

Innovation Profile of the Sarah Baartman District

1. Background

The aim of the briefing note is to share key findings of the nature and characteristics of innovation in the Sarah Baartman District. A survey of 29 key innovative enterprises was conducted in the District in 2019 in order to profile the key innovators.

For something to be considered an innovation, it should meet the following three criteria:



Figure 1. Innovation Criteria

2. Nature of innovation in the Sarah Baartman District

2.1 Innovation types

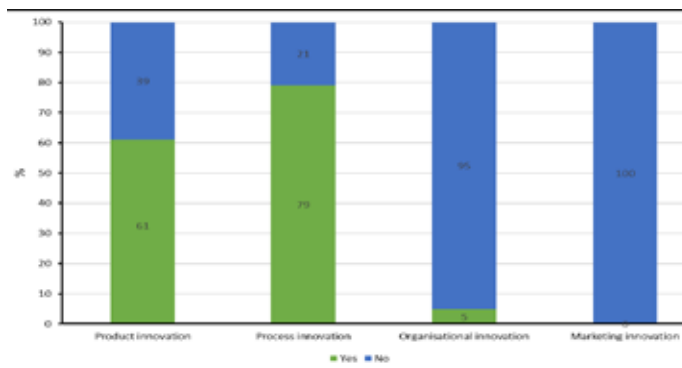


Figure 2. Innovation types

The figure above indicates that process innovations were the most popular innovation, reported by 79% of the enterprises. For example, the *Graaff Reinet Museum* changed standard archival practice to digital practice for easy and efficient retrieval of documents and photographs when requested by clients or researchers. At that point, the digital archives can only be accessed through museum's website eventually by end of the year (2019), the material should be running (uploaded onto ATOM). The process has significantly improved archival practice.

The second most popular innovation type was product innovation, which was reported by 61% of the enterprises. An example includes *Wirquin*, a sanitary wear company in Somerset East that designs and manufactures sanitary equipment. The company created a new product in 2018 called the *Wirquin Neo*. Designed with innovative and patented functions, this product offers a full range for all basin and sink installations. According to the company, the product has a reliable zero leak guarantee.

The least reported innovation types were organisational and marketing innovations, practiced by 5% and 0% of the enterprises, respectively. The results suggest that the enterprises' focus is on improving the processes of producing or manufacturing goods or services.

2.2 Innovation activities



In the Sarah Baartman District, the main innovation activity was adoption, as reported by 88% of the enterprises. For example, the *Robert Mangaliso Sobukwe Museum's* craft tech club utilised a 3D printer to create educational toys and equipment from recycled plastic. In addition to the equipment, the youth were trained on coding techniques. Another example is of *Montego*, a company that produces pet food. The company adopted a new batching machine and the use of an extruder (only one in the country of its size). All new machines are part of the organisation's investment to grow. The machines were implemented from September 2018 and has increased the organisation's production by 30%.

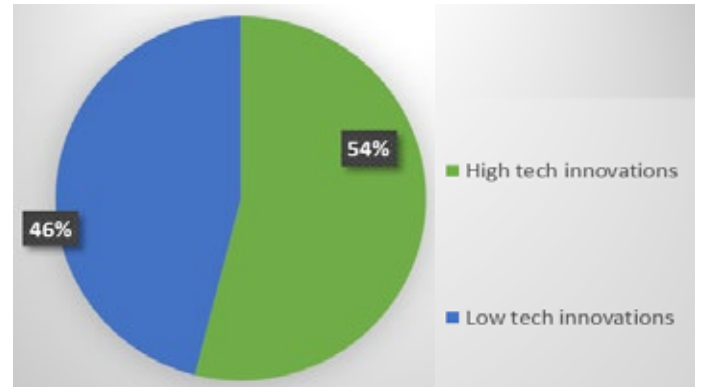
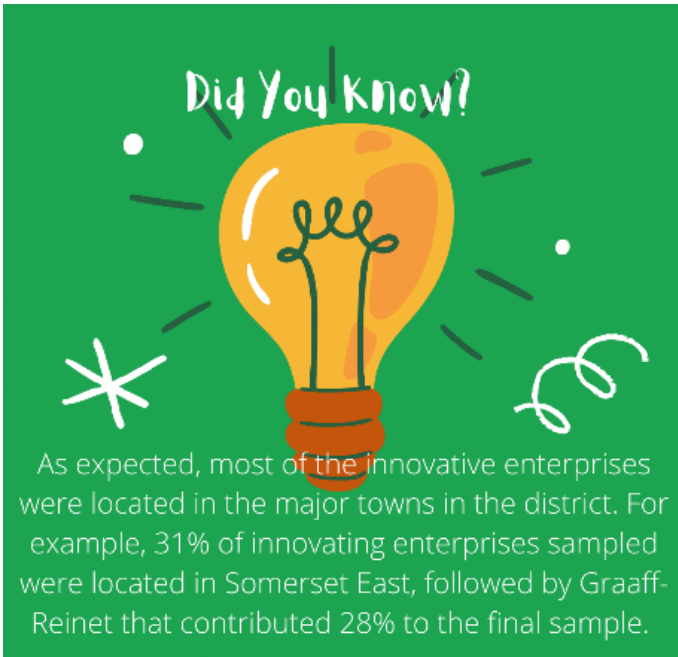


Figure 3. High-tech versus Low-tech innovation

3. Characteristics of innovators in the Sarah Baartman District

3.1 Size of the firm

Of the innovative enterprises surveyed, 58% were micro enterprises, which employ 10 or less employees. Small enterprises, which employ between 11 and 50 employees, constituted 21% of the innovators, with the medium and large enterprises constituting 14% and 7%, respectively. In summary, these results indicate that the micro and small enterprises are key drivers of innovation activity in the Sarah Baartman District, with medium enterprises contributing relatively small proportions.

The figure below indicates that the innovative enterprises were mature, having been in operation for more than 13 years on average. Further analysis indicates that 24% of the enterprises were new start-ups formed a year or less before the survey, while most (38%) of the innovative enterprises were very established, having been in operation for at least 11 years. About one in five (21%) of the innovative enterprises had been operational for between six and 10 years, while five percent of the enterprises were in operation for between two and five years, which represents well-established enterprises. These values highlight the high maturity levels of the innovators, suggesting that enterprise maturity is positively linked with innovation proclivity.

The next popular innovation activity was adaption (40%), which suggests that a significant proportion of the innovators are improving production technologies and adopting from others to suit their specific needs and local circumstances. For example, includes an enterprise focused mainly on farming game. The enterprise installed a water purifier, which was custom made by Extreme Water (who develop water purifiers primarily for household use). The enterprise requested a custom-made large water purifier for farm use.

Few enterprises (28%) reported any invention activity, while a quarter of the enterprises reported that they share or diffuse innovations with others. The small proportion of inventors is expected, as most of the innovation activities in developing countries are mainly imitation of inventions from the developed countries. The relatively high level of innovation diffusions suggests that innovators, who are mainly adopters of production technologies from elsewhere, are sharing these innovations with others, which augurs well in terms of technology spread and adoptions.

2.3 High tech versus low tech innovation

Fifty-four percent of the innovating enterprises in the Sarah Baartman District adopted high-tech innovations, such as drones and 3D printers, while 46% adopted low-tech innovations in their business. The results suggest that the innovators adopt high-tech technologies to improve their production activities.

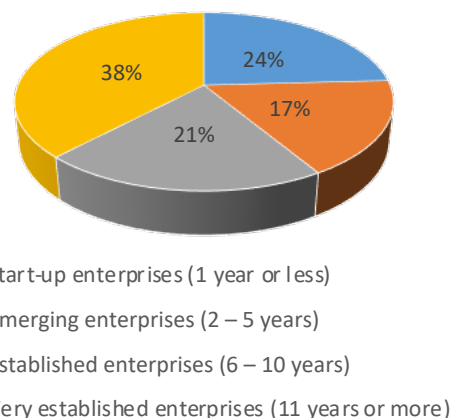


Figure 4. Enterprise maturity stage

3.2 Formal versus informal enterprises

The number of unregistered enterprises suggests that there is also innovation that takes place amongst the informal enterprises who operate in the parallel economy. It is important that these innovations taking place in informal settings be acknowledged and harnessed for inclusive outcomes. The results also indicated that most of the enterprises (68%) were registered with SARS for tax reasons, while 14% were exempted (NPOs). Five (18%) innovative enterprises were not registered and were not paying business tax.

3.4 Part of a larger organisation

Most of the innovative enterprises (52%) in the Sarah Baartman District were part of larger organisations. Most of the headquarters of the innovative enterprises (86%), who were part of larger organisations, were located within the Eastern Cape, while others were located in the Western Cape (7%) and outside of the country (7%).

3.5 Enterprise type

The figure below indicates that innovation within the Sarah Baartman District municipality is mostly done by private enterprises (73%), and less so by non-profit organisations (17%). Only 10% of innovating enterprises sampled were public enterprises, and none were government parastatals.

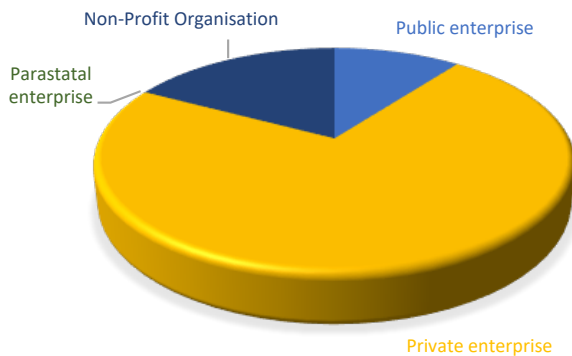


Figure 5. Enterprise type

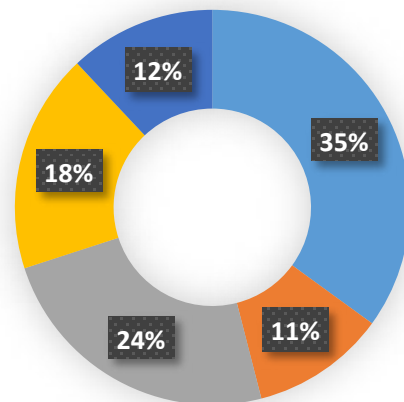
The private enterprises utilise technology and innovation to maximise productivity and add value to their businesses. These technologies include, farm ranger (a device connected to a mobile phone application to track and monitor livestock activity); sanitary wear (a company that designs and manufactures new sanitary equipment guaranteed to limit leakages and save water); drones; solar pumps; and innovative science and mathematics kits.

Innovation and technology in the non-profit organisation (NPO) space include the installation of WiFi and internet infrastructure and services to disadvantaged communities. Public enterprise Science Technology & Innovation (STI) include a public museum that has migrated to a digital platform for archival purposes.

Regarding the types of enterprise and registration status, only 10% of the enterprises were not registered with any authority, while most innovators (55%) were registered as close corporations or private limited companies. Sole proprietorship contributed four percent to the total sample, NPOs contributed 14%, and cooperatives contributed seven percent. These figures indicate that most of the profiled enterprises were operating formally, with very few enterprises meeting the criteria for informality (i.e., being unregistered with any authority).

3.6 Enterprise sector

The figure below highlights that most of the innovating enterprises were operating in the agriculture, conservation and natural resource sector (35%), followed by the manufacturing and agro-processing sector (24%). There were also 18% of enterprises in the education and training sector, and 11% in the ICT sector. Furthermore, the survey results indicated that the innovative enterprises were mostly partnerships (45%), followed by sole ownership (35%), totalling a majority of 80% for two or less owners. Only four enterprises (20%) had three or more owners. On average, the enterprises employed over 190 employees, which include about 128 permanent and 68 temporary employees. Additionally, some enterprises employed on average less than a single worker without formal contracts.



- Agriculture, Conservation, Natural Resource
- Information & Communication Technology
- Manufacturing and agro-processing
- Education & Training
- Other

Figure 6. Main economic sector



4. Innovation for thought

This briefing note has presented an overview of the innovation profile of the Sarah Baartman District. It is based on a summary of the statistics from a survey on innovative enterprises undertaken during the mapping exercise of Karoo Phase 1.

The survey results indicated that there is a relatively high level of innovation activity occurring in the Sarah Baartman District. For example, 75% of the 46 enterprises that were visited met the criteria to be considered as innovators. The innovative enterprises were mainly involved in adopting process innovations, with very limited inventions. This suggests the need for improving access to information and support for these enterprises to connect with producers of modern production technologies (outside the region).

Furthermore, it is important that investments be made in promoting both basic and applied research to cultivate conducive environments for inventions and adaptations.

5. About

This briefing note gives an overview of the innovation profile of local actors in the Sarah Baartman District captured during Mapping the Innovation Landscape of the Karoo Region Phase 1 using the Local Innovation Assessment Tools (LIAT). This study was commissioned by the Department of Science and Innovation, in partnership with the Technology Innovation Agency, and is aimed at understanding the innovation ecosystem of the Karoo region as an important step in developing an innovation strategy for the region.

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