

ANNEXURE B INDUSTRIAL CLUSTERS & BENEFITS

1. INDUSTRIAL CLUSTERS

“The Department of Trade and Industry in South Africa recognises its role in the ongoing efforts to upgrade the competitive capacity of the South African economy. Experience worldwide demonstrates that competitive advantage is not created by a single firm alone but by the competitive platform – or industry cluster – off which it competes, and the efficiency and stability of the macro environment. To that end, the DTI facilitated a series of cluster initiatives in South Africa. These are fact-based, action-driven processes which bring together all role-players in an industry to identify areas to ‘cooperate to compete’ more effectively in a global economy.”(Minister of Trade and Industry)

✓ What is a Cluster?

“Clusters are geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions in particular fields that compete but also cooperate” (Porter, 1998).

Competitive advantage is not created within a single firm alone. Efficiency in internal operations is essential but not necessarily sufficient to compete globally. Factors external to the business are increasingly important. Each firm is inherently part of a “cluster” of activities made up of firms along the value chain as well as related and supporting organisations (e.g. R&D, finance, skills, and infrastructure). Around the world it has been demonstrated that strong clusters ensure sustainable competitive advantage and that specific actions and interventions can improve this strength.

✓ What is happening around the world?

Many countries and regions around the world are promoting cluster development in response to the changing global economy. Excellent results are being achieved in a number of countries including Scotland, Morocco, Ireland, El Salvador, Peru, Malaysia, New Zealand and many states in the USA.

The cluster methodology can be used no matter what the level of industrialisation or size of the economy. The process is aimed at continuously improving competitiveness, attracting investment and creating employment, irrespective of the starting point.

✓ What is a cluster initiative?

Cluster initiatives are processes whereby industry role-players identify opportunities and challenges that can be addressed more effectively through working together than individually. Cluster initiatives can support firm level strategic planning but do not supplant it. They “grow the pie” for the industry while firms continue to compete for larger “slices”.

Cluster initiatives typically bring role-players together to:

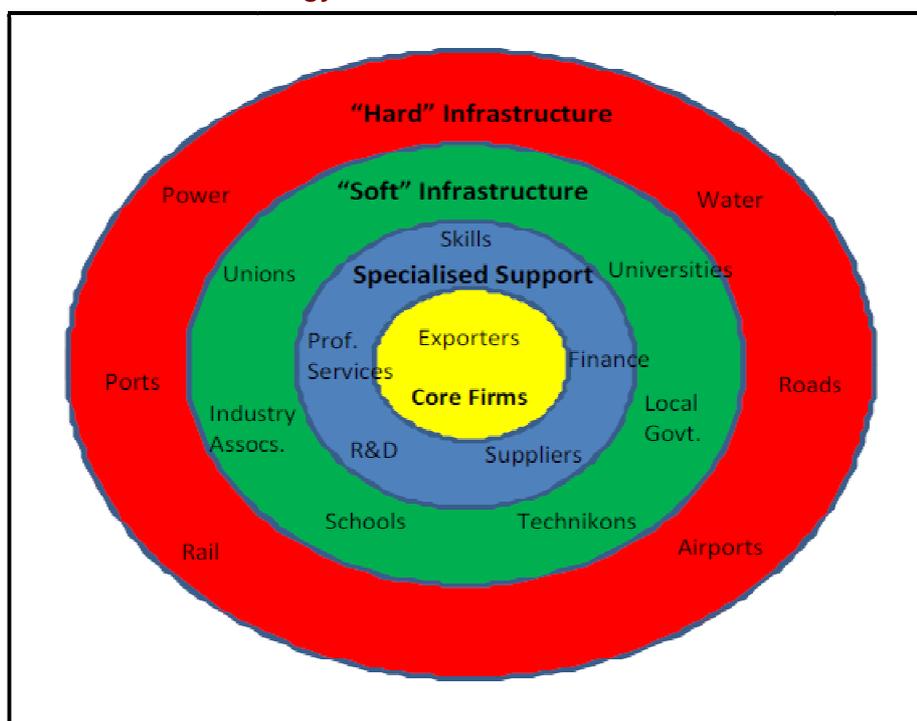
- Construct a shared, fact-based view of the current and future competitive position in the industry
- Identify obstacles to raising competitiveness and opportunities for new business growth
- Develop and implement cluster-level actions aimed at addressing those obstacles and opportunities.

✓ **Who participates in a cluster initiative?**

A cluster initiative should involve all role-players who contribute to the competitive platform of any specific industry. In general, participants come from small and large-scale firms, industry associations, labour organisations, government and related and supporting institutions involved in all steps of the traditional industry value chain – from raw material producers to end consumers.

“The cluster process is an integral component of an industrial strategy. Bringing together stakeholders across supply chains to identify problems and define a vision and strategy has been shown internationally to be extremely beneficial in promoting industrial transformation. Although a relatively recent innovation in South Africa, the cluster process has already yielded a number of positive results in several sectors.” (Rob Davies)

Figure 1 Cluster Methodology



✓ **What are the benefits to firms?**

Benefits can include:

- Greater understanding of customer needs and the market opportunities for the South African industry at home and abroad (also creates links into Export Councils)
- Improved relationships between customers and suppliers, ensuring customer needs are better met
- Stronger competitive platform in terms of the availability of skills, information and infrastructure
- Assistance to develop “world class” capabilities in South Africa
- Lowering inter-firm transaction costs by eliminating bottle-necks and cost drivers
- Identification of opportunities for joint procurement, export promotion or distribution
- Opportunities to explore partnerships and discussions with government and parastatals in areas such as trade agreements, trade missions, infrastructure requirements, opportunities for trade and investment
- Better information about, and access to, DTI supply side measures
- A process to overcome historical conflict and isolation within industries and society in order to identify opportunities for synergy and mutual benefit.

✓ **What are some specific steps in the process?**

Cluster processes vary in nature but generally involve the following elements:

- Identification of the key role-players / stakeholders in the cluster
- A process to ensure that all the key stakeholders are able to engage in a constructive dialogue
- Development of a vision for the cluster
- Data collection and analysis in order to come to a joint understanding of the competitive environment
- Prioritisation of those issues which are key to enhancing cluster competitiveness
- Formation of working groups and tasks teams to deal with specific challenges and opportunities identified by the cluster
- A continuous focus on short and long-term action steps that can be taken to increase the competitiveness of the cluster.

✓ **What makes a successful cluster initiative?**

- Active involvement of senior government, business, labour and community leaders who are empowered to take decisions and commit time to the process
- The ability to focus on specific areas of mutual concern
- The collection and analysis of relevant data which creates meaningful dialogue between the participants
- A willingness to share data with other members of the cluster (sensitive information may be disguised by a process of aggregation by a neutral facilitator)
- The willingness to learn, be open to new ideas and to think differently about problem-solving
- A willingness to translate strategies into actionable initiatives
- A “neutral corner” that can provide process facilitation and coordination.

The Silicon Valley case

In the mid- to late 1990s, several successful computer technology related companies emerged in Silicon Valley in California. This led anyone who wished to create a startup company to do so in Silicon Valley. The surge in the number of Silicon Valley startups led to a number of venture capital firms relocating to or expanding their Valley offices. This in turn encouraged more entrepreneurs to locate their startups there. In other words, venture capitalists (sellers of finance) and dot-com startups (buyers of finance) "clustered" in and around a geographical area.

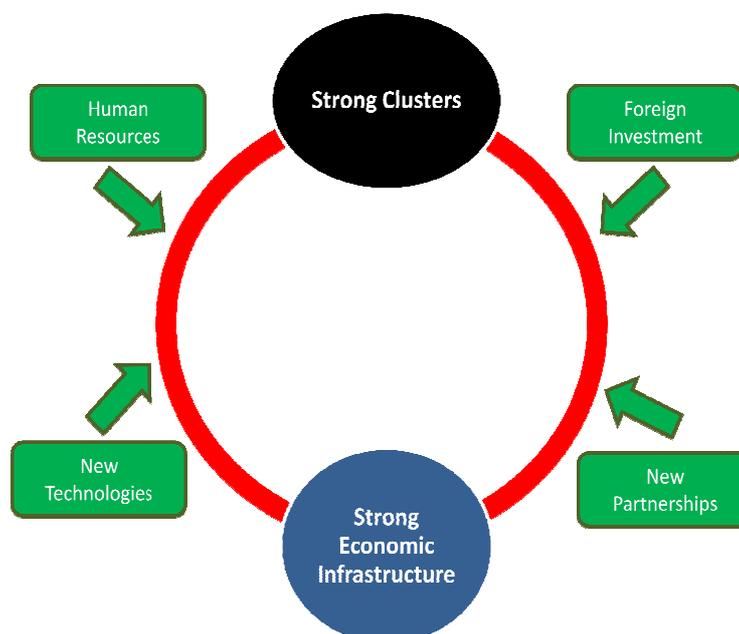
The cluster effect in the capital market also led to a cluster effect in the labor market. As an increasing number of companies started up in Silicon Valley, programmers, engineers etc. realized that they would find greater job opportunities by moving to Silicon Valley. This concentration of technically skilled people in the valley meant that startups around the country knew that their chances of finding job candidates with the proper skill-sets were higher in the valley, hence giving them added incentive to move there. This in turn led to more high-tech workers moving there.

✓ **What are the links between clusters and investment?**

World-wide research and experience is showing that decisions to invest downstream by firms are influenced largely by macroeconomic factors and the strength of the cluster rather than only by specific incentives, low wages or infrastructure. This is because the strength of the competitive platform (skills, R&D, supplier linkages, government-business relationships etc.) is increasingly important as the need to be flexible and innovative grows. This applies particularly to SMMEs which do not have the capacity to internalize many of the supporting activities and which rely on the linkages and relationships which a strong cluster can provide.

Lessons in economic development world-wide have shown that while anchor projects can result in significant FDI value, the jobs created per rand will be higher where the cluster platform is strong. The region must ensure a fertile environment for the downstream linkages, investment and SMME growth. To generate the largest number of jobs, an investment promotion approach to ongoing activity in the targeted region will be substantially strengthened by strong local clusters.

Figure 2 The Vital Cycle

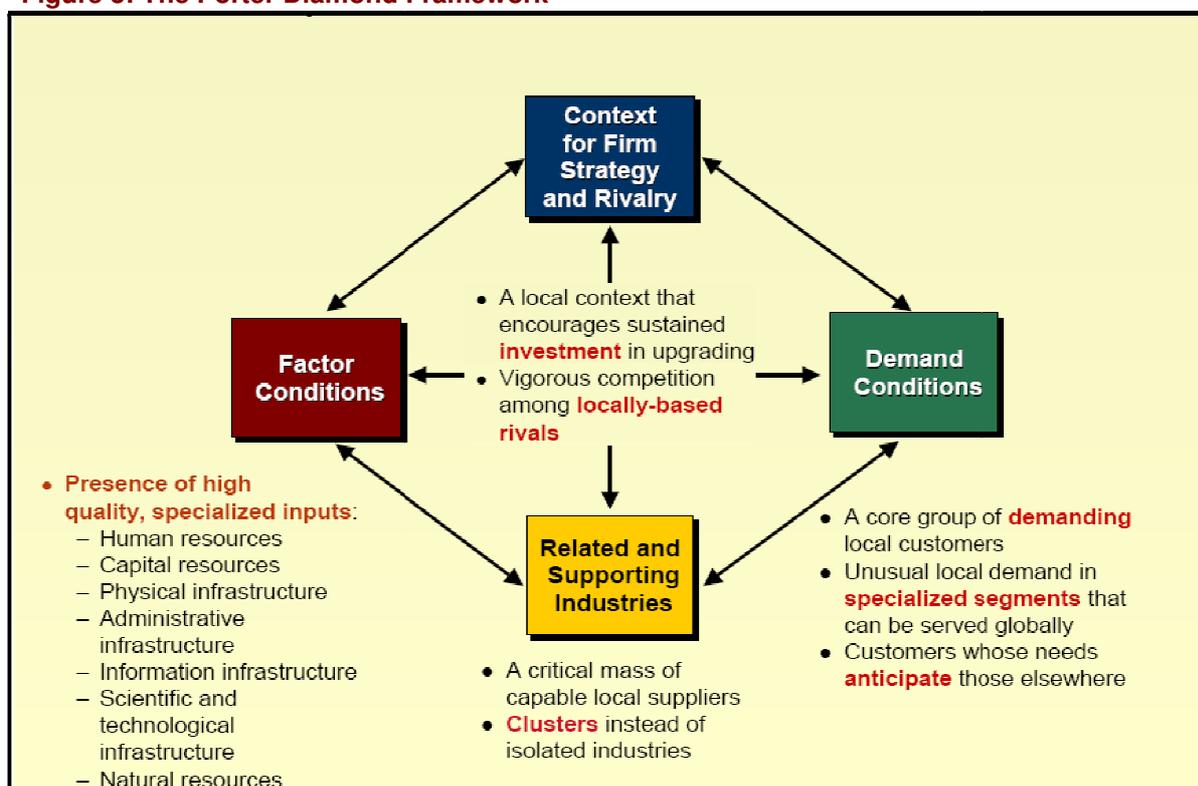


✓ Four methods by which a cluster can be identified

- The **geographical / business cluster** - A business cluster is a geographic concentration of interconnected businesses, suppliers and associated institutions in a particular field.
- **Sectoral clusters** - A cluster of businesses operating together from within the same commercial sector e.g. marine (e.g. south east England; Cowes etc.)
- **Horizontal cluster** - interconnections between businesses at a sharing of resources level e.g. knowledge management
- **Vertical cluster** - i.e. a supply chain cluster

In the Porter diamond model mentioned below, clusters advance through four dimensions (1) strong and sophisticated local demand; (2) a local base of related and supporting industries exist in the local economy to support the export industry; (3) favourable factor (resource) conditions; (4) a competitive climate driving firm productivity. The diamond model is depicted in **Figure 3**.

Figure 3: The Porter Diamond Framework



Source: Michael Porter, Institute for Strategy and Competitiveness, Harvard Business School, 1998

Clusters can consist of various sectors and sub-sectors, such as **heavy manufacturing** (e.g., metalworking, vehicle manufacturing, chemicals and rubber, nonferrous metals), **light manufacturing** (e.g., electronics and computers, knitted goods, fabricated textiles, wood products, leather goods, printing and publishing), food-related clusters and several clusters closely related to other major clusters (e.g., brake and wheel products, plate making and typesetting). There is also growth in importance of key high tech clusters (electronics and computers and aerospace).