CRISIL Risk and Infrastructure Solutions Limited

Commerce and Industries Department

Development of KSSIDC Land Parcel

Pre-feasibility report

May 2012

Abbreviations

Acronym	Definition
BARC	Bhabha Atomic Research Centre
BOO	Build Operate Own
CRIS	CRISIL Risk and Infrastructure Solutions Limited
DBFOT	Design Build Finance Operate Transfer
DIC	District Industries Centre
DIPP	Department of Industrial Policy and Promotion
DRDO	Defence Research and Development Organization
EIA	Environmental Impact Assessment
GDP	Gross Domestic Product
IISc	Indian Institute of Science
IRR	Internal Rate of Return
ISRO	Indian Space Research Organization
ITES	Information Technology Enabled Services
KHB	Karnataka Housing Board
KSSIDC	Karnataka State Small Industries Development Corporation
MSME	Micro, Small and Medium Enterprises
PPP	Public-Private Partnership
PSP	Private Sector Partner
RFP	Request for Proposal
SHLCC	State High Level Clearance Committee
SIA	Social Impact Assessment
SLSWCC	State Level Single Window Clearance Committee

Acronym	Definition
SPC	Special Purpose Company
SPV	Special Purpose Vehicle
SSI	Small Scale Industry
VGF	Viability Gap Funding
WACC	Weighted Average Cost of Capital

Contents

List of Figures

1. Executive Summary

Karnataka is at the forefront of industrialization in the country. Today, the state is one of the most attractive locations for future investments. In order to consolidate its leadership position, Karnataka now intends to provide a major thrust to infrastructure development through increased public-private partnerships (PPP). In pursuance of this objective, CRISIL Risk and Infrastructure Solutions Limited has been mandated to work closely with the Commerce and Industries Department in identifying and mainstreaming PPP projects. The Commerce and Industries Department has identified five priority projects, one of which is the development of a 50-acre land parcel owned by the Karnataka State Small Industries Development Corporation (KSSIDC) at Khudapura village in Chellekere taluk, Chitradurga district.

The KSSIDC intends to develop an industrial estate through the public private partnership model. A pre-feasibility for the proposed project has been carried out and is presented in this report.

The land parcel is located approximately 15 km away from Chellekere town, which is approximately 30 km from Chitradurga. It is spread over 50 acres and is in the possession of KSSIDC. The site is adjacent to land parcels proposed to be developed by Indian Space Research Organization (ISRO), Defence Research and Development Organization (DRDO), Indian Institute of Science (IISc) and Bhabha Atomic Research Centre (BARC). The Chellekere taluk has a pre-dominantly agrarian economy. The region is well-known as an oild producing region and is ranked second in the country in terms of oil production. The industrial development in the region is very low with only a handful of large and medium scale industries operating. There are no large industrial areas developed in the region, KSSIDC is the only agency who has developed industrial estate spread over only 32.5 acres of land.

It is anticipated that the industrial demand for the region will be low except for defence manufacturing which will be buoyed by the developments proposed by ISRO, DRDO, IISc and BARC. Hence, it is recommended that the KSSIDC should develop the industrial estate as an ancillary hub for defence manufacturing or ancillaries that support the aforementioned organizations.

The proposed industrial area should house the following facilities:

- Industrial sheds, industrial plots
- Trunk and internal roads
- Drainage and sewerage facilities
- Water treatment and distribution facilities
- Power substation and distribution
- Solid waste and liquid effluent management facilities
- Data and telecom facilities

The report examines the possibility of developing such infrastructure on a public private partnership basis. The financial viability has been depicted as only a demonstration that industrial infrastructure development is possible and can be made viable for the private sector if the project is structured well.

The financial analysis reveals that on a standalone basis the project may not be a viable under the typical Design, Build, Finance, Operate and Transfer (DBFOT) model. However, the project can be made viable by accessing the Centre and State viability gap funding (VGF) mechanism.

The proposed project structure has been developed from a bottom up approach with due consideration for all concerns of the participating stakeholders. We have analysed the concerns that

each of the stakeholders are likely to have and based on this analysis the project structure has been derived.

It is proposed that the project would be developed through a Special Purpose Company wherein 74% of the equity will be brought in by the developer and 26% of the equity will be brought in by KSSIDC in the form of land. The land will be transferred to the SPC who will then take up the development of the land. The KSSIDC will be able to gain a revenue share from the profits that the SPC will make.

The report also examines the way forward for the project. The first step will be to appoint a transaction advisor to conduct detailed feasibility for the industrial estate. The transaction advisor will also prepare the bid documents for the appointment of private sector player for developing the area.

The procurement plan proposes that the appointment of the transaction advisor can be accomplished within a span of 7 to 8 weeks.

2. Introduction

The growth of small-scale industries in our country since independence is rightly regarded as one of the most significant features of planned economic development. The very concept of small-scale industries, as we know, was not in vogue at the eve of independence. Rural and cottage industries, which constituted the indigenous sector of industries, were wide spread throughout the length and breadth of our country. Various programmes to sustain, modernise, and further develop this group of industries were initiated soon after the independence, and the modern small-scale industry scheme has gradually emerged out of this programme.

The small-scale industries have provided opportunities for self-employment to educated youth and experienced technicians from the middle level of society and contributed to the growth of industrial entrepreneurship in our country. Today, small-scale industries are regarded as a power tool for balanced regional economic development. These achievements are primarily due to the dynamic enterprising spirit of the small-scale industrialists themselves.

A positive programme for assistance to small-scale industries was initiated towards the end of 1954 on the basis of a suggestion made by the international planning team sponsored by the Ford Foundation at the request of Government of India. Further, on the basis of the recommendations of the Central Small Scale Industries Advisory Board, the state-level organisations have been set up in all states to assist the small-scale industries for procurement of scarce raw materials, establishment of industrial estates, etc.

KSSIDC, one such corporation, was established on 29th April 1960. The registered office of the company started functioning at Bangalore in the state of Karnataka. The company framed a comprehensive and well-defined memorandum of association and articles of association, which permit the corporation to take up any activity aimed at the rapid development of small-scale industries, subject to the guidelines issued by the government from time to time.

2.1 Project idea

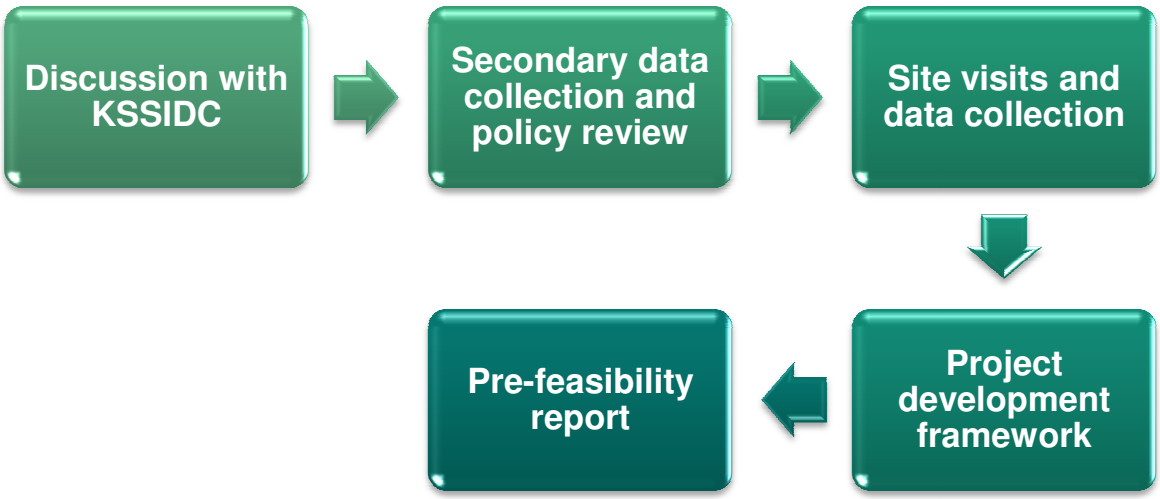
KSSIDC typically develops the industrial layouts/estates on its own and allocates the same to prospective entrepreneurs. The entire investment in infrastructure is made by KSSIDC mostly through the engineering, procurement, and construction route.

KSSIDC wants to explore if an industrial layout/estate can be developed through the PPP mechanism.

For the purpose of this assessment, we have assumed that the PPP model to be adopted will be based on a design, build, finance, operate, and transfer (DBFOT) model.

2.2 Approach and methodology

The approach and methodology adopted for the development of this concept note has been outlined in the diagram below.



2.3 Review of previous studies

Since no previous reports were available, we held discussions with KSSIDC officials to understand the current process of industrial estate development and management. The discussions centred on the current mode of industrial estate development, the potential costs of such development, the different configurations under which industrial estates are developed, and the price at which these are allotted.

3. Sector profile

3.1 Commerce and Industries Department

The Commerce and Industries Department acts as a catalyst for the overall development of the industrial sector through effective discharge of developmental and facilitation roles. With a view to promote investment and trade, the department formulates and implements the policies of the state. Identification of sectoral advantages of the state and human resource development for sustainable and growth-oriented industrialization have been the crucial functions of the department. Facilitating the launching of infrastructure projects that boost industrial growth has been the department's forte. The department helps enhance the competitiveness of domestic industry through modernization, technology up-gradation, and adoption of best practices. It also provides a forum for entrepreneurs and industrialists through their associations to represent their needs to the government, which translates into policies of the state.

Some of the crucial infrastructure projects facilitated by the department include growth centres across the state, export promotion industrial parks, International Technology Park Ltd., electronic city, food and agro-technology parks, agro export zones, special economic zones, Bengaluru International Airport, etc.

The department has established the single window mechanism for faster, single-point clearance for projects seeking infrastructure facilities/incentives/concessions and assistance in establishing industries and businesses in Karnataka. Karnataka Udyog Mitra is the nodal agency under the single window setup.

KSSIDC is a part of the Commerce and Industries Department.

3.2 Karnataka Small Scale Industries Corporation

KSSIDC was established on 29th April 1960. The registered office of the company started functioning at Bangalore in the state of Karnataka. The company framed a comprehensive and well-defined memorandum of association and articles of association, which permit the corporation to take up any activity aimed at the rapid development of small-scale industries, subject to the guidelines issued by the government from time to time.

KSSIDC not only develops industrial infrastructure for small-scale industries but also supports these industries through raw material support.

3.3 Industry outlook

Karnataka is considered as one of the most desired destinations for industrial investments in the country. The state has been able to adapt to the continually changing investment climate and has been well prepared to meet the needs of the investors. Karnataka is also home to large public sector industrial undertakings and large privately owned industries like steel sugar and textiles. In the recent times, Karnataka has emerged as the leader in IT & BT and the knowledge-based industrial sector, making rapid strides in IT and computer related industries and biotechnology with a strong research

and development base. The state has a number of traditional cottage and handicraft industries, micro enterprises like handlooms, power looms, silk weavers, khadi and village industries, etc.

Over the last 3 years, KSSIDC has consistently recorded profits. KSSIDC made a net profit of Rs. 12.47 crores in the year 2008-09. KSSIDC has also turned in an average of 100% performance on raw material purchase and distribution over the last 5 years or so.

Since its inception, KSSIDC has acquired 2828.61 acres of land both through KIADB and through other government agencies. Details regarding KSSIDC developed industrial estates and facilities are given below.

Description	Figures in Nos.
Number of Industrial Estates	164
Number of Industrial Sheds Constructed	5757
Number of Industrial Plots Formed	6301
Numbers of Godowns Constructed	233
Number of Vishwa Sheds Constructed	806

Thus, KSSIDC has been playing a pivotal role in promoting the development of small-scale industries in the state.

3.4 Key issues

Thus far, KSSIDC has attempted PPP projects in a very limited manner. The institutional capacity and preparedness for managing projects under the PPP mode is, at best, limited. Capacity building to successfully develop and manage PPP projects is a critical area that KSSIDC should focus upon.

4. Project

4.1 Description of the project

The proposed project envisages developing an industrial estate in Chitradurga district spread over an area of 50 acres. The project will provide an ideal environment for investments with serviced land being made available to potential investors willing to set up facilities.

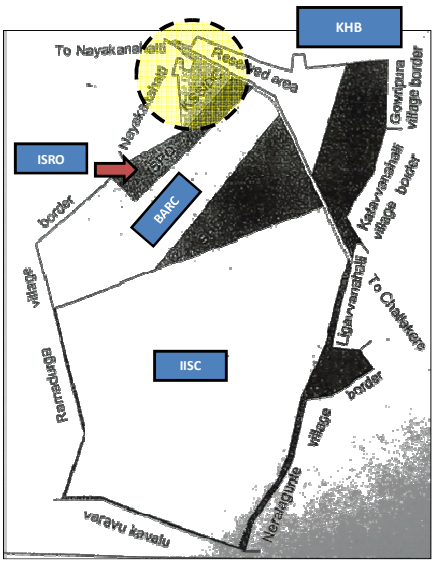
4.2 Components of the project

The project will include the following components:

- Industrial sheds, industrial plots
- Trunk and internal roads
- Drainage and sewerage facilities
- Water treatment and distribution facilities
- Power substation and distribution
- Solid waste and liquid effluent management facilities
- Data and telecom facilities

4.3 Description of the site

Chellekere is located at a distance of 200 km from Bangalore. It is known as the 'oil city' of Karnataka and is India's second largest producer/supplier of edible oil after Mumbai. There are more than 60 oil industries in Chellekere. Several other industries like dal, fried gram, rice etc. are also present. Indian Space Research Organization (ISRO), Defence Research and Development Organization (DRDO), Indian Institute of Science (IISc), and Bhabha Atomic Research Centre (BARC) are developing facilities in the Chellekere taluk. The proposed developments will create India's largest science and research hubs.



The site for the proposed project is spread over 50 acres of land and is located in close proximity to the land allotted to ISRO (adjoining land parcel spread over 100 acres), BARC (400 acres), DRDO (200 acres), and IISc (1500 acres), as depicted in the map. The site is situated 217 km from Bangalore, on State Highway 45 (SH 45), and is a mere 15 km from the national highway.

4.4 Connectivity

- **Road**: The district has 166 km of national highway (NH), 486.40 km of state highway (SH), and 887 km of major district roads. NH 4 and NH 13 pass through the district.
- **Rail**: The total broad gauge railway route length is 165.27 km in the district. The district is connected to Arsikere and from there, on to Bangalore, Mumbai, and Mysore.
- **Port**: Mangalore Port, the nearest port to the district, is situated at a distance of 300 km. Other accessible ports are the ones at Goa and Karwar at a distance of 600 km.
- **Airport**: The nearest airport is Bengaluru International Airport, situated at a distance of 200 km. Mangalore airport is located at a distance of 296 km.

4.5 Economic profile and regional strengths

Agriculture is the main occupation of the people in Chitradurga district. Out of the total workforce in the district, about 72% are cultivators and agricultural labourers. Agriculture including animal husbandry accounts for about 35% of the district income. The total geographical area is 7.71 lakh hectares and the net cultivable area is 4.18 lakh hectares, of which only 0.65 lakh hectare (15%) area is irrigated. Further, 85% of the area is irrigated by bore wells. Therefore, rain-fed agriculture is predominant in Chitradurga district.

Chitradurga is home to one of country's best performing wind farms. These wind farms recorded a capacity factor of 38.5%, the highest in India.

Horticultural produce processing is a prominent industry in the district. There is a huge scope for spice processing industry as well as jam/jelly and juice segments.

Figure 4-1: Wind farms in Chitradurga

4.5.1 Industrial scenario

There are 13 large and medium industries in the district with an investment of Rs. 398.73 crores. Further, the district has 167 factories. The industries include 1 gold mine, 3 textile industries, 7 edible oil industries, 1 power industry, and 1 cement industry. There are 9,886 small-scale industries with an investment of Rs. 1,74,433 lakhs, providing employment to 40,071 persons. There are three industrial estates, one each in Chitradurga, Hosadurga, and Hiriyur. There is one industrial area at Kelagote extension on 85.93 acre land. Of the 85.93 acres, 70.87 acres of land has been developed. Focus sectors include natural fibre and food processing, wind energy, handloom and power loom, and cement.

Only KSSIDC has developed industrial estates within the district. The overall industrial development in the district is very low. As is evident from the table below, so far, only 32 acres of land has been developed for industrial purposes.

Table 4-1: Facilities developed by KSSIDC in Chitradurga district

Taluks	Total extent of land acquired in acres	No. of sheds constructed	Sheds allotted	Plots developed	Plots allotted	Plots vacant
Chitradurga	10.00	36	36	17	16	1
Hosadurga	9.36	16	16	50	50	0
Hiriyur	13.14	8	8	67	47	20
Molakalmur						0
Chellekere						0
Holalekere						0
Total	**32.50**	**60**	**60**	**134**	**113**	**21**

Source: KSSIDC

According to the officials of the District Industries Centre (DIC), IISc, ISRO, DRDO, and BARC plan to develop various facilities adjacent to the proposed site. An integrated township of all these institutions is also proposed to be developed in the proximity of the site.

It is estimated that all of these facilities would be developed over approximately 8,000 acres of land adjoining the proposed project site.

Institution	Area (in acres)	Facilities
IISc	1,500	Laboratories, specialized research centres, hostels
ISRO	473	Communication and remote sensing facilities
DRDO	4,290	Extensive aeronautical testing range
BARC	1,810	Material enrichment facility
Total	**8,073**	

The Karnataka Housing Board (KHB) has also initiated development of land right across the project site.

4.6 Development needs, public needs, and planning considerations

The micro, small, and medium enterprises (MSME) sector has received a lot of attention from both the central as well as state governments since this sector is perceived to become an engine of growth for the economy. Development of MSMEs also ensures that jobs are created locally and that the multiplier effect also creates employment outside of the MSME units.

The MSME sub-group is an important component of the Indian industry, contributing about 45% of its manufactured output and 40% of the manufacturing exports. The state accounts for 7% of the MSMEs in the country and ranks only next to Uttar Pradesh (12%), Tamil Nadu (11%), Maharashtra (9%), and West Bengal (9%).

The Industrial Policy, 2009-14, of the Karnataka state envisages development of MSMEs as a key component for the industrial development of the state. The vast resource pool available with Karnataka will need employment opportunities since all the resources cannot be absorbed in the IT and services sector.

4.7 Best case studies for similar projects in India/world

Since there are no direct case studies, we have chosen to discuss a case study of an integrated industrial township model.

4.7.1 The Tefen model

Atop a rocky hillside in the northern Galilee region of Israel, industrial workers each produce over $150,000 a year for export. Together they account for over 10% of Israel's industrial exports and yearly sales of one and a half billion dollars. This is Tefen, populated by less than 1% of the Israeli population.

Tefen is the site of the first model industrial park developed by the industrialist Stef Wertheimer, replicated at three other locations in Israel with four additional projects planned, both in Israel and overseas. At the outset, these projects promoted Stef Wertheimer's vision of the development of Israel towards a goal of economic independence and stability. Today, the model is expanding in pursuit of a broader vision for economic independence for Israel and its neighbours, regional stability, and peace.

Up until the mid-1980s, Tefen was a barren hilltop grazed by local goat herds. Today, the scope of industrial exports manufactured at Tefen equals that of the entire Jerusalem area. The four Tefen model industrial parks have, to date, given rise to more than 160 industrial enterprises, with export rates typically associated with industrial powerhouses such as the United States, Western Europe, and Japan.

The industrial parks were established with the goal of creating a supportive, quality environment to nurture the development of export-orientated economic activity. All the parks in Israel are unique in that they integrate a high level of aesthetics and business services with art, culture, and educational facilities of international standards. An industrial park is a supportive business incubator that enables entrepreneurs, at the early stages of business development, to focus their efforts on their major concerns, namely manufacturing and marketing of their products.

The model is based on the synergy of complementary factors of development: advanced export industry, education and technological training, cultural enrichment, high living standards for workers and their families, and peaceful coexistence. The simultaneous pursuit of all the development factors provides a collective impact, far greater than the sum of individual initiatives.

The synergy generated by the model sets the industrial parks apart from other industrial initiatives in Israel and abroad, through their creation of an entirely new type of industrial-social-cultural entity. The model, which recognizes the importance of a sophisticated work environment together with the possibility of a high quality of life, has been exceptionally successful in attracting highly productive industries and a high-quality workforce to remote and developing areas.

5. Market Assessment

5.1 Industry sector in Karnataka

Karnataka is considered a pioneer in the field of industrialization in India. The state has been in the forefront of industrial growth of our country since independence. In the era of economic liberalization since 1991, the state has been spearheading the growth of Indian industry, particularly in terms of high-technology industries such as electrical and electronics industries, information and communication technology (ICT) industries, biotechnology industries, and more recently, in terms of nanotechnology industries.

The highlights of Karnataka's industrial growth performance are as follows:

- The annual survey of industries (ASI) figures indicate that Karnataka accounted for 5.53% of the total registered factories in the country, 7.10% of the fixed capital investment, and 7.23% of the total gross value added by the registered factories in the country.
- Karnataka compared favourably to All-India in terms of labour productivity, input per worker, output per worker, and wages per worker during 2005-06 to 2007-08.
- Karnataka accounted for 5.64% of the total number of unorganized manufacturing enterprises and 5.42% of the total unorganized manufacturing employment in the country in 2005-06. In terms of gross value added per enterprise as well as per worker, Karnataka performed better than All-India and stood fourth among the states of India.
- Under service sector, Karnataka accounted for 4.9% of the total enterprises and 4.8% of the total enterprise workers in the country. In terms of both gross value added per enterprise and gross value added per worker, Karnataka stood first in the country.
- Karnataka has registered more than 12,000 MSMEs and generated employment for more than 75,000 persons during April-December 2010.
- Karnataka is making rapid strides in terms of important industry sectors such as food processing industries, textiles, sericulture, and information technology and biotechnology industries.
- Karnataka has been making impressive progress in e-governance. Its e-procurement project won the '2010 FutureGov Award for Best Business Practices in Asia's Public Sector' for the year 2010.
- The growing number of SEZs presents another dimension of Karnataka's industrialization. This is however skewed towards IT/ITES sectors.
- Karnataka is an industrially peaceful state and therefore has a salubrious industrial climate. Naturally, therefore, according to the Investment Assessment Report of ASSOCHAM, Karnataka is the most favoured investment destination in the country today.

5.2 Opportunities and demand projections

There are limited reference points available to outline the demand projections for the industrial sector. However, several references are available to the manner in which the industrial growth of the nation should span out. These have been described both in the Planning Commission's 'Approach Paper to the 12th Five Year Plan' as well as the National Manufacturing Policy floated by the Department of Industrial Policy and Promotion (DIPP).

Planning Commission's approach paper observes that though the Eleventh Plan targeted growth in manufacturing at 10.0-11.0%, actual performance is estimated to be only about 7.7%. It is a matter of concern that the manufacturing sector has not shared the dynamism of the economy not just in the

Eleventh Plan but also in the preceding Plan periods. As a result, the share of the manufacturing sector in GDP is only 15.0% in India, compared with 34.0% in China and 40.0% in Thailand. It further observes that the manufacturing sector must provide a large portion of the additional employment opportunities as opposed to agriculture for India's increasing number of youth. On the contrary it should be releasing labour which has very low productivity in agriculture to be absorbed in other sectors. While the services sector has been growing fast, it alone cannot absorb the 250 million additional income seekers who are expected to join the workforce in the next 15 years. Unless manufacturing becomes an engine of growth, providing at least 100 million additional decent jobs, it will be difficult for India's growth to be inclusive.

In order to further the manufacturing sector growth, the Planning Commission has recommended the following strategic objectives for changing the manufacturing sector in the next 15 years:

- Increase manufacturing sector growth to 12.0–14.0% over the medium term to make it the engine of growth for the economy. The 2.0-4.0% differential over the medium-term growth rate of the overall economy will enable manufacturing to contribute at least 25.0% of GDP by 2025.
- Increase the rate of job creation in manufacturing to create 100 million additional jobs by 2025
- Put emphasis on the creation of appropriate skill sets among the rural migrant and urban poor to make growth inclusive
- Increase domestic value addition and technological 'depth' in manufacturing
- Enhance global competitiveness of Indian manufacturing through appropriate policy support
- Ensure sustainability of growth, particularly with regard to the environment

The Karnataka Industrial Policy, 2009-14, also emphasizes on promoting industrial development. The mission statement of the policy is as follows:

- To create enabling environment for robust industrial growth
- To ensure inclusive industrial development in the state
- To provide additional employment for about 10 lakh persons by 2014
- To enhance the contribution of the manufacturing sector to the state's GDP from the current level of 17% to 20% by the end of the policy period

Thus, it is amply clear that the industrial sector will receive significant push in the future from both the central government as well as the state government. It is expected that the Indian economy will reach the US $ 6 trillion mark by the year 2020. In order to aid the achievement of this size of GDP, the key growth drivers will be industry and services. Industry is expected to increase its share in the GDP from the current 15% to over 25% by 2020.

5.3 Potentially low demand in Chitradurga

Chitradurga is predominantly an agrarian economy. KSSIDC has so far developed only 32.5 acres of land for industrial purposes across the district. There are only a handful of large and medium-scale industries operating in the district. Small-scale industries are also very limited in the district.

According to the figures available from the Joint Director, DIC, there are 518 registered units in Chitradurga with a total investment of a little over Rs. 33.16 crores. These units provide employment to 2,483 persons. This shows that industrial investment demand is very limited in the district.

The upcoming developments proposed by the IISc, DRDO, ISRO, and BARC will likely spur investor interest, but this will in all possibility be limited to the defence manufacturing space where ancillaries will likely be set up around the proposed facilities of these agencies.

Industrial investments apart from these are expected to be very limited in Chitradurga.

6. Project financials

The project financials have been worked out based on ASSUMPTIONS only. The actual working of financials for the proposed project will depend on several components, viz. land use plan, water requirements, common effluent treatment plant requirements, and all other infrastructure components. It is recommended that a detailed feasibility be carried out for the project.

6.1 Cost estimation

The cost estimates have been worked out based on thumb-rule estimates and our experience of undertaking cost and financial analysis for other similar parks. The total estimated cost of developing all infrastructure and facilities within the area would be approximately Rs. 2,47,800 lakhs or Rs. 2,478 crores. The overall cost estimate outlined below is for illustration purpose only.

Table 6-1: Cost estimates for industrial estate

Project component	Project cost (Rs. lakhs)	Loading (Rs. lakhs)	Total (Rs. lakhs)
Roads	473	382	855
Water Supply	569	460	1,029
Strom Water Drains	62	50	113
Underground Electric Cables	108	87	196
Underground Telephone Cables	12	10	21
Casing Pipes for Cables for Road Crossing	5	4	8
Effluent Drainage	30	25	55
Initial Costs	362	293	655
Buildings	357	289	645
Residential Complex	-	-	-
Total	**1978**	**1600**	**3,577**

The cost estimates are only for demonstration purposes and may vary depending on the plan for the site and facilities at the site.

6.2 Revenue streams

The revenue streams have been identified in the following categories:

- Lease rentals and maintenance charges for facilities developed within the site
- Water charges paid by users
- Effluent treatment charges paid by users

A significant portion of operating cost for the area is for O&M of common infrastructure facilities, which cannot be recovered by charging direct user charges. The operation and maintenance cost of common facilities such as roads, storm water drains, underground electric cables, domestic drainage system, and green areas would be funded through contribution from the members.

A sample of the revenue stream has been presented below.

Table 6-2: Sample revenue stream

Year	2016	2017	2018	2019	2020	2021
Member contribution	1.59	3.35	8.78	14.76	17.43	18.30
Lease rentals	25.08	53.12	140.68	238.42	252.55	267.52
Water charges paid by users	101.92	205.25	522.70	864.16	897.55	932.57
Effluent drainage	6.42	6.42	19.26	19.26	6.42	-
Total income (Rs. lakhs)	**135**	**268**	**691**	**1,137**	**1,174**	**1,218**

Since KSSIDC will also be a stakeholder in the whole process, it is assumed that KSSIDC would be able to earn a revenue share of 5% to 10% (or whatever is decided at the time of the transaction).

6.3 Viability assessment

The feasibility of the project is assessed based on the estimated project cost, inflow of lease rentals, and other operational surpluses/deficits. The overall project cash flows are evaluated against targeted values of project IRR and equity IRR, which are in turn determined by the cost of debt, equity, and the overall weighted average cost of capital (WACC).

We have estimated that the proposed industrial estate would begin to be occupied in Year 4, i.e., 2016 onwards, as the first two years would be dedicated to the development of the land and, given the low demand, occupancy will be initiated once some developments start happening on the IISc, DRDO, ISRO, and BARC lands. Occupancy is likely to be experienced in a phased and gradual manner. In this 'base' financial feasibility, total occupancy levels of 10%, 20%, 50%, 80%, and 90% have been assumed for 2016, 2017, 2018, 2019, and 2020, respectively. By 2021, it is assumed that the industrial estate would be fully occupied (100%).

Hence, revenues, variable costs, and capital recoveries are functions of the abovementioned 'market off take' with regards to industrial, commercial, and residential spaces. Feasibility of the project would be largely dependent on the pace at which tenants are attracted to the estate.

The results of the viability assessment have been outlined below.

Parameter	Output
Project IRR	9.3%
Equity IRR	7.6%

From the above figures, it is evident that the project is unviable on a pure DBFOT model. However, with viability gap funding (VGF) to the extent of 40% of the project cost, the project will become viable, and the project IRR can be around 15%, while equity IRR can be around 18%.

6.4 Funding available under various schemes

The central government's VGF mechanism allows for funding of up to 20% of the total cost for projects that are based on the PPP mode but are otherwise financial unviable.

The state government also has a VGF mechanism that provides additional 20% of the project cost over and above the central government's VGF funding.

6.5 Issues for KSSIDC's consideration

Given that the demand for industrial land is likely to be low, it might be useful for KSSIDC to market the project as an ancillary hub for defence manufacturing due to the presence of DRDO, ISRO, IISc, etc. DRDO is developing its testing range close to the proposed site and will definitely require support industries around the facility.

6.6 Discussions on the report

While we have prepared the report and provided recommendations based on our assessment of the projects, we would like to further discuss the recommendations with the C&I Department and KSSIDC officials and factor in their suggestions and recommendations as well.

7. Regulatory and Legal Framework

7.1 Applicable laws and acts and legal cover for the project

The development of the estate would be influenced by several legislative instruments and policy instruments.

The estate development may benefit from the following policies:

- Karnataka State SEZ Policy, 2009
- Karnataka Industrial Policy, 2009–14
- Karnataka Infrastructure Policy, 2007
- Karnataka Renewable Energy Policy
- State Millennium Biotechnology Policy, 2001

7.2 Legal and regulatory framework

The proposed industrial estate will be developed on the land acquired by KSSIDC. The mandate of KSSIDC is to undertake following activities:

- Establishment and management of industrial estates
- Procurement and distribution of raw materials
- Marketing assistance to SSI units
- Supply of machinery under the hire purchase scheme
- Participation in exhibitions

KSSIDC now intends to set up an industrial estate on a PPP basis, which it can do under the current framework in which it functions.

7.3 Key issues

No major issues are envisaged.

8. Indicative Environmental and Social Impacts

8.1 Environmental impacts

The environmental impacts due to the development of the industrial estate are predominantly likely to be in terms of air, water, and noise pollution.

Air pollution would be caused by the construction of infrastructure as well as industrial units. The development would be spread over a period of 4 to 5 years and would peak incrementally, which would further increase the pollution load.

Water pollution is likely once the occupancy in the estate starts taking place. Once units become active, effluent discharge will be a critical area which, if not mitigated, would lead to surface and ground water pollution.

Noise pollution would also largely follow the occupation of the estate. In the initial years, noise pollution would be attributable to the construction activity, and later, would be attributable to noise emanating from the units.

8.2 Social impacts

Currently, no human settlement is observed on the land under study, and hence, no resettlement and rehabilitation issues are foreseen.

8.3 Mitigation measures

It will be critical to undertake both an environmental impact assessment (EIA) and a social impact assessment (SIA) before development is undertaken. These studies will clearly identify issues related to both environment and social impact and would provide detailed mitigation measures for the same.

9. Operating Framework

9.1 Risks and mitigation

The risk framework for this project has been outlined below.

Table 9-1: Risk mitigation measures

Risk category	Risk implication	Mitigation measure
Sponsor risk	KSSIDC scraps projects under PPP mode	Termination payments in case of KSSIDC scrapping projects
Environment risk	Adverse impact on surrounding environment	Penalty clauses in case of default on concessionaire's part EIA to identify all risks in advance
Political risk	Change in government may put project in jeopardy	Termination payments in case of project being scrapped
Force majeure risk	Project is abandoned	Force majeure clauses in the concession agreement
Operating risk	Operations of the estate are impacted (infrastructure service failures etc.)	Penalty clauses for stalled operations on account of concessionaire's fault
Revenue risk	Revenue realization is sub-par	Protection clauses for the developer in case the revenues fall below threshold limit (depending on the nature of project)
Demand risk	Demand is low	Protection clauses for the developer in case the demand is lower than anticipated
Design risk	Overdesign of the project	Project design to be finalized in mutual agreement of concessionaire and KSSIDC/SPV/appropriate agency
Completion risk	Completion of project is delayed	Penalty clauses for time overrun in the concession agreement
Cost over-run risk	Cost of projects are higher than anticipated	Developer to be responsible for cost controls; clauses for non-payment of additional costs on account of concessionaire's fault

9.2 Indicative project structure

In order to make the industrial estate a success, the expertise and strengths of various stakeholders would need to be structured effectively. Project structuring involves allocating roles and responsibilities amongst the various stakeholders capable of executing/managing them most efficiently. An efficient project structure also needs to give due consideration to the interests/concerns of all stakeholders in order to have sustainable operations.

The key stakeholders in the project are:

- Government of Karnataka (GoK)
- KSSIDC
- Strategic partner
- Tenants
- Financial investors and lenders

GoK intends to further the development of the industrial infrastructure in the region and thereby boost investments in the state.

As the nodal agency for the project, **KSSIDC**'s concerns are:

- Recovery of investment in the land demarcated to be transferred to the special purpose company(ies) (SPC), which will be responsible for execution of the project
- Participate in the potential benefits of industrial estate (either through equity stake or premium for the land)
- Development of Chellekere region

It is assumed that the key concerns of the **strategic investors** would be:

- Overall attractiveness of the project
- Facilitation by KSSIDC as a partner
- Long-term commitment from GoK
- Autonomy to take decisions in line with their commercial objectives
- Minimize capital at risk

Tenants, i.e., various industries, and services would be concerned about:

- Assured, good quality, and cheap infrastructure and services
- Hassle-free operating environment and a single-point interface for all infrastructure and services

The financial investors and lenders would be concerned with risks, returns, and liquidity of investments in the project. Specific concerns would be regarding:

- Reducing the risks in the project through commitment from KSSIDC/GoK
- Bankable revenue streams and adequate cover
- Credit enhancing mechanisms
- Reducing the execution risk by selecting promoters with a good track record

The interests and concerns of various stakeholders as identified above have been captured (as key issues) and addressed in the following section.

9.2.1 Key issues in project structuring

The key issues, as envisaged, in structuring the industrial estate project are as follows:

- Role of the state – KSSIDC and other bodies

- Private sector partnering
- Land development and provision of services – one company or separate companies
- Services to tenants - single-point interface or multiple service providers
- Transfer of assets to SPC

9.2.1.1 Role of the state – KSSIDC and other bodies

The state government and its bodies could have multiple roles in the industrial estate project. These roles could be one or more of the following:

- Statutory role
- Management
- Investor
- Land owner
- Facilitator between government and private players
- Developer
- Infrastructure provider (own facilities or concessions)
  - Trunk infrastructure provider
  - Local utility provider

Based on the private sector participation (PSP) experiences in the infrastructure sector and development of industrial estates across the world, it is envisaged that the roles most suitable for the state government and its bodies are as follows:

Statutory role

All roles to be performed by the government (the sovereign authority) as per the laws of the land would need to be undertaken by the state government, e.g., maintaining law and order in the estate.

Management vis-a-vis investor

Typically, investors prefer to have representation and control of companies/projects (where investments have been made) in order to secure their investments. The state government and its agencies would, on the other hand, also be concerned about the economic and social outfall of the project. Moreover, the presence of the state government or its agencies would also provide assurance to the tenants regarding transparency of transactions and regulation of the area.

The strategic partner on the other hand would prefer management control and autonomy over commercial decisions. However, he could benefit from a limited role of the state, i.e., that of a facilitator. Moreover, the strategic partner is expected to provide superior marketing reach, financing capability, and management expertise and thus a higher stake for KSSIDC would lead to the dilution of the project on the above aspects.

Further, the implication of a high equity stake is that KSSIDC might need to commit further funds to the project, in order to fund growth and further development.

The following table summarizes the implications of the various options before KSSIDC as an investor.

Extent of Stake	Implications
100% Stake for KSSIDC	The project would be entirely under public sector control. GoK/KSSIDC does not possess capabilities in marketing to tenants and management of infrastructure Large capital commitments would have to be made for the

Extent of Stake	Implications
	development of the project leading to fund outflow for the government. Tenants are likely to have less trust in the public body's ability to deliver upon infrastructure and management.
50-100% Stake for KSSIDC	The government would retain management control, and hence, attracting other equity investors will be difficult. Future investments required would need to be funded by KSSIDC to maintain majority shareholding. Tenants are likely to have less trust in the public body's ability to deliver upon world-class infrastructure and management.
26-50% Stake for KSSIDC	Management control would vest with the private sector participant. The government would have no real operational control but would enjoy veto power in cases of special resolutions. Future investments will need to be funded by KSSIDC to the extent of its shareholding, but the fund requirement will be lesser than that in previous cases.
0-25% Stake for KSSIDC	KSSIDC would have no control on any activity of SPC. There is only limited comfort for GoK.
0% Stake for KSSIDC	The project would be equivalent to a build-own-operate (BOO) structure. The entire project is financed and managed by the private sector participant. The government would be related to the project only through a contract.

Based on the analysis above, it is proposed that KSSIDC should hold an equity stake of around 26%-49% in the SPC with management control given to the strategic partner. This would address the concerns of all the stakeholders.

Facilitator

KSSIDC as a government company is well versed with the clearances and administrative procedures involved in project execution and operations. It is thus envisaged that KSSIDC, being well positioned in the administrative mechanism, would be an ideal body, as a facilitator, to provide such support to the SPC formed for implementing the project.

Provider of trunk infrastructure

KSSIDC has developed industrial estates in the past and has procured trunk infrastructure like water supply sources, trunk water supply lines, and trunk linkage roads. Efficient provision of such infrastructure is crucial for the development of the industrial estate, more so since it is beyond the scope and control of the SPC implementing the project. Currently, most trunk infrastructure services

are operated and managed by state government agencies. It is thus envisaged that KSSIDC and the state government would help in assuring efficient provision of trunk infrastructure to the SPC for the project.

9.2.1.2 Services to tenants - Single-point interface or multiple service providers

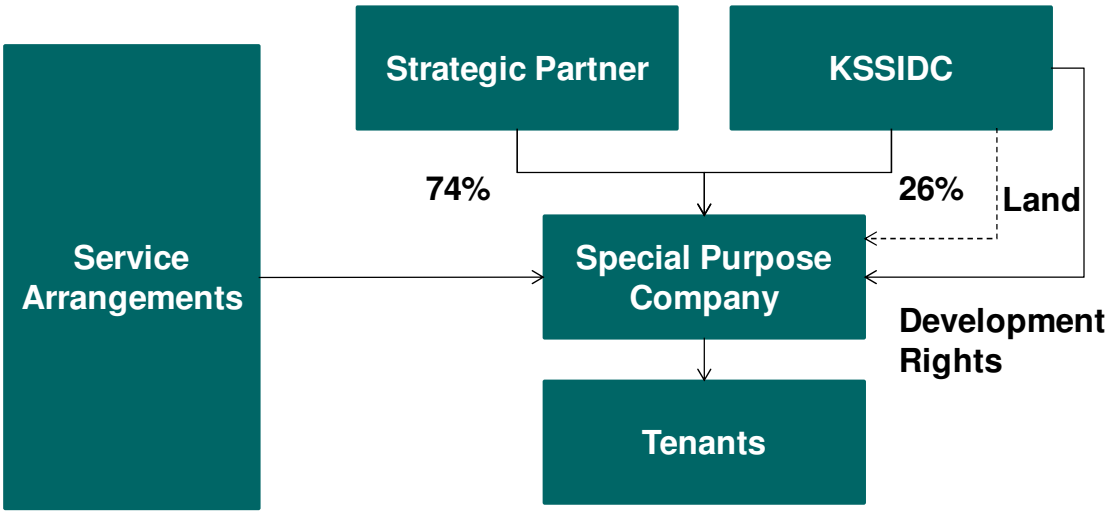
The SPC implementing the project might not have the capability to provide all the infrastructure and services efficiently, i.e., assured and cheap infrastructure services. Thus, the SPC might subcontract or outsource certain service and have back-to-back arrangements with other service providers. However, tenants would require a hassle-free single-point interface for all infrastructure and services, which takes care of all their needs and thus enables them to focus on their core business activities. Thus, from the tenants' viewpoint, it is desirable that the SPC be responsible for aggregating all infrastructure services.

9.2.2 Recommended project structure

Based on the key takeaways from the above analysis, we recommend that KSSIDC should become a strategic stakeholder in the SPC with a 26% stake. The land being provided by KSSIDC would substitute the equity requirements for participation in the SPC.

The SPC will be the sole agency responsible for providing both serviced land and infrastructure services to the tenants in the industrial estate.

Figure 9-1: Recommended structure for the industrial estate

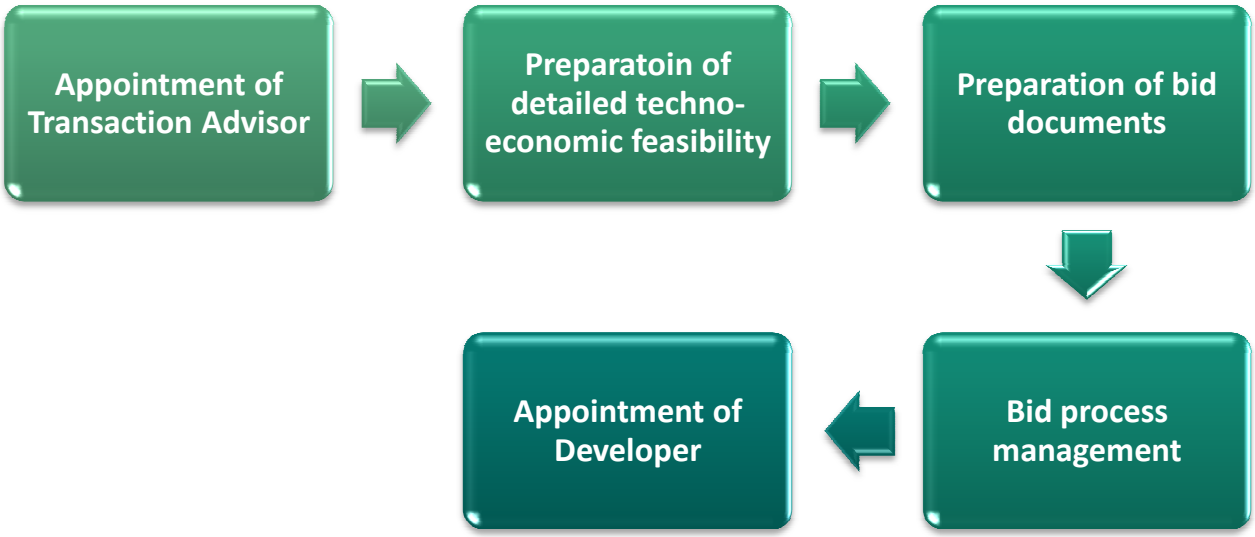


10. Way Ahead

10.1 Project development framework

In order to kick-start the development of the industrial estate, KSSIDC should appoint a transaction advisor (TA) who will conduct a detailed techno-economic feasibility analysis. The analysis will cover commercial as well as technical aspects of development and would lay out the framework for the proposed transaction. The TA will also prepare the bid documents for the selection of a private developer and manage the bid process.

Figure 10-1: Project development framework for KSSIDC industrial estate



10.2 Procurement plan

A procurement plan has been prepared to ensure that the entire process of selecting a developer would be completed within the shortest possible time. The issue of RFP to empanelled consulting agencies would be the first step. Once the RFP is issued, a pre-bid meeting should be organized and responses to queries should be prepared and shared within one week.

Post the pre-bid conference, a time frame of 3 to 4 weeks may be allowed for bid submission.

Activity	W1	W2	W3	W4	W5	W6	W7	W8
Issue of RFP to consulting agencies								
Pre-bid meeting and reponse to pre-bid queries								
Proposal submission								
Proposal evaluation								
Appointment of TA								

Once proposals are received, the evaluation should be completed within 1 week, and the TA should be appointed by the end of the 8th week.

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