategic alliance for industrial and technological innovation, or a testing and certification organization
	Encourage the Growth of Modern Service Industries	Lump-sum bonus of up to RMB 500,000 for a project recognized as a municipal-level key service sector project
	Plan and Build Central Business	Lump-sum bonus equal to an amount from 10%-30% of the property investment to

	Districts In the Main Urban Area	accommodate corporate headquarters, industrial associations and financial institutions
	Encourage Setting up Corporate Headquarters	Basket of subsidy including a maximum RMB 10 million for office rent subsidy and a maximum RMB 2 million for property management fee subsidy
	Industrial Associations and other Civil Organisations	Basket of subsidy including a maximum RMB 1 million for subsidizing office rent and a maximum RMB 300,000 for subsidizing property management fee
Personnel	Housing benefits, elderly care, relaxed border entry and exit	Fixed price apartments and public leasing apartments are being developed in Lingang area
		Corporate pension programme and occupation pension programme for Elderly care
		Relaxed Border Entry and Exit Management for professionals working in the public sector
		Incentives for eligible important talents and influential professionals
Land	Lower Land Acquisition Cost for Investors	Policy controlled land costs to ensure Lingang's competency
	Flexible Use Right Assignment for Industrial-Use Land	Investors are offered flexibility of land lease duration for industrial use land varying from 10-50 years, with price being determined by evaluation, depending on the duration

Shanghai Lingang Industrial Area – Key Success factors

The following table summarizes the key factors that contributed to the success of Shanghai's Lingang industrial area

Location	**The area is located between the Shanghai Pudong International Airport and Yangshan Deep-Water**

	Port. Its unique geographical location and the expressway network around bring convenient traffic to the containerized shipment of Shanghai Lingang Area
Infrastructure Support	The Langing Industrial Area has **excellent physical and social infrastructure support to back the industrial developments** - Metro Line 16, bus line systems, High-quality Education, Medical Care and other Essential Services, service station integrating all government functions
Policy and Incentives	The tenants were offered the policy support on project planning, project approval, enterprise establishment and talent introduction. By offering **financial, personnel and land incentives**, the administration succeeded in attracting strategically important industries and the best talent towards the development
Industrial factors	Lingang industrial area has 6 zones focusing on different strategically important industries, thus ensuring an overall and integrated development. The administration also succeeded in developing an ecosystem model of development - industrial clusters were established which would comprise of a large anchor tenant along with their complementing upstream and downstream partners. The administration has so far succeeded in establishing about 200 such clusters

Learning's from Jiangyin Harbour Economic Development District

The Jiangyin Harbour Economic Development District was established in the year 2006 in Jiangyin near Shanghai. It is spread over an area of 188 sq.km. and has more than 8,000 units operating out of it. It has 4 industrial parks/zones, each dedicated to a different industry sector.

Development zone

The following table indicates the different zones that are part of the Jiangyin Harbour Economic Development District:

Comprehensive industrial district	38.3 km²
Port logistics area	17.8 km²

Chemical industry area	13.3 km²
Comprehensive area (including public service facilities, residential area)	15.3 km²
Living quarters	14 km²
Biological reserve	47.2 km²

Incentives offered

The Jiangyin Harbour Economic Development District offers different incentives to its tenants to attract investments from industries across the globe. Major ones among them are listed below:

- Reduced corporate income tax rates for high-tech enterprises
- Limited period tax rebate for newly-established regional headquarters
- Limited period offices and apartment support for eligible scientific talent
- Supporting funds ranging from RMB 1 - 5 million to be granted to eligible scientific projects according to the project's total investment
- Special funds to provide financial support for tenants from emerging industries

Key Success Factors

The following are the key factors that contributed to the success of the Jiangyin Harbour Economic Development District

Location and connectivity

- Located on the Yangtze River Delta, one of the most developed regions in China
- Important transport hub connecting the areas in the south and north of the Yangtze River
- Well connected by Rail (Xinchang and Zhennan railway), Expressways (Jinghu, Huning and Yanjiang expressways), Air (Changzhou Benniu Airport, Wuxi Shuofang Airport and Shanghai Pudong International Airport) and port (Jiangyin—Shanghai Waigaoqiao/Yangshan Port)

Personnel and social infrastructure

- Jiangyin's educational infrastructure comprises 7 colleges and universities, 8 national key schools, 32 vocational colleges and training centers, 143 scientific research institutes in all the fields, 8 post-doctoral research stations - this ensures ready availability of talent for the industries

- Additionally, Jiangyin also has well developed residential, healthcare and urban infrastructure such as public transportation and open parks

Incentives

- Incentives and funds are offered to tenants such as reduced corporate income tax, tax rebates of upto 100% and special funds to provide financial support