



DIAGNOSTIC STUDY REPORT

ENGINEERING CLUSTER
ROURKELA, SUNDARGARH DISTRICT, ORISSA

SUBMITTED TO



PROJECT MANAGEMENT DIVISION

BY



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Abbreviations

BDS	Business development service
BMO	Business member organization
CA	Chartered accountant
CFC	Common facility center
CGTMSE	Credit guarantee fund trust for micro,small enterprises
CNC	Computer numerical control
CORE	Cluster of Rourkela engineering enterprises
DIC	District Industries center
DI-MSME	Micro, small and Medium enterprise development institute
DSSIA	District small scale industries association
ED	Excise duty
EIL	Engineers India Limited
EPC	Engineering procurement construction
ERP	Enterprise resource planning
FI	Financial institution
GoO	Government of Orissa
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
HO	Head Office
ICT	Information and communication technology
IDCO	Industrial Development corporation
IIPM	Indian institute of production management
ISO	International organization for standards
ITI	Industrial training institute
Kfw	Kreditanstalt für Wiederaufbau
L&T	Larsen and Tubro
M&E	Monitoring and Evaluation
MCGS	Mutual credit guarantee scheme
MFI	Micro finance institution
MIG	Metal Inert gas
MoU	Memorandum of Understanding
MSE-CDP	Micro, small enterprise-Cluster development programme
MSME	Micro, Small and Medium Enterprise
NALCO	National aluminum company Limited
NIT	National Institute of Technology
NSIC	National Small Industries Corporation Limited
OASME	Orissa Assembly of Small and Medium Enterprise
OCL	Orissa Cement Limited
OSFC	Orissa state finance corporation
OSIC	Orissa small industries corporation
OYEA	Orissa young entrepreneurs association
PMRY	Primeminister rojgar yojana
PSU	Public sector undertaking
R&D	Research and development
RCCI	Rourkela chamber of commerce and Industry
RSP	Rourkela steel plant
RTSHCL	Rourkela Technopark self help cooperative limited
SAIL-RSP	Steel authority of India-Rourkela steel plant
SIDBI-PMD	Small Industries development Bank of India-Project management Division
SPM	Special purpose machines
UNIDO	United nations industrial development organization
VAT	Value added tax

Executive Summary

Background:

This diagnostic study was conducted with a view to design and implement interventions for development of market for Business Development Services (BDS) in Rourkela Engineering cluster. The promotion of market oriented BDS in selected MSME clusters is one of the components of a project supported by DFID and GTZ. The purpose of the programme is to foster a substantially improved enabling and support framework for the development of SMEs in both rural and urban areas. SIDBI is implementing agency and the Banking Division of Department of Economic Affairs of the Ministry of Finance, GoI is nodal agency for this project.

The project aims to i) create an enabling framework for financing of MSMEs by banks; ii) helping banks for better access to long term finance for lending to MSME sector ;iii) mitigating banks risks related to SME lending and reducing transaction costs ; and iv) strengthening MSMEs access to market oriented BDS so that MSMEs improve their profitability and competitiveness. Besides the impact of other support systems and policy initiatives evidences and experiences suggest that a well developed market for BDS can stimulate growth of MSMEs, increase its outreach and ensure sustainability. In context of promotion of market oriented BDS, SIDBI has identified 20-25 clusters in the country and Rourkela Engineering cluster is one such selected cluster,

APITCO Limited has been selected by SIDBI for implementation of BDS component of the project in Rourkela Engineering cluster to design & implement strategies to: -

- Foster 'BDS market development'
- Strengthen the access of MSMEs to BDS
- Help make BDS providers in the clusters self- sustainable
- Develop the select clusters as 'Role models'with a strong demonstration effect.

This quick diagnostic study gives an overview of global trends and national scenario of engineering sector and brings out mapping of the cluster, articulated needs of MSMEs for different services, existence of BDS providers and services being provided by them and critical gaps and possible interventions for promotion of market oriented BDS. Based on the

studies, interventions have been identified and prioritised and operational plan has been developed.

1.2 Methodology:

The methodology adopted includes structured and informal interviews with promoters of MSMEs, their associations and major stakeholders, focused group discussions and review of secondary sources.

In the process of diagnostic study, 60 industrial units of various scale were contacted. Intensive discussions held with office bearers of associations and 14 officials of government support institutions, mother plants (SAIL-RSP), private BDS providers and also lead bank officials. A few private BDS providers located outside the cluster were also contacted to ascertain their perception about BDS market dynamics

Present status of the Cluster

Rourkela, the industrial capital of the state is situated in the north western part of Orissa, in the mineral rich (iron ore, coal, manganese, limestone, dolomite mines) district of Sundargarh

The establishment of cement factory OCL at Rajgangpur in 1951 and the Hindustan Steel Limited (Now Rourkela Steel Plant) in 1955 and Utkal Machinery" (Now Larsen and Tourbro's Heavy Engineering) were mainly responsible for rapid industrial development in this area.

Due to recent encouragement provide by state policies, large number of sponge iron, steel melting (Induction Furnace), Re-Rolling units came up in and around Rourkela, catering to the need of not only large and medium scale but also small individual customers.

Due to governmental issues and high volatility in the business cycles of Sponge iron and Induction furnaces units , these product lines frequently shut down there operations for long period and resume when the market stabilizes. Hence the project focused on machining and fabrication cluster.

The spread of units based on turnover is tabled below:

Table 1: Spread of units based on Turnover

Approx. Annual Turnover	Category	Type of Establishment	Investment in Plant & Machinery	Type of Major activity	Monthly Minimum Fabrication capacity	Number of Units
Rs.50 Lakhs and above	Tier1	Private Limited and Partnership	Rs.50 lakhs to Rs. 2 Cr	Machining and fabrication	Approx. 100MT	30
Above Rs. 15 lakhs to Rs. 50 Lakhs	Tier2	Proprietary and partnership	Rs. 10 Lakh to Rs. 50 lakhs	Machining	Approx.50 MT	40
Less than Rs. 15 lakhs	Tier3	Proprietary	Rs. 2Lakhs to Rs. 8 Lakhs	Machining	Negligible	150 plus

Problems affecting development of BDS market

Demand Side:

- Lack of information about services
- Inability to identify their business problems
- Lack of MSME networks to share cost of services.

Supply Side:

- **Lack of local strategic BDS (Design development, Advance Welding,)**
- Absence of local strategic BDS
- Scale of assignments are not attractive for the BDS

Transactional Side

- Unavailability of BDS providers in close proximity to cluster increases the cost of BDS use
- Tier 3 units isolated from service market
- Culture of dependence in subsidy limiting outreach.

Table 2: Suggested Interventions

BDS Area	Major Issues	Suggested Intervention
Skill development	Shortage of skilled manpower	<ul style="list-style-type: none"> - Developing cluster specific training module - Establishing collaboration with reputed training institutions and local institution.(Ex: Welding research institute, Trichy and Govt. ITI) Promotion of private training centers
Finance	<p>Absence of financial linkages to tier3 units</p> <p>Absence of credit for automation of machinery and use of ERP packages</p> <p>Absence of bookkeeping and accounting practices by tier3 units</p>	<ul style="list-style-type: none"> - Developing specific financial models for tier3 units through linkage with MFIs and FIs - Promotion of MCGS(Mutual credit guarantee schemes) - Organize periodic meets between SMEs and Bankers to sensitize the advantage of use of ICT tools. - Sensitization of tier3 units about the benefits of book keeping and deployment of part time accountants
Market Access	<p>Tier 3 units do not receive work from RSP and other direct orders due to being not registered under EM-part2 and absence of VAT registration.</p> <p>Absence of information about new projects in other geographical area</p>	<ul style="list-style-type: none"> - Registration of tier3 society with RSP with the support of DIC and NSIC participate in tender - Promotion of marketing BDS for tier3 - Building linkages with marketing BDS in other geographical area. - Participation in trade fairs
Safety and Occupational Health	Frequent accidents and absenteeism	<ul style="list-style-type: none"> - Awareness programme on safety and occupational health through National safety council - Training to local BDS to carry out period safety audits
ICT	<p>Low use of ICT tools by tier3 units</p> <p>Piling of inventory and bill follow up due to poor tracking systems</p>	<ul style="list-style-type: none"> - Training on computers and use of internet through Govt. ITIs and private BDS providers - Training to private BDS in developing SME ERP modules
BMOs	Role confined to advocacy and readdressal of grievances	<ul style="list-style-type: none"> - Capacity building of BMOs for provisioning of BDS - Capacity building of association in market facilitation and organize cluster specific seminars and workshops.

Chapter - 1

INTRODUCTION

Background

MSMEs play a vital role in the Indian economy. The sector has proved to be appropriate to address the national priorities of employment, removing poverty and regional imbalances. Government of India has been taking proactive steps in the direction of strengthening the competency of Indian MSMEs. The Tenth Five-year plan of the Government placed heavy reliance on the MSME sector for achieving various growth parameters. Recently notified MSME Act 2006 has been another proactive step in the direction of creating enabling environment.

With intent to facilitate increased flow of credit to MSMEs and support other developmental initiatives, SIDBI is implementing a multi-agency / multi-activity flagship Project on Financing and Development of Small and Medium Enterprises in India. The World Bank, Department for International Development (DFID), UK, KfW and GTZ, Germany are the major international partners in the Project.

The promotion of market oriented BDS in selected MSME clusters is one of the components of a project supported by DFID and GTZ. The purpose of the programme is to foster a substantially improved enabling and support framework for the development of SMEs in both rural and urban areas.

APITCO has emerged as preferred bidder for engineering sector by SIDBI PMD after assessing the technical and financial bids submitted by various competitive agencies/ Organisations with an objective to strengthen SMEs' access to BDS by designing & implement strategies to: -

- Foster 'BDS market development'
- Strengthen the access of MSMEs to BDS
- Help make BDS providers in the clusters self- sustainable
- Develop the select clusters as 'Role models' with a strong demonstration effect.

The total project period of 32 months is divided in to four phases which are :

Pre Implementation Phase

- Establishment of Project Office with necessary infrastructure
- Preparation of Diagnostic Survey Report
- Preparation of Action Plan
- MOUs with Network Partners

Implementation Phase

- Implementation of the activities as per the action plan

Sustainability Phase

- Assuring sustainability of interventions
- Setting of International Best Practices

Exit Phase

- Formation and strengthening of Governance mechanisms for sustainability of interventions
- Project Impact Assessment & Preparation of End of Project Report (EOR)

As a the part of the Pre Implementation Phase the Core Team of the engineering cluster of Rourkela with the support of HO team, has completed the Diagnostic Survey and prepared the Diagnostic Survey Report as per the specifications given by the SIDBI and M&E Agency.

Methodology

The methodology adopted includes structured and informal interviews with promoters of MSMEs, their associations and major stakeholders, focused group discussions and review of secondary sources.

In the process of diagnostic study, 60 industrial units of various scales were contacted. Intensive discussions also took place with office bearers of associations and 14 officials of government support institutions, mother plants (SAIL-RSP), private BDS providers and also SIDBI & lead bank officials. A few private BDS providers located outside the cluster were also contacted to ascertain their perception about BDS market dynamics.

Chapter - 2

FRAME WORK

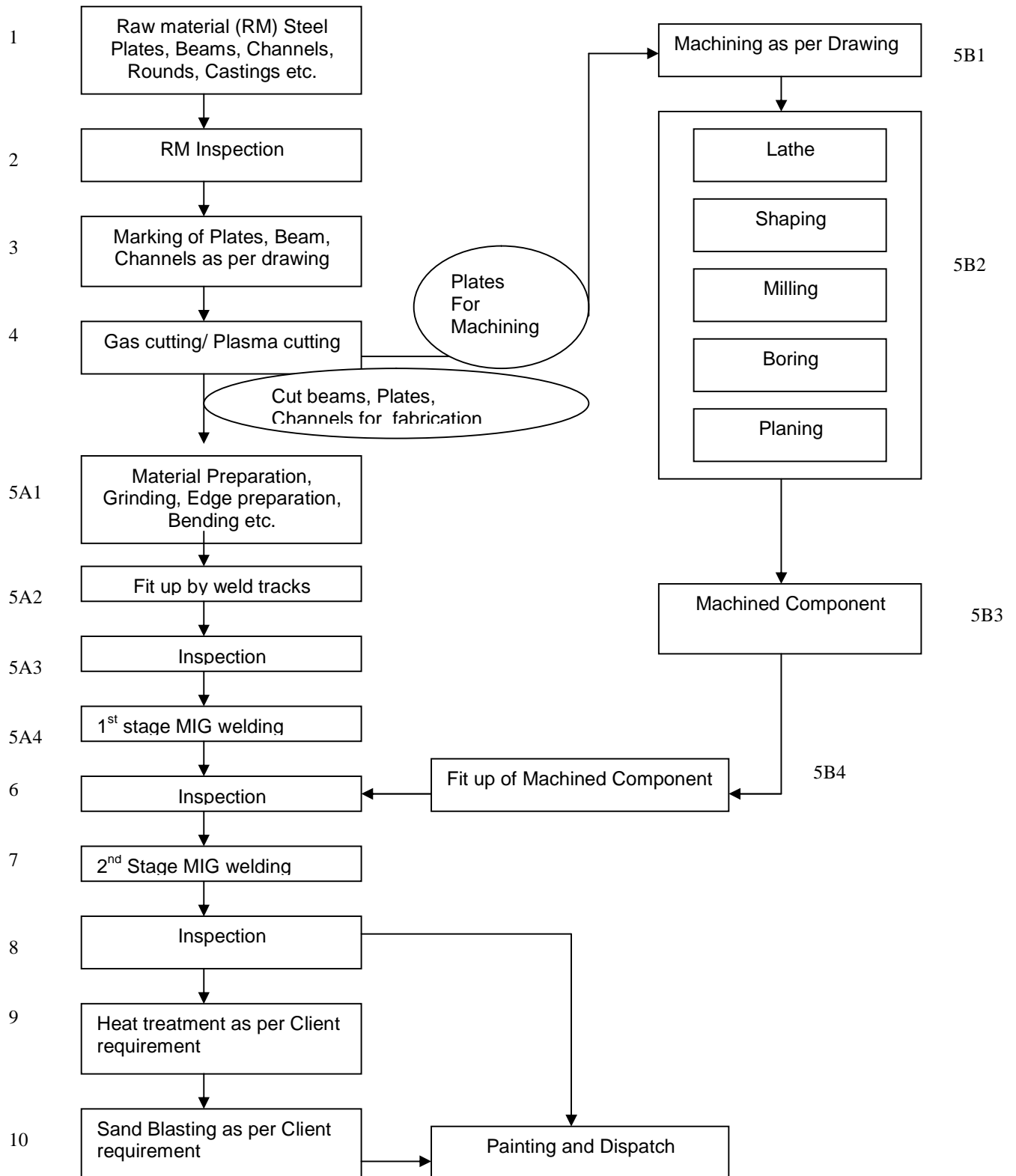
2.1 Rourkela Engineering Cluster

The Rourkela Engineering Cluster is located at Rourkela City of Sundergarh District, the industrial capital of the state of Orissa. The Cluster mainly consists of machining and fabrication Units. These units are found in the **two** Industrial Estates of Rourkela (Machining & Fabrication Units) and Kalunga (Fabrication Units). The Rourkela cluster products cater to mainly metallurgical, cement and to some extent the power sector.

2.2 Production Process

The **fabrication** process begins with coordinating the steel to be fabricated with the steel stock. As per the drawing markings are made on the steel and it is cut to size by gas cutting or plasma cutting as steps given (1-4). The cut material is prepared for fitting by grinding the burrs, forming edge angles, bendings etc as per drawing by welding tracks to construct the final piece as steps given (5A1-5A4). The component which needs to be assembled are **machined** in conventional power driven machine tools such as lathes, shaping etc as steps given (5B1-5B4). The machined component is fitted in assembly for second stage of welding which are again tested and the final assembly is sent for heat treatment and sand blasting is done as per client's requirement and the finished product is painted and sent for dispatch as shown in steps (7-10).

Production Process of Fabricated Equipment:



2.3 History of the Cluster

2.3.1 Milestones/Turning Points

The establishment of cement factory OCL at Rajgangpur in 1951, the Hindustan Steel Limited (now Rourkela Steel Plant) in 1955 and Utkal Machinery, a heavy engineering unit serving the Rourkela Steel Plant (RSP) of the Steel Authority of India Limited, (Utkal Machinery soon evolved into Larsen and Toubro's Heavy Engineering) were mainly responsible for rapid industrial development and associated growth of fabricated equipment in this area.

After the modernization of RSP, during the ninties, due to non availability of scrap (skull), the foundries units operating at Rourkela became unviable and had to shut down. At present, less than 13 cupola based units are in operation.

However, due to encouragement like clearances under single window scheme for establishing units provided by state policies, large number of sponge iron, steel melting (induction furnace), and re-rolling units came up in and around Rourkela, catering to the need of not only large and medium scale but also small individual customers.

Today Sundargarh district is home to approximately 35 sponge iron units, 40 Induction furnace units (ingot) and 10 rerolling mills. The fabrication and machining units were mainly responsible for supplying equipment and structures required for the above units, In addition to being ancillary to SAIL RSP and other mother plants.

2.3.2 Overview of Past & Ongoing Intervention

NSIC during the year 2002 implemented cluster development programme for the foundry sector of Rourkela. The intervention resulted in six cast iron foundries forming a consortium and jointly bidding for orders for supply of grinding media balls to Hindustan Zinc Limited, with the market assistance from NSIC.

UNIDO implemented a Cluster Development Programme (CDP) in Rourkela during 2005 - 2008, where the objective of the project was to promote the economic growth of the cluster by supporting the cluster stakeholders to collectively address bottlenecks and take

advantage of emerging opportunities. Some of the major activities and outcomes included the following:

- 8 Tier I units were taken on exposure visit to the Trichy fabrication cluster where they learned about modern machineries, diversification and quality of products and work culture of entrepreneurs. 5 Tier III units were taken for exposure to Coimbatore engineering cluster. As a result of the exposures, tier I and III of the cluster organised business networks with the objective of undertaking joint initiatives.
- 15 Tier I units have established a consortium named as CORE (Cluster of Rourkela Engineering Enterprises) to collaborate and take advantage of common opportunities through cluster based approach in the machining and fabrication segment. Core is an off shoot of tier 1 engineering members of DSSIA (District Small Scale industries Association) and had piloted several collaborative activities such as joint procurement of welding consumables, joint marketing, leading trade delegation, hiring of BDS for ISO certification, and have submitted proposal for establishment of CFC under MSE-CDP. It is a partnership concern.
- 20 Tier III units have established a network, the Rourkela Techno-Park Self Help Co-operative Limited (RTPSHCL).
- A proposal for a gas refilling plant was submitted to the Government of Orissa
- Three awareness programme on CGTMSE & CLCSS were conducted and Credit linkages for the cluster units were established under CGTSI & CLCCS with two financial institutions - SIDBI and State Bank of India.
- Joint Liability groups (JLGs) were formed covering a total of 50 units and linked them up to a micro finance institution called BISWA to solve the problem of lack of sufficient working capital to run the units optimally.

The learning's from **UNIDO –CDP** interventions are

- Micro finance institutions (MFI's) can play a major role to increase availability of credit to those micro units who are considered as non-bankable by financial institutions and facilitate the growth of micro units through financial support. Micro units traditionally face higher constraints in accessing credit from financial institutions since they cannot provide collaterals and sometimes they do not have land proof. Regular financing institutions (e.g. Banks) also have problem in loaning to enterprises which are irregular. However, MFIs do not require collaterals for loaning even to unorganized sector i.e. Tier 3 units. In

addition, they also provide accident insurance and coverage under social schemes which are generally not availed by other financial institutions.

- Further, a major determinant of credit shortage especially for the micro and small enterprises is not the unavailability of credit schemes for MSEMs rather the lack of awareness among cluster units regarding existing schemes and their inability to submit sound business plans to financial institutions. In addition to this financial institutions are also reluctant to promote the schemes in the cluster because the profitability of small loans is low. Thus facilitating the linkage between credit institutions and cluster firms can produce major impact in terms of credit inflow into the cluster and reduced dependence on informal credit.
- Public Private partnership for skill development resulted in two fold impact local employment generation as well as creating skilled workforce.
 - A major route to enterprise upgrading is the establishment of linkages with BDS providers which can provide technical assistance in quality, productivity and safety.

Major Lessons

- Linkage to MFI for supplying little more than micro finance (eg. Rs.2 lacs plus)
- PPP training modules leading to employment.
- Introduction of BDSs from outside the cluster

2.4 International & National Scenario and Description of Benchmark Cluster

2.4.1 International Scenario: Engineering is a diverse industry with a number of segments. A company from this sector can be a metallurgical and power equipment manufacturer (like steel plants and boilers), execution specialist or a niche player (like providing environment friendly solutions). It can be a non-electrical machinery and static equipment manufacturer too. This industry stands at a worth of USD 6 trillion presently. The global engineering sector is experiencing a phase where demand is outstripping the supply hence the engineering companies world over are embracing global sourcing.

In the light of the modern state of the art technology the engineering sector forms a crucial sector for the fast developing economies. Apart from experience and technical skills, enthusiasm and innovation is what the present day engineering industry yearns for.

The machining and fabrication sector, which includes the global engineering projects, including light engineering industry, was expected to touch USD 1.9 trillion by 2015, of which around 40% (USD 700 billion) was potentially expected to be sourced from low cost countries like India. Of the total global trade of USD 185 billion, India's share is merely 0.4%. It is expected that the present sourcing of Engineering projects and components from low cost countries (LCCs) worth USD 65 billion may actually reach USD 375 billion by 2015.

2.4.2 National Scenario

The Engineering sector is a diverse industry with a number of segments, and can be broadly categorized into two segments - heavy engineering and light engineering. The engineering sector is relatively less fragmented at the top, as the competencies required are high, while it is highly fragmented at the lower end (e.g. unbranded equipments and machinery for the retail segment) and is dominated by smaller players.

The heavy engineering goods account for bulk of the production. Most of the leading players are engaged in the production of heavy engineering goods Requirement of high level of capital investment poses as a major entry barrier. Consequently, the small and unorganized firms have a small market presence

Table1.0 : Classification of the Heavy Engineering Sector in India

Sub-segments	Number of Organised Players
Heavy Engineering Sector	
Cement Machinery	18
Metallurgical machinery	39
Material Handling Equipments	50
Mining Machinery	32
Sugar Machinery	27
Machine tools	125
Dairy Machinery	16

The major end-user industries for heavy engineering goods are power, infrastructure, steel, cement, petrochemicals, oil & gas, refineries, fertilizers, mining, railways, automobiles, textiles, etc. Light engineering goods are essentially used as inputs by the heavy engineering industry.

The light engineering goods segment, on the other hand, uses medium to low-end technology. Entry barrier is low on account of the comparatively lower requirement of capital and technology. This segment is characterized by the dominance of small and unorganized players which manufacture low-value added products. However, there are few medium and large scale firms which manufacture high-value added products. This segment is also characterized by small capacities and high level of competition among the players.

There being a technological gap in the basic design and engineering for plants and equipments in the ferrous and non-ferrous sector, the domestic manufacturers depend on imported technological know-how.

Key Findings

- Bright prospects for growth of engineering enterprises.
- Dominated by small players
- Low entry barrier
- Scope for moving up the Value Chain

2.4.3 Benchmark Cluster

The Trichy heavy fabrication and machining cluster in Tamilnadu, with about 400 SMEs has emerged as a model cluster in the country. The cluster caters to its mother plant, Bharat Heavy Electricals Limited (BHEL) and other power sector (high pressure boilers, pressure vessels, heat exchangers, windmills etc) the stakeholders of the cluster have inherently adopted cluster approach under a UNIDO programme. The association BHEL Small Scale Industries Association (BHELSSIA) is today taking lead in pursuing several collaborative interventions for the growth and competitiveness of the Industry.

One of the important contributions of BHELSSIA is establishment of BHEL Industrial development and service society (BIDASS) to procure consumables in bulk and retail the same to member units and is a price setter in trade circles. This is perhaps the oldest and largest initiative of its kind in SME engineering sector in India. Common facility center for addressing critical inputs like inert gas were established. The cluster also avails the strategic services of BDS providers such as NIT, Welding Research Institute, Indian Institute of quality assurance, certifying and inspection agencies such as Lloyds and there exists a strong linkage between private BDS providers who provide services as per the needs of the

SMEs in the cluster. Absorption and dissemination of modern technology, public private partnerships in training, infrastructure are systemized (A separate committee is formed by the association for each programme and the activities are monitored and reviewed periodically by the committee for effective implementation) in the Trichy cluster. The Trichy heavy machining and fabrication cluster has made good progress in moving up the value chain and are still progressing and creating examples for others.

Against the above background the Trichy heavy engineering and machining cluster may be considered as the bench- marking cluster.

Major Findings/ Learning

- Association/Society is the trend setter in fixing raw material prices
- Sourcing BDS services through association is cost effective
- Institutional support is specific to cluster needs
- Wider reach in dissemination of information through BMOs

2.5 VITAL STATISTICS (Principal Firms and Areas)

Core activity of the Rourkela engineering cluster is structural and equipment fabrication and machining. The units in the cluster are doing ancillary work of machining and fabrication to RSP, L&T, OCL and engineering and procurement companies. Units undertake job works as well as produce product as per design given by the customer. Additionally units also cater to the needs of small and medium sponge iron, casting units for their maintenance requirements. The cluster units are classified based on their turnover and investment capacity.

The major products of the cluster are structural and equipment fabrication to metallurgical, cement, material handlings industry

Tier 1 units take up larger volume jobs and receive orders from outside the region. They have contacts with one or two package providers (which are given by RSP and other similar firms to bigger firms who offload their works to smaller units) and consulting firms in addition to PSUs (public sector undertakings) themselves. Few units take up turnkey jobs. The owners of the Tier 1 are mostly second generation entrepreneurs and are qualified. The profitability of the units is estimated at 10 to 15 % or above. On an average each unit

employs 50 to 150 workers and overall, the total employment generated by Tier-1 units is around 4500.

Tier 2 units are mainly dependent on orders issued by RSP and local medium industries and are mainly engaged in the supply of spare parts. They are often created as spin offs of the mother plants or Tier I units. The average income of Tier II units ranges between 15000 to 25000 rupees per month. Tier II units provides employment to about 800 workers both direct and indirect with an average of 10 employees per unit.

Tier 3 units constitute the majority of the cluster. Tier 3 units are established by self-employed entrepreneurs as spin offs of Tier 1 and 2 on which they depend for the placement of orders. Most operate informally and are not registered as MSMEs in the Industries Department of Government of Orissa (GoO). On an average, the owners' income ranges between 4000 and 8000 rupees a month. Most of the units are spread across Kalunga and Rourkela Industrial Estates. Each unit employs approximately 2-4 helpers.

Criteria for Categorisation (Approx. Annual Turnover)	Category	Type of Establishment	Investment in Plant & Machinery	Type of Major activity	Monthly Minimum Fabrication capacity	Number of Units
Rs.50 Lakhs and above	Tier1	Private Limited and Partnership	Rs.50 lakhs to Rs. 2 Cr	Machining and fabrication	Approx. 100MT	30
Above Rs. 15 lakhs to Rs. 50 Lakhs	Tier2	Proprietary and partnership	Rs. 10 Lakh to Rs. 50 lakhs	Machining	Approx.50 MT	40
Less than Rs. 15 lakhs	Tier3	Proprietary	Rs. 2Lakhs to Rs. 8 Lakhs	Machining	Negligible	150

Engineering Cluster Concentration – Area Wise (Rourkela & Kalunga Township)

Sl.no	Cluster Area	No of units
1	Rourkela Industrial (Indust.) Area	40
2	Kalunga Indust. Area	60
3	Kuarmunda	20
4	Vedvyas	30
5	Gandhi Road	25
6	Orampara	20
7	Lathikata	10
8	Bisra Road	15
	Total	220

Critical BDSPs in the area were mapped and presented in the following table to understand the availability of the BDS market in the cluster.

BDS

S.No	BDS Areas	BDS Providers		
		Public	Private Organized	Private Un-organized
1	Technology	0	5	2
2	HRD	2	4	2
3	Marketing	3	0	7
4	Quality	2	2	3
5	Logistics	0	100	0
6	Finance	70	20	10

WDWP Matrix

Table 2.0 : Who Does, Who Pays Matrix

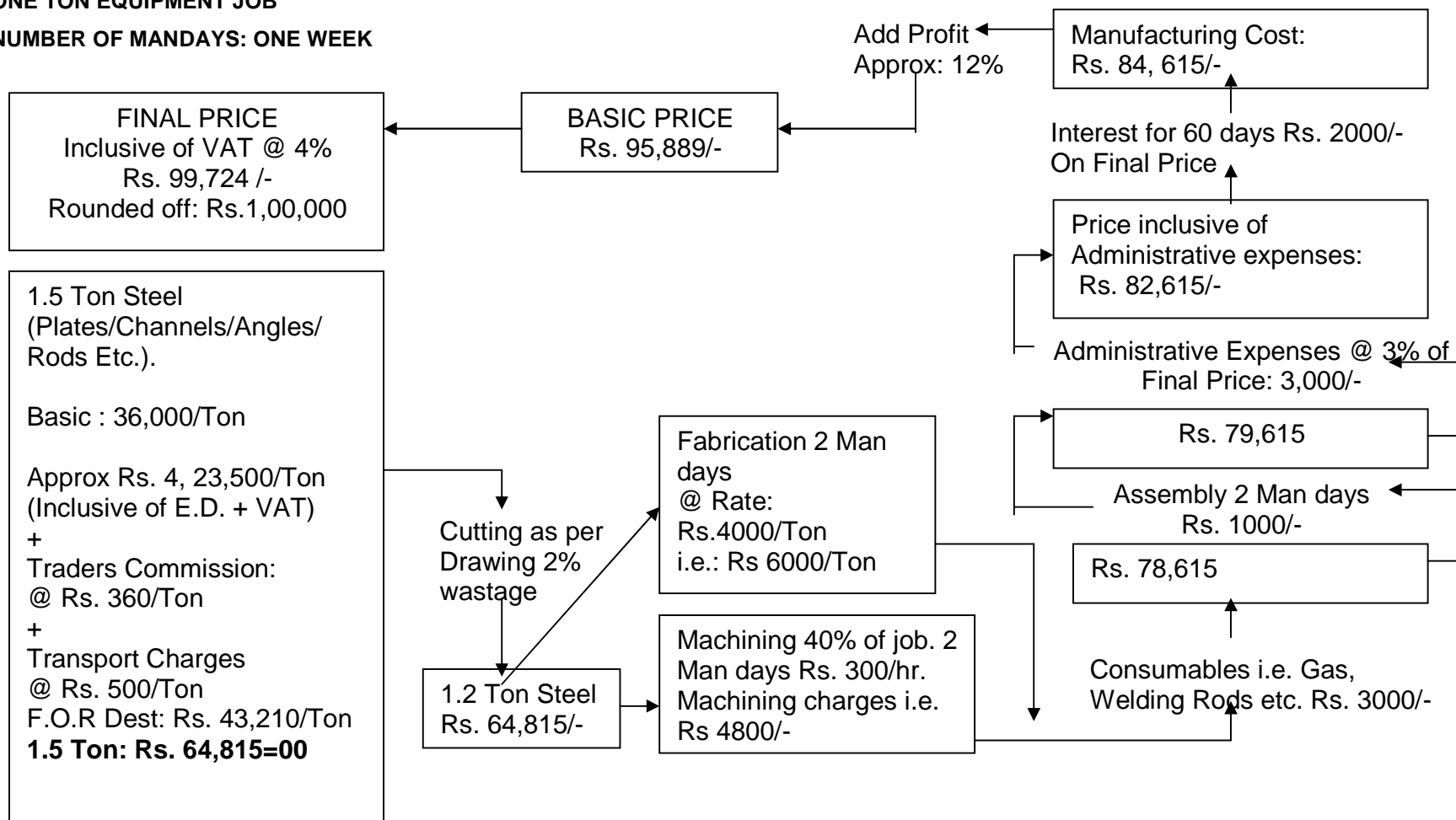
BDS	Who Does	Who Pays	Remarks
Testing	Govt. testing lab	100% Users(Tier1 ,Tier2)	The Govt. testing lab only charges maintenance and operational charges.
	Private testing lab	100% User (Tier1 &2)	
Market access	NSIC	50% User(Tier1) 50% grant	Participation expenses born by user, Promotional, coordination, stall , etc borne by NSIC
	OSIC	100% User(Tier1)	
Access to Finance	CAs	100% User (Tier1,2,&3)	
Training /Skill Development	DI-MSME	50% trainees	Govt. of India subsidy
	Employment Exchange/ITIs	100% grant	
	IIPM	100% User (Tier1 & Large firms)	Concession if training to large groups, BMOs can submit proposal for sponsorship for training in IIPM through corporate and Govt.
Access to finance	CAs	100% User (Tier1,2,&3)	
	NSIC	100% bank	NSIC gets fee for apprising the vailable proposals and recommending to bank for loan
Equipment Service	Pvt.BDS	100% User (Tier1,2,&3)	
Web development	Private BDS	100% User (Tier1)	
Infrastructure	IDCO	100% User(Tier1,2,&3)	A significant part of expenditure is met by govt.

3.1 VALUE CHAIN ANALYSIS OF MACHINING AND FABRICATION JOB

BASIS:

ONE TON EQUIPMENT JOB

NUMBER OF MANDAYS: ONE WEEK



Following points emerged as major constraints after thorough analysis of the value chain.

- Raw material (Mild steel) constitutes the major component of the cost of the product. However, if stain less steel or special grade steel is used as raw material which are currently procured from Mumbai and traders from Kolkata, the cost is increased by 20% compare to benchmark cluster.
- The man days required to complete the job is around 24 hours where as in bench mark cluster it will be completed in 16 hours. This is due to the fact that traditional equipments and machineries are used in operation.
- Administrative expenses, inspection, order and payment follow up and procurement of special items from Calcutta/Mumbai etc. is 3% as most of them cater to EPC firms and PSU's, where as the standard should not be more than 1%

3.2 Analysis of BDS Providers

BDS market is very weak in cluster. Both demand and supply sides are weak, unorganized and fragmented. As regards demand of services, there is lack of awareness among majority of MSMEs about availability and efficacy of BDS. Majority of Tier 2 and Tier 3 units in the cluster have never used fee based services. Many Tier 3 units do not have access to institutional finance. Services to a limited extent in the areas of ISO certification and credit ratings are availed by Tier 1 units. Barring CAs providing limited service in areas of taxation, audit and loan syndication, there is absence of private service providers. At the supply end public support institutions like NSIC, OSIC, MSME development institute, DIC and Employment exchange, are the institutes which provide free/subsidized services in there areas. Suppliers of inert gas, welding consumables and machines are providing embedded services to the firms.

This rapid market assessment based on quick diagnostic study gives a snapshot and broad contours of BDS market in the cluster. It covers i) assessment of present demand & supply of both low end and strategic services; ii) identification of needed strategic services and profiling of existing BDS providers and the nature of services being provided by them and iii) finding critical gaps in respect of certain services and range of possible interventions .

BDS market is very weak in cluster. Both demand and supply sides are weak, unorganized and fragmented. As regards demand of services, there is lack of awareness among majority of MSMEs about availability and efficacy of BDS. Majority of Tier 2 and Tier 3 units in the cluster have never used fee based services. Many Tier 3 units do not have access to institutional finance. Services to a limited extent in the areas of ISO certification and credit ratings are availed by Tier 1 units. Barring CAs providing limited service in areas of taxation, audit and loan syndication, there is absence of private service providers. At the supply end public support institutions like NSIC, OSIC, MSME development institute, DIC and Employment exchange, are the institutes which provide free/subsidized services in these areas. Suppliers of inert gas, welding consumables and machines are providing embedded services to the firms.

3.2.1 BDS Demand and Supply Analysis:

The generic problem affecting development of a market oriented BDS are summarized in table 3.0.

Table 3.0: Problems affecting development of BDS market

Demand side problems	Supply side problems	Transactional problems
<ul style="list-style-type: none"> ○ Inability to identify their business problem especially in tier2 & 3 units ○ They lack information about services ○ MSMEs don't see value of services ○ Lack of MSME-networks to share cost of services 	<ul style="list-style-type: none"> ● Lack of market information ● Absence of local strategic BDS ● Scale of assignments are not attractive for the BDS ● Prefer to work in informal manner ● Lack of innovation to suit the changing SMEs demand 	<ul style="list-style-type: none"> ● Unavailability of BDS providers in close proximity to cluster increases the cost of BDS use. ● Tier3 units isolated from service market ● Culture of dependence in subsidy limiting outreach.

3.2.2 Demand Side assessment

The assessment of demand of services has been made in respect of each tier of units in the cluster and is shown in Table 4.0

Table 4.0: Demand assessment and also level of usage of different services.

Machining and Fabrication	Nature of services being availed	Usage level	Services in demand
Tier 1	<ul style="list-style-type: none"> ○ ISO Certification ○ Tax & Audit ○ Testing ○ Maintenance ○ Design detailing ○ Credit Rating ○ Raw material loan ○ Heat treatment 	<ul style="list-style-type: none"> M H H M M L M M 	<ul style="list-style-type: none"> ○ Equipment Calibration ○ Training of operators/ supervisors ○ Welder certification ○ Weld testing ○ Technical consultancy for manufacturing power plant equipment and upgrading to higher value chain. ○ Equipment refurbishing ○ New geographical Market penetration ○ Management consultancy
Machining and Fabrication	Nature of services being availed	Usage level	Services in demand
Tier 2	<ul style="list-style-type: none"> ○ Tax & Audit ○ Testing ○ Maintenance 	<ul style="list-style-type: none"> H H L 	<ul style="list-style-type: none"> ○ New geographical market ○ Training of operators ○ Equipment calibration ○ Financial services for diversification and expansion ○ Mining spares product development with existing facility
Tier 3	<ul style="list-style-type: none"> ○ Machining technical inputs from tier1& tier2 units ○ Loans from money lenders ○ Hiring of portable equipments 	<ul style="list-style-type: none"> H H M 	<ul style="list-style-type: none"> ○ Direct market linkages ○ Financial services for availing loan from nationalized banks ○ Registration with PSUs. ○ Costing and estimation of jobs ○ Infrastructural services for expansion ○ Business management advisory

(*H-High, M-Medium, L-Low)

3.2.3 Supply side assessment

BDS in the cluster are provided by i) government support institution ii) Industries association iii) Private agencies/individuals.

i) Government support institutions

A) District Industries Center: It is a nodal agency of the state government in the district for promotion of industries. Its mandate is to coordinate and facilitate industrial development and provide free services in area of project identification etc and plays an important role as facilitator for Govt. sponsored schemes like Jawahar Rojgar Yojna etc. It is designated agency for issuance of provisional and final registration certificates in respect of MSMEs. The linkage with the principal cluster actors has to be strengthened.

B) Development Institute-MSME: It is an outfit of the ministry of MSME, Gol created to provide micro consultancy to MSME units. They also undertake machining works in there common facility center by charging on hourly basis for the job to be executed, but there usage is marginal. They also periodically conduct certified training programme on machining. Linkage with principal firms has to be strengthened.

C) National Small Industries Corporation (NSIC): It has its branch office at Rourkela and provides financial assistance at nominal interest of 12 % per annum for procurement of raw material and helps the foundry units in tender marketing to supply grinding media balls to Hindustan Zinc Limited charging a nominal 2% service charge. They also provide free services in facilitating in processing loan from nationalized banks. The linkage with Tier 1 and Tier 2 units are strong, however their activities to Tier 3 units is absent which needs to be developed.

D) Testing Laboratory: A Senior Scientific Officer heads the testing laboratory under Government of Orissa situated at Industrial estate of Rourkela. The equipments are in bad shape and the laboratory is run by a skeletal staff. There is strong linkage with Tier 1 and Tier 2 units. A laboratory under RITES Ltd (under ministry of Railways) is functional in the cluster and is managed by an inspecting engineer. The laboratory is well equipped and most

of the tests carried out are chemical composition of material tests. NIT, Rourkela also assists in testing of materials. The fees charged are subsidized.

E) Employment Exchange: It periodically conducts entrepreneurship training programmes and skill development programmes for unemployed youths through Govt. & Pvt. Technical institutes, it facilitates in providing manpower mainly to large and medium enterprises and does not charge any fee.

F) The Orissa Small Industries Corporation (OSIC): This is a Govt. of Orissa enterprise is allotted a fixed quota by SAIL at discounted price to trade in Iron and Steel. They supply to SSI units who require material in small quantity, which otherwise is not supplied in small quantity by SAIL. The price discount is passed on to the industry and a nominal service charge of 2% is charged from the units. They have a godown at Rourkela Industrial Estate. OSIC also facilitates in procurement of order to SMEs from PSUs by charging 3% service charge on fructification of order. The facilities are mostly availed by Tier 1 units.

G) Orissa State Financial Corporation (OSFC): Credit provisioning is made available by OSFC which has provided term loan assistance to majority of units for acquiring fixed assets. It has stopped giving loans for the time being due to accumulation of Non Performing Assets. At present the local office of corporation (headed by a Dy. General Manager) is active in recovery of bad loans.

H) Orissa Industrial Infrastructure Development Corporation, IDCO: IDCO provides and maintains existing infrastructure (Industrial estates) and has an office at Rourkela, headed by a project manager. The organization collects property tax from the units and arranges to provide water supply, maintains road and arrange sheds for lease or sale for prospective entrepreneurs.

II) Industry Associations

The role of associations and chamber of commerce is confined to advocacy and redressal of grievances of its members. The Rourkela Chamber of Commerce and Industry keeps its members informed about policy and procedure changes. They have representation in plant level purchase committee of Rourkela steel plant. The table 5.0 summarizes the status of various BMOs/ associations in the cluster.

A) Rourkela Chambers of Commerce and Industry (RCCI)

Most of the units in Rourkela are members of this apex chamber. With a membership of about 600, the chamber has its own chamber office, hall, conference room and administrative staff. The members are classified into different categories (foundry and engineering, iron and steel, trading etc) and each group is headed by a general Secretary. The chamber espouses the issues of Industries to the State and Central Governments. It also releases a yearly bulletin named VICHAR. It conducts workshops on taxes and awareness programmes on govt. supports to industries.

B) Orissa Young Entrepreneurs Association (OYEA)

OYEA – Rourkela chapter has a membership of 160 units. Most of the MSME units of Sundergarh district are members. The association has its own building and meeting hall at Rourkela Industrial Estate. Its role is dormant.

C) District Small Scale Industries Association (DSSIA)

With a total membership of 120 spread around the district of Sundergarh, DSSIA is operating from DIC office of Rourkela. It does not play any active role. Majority of the members are engineering industries.

D) Orissa Assembly of Small and Medium Enterprise (OASME)

This association of 60 units from Kalunga industrial area is a locally based organization. They have their office at DIC and take up issues related to, policy with the concerned Government Departments.

All the above associations are in the vendor committee of RSP- a representative body of all vendors to RSP.

Table 5.0 : Status of existing BMOs with respect to their capacity for service provisioning

BMO	Membe- rship	News letter/ Website	Separate Office	Professional Secretariat	Joint activities other than advocacy
RCCI	600	Yes	Yes	Yes	No
Orissa Young Entrepreneurs Association (OYEA)	100	No	Yes	No	No
District Small Scale Industries Association (DSSIA)	150	No	Yes	No	No
Orissa Assembly of Small and Medium Enterprise (OASME)	50	No	Yes	No	No

III) Private BDS providers

- In Rourkela there are about 50 CA's providing limited range of services to MSME's in area of audit, tax and loan syndication. The local units are availing their services for audit and taxation. The annual income of this CA group is about 70 lacs and out of which about 10 CAs provide services to machining and fabrication cluster, and there annual earning is about Rs. 20 lakhs. There requirement is substantially good.
- There are two private testing laboratory approved by Rourkela steel plant, they provide destructive and Non-Destructive testing to engineering units, their annual earning is about Rs.60 lakhs. There requirement is high.
- There are two designers who take up detailing of drawing and prepare the bill of materials and estimations. Their annual turnover from the cluster is approx. Rs. 40 lakhs. There are also 10 individual engineers who take up part time assignments for engineering units charging a fee between Rs. 500 to Rs. 5000 depending on the scale of detailing. Their requirement is good.
- There are about 8 private individual members who carry out quality check of the product and render necessary assistance for up-gradation of quality of the product. They do such type of services on case to case basis on for a fee based on the value of assignment (ex. 0.5% of the value of order or a lump sum one-time fee say Rs. 6000 or so). The requirement of this service is high.
- About five agencies are available who deal with machineries supply both new and old

they have the wide network and ample of information regarding availability of machines of various types required by the SME's. They come as a big help for local units. The commission is fixed by the agency prior to supply of the machines. The requirement of this service is high.

- About five agencies are available who shuttle between Kolkata and Rourkela units for procurement of items which are not available at Rourkela and are urgently required and they personally visit Kolkata to get those items. In a week once or twice they visit Kolkata to fetch the items such as fasteners, bearing, plumber blocks or any other assorted items.
- There are two enterprises who undertake heat treatment of structures and equipments and their annual turnover is approx. Rs. 60 lakhs. Their requirement is mainly used by Tier 1 units.
- There are two BDS who provide sales and service of welding equipments. Their annual turnover from service contract is approx. Rs. 50 lakhs. The requirement of this service is very high.
- There are two BDS provider who provides service in web site development and portal maintenance. The annual turnover is approx. Rs. 50 lakhs. The demand for the BDS is good.
- There is one BDS in the cluster who provides factory layout and structural consultancy for construction of industrial sheds. This service is in good demand.
- There are about 20 BDS providers who regularly liaison with Rourkela steel plant for order follow up, delivery of material and receipt of payment. There is good demand for this service.
- There are about 15 labour contractors who undertake fabrication works on labour charges; their labour charges are approximately between Rs. 3000/Mt to Rs. 8000/Mt depending on the nature of Job. There is large requirement of this service.

- **Technical Institutions**

National Institute of Technology (NIT) - the premier technical institute, is located at Rourkela. It has a separate department for sponsored research and industrial consultancy and continuing education. The institute has well qualified faculty and laboratory but is not utilized because of their preoccupation in their academic pursuit. Additionally there are two private Engineering Colleges and Polytechnic Institutes. There are about 20 Industrial Technical Institutes which impart training and education in the field of Mechanical, Electrical and

Electronics. The Government ITI is well equipped and has two CNC Machines which are not in use due to lack of trained operator and absence of specialist to attend breakdown.

Indian Institute of Production Management (IIPM), Kansbahal near Rourkela is a leading institute whose activities are training, technical consultancy services, education and management consultancy for managers, supervisors and technicians. They have till date catered to only large organizations like L&T, OCL, RSP, ACC, ITC and Reliance etc. Dalmia Institute of Scientific and Industrial Research, Rourkela is a self sustaining organization for research in cement and refractory areas. They have now slowly expanded their research work into other areas. Dept of Science and Technology, Gol recognizes the Institute to do research in cement and refractory by providing grants and collaboration.

- **Transport contractors**

There are nearly 200 transport contractors operating in the clusters. Dumpers are the main service provided; about 40 contractors employ trailers and material handling equipments like EOT cranes for transportation of heavy fabrication and machinery.

- **Labour Contractors**

There are about 50 labour contractors in the cluster, they supply labour for fabrication and material handling works.

Usage levels of Current BDS Matrix

The current BDS matrix depicts the relationship amongst the various institutions operating in the cluster. The following table presents the current institutional matrix of the Rourkela Engineering cluster. (1- poor usage, 5 - high usage)

BDS Provider	Supply of BDS						
	Raw Material	Technology	Marketing	HRD	Quality	Finance	Logistics/Infra structure/Audit
Public BDSP							
IDCO	0	0	0	0	0	0	2
OSIC	3	0	4	0	0	0	3
NSIC	3	0	4	0	0	0	3
MSME DI	0	0	0	3	0	0	0
NIT	0	0	0	4	0	0	0
ITI	0	0	0	3	2	0	0
Testing Lab	3	0	0	2	3	0	0
BANKS/FI	2	2	0	0	0	2	0
Private BDS							
CA's	0	0	0	0	0	0	3
Testing lab	2	0	0	0	2	0	0
Designers	2	0	0	2	2	0	0
Marketing	2	1	2	1	2	0	2
Technology	0	1	0	1	2	0	0
IIPM	0	0	0	4	3	0	0
Logistics	3	0	2	0	0	0	2
BMO							
RCCI	0	0	1	1	0	0	0
OYEA	0	0	0	2	0	0	0
DSSIA	0	0	0	2	0	0	0
OASME	0	0	0	2	0	0	0

Note: '0' – Not applicable, '1' – Poor, '2' – Marginal, '3' – Good, '4' – Very good

- IDCO : Industrial Infrastructure development corporation
- OSIC : Orissa small industries corporation
- MSME DI : Micro small & medium enterprises Developing Institute
- NSIC : National small industries corporation
- NIT : National Institute of Technology
- ITI : Industrial Training Institute
- CA : Chartered Accountants
- IIPM : Indian institute of production management
- RCCI : Rourkela chamber of commerce and industry
- OYEA : Orrissa young entrepreneurs association
- DSSIA : District small scale industries Association
- OASME : Orrissa Assembly of small & Medium enterprises

BDS Conclusions

Following specific needs of BDS requirements in the Cluster emerged out of all the above analysis.

At Rourkela Engineering Cluster there are very few BDS facilities in terms of marketing, design and financial aspects.

Marketing-and RMS consultants: At present there are few consultants for raw material handling, supplying consumables. Higher presence of them also leads to increase in work orders for additional income growth. The firms are also limitedly capable to identify sources for getting work orders due to their limited networks and dependant on local vendors only.

Design Centre: Most of the jobs are tailor made. Hence, for all the above works there is huge requirement for common design centre for detailed design/drawings.

Financial Institutions: As there is poor credit facilities, clusters are restricted to limited jobs therefore financial linkages are needed to purchase raw materials, tools etc.

The BMOs are inactive to provide BDS services or facilitation.

Lack of market information and innovation to suit clients' requirements.

3.3 ANALYSIS OF BUSINESS OPERATIONS

3.3.1 Raw material Procurement System: Machining and fabrication units buy their material i.e. steel rods, sheets, channels, beams and plates locally and through dealers. Retails branch of RSP also supplies in bulk quantity. Special steels and stainless steel is procured from Kolkata and Mumbai. Sometimes inventories have to be maintained for such items. Orissa Small Industries Corporation is also supplying to the small units as it gets its discounted supply from RSP the benefit of which is passed on to the units. Its services are not fully utilized by the units due to procedural problems.

Other than the steels available from Rourkela steel plant, steel products of private steel plants like Jindal, Bushan steel are also consumed through dealers. There is no credit system in purchase of steel, however due to long standing business relationship between the units and traders, short term credit of 3 to 7 days are generally negotiated. There are local traders who stock and supply welding consumables, inert gas and miscellaneous items.

Proper analysis shows that the raw material price of steel can be reduced by about 3% through common procurement. Procurement of Stainless steel by OSIC would facilitate ready stock of SS plates in the cluster reducing the lead time of procurement. Bulk purchase of consumables would reduce the procurement price by about 10% of the present procurement cost.

3.3.2 Technology: The cluster manufactures products related to cement, paper and metallurgical plants and employs conventional welding and cutting equipment and machinery resulting in increase in man-day for completing a job. If the cluster goes for modern machineries like CNC multi nozzle cutting machine, automated welding machine etc, there is scope for at least 25-30% increase in production resulting in execution of more tonnage of work per month. The tier1 & 2 units have capability to manufacture power plant equipments which are of high value with the existing facilities but lack technical inputs on design capabilities.

3.3.3 Present Marketing System: The units in and around Rourkela presently do the marketing of their own without engaging any outside agencies. The enquiries are obtained from organizations and the quotation is prepared with detailed study of drawings. Most of

the clients go for lowest bid, which are further negotiated based on technical requirements, quality adherence and once accepted the order is placed by the client. Rourkela steel plant outsources 25 % of there machining and fabrication work from the cluster. The units have to be registered with RSP for getting enquiries and participate in tender. Number of power plants is being established in the eastern region, the equipments and components required for power plant are procured from the fabrication cluster located in southern and western region of our country. The prices of power plant equipment and structural fabrication and machining are 30% higher than for metallurgical plants and equipment, hence there exists good potential for manufacturing power plant equipments and components by the cluster.

Tier 1 units get orders from engineering and procurement companies (EPC), private metallurgical and cement plants, e.g. Jindal steel, Bhusan Steel, Vedanta Aluminum Limited, OCL, BALCO, Adhunik etc. EPCs are those large firms who undertake concept to commissioning of part of large projects, e.g. commissioning of blast furnace in steel plant, commissioning of captive power plant in an Aluminum plant, etc. The units execute the work as per the drawings provided by the client. The price is fixed based on the tonnage of work executed. Orders are mostly taken with material. In some cases steel is supplied by the client in which case labour charges are collected for the work executed. Most of the work which is off loaded to Rourkela is for large projects being established in the Eastern region.

Some of the export orders received from EPC firms are also executed by Tier 1 units, however no direct export is reported from the cluster.

Tier 2 units undertake 80% machining works and 20% fabrication work and get most of the orders from Rourkela steel plant, OCL, L&T, Tier1 units and sub-contractors working inside the steel plant. They also undertake maintenance work of sponge iron units. These units do not explore market beyond Rourkela and surrounding area due to poor marketing skills and manpower constrains.

Tier 3 units are mostly job workers, the job to be executed is provided by the Tier 1 and Tier 3 units and they are paid only labour charges. These units are not aware of scientific system of estimating the cost of job being undertaken. Presently the capacity of tier 2 and tier 3 units are underutilized, due to strict inventory control practiced by RSP and tier 1 unit. Larsen & Toubro Limited, Industrial Machinery division, Khansbahal works, outsources machining and fabrication works to a set of about 15 Tier 1 and Tier 2 units.

RSP is undertaking major expansion of its plant and number of EPC firms has started executing the work. However due to general economic conditions the pace of work is slow, which is expected to pick up in the near future.

The profit margin varies between 10 to 12 % due to poor negotiation skills and fear of losing order to competing firms/clusters across the three tiers

3.3.4 Skill Development: Most of the workers are on irregular basis as they are paid 20% less than the average industry wages e.g. Rs. 250 per day for skilled welder. The level of cluster specific skills are average and there exists scarcity in the availability of adequate skilled manpower for welding, fitting, supervision and machining operations. Also noticed there is high level of absenteeism of workforce in the cluster. The training in technical institutes is not in tune with the skill required in the cluster. Since the nature of work in fabrication and machining cluster is labour intensive, candidates prefer to work in units such as L&T, OCL, ORIND, ADHUNIK etc where the wages are higher compared to that in the cluster.

3.3.5 Financial Aspect: All the Tier 1 units and 50% of the Tier 2 units have availed term loan and working capital from major nationalized banks. SIDBI has been designated by DoI, GoO to adopt engineering cluster of Rourkela and adjoining areas. SIDBI is the major financial institution which had disbursed term loan under Credit Guarantee Trust for Micro Small Enterprises (CGTMSE) and also facilitated expansion of Tier 1 units under Credit Linked Capital Subsidy Scheme (CLCSS). Nationalized banks are not proactive to provide loans to units under CGTMSE. Dun & Bradstreet has conducted credit rating for 20 Tier 1 units and SMERA has rated one Tier1 unit during the year 2007, the ratings are still not reviewed. Banks and financial institutions have their own rating tools and rarely rely on external rating agency.

Loans availed by tier1 units are in the range of Rs. 25 lakh to Rs. 2 crores. Loans availed by tier2 units are in the range to Rs. 5 lakhs to Rs. 15 lakhs. About 10 Tier 3 units which have EM registration have availed loans in the range of Rs. 2 lakhs to Rs. 5 lakhs.

Most of the Tier 3 units lack access to credit from financial institutions due to their unorganized nature of operation and absence of book keeping and minimum accounting

practices, and lack of collaterals to provide. Further they are not EM1 registered, they source loan from informal source at high interest rates of 3 to 5 per cent per month. The immediate potential for loan to these Tier 3 units is approximately Rs.300 lakhs. This will enable them to upscale their production base, explore direct marketing channels, take higher order and facilitate in increase in profitability.

3.3.6 Information and Communication Technology (ICT): Tier 2 and Tier 3 units are poor in business management practices. Their unorganized nature of operation restricts them to limited network and they are unable to explore their manufactured products in the competitive market. Due to this major factor surrounding firms are unable to know the services offered by these units. Therefore usages like internet and scientific methods may result in higher production levels. There are only two website development agency and there charges are between Rs. 10,000 to Rs. 30,000.

3.3.7 Business Member's Organisation (BMO): Even though at cluster level the associations are available but the presence of networking among the associations is very weak and there is no product specific association. Only informal group of 12 members formed CORE (Cluster for Rourkela Engineering Enterprises) are present.

Analysis of Business Operations (AOBO) & Pressure Points

BDS Areas	Key Issues		Suggested Solutions	Required BDS providers / Facilitators
	Issues	Types of Firms		
Raw Material	<ul style="list-style-type: none"> • Lack of sufficient common procurement centers. • Lack of credit system for purchase of steel 	<ul style="list-style-type: none"> • Tier 1, Tier 2 and Tier 3 units • Tier 2. and Tier 3 	<ul style="list-style-type: none"> • Establishing common procurement centre for Raw material • Frequent Bankers meet • Organize loan mela 	<ul style="list-style-type: none"> • Large firms(RSP),Associations and local Dealers. • Banks, FI's
Technology	<ul style="list-style-type: none"> • Lack of awareness on manufacturing high value products • Lack of automated machineries. • High percentage of wastage during the process • Lack of drawing/design centre 	<ul style="list-style-type: none"> • Tier 1 and Tier 2 • Tier 1, Tier 2 and Tier 3 • Tier 2 and Tier 3 • Tier 2 and Tier 3 • Tier 1, Tier2 and Tier 3 	<ul style="list-style-type: none"> • Conducting Awareness programme on manufacturing process. • Demonstration of automated machineries like CNC. • Awareness Programme on waste minimization. • Promote Design centre. 	<ul style="list-style-type: none"> • Technical Institutions like NIT. • Technology Consultants • Technical Training institutes like ITI,NIT • Professional Institute like IIPM • Individual design Consultants
Marketing	<ul style="list-style-type: none"> ▪ No proper Distribution channel. ▪ Uneconomical pricing practices among the cluster units. ▪ Lack of awareness among end users regarding products offered by cluster firms 	<ul style="list-style-type: none"> • Firms to cluster units • Tier 1, 2 and 3 units • Large firms (RSP) and engineering units 	<ul style="list-style-type: none"> • Organizing buyer seller meets in cluster. • Capacity Building of Association on price fixation. • Create Web Portal 	<ul style="list-style-type: none"> • NSIC, OSIC and associations. • DIC,MSME DI and Pvt. Institutions • BDS like Hi technology and Services

Skill Development	<ul style="list-style-type: none"> ▪ Shortage of skilled manpower 	<ul style="list-style-type: none"> • Cluster units 	<ul style="list-style-type: none"> • Conducting cluster specific trainings for skill up gradation. 	<ul style="list-style-type: none"> • Reputed training institutions (Eg. Welding research institute, Trichy) and Govt. ITI • DIC and Associations
Finance	<ul style="list-style-type: none"> ▪ Absence of financial linkages 	<ul style="list-style-type: none"> • Tier 2 and Tier 3 	<ul style="list-style-type: none"> • Developing specific financial models with the support of MFIs and FIs 	<ul style="list-style-type: none"> • CA's and pvt certified consultants
ICT	<ul style="list-style-type: none"> ▪ Low usage of ICT tools in design/fabrication 	<ul style="list-style-type: none"> • Tier 3 units 	<ul style="list-style-type: none"> • Conducting workshop on usage of ICT in design/fabrication.. 	<ul style="list-style-type: none"> • Through professional institutes NIIT & BMOs
BMOs	<ul style="list-style-type: none"> ▪ Role confined to advocacy and readdressed of grievances 	<ul style="list-style-type: none"> • Associations 	<ul style="list-style-type: none"> • Capacity building of association in market facilitation and organize cluster specific seminars. 	<ul style="list-style-type: none"> • DIC, MSME –DI & BMOs

3.3.8 Pressure Points

- Promotion of technical skill development of manpower as per the requirement of machining and fabrication cluster.
- Increase the market reach for Tier 2 and Tier 3 units
- Access to credit to Tier 3 units

Chapter -4 DERIVATION

4.1 SWOT Analysis

Strengths

- Easy availability of raw material, power, and workforce.
- Existence of undergraduate and graduate technical institutions, including one of high repute
- Proximity to mother plants
- Entrepreneurs are experienced in their core area of machining and fabrication
- Cordial labor relations
- Financial institution's willingness to fund bankable projects
- Facility to undertake high value power plant fabrication and equipment exists

Weakness

- Majority of Tier 2 and Tier 3 units in the cluster have never used fee based services
- Absence of strong BDS linkages in critical areas like marketing, product development, quality, technology, finance, etc.
- Scarcity in availability of adequate skilled manpower for welding, fitting, supervision and machining operations
- Training in technical institutes is not in tune with skill required in the cluster
- Tier 3 units not aware of scientific system of estimating the cost of job being undertaken.
- Tier 2 lacks in poor marketing skills
- Deficient support services in equipment calibration, equipment refurbishing, technical consultancy and upgrading to higher value chain, e.g. manufacturing power plant equipment
- Government of Orissa testing laboratory equipments are in bad shape and the laboratory is run by skeletal staff. There is less linkage with Tier 3 units.
- Most of the jobs are tailor made. But there is lack of common design centre for detailed design/drawings.
- Orissa Small Industries Corporation services are not fully utilized by the units due to procedural problems.
- Raw material price of steel can be reduced by about 3% through common procurement.
- Bulk purchase of consumables would reduce the procurement price by about 10% of the present procurement cost.

- If the cluster goes for modern machineries like CNC multi nozzle cutting machine, automated welding machine etc, there is scope for at least 25-30% increase in production resulting in execution of more tonnage of work per month.
- Usages like internet and scientific methods may result in higher production levels but there are only two website development agency Tier 3 unit lacks access to credit from financial institutions due to there unorganized nature of operation and absence of book keeping and minimum accounting practices, and lack of collaterals to provide. They source loan from informal source at high interest rates of 3 to 5 per cent per month. The immediate potential for loan to these Tier 3 units is approximately Rs.300 lakhs. This will enable them to upscale their production base, explore direct marketing channels, take higher order and facilitate in increase in profitability. They also need business management advisory, infrastructural services for expansion, financial linkages are needed to purchase raw materials, tools etc.
- Tier 2 units need financial services for diversification and expansion
- Lack of effort for new geographical Market penetration for Tier 1 and Tier 2 units.
- Tier 3 units lack direct market linkages and registration with PSUs
- No product specific association
- The BMOs are inactive to provide BDS services or facilitation

Opportunities

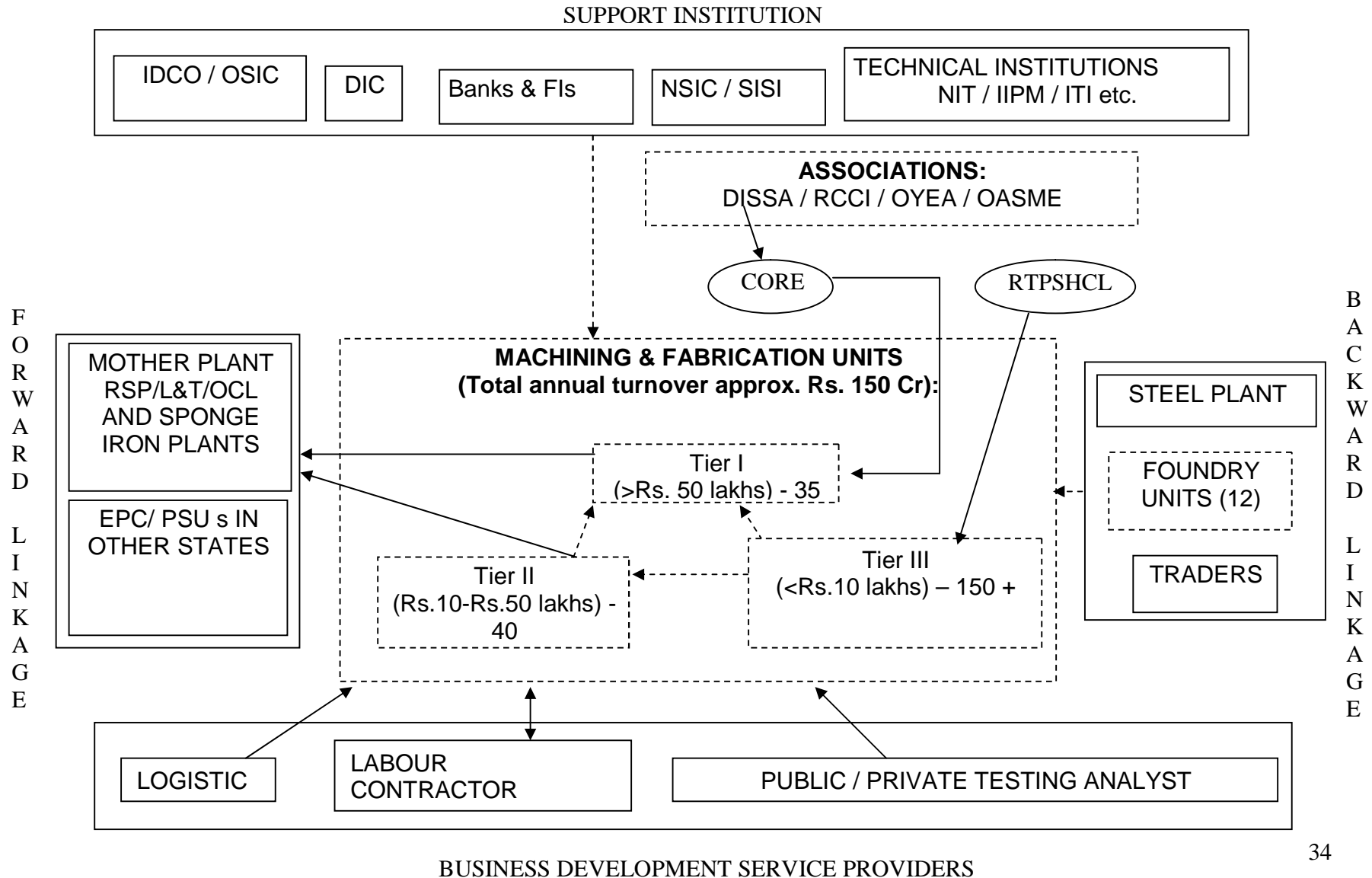
- Increased infrastructure activity within and outside the country gives good scope for executing large projects
- Expertise of machining and fabrication of Sponge iron plants can be put into maximum use in emerging sponge iron clusters in other states.
- Huge Investments in power plant and metallurgical plants in pipe line at this part of the country
- Opportunity exists for becoming a one stop source for mining spares.

Threats

- Lack of availability of freehold land limiting expansion and growth of the industry.
- Slowdown in infrastructure activities will adversely affect the units.
- Dependence on design for fabrication of equipment and structures resulting in outsourcing of orders by RSP/EPCs from competing clusters.

4.2 ROURKELA ENGINEERING CLUSTER

Cluster Map



4.3 Cluster Vision

The Rourkela machining and fabrication cluster envisions to enhance its turnover profitability by productivity improvements of existing facilities and diversifying into high value added products by building strong linkages with BDS providers in the area of technology, product and skill development, market and financial access and quality by 2011.

4.4 Long Run and Short Run Objective

Long Run Objective

- Linkage with BDS providers for manufacturing high value products
- Facilitating public private partnership in establishing welding training and certification institute
- Creation of design development facility with the help of NIT and will be run and managed under PPP model.
- Double the turnover level by, profitability by 50%
- Promotion of private skill up gradation centres.
- Promotion of metal cutting software and ERP tools for Tier 1 units
- Capacity building of Tier 2 and Tier 3 units to use ICT tools
- Promoting Tier 3 units as ancillary to SAIL-RSP
- Linkage MFIs and FIs to finance Tier 3 units
- Capacity building of association
- Strengthening linkages between BMOs and mother plants to provide technical and management support to MSMEs
- Enhancing the production levels of existing facility by 25% through lean manufacturing practices

Short Run- Objective

- Strengthening of product specific association
- Establishment of web portal for information dissemination

- Conducting training on weld testing and certification through equipment suppliers and institutes.
- Organizing skill development training programmes on welding and machining through Govt. ITIs and employment exchange
- Sensitization of MFIs for financing to Tier 3 units and creating awareness regarding CGTMSE scheme for Tier 1/Tier 2 units.
- Propagation of financial and credit rating schemes
- Market linkage for Tier 3 units with mother plant
- Sensitization on occupational health and safety.

4.5 Suggested Action Plan

The suggested action plan is given below:

BDS Area	Major Issues	Suggested Action Plan
Skill development	Shortage of skilled Manpower	<ul style="list-style-type: none"> - Developing cluster specific training module - Establishing collaboration with reputed training institutions and local institution.(Ex: Welding Research Institute, Trichy and Govt. ITI) - Promotion of private training centers - Training in supervision and machining operations - Cost estimation for Tier 3 units
Finance	<p>Absence of financial linkages to tier3 units</p> <p>Absence of credit for automation of machinery and use of ERP packages</p> <p>Absence of bookkeeping and accounting practices by tier3 units</p>	<ul style="list-style-type: none"> - Developing specific financial models for Tier 3 units through linkage with MFIs and FIs - Promotion of MCGFS (Mutual credit guarantee schemes) - Organize periodic meets between SMEs and bankers to sensitize the advantage of use of ICT tools. - Sensitization of Tier 3 units about the benefits of book keeping and deployment of part time accountants
Market Access	<p>Tier 3 units do not receive work from RSP and other direct orders</p> <p>Absence of information about new projects in other geographical area</p>	<ul style="list-style-type: none"> - Registration of Tier 3 society with RSP with the support of DIC and NSIC participate in tender - Promotion of marketing BDS for Tier 3 - Building linkages with marketing BDS in other geographical area. - Participation in trade fairs - Marketing training for Tier 2 units

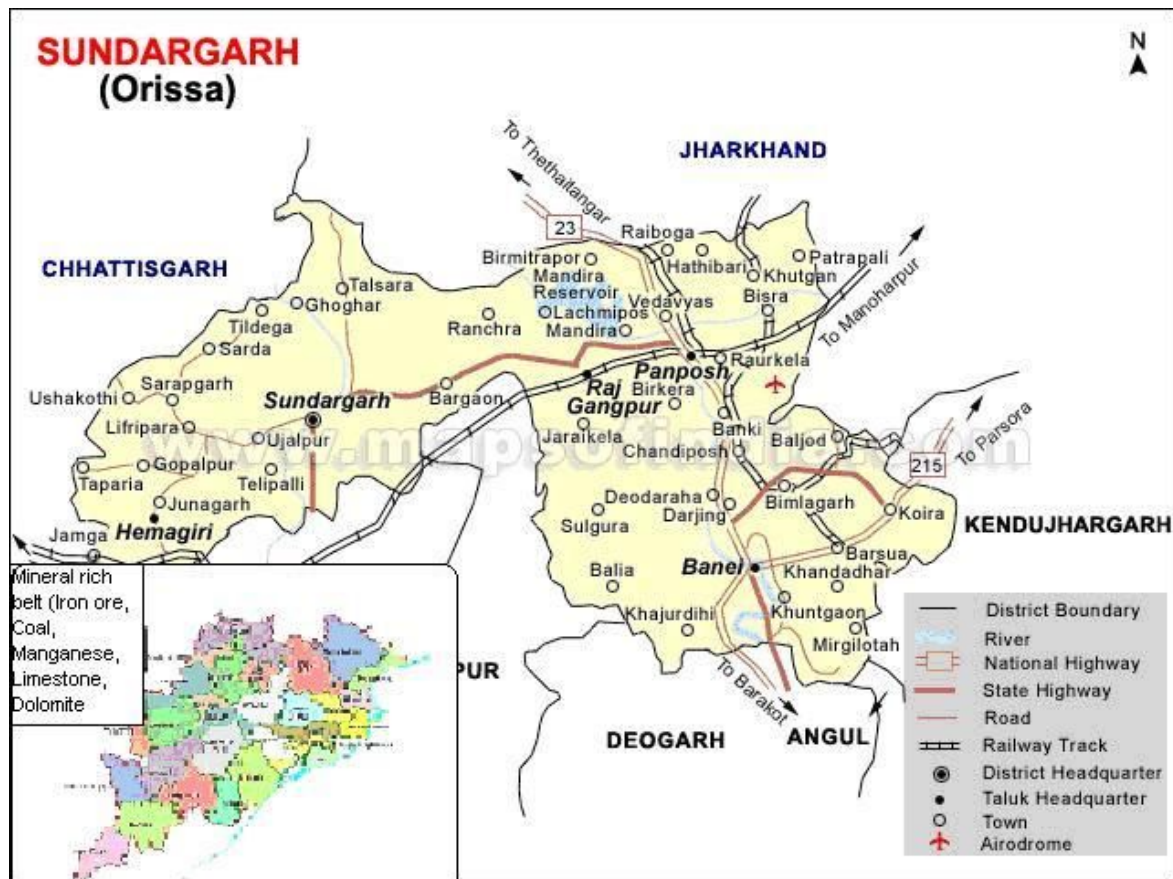
BDS Area	Major Issues	Suggested Action Plan
Safety and Occupational Health	Frequent accidents and absenteeism	<ul style="list-style-type: none"> - Awareness programme on safety and occupational health through National safety council - Training to local BDS to carry out period safety audits
Technology	<p>Lack awareness on manufacturing high value products</p> <p>High percentage of wastage in metal cutting and machining operation</p> <p>Low productivity due to use of conventional machines</p> <p>Poor shop floor practices resulting in constrains in taking additional orders</p>	<ul style="list-style-type: none"> - Linkage with technical BDS for manufacturing high value products like power plant accessories and components - Awareness creation and demonstration on optimum metal cutting operation and use of standard tools - Linkage with machinery automation BDS provider through NIT for increasing productivity, and innovation and Design development facility - Promotion of lean manufacturing concepts through IIPM and mother plants
ICT	<p>Low use of ICT tools by tier3 units</p> <p>Piling of inventory and bill followup due to poor tracking systems</p>	<ul style="list-style-type: none"> - Training on computers and use of internet through Govt.ITIs and private BDS providers - Training to private BDS in developing SME ERP modules
BMOs	Role confined to advocacy and readdressal of grievances	<ul style="list-style-type: none"> - Capacity building of BMOs for provisioning of BDS - Capacity building of association in market facilitation and organize cluster specific seminars. - Joint purchase of special steel and consumables

Annexure- I

Geographical Location of cluster

Rourkela, the industrial capital of the state is situated in the north western part of Orissa, in the mineral rich (iron ore, coal, manganese, limestone, dolomite mines) district of Sundargarh. Rou-re-kela means your village in local Sadri dialect. Rourkela located at a distance of 350kms from state capital of Bhubaneswar, is well connected by road and rail. It lies on the trunk rail route of Calcutta – Mumbai.

(Annexure Enclosed)



Annexure- II

List of Respondents

Sl.No.	Machining & Fabrication	Contact Person	Contact No.
Category: Tier3			
1	Daitari Engg Works	S K Samal	9937404992
2	Indo tech Enterprises	P Tarafdar	9861159468
3	Sahadev Engg.	SK Behara	9437413598
4	Ujala Engg.	C Das	9861254826
5	Mishra Indust Equip Co	S C Mishra	9437502566
6	Laxminarayan Pattern shop	D Moharana	9937108022
7	Royal Industries	P I Singh	9861107825
8	Senapati Engg	N Patro	06612507955
9	Kanaka latha Engg works	K Benarji	9337077673
10	Saini Engg	TK Benarji	9861129581
11	Nigam Automobile & Engg Works	S Mohapatra	9238306259
12	Shivalik Industries	S Basisht	9337401050
13	Raja rani Engg	R K Sahu	9437082793
14	NM Engg, I E Rkl	MD Jobair	9861577671
15	Maruti Udyog, IE Rkl	MOhanty	
16	Ispat Enterprises IE Rkl	S Sahu	9937586488
17	Rana Industries, Kalunga	S K Rana	9437187636
18	Golden Industries I E Rkl	Ajit Singh	9437117103
19	S K Engineers, IE Rkl	S K Mohanty	9438307029
20	Microtek Engg, Basanti Colony	ML Rao	9861152997
21	Hindustan Electricl Engg, Balughat	I Hussain	9861429794
22	Bhagat & Sons, IE Rkl	Sanjeev Barik	9438093829
23	Bharat Castings Udyog, Kalunga	H. Jaiswal	9437144568
24.	Raj Enggg Works, I E Rkl	Randir sethi	9437341267
25	Kiran Engg Works IE Rkl	Sunil phoumick	9861254826
26	AK Engg & Equip	Anup kumar	9437413560
27	Mahavir Industries	B Mohapatra	9861129255
28	GC Mandal & Co	GC Mandal	9938165192
29	Hindustan Engg. & Co	Md Gulab	9861036949
30	Sk. Engg Works	Mohatab Alam	9437647627

Category: Tier1			
31.	Techno Services	DK Das	9437044537
32	Poineer INdustries	ML Maharshi	9437116960
33.	Weldtech Engineers	Malkith Singh	9437172556
34	Rourkela Constructions	Prabat Mishra	06612511204
35	Baid Engg Works	Sanjay Baid	9861046589
36	Utkal Engineers	Arbind Kocher	9432596979
37	Janapriya Engineers	Parusharam ram	9437044053
38	Trident Fabricators	CS Chandan	9437045025
39	Koshala Engineers	Panigrahi	9337400828
40	Rourkela Fabrications	Uday Patel	9437045884
41	Industrial Engg Enterp	Mohindru	9337024857
42	Tara Equipments	Amarjeet Singh	9437047543
43	Vedvyas Engg Works	Ranjan Sahu	9437044446
44	Manasarowar Industries	Jagdeep Singh	9937096062
45	Modern Industries	Neeraj Gosain	9937044338
46	Arnapurna Engg Pvt	Mohapatra	9861030602
47	Mini Industries	Philips	9437249660
48	Batala Engg Works	Anup Singh	9437049492

Category :Tier2			
49	Spares India	M. Singh	9437129750
50	Paneshar Brothers	Amarjeet Singh	06612510045
51	Ganga Engineerin works	Mr.Pandit	2660225
52	Nath Engineering	Mr.Chandel	9337402266
53	Bharat Casting Udyog	Mr.H.Jaiswal	-
54	Jwala Engg Works	BS Rana	06612505120
55	Remag Electros	Agarwal	9437047731
56	Fifteen T	Shohan Singh	9437046515
57	Hitkarni Industries	Sunitha Srivastav	9337400254
58	Steele Precision engineer	RK Nair	9437577906
59	Paneshwar Engineer	Sarabjit Singh	06612255023
60	Prakash Engineers	AK Bagaria	06612502110

SI No	Enterprise Name	Contact Person	Contact No
Support Institutions			
1.	Orissa Small Industries Corporation	Sri Das	9937378829
2.	National Small Industries Corporation	Mr. Naik	9437022789
3.	District Industries Centre	PK Jena	9937583328
4.	MSME Development Institute	NC Maurya	9437601341
5.	National Institute of Technology	Dr.Sunil Sarangi	9437139254
6.	Govt.ITI	Mr.Mishra	06612502428
	Govt. Testing Laboratory	Shahedullah	06612504689
BMOs			
1.	Orissa Young Entrepreneurs Association	Sanjay Rungta	9437047701
2.	Orissa Assembly of Small and Medium Enterprise	ML Maharshi	9437116960
3.	District Small Scale Industries Association	Suresh Lath	9437046124
4.	Rourkela Chamber of Commerce	Subha Patnaik	9437047000
Private BDS			
1.	Hi Technology & Services	Smt Abha Mohunta	9437049689
2.	Keshri & Co, Chartered Accountants	Sunil Kumar	9437245941
3.	Chartered Accountant	Mr. Manish	9238336601
4.	Creative Deal	Amarendra Puhan	9337404500
5.	DCS Enterprises	UK Sahoo	9437048123
6.	Hari M/c Suppliers	Alok Agarwal	9437045414
7.	PR Electro Equipments	SK Pradhan	9861058685
8.	Basu Indust. Engg Consultancy	Ajay Prakash	9437555754
9.	Rapid Methodical Testing & QC Group	Bandyopadhyay	9437048395
10.	Shivani Institute of Technology	SK Sahu	9861367944
11.	Eastern Equipment	RajaniKanth	
12.	Himalaya Engg Works, New Delhi	Batliboi & Co	
13.	Bata Engg Works, Punjab		
14.	Ashok Machine Tools, New Delhi		

Annexure - III

Action Plan for August 2009 – March 2010 for the Engineering Cluster of Rourkela

Major Activity Area/Sub-Activity						Budget (Rs '000)				Basis for Costing	No. and type of Beneficiary	Expected Output/Outcome
M1-M2	M3-M4	M5-M6	M7-M8	M9-M10	M11-M12	Project Funding	Beneficiary Stakeholder Contribution	Contribution by others	Total			
1.Capacity building of association												
1.1 Formation of Product specific entity												
-Organising Exposure visit to Benchmark clusters -Workshop and meets with SPVs	-Formulation of by-laws and AoA. - Formation of executive committee -Formulation of programme calendar	-Orgnaising workshops , seminars on PPP - Brainstroming session with NIT,RKI to explore PPP	-Awarness programme on Consortia marketing -Technology demonstration on metal cutting	- Followup of unfinished agenda of past interventions -Sourcing of BDSP information	-Collabaration and MoUs with reputed institutes such a s MERADO, CTTC,NTTI etc. -Linkage with SES,Gemany	600	200	-	800	-Organising workshops, seminars, meets @ Rs.40 x 5 events=200 -Exposure visit to benchmark cluster @Rs.200 each visit x 2 visits =400 - Collabaration and MoUs with reputed institutes @Rs.50 x 4 =200	Tier1&2 units	Product specific association established
2.Improving the availability of Skilled manpower												
2.1 Cluster specific training and cirriculum												
-Conducting a study on skill gaps in the cluster. -Interactive meet with Employment exchange and ITIs	-Formulation of trainign module for each area of operation (i.e.Welding, Machining) in vernacular language -Mapping of existng facilities and additional infrastructure required - identification of Pvt.BDS to take up training programmes	-Submission of proposal to State or funding agency for additional infrastructure. -Capacity building of BDSP and training of trainers in skill sets at NTTI,Blore	- Training in welding certification to Supervisors and Foreman at WRI,Trichy. -	- Training to BDSP on weld testing and franchisee network. - MoU with PSUs such as L&T, SAIL-RSP to access to there growth shop facilities under their ESR initiative	-On the job training in selected SMEs - Capacity building of BDSP for SOH by training through NSC -Capacity building of BDS for providing CAD/CAM training.	700	200	200	1100	-Orgnaising meets,Identification of BDSP@Rs.40 x 4 events=200 -Capacity buildingof BDSP @ Rs.40 x 10BDSP=400 -Voucher Scheme for Welding certification and weld test @ Rs. 10 x 20 participants=200 -Formulation of training programmes @Rs.100 -ToT @ Rs.40 x 5participants =200	TIER1,2&3	Availability of 15 certified welders , 5 testing BDSP,5 trainer trainers,Pvt training institute linked,Cluster specific training cirriculum in place. -

3. Improving the probitability of Tier3 units												
3.1 Access to finance												
-Awareness programme on MCGS -FI-MFI meet on micro finance to engineering enterprises	-5 day training programme on IYB by ILO trainer - Identification of BDSP on book keeping and escort service -Capacity building of BDSP	-	-Seminar on CGTMSE -Formation of sub-committeed with DIC & RTPSHCL to expedite satuatary sanctions (This is valid for market facilitation also)	-MoU with NSIC for recommending bankable proposal for loan under GGT MSE -Preparation of bankale proposals	-	550	50	-	600	-Organising workshop,meets,Seminar,@Rs.50 x 2 events=100 -Conducting 5 day trainign on IYB for 40 enterprises @20 per batch=Rs.150 x 2 programees=300 -Capacity building of BDSP@Rs.40 x 3 =120 -Voucher scheme for proposal preparation to 30 enterprises @ Rs.6 x30=Rs.180	30 Tier3 enterprises	30 Tier 3 units avaiad loan under CGTSME Spin off effect in another 40 units. -Capacity built to take up direct orders
3.2 Access to Market												
		-Formation of Consortia for market linkages -Identification of BDSP for market access and formulation of TOR to facilitate registration with SAIL-RSP	-		-Identification of Technical BDSP for product development and formulation of TOR ex:Couplings,Mining spares -Exposure visit to trade fairs and units manufacturing mining spares	450	50	100	600	-Formulation of consortia @ Rs. 25 x4=100 -Voucher scheme for availing BDSP @ Rs. 5 x 40 enterprises+Rs.200 -Exposure visit attending trade fairs @ Rs.150 x 2 visits= 300	-40 units take up direct orders - 10 micro enterprises make mining spares	-30 units graduated from tier3 to tie2
TOTAL						2300	500	300	3100			

ANNEXURE-IV

Business Development Services market development to MSMEs

Questions for interviewing individual Enterprises

Basic Information about the enterprise and its functions

- Name of the Enterprise
- Location
- Age of the entrepreneur
- Year in operation
- Details of different activities and operations/functions related to the enterprise
 - Kind of products you make
 - Kind of raw materials and consumables that you buy for making products; method of procuring raw materials. Frequency of buying raw materials?
 - Markets where you sell your products-sale price; methods of marketing; Do you market your product on your own or through any distribution channels? (Understanding all the market channels the enterprise use for the sale of product and which one he uses regularly and why?)
 - Kindly of machinery/tools/equipments you use for the production? If you do not have a particular equipment/tool/machinery how will you get the work done?
 - Other equipments/tools/machinery related to the production process they have seen elsewhere & not in use in the enterprise and in the cluster.
 - From where do you obtain equipment/tools/machinery? Do these Equipment/tool/machinery requires servicing of any type? Where do you get the servicing done?
- Scale of Operation
 - Monthly sales turnover:
 - Monthly production capacity
 - No. of workers employed if any
 - Investment in fixed and working capital
- Seasonality in sales, if any. How does it affect employment and sales turnover?
- Alternative source available for the procurement of raw material/ consumables/ tools/ equipments

- Comparison of regular and alternative source on the following parameters

	Regular Source	Alternative source(1)	Alternative source(2)
Cost			
Quality			

- Any other qualitative benefits offered by the alternative sources (Credit sales, relationship with enterprise, payment as per enterprise convenience, etc)
- An estimate of the number of suppliers working as regular and alternate sources
- Is the enterprise satisfied with the quality/type of raw materials/consumables supplied to them? if not, then why?
- Is the enterprise satisfied with the existing modes of raw material supply? If yes, why? If no, then reason for dissatisfaction. Suggestions if any about the alternative mode of supply.
- Understanding the reasons behind their inability to access quality raw material/consumables/tools/equipments as per their requirements.(Inability could be lack of awareness of the source, high cost, etc)

Identification of relations ships the enterprise has with all the persons he interacts with the business purpose

You have business relationships with a number of people such as raw material suppliers, buyers and consumable suppliers. Now we would like you to identify other such relationships”. This would help enterprise to focus and explore relationship with other people.

- Kind of expert services that enterprise obtains from these business relationship
- Is payment is made by enterprises to expert services
- Are your buyers of final products providing some inputs on improving designs and making some changes in earlier designs?

Identify all such expert services in the form of guidance, information, business development inputs or help that the enterprise obtains from

buyers:

suppliers:

managers:

- Service other than the one listed that he would like to obtain in order to develop his business or increase the income level from the enterprise.
- What expert services demanded by the enterprise are available/not available to the enterprise).
- Modes of expert service delivery and service transactions: For examples, are they delivered at the cluster or other place, individually or on a group basis
- Information on how the enterprise feels about the quality of expert services by the: Is the enterprise satisfied with the service currently available to him? (Perception of the enterprise sought on aspects like frequency, appropriateness, adequacy and delivery of the services)

- What improvements could be made in terms of quality and delivery mechanisms of the services?
- Willingness to pay fees for expert services: How much if he can tell?
- Awareness about other alternative sources for expert services

Questions for BDS (government/non-government)

Basic information

- Name
- Type of enterprise: private, government, NGO and technical institute
- Working for profit or non-profit
- Main sources of income – fees, grants from governments and other sources

Types of services offered in general and to the cluster in particular

- What services does your organisation offer?
- What specific services/products do you offer to the sub-sector in general and to the cluster enterprises in particular?
- Are services to the sub-sector your main activity or supplementary/ complementary activities? If supplementary, then what are your main activities?
- How do you offer these services
- Do you seek involvement of other persons/organizations in the process of delivering services?
- What has been the outreach of various services provided by you?
- Are you satisfied with the outreach? If yes or no, why?
- What do you feel about the impact created by the provision of various services by your organisation for enterprise?
- How many enterprises visit you (daily, weekly, monthly or yearly for availing your services)?
- Do you charge fees for these services?
- What are the fees for different services?
- What are the payment options available for these services?
- According to you, which service is more in demand? Why?
- Is subsidisation of services important or could these services be offered on a commercial basis. If yes, why? If no, why?

- Why do a majority of enterprises fail to use the services provided by you?
- Do you see the role of commercial service provider for these enterprises? If yes, what are the services that have potential to be commercialised?
- What suggestions would you make to commercialise these services?
- In your opinion, what are the constraints in the providing expert services to MSMEs in general and enterprises in the cluster in particular?
- In your view what are the problems/factors that might hamper the development of a vibrant expert service market for MSMEs in general and cluster in particular? What needs to be done to remove those problems?
- What changes in terms of features and delivery is needed to make the services more effective?
- What kind of technical support do you obtain from other sources to serve MSMEs in general and in this cluster enterprise in particular?
- Are there any systems in your organisation by which you obtain feedback from enterprises about the services you offer? If yes, how do you use this information and for what purposes?
- Do you undertake some market surveys and market research to improve the quality of service and to develop new products? If yes, how frequently?
- Do you have any future plans to provide other services to the cluster enterprises? What are they?
- Number of staff members involved with respective services

