

Access to Resources and Support for Innovation in the Central Karoo District

This briefing note summarises key messages from “the Mapping the Karoo Innovation Landscape Project” using the Local Innovation Assessment Tools (LIAT). It looks at the innovation infrastructure and resource profile of the Central Karoo District Municipality (CKDM) for context. The lessons shared in this brief are concerned with the local enterprises’ access to resources and support for innovation.

How was the Mapping Done?

A set of complementary tools of LIAT were used to assess innovation landscape in the Central Karoo, and how innovation potential can be best exploited for Inclusive Local Economic Development (ILED). The approach used a set of mixed methods including insights from the principles of geospatial analysis, participatory action and observation methods, key informant interviews, a survey questionnaire, and transformative participatory workshops.

Innovation Infrastructure & Resource Profile of Central Karoo District Municipality: What Have We Learned?

The key lessons are categorized into three sub-themes that focus on the;

- internal environment of the surveyed enterprises in CKDM and their access to resources for innovation,
- external environment of the enterprise for innovation,
- institutional support for innovation.

What Does the Internal Enterprise Environment and Access to Resources for Innovation Look Like?

Internal enterprise environment is concerned with the institutional arrangements within the enterprise, i.e. the space within which enterprises innovate and operate. When looking at the main place for innovation activities, most (50%) of the activities took place in farmlands/fields, followed by business premises (i.e., plants, workshops, and factories) of the enterprises.

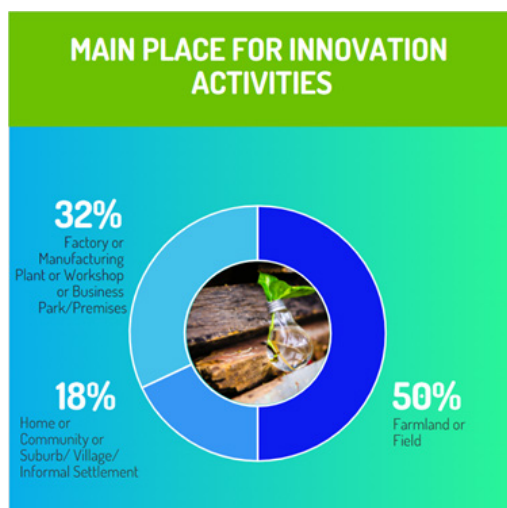


Figure 1: Main Place for Innovation Activities

This is not surprising, because a considerable proportion of the innovative enterprises studied were in the farming sector. Additionally, 18% of the innovators carried out their activities in less formal settings such as their homes or villages, etc. In contrast, no innovators reported conducting their innovation activities in educational institutions or research laboratories. What we see here is that innovation can thrive in local and marginal settings, suggesting that with proper infrastructure and support it can play a crucial role in rural economies.

With a 96.8% electricity connection at household level in the district, most of the innovators had access to reliable electricity (74%), as well as functioning Information and Computer Technology (ICT) infrastructure such as telephones, computers, internet network, equipment, and devices.

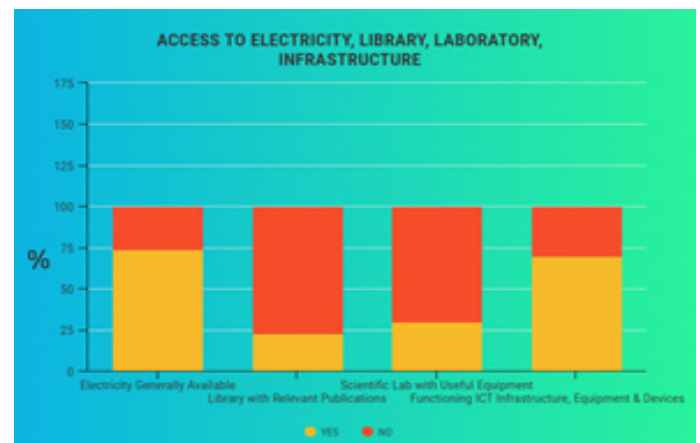


Figure 2: Access to Electricity, Library, Laboratory & Infrastructure

However, innovators had limited access to libraries with relevant publications (23%), or scientific laboratories with usable equipment (30%).

The limited access to relevant information, publications and laboratory facilities might help to explain why the innovators are focusing on adopting technologies developed elsewhere and applying them without making any changes. As a result, many of the innovators (78%) felt that there was need for further research by other organisations to improve their innovations for local use. In other words, there is appetite among innovators to apply changes and modify the innovations they adopt for local use. Of those innovations requiring further research, local universities (65%), including Universities of Cape Town and Stellenbosch, were the most preferred sources of further research. State funded research institutions (35%), local private research institutions (24%), and international research institutions (18%) were less popular, in that order.

Insights on the External Enterprise Environment for Innovation

The conditions surrounding the enterprises in the district, particularly infrastructure, policy framework and factors relating to a conducive space for innovation are critical in creating and sustaining appetite for innovation. For instance, a marginal majority (54%) of the enterprises in Central Karoo depend on electricity or energy from the public sources. Given the reduced reliability of the public electricity utility (Eskom), it is not surprising that we see an increasing proportion of the innovators (50%) have resorted to other alternative sources of electricity or energy, with most relying on generators and solar panels. A similar trend is observed for water, as a larger proportion (70%) indicated that they had private sources of water for innovation purposes. Only 36% of the innovating enterprises indicated that they depend on the use of the public water, with the other 64% reporting that they do not use water from a public source for innovation.

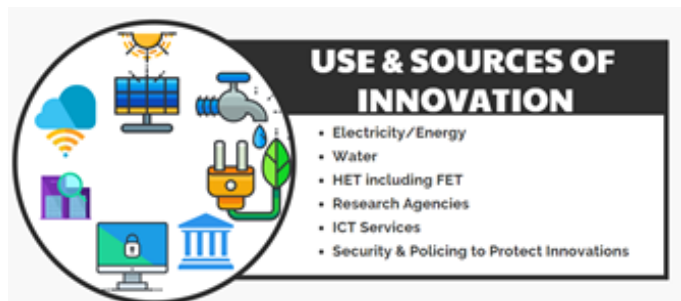


Figure 3: Use & Sources of Innovation

Figure 3 shows that only a small proportion of the innovating enterprises within the Central Karoo district depend on the use of higher education and training from both the public (8%) and private (12%) sources for innovations purposes. Similarly, a small percentage of the enterprises depend on the uses of public (8%) and private (21%) research agencies. Public sources are the only source of ICT services in the district, and 22% of the innovating enterprises used these ICT services for their innovation activities. None of the innovators indicated the use of public sources to protect their innovations, with nearly two thirds (64%) reporting use of the private sector for protection.

A Glimpse into the State of Institutional Support for Innovation in the Central Karoo

On figure 4 we see that there were relatively low levels of awareness among enterprises of laws, policies, regulations, and agencies that control innovation activities in their sectors. Only two in five of those asked (40%) were **not** aware at all, while 12% were only “somewhat aware” of the laws, policies, regulations, and agencies relevant for innovation support in their sectors. Just under half (48%) of the innovators indicated that were fully aware of these institutions.

These results indicate, firstly, that innovation occurs primarily to solve problems despite there being minimal awareness and knowledge of the laws, policies and regulations that control innovation. Secondly, it suggests that it will be important for

the relevant institutions and agencies to implement awareness or publicity campaigns in order to improve the exposure of the innovators to their services, as well as the services of other sister departments that are in the business of assisting and guiding innovation and innovators. This will go a long way in developing and sustaining an innovation inclined district.

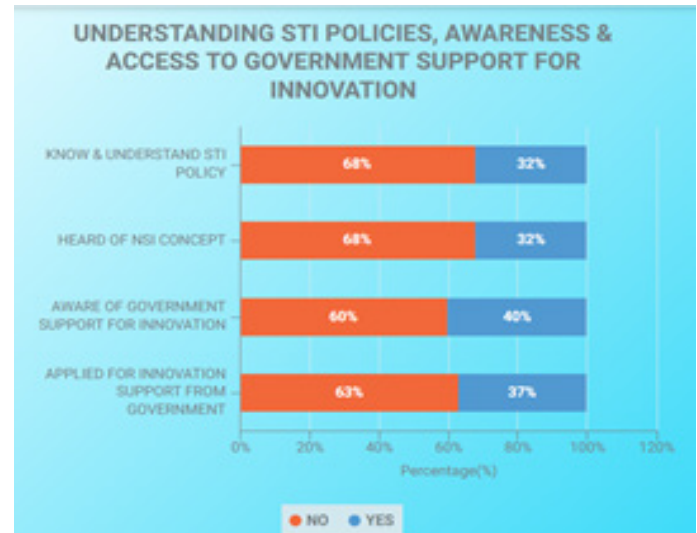


Figure 4: Understanding of STI Policies, Awareness and Access to Government Support for Innovation

Furthermore, most of the innovators were not aware of the country’s policy framework on Science, Technology, and Innovation (STI), with only about one in three (32%) indicating that they are aware of it. Similarly, the concept of a National System of Innovation (NSI) was not common among the innovators, with only about a third of the enterprises (32%) reporting that they were familiar with the concept. The implication of this is that the government should put more effort into popularising their policies as well as the NSI concept - the preferred framework for driving innovation in South Africa, as entrenched in the new White Paper on STI.

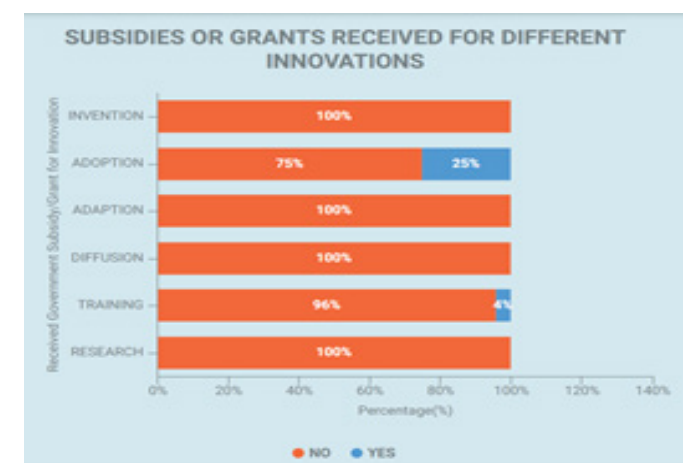


Figure 5: Subsidies/Grants Received for Different Types of Innovations

Our results (figure 5) also show that most of the enterprises (60%) were not aware of the different support mechanisms that Government has put in place to support innovation in the country.

It is important that information about these interventions cascade down to the local levels, particularly in the marginalised contexts so that the grassroots innovators can also benefit. What is of particular concern, however, is that only 37% of those enterprises who were aware of the support available had actually applied for the support. These results demonstrate that there are constraints that enterprises face in accessing support from Government, beyond just a lack of information. While improving awareness about the support is necessary, it will not be sufficient to get these small innovators to access government support. Rather, what is required is the need for an integrated approach to improving government support to the small enterprises, empowering them to access the support successfully. For instance, the innovative enterprises received negligible support from government for innovation activities. While 25% reported receiving a grant or subsidy to adopt innovations, and 4% reported received support for training themselves or staff for innovation, no support was received for other key innovation activities such as invention, adaption, diffusion, and research. With this limited support for key innovation, it is difficult to see how these enterprises can succeed in risky innovation activities such as invention.

empowering them to access the support successfully. In addition, policy makers should revise the policies and regulations to create an environment that is conducive and supportive of innovation. This would require the participation of the innovators, to include voices from the local systems of innovation.

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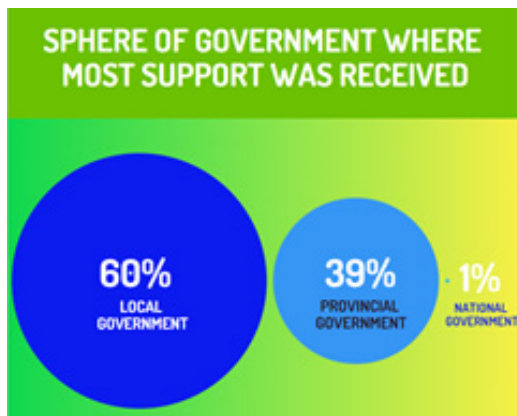


Figure 6: Sphere of Government Where Most Support was Received

The few who received support according to figure 6, mostly obtained it from local government (60%), followed by the provincial government (39%). The support from the national government sphere is extremely limited, with only a tiny 1% indicating national government as the sphere they received most of their support.

What are the Lessons for Future Actions?

This briefing note summarises key messages from "the Mapping the Karoo Innovation Landscape Project". It looked at insights concerned with the local enterprises' access to resources and support for innovation. Our research suggests that efforts must be made to ensure access to support for innovation gets a confidence boost among local actors while improving awareness about the support and other relevant information cascades down to the local level. Therefore, there is need for an integrated approach to improving government support to the small enterprises,