

Healthcare in Africa

South Africa: Working towards a world-class life sciences industry

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Making the case for economic diversification in South Africa

The tough economic conditions are due to a combination of global and domestic factors and have had a particularly negative effect on the country's well established industries such as energy and resources.

In line with the experiences of other open middle income economies South Africa has experienced subdued growth in recent years averaging approximately 2.1% year-on-year GDP growth from 2011 to 2015. The reliance of industries such as mining and resources on exports has added significant pressure to the trade deficit and current account as global resource prices have dropped.

Despite the challenges South Africa is ranked as Africa's second largest economy

with a GDP of USD318 billion (USD5 951 per capita) recorded in 2015 and is considered to be Africa's most diverse economy in terms of economic activity (i.e. manufacturing, resource extraction, services and value-added exports). Government has acknowledged the need for further diversification, and policies such as the National Development Plan (NDP), the Industrial Policy Action Plan (IPAP) and the Bio-economy Strategy (BES) have been published as guidelines for how additional diversification can be achieved.

Working towards the goals stated in these documents is considered to be of paramount importance to the long-term success of the economy. It is clear that the reliance on low value-added mineral exports must be reduced and the economy must supply a higher proportion of value-added products to domestic, regional and global markets.

The role of life sciences in diversification

One industry identified as being critical to the economic diversification is the life sciences industry.

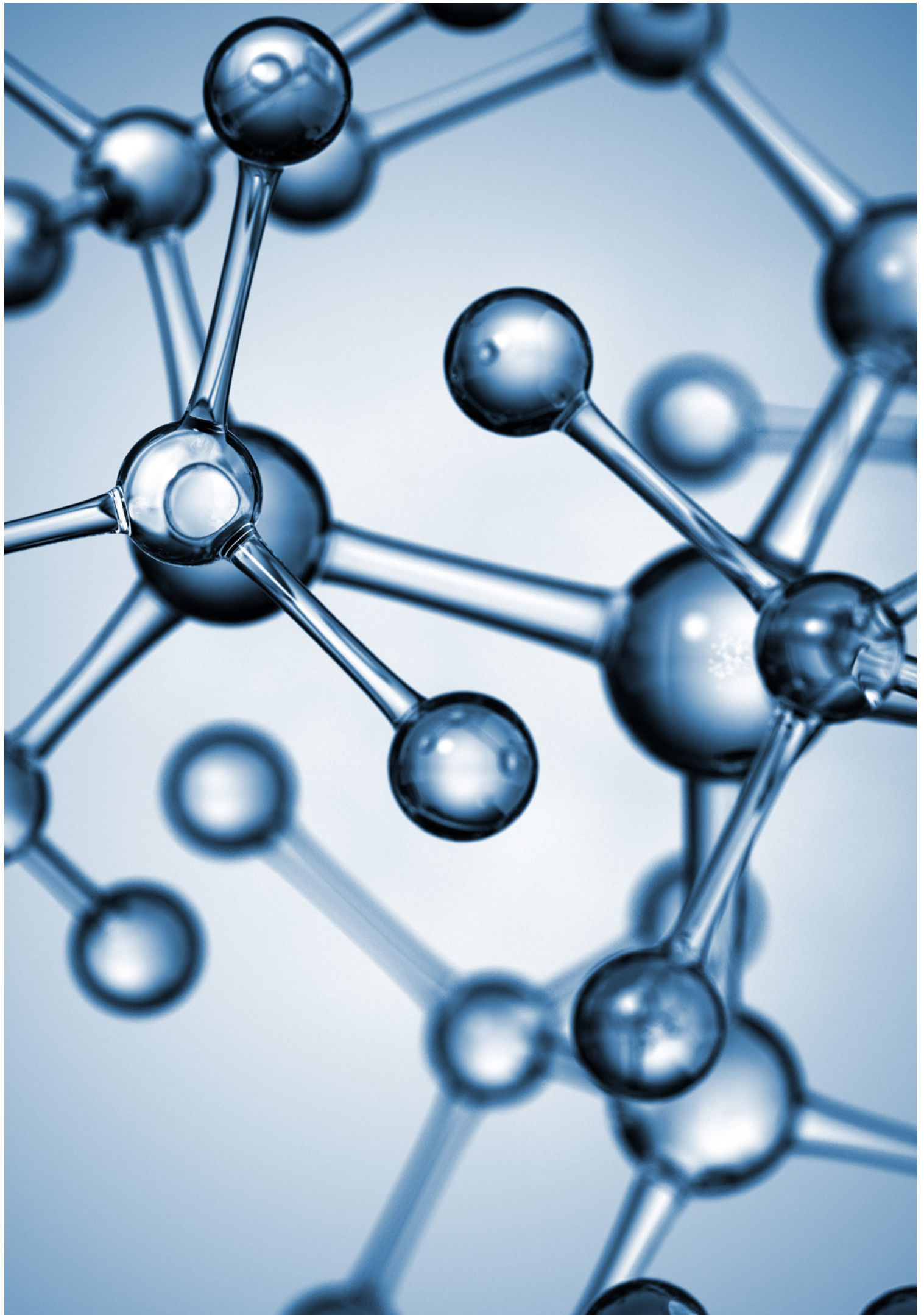
South Africa has the largest life sciences market on the African continent.

This industry can be considered to be made up of two interlinked sub-sectors, namely: biotechnology and pharmaceuticals.

South Africa has the largest life sciences market on the African continent, at approximately USD3.2 billion. This feeds into what is the continent's largest healthcare market valued at approximately USD28.1 billion. Further to this, the South African prescription drug, generic drug and over the counter drug markets are all projected to show considerable growth up to 2023.

As outlined above there is considerable demand for life sciences products in South Africa. However, much of the local demand for the products (particularly value-added innovative products) is supplied from other markets in the global economy. This had resulted in a pharmaceuticals trade deficit of USD1.6 billion in 2015.

A deficit this large may be considered to be a barrier to economic diversification and growth of the local industry as envisioned in the NDP, IPAP and BES. Fortunately, despite the challenges, South Africa nonetheless has the economic fundamentals to develop a competitive advantage and significantly improve its share of the global life sciences market in the long term. This potential competitive advantage lies in a number of factors contained in what can be termed 'keys to success'.



Keys to success

South Africa has a diversified manufacturing industry that includes pharmaceuticals and biotechnology.

The Department of Science and Technology's BES has noted that South Africa needs to develop its health innovation system using a 'quadruple helix' model that brings together government, academia, industry and civil society – in which each of these stakeholders have distinct but complementary roles.

Deloitte is in agreement with this view; and of the opinion that the keys to success for working towards the realisation of a world-class industry can be found in the following domestic market factors: (1) *Manufacturing Capability*; (2) *Research and Academia* and (3) *Regulatory Environment*; as illustrated by the 'Triangle of success' – see Figure 1. The existing competitive advantage in these areas is outlined below.

Manufacturing capability

South Africa has a diversified manufacturing industry that includes pharmaceuticals and biotechnology. Global generics companies, such as Aspen Pharmacare and Adcock Ingram, have also emerged from the country. This is indicative of an established market with the requisite skills base and fundamentals for additional investment to yield significant results – if done in a strategically sound manner.

The Department of Trade and Industry (the dti) has put into place a number of grants and incentives aimed at supporting growth of value-adding economic activities – including those of life sciences manufacturers. These incentives cover a range of activities including but not limited

to: Research and Development (e.g. S11D Incentive); Infrastructure Development (e.g. Critical Infrastructure Programme); and Manufacturing Competitiveness (e.g. MCEP Incentive). The existence of such incentives is important for supporting the life sciences industry but more work can be done to better promote them and increase ease of access.

Research and Academia

South Africa has a well-established research and academic fraternity in life sciences that has provided a steady output of research and development (R&D).

A robust regulatory environment is critical for any country aiming to develop world-class industries. Good performance in this area increases economic competitiveness and business confidence.

Research by the African Society for Laboratory Medicine has found that while Africa has less than 500 internationally accredited laboratories, 90% of these are based in South Africa. This strengthens South Africa's position as the most suitable African country for investment into life sciences knowledge generation and production.

In order to fully leverage and build on the fundamentals outlined above, greater effort and resources are required to increase the number of researchers currently in the market and upgrade their collective skill set. This will require a number of private and public sector interventions including but not limited to:

- Finding ways to encourage collaboration between leading global researchers and local industry. This could potentially be done by leveraging on South Africa's level of development in ICT infrastructure to explore the potential for remote collaboration
- Reform of immigration laws to attract more skilled researchers and academics in life sciences.

Regulatory Environment

A robust regulatory environment is critical for any country aiming to develop world-class industries. Good performance in this area increases economic competitiveness and business confidence. As a result, it is important for South Africa to take the necessary steps in continuing to develop its institutional capacity in this regard.

At present South Africa ranks 49th out of 140 countries in the World Economic Forum's (WEF) Global Competitiveness Report for 2015–2016. This is the second highest ranking amongst African countries with only Mauritius ranked higher at 46th place. The WEF notes the following as the reason for the ranking:

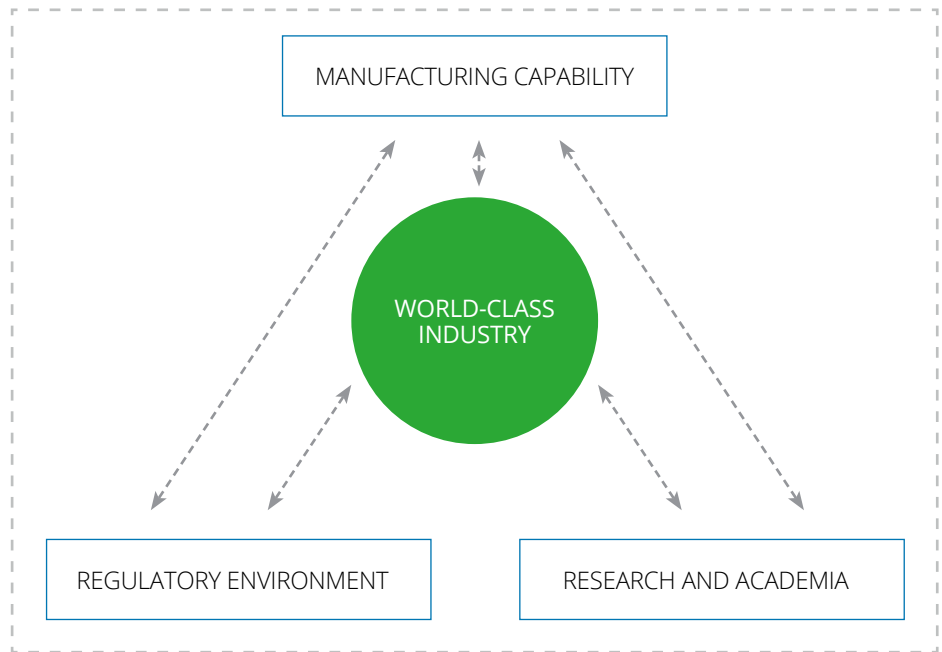
South Africa climbs seven places to reach 49th, reversing its four-year downward trend thanks largely to increased uptake of ICTs – specially higher Internet bandwidth and improvements in innovation (up by five places to 38th), which establishes the economy as the region's most innovative.

South Africa also hosts the continent's most efficient financial market (12th) and benefits from a sound goods market (38th), which is driven by strong domestic competition (28th) and an efficient transport infrastructure (29th). It further benefits from strong institutions (38th), particularly property rights (24th) and a robust and independent legal framework.

These are favourable rankings and South Africa's performance suggests a generally stable and low-risk business environment for industries such as life sciences.

For a national competitive advantage to be developed, industrial policy needs to be effectively implemented and effective co-operation between the public and private sectors is required.

Figure 1. Triangle of success: requirements for a world-class pharmaceuticals industry



Two additional drivers also give South Africa a critical advantage in working towards a world-class life sciences industry. These are as follows:

1. Genetic diversity

Due to historical and present day socioeconomic reasons, South Africa has a population with a high genetic diversity. This makes it a particularly advantageous location for life sciences research and application in the long term. The importance of this factor lies in the growing role of population genetics in the future of life sciences and healthcare. Large diverse populations in close geographic proximity can help reduce research costs and make it more likely to be able to carry out more genetically representative research.

2. The African growth story and healthcare demand

Growing economies, higher disposable incomes and a high disease burden across Africa means that there will likely be continually increasing demand for life sciences based products on the continent. This growth story provides South Africa with a fast-growing regional market to tap into.

Fundamentals for the way forward

It is important to note that while the factors above are advantageous and signal significant potential for transformation and growth of the South African life sciences industry, their existence alone is not enough. For a national competitive advantage to be developed, industrial policy needs to be effectively implemented and effective co-operation between the public and private sectors is required.

Private sector call to action

The private sector is best placed to be the driver in growth of the life sciences industry in South Africa. Private sector stakeholders can pioneer a new era of growth in South Africa's life sciences by pursuing the following:

1. Life sciences product manufacturers:

Life sciences manufacturers should recognise and act on the current attractiveness and continuing growth potential of the South African market.

- Key strategic areas of growth should be identified and the appropriate delivery partners with whom firms can effectively collaborate and co-invest into new ventures should be selected.

2. Clinical trial/research institutes:

Companies involved in South Africa's life sciences R&D industry should develop business strategies to leverage on South Africa's competitive advantage in terms of manufacturing, research, robust institutions and population diversity.

- A long-term strategic area of growth is in the digitisation of clinical research activities.

Particularly in terms of remote monitoring of trial participants. The internet is better enabling long-distance collaboration of researchers and extending the geographic reach of trials. South African firms should endeavour to place themselves at the heart of this global trend.

The public sector should look at ways in which it can improve the services it provides to better enable the private sector and encourage local manufacturing and R&D.

Public sector call to action

The public sector should look at ways in which it can improve the services it provides to better enable the private sector and encourage local manufacturing and R&D. This could be achieved by working to achieve the following:

1. Procurement designation:

Establishing ways in which a designation policy could be implemented for public healthcare procurement should be considered.

- Designating funds from the public purse to procure products from life science companies with manufacturing facilities in South Africa may prove critical in sustaining a fledgling industry in the short to medium term.

2. Improvement of existing incentives:

Better promotion and effective implementation of existing manufacturing incentives in life sciences R&D and manufacturing.

- Better promotion and administration of existing government incentives would better enable government to support growth of the industry.

3. Collaboration with private sector:

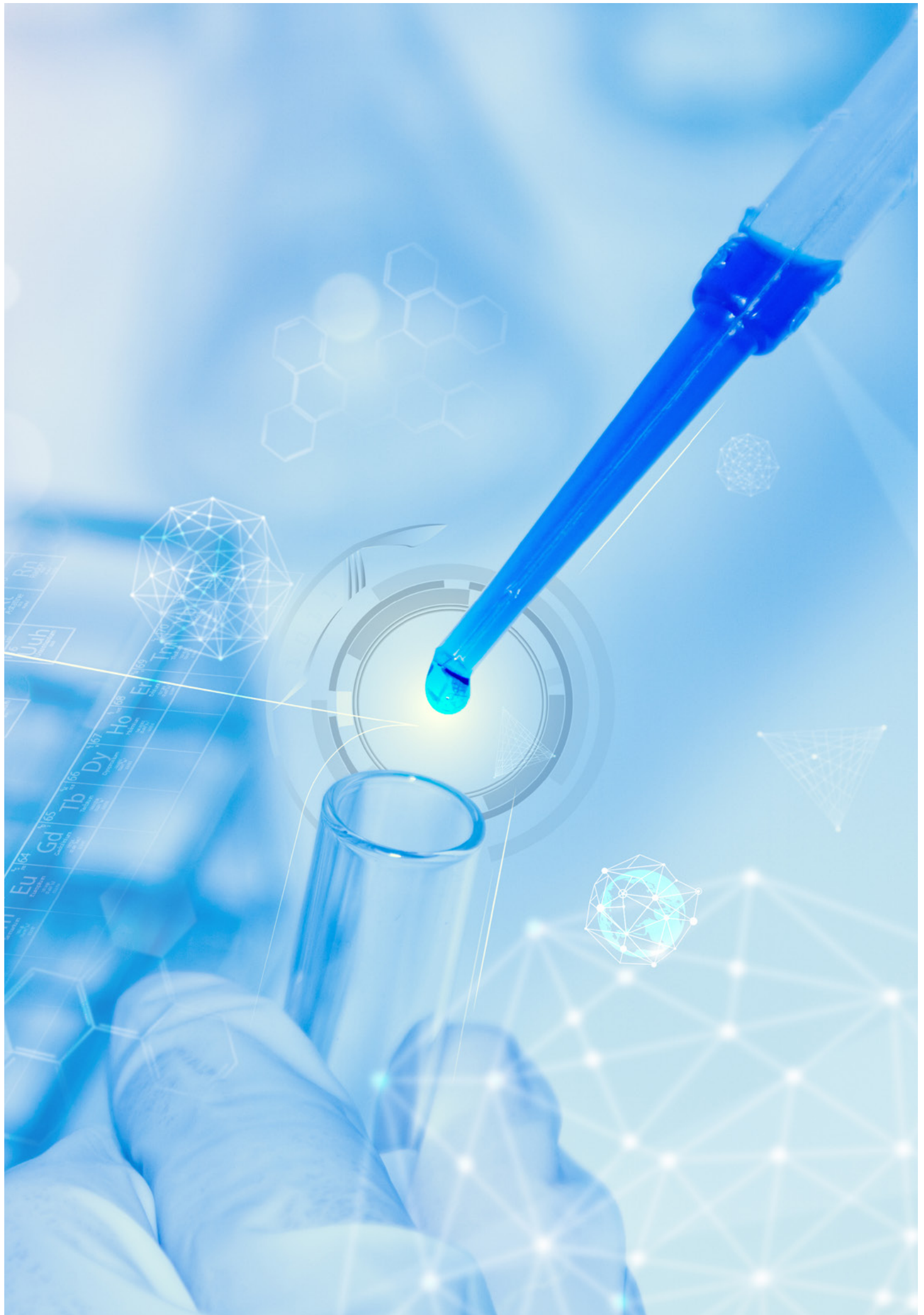
Initiating strategic private sector partnerships for initiatives such as Kettlaphela (which intends to create a state owned pharmaceutical company) would enable the public sector to play a direct and meaningful role in developing domestic manufacturing capacity.

4. Special Economic Zones:

Creation of a Special Economic Zone (SEZ) for life sciences companies, with favourable tax incentives for manufacturing and R&D, may prove critical in increasing domestic and international investment into the

industry. Creating a SEZ specifically for life science companies may also be critical in aiding the formation of a specialised geographic cluster in which skills and resources can be more efficiently shared.

The public sector should look at ways in which it can improve the services it provides to better enable the private sector and encourage local manufacturing and R&D.





Conclusion

In conclusion it can be said that there are a number of critical areas and factors related to the life sciences industry in which South Africa performs well, particularly in terms of institutional strengths, human capital, and existing infrastructure and population demographics. However, more effective collaboration between stakeholders across and between the public and private sectors is required in order to leverage on these factors and more effectively grow the industry.

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