Cities, Industrial Estates and Local Industrial Policy:

Exploring the lessons from manufacturing firm and industrial estate research in Durban, South Africa.

eThekwini Medium and Large Manufacturing Firm Survey Policy Note

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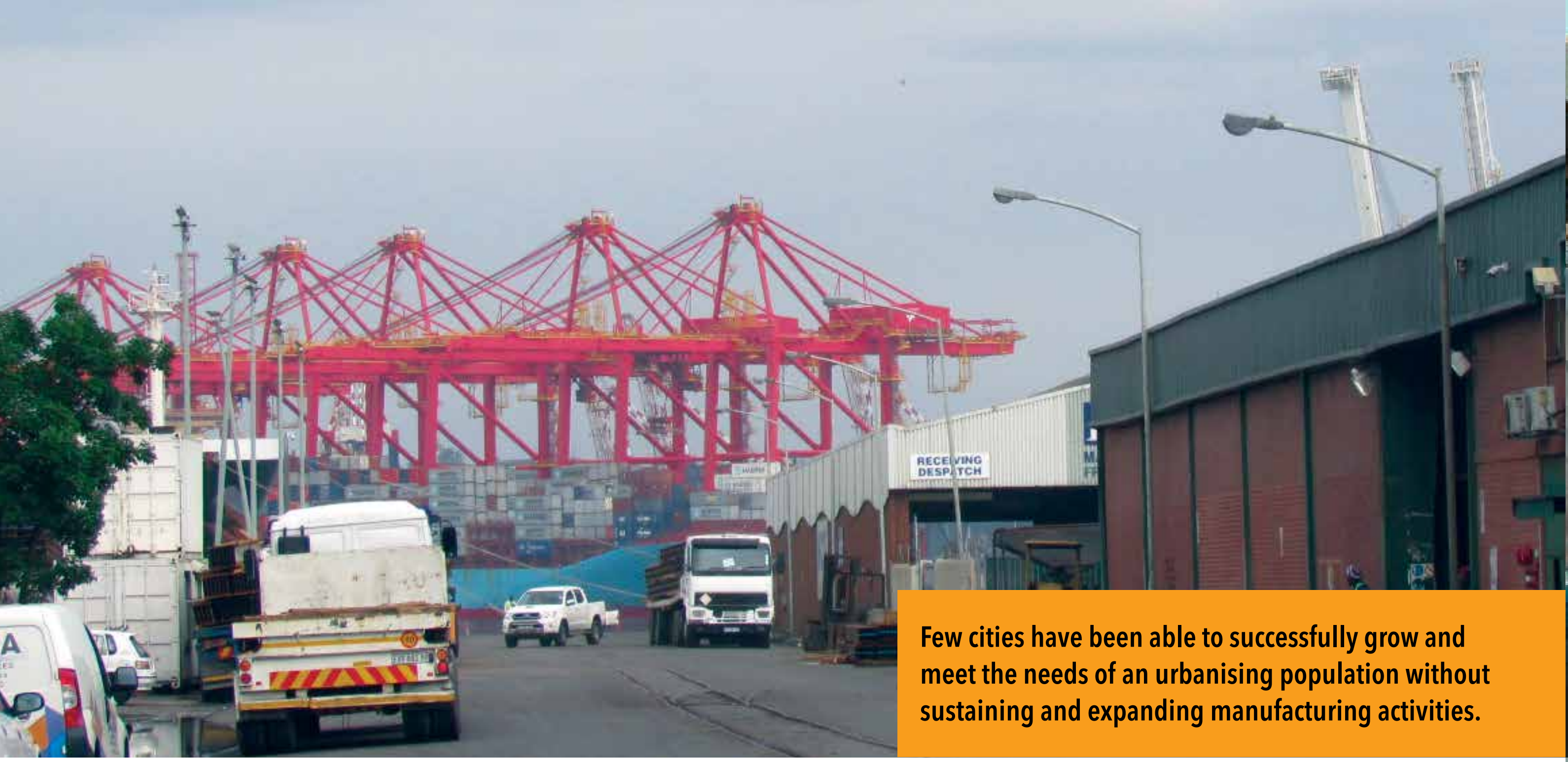
How are manufacturing land use demands evolving?

How does the condition of industrial estates effect manufacturing?

What should policy makers focus on?

Today, cities and the actors in them are faced with challenges such as the changing nature of manufacturing, shifting demand patterns for land use, the absence of coherent policy guidance at a national and provincial level, and a lack of consultation with the private sector. This policy note raises a series of questions which are important for local actors in the context of the relationship between economic growth through manufacturing, and the city. The discussion which follows is largely informed by a survey of medium and large manufacturing employers in Durban (South Africa) during 2013/14 and by subsequent interviews with municipal officials and those in the real estate sector.



Few cities have been able to successfully grow and meet the needs of an urbanising population without sustaining and expanding manufacturing activities.

Industrial estates and economic development

Industrial estates and industrial sites have constituted, and continue to constitute, an important use of land in many, if not most cities around the world. Industrial development has of course been closely associated with processes of urbanisation.

This has been noted by authorities such as Alfred Marshall, one of the eminent documenters of the 18th century industrial revolution in Britain, and more recently, Jane Jacobs who explained the process of land use specialisation in a city context. She argued in favour of urban land use specialisation, geared to both meeting the particular needs of businesses, and minimizing excessive conflict arising from conflicting land uses. For Jacobs this was important because, "The overwhelming fact about cities is that if they do not maintain self-generating economies, they will ultimately stagnate and decline" (Jacobs, 1969: 652).

In cities where manufacturing has thrived, considerable attention has often been given to the development of land for new or greenfield business/industrial estates. Thus it is no surprise that this has been an important feature of local/municipal public policy and also a matter of vocal private interests including by property developers. Those cities and towns with a low profile in manufacturing have also often sought to plan for possible future industrial development, informed by a desire to grow their local economies. A look at some of the national economies that have witnessed the most consistent higher levels of growth in recent decades also reveals that the development of industrial estates in cities and larger towns has provided a key location from which national economic growth has been driven.

At times, these processes have also captured the interest of national actors in the form of planning, infrastructure investments and various policy and regulatory instruments. Special economic zones (SEZs) would be one example of initiatives that have recognised the possible synergies between urban growth and industrial development.

Today, in many different contexts tertiary services have surpassed manufacturing, the traditional mainstay of industrial estates, as the dominant city economic activity. In some towns and cities, manufacturing has struggled to even get off the ground in the first place. Older industrial estates that hosted manufacturing firms are now characterised by some urban decay, whilst others have been repurposed as regenerated mixed-use areas or even as tourism attractions.

Shifting demand patterns for land have seen local and other policy makers typically favour greenfield developments to accommodate a new generation of manufacturing businesses and the accompanying service and logistics firms that work alongside them.

These choices are often made in the absence of any coherent policy guidance outside the local sphere of government. While national or provincial departments are eager to support manufacturing growth, they tend to have little to say about the specifics of location.

The private sector and more especially the manufacturing businesses that occupy industrial estates, are also rarely consulted on land use change and development processes.

City development and industrial estates

Industrial development has played, and continues to play, an important role in urban development. It offers the scope for employment creation and local economic value addition. Industrialisation is critical in helping to generate, both directly and indirectly, public resources, through taxation and margins on the supply of utilities (such as water, waste and electricity) for numerous public programmes.

The resources generated through skilled work, wages and profits, as well as in the sale and use of manufactured products and adopted technologies that are necessary for local consumption and development, have been noted as critical to urban development and the livelihoods of people.

Well-managed and thriving industrial estates can contribute substantially to cities being able to grow their economies and thereby offer new employment prospects along the way. Because the manufacturing sector has such important linkages with other economic processes, it can also stimulate further deeper economic processes in cities, that are important for small, medium and large businesses, not just in manufacturing, but also in a variety of services sectors. Few cities have been able to successfully grow and meet the needs of an urbanising population without sustaining and expanding manufacturing activities.

Processes of local industrial development have also contributed to the modernisation of governance systems: urban residents, both professional staff and working classes, have previously engaged in struggles to influence the processes of industrial reform and urban reform. Their growing numbers and the importance of their economic contribution allowed for the creation of various democratic spaces of dialogue with government. Such dialogue has, in turn, provided fertile ground for cultivating new urban cultural environments that have been so important in helping craft a variety of contemporary urban identities.

Industrial development processes have thus been a necessary element of creating urban areas that can better meet the needs of citizens and a variety of economic systems. However, industrial estates, as the predominant location for medium and larger manufacturing firms, have not only had positive impacts within city landscapes.

Some industrial processes have had severely negative impacts in urban spaces, for example the emission of pollutants, the increased contribution to noise and the risks from handling of hazardous processes and waste. The industries themselves can also impact on transport congestion.

The surrounding infrastructure such as roads and sewage systems suffer as a result of the high intensity of use by industry. Industrial processes can also loom large in the spaces they occupy and negatively impact local aesthetics and social resources.

"Well-managed and thriving industrial estates can contribute substantially to cities being able to grow their economies and thereby the prospects for employment."

Businesses can also consciously sidestep regulations and engage in behavior that further exacerbates city-wide and community problems.

At times various levels of the state, through commission or omission, facilitate these negative impacts made by industry when they take no steps to rectify the issues. As a result industrial estates and their surrounding areas can suffer from urban decay and its associated problems. Furthermore, changes in local, national or global economic processes can also render businesses or even parts of industrial estates obsolete. Many would argue that these pressures have generated a degree of uncertainty that makes actors in industrial estates focus on shorter time horizons in their investment decision-making.

These factors have often contributed to inconsistent attention being directed to manufacturing firms and industrial estates by different spheres of the state. Elected representatives are often ambivalent about the role of businesses in the areas, as after all, firms do not vote. The variety and complexity of businesses in industrial estates often makes them very difficult municipal customers to satisfy. An industrial partner can have high intensity use of infrastructure which causes ongoing maintenance challenges and can place further pressure on various service units or departments.

City leadership, whilst often prepared to cut ribbons at events to celebrate new plants or investments, steer clear of the everyday, more mundane challenges of industrial estates. Furthermore, leadership attention is often captured by developments in new areas or new projects that are associated with 'hot' economic activities involving technology, tourism or new property developments.

At the provincial or national scale, issues involving individual firms or particular industrial estates can be seen as parochial concerns and thus not deserving of attention when it comes to budgets or policy. This is often aggravated by fragmented business organisations that rarely find themselves able to communicate with a common voice.

Despite these challenges, the prospects for manufacturing to help generate economic growth and employment creation has kept manufacturing on the agenda in many cities around the world. The firms bring higher value processes with demand linkages into a wide range of local production and services.
Cities have often played direct roles in upgrading or redeveloping areas in which these firms are located or where they might want to locate. Major public (and even public-private) infrastructure projects are often considered because of their fresh prospects to grow industrial activity. Of course funding of large-scale infrastructure projects is often made more viable if directly associated with users of that infrastructure, who can in turn generate a scale of demand and thus secure the necessary revenue streams needed by municipalities and infrastructure providers.

Cities have often supported new estate developments that have fewer drawbacks, compared to older, space-constrained estates. In fact business themselves are often attracted to these new estates for a wide range of reasons, including the need for more space, the offer of different building formats or even for image reasons.

Beyond the local level, other spheres of government also sometimes see the attraction of linking new special industrial estate projects in or near cities to their national programmes. The consequence of all of this is that more established estates and the businesses that occupy them are often not given the attention their economic contribution might justify.

Evolving manufacturing dynamics and industrial estates

Changes in trade, technology, organisation of production and product demand have all influenced the evolution of manufacturing activities. These changes have impacted heavily on the relationships between firms and the spaces they operate in. Probably the most significant change in this regard has been the globalisation of production networks whereby most manufacturing businesses are part of some type of globalised or globalising value chains. Alongside this firms have also responded to pressures for increases in productivity and specialisation by outsourcing many aspects of production which they deem non-core or that are better performed by other specialised suppliers. Large-scale Fordist-type mass production of long runs of standardised products has increasingly been replaced by production on demand and related systems such as just-in-time supply. As a result, processes associated with manufacturing have become more logistics intensive. There is a considerable need to move products between establishment nodes in the chain of production, whether these are located in the same city or in the same country or even in different countries. In parallel, manufacturing processes have often become more technologically driven and also more skills-intensive and, in some cases, more sensitive to environmental factors. Successful manufacturing has thus been heavily influenced by networks and relationships. Michael Porter of the Harvard Business School has written widely on the imperative for firms to compete through building effective clusters, involving specialised interactions between suppliers, producers, customers, related and supporting industries and government (Porter, 1998). Other writers have noted the importance of ideas of 'collective efficiency' in enabling firms to collaborate in such a manner to address needs of customers (Schmitz, 1997). Prominent urban economic theorist, Michael Storper, has written about the critical role of generalised and specific institutions in supporting growth in cities that help foster relationships between different urban actors (Storper, 2010).

Table 1 Contrasting traditional and new approaches to industrial areas

Categories	Traditional approach	New approach
Allocation of uses	Separation of land uses according to process categories such as 'heavy', 'light', 'noxious'.	Mixed use with greater emphasis on on-site externality management.
Infrastructure	Standardised offerings with adaptions only for largest firms. Public sector provided.	Multi-structure or adaptable infrastructure solutions. Multi-stakeholder provided.
Key advantages	Proximity to infrastructure	Proximity to leading firms & key local institutions
Area design	Compact development. Isolated from other uses.	Spacious sites to allow for logistics & flexibility. Integrated with other uses.
Institutions	Focus on regulation of activities.	Focus on value adding & collaboration.
Management	Through user initiated line department services.	Through dedicated local management teams & local partnerships.
Labour force	Predominantly lower skill.	Mid- to high-skill.
Firms	Individualist and hierarchical.	Collaborative & often negotiated interdependencies.
Buildings	Fixed brick/concrete structures.	Flexi-buildings with light adaptable frames & materials.
Services	Set offerings. Traditional utilities.	Flexible, user-informed offerings & standards, also covering new public goods.

Source: Robbins *et al.*, 2016

Table 1 provides an overview of some of the changing imperatives manufacturing firms seek from industrial areas, irrespective of whether they are greenfield or established estates.

The notions behind these new, often localised elements of competitiveness, require a rethinking of urban spaces where firms operate: essentially it has become increasingly important to not only attend to matters of infrastructure and services, but also to encourage the development of local institutional partnerships.

These processes hold the promise of enabling the development of localised initiatives that can help harness the potential of inter-firm collaboration on matters including those such as skills provision, workplace health and safety, technology acquisition, waste and energy reduction. The result can be the introduction of new specialisation dynamics that are often not the automatic product of market processes. Hence a role exists for various public bodies to support these processes.

Internationally the processes described above has driven the development of many new generation industrial estates, often with a strong logistics orientation and design, but also with a variety of other institutional and infrastructural resources to support contemporary firm needs (for example co-locating pharmaceutical production with university R&D facilities). These processes have also been seen to influence the character of many more established estates where efforts towards their regeneration have needed to respond to changing firm needs in a rapidly evolving economic context.

Industry and industrial estates in Durban

Durban is South Africa's third largest city in population terms and has a similar share of national economic activity (9.2% of national Gross Domestic Product in 2015 – 2010 prices) to that of Cape Town, with both cities somewhat shy of the 30% national economic contribution of Johannesburg and the greater Gauteng City region (including the metropolitan areas of Pretoria/Tshwane and Ekurhuleni).

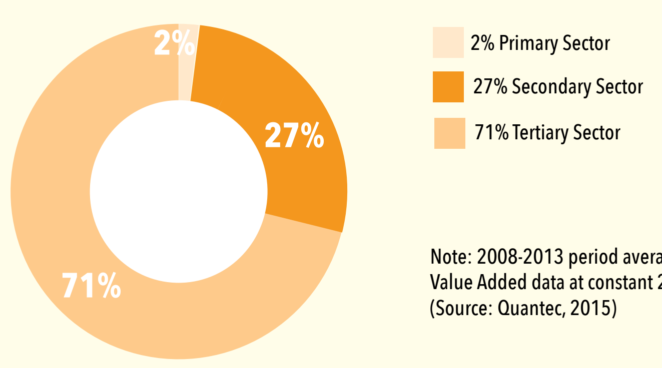
Durban has, since the early twentieth century, been an important industrial hub. This has had much to do with its port facilities and the relative proximity of the port-city to the national economic hinterland dominated by Johannesburg.

South Africa's economy has been heavily dependent on trade as it has exported primary goods and often imported fuels and manufactured inputs and final goods. Industrial development has therefore played a critical role in the development landscape and character of the city. The large industrial areas around the inner city, particularly to the south, which were developed by public and private sector actors often with a fair degree of collaboration are an illustration of this.

Durban's industrial sector

Durban's industrial activity has always been somewhat diverse in terms of sectors, but in employment terms the city has had a considerable exposure to labour-intensive manufacturing, particular in clothing and textiles which made up at one stage, around half of all manufacturing employment.

Figure1 Average share of eThekwini Gross Value Addition 2008-2013 (%)



Note: 2008-2013 period average – % from Gross Value Added data at constant 2005 prices (Source: Quantec, 2015)

However, the late 1980s and early 1990s witnessed South Africa opening its economy to global competition and, employment in clothing, textile and footwear declined precipitously. Despite this, the share of manufacturing in Durban's economy remains relatively high at 22% between 2008 and 2013, compared to 20% for the whole of Gauteng and 16% for Cape Town. It is thus no surprise that manufacturing has featured in the eThekwini Metropolitan Municipality's various economic development policy offerings and projects.

In past few years a variety of programmes of relevance to manufacturing have been driven by the municipality, at times in partnership with other spheres of government and also the private sector:

- Cluster programmes such as the Durban Auto Cluster, Chemicals Cluster and the Clothing and Textile Cluster
- Special industry infrastructure interventions such as those related to Toyota's vehicle export facilities and other investment facilitation services
- Some industrial estate infrastructure provision for new estates such as Intersite, Riverhorse Valley, Dube TradePort, and more recently Cornubia (with Tongaat Hulett) and Keystone in various parts of Durban
- Some efforts at industrial estate upgrades such as those related to Business Retention and Expansion projects in Phoenix Industrial Park and previously in Jacobs and Mobeni.

Industrial land in Durban

In terms of the city's industrial land-uses[1], the industrial sector is a major category in the municipality with land zoned for industrial activities amounting to approximately 10,850ha of a total of available land of 229,193ha (The Planning Initiative, 2013: iv). Industrial land is shown in Map 1 (below) along with areas that are being considered for future industrial land expansion. This industrial landscape has seen some changes over the last decades.

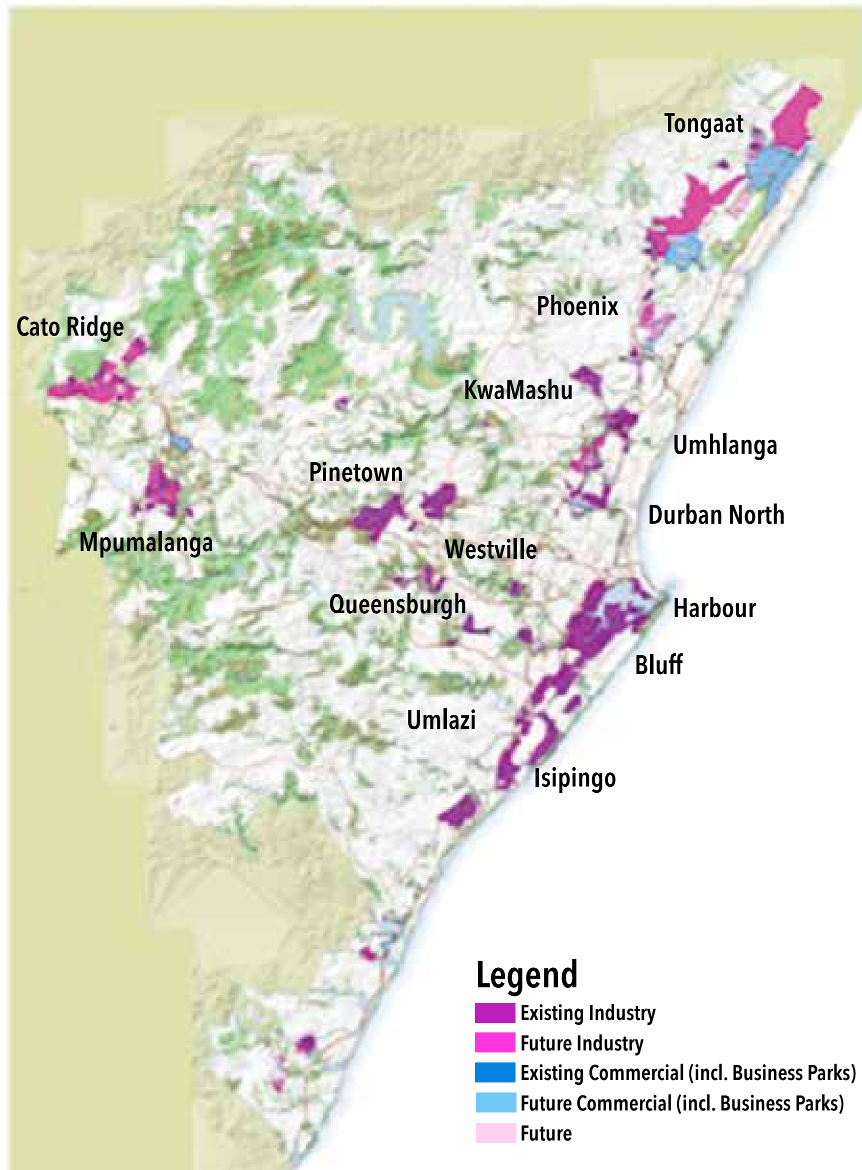
The port and surrounding areas have historically been the prime location for warehousing as well as production of various kinds. These include especially the area of Jacobs, Mobeni, Prospecton, known to some as the South Durban Basin. It is still one of the busiest manufacturing hubs in Durban.

The area reaches from the Port of Durban in the north to eZimkokodweni (Umbogintwini) in the south and is home to two large petrochemical refineries (Engen and Sasol), a large paper mill (Mondi), Toyota and an estimated 5000 businesses.

In the 1950s and 1960s industrial estates in and around the western areas of Pinetown and New Germany were consolidated. Today these serve as the second most important manufacturing and industrial land hub in the eThekwini Municipality[2]. Originally businesses such as Frame Textiles originally dominated the region with tens of thousands of employees. However, over the years the area has emerged as a diversified base for manufacturing across sectors such as automotive components, engineering, packaging, food and chemicals. Westmead and Mahogany Ridge have developed as industrial areas since the 1970s with the considerable expansions that took place in the 1980s and early 1990s.

Government also promoted Hammarsdale as an industrial location as part of the apartheid urban planning model seeking to keep black African workers to the periphery of the city. More recently the Outer West area has also seen some new industrial developments around Cato Ridge and the new Keystone Industrial Park near Hammarsdale.

Map 1 Industrial land in eThekwini Municipality 2012 and proposed areas for expansion based on 2013/14 Spatial Development Framework



Source: The Planning Initiative, 2013

To the north of the city centre of Durban, a range of industrial areas were originally developed from the 1950s through to the 1980s. These include older industrial areas around Umgeni Road, Sea Cow Lake, the North Coast Road and developments such as Phoenix Industrial Park and later development at Springfield and subsequently the redevelopment of old Corobrick and Tongaat Hulett land around North Coast Road and later at Riverhorse Valley. Further north, Verulam and Tongaat have been economic centres for many decades with activities linked to the sugar industry and the textiles and clothing sector. Whilst these sectors have been in economic decline, there remains a presence of firms related to these activities in the areas.

With the establishment of further road networks as well as the new King Shaka International Airport there has been a shift to other parts of the city (SAPOA, 2015). Over the past two decades the spatial focus of industrial land development moved from the centre and south to the west and north. This shift has not involved large scale manufacturing, but specifically warehousing/logistics businesses (also using industrial land) alongside major new commercial and residential developments.

Plans associated with the national government's Strategic Infrastructure Programme (SIP) have, apart from the N3 upgrade and possible intermodal facility at Cato Ridge, also proposed the development of a 'dig-out' port at the old Durban International Airport site. Plans have also been announced for the Dube TradePort company to develop a proposed automotive supplier park on land formerly belonging to the Illovo, Sugar Company in the south of the eThekwini Municipal Area, with the possibility mooted that this could acquire the SEZ status.

1. The eThekwini Municipality defines industrial property as: *"property used for a branch of trade or manufacturing, production, assembly or processing of finished or partially finished products from raw material or fabricated parts in respect of which capital and labour are involved, and includes: a)The production of raw products on the property; b) The storage and warehousing of products; and c) Any office or other accommodation on the same property the use of which is incidental to such activity'. From this definition four industrial zones can be identified that determine the use of the land 1. Extractive industry, 2. Noxious industry, 3.General industry, 4. Heavy industry."* (The Planning Initiative, 2013: 10)

2. The geographic space is referred to as Durban, Greater Durban or eThekwini Municipal Area, whilst the local government structure is the eThekwini Metropolitan Municipality or the eThekwini Municipality

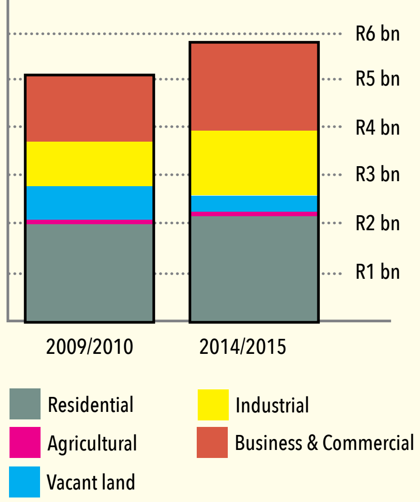
Durban is also on average more expensive in land and property cost terms than other locations in South Africa. This is partly linked to Durban being home to one of the largest container ports in the Southern Hemisphere.

For much of the period since the 2008 recession manufacturing has showed rather disappointing growth rates that have negatively affected the uptake of industrial land and caused a slow down in the development of industrial estates.

Given its strong industrial location Durban has been named the country's 'industrial hotspot' (SAPOA, 2015). However, eThekwini is also the most expensive location in terms of property rates for industrial land. The South African Property Owner Association (SAPOA) states that for the fiscal year 2014/2015, the Municipality charged the highest level of commercial property rates of 3.053 cents per Rand applied to industrial property. Other Municipalities such as City of Johannesburg charge 1.73 cents in the rand in comparison. (eProperty News, 2015).

The city has seen its industrial share of total rates income grow in recent years, both due to the high rates charged and due to the development of significant new portions of industrial land. Figure 2 shows the percentage of total rateable property valuations in nominal Rands for 2009/10 and 2014/15. Of the total value of rateable property in the Municipality the share of industrial land has increased.

Figure 2 Changing composition of eThekwini property rates



Source: Authors' own calculations of eThekwini Metropolitan Municipality rates revenue data.

Durban is also on average more expensive in land and property cost terms than other locations in South Africa. This is reported to be influenced by a variety of factors such as insufficient flat land and related high cost of developing the land. The strong demand for land associated with logistics and warehousing/distribution linked to Durban being home to one of the largest container ports in the Southern Hemisphere is a factor that has influenced strong demand and therefore prices. Limited infrastructure in the wider region (such as in Msunduzi Municipality, encompassing the city of Pietermaritzburg) has also placed high demand on eThekwini for industrial land. The surrounding municipalities have lacked the resources required to significantly develop the infrastructure offerings needed for industrial land.

For much of the period since the 2008 recession manufacturing has showed rather disappointing growth rates across South Africa that have negatively affected the uptake of industrial land and caused a slow down in the development of industrial estates. However, despite these national conditions, Durban has experienced a steady increase in industrial land prices and rentals over the last decade with some locations being amongst the most expensive in the country – e.g. more than R10 million per hectare in the Riverhorse Valley Business Estate (eThekwini Municipality, 2013). Other new or planned developments such as the 'dig-out' port have, in some areas, also led to speculations about an increase of land prices – e.g. in South Durban (Isipingo Rail) the prices for factories increased from R600/m^2 in 2011 to 1,236/m^2 – 1.986/m^2 in 2014.

Overall, nominal growth in land value across eThekwini between 2006 and 2013 was estimated at 191%. Areas such as Sea Cow Lake and Springfield Park have been amongst the locations with the steepest increase in land values (in R/m^2). Land value in Sea Cow Lake, for example, rose from R300/m^2 in 2006 to R1,500/m^2 in 2013. In terms of rentals Cato Ridge experienced a 114% increase from R15-20/m^2 in 2006 to R35-40/m^2 in 2013. Riverhorse Valley Business Estate did not show steep increases but is one of the most expensive locations with rentals between R55/m^2 and R65/m^2 (The Planning Initiative, 2013).

In comparison, cities like Johannesburg have experienced a rather slow growth and even some decline in industrial rentals in 2015. Currently rentals for prime maxi units are on average at R50/m^2 and midi units at R47/m^2 (Jones Lang Lasalle IP, 2014). Rental rates for pioneer, (new state-of-the-art) developments in Durban in 2013 were at R60/m^2 compared to in Port Elizabeth, R42/m^2, in the Cape Peninsula, R46/m^2 and R59/m^2 in the Central Witwatersrand (Rode & Associates, 2013: 61). In reporting on industrial development trends in South Africa, the consultancy, Jones Lang Lasalle, indicated that developers had to meet the following criteria: location close to road networks connected with major freeways; large site/yard sizes for vehicle parking and possible site reconfiguration; yards accessible from local road network with infrastructure in estates to accommodate freight vehicles; excellent safety and security arrangements; larger maxi unit/structures which are preferred in support of warehousing/distribution activities (Jones Lang Lasalle, 2016: page not numbered).

Although the bulk of growth for industrial land in eThekwini has been accommodated through greenfield projects or development of vacant sites in existing zoned areas, there has also been some re-development in older industrial estates. This has either taken the form of new developers acquiring older facilities and replacing these with newer structures, often oriented to warehousing/distribution. Developments in Umbilo/Congella such as those done by Shree Prop, and the more recent news that JT Ross was intending to redevelop the large Dunlop Tyre factory site, suggest that the high land prices already noted are driving some re-development. In other areas existing firms involved in manufacturing have also sought to expand their foot-print by buying adjacent or nearby properties (such as in Jacobs or New Germany) but have encountered many challenges with consolidating properties, even when adjacent.

In a handful of cases former industrial stands have been redeveloped into multi-tenant industrial parks. Similar processes have taken place in other established industrial areas around the city and this is a source of demand in newer industrial parks as well as in stand-alone mini-parks around the city. The former Frame Textiles premises in New Germany is now home to around a dozen firms, covering manufacturing, services and logistics. Similar developments can be seen in Jacobs, Mobeni, Springfield Park and Mahogany Ridge to name a few. Developers of these sites have been eagerly lobbying the municipality to invest alongside them in re-developing these areas.

The conditions in eThekwini industrial estates

The bulk of manufacturing firms in the eThekwini Metropolitan Municipality are located in older, established industrial estates. The bulk of these estates, developed from the post- World War II era through to the early 1990s, are suffering some measure of urban decay and infrastructure maintenance and service neglect. This has been due both to changing use patterns, as well as a generally poor public sector attitudes to investing in these spaces. In some cases the infrastructure has been rendered partially obsolete or was developed with insufficient attention paid to the required standards. Few have any specific local institutional arrangements to attend to both urban management issues or to other firm needs (such as training institutes).

Estates developed in the last decade have tended to be mixed-use and more often provide a home to service-type businesses with an industrial flavour: warehousing and distribution, construction equipment supply and servicing, packaging and printing, depot for service sectors in security, transport machinery, equipment repairs/ maintenance, business services needing cheaper premises (e.g. call centres), wholesale and some larger-scale retail.

Some manufacturing that has located in these newer mixed-use estates would include electronics assembly, pharmaceuticals, firms producing items for the fast moving consumer goods sector and a variety of light manufacturing activities. Bar the in-progress development of the Dube TradePort (DTP) SEZ, none of the newer estates have any highly specific infrastructure or service packages (such as the IT and air-cargo platforms at DTP), although a number do have some type of lot-owners or area management structure that provides assorted levy-based services in public space such as cleaning, landscaping and security.

Drawing on both the *2013/14 eThekwini Medium and Large Manufacturing Firm Survey* (Robbins & Velia, 2015) and subsequent stakeholder interviews the following issues were raised consistently with regard to matters of location with respect to manufacturing operations located in Durban and surrounds. In terms of advantages of their location, firms noted the most prominent advantage of eThekwini is that related to the transportation of goods.

This is not surprising considering the presence of the Port of Durban and the fact that the overwhelming bulk of firms participate in trading activities (importing, exporting or both). Over 50% of establishments reported that these contributed to a notable advantage for the location. A little over 30% of establishments note their location in eThekwini has advantages arising from the availability of labour and of some skills. Slightly over 10% of firms reported that the specific site and/or premises of the firm provide an advantage in that it suits their specific production and strategy needs. These few advantages are once again quite simple (or not advanced factors) but importantly firms do see them as advantages.

In terms of local (eThekwini) disadvantages as set out in Figure 3, a significant number of firms indicated that their distance from customers was the major disadvantage, with eThekwini and KZN having some market size limitations.

Firms also reported issues related to costs of operating at their locations and transport costs as being a major constraint. This was followed by concerns about local infrastructure and also crime and grime issues at the local level. Suitability of premises was also raised as a constraint by 11.5% of establishments.

We have received good services from the Municipality. Still there are areas of improvement such as proper service delivery.

We are in town. There is a lot of litter which is not cleaned up and this affects client's perceptions. Also, the crime is bad. And when we need to move goods, the access to the port is congested all the time.

Hammarsdale is not regarded as an industrial area so the infrastructure around us is bad. Water provision is problematic, but also waste disposal. There are very few networking roads.

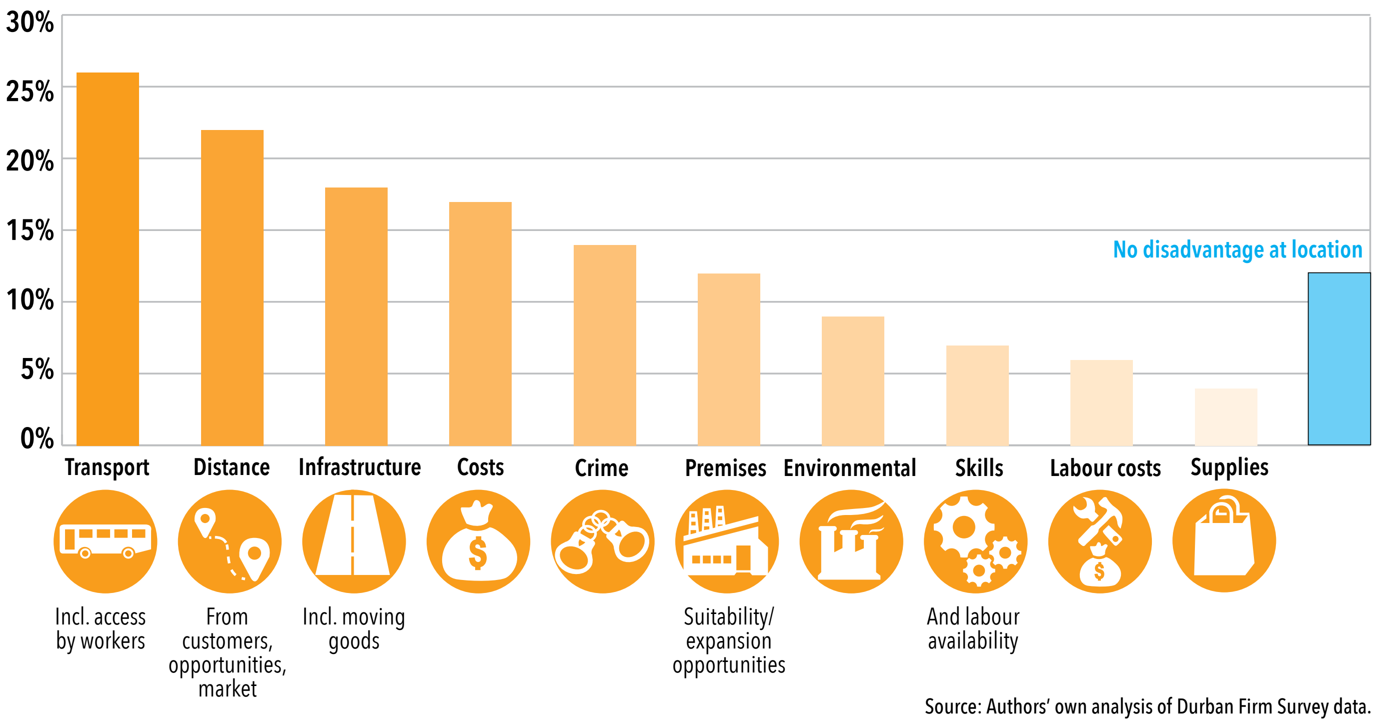
The province and the municipality are only looking at very big businesses. We are not important and not made to feel important. They don't pay attention to us.

Transport is an issue in our area. Workers have to get to Durban before they get to work because there is no direct public transport.

It is difficult to access finance to expand our manufacturing plant into a new area. We are stuck where we are. Our area (Umbilo) is dropping in status compared to new areas.

Source: Comments from high level experts. Medium and Large Manufacturing Firm Survey for eThekwini, 2013/2014.

Figure 3 Main disadvantages of eThekwini/Durban as a location (% of establishments reporting an issue)



Source: Authors' own analysis of Durban Firm Survey data.

In looking at qualitative responses from surveyed firms it can be noted that they generally felt very strongly about the absence of high quality production environments under circumstances where they felt they were paying high property rates.

Firms were also asked to specify what they considered to be areas for further progress that are still required from the Municipality and from national government. While the responses showed that there were overlaps, the perceptions are useful as considerations for local and national action around industrial policy matters. Three areas of intervention for which further progress is required stand out at the national level: 1) addressing the high cost of utilities; 2) promoting an efficient skills development system (e.g. as managed by the Sector Education and Training Authorities (SETAs) for the relevant manufacturing sectors); and, 3) maintaining infrastructure. In the case of the Municipality, maintenance of existing infrastructure is set out as the highest area for further progress at the local level by respondents, with seven in every ten establishment reporting on the extreme importance of maintenance compared to one in every five reporting on new infrastructure. Sector-specific support is mentioned as an area for which further progress is extremely importantly required by almost 40% of establishments. This would suggest firms are looking for some support in more specialised responses to some clusters/sectors.

Also of concern is that almost 7% of establishments – of the few firms that had tried to interact with the Municipality – felt that they could not communicate the importance of the problems faced to staff in eThekwini. A variety of comments were made on this, including responses such as: "it is very difficult to get the queries across [to eThekwini Municipality staff] – you end up paying people to get through to the Municipality"; "we are not sure if the requests are followed through"; the problem "is one of facelessness"; "turnover of staff [at the Municipality] means that there is no one to deal with consistently that can be identified", etc. Separately, around 6% of establishments reported lack of knowledge or expertise by the staff at the Municipality with whom they had to interact for their queries. On a positive note, 20% of firms had a good experience when placing a business query to staff at the Municipality. On the other extreme, one fourth of high-level respondents in the firms surveyed had no direct dealings with anyone in the Municipality.

From this overview of the Firm Survey results one can clearly conclude that attending to issues in, and near, locations where firms operate is an important factor for firms. Firms articulate these issues not just as a 'hassle factor' but as impacting on their prospects to grow output and employment. This suggests that attending to the variety of issues noted in these findings would be very important to manufacturing firms in eThekwini. This goes well beyond the physical upgrade. It suggests that a total business environment approach would be appropriate, to include factors such as area maintenance and infrastructure upgrades but also matters such as sector development, skills and crime.

Some key policy considerations

"There is no doubt that businesses and the private sector are key to enhancing the economic competitiveness of urban areas. However, markets by themselves are unlikely to provide the two ingredients most needed for higher urban performance – density and connectivity – to support clusters of firms and to more efficiently connect workers with firms." (Lall, 2016)

International experience

The challenges being faced with existing industrial areas in eThekwini are not unique to Durban, let alone South Africa. In many northern hemisphere countries the shift to a greater service driven economic models has rendered many older industrial areas obsolete for their original purpose. It has thus not been uncommon for in Europe or in North America for there to be a focus on repurposing these areas for other uses, or the updating of areas for contemporary industrial needs. With regard to the latter, these efforts have involved infrastructure and services refits, general urban upgrades and efforts to facilitate the re-development of a stock of older properties to make it suitable for present day industrial needs. The provision of some form of area incentive has been particularly common in the USA, whilst in Europe the efforts have been mainly around infrastructure investments and specialised institutional arrangements.

Commercial and/or industrial estates divisions are a common feature in many city councils in industrialised countries. These have a dedicated focus on working with those running businesses in these industrial areas to maintain them and if need be improve them. Regulatory innovations have also been important as businesses operating in global value chains often need particular conditions created which might not have been the case a decade or two ago. These could be relationships with specialist skills institutions or ensuring that all present in certain areas contribute to creating optimal business conditions. This can include participating in local area associations or finding deeper opportunities for collaboration around industrial clusters and the like.

In the more industrialised developing countries there have been a wide range of responses. These countries have often shown a tendency to enable greenfield growth as the prime focus of industrial land development, but there has been a range of innovations that also pertain to established industrial estates. In many countries special zones have been operating for thirty years or more. These zones, more often than not operating as export processing zones, have generally been run by special agencies that take full responsibility for the quality of the local industrial estates and also get irregular injections of new capital investment for infrastructure refits when needed. In areas where particular constraints exist that reduce prospects for greenfield development, efforts have been made to work with older industrial areas, either for redevelopment into other uses or to enable them to meet modern day requirements. World Bank experts have noted that an excessive focus on greenfield and special zone projects often comes at a cost to existing local productive capacity, and thus a balanced approach is proposed (Farole, 2011).

The changing character of manufacturing and general industrial activities is a major challenge to local authorities. Not only do firms change their products and their processes to make such products, they also change the relationships they have with suppliers and customers. As a consequence firms demand spaces where there is a degree of flexibility and innovation in planning and administration. They also demand connectivity within the host cities and between their location and other cities around the world. Globally competition for these businesses is growing all the time and therefore locations where firms invest have to meet higher and higher standards to guarantee the investment.

It is also worth noting that location issues for manufacturing production have also featured in many national industrial policy frameworks. In this regard it is not uncommon for such frameworks to pay particular attention to how national states can work with other stakeholders to support the delivery of the appropriate urban spaces that allow firms to expand existing production and employment and also support the introduction of new investors. Such approaches require a greater sensitivity to differentiated economic spaces in national policy and an appreciation of how important these apparently parochial issues can be to firms, the clusters in which they operate and their relationship to domestic and global value chains.

Efforts to improve industrial estates, and thereby improve the prospects of firms operating in them, have included a wide range of instruments that have been deployed at the local, regional and national level. Table 2 proposes a way of thinking about these possible fields of activity in terms of the varied resource and institutional capabilities that might be needed to support them.

Table 2 Policy instruments for industrial area upgrading and development

Institutional complexity

1 Higher institutional complexity Lower resource costs	2 Higher institutional complexity Higher resource costs
• Formation of **local area partnerships** (around issues such as waste, skills etc.) • Facilitation of local project **collaboration** between private and public actors. • **Regular reporting** on quality and functionality of key industrial areas and information provision. • **Urban planning reviews** and amendments. • **Regulatory reviews** and amendments. • **Heritage development** linked to tourism and education (factory museums, science and technology centres etc.) • Interaction with **sectoral/cluster** type programmes.	• Creation of industrial (and commercial?) **estates division** in the Municipality (hub for services, knowledge, renewal and facilitation of local action plans). • **Special levies** to enhance area management and services. • Dedicated **area management** and **services**. • Supporting new **institutional formation** (skills, technology etc.) • Collaborative **area re-design** and **re-development** (including things such as improved lighting for night workers and better pavements or public transport infrastructure facilities alongside natural areas, improving area legibility, signage). • **Reduction in business operating costs**/ commitment to better services in exchange for operating costs. • **Special status** (IDZ or SEZ).
3 Lower institutional complexity Lower resource costs	**4 Lower institutional complexity Higher resource costs**
• **Local area campaigns** around a host of issues (productivity, health, safety, public education etc.). • Special municipal **cleanups** • **Support** to local area organisations performing a range of tasks (e.g. local area environment committee or local area anti-crime forum). • Area **marketing**, branding identity.	• Capital **infrastructure upgrades** • Dedicated and regular area **maintenance** efforts • basic area legibility, signage, **urban design improvements**

Resource costs

(Source: Robbins *et al.*, 2016)

Web-site links

eThekwini Metropolitan Municipality: www.durban.gov.za
Durban Chamber of Commerce and Industry: www.durbanchamber.co.za
South African Property Owners Association (SAPOA): www.sapoa.org.za
The Department of Trade and Industry: www.dti.gov.za

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