

ODISHA ECONOMIC CORRIDOR

PROPOSAL FOR NICDIT



Odisha Industrial Infrastructure Development Corporation

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1 Executive summary

Odisha Economic Corridor (OEC) is the third phase of East Coast Economic Corridor (ECEC) and it links up with and continues further as the Visakhapatnam-Chennai Industrial Corridor (VCIC) and the Chennai-Kanyakumari Industrial Corridor (CKIC). OEC envisions port-led development under the Sagarmala initiative. It is expected to not only improve industrial infrastructure in select districts of Odisha but also to support manufacturing-led growth of the State. Apart from an ambitious industrial infrastructure program, the corridor development involves developing skills; creating an attractive regulatory environment; bringing in new investments; nurturing existing businesses to grow and create much-needed jobs.

OEC will build on the current aspirations of the state as they relate to industrial growth and will position the state as a manufacturing hub as defined under the Odisha Industrial Development Plan, 2025 (OIDP 2025). The vision document was planned for industrial development of Odisha with an enabling policy framework, skills development plan, and infrastructure facilities to help achieve the desired outcomes by 2025.

The OEC and the corridor development revolves around development of nodes. Two nodes have been short-listed for the corridor through an assessment framework. The identified nodes are Gopalpur, Bhubaneswar Kalinganagar (GBK) and Paradip – Kendrapada – Dhamra – Subarnarekha (PKDS). Factors such as land availability and distances from large cities, highways, and ports have been used to prioritize the two nodes of GBK and PKDS. These nodes have the key urban areas of Bhubaneswar and Cuttack.

The land parcels in each node have been identified. Node 1 – GBK has a total land of around 6,153 acre and Node 2 – PKDS comprises of around 10,558 acres of land. IDCO has identified certain infrastructures to be executed in each node for external and internal

connectivity to make these nodes industry friendly and provide a ready-made plug and play platform for investment.

- Total infrastructure development cost in **GBK Node** is estimated to be Rs. 1,963 Cr, wherein the external infrastructure is to be developed with Rs. 574 Cr and cost of internal infrastructure is Rs. 1,389 Cr.
- Total infrastructure development cost in **PKDS Node** is estimated to be Rs 2,478 Cr, wherein the external infrastructure is to be developed with Rs 740 Cr and cost of internal infrastructure is Rs 1,738 Cr

Funding for the development of various components of the proposed Nodes will be sourced from diversified agencies. It will comprise of active involvement of the State government along with support from NICDIT, external debt-providing agencies and private sector. Source of fund for specific component will vary based on the nature of the component and priorities and/or guidelines of the funding source. For some components the funding may be from a combination of more than one sources, as per requirement.

The below table provides a proposed funding option for the two nodes.

S. No.	Project Component	Funding Source				
		Government of Odisha	NICDIT	External debt-agencies	Private sector	Other GoI / GoO Schemes / Agencies
1	Land contribution	✓	X	X	X	X
2	In-node infrastructure	X	✓	✓	✓	X
3	External infrastructure	X	X	X	X	✓

The below table provides a proposed funding pattern for the two nodes.

S. No.	Project Component	Funding Source				
		Government of Odisha (Rs Cr)	NICDIT (Rs Cr)	External debt-agencies (Rs Cr)	Private sector (Rs Cr)	Other Gol / GoO Schemes / Agencies (Rs Cr)
1	Land contribution	2,064	X	X	X	X
2	In-node infrastructure	X	3,127			X
3	External infrastructure	X	X	X	X	1,314

S. No.	Project Component	Funding Pattern					
		Government of Odisha (Rs Cr)	% contribution	NICDIT and other sources (Rs Cr)	% contribution	Other Gol / GoO Schemes / Agencies (Rs Cr)	% contribution
1	Land contribution	2,064	32%				
2	In-node infrastructure			3,127	48%		
3	External infrastructure					1,314	20%

The table mentioned below depicts proposed funding contribution from various sources.

SI No	Source of Funding	Amount of contribution (Rs Cr)	% contribution
1	Government of Odisha	2,064	32%
2	NICDIT and other sources	3,127	48%
3	Other Gol / GoO Schemes / Agencies	1,314	20%
Total cost of project for both the Nodes		6,505	100%

Key industrial sectors along these nodes have been prioritized based on Business-as-usual (BAS) scenario and Business-induced scenario (BIS). For each of the shortlisted industries, industrial output (in value terms), investment, land and employment demand were assessed. In BIS scenario the corridor is expected to see investments of INR 81,000 crore, leading to an output of INR 4 lakh crore and creating an additional 8 lakh direct jobs by 2045.

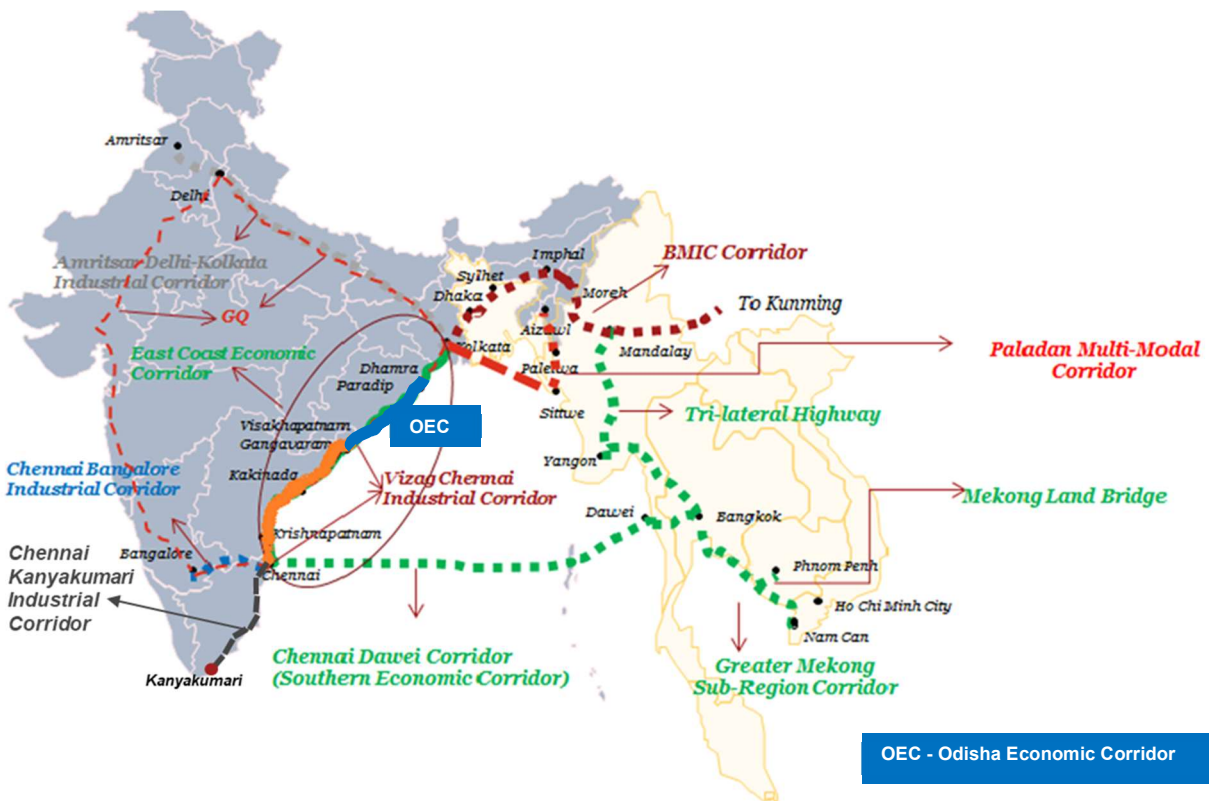
This document provides a list of projects that have been identified for funding which are falling in the respective nodes. The potential demand for development of investment

regions in Odisha is the key factor that validates the operationalization of the OEC. The corridor aligns with various schemes of Government of India like Smart Cities, AMRUT, Sagarmala and Bharatmala. Along with this, funding support from National Industrial Corridor Development and Implementation Trust (NICDIT) will play a very crucial role in the development of the priority nodes along the OEC corridor.

2 Introduction - The Odisha Economic Corridor

Odisha Economic Corridor (OEC) is envisaged as the third phase of East Coast Economic Corridor (ECEC) which links up with and continues the Visakhapatnam-Chennai Industrial Corridor (VCIC) and the Chennai-Kanyakumari Industrial Corridor, implemented under Phase I and Phase 2 of ECEC, respectively. OEC envisions port-led development under the Sagarmala initiative and is expected to not only improve the state of infrastructure in Odisha and diversify the industrial mix, but also to link the manufacturing sector in Odisha with national supply chains and global value chains in East and Southeast Asia. Apart from an ambitious industrial infrastructure program, the corridor development involves developing skills; creating an attractive regulatory environment; bringing in new investments; and nurturing existing businesses to grow, innovate, and create much-needed jobs.

Figure 1 OEC, part of the ECEC



The corridor's influence area has been defined as the area lying within a buffer line of 100 km on either side of the Kolkata - Chennai NH-16 in Odisha. The spine for the OEC has been identified based on an analysis of the existing network of transportation modes and infrastructure cutting across the state; the primary one being NH-16, which is part of the Golden Quadrilateral road network. In addition, four districts (three north-western districts and one central district) that fall outside the 100-km benchmark yet have significant influence on the industrial development of the state have been included within the influence area. This results in the coverage of 20 of the state's 30 districts, which contribute nearly 82% of GSDP.

OEC will build on the aspirations of the state as they relate to industrial growth and will position the state as a manufacturing hub as defined under the Odisha Industrial Development Plan, 2025 (OIDP 2025). The vision document sets the plan for industrial development for Odisha while proposing an enabling policy framework, skills development plan, and infrastructure facilities to help achieve the following desired outcomes by 2025:

- i. Creation of an additional 30 lakh jobs with an investment of INR 2.5 lakh crore, while positioning Odisha as a leader in manufacturing in eastern India;
- ii. Attainment of a top three ranking among all states in the country in terms of ease of doing business;
- iii. Adoption of a pro-business stance and promotion of Odisha as a destination for investment; and
- iv. Transformation of Bhubaneswar into one of the top three start-up ecosystems in the country.

OEC is expected to play a key role in promoting manufacturing competitiveness in the corridor, facilitate in plugging Odisha into GVCs and global production networks, and enable the state to go beyond achieving the goals set under OIDP 2025. It may also provide further impetus to India's Act East Policy and promote regional integration with the economies of East and Southeast Asia. Odisha's location on the east coast of India and the presence of three ports provides the state easy access to ASEAN countries,

facilitating trading opportunities within the Asia-Pacific region. These factors are expected to help Odisha grow into a major hub and facilitate trade with the ASEAN countries.

The Government of Odisha is looking to develop the chemicals and petrochemicals sector since there is potential for growth in the industry. There was a 150% increase in the value of chemicals exports from Odisha in 2014-15 and 2018-19. A Petroleum, Chemicals, and Petrochemicals Investment Region (PCPIR) is being developed in Paradip with world class infrastructure and a conducive business environment to promote and attract exclusive investments in the chemicals and petrochemicals sector.

It has the added advantage of being near the Paradip Port, which is one of the largest ports in the country for freight cargo. To support development of the chemicals and petrochemicals industries in the state, there are two LNG terminals planned, one at Paradip Port and the other at Dhamra Port, each with a handling capacity of 5 MMTPA. The terminal at Paradip Port is being developed by GAIL Limited; at Dhamra, it is being developed by Indian Oil Corporation Limited.

Hence, by 2045, the manufacturing output in the OEC will have a long-term multiplier effect of 2.5 times in the business-induced scenario from 2025. In the business-induced scenario the corridor is expected to see investments of INR 81 Thousand Crore, leading to an output of INR 4 Lakh crore and an additional 8 Lakh employment by 2045

Achieving these outcomes calls for development of supporting (urban, transport and power) infrastructure and implementation of policy & regulatory reforms that span across sectors. This includes development of the Smart Cities, implementing the AMRUT mission, Development of Multi-Modal Logistics parks etc. Implementing these interventions in a planned and efficient manner on ground will involve close coordination between multiple departments and agencies.

The key attributes of the corridor include

- i. 82% of Odisha's GSDP, with the highest concentrations of output in the eastern and northwestern districts (Khordha, Cuttack, and Sundargarh), which contribute 20% of GSDP;
- ii. 63% of the state's area and 75% of its population, with a share of the urban population at 19%;
- iii. Four ports at Balasore (Subarnarekha), Jagatsinghpur (Paradip), Bhadrak (Dhamra), and Ganjam (Gopalpur);
- iv. One International airport at Bhubaneswar;
- v. Developed industrial ecosystems in key sectors such as metallurgy (NALCO, SAIL, TATA, Jindal), coal (MCL, NTPC), machinery (L&T), petroleum and chemicals (IOCL), and basic metals;
- vi. Large-area developments like NIMZ and PCPIR planned in the corridor region; and
- vii. The largest urban center in the state and the AMRUT and SMART cities of Odisha.

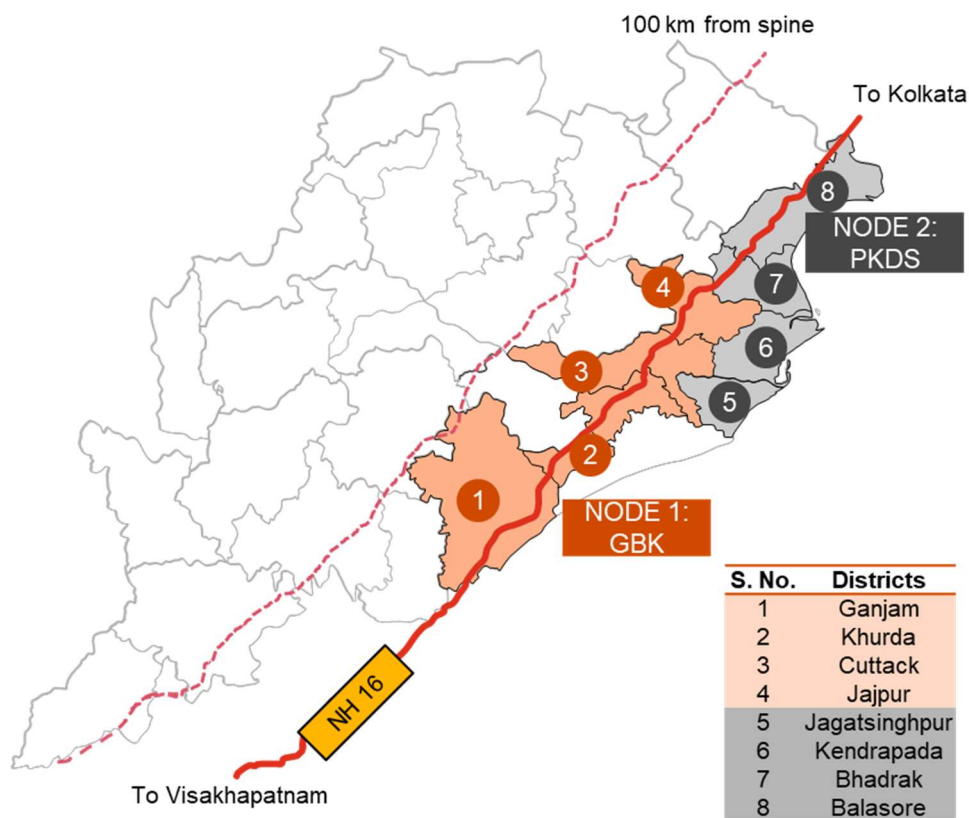
2.1. Node Development for OEC

To kick start the corridor, industrial nodes have been prioritized to anchor the corridor growth based on three parameters: a) Existing industrial infrastructure with proximity to port, b) Large scale priority industrial developments and c) Availability of land parcels with more than 100 acres. Accordingly, out of six nodes two have been prioritized. The two nodes are as follows:

- a) **Node 1: Gopalpur, Bhubaneswar Kalinganagar (GBK)** comprising the districts Ganjam, Khurda, Cuttack and Jajpur
- b) **Node 2: Paradip – Kendrapada – Dhamra – Subarnarekha (PKDS)** comprising the districts Jagatsinghpur, Kendrapada, Bhadrak, and Balasore

The total area identified under the two nodes is 16,712 acres.

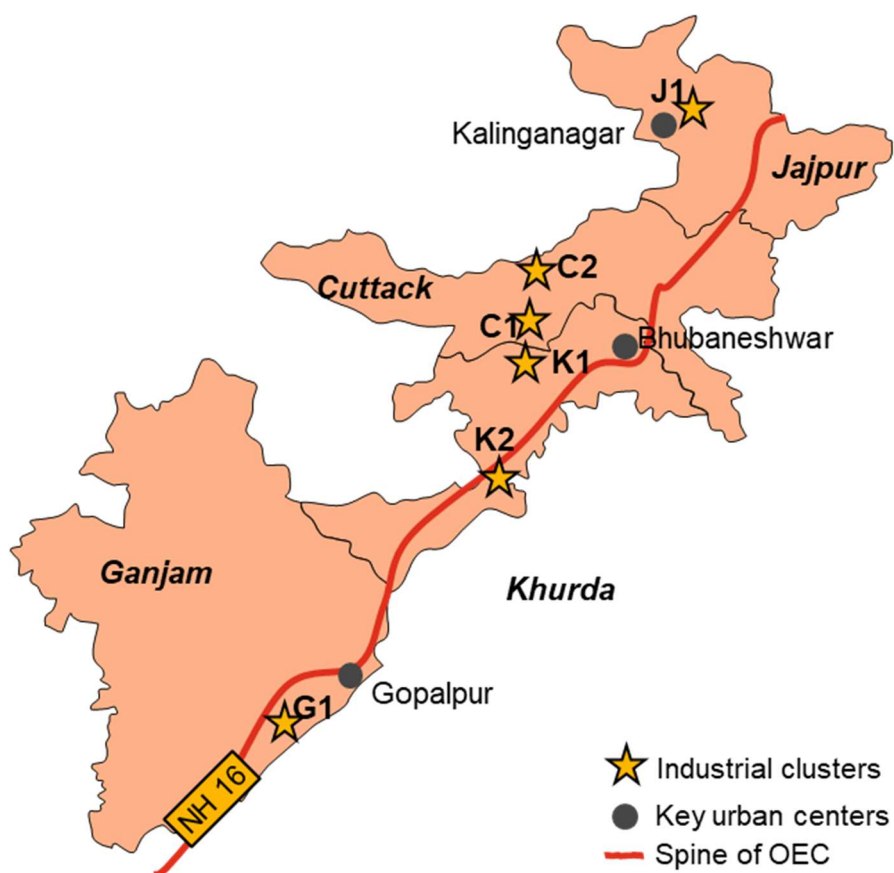
Figure 2 Nodes in OEC



Gopalpur, Bhubaneswar, Kalinganagar (GBK) Node:

The total area under this node is around 6,153 acres. The node comprises of four districts: Ganjam, Khurda, Cuttack, Jajpur. It is the most developed node in Odisha. It consists of the two largest urban centers of Odisha, Bhubaneswar and Cuttack. The node is well balanced in terms of presence of industries, agriculture, and urban centers. It is well connected through the road and railway network with proximity to Paradip as well as Gopalpur ports. The spine NH- 16 and the Howrah Chennai railway stretch passes through the node. There are other existing industrial parks also such as Information Technology Investment Region (ITIR) of 10,000 Acres, Khordha cluster and 40,400 acres in Kalinganagar National Investment & Manufacturing Zone (KNIMZ).

Figure 3 Gopalpur, Bhubaneswar Kalinganagar (GBK) Node

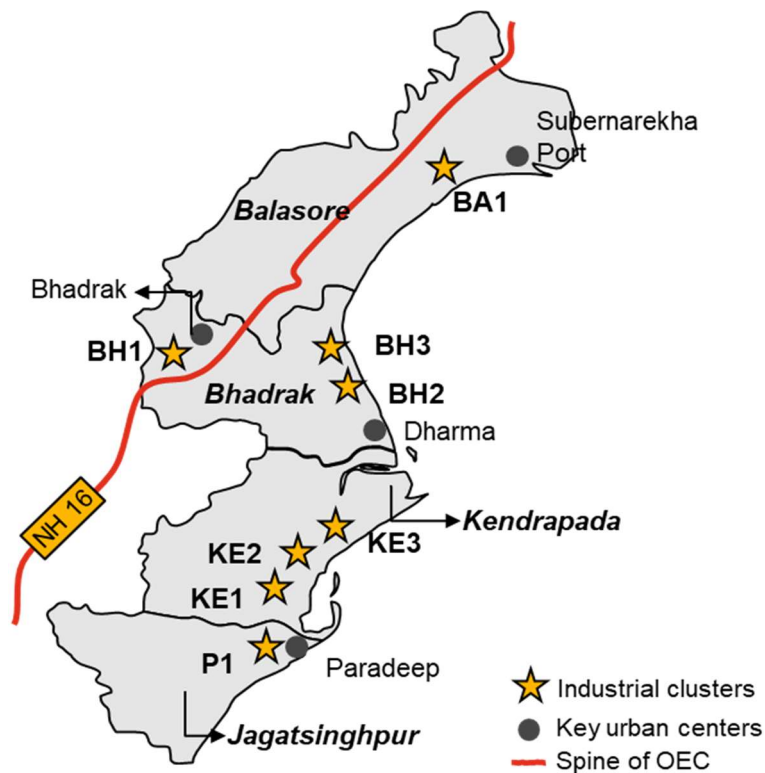


District	Industrial clusters	Area (acre)	Village	Dist. from NH 16 (km)	Dist. from Railway station (km)
Ganjam	G1	388	Phasinuapi	12	21
			Markandi	13	21
			Indrakhi	12	21
Khordha	K1	1,800	Malipada	0.5	11
			Infovaley	0.35	11
	K2	708	Mudamna	0.64	12
			Arang	3.5	12
Cuttack	C1	1,200	Ramdaspur	25	10
			Mundali	25	10
	C2	721	Nuagaon	25	20
Jajpur	J1	1,336	Golagaon	20	12
			Gobarghati	20	12
			Panchabati	20	12
Total area		6,153 acres			

Paradip – Kendrapada – Dhamra – Subarnarekha (PKDS) Node:

The node comprises of a total area of 10,558 acres. The major urban centers in the node are Bhadrak, Byasanagar and Balasore which are municipalities. The node is well connected with both road and railways. NH- 16 and the Howrah Chennai railway stretch pass through the node. The node has three ports in the corridor, Dhamra, Paradip and upcoming port Subarnarekha. It is gifted with iron ore reserves and houses six steel plants (JSL, Neelanchal Ispat Nigam Limited, VISA Steel, Maithan Ispat Ltd., MESCO Steel, and Tata Steel). With large scale area developments like Petroleum Chemicals & Petrochemicals Investment Region, PCPIR (area of 70,634 acres) and Dhamra Special Investment Region, SIR (area of 7,735 acres) in the development stage, the node is set to be the heavy industry hub for the corridor. The node is placed at an advantageous position with the availability of natural resources, existing heavy industries, upcoming mega industrial parks, and proximity to port gateway connectivity.

Figure 4 Paradip – Kendrapada – Dhamra – Subarnarekha (PKDS) Node



District	Industrial clusters	Area (acre)	Village	Dist. from NH 16 (km)	Dist. from Railway station (km)
Jagatsingpur	P1	4,128	Siju	5	30
			Pratappur	12	30
			Gobindpur	17	30
Kendrapada	KE1	440	Maladiha	10	10
	KE2	302	Sankhachit	20	10
	KE3	192	Munda Tala SK	24	10
Bhadrak	BH1	175	Majurigadia	0	18
			Pahimahur	0	17
			Helpur	0	17
	BH2	588	Narendrapur	40	50
			Gouraprasad	40	50
			Karanjamal	40	50

	BH3	1,174	Bideipur	40	47
Balasore	BA1	3,559	Jambhirei	30	40
			Narayanpur	30	40
			Aladiha	30	40
Total Area		10,558			

3 Infrastructure assessment of the two nodes

The industrial infrastructure is assessed at node level and as well as at the external level. Land parcels in the GBK node are located in proximity to both Bhubaneswar and Cuttack. It is also well connected to the Biju Patnaik International Airport, Odisha's only international airport. Land parcels in Khorda and Cuttack district enjoy the advantage of proximity to Bhubaneswar and would be preferable for industries in the IT and ESDM sector. The Paradip – Kendrapada – Dhamra – Subarnarekha (PKDS) node houses Paradip Port, Odisha's major port. Land parcels having strong connectivity to these gateways are ideal locations for the establishment of industries that are dependent on port- and airport-based cargo. Hence for Jagatsinghpur, it will be advantageous to port-led manufacturing units due to its proximity to Paradip Port.

In terms of road and rail connectivity, the nodes have strong road and rail linkages. However, last-mile connectivity to the highways and railway lines are provided by village roads for most of the land parcels and is nonexistent in some cases. This acts as a major bottleneck that impedes industrialization; the respective roads will need upgradation. It is also essential that low levels of water coverage and industrial water supplies should be taken care of, and the areas where industrial and IT clusters are located should be provided with adequate connectivity and supplies through means of supply augmentation projects. The project cost for infrastructure development as shared by Odisha Industrial Infrastructure Development Corporation (IDCO) is in the following sections.

3.1. Internal and external infrastructure assessment for Gopalpur, Bhubaneswar, Kalinganagar (GBK)

Table 1 Cost for infrastructure development in GBK node

Cost incurred for infrastructure development in GKB (Gopalpur-Bhubaneswar-Kalinganagar)						
		Ganjam	Khordha	Cuttack	Jajpur	Total
External Infrastructure	Land (in Acre)	388	2,508	1,921	1,336	6,153
	Cost of Land (in Cr)	21	788	144	392	1,345
	Road connectivity to Spine (In Cr)	18	6	20	30	74
	Rail connectivity (Rail siding) (Cr)	-	-	-	100	100
	Power (Cr)	100	100	100	100	400
Internal Infrastructure	Internal Road	16	100	76	54	246
	Power distribution n/w	40	110	100	80	330
	Water pipeline	35	120	80	80	315
	Workers' hostel	50	100	100	100	350
	SPV admin complex	8	50	40	50	148
Grand Total in Rs (Including cost of land)						3,308
Grand Total in Rs (Excluding cost of land)						1,963

Total land cost of GBK node is Rs. 1,345 Cr and the total infrastructure development cost is Rs. 1,963 Cr, wherein the external infrastructure is to be developed with Rs. 574 Cr and internal infrastructure is Rs. 1,389 Cr.

3.2. Internal and external infrastructure assessment for Paradip – Kendrapada – Dhamra – Subarnarekha (PKDS)

Table 2 Cost for infrastructure development in PKDS node

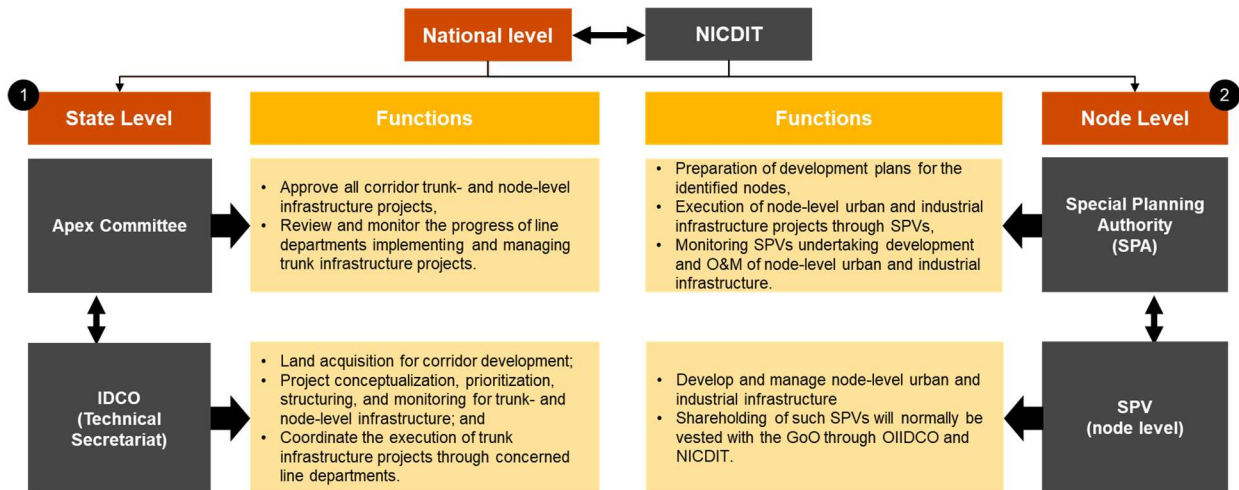
Cost incurred for infrastructure development in PKDS (Paradip – Kendrapada – Dhamra – Subarnarekha)						
		Jagatsinghpur	Kendrapada	Bhadrakh	Balasore	Total
External Infrastructure	Land (in Acre)	4,128	934	1,937	3,559	10,558
	Cost of Land (in Cr)	408	47	100	164	719
	Road connectivity to Spine (In Cr)	30	30	40	40	140
	Rail connectivity (Rail siding) (Cr)	-	200	-	-	200
	Power (Cr)	100	100	100	100	400
	Internal Infrastructure	Internal Road	140	40	75	120
Power distribution n/w		120	60	100	120	400
Water pipeline		120	60	80	100	360
Workers' hostel		100	70	95	100	365
SPV admin complex		90	28	40	80	238
Grand Total in Rs (Including cost of land)						3,197
Grand Total in Rs (Excluding cost of land)						2,478

Total land cost of PKDS node is Rs. 719 Cr and the total infrastructure development cost is Rs. 2,478 Cr, wherein the external infrastructure is to be developed with Rs. 740 Cr and internal infrastructure is Rs. 1,738 Cr.

4 Institutional structure for OEC

A 'Two-tier Institutional Framework' is being proposed to enhance the readiness for projects in OEC.

Figure 5 Institutional structure for Odisha Economic Corridor



4.1 State level

At the state level, an apex committee shall be constituted and will be chaired by the Chief Secretary, Odisha and have principal secretaries and secretaries of concerned departments as ex-officio members. The Apex Committee will be mandated to plan, develop, and manage industrial corridors in Odisha. It will approve all corridor trunk- and node-level infrastructure projects, review and monitor the progress of line departments implementing and managing trunk infrastructure projects. Odisha Industrial Infrastructure Development Corporation (IDCO) will function as the Technical Secretariat to the Apex Committee. IDCO will be additionally responsible for land acquisition for corridor development, project conceptualization, prioritization, structuring, and monitoring for trunk- and node-level infrastructure; and coordinate the execution of trunk infrastructure projects through concerned line departments.

4.2 Node level

At node level, a Special Planning Authority (SPA) shall be set up along with the Special Purpose Vehicle (SPV) which would identify projects that are required for the corridor based on importance and urgency. IDCO will be nominated as the “Special Planning Authority” for the Special Planning Areas with the mandate of planning, developing, and maintaining the nodes as integrated industrial–urban agglomerations. It will undertake activities such as preparation of development plans for the identified nodes, execution of node-level urban and industrial infrastructure projects through SPVs, monitoring SPVs undertaking development and O&M of node-level urban and industrial infrastructure. This would ensure that there are no delays in the implementation of projects, would enable efficient decision making and would also enhance the readiness of the OEC project in general.

4.3 Node level SPV

The node-level SPVs will be constituted by IDCO to develop and manage node-level urban and industrial infrastructure. Shareholding of such SPVs will normally be vested with the Government of Odisha through IDCO in the form of a land contribution and NICDIT, with the contribution of NICDIT to the node-level SPV in the range of INR2,500–3,000 crore in line with Department for Promotion of Industry and Internal Trade (DPIIT) guidelines.

The National Industrial Corridor Development and Implementation Trust of the Government of India can be offered an equity stake in the special purpose vehicles in return for partial funding towards node development.

5 Funding strategy for the identified nodes

Funding for the development of various components of OEC will be sourced from diversified agencies. It will comprise of support from the State government along with support from NICDIT, external debt-providing agencies and private sector. Source of fund for specific component will vary based on the nature of the component and priorities and/or guidelines of the funding source. For some components the funding may be from a combination of more than one sources, as per requirement.

Table 3 Mapping of corridor components and funding sources

S. No.	Project Component	Funding Source				
		Government of Odisha	NICDIT	External debt-agencies	Private sector	Other GoI / GoO Schemes / Agencies
1	Land contribution	✓	X	X	X	X
2	In-node infrastructure	X	✓	✓	✓	X
3	External infrastructure	X	X	X	X	✓

Table 4 Funding from various sources for corridor development

S. No.	Project Component	Funding Source				
		Government of Odisha (Rs Cr)	NICDIT (Rs Cr)	External debt-agencies (Rs Cr)	Private sector (Rs Cr)	Other GoI / GoO Schemes / Agencies (Rs Cr)
1	Land contribution	2,064	X	X	X	X
2	In-node infrastructure	X	3,127			X
3	External infrastructure	X	X	X	X	1,314

Table 5 Proposed funding pattern from various sources for corridor development

S. No.	Project Component	Funding Pattern					
		Government of Odisha (Rs Cr)	% contribution	NICDIT and other sources (Rs Cr)	% contribution	Other Gol / GoO Schemes / Agencies (Rs Cr)	% contribution
1	Land contribution	2,064	32%				
2	In-node infrastructure			3,127	48%		
3	External infrastructure					1,314	20%
SI No	Source of Funding		Amount of contribution (Rs Cr)		% contribution		
1	Government of Odisha		2,064		32%		
2	NICDIT and other sources		3,127		48%		
3	Other Gol / GoO Schemes / Agencies		1,314		20%		
Total cost of project for both the Nodes			6,505		100%		

Table 6 Funding from various sources for GBK Node

S. No.	Project Component	Funding Source				
		Government of Odisha (Rs Cr)	NICDIT (Rs Cr)	External debt-agencies (Rs Cr)	Private sector (Rs Cr)	Other Gol / GoO Schemes / Agencies (Rs Cr)
1	Land contribution	1,345	X	X	X	X
2	In-node infrastructure	X	1,389			X
3	External infrastructure	X	X	X	X	574

Table 7 Proposed funding pattern from various sources for GBK Node

S. No.	Project Component	Funding Pattern					
		Government of Odisha (Rs Cr)	% contribution	NICDIT and other sources (Rs Cr)	% contribution	Other Gol / GoO Schemes / Agencies (Rs Cr)	% contribution
1	Land contribution	1,345	41%				
2	In-node infrastructure			1,389	42%		
3	External infrastructure					574	17%
SI No	Source of Funding		Amount of contribution (Rs Cr)		% contribution		
1	Government of Odisha		1,345		41%		
2	NICDIT and other sources		1,389		42%		
3	Other Gol / GoO Schemes / Agencies		574		17%		
Total cost of project for both the Nodes			3,308		100%		

Table 8 Funding from various sources for PKDS Node

S. No.	Project Component	Funding Source				
		Government of Odisha (Rs Cr)	NICDIT (Rs Cr)	External debt-agencies (Rs Cr)	Private sector (Rs Cr)	Other Gol / GoO Schemes / Agencies (Rs Cr)
1	Land contribution	719	X	X	X	X
2	In-node infrastructure	X	1,738			X
3	External infrastructure	X	X	X	X	740

Table 9 Proposed funding from various sources for PKDS Node

S. No.	Project Component	Funding Pattern					
		Government of Odisha (Rs Cr)	% contribution	NICDIT and other sources (Rs Cr)	% contribution	Other GoI / GoO Schemes / Agencies (Rs Cr)	% contribution
1	Land contribution	719	22%				
2	In-node infrastructure			1,738	54%		
3	External infrastructure					740	23%
SI No	Source of Funding		Amount of contribution (Rs Cr)		% contribution		
1	Government of Odisha		719		22%		
2	NICDIT and other sources		1,738		54%		
3	Other GoI / GoO Schemes / Agencies		740		23%		
Total cost of project for both the Nodes			3,197		100%		

Land acquisition will be undertaken by the Government of Odisha through its own resources. GoO's financial contribution in development of these two nodes is expected to be Rs. 2064 Cr. It is proposed that the funding from NICDIT for the development of infrastructure in the two nodes be Rs. 3125 Cr. This will be critical in developing the in-node infrastructure. There is a possibility that other sources may also be used to fund in-node infrastructure. Other corridor infrastructure refers to trunk infrastructure such as roads, transmission lines, port terminals etc. For such projects, in addition to external debt agencies and private sector, there may be a case to induct funding from GoI agencies such as NHAI. NICDIT's assistance will be crucial in establishing institutional, financing and operational framework for the development of OEC.

6 Economic impact and Outcomes

6.1. Economic outcomes based on development of prioritized focus manufacturing sectors

Based on the region’s resource strengths and locational advantages focus manufacturing sectors have been identified for the OEC corridor. The approach for selection of focus sectors for the state has considered both ODP 2025 and emerging industries based on global manufacturing trends. These trends have been juxtaposed with OEC’s strategic advantages, ODP vision to arrive at set of target sectors for future growth, to take advantage of the emerging manufacturing landscape and fulfill the vision of OEC as a coastal economic corridor with a competitive position in global production networks.

The final shortlisted focus sectors identified for OEC include Marine Food Processing, Fruits & Vegetable Processing, Auto and auto components, Aerospace and Defense manufacturing, Specialty Chemicals (paints, varnishes, Downstream Metals, Electrical Components & Consumer Durables and Textiles & Garments. The Government of Odisha has also enacted various sector specific policies to give a boost to these sectors and make them attractive in the OEC territory.

The set of shortlisted industries which were identified under these two steps, thereafter, have been assigned to two prioritized nodes within the identified corridor based on criteria that are essential for those industries, such as proximity to port, coast, source of raw materials, and existing ecosystems.

Figure 6: Prioritized focus manufacturing sectors for identified nodes



Based on the analysis of the shortlisted industries, land demand, output, investment and employment assessment were made for these industries. The assumptions used to arrive at these estimates have been placed in Appendix 1. Both the nodes have potential to generate about INR 4 lakh crore of manufacturing output, entice about INR 81 thousand crore of investments and create an additional 8 lakh of employment. Our calculations have been on a conservative basis. The summary of the estimates for the two prioritized nodes have been computed as indicated in Table 10.

Table 10: Summary of estimates for the two prioritized nodes

S. No.	Focus sectors	Nodes	Land required (acre)	Output (INR Cr)	Investment (INR Cr)	Employment (no.)
1	Food processing	GBK	645	35,377	3,415	40,973
		PKDS	860	47196	4555	54662
		Total	1,505	82,573	7,970	95,635
2	Apparel	GBK	228	5074	967	12572
		PKDS	304	6770	1290	16772
		Total	532	11844	2257	29344
3	Downstream metals	GBK	2,349	25,139	8,223	74,743
		PKDS	3135	33539	10970	99714
		Total	5,484	58,678	19,193	1,74,457
4	Specialty chemicals	PKDS	1,095	25,947	6,930	27,721
5	Downstream Electronics	GBK	234	19956	1670	13360
6	Electrical equipment	GBK	615	8820	1943	19861
		PKDS	820	26261	9963	106690
		Total	1,435	35,081	11,906	1,26,551
7	Capital Goods	PKDS	1,567	7,126	2,011	20,112
8	Auto and auto components	GBK	1,024	35,004	4,570	50,636
		PKDS	1,365	46,699	6,097	67,553
		Total	2,389	81,703	10,667	1,18,189
9	Defence manufacturing	GBK	1,059	36,046	7,033	77,361
		PKDS	1,413	48,096	10,972	1,09,722
		Total	2,472	84,142	18,005	1,87,083
Grand Total			16,713	4,07,050	80,609	7,92,452

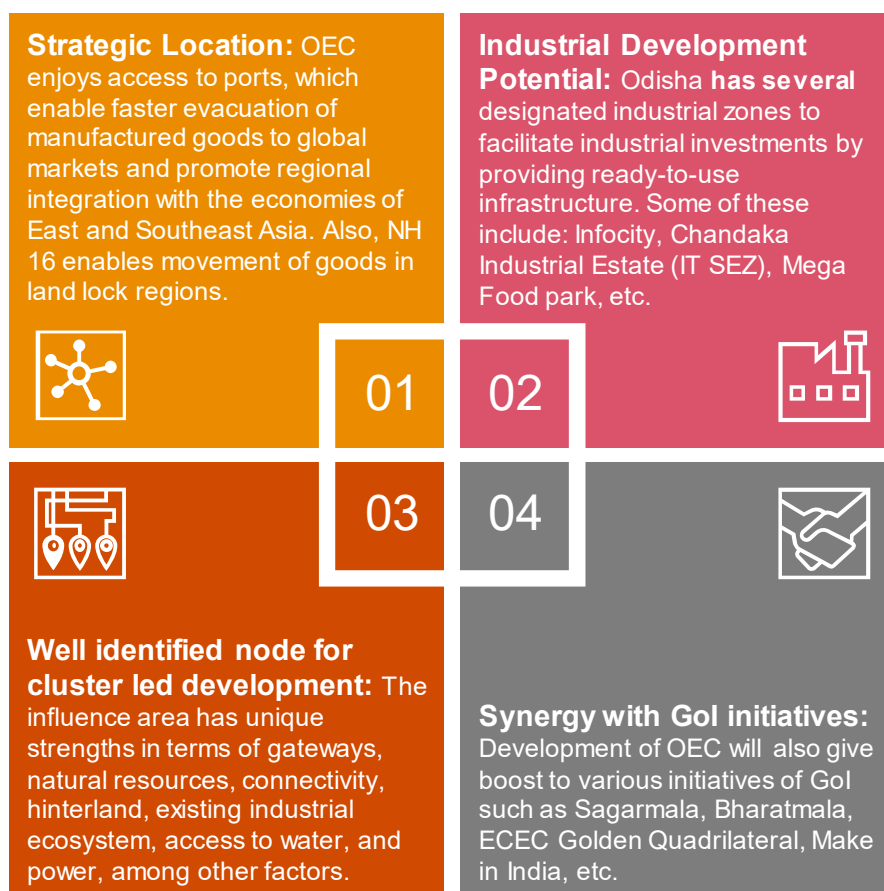
* Detailed sub sector wise estimates for GBK and PKDS nodes have been placed in Appendix 3

6.1.1. Key success factors for OEC

Odisha Economic Corridor (OEC) has unique strengths in terms of gateways, natural resources, connectivity, hinterland, existing industrial ecosystem, access to water, and power, among other factors. As a coastal corridor, OEC enjoys access to ports, which enable faster evacuation of manufactured goods to global markets, thereby opening new opportunities. The corridor supports port led industrialization, which envisages to play a sacrosanct role in promoting manufacturing competitiveness in the corridor, facilitate in plugging the state into GVCs and global production networks. It will also provide impetus to India's Act East Policy and promote regional integration with the economies of East and Southeast Asia.

Some of the key success factors for the seamless integration of various Gol projects among which OEC has a key link to bridge has been depicted below in the Figure 7.

Figure 7: Key success factors of OEC



Strategic location

- The corridor is envisaged to utilize an existing connectivity route—the national and state highways passing through the state along the India's east coast. NH-16 is the spine for the corridor. The national highway runs along the entire east coast of Odisha, covering a distance of 488 km. It links with crucial state highways NH-20, NH-49, NH-53, NH-55, NH-57, NH-157, NH-42, NH-326, and NH-215 for the movement of goods longitudinally through the corridor. The highway connects the state's major cities like Balasore, Bhadrak, Cuttack, Bhubaneswar, and Brahmapur. It also links the only international airport in the state. NH-16 connects the major ports and hinterland, providing the crucial link for raw materials and finished goods movement.
- The highway is predominantly 4-laned and at some portions is 6-laned. NH-16 extends south into VCIC and the Chennai–Kanyakumari Industrial Corridor and thus is the natural choice as the spine for OEC.
- 96% of chromite, 35% of iron ore and 53% bauxite deposits of India are in Odisha. To leverage on this advantage and encourage investments in the manufacturing sector, the State has envisaged this "National Investment and Manufacturing Zone (KNIMZ)" at Kalinganagar.

Industrial Development Potential

- Odisha has several designated industrial zones to facilitate industrial investments by providing ready-to-use infrastructure. A large number of industrial estates, industrial areas, IT parks, and theme parks have been established in different strategic locations in Odisha.
- Major industrial zones in Odisha include Infocity, Fortune Tower, IDCO Tower, Chandaka Industrial Estate in Khordah is an IT and ITeS SEZ developed by IDCO, Software Technology Parks of India has developed software technology parks at Bhubaneswar, Rourkela, and Berhampur, The Government of Odisha is planning to establish mega food parks in Bhubaneswar, Deogarh, and Rayagada to draw in more units from the food and beverages sector.

- The corridor has potential to generate over INR 20 trillion of manufacturing output (about 2.5 times), entice INR 8.1 trillion of investments and create an additional 1.4 million direct jobs by 2045.

Well identified node for cluster led development

- The influence area of the corridor was selected based on the following parameters: presence of key industrial areas, urban centers, resource areas, contribution to GDP, and the population impacted, among others.
- Total 20 districts are included with an area of 98,178 sq.km, GDP per capita INR 31,734 and 83% contribution to the state's GDP and which are rich industrial and mineral districts such as Angul, Keonjhar, and Jharsugud.
- All AMRUT and SMART cities in Odisha; and three gateways including the state's two largest ports (Paradip and Dhamra) and its lone international airport at Bhubaneswar (Biju Patnaik International Airport).

Synergy with Gol initiatives

- Development of OEC will also give boost to various initiatives of Gol such as Sagarmala, Bharatmala, ECEC Golden Quadrilateral, Make in India, etc. Some of these initiatives have been described below:
 - **East Coast Economic Corridor and Golden Quadrilateral:** The Odisha Economic Corridor (OEC) is part of the northernmost stretch of the East Coast Economic Corridor (ECEC) and also will join the golden quadrilateral.
 - **Sagarmala:** The Sagarmala program was launched in March 2015 to promote port-led development in India. OEC would give a huge boost to the vision of the Sagarmala program.
 - **Bharatmala:** The Bharatmala program is a centrally sponsored scheme for the development of highways in the country. As the corridor is envisaged to develop state of the art road connectivity, the OEC program will also give a boost to the Bharatmala program.
 - **Look East Policy:** The development of OEC will promote increased economic activity, regional cooperation and stronger ties with our East Asian neighbors giving a boost to Gol's Look East Policy.

- **Make in India:** One of the flagship programs of GoI, as OEC is expected to increase manufacturing output by 2.5 times in the corridor region, the OEC program will greatly boost the Make in India program by increasing production for both domestic and global markets.
- **Skill India:** Through the investments in OEC, it is expected to create about 30 lakh additional jobs in (i) agriculture and food processing, (ii) chemicals and petrochemicals, (iii) ESDM and IT and ITES, (iv) textiles, and (v) other downstream and ancillary industries. OEC could therefore potentially absorb the huge number of skilled workers, thereby contributing to the success of the program.
- **Startup India:** With the development of state-of-the-art infrastructure in OEC, a vibrant ecosystem will be fostered in the region. This would serve as an attractive destination for startups. Moreover, startups could greatly benefit from the positive 'cluster effects' that would be enabled due to the concentration of many industries in a dedicated area. The OEC therefore would be an attractive destination for startups, thereby boosting the Startup India program, and paving way for a strong industry led urbanization with industrial hubs becoming robust economic cities.
- **UDAN scheme** Under the Ude Desh ka Aam (UDAN) scheme, regional connectivity flights for Odisha's cities have recently been awarded funding to improve air connectivity. Cities getting the air connectivity are Utkela, Rourkela, Jeypore, and Jharsuguda. Out of the four airports, Rourkela and Jharsuguda fall within the corridor.

7 NICDIT's Collaboration in driving OEC

The discussion above highlights some of the factors that can lead to the success of OEC. In addition to these, the potential demand for development of investment regions in Odisha is the key factor that validates the operationalization of the OEC. The OEC will give a huge boost to the ECEC which falls under the phase 3 development. The establishment of OEC is not only expected to better the lives and create opportunities for people in the OEC region, but is also expected to give a push to various schemes of the Government of India such as Look East Policy, port-led industrialization (Sagarmala) etc. Moreover, by enabling world class manufacturing in export-oriented industries, it would help India increase its share in world trade and would also foster economic cooperation between India and other East and Southeast Asian countries.

For few projects in OEC such as development of ports or highways, funding can be tapped from other Government of India schemes such as Sagarmala and Bharatmala. The Smart City Mission and AMRUT mission enables the external infrastructure till the nearest city level. However, for the provision of internal infrastructure such as power, water, workers accommodation, internal roads, CETP plants, logistic hubs etc. the support from NICDIT is crucial for enabling the full functioning of the corridor and achieving the vision of OEC. For efficient node administration and to look after node-specific challenges Special Purpose Vehicles (SPVs) have been envisaged to be set up in each node.

The Government of Odisha has recently promulgated a new pragmatic Industrial Policy with several investor-friendly fiscal and non-fiscal benefits and incentives. It has been recognized as an 'Aspiring Leader' by the World Bank in terms of implementation of Ease of Doing Business reforms, ahead of a number of other industrially progressive States in the country. For investments under the identified projects, NICDIT can expect average returns ranging between 8-13%. As an example, in the Visakhapatnam node of the Vizag-Chennai Industrial Corridor the IRR has been estimated as 12.4%.¹

¹ for a period of 50 years where the land offtake has been considered to be 25 acres per year until 17 years and the weighted average cost of capital is assumed at 11.8%

The collaboration between OEC and NICDIT would not only be beneficial in terms of the mutual benefits that both the institutions could gain in terms of funding for completion of OEC and the returns that may accrue to NICDIT, but the synergies between the two would result in a long term partnership in creating millions of opportunities for the people of India, enhancing regional cooperation with other Asian countries and enhancing India's contribution to the global economy. It is proposed that the funding from NICDIT for the development of infrastructure in the two nodes be Rs. 3127 Cr

8 Conclusion

OEC is the third phase of ECEC aligns with port-led industrialization initiative, which seeks to develop India's economic strengths along its coastline by transforming ports, creating industrial clusters near the coast, and developing inland logistics infrastructure to facilitate the faster movement of goods. OEC will play a key role in promoting manufacturing competitiveness in the corridor, facilitate in plugging Odisha into GVCs and global production networks, and enable the state to go beyond achieving the goals set under ODP 2025. OEC's long coastline and strategic location provide an opportunity to develop multiple international gateways to connect India with global value chains.

To unlock the immense potential the state holds within, we have prioritized two nodes for development (i.e., GBK and PKDS), determined key industrial sectors and identified key infrastructure (internal and external) projects for improving the investment climate in the region. For achieving this ambitious sectoral growth, OEC needs to entice investments of INR 80,000 crores which will lead to an industrial output of INR 4 lakh crore and create an additional employment of 8 lakh. With the support of NICDIT, key interventions will focus on meeting the node level infrastructure requirements and execution of node-level urban and industrial infrastructure projects through suitable institutional and regulatory structure.

9 Appendix

9.1 Appendix 1: Benchmarks for Shortlisted industries in 2020-21

The data sources for estimating land productivity values have been taken from estimates from earlier studies, master planning documents, and other secondary sources of information including estimates derived from annual reports of major players and annual survey of industries (ASI). It is assumed that the land requirement might precede output generation by two years, which is assumed to be the construction/development period. Our calculation has been on conservative basis. The benchmarks for the year 2018- 2019 are mentioned in table below:

Table 11: Industry benchmarking

S. No.	Sector	Sub-sector	NIC CODE	Land area to Productivity	Land area to Investment	Investment to Employment
				INR Cr per acre	INR Cr per acre	Employee per Cr investment
1	Food processing	Processing of marine products	102	78	6	12
		Processing of fruits and vegetables	103	6	4	12
2	Specialty chemicals	Other chemical products (paints, agrochemicals, varnishes, etc.)	202	24	6	4
3	Downstream metals	Casting of metals	243	11	4	8
		Structural metal products	251	11	4	9
		Metal fabrications	259	11	4	10

4	Apparel	Wearing apparel	141	22	4	13
5	Auto and auto-components	Automobiles	291	34	5	14
		Automobile parts	293	34	4	8
6	Downstream electronics	Communication equipment & Consumer electronics	263, 264	85	7	6
7	Electrical equipment	Battery and accumulators	272	34	4	6
		Domestic appliances	275	10	3	10
8	Capital goods	General & Special purpose machinery	281, 282	31	7	10
9	Aerospace and Defence	Aerospace and defence related machinery & ammunition	252, 303, 304	15	7	11

9.2 Appendix 2: Availability of land parcels in the prioritized nodes

The total land for the prioritized nodes under Odisha Industrial Infrastructure Development Corporation (IDCO) is 16,712 acres. The details are as follows –

Table 12 Land details of the GBK Node

Land Details - Gopalpur, Bhubaneswar Kalinganagar (GBK) comprising of Ganjam, Khorda, Cuttack and Jajpur districts						
District	Village	Govt. land	Cost (In Crore)	Pvt Land	Cost (In crores)	Distance from NH (KM)
Ganjam	Phasinuapada	118.72	7.00	0.00	0.00	12 from NH 16
	Markandi	193.06	10.00	0.00	0.00	13 from NH 16
	Indrakhi	26.60	1.50	0.00	0.00	12.5 from NH 16
	Phasinuapada	50.05	3.00	0.00	0.00	12 from NH 16
Khordha	Mundamba	376.560	25.25	0.00	0.00	0.64 from NH16
	Lahanga	198.290	1.33	0.00	0.00	0.10 from NH16
	Arang	251.865	16.90	0.00	0.00	3.55 from NH16
	Mallipada	343.565	23.00	0.00	0.00	0.50 from NH16
	Niala	212.773	14.27	0.00	0.00	4.00 from NH16

	Daspur	127.710	76.63	0.00	0.00	7.00 from NH16
	Champajhar	25.000	5.00	0.00	0.00	1.45 from NH16
	Infovalley	700.000	455.00	0.00	0.00	0.35 from NH16
	Bisiapada	24.000	1.60	0.00	0.00	15.00 from NH16
	Chhatabar	11.950	7.17	0.00	0.00	4.89 from NH16
	Mukundaprasad (Pvt)	0.000	0.00	26.79	23.00	0.05 from NH16
	Olasing	13.023	5.21	0.00	0.00	15.00 from NH16
	Giringaput	60.405	36.24	0.00	0.00	7.50 from NH16
	Pitapali	11.565	6.93	0.00	0.00	0.10 from NH16
	Ratanpur	60.005	36.00	0.00	0.00	2.80 from NH16
	Gramadihi	26.113	15.67	0.00	0.00	1.9 from NH16
	Kholadwar	25.000	15.00	0.00	0.00	3 km from NH16
	Gothapatna	40.000	24.00	0.00	0.00	2 km from NH16
Cuttack	Dulanpur	100.000	6.71	0.00	0.00	50 km from NH-5
	Indranipatna	56.830	3.81	0.00	0.00	Near NH-42

	Ramdaspur I/E	390.770	26.20	0.00	0.00	25 Km from NH-5
	Govindapur	3.000	0.20	0.00	0.00	23 Km from NH-5
	Talagarh	7.013	0.47	0.00	0.00	25 Km from NH-5
	Naraj-Marthapur	0.00	0.39	0.00	0.00	25 Km from NH-5
	Mundali	0.00	2.68	0.00	0.00	25 Km from NH-5
	Nuagaon	0.00	2.58	0.00	0.00	25 Km from NH-5
	Nuagaon	0.00	0.00	198.87	8.88	25 Km from NH-5
	Talagarh	0.00	0.00	209.64	21.76	25 Km from NH-5
	Mundali	0.00	0.00	255.104	18.55	25 Km from NH-5
	Naraj-Marthapur	0.00	0.00	116.47	11.78	25 Km from NH-5
	Bramanabasta	0.00	9.48	0.00	0.00	2 Km from NH-42
	Bamanpur	0.00	1.25	0.00	0.00	2 Km from NH-42
	Brahmanbasta	0.00	0.00	202.27	2.79	2 Km from NH-42
	Bamanpur	0.00	0.00	132.813	1.60	2 Km from NH-42
	Rahangol	0.00	11.76	0.00	0.00	5 Km from NH-42

	Kakhadi	0.00	0.03	0.00	0.00	5 Km from NH-42
	Dalua	0.00	0.48	0.00	0.00	5 Km from NH-42
	Khanduali	0.00	0.27	0.00	0.00	5 Km from NH-42
	Kandarai	0.00	0.12	0.00	0.00	5 Km from NH-42
	Dalua	0.00	0.00	41.7	0.23	5 Km from NH-42
	Khanduali	0.00	0.00	64.35	0.56	5 Km from NH-42
	Rahangol	0.00	0.00	66.49	0.50	5 Km from NH-42
	Kandarei	0.00	0.00	75.94	0.40	25 Km from NH-5
	Bhagipur	0.00	3.89	0.00	0.00	25 Km from NH-5
	Bishnupur	0.00	3.41	0.00	0.00	50 Km from NH-5
	Naranpur	0.00	1.43	0.00	0.00	10 Km from NH-5
	Dadhapatna	0.00	2.14	0.00	0.00	15 Km from NH-5
District	Village	Non-Forest land & Land cost	Forest land & land cost	Private land	land cost (pvt land)	Distance from NH (KM)
Jajpur	Chandia	0.00	0.00	66.45	16.61	Approx. 20 KM
	Badasulidihi	0.00	0.00	13.10	3.28	

Golagoan	0.00	0.00	25.64	6.41	distance from NH-20 (Panikoili to Duburi) & Approx. 2 KM distance from NH-53 (Chandikhoh to Duburi)
Baliposi	0.00	0.00	0.46	0.12	
Pankapal	0.00	0.00	4.38	1.10	
Panchabatia	0.00	0.00	142.80	35.70	
Balungabandhi	0.00	0.00	1.29	0.32	
Jakhapura	0.00	0.00	64.49	16.12	
Golagaon	0.00	0.00	163.87	40.97	
Gobarghati	0.00	0.00	205.03	51.26	
Gobarghati	0.00	0.00	76.61	19.15	
Nimapalli	0.00	0.00	13.60	3.40	
Gobarghati	0.00	0.00	5.98	1.50	
Chandia	0.00	113.68 / 28.42	119.95	29.99	
Jakhapura	2.99 / 0.75	314.04 / 78.51	77.99	19.50	
Kacherigaon	4.57 / 1.14	3.29 / 0.82	55.75	13.94	
Dasamania	4.98 / 1.25	2.66 / 0.67	85.34	21.34	
Mangalpur	0.00	0.45 / 0.11	0.00	0.00	

Table 13 Land details of the PKDS Node

Land Details - Paradip – Kendrapada – Dhamra – Subarnarekha (PKDS) Node					
District	Village	Non-Forest Govt land & Diverted forest land	Land cost (In crores)	Pvt Land	Cost (In crores)
Jagatsinghpur	Rangiagarh	10.44	0.42	125.57	19.94
	Kathada	2.18	0.09	9.18	1.60
	Siju	14.65	0.59	300.40	46.08
	Katakula	0.00	0.00	16.02	2.75
	Fatepur	25.21	1.01	86.64	125.61
	Pratappur	33.42	1.34	635.65	93.70
	Nuagaon	736.10	29.44	0.00	0.00
	Jatadhara	313.19	12.53	0.00	0.00
	Polanga	325.70	13.03	0.00	0.00
	Bhuyanpul	31.69	1.27	0.00	0.00
	Noliasahi	48.20	1.93	0.00	0.00
	Bayanalakhan	52.03	2.08	0.00	0.00
	Dhinkia	434.02	17.36	0.00	0.00
	Gobindpur	811.10	32.44	0.00	0.00
	Siha	106.41	4.26	0.00	0.00
Neepur	10.20	0.41	0.00	0.00	
Bhadrak	Helpur	0.00	0.00	32.31	13.25
	Majurigadia	0.00	0.00	80.83	33.14
	Pahimahura	0.00	0.00	44.95	18.43
	Helpur	0.00	0.00	3.71	0.07
	Majurigadia	0.00	0.00	9.15	0.18
	Pahimahura	0.00	0.00	4.29	0.09
	Narendrapur	0.00	0.00	160.97	3.22

	Gouraprasad	0.00	0.00	249.68	4.99
	Karanjamal	0.00	0.00	177.00	3.54
	Bideipur	0.00	0.00	1174.44	23.49
Balasore	Jaydevkasapa	0.00	0.00	39.00	1.56
	Aladiha	0.00	0.00	401.40	16.06
	Chandamani	0.00	0.00	312.64	12.51
	Balibil	0.00	0.00	303.13	12.13
	Jamunasul	0.00	0.00	276.91	11.08
	Jambhirei	0.00	0.00	1078.05	43.12
	Narayanpur	0.00	0.00	603.10	24.12
	Aladiha	0.00	0.00	67.98	5.44
	Chandamani	0.00	0.00	44.90	3.59
	Balibil	0.00	0.00	56.71	4.54
	Jamunasul	0.00	0.00	26.72	2.14
	Jambhirei	0.00	0.00	132.52	10.60
	Narayanpur	0.00	0.00	216.15	17.29
	District	Village	Land area	Cost	Distance
Kendrapada	Sankhachita	302	0.05	20 km	
	Mundatalasaharaka ni	192	0.05	24 km	
	Maladiha	440	0.05	10 km	

9.3 Appendix 3: Detailed sub sector-wise economic estimate for the two nodes

The estimates for Node 1 (GBK) have been computed as indicated in Table 14.

Table 14: Land, output, investment and employment estimates for Node 1 (GBK)

S. No.	Focus sectors	Sub-sectors	Land required (acre)	Output (INR Cr)	Investment (INR Cr)	Employment (no.)
1	Food processing	Processing of marine products	438	34,144	2,596	31,149
		Processing of fruits and vegetables	207	1,233	819	9,824
2	Apparel	Wearing apparel	228	5,074	967	12,572
3	Downstream metals	Casting of metals	733	7,842	2,565	20,522
		Structural metal products	674	7,216	2,360	21,244
		Metal fabrications	942	10,081	3,298	32,977
4	Downstream Electronics	Communication equipment & Consumer electronics	234	19,956	1,670	13,360
5	Electrical equipment	Domestic appliances	514	5,341	1,508	15,076
		Battery and accumulators	101	3,479	435	4,785
6	Defence manufacturing	Aerospace and defence related machinery & ammunition	1,059	36,046	7,033	77,361
7	Auto and auto-components	Motor vehicles & its accessories & parts	1,024	35,004	4,570	50,636
Total			6,154	1,65,416	27,821	2,89,506

The estimates for Node 2 (PKDS) have been computed as indicated in Table 15.

Table 15: Land, output, investment and employment estimates for Node 2 (PKDS)

S. No.	Focus sectors	Sub-sectors	Land required (acre)	Output (INR Cr)	Investment (INR Cr)	Employment (no.)
1	Food processing	Processing of marine products	584	45,551	3,463	41,556
		Processing of fruits and vegetables	276	1,645	1,092	13,106
2	Apparel	Wearing apparel	304	6,770	1,290	16,772
3	Specialty chemicals	Other chemical products (paints, agrochemicals, varnishes, etc.)	1,095	25,947	6,930	27,721
4	Downstream metals	Casting of metals	978	10,462	3,422	27,378
		Structural metal products	900	9,627	3,149	28,342
		Metal fabrications	1,257	13,450	4,399	43,994
5	Capital Goods	General & Special purpose machinery	1,567	7,126	2,011	20,112
6	Electrical equipment	Domestic appliances	685	4,642	581	3,483
		Battery and accumulators	135	21,619	9,382	1,03,207
7	Defence manufacturing	Aerospace and defence related machinery & ammunition	1,413	48,096	10,972	1,09,722
8	Auto and auto-components	Motor vehicles & its accessories & parts	1,365	46,699	6,097	67,553
Total			10,559	2,41,634	52,788	5,02,946

Thank You

