



Nancefield

## What are Industrial Nodes?

Industrial Nodes are areas that are zoned for industrial and light manufacturing activity, intended to enable efficient and effective delivery of core services required for business – in the process, enhancing their scope for growth. Over the years, many such hubs have been developed – some dating back several decades. In Gauteng, the Centre for Competition, Regulation and Economic Development (CCRED) surveyed 26 such nodes.

Within Industrial Nodes, there is an expectation that 'agglomeration effects' will enhance productivity, due to the greater efficiencies and economies of scale that arise when many firms operate in close proximity to each other. So, for example, such proximity – or agglomeration – of firms is expected to create efficiencies in the delivery of public services such as electricity, water and public transport. In the process, such hubs also create economies of scale for support firms in the services sector – across a spectrum that includes cleaning, catering and private security as well as more specialised but also generic services such as IT support and accounting services.

These effects can be enhanced when firms within the same sector or value chain start to cluster together – competing but also co-operating in relation to shared needs, such as in relation to training, product development and specialist maintenance of machinery.



# Industrial nodes: bringing jobs closer to people in townships?

Under apartheid, townships were designed to exist at a distance from economic opportunities, as dormitory towns for labour. As a result, transport costs as well as the time spent traveling add economic and social costs to the cost of labour: with both these costs reducing aggregate productivity.

Some strategies to address this focus on improved, more affordable transport linkages. This is important for moving people to where the jobs are. But is there also scope to move jobs to where people are? The development of industrial nodes adjacent to townships is one approach to trying to do so.

What factors attract business to such areas? What obstacles to growth and development – and job creation – do they face?

This edition of the Township Economy Series of the Cities Support Programme explores these questions, with a focus on case studies of Industrial Nodes adjacent to townships in Gauteng, in particular, Aeroton, Nancefield, and Devland – all of which are close to Soweto, Eldorado Park and Orange Farm.

**In addition to enhancing productivity – especially for small firms – clusters can also create conditions conducive to innovation.**



# Industrial nodes near townships in Johannesburg: Creating conditions for growth?

**Aeroton, Nancefield and Devland are all near to Soweto, Eldorado Park and Orange Farm.**

While most industrial nodes in Gauteng are not adjacent to townships, the location of these three nodes means they have the potential to create jobs close to where people live – avoiding long commutes to work. With over 150 firms located in these three nodes, strategies to support them are important both to retain existing jobs – and to support employment growth.

Yet in practice, firm surveys undertaken by CCRED highlight many obstacles. While some of these relate to the ability of firms to compete effectively, this ability is also affected by a range of challenges in their environment that negatively affect their productivity. These challenges were worst in the nodes adjacent to townships, which CCRED classified as 'neglected'.

**Getting the basics right** in industrial nodes adjacent to townships is vital to enabling employment growth – which is typically easier to achieve through supporting the growth of existing firms than through the establishment of new ones.

While **larger firms** can invest in solutions – from generators to in-house transport for their workers – **smaller firms** are less able to do so and are more negatively affected by service delivery failures: reinforcing inequality of outcomes.



An informal settlement adjacent to Kya Sands – an example of an industrial node that was not originally developed near a township – but where people have moved to be nearer to their work, or nearer to where the jobs are believed to be.

## Unstable electricity supply

Unstable electricity supply has had seriously adverse effects on productivity in all three nodes with significant loss of production time. A company in Nancefield, for example, says it has been losing a day of production per week as a result of power outages; another company calculated that it had 160 hours of downtime in 2017 as a result of outages. That is 20 full working days. This alone translates into a massive negative impact on productivity.

Nor is load-shedding the prime culprit. Instead, power interruptions were attributed to cable theft, illegal connections and lack of maintenance of power distribution systems.

In Nancefield, illegal electricity connections linking the industrial node to a nearby informal settlement create a spiderweb of wires – including uncovered live wires – on the surface of the road. These create a significant safety hazard that has led to deaths in the area. The problem is linked to lack of access to electricity in the informal settlement – an issue that has caused service delivery protests that further negatively affect businesses in the area.

The cost of power outages is not limited to production downtimes, however. Outages also damage equipment which can lead to further disruptions and costs. A component manufacturer, for example, had to invest over R1 million in equipment to stabilise voltage fluctuations. The use of generators requires upfront investment and high operating costs.



**'Firms...would benefit from knowing who to call when there are electricity or water interruptions or when they have billing queries, having their calls answered in a timely manner, and having these issues resolved promptly and professionally.'**

CCRED 2016





Illegal electricity connections running from Nancefield to the adjacent informal settlement

### Connectivity challenges

In Devland and Nancefield, internet infrastructure is poor, with Telkom also suffering from cable theft. Lack of connectivity affects all aspects of the business – but particularly marketing. If your customers cannot reach you, they will contact the next business on the list.

### Basic services matter for productivity

In Nancefield – the largest of the nodes – roads are poorly maintained with large potholes. Poor drainage leads to intermittent flooding. Lack of refuse collection has meant companies having to bear the costs of pest control measures. In Devland, street lights have not been working for extended periods. This is exacerbating security concerns, as a result of which some firms close early.

All of these factors not only negatively impact on productivity for existing firms – they also act as disincentives for new firms to locate in these nodes.

### Transport linkages

Despite being adjacent to townships, transport services linking residential areas to these industrial nodes are not available for shifts ending after 10pm. While some of the larger companies have set up their own transport services to address this gap, smaller companies

are unable to do so, limiting their ability to operate shift systems. Attempts by firms to co-operate to solve this problem have not yet succeeded; not least because of resistance to the associated competition from taxi operators. This is a problem which requires intermediation by the City's Roads and Transport Department.

### Planning permissions and infrastructure development

The reasons firms choose to locate in these nodes include the availability of cheap serviced land; but these advantages are undermined where basic infrastructure is not rolled out or well maintained and where planning permissions are slow.

Many of these issues can be resolved by the Metro Municipality. Making jobs a higher priority often also means focusing on *getting the basics right* in industrial nodes adjacent to townships.



Potholes in Nancefield

## Scope for a furniture cluster in Nancefield?

Although among the smaller of the nodes overall, Nancefield is the largest and most established of the three industrial nodes considered here, with 56 manufacturing firms and 30 services firms. Some firms have operated in the area for over twenty years. Amongst the manufacturing firms, 25 are involved in furniture manufacturing; some of the service firms – such as in transport and logistics – support this sector also. They are mostly small firms.

In the CCRED firm survey, one of the unanticipated outcomes was that furniture manufacturing proved to be **the largest employer** in the manufacturing sector in the City of Johannesburg; it is also one of the more labour-intensive forms of manufacturing.

In a context of growing urbanisation and housing development – including in adjacent townships – there would appear to be scope for market growth. A constraint faced by small producers is however their dependence on access to markets via the four big furniture retailing outlets, who control most of the market. The scope for smaller retailers to compete – or even for producers to engage in direct sales to end-consumers in adjacent townships – is constrained by the ability of the larger retailers to offer hire-purchase and financing terms. For 'bulkier' items like furniture, such terms are often a deal-breaker in the mass market. So while there may well be a market in adjacent townships, the manufacturers surveyed mostly supply the large retailers or are part of wider value chains that do so.

The large number of firms in the furniture sector does, however, appear to create conditions for cluster effects – not only in Nancefield but as part of wider approaches in the metro, in a context in which cluster development is local and spatial by nature: which is why it lends itself to city-level economic development strategies.



Illegal electricity connections in Kya Sands

## Supporting industrial nodes as part of the development of township economies

Where Industrial Nodes are established adjacent to townships, they have an important role to play as part of strategies to bring jobs closer to where people live. While the municipalities like Johannesburg can do little to impact on currency fluctuations or some of the competition issues that firms confront, they play a vital role in creating an environment that supports productivity and efficiency, through the delivery of basic services.

The starting point is to recognise that job creation strategies need a dynamic private sector, which in turn needs support from an effective public sector, based on new forms of partnership focused on problem-solving.

Here are some ideas of how cities can support this agenda:

### Get the basics right

The starting point for job creation strategy is to get the basics right in relation to the core public services on which the private sector depends to meet a minimum level of productivity and efficiency. In particular:

- **Address the issues causing power outages: directly, or by engaging the relevant roleplayers**
  - upgrade and maintain substations to improve reliability of electricity supply
  - better policing to limit cable theft
  - support to innovation for green alternatives
  - develop strategies for basic service delivery to communities, to prevent illegal connections
- **Address security concerns**
  - get street lights working
  - ensure a police presence and regular patrols in Industrial Nodes, particular when shifts change
- **Maintain and extend infrastructure**
  - sort out potholes, drainage, pavements – workers are also pedestrians
- **Encourage the formation of business associations and partner with them to address problems in a structured way, giving feedback and progress reports**
  - set up hot-lines – implement strict minimum service levels
- **Consult firms about public transport constraints and lead the development of solutions**
- **Identify and service vacant land for industry expansion adjacent to where people live**
- **Explore the scope for cluster development strategies that unlock new levels of efficiency and innovation – learning from what cities have already done, including in Johannesburg, Ethekewini and Cape Town**



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