

# INDUSTRIALIZATION OF THE MADURAI – TUTICORIN CORRIDOR

*THE UNEXPLORED OPPORTUNITY*

## EXECUTIVE SUMMARY

*For*

**Confederation of Indian Industry**

**By**

**Scope e-Knowledge Center Pvt Ltd**

Map not to Scale

- ⊙ State Capital
- State Boundary
- District Boundary

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# **1.0 Introduction**

## **Introduction**

The Confederation of Indian Industry (CII), Tamil Nadu branch's Task Force for Industrialisation of Tamil Nadu, has appointed Scope e-Knowledge Center Pvt. Ltd., Chennai to carry out a study on the industrialisation potential of the southern districts of Tamil Nadu and suggest the way forward for achieving the objective.

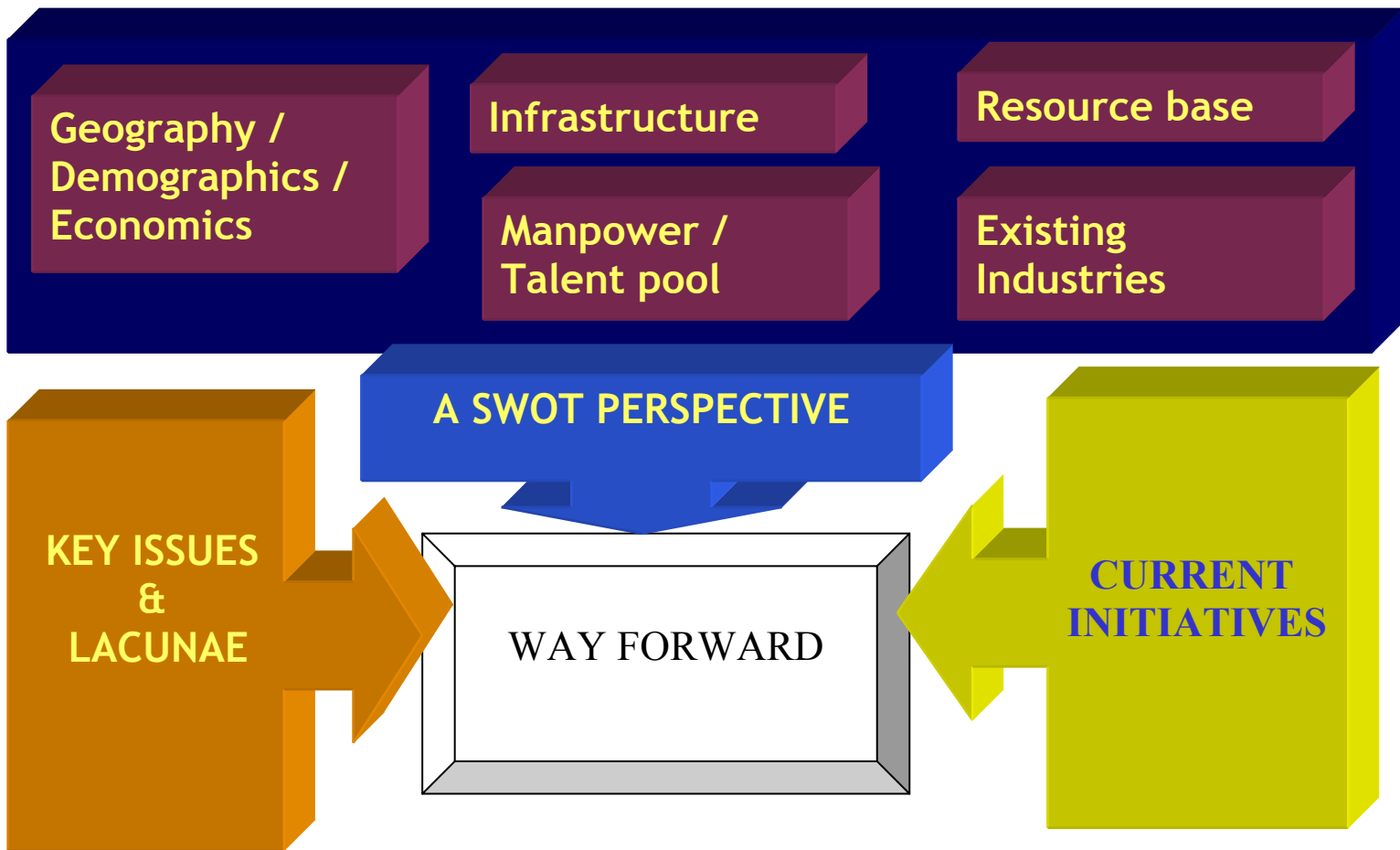
This report covers seven districts: Madurai, Virudhunagar, Ramanathapuram, Tirunelveli, Sivagangai, Tuticorin and Kanniyakumari. It is based on extensive discussions with government officials, industries, trade, services, CII council members and NGOs, in every district covered as well as exhaustive secondary and Internet research.

The study was conducted by Scope e-Knowledge Center, Chennai, in partnership with Madras Consultancy Group, Chennai.

## **Methodology and Approach**

- The study employed a combination of Primary & Secondary research tools
- Secondary Research helped in understanding the existing Industrial Scenario of the concerned districts
- Primary survey was carried out among the following respondent categories - Large & small scale industries, Industrial estates, District Industries Centres, Infrastructure service providers, Relevant government departments, Industrial Associations & Experts, Non Governmental Organizations, Banking & Financial Institutions
- Delphi technique was employed wherein Scope's consultants held in-depth discussions with experts in the districts offices, industries, associations, etc to get a wholesome picture of the opportunities available in each districts and plans that would help in achieving the target of industrialization.

## Framework of Analysis



The exhibit above explains the basic approach adopted to discuss the strategic way forward for each of the individual districts and also the southern districts as a whole. Each of the study district has been critically analysed based on a SWOT perspective (Strength, Weakness, Opportunities and Threats), covering key aspect which included geography, demographics & economics, existing resources & industries base, the current infrastructure and more importantly, the manpower pool.

The research then featured an extensive probe into the issues & lacunae that hindered growth and gleaned through the current initiatives by various stakeholders like central & state government, district authorities, existing industries, Non Governmental Organizations (NGOs) and associations. Based on these three critical inputs, namely SWOT perspective, key issues and existing initiatives, the report has drawn a comprehensive action plan for the southern districts.

## **2.0 Key Indicators**

## Demographics and Key Economic Indicators, 2003

The key statistics relating to these 7 districts are summarised below<sup>1</sup>:

District	Population (Million)	% Urban Population	% Literacy	NDP Rs. Crore	Per capita NDP Rs.	HDI
Madurai	2.6	56.0	77.8	5,560	21,271	0.661
Tuticorin	1.6	42.3	81.5	3,820	23,945	0.703
Virudhunagar	1.8	44.4	73.7	4,205	23,477	0.651
Tirunelveli	2.7	48.0	76.1	5,212	18,810	0.658
Kanniyakumari	1.7	65.3	87.6	2,760	16,340	0.711
Sivagangai	1.1	28.2	72.2	1,672	14,341	0.640
Ramanathapuram	1.2	25.5	73.0	2,190	18,249	0.629
State	62.4	44.0	73.5	137,681	21,738	0.657
India	1,027	27.8	65.4	2,014,450	18,912	0.571

It is seen that except for Tuticorin, Virudhunagar and Madurai falling close, other districts are well below the State average in per capita NDP. However, in respect of Human Development Index, the districts do not lag behind the State, with Tuticorin and Kanniyakumari being far ahead of the State as well as the national average. In literacy also these two districts are quite ahead.

### Infrastructure

#### *Roads and Railways*

The districts are served by many important national highways, state highways and district roads. The important highways are Thiruvananthapuram - Kanniyakumari National highway (NH47), Kanniyakumari - Madurai National Highway (NH7) that passes via Tirunelveli and Virudhunagar, Tuticorin - Tirunelveli National Highway (NH7A) that proceeds further to Kollam in Kerala, Ramanathapuram - Madurai National Highway (NH 49) that passes through Sivaganga district, Madurai - Kollam highway (208) that passes near Thenkasi and Senkottai in Tirunelveli district and the East Coast Road that connects Nagapattinam, Ramanathapuram, Tuticorin and Kanniyakumari (to be upgraded). These roads do provide a reasonably good network among the districts.

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<sup>1</sup> The statistical data are from the Statistical Handbook of Tamil Nadu and the Tamil Nadu Economic appraisal. Where 2003 figures were not available (e.g. district NDP and per capita district NDP), these have been estimated on the basis of extrapolation of available data.

A comparative analysis of road infrastructure available in the districts reveals that apart from Kanniyakumari, the road length per square kilometer in other districts is about the average/ less than average of the State (1.4 km). Tuticorin, Virudhunagar and Tirunelveli have significantly less road length per square kilometer. Further, the number of vehicles per 1,000 persons is only 72.7% of that of the State. These may indicate that the road and transport infrastructure in these districts is below average when compared with the rest of the State.

### *Railways*

The districts are served by broad gauge as well as meter gauge railway. Most district headquarters are connected with Madurai by railway services and express trains run to Chennai on a daily basis. Madurai is especially well connected to most of the southern cities - Chennai, Trichirappalli, Coimbatore, Bangalore, Rameswaram, Quilon, Thiruvananthapuram, etc. – as well as to other major Indian cities such as Delhi, Mumbai and Kolkata. Over 35 express and other trains serve Madurai.

### **Key Take-away**

- **Roadways – Adequate intra-district connectivity, scope for strengthening inter-district connectivity & developing 6 lanes (especially covering Madurai, Chennai & Tuticorin).**
- **Railways – The railways connectivity for all the study districts is good with several areas being covered for gauge conversion**

### *Ports*

Tuticorin port is one of the 10 major ports in India. The port has an artificial deep-sea harbour with breakwaters of about 4 km long and about 1.3 km wide. The harbour basin area is about 400 hectares with approach channels of about 2.4 km length and 183 meters width. The traffic handled by the port in 2003-04 was 14.7 million tonnes (1,500 ships). It has great potential to become a major hub port, with the deepening of inner (increasing the draught from 10.7 to 12.8 metres) and outer harbors.

In addition to Tuticorin port, there are several other minor ports and fishing harbors at Kolachel, Kanniyakumari, Rameswaram, etc. The Kolachel port also has potential to grow as it has a natural harbor.



## *Power*

The TNEB grid serves the districts. Tuticorin has a TNEB thermal station generating 1,000 MW of power. There are gas based power plants in Ramanathapuram and windmills in Kanniyakumari that generate another 300 - 400 MW of power. Another major power project - i.e. a joint venture project between Neyveli Lignite Corporation and TNEB for 1,000 MW, is proposed in Tuticorin. In Tirunelveli district, at Kudankumam, the Nuclear Power Corporation of India is constructing a power plant that would generate 2,000 MW of power by 2008.

Generally, the power situation in the districts is comfortable, though in Kanniyakumari district, it was reported that the quality of power was not that satisfactory. Certain industrial sectors, e.g. salt industry in Tuticorin reported that the tariff was too high for them, rendering them less cost competitive.

## *Communications*

The major landline operators in the districts are BSNL and Tata Teleservices. There are several mobile phone service providers such as BSNL, Aircel, Airtel, Reliance, BPL, and Tata, and from most places in the region signal is available. Internet service providers like VSNL and Satyam also are present in the districts. Software Technology Parks of India (STPI) has sub-centres in Madurai and Tirunelveli providing medium sized KU- Band gateways. A high-speed data-communication service to software exporters under the cap of SOFTnet is also available.

### ***Key Take-away***

- **Airports - scope for improving air-connectivity, need for an international airport (Madurai) & reactivating Tuticorin airport**
- **Ports - scope for enhancing Tuticorin port (e.g. deepening of outer harbour, widening the port's prime service roads)**
- **Connectivity is adequate but would require strengthening as requirements from newer activities such as IT / ITeS emerge**

### *Social Infrastructure*

The social infrastructure, especially educational infrastructure, in these districts is significant. The details are given below:

District	Schools & Colleges	Professional Institutions	Vocational & Research	Total
Madurai	1,483	6	7	1,496
Tuticorin	1,543	6	5	1,554
Virudhunagar	1,773	5	27	1,805
Tirunelveli	2,400	15	6	2,421
Kanniyakumari	820	9	8	837
Sivagangai	1,300	9	4	1,313
Ramanathapuram	1,298	8	8	1,314
Total 7 districts	10,617	58	65	10,740
Population				12,644,757

It is apparent that the educational infrastructure in the 7 districts compare favourably with the State average. Tirunelveli especially has a large number of educational and professional institutions. Madurai is the home of well- known Madurai Kamaraj University, with its 72 departments, 109 affiliated colleges (9 autonomous) and 7 evening colleges.

#### ***Key Take-away***

- **Strong in Basic Schooling (all the districts)**
- **Madurai, Tirunelveli - Strong in professional education**
- **Vocational training / Polytechnics / ITI – Numerous government & private institutions in Madurai, Tirunelveli, Virudhunagar & Kanniyakumari.**

### Existing Resources, Industries & Clusters

District	Key Resources	Existing major industries	Clusters / Cottage / SSIs
Madurai	Limestone, Graphite, paddy, Cereals and pulses	Rubber, Automotive & Textile industries	Hosiery, milling & readymade garments, Food processing (mango) & medicinal herbs
Sivagangai	Graphite, Granite, Minerals and Herbs	Spinning/ Ginning/Weaving mills, Sugar (Sakthi sugars) & Chemicals (TCP Ltd)	Mud based, Coir, Electroplating, Herbal extraction and Handicraft
R'Puram	Salt, Gypsum, Limonite, Sand, Shells, Clays and marine.	Textile and Cotton industries	Fishing and marine products
Virudhunagar	Granite, Limestone, gypsum and Herbs	Matches, Textile, Cement, Printing industries, Automotive nuts-bolts & brakes (Sundaram Fasteners / TVS ancillaries)	Printing and Surgical bandage cloth, matches, fireworks, Bio-diesel
Tirunelveli	Limestone, Sulphides and Paddy	Textiles, Cement and Sugar industries	Packaged Water and banana fibres
Tuticorin	Salt, Garnet and Ilmenite	Port and related service industries	Dry flower, edible oil, textile, readymade, Match and printing
K'Kumari	Garnet, Ilmenite, Rubber, Wind power, Cashew nuts, Clay and Monazite	Rubber industries.	Handicrafts, Herbal medicine and coir

#### **Key Take-away**

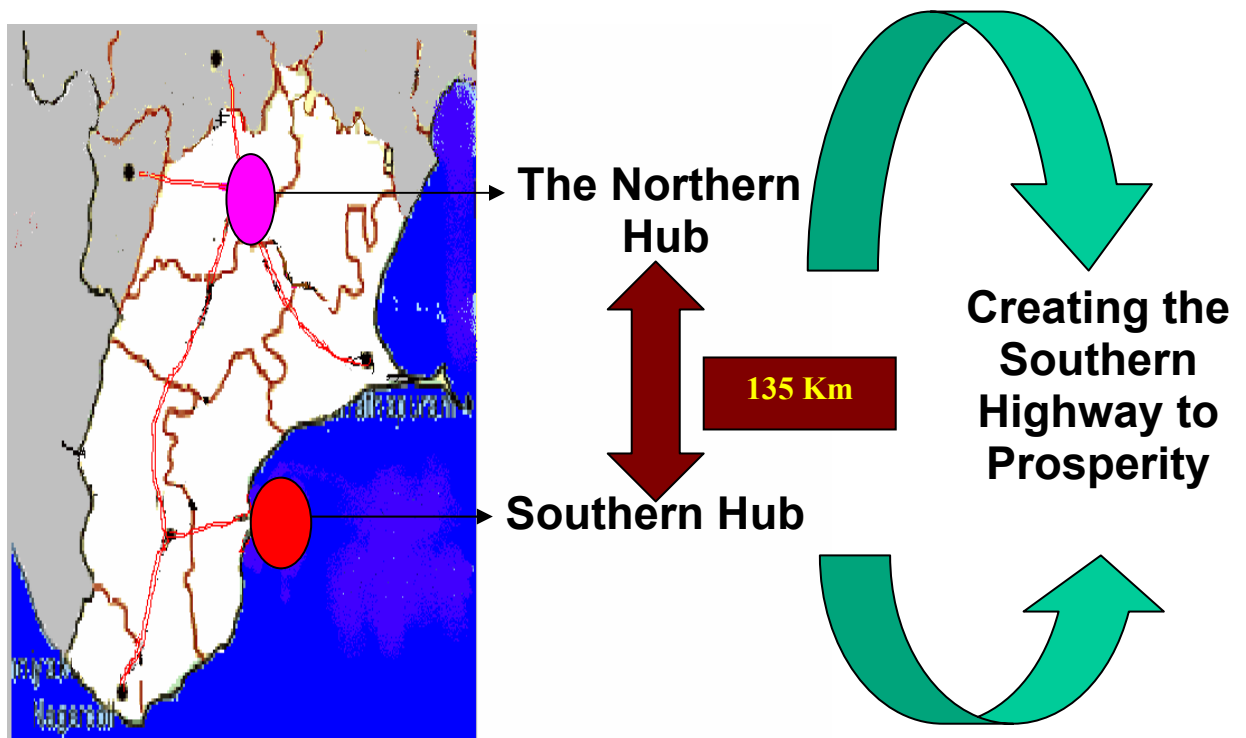
- The industry base is very diverse and there are several industrial clusters in most of the study districts.
- However, there are some key industries such as textiles, rubber, auto, printing and port based services

## **3.0 Way Forward – The Hubs, The Satellites And The Corridors**

## The Approach for the Industrial Development of the Corridor

The study has clearly established **Madurai as a key hub for manufacturing** in the Northern zone of the districts of interest and **Tuticorin emerges as a key export cum services hub** in the southern zone of the corridor, with these two being linked by the national highways (distance 135 km).

### The Development Corridor



**Note:** a) Map Not to Scale; b) The red pathway is the national highway

From the bustling trade and commercial centres of Madurai to the harmonious hills of the Western ghats and the awesome ocean in the East and South, the Southern Districts of Tamil Nadu, present large and diverse opportunities for the development of the industrial and services sectors. With the right focus, the development process can be spread evenly across the region.

**Madurai district has the potential to become a Manufacturing Hub** and can be promoted as a Gateway to the Knowledge and Tourism corridors of Southern Tamil Nadu. The temple town of Madurai, which is already perceived as the gateway to southern districts, is eminently suited

to fulfil this role and act as the engine driving the industrialisation and economic advancement of the region. Strategically situated to serve the entire region, including adjoining states, Madurai needs but limited investment from the State Government to catalyse this development process. International air connectivity would be a major priority in this context of Madurai being promoted as the manufacturing hub of the corridor.

The benefit of the initial push at Madurai will strongly be felt in the neighbouring districts, especially Virudhunagar and Sivagangai. The strategy for industrialisation of Virudhunagar district focuses on the existing core industries such as fireworks, printing and textiles, and scaling them up to global standards with world class manufacturing facilities. Other growing sectors such as food processing, herbal medicines and bio-diesel, need to be incubated and nurtured and be provided with appropriate infrastructure.

Apart from encouraging the large, medium and small industries that are already well established in the Tuticorin district, the establishment of a Special Economic Zone will ensure that Tuticorin becomes a thriving Export Hub. Strategically situated to serve the East and the West, Tuticorin needs sizeable initial investments from the Government to attract domestic and foreign investors. With a bustling port and rapidly growing import and export trade, a Services Hub can then develop encompassing logistics, warehousing, shipping, ship repair, cruise tourism, ferry services and so on. **The Export cum Services hub at Tuticorin** will have spin off benefits in Ramanathapuram and Kanniyakumari, with satellite industrial clusters developing based on leveraging their respective resources. For example, while Ramanathapuram can leverage the availability of natural gas and its coastline, Kanniyakumari has abundance of rubber wood apart from marine resources.

The strong base of education at the University level combined with ever expanding computer literacy, point to the potential to develop the ITES & BPO sectors, in some of the southern districts, viz. Madurai, Virudhunagar and Tirunelveli. **Thus, Madurai can trigger off the knowledge corridor which can wind through Virudhunagar and get anchored in Tirunelveli** where the raw material for the ITES / BPO sector is found in abundance. There are some success stories already, like Honeywell that has set up shop in Madurai and now expanding its scope of business & operations. This can trigger other major companies to replicate similar initiatives in the corridor.

Tourism in southern districts has been fragmented with the districts competing with each other to get a greater share of the pie. Madurai, with its historic Meenakshi Temple and proximity to other heritage and leisure centres, can become the gateway to the Southern Tourism corridor.

**With Madurai as the gateway, the other two corners of the proposed tourism corridor would be Kanniyakumari & Ramanathapuram.** The corridor will have several satellites with heritage tourism potential in Sivagangai and leisure tourism opportunities in Virudhunagar and Tirunelveli.

Thus, in the study team's vision, the following major avenues of growth need to be integrated into the developmental plans for the Southern Districts, leading to rapid economic development that is sustainable and one that meets the aspirations of the stakeholders in the region.

- Manufacturing (textiles, auto, rubber), and employment generating sectors like food processing (agro and marine),
- Services (IT and knowledge based ITeS / BPO, port based services like Bulk storage in Tuticorin etc),
- New export markets (e.g. scaling up printing base in Virudhunagar to tap global markets, engineering design, mechatronics and biotechnology,), and
- Tourism - internationally oriented Cultural & Heritage and Eco Tourism

***Based on the review of the conditions, resources and a detailed analysis of latent potential for industrialization of the corridor, the study team proposes the SPEED model – a four geared strategy for the industrialization of the Southern districts.***

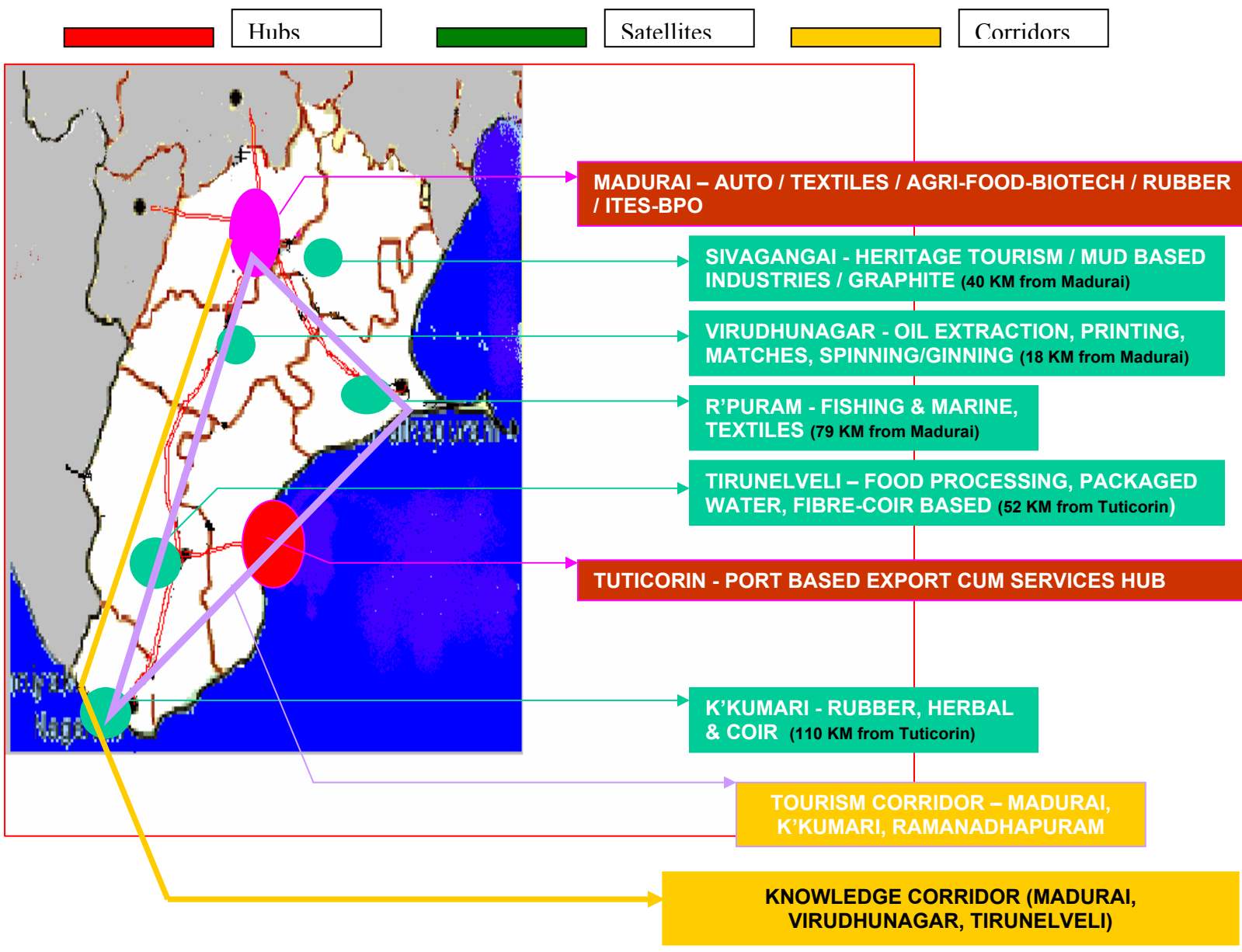
### **Southern Prosperity Through Enhanced Economic Development (SPEED)- The Vision in a Nut Shell**

The fulcrum of the SPEED approach lies in enhancing the economic development of the Southern Districts of Tamil Nadu. The acronym SPEED signifies the need for speedy economic development in South TN, as time is of the essence so as not to be left behind.

#### **The Four-gearred SPEED strategy**

- **Manufacturing Hub (Madurai) & Satellites (located in various centres in Virudhunagar, Ramanathapuram & Tirunelveli etc)**
- **Export cum Service Hub (Tuticorin)**
- **Knowledge Corridor (Madurai, Virudhunagar, Tirunelveli)**
- **Tourism Corridor (Madurai, Kanniyakumari & Ramanathapuram)**

**The hub would be the primary focus for development in the first phase, especially in infrastructure development, and the hub in turn will drive the development of satellite centres**



**THE SPEED BLUEPRINT**  
*For*  
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### Investment for Industrialization

The key infrastructural priorities for the proposed SPEED approach would be enabling international air connectivity (Madurai) and re-activating Tuticorin airport. There is an urgent need to develop the Tuticorin port (e.g. deepening of outer harbour, bulk storages etc) if one were to promote Tuticorin as an export & services hub.

Also, the industrialization process in general would benefit from a 6-lane connectivity between the manufacturing & export hubs with state capital – Madurai, Tuticorin & Chennai. Improvements in connectivity (especially 6 lanes between Madurai & State capital and international air connectivity) would particularly serve the proposed tourism corridor well.

For the proposed knowledge corridor, TIDEL replica in Madurai will help in encouraging IT/ITeS sector. Apart from stressing on scaling up capabilities in employment generating sectors like food processing, Printing etc, the SPEED strategy also focuses on developing key satellite industries (e.g. Pulses, Printing in Virudhunagar, Tourism in Sivagangai)

The following investment, to the tune of Rs.33735, is already in the pipeline, if one were to consider the various public and private sector projects that are planned, proposed or are under implementation (as given below). However, the state and central governments need to speed up these ongoing projects so that the vision of SPEED is realized at the earliest.

<b>Project Area</b>	<b>Investment Amount (Rs. Crores)*</b>
Airways-ports	4990
Mother Industries	6200
Parks & SEZs	4385
AEZs	170
Power	16405
Railways	265
Roadways	1320
<b>Total</b>	<b>33735</b>

## Roles to be played

The key stakeholders in the development of the southern districts include the state & central governments, existing industries, CII & other association bodies and NGOs. The state & central governments would have to play an active role in speeding up development projects that are already in pipeline. The state government would need to play a pivotal role in marketing the southern districts in order to attract more investments from within the country & abroad.

Amongst others, CII's priority would be to encourage its members and private sector to invest in the southern districts, by enabling a mindset / attitudinal change through curtain raiser seminars and conferences highlighting the advantages of such a move.

Existing industries can do their bit by scaling up and exploring new avenues of growth, while the NGOs community, with its grassroots level machinery, can help in identifying local opportunities and suitable mechanisms for delivery that takes the local environment into consideration.

Summing up, these are some of the key roles that need to be played by the various stakeholders

	<b>The Hubs, Satellites &amp; Corridors of the SPEED Strategy</b>			
	Manufacturing Hub	Export & Services Hub	Tourism Corridor	Knowledge Corridor
Central Government	Highways, Port development and SEZ development	Enhance Highways / Airports Port & SEZ  Reduce port charges (wharfage)	Enhance air/road connectivity to state capital (Chennai) & major destinations like Madurai	Enhance data links
State Government	Support infrastructure Invite mother industries	District roads/ State highways Modification /  Re-orientation of existing schemes	Boost investment flow in developing regional tourist centres	Set up a TIDEL replica in Madurai  Development & marketing of TIER II destinations

CII/ Other Associations	Conduct seminars & conferences to highlight advantages in re-locating to southern districts Transform the existing strong spirit of local entrepreneurship in trading, to look at manufacturing and other opportunities	Identify new avenues of growth (e.g. bio-diesel) Actively involve itself with the governmental efforts to transform the Tuticorin port	Bring about attitudinal / mindset change to improve patronage of regional tourist centres (e.g. 'Madurai Mystique')  Focus on International Tourism – through leveraging the region's Cultural and Ethnic Heritage	Same as Mfg Hub  Enhance industry-institute collaboration
Industries	Scaling up existing industries & promoting Mother industries	Scaling up, Promoting local sourcing from regional supplier clusters (e.g. auto) thus helping them hook up to global value chains	Existing players / stakeholders to work towards a global orientation to promote regional tourism	Explore new growth avenues [e.g TVS - engineering design services & MKU – Biotechnology / Biology, knowledge based ITeS])
NGOs	Set up SHGs to promote cottage industries Safeguard local industries' interest	Identify, promote & train for businesses that utilize local domain knowledge & have export market	Advocate sustainable usage of local resources and preserve regional ecosystem	Kindle the spirit of entrepreneurship in local youth through identification of opportunities and mechanisms for implementation

## **Conclusions & Outlook**

There exists immense hidden potential (resources, talent pool and basic infrastructure) and the southern districts are economical solutions when compared to other cities that are turning into high cost centres. The study findings have clearly established a strong case favouring Southern districts as having immense potential for industrialization and development.

In order to achieve the vision of harnessing the latent potential in the southern districts, the study has chartered a growth strategy SPEED covering the major business opportunities that are available to be tapped.

The investments that may need to go in (Rs.33,000) are already in pipeline. However, apart from the investment that needs to be pumped in for the development, there are critical roles assigned to each of the various stakeholders, which includes the state-central governments, existing industries, CII & other associations and NGOs. With a proactive marketing effort as a vital ingredient, and with various stakeholders playing their part to perfection, the vision of industrialization of southern corridor is not a distant dream. **Southern Prosperity through Enhanced Economic Development** can in fact be realized.