

Innovation trends in the transport, storage and communication sector, 2019-2021



Transport, storage and communication contributed 7.2% to economic activity in South Africa in 2021.¹ The sector facilitates the movement of goods and people, enabling trade and enhancing connectivity across the nation and globally.

This brief examines how much innovation happened in the transport, storage and communication sector from 2019 to 2021, including the types of technologies businesses used in the sector, the innovation challenges they faced, and the outcomes of their innovations.

During 2019-2021, over 50% of businesses in the transport, storage and communication sector carried out activities intended for innovation. Not all these businesses had developed product or process innovations by the end of 2021.

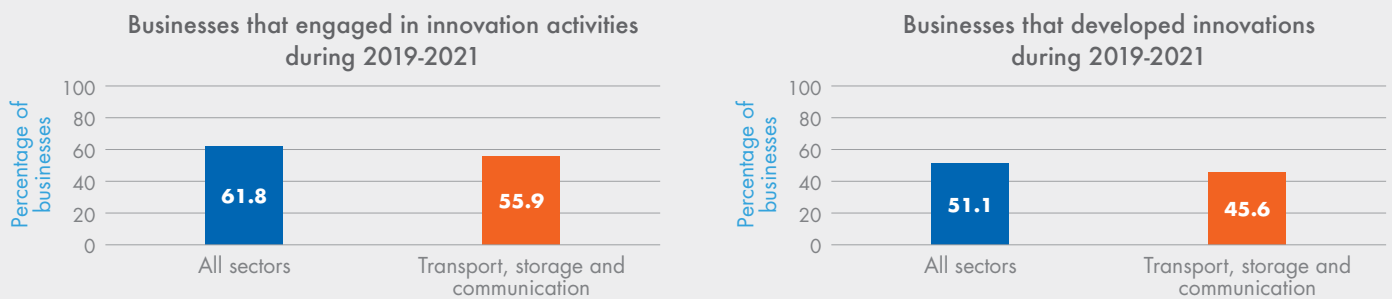


Figure 1: Percentage of businesses in transport, storage and communication that engaged in innovation and developed innovations.

What types of advanced and emerging technologies did businesses in the transport, storage and communication sector use and/or develop during 2019-2021?

Internet of Things was the most widely used technology, by 71.6% of businesses in the sector. Far lower proportions of businesses used **business intelligence technologies** (35.9%) or **material handling, supply chain and logistics technologies** (32.7%).

There was very little engagement with emerging technologies such as **robotics** and **blockchain**.

Apart from Internet of Things, engagement with advanced and emerging technologies among businesses in the sector was low.

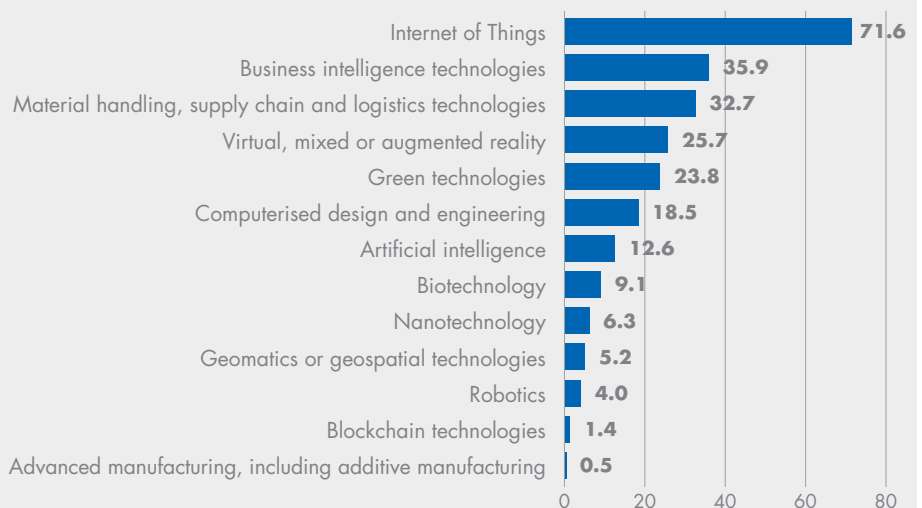


Figure 2: Percentage of businesses in transport, storage and communication that used or developed advanced or emerging technologies.

Percentage of businesses in transport, storage and communication

¹ Statistics South Africa (2023). The Manufacturing Industry: A Detailed Exploration of Production, Employment and Finances (2021). Available at: https://www.statssa.gov.za/publications/Report-30-02-03/Manufacturing%20Industry%202021_Media%20presentation.pdf. Last accessed: 28 November 2023.

What were the most important barriers to innovation that transport, storage and communication businesses faced during 2019-2021?

The most important barrier to innovation was **high innovation costs**, with 26.2% of businesses citing this as a highly important barrier.

Market-related factors were also relatively important, including **too much competition, limited access to international markets and market domination by established enterprises**.

Businesses in the sector were least constrained by lack of digital platforms or weak intellectual property rights.

Cost and market-related factors were the most important barriers to innovation.

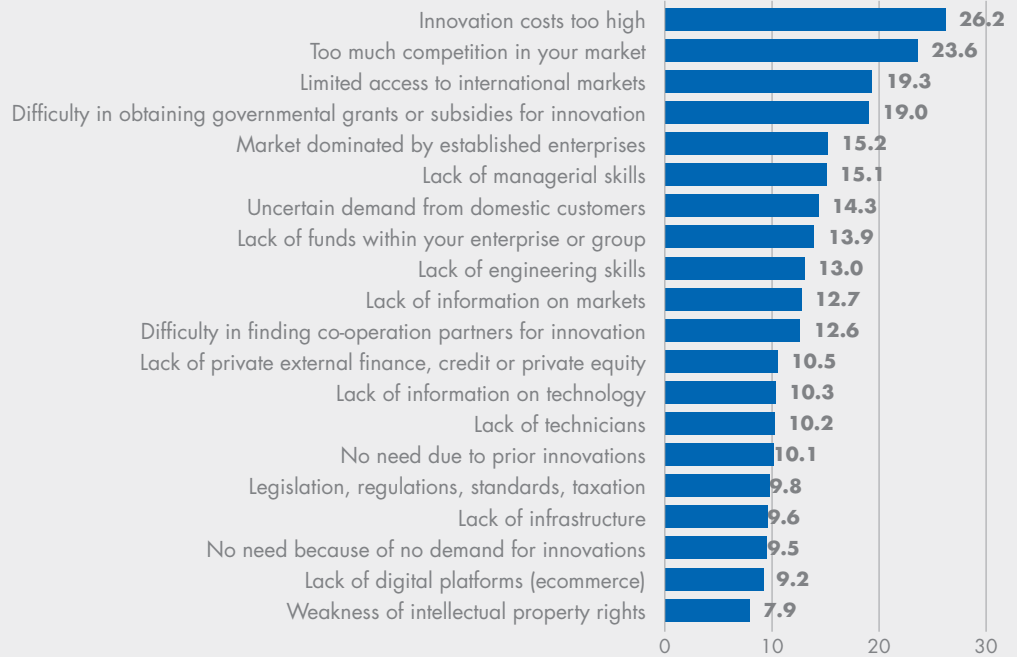


Figure 3: Percentage of businesses in transport, storage and communication that rated barriers to innovation as highly important.

What did innovative businesses in the transport, storage and communication sector perceive to be the most important outcomes of their innovation(s) during 2019-2021?

The most important innovation outcomes were **improved quality of goods or services and increased business resilience and adaptability to change**.

Strengthening relationship with external entities and an increase in intellectual property portfolios were the least important outcomes of innovation.

Improvements in product quality was the most important innovation outcome for businesses in the sector.



Figure 4: Percentage of innovative businesses in transport, storage and communication that rated outcomes as highly important.

About this brief

This brief is one of eight sector-specific analyses drawn from the [South African Business Innovation Survey 2019-2021](#). It provides deeper insight into innovation trends in the **transport, storage and communication sector**, so that businesses can compare and benchmark their innovation activities. Industry associations and policymakers can use the data in their efforts to mobilise and support innovation activities across the sector.

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