



**TRENDS REPORT:  
TECHNOLOGY FOR  
A MORE RESILIENT  
SOUTH AFRICA**

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# **Technology for a more Resilient South Africa**

This digital revolution is occurring at a time when South Africa is tackling severe economic challenges including high youth unemployment, stagflation and shrinking economic activity exacerbated by the ongoing power cuts.

Amidst these seemingly insurmountable challenges, South African businesses have an opportunity to fully embrace digital technologies to become more resilient and fulfil their business objectives.

This point of view explores four technological aspects that can equip South Africa to be more resilient.

These aspects are:

- Digital Workforce that leaves no one behind
- Supply Chain use cases for 5G
- Future of AI
- Data for Climate Action

**As the world continues to become increasingly connected, digital transformation technologies are becoming key drivers of economic growth and societal progress.**

## About the Research

For this point of view, we adopted an approach of desktop research accompanied by insights from panel discussions held at the World Economic Forum in January 2023 by global industry leaders. Case Studies from Amazon, Dimension Data, BMW, DHL South Africa, OpenAI's ChatGPT and Kriterion AI are also unpacked.

The point of view details challenges and opportunities that can arise from the four technological aspects. Some of the challenges outlined in the point of view are:

- Lack of digital skills and limited access to digital technologies
- Investment costs into innovation and emerging technologies
- Ongoing power cuts and ageing infrastructure
- Quality of data for climate action

**The structure of the point of view begins with an exploration into the digital workforce that leaves no one behind, supply chain use cases for 5G, the Future of AI and Data for Climate Action. Global and local case studies are outlined for each theme as well some of the opportunities and challenges for South African businesses.**

# Digital Workforce that leaves no one behind

**Increasingly, businesses are deploying digital employees to automate repetitive and mundane tasks in their business.**

## **Digital Workforce that leaves no one behind**

This digital workforce has increased efficiency for businesses, allowing for human employees to focus on more productive and value creating activities.

*Digital technologies are transforming the way we interact with the world, however, as the digital workforce expands and advances there is a growing risk that certain individuals and groups may be left behind.*

Julie Sweet, the CEO of Accenture, emphasised that the most important factor for Accenture when recruiting is assessing people's ability to learn and their learning agility. She stressed that approximately **40% of the skills that were around in the Fortune 500 in 2017 are no longer relevant today**. The pace of **reskilling** the workforce is crucial in the transition of the digital revolution. Accenture approached reskilling their employees by:

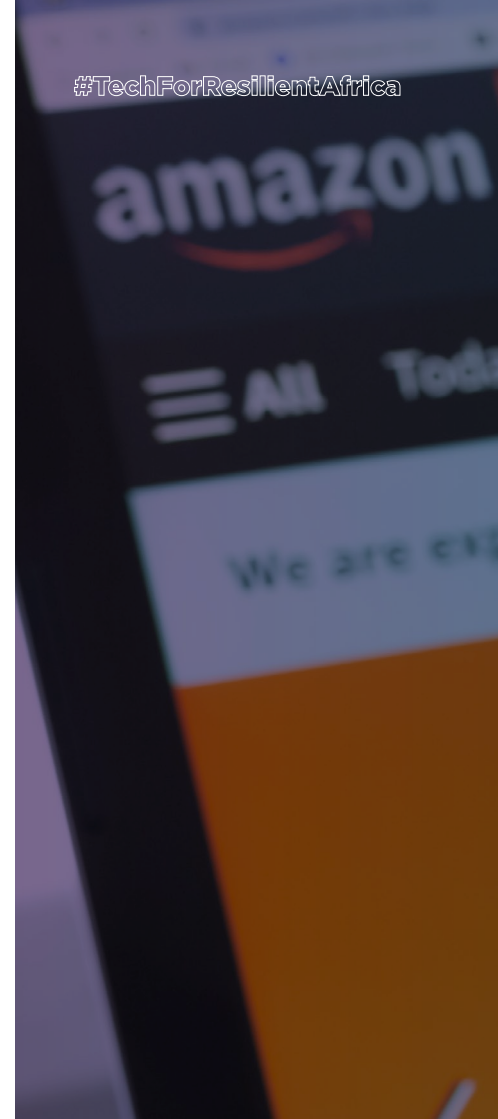
- 01 | Placing emphasis on skills rather than job roles, and creating a dynamic work environment that is capable of adapting to rapidly evolving business requirements and needs.
- 02 | Making their employees go through and pass a technology quotient (TQ) assessment. The assessment covered 10 areas that touch on basic technological skills that are critical in every aspect of Accenture's business.
- 03 | Spending \$1 billion on reskilling their employees, an average of 40 hours per employee.

## Digital Workforce that leaves no one behind

Mihir Shukla, the CEO of Automate Everywhere stated that up to **70% of all the work we do in front of our computers can be automated.**

Mihir stated that:

- 01 | His company processes over 100 million automated processes using AI powered robotic process automation (RPA).
- 02 | His clients were not reducing their workforce but rather using the efficiency that came with automating their workflows to gain more market share.
- 03 | Companies that embrace AI and the broader digital workforce are more productive and have a competitive advantage over companies that haven't transformed digitally.





## Global Case Study: Amazon

A leading global company that employs a digital workforce in their operations is Amazon. Amazon has been a pioneer in utilising automation and digital technologies in their warehouses, logistics, and customer service operations. They have developed and implemented a range of innovative technologies, such as robots, drones, and artificial intelligence, to improve efficiency, accuracy, and speed in their operations.

For instance, Amazon's warehouses use robots to move items around and pack orders, reducing the need for human workers to perform repetitive tasks. They have also developed autonomous delivery drones that can deliver packages to customers' doorsteps. Amazon's customer service operations also use chatbots and virtual assistants to handle simple customer inquiries and requests, freeing up human agents to focus on more complex issues.

Amazon's digital workforce has enabled them to scale their operations rapidly, improve the customer experience, and stay ahead of the competition in the highly competitive e-commerce industry.

## Local Case Study: Dimension Data

An example of a South African company that employs a digital workforce is Dimension Data. Dimension Data is a global technology integrator and managed services provider that has a significant presence in South Africa. They offer a range of digital solutions, including cloud computing, cybersecurity, and network infrastructure.

In recent years, Dimension Data has been investing heavily in developing its digital workforce capabilities. They have launched various initiatives aimed at upskilling their employees in digital technologies such as artificial intelligence, big data, and the internet of things. They have also established partnerships with leading technology providers to ensure that their employees have access to the latest tools and technologies.

Dimension Data believes that reducing the mounting infrastructure administration pressure on IT teams by embracing a DevOps culture and platform automation, allows IT to optimize transformation efforts by focusing on innovation, and ultimately results in better Mean Time to Repair (MTTR) and cost-optimisation, as well as the delivery of continuous improvement across the business. Additionally, Dimension Data has also embraced remote work and has implemented flexible working arrangements for many of its employees. This has allowed them to tap into a global talent pool and access the best digital talent from around the world. Dimension Data is a great example of a South African company that is leveraging digital technologies and embracing a digital workforce to drive innovation and growth.

**South Africa is in a precarious position since it is tackling high youth unemployment.**

## **Challenges and Opportunities for South Africa Digital Workforce**

Managing the transition into this digital era is crucial in ensuring that the reskilling of the existing labour force happens in pace with the advancement digital technologies. This will minimise the job displacement that will inevitably be caused by advancement in technology.

Challenges that exist for South African businesses adopting the digital workforce includes:

- Lack of digital skills
- Limited access to technology
- Resistance to change and change management
- Investment costs
- Cybersecurity

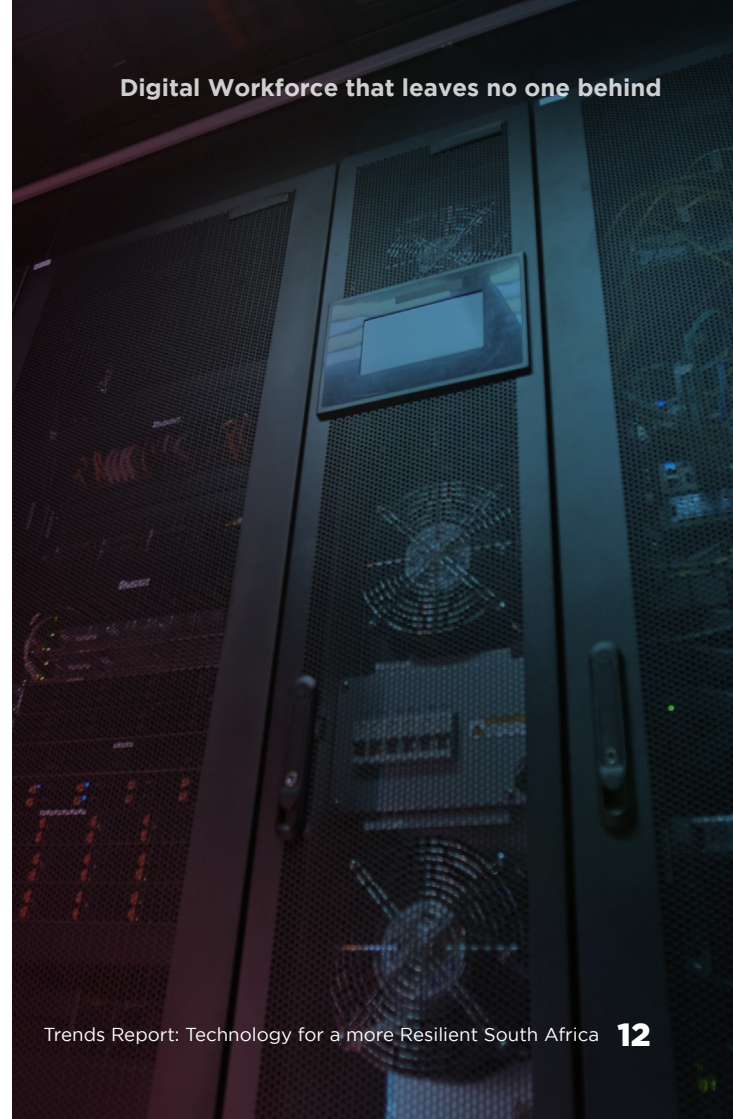
President Cyril Ramaphosa in the latter part of 2022 stated that the jobs of the future lie in technology. To address the challenge of digital access and equity, the South African government has embarked on phase two of the SA Connect IT project which aims to:

- 01 | Connect 44 600 government sites to the internet
- 02 | Rollout 33 000 community Wi-Fi locations and broadband to households
- 03 | Create 3 700 jobs

SA Connect was first announced in 2013 and cabinet approved the rollout of phase two of the project in 2022. The pace of governments efforts may not be rapid enough to counteract the pace of advancement in digital technologies and the private sector must come to the fore. Rwanda is addressing this challenge by exploring innovative financial products to subsidise and lower the cost of digital access and equity in accordance to household incomes.

Some of the opportunities that South African business can exploit by embracing the digital workforce include:

- |    |                                       |    |                        |
|----|---------------------------------------|----|------------------------|
| 01 | Increased efficiency and productivity | 02 | Cost saving            |
| 03 | Enhanced customer experience          | 04 | Improved collaboration |
| 05 | Increased data insights               | 06 | Greater agility        |



# Supply Chain use cases for 5G

## Supply Chain use cases for 5G

Sunil Mittal, CEO of Bharti Enterprises estimates that around \$400 to \$500 billion will be spent by the telecommunications industry to rollout 5G globally.

Cristiano Amon, the CEO of Qualcomm stated that 5G will democratise computing power and allow users to have incredible processing capabilities at the tip of their phones. It will allow users to access all the benefits of the cloud. Most of the benefits of 5G, however, will come from industrial applications. 5G technology has the potential to transform the supply chain sector by enabling real-time data transmission, enhancing visibility, improving efficiency. 5G can achieve this because it offers unprecedented communication bandwidth and low latency and higher throughput.

There are several practical use cases for 5G in the supply chain industry, some of these use cases include:

- 01 | Remote monitoring and control
- 02 | Autonomous vehicle and drones
- 03 | Predictive analytics
- 04 | Enhanced Security

**5G technology has the potential to transform the supply chain sector by enabling real-time data transmission, enhancing visibility, improving efficiency.**

### 01

#### Remote Monitoring and control

Companies can locate, monitor, and manage their assets in real time using 5G technology. Machines can be configured to optimise safety, efficiency, and quality. Siemens, one of the largest global automation companies, implemented its first live remote monitoring system for Factory Acceptance Tests (FAT) in its transformers factory in Mexico in 2022.

### 02

#### Autonomous vehicles and drones (Fleets)

5G networks can support the development and deployment of autonomous vehicles and drones which can be used for tasks such as fleet and inventory management. These vehicles can operate in real-time and navigate complex environments, making supply chain operations more efficient and cost-effective.

### 03

#### Predictive analytics

5G networks can support the collection and analysis of large amounts of data, which can be used to predict and prevent supply chain disruptions. This can assist companies to optimise their operations and reduce costs, while also improving customer satisfaction.

### 04

#### Enhanced Security

5G networks can provide enhanced security features, such as biometric authentication and encryption, which can assist in protecting sensitive supply chain data and prevent cyber-attacks.



## Global Case Study: BMW

One example of a leading global company that uses 5G technology to improve their supply chain operations is BMW.

BMW has been actively exploring the potential of 5G technology in improving their production and logistics operations. They have been working with several technology partners to develop and test 5G-powered solutions that can help them optimize their supply chain and improve efficiency.

One of the key areas where BMW is using 5G technology is in their smart logistics operations. They have partnered with Deutsche Telekom and Ericsson to develop a 5G-powered logistics solution that enables real-time tracking and monitoring of goods in transit. The solution uses 5G connectivity and advanced sensors to provide real-time data on the location, condition, and status of goods, allowing BMW to optimize their supply chain operations and improve delivery times.

BMW is also using 5G technology in their production operations to improve efficiency and productivity. They have partnered with Samsung and AT&T to develop a 5G-powered solution that enables real-time monitoring and control of their production line robots. The solution uses 5G connectivity and edge computing capabilities to provide low-latency data transmission, allowing BMW to optimize their production processes and reduce downtime.

BMW's use of 5G technology has enabled them to improve the speed, accuracy, and visibility of their supply chain and production operations, which can help them meet customer demands more efficiently and effectively.

## Local Case Study: DHL South Africa

A South African company that uses 5G technology to improve their supply chain operations is DHL Supply Chain South Africa. DHL Supply Chain South Africa has been actively exploring the potential of 5G technology in improving the efficiency, visibility, and agility of their supply chain operations. They have partnered with several technology companies to develop and test 5G-powered solutions that can help them address key supply chain challenges.

For example, DHL Supply Chain South Africa has partnered with Nokia to develop a 5G-powered solution that enables real-time tracking and monitoring of goods in transit. The solution uses Nokia's digital automation cloud platform and 5G connectivity to provide real-time location data, temperature monitoring, and other key metrics to DHL's customers.

DHL Supply Chain South Africa has also partnered with Vodacom to develop a 5G-powered solution that enables remote control of warehouse operations. The solution uses Vodacom's 5G network and edge computing capabilities to enable real-time video streaming, allowing warehouse managers to remotely monitor and control warehouse operations.

DHL Supply Chain South Africa's use of 5G technology has enabled them to improve the speed, accuracy, and visibility of their supply chain operations, which can help them meet customer demands more efficiently and effectively.



## Challenges and Opportunities for South African businesses to implement 5G

Some of the biggest challenges when it comes to South African businesses adopting 5G technology and integrating it in their supply chain operations include:

01 | Infrastructure and coverage

02 | Security

03 | Skills and knowledge gaps

04 | Investment costs

05 | Compatibility

06 | Regulatory hurdles

### 01

#### Infrastructure and coverage

Although 5G is more power efficient, cellular towers using the technology consume more electricity than LTE because it supports much higher speeds. Given the ongoing power crisis plaguing South Africa, the adoption of 5G for South African businesses can be challenging from an Infrastructure and coverage perspective.

### 02

#### Security

5G networks have more connected devices and systems, which increase the potential for cybersecurity risks. This can lead to data breaches and loss of sensitive information and companies can incur financial losses.

03

Skills and knowledge gaps

There is a shortage of skilled professionals with expertise on 5G technology. South African businesses will need to invest in reskilling their employees and possibly hire new talent to manage the 5G integration into their operations.

04

Investment costs

Adopting 5G technology can be expensive for businesses, especially for small and medium-sized enterprises (SMEs). Upgrading infrastructure, hardware and software can be expensive and this can be a barrier to 5G technology adoption.

05

Compatibility

Business may face compatibility issues when integrating 5G technology into their existing systems and processes. This can lead to delays, disruptions, and other issues in the supply chain.

06

Regulatory hurdles

The adoption of 5G technology in South Africa is still to a large extent subject to regulatory approval and compliance. ICASA concluded the high frequency spectrum auction in March 2022 and National Treasury was able to raise R14.4 billion from the spectrum. ICASA must still set the standard operating rules as well as terms and conditions applicable for trading, sharing, and subletting of spectrum.

## Opportunities for South African Businesses

Embracing 5G technology can present significant opportunities for businesses in South Africa, some of these opportunities are outlined below:

01 | Faster and more reliable connectivity

02 | Improved logistics and inventory management

03 | Enhanced customer experience

04 | Increased automation and efficiency

# Future of Artificial Intelligence

**Machine Learning (ML) was developed in the 1990's and it taught computers to recognise patterns in data and make decisions based on that data.**

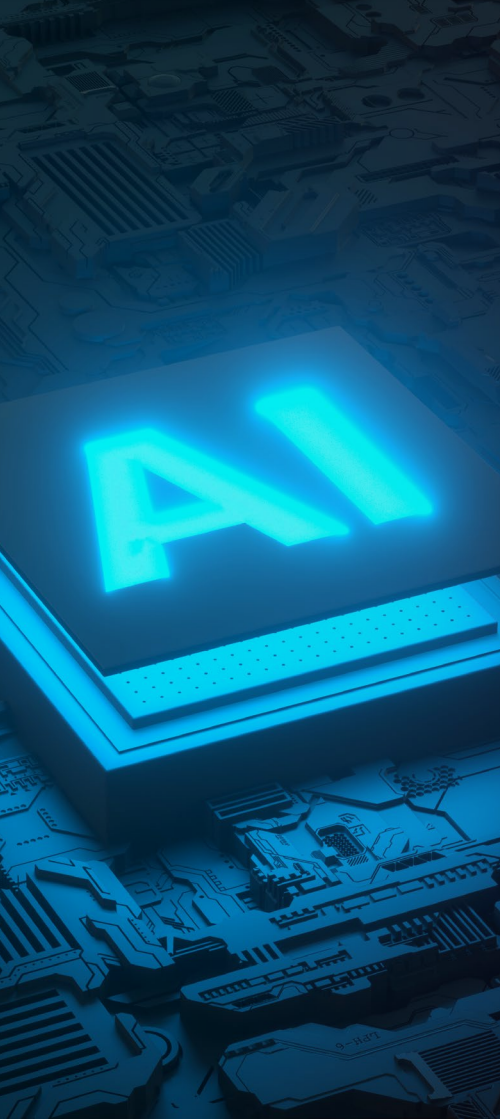
## Future of Artificial Intelligence

Artificial intelligence has been a topic of fascination for many years. The history of AI dates back to the 1940s, when computer scientist John McCarthy coined the term “artificial intelligence” and began developing the first AI programs.

Since then, the field has seen many ups and downs, with periods of great progress followed by setbacks and disillusionment. Some of the key milestones in the development of AI are outlined below:

- 01 | Expert systems were developed in the 1980's to mimic decision-making abilities of human experts, however, they were limited in their ability to learn and adapt.
- 02 | ML has proven to be crucial in fields such as image recognition, natural language processing and recommendation systems.
- 03 | Recently, developments in deep learning have revolutionised the field of AI. Deep learning involves using neural networks to process large amounts of data and identify patterns. Deep learning has proven to be crucial in areas such as speech recognition, self-driving vehicles, and game-playing AI.





The advancement and capabilities of AI have passed the Turing test, in many Artificial Narrow Intelligence (ANI) applications the AI can outperform humans.

The technological breakthrough of having a general-purpose AI that can outperform human beings on any task is estimated to be decades away. Despite this, ANI applications are increasingly getting better and more sophisticated every year, this presents a plethora of challenges and opportunities for businesses. In the years ahead, it is expected that we will see more advances in areas such as personalised medicine, autonomous vehicles, and smart cities.

## Global Case Study: ChatGPT

As an AI language model, ChatGPT has been one of the most significant breakthroughs in the field of natural language processing (NLP) in recent years. With its advanced algorithms and deep learning models, ChatGPT has revolutionised the way we interact with machines, opening a whole new world of possibilities for communication and problem-solving. In February 2023, the platform hit a milestone of having a 100 million active users, just after two months of launch, making it the fastest growing consumer application in history.

Julie Sweet stated that the power of ChatGPT is that it can do amazing things with clean data. Additionally, ChatGPT is truly remarkable in its ability to learn and adapt to new information and contexts over time. Unlike traditional chatbots that are programmed with a fixed set of responses, ChatGPT uses machine learning techniques to analyse vast amounts of data and generate responses that are tailored to the specific needs and preferences of the user.

This adaptability and flexibility make ChatGPT a valuable tool for a wide range of applications, from customer service and tech support to education and healthcare. By providing personalised and responsive interactions, ChatGPT can help organisations improve efficiency, increase customer satisfaction, and enhance overall user experiences.

## Local Case Study: Kriterion AI

One example of a South African business pioneering artificial intelligence is Kriterion AI. Kriterion AI is a startup that focuses on using AI to improve and optimise supply chains. Their platform uses machine learning algorithms to analyse data and provide insights that can help companies reduce costs, increase efficiency, and improve their overall supply chain operations. Kriterion AI has already gained recognition for its innovative approach to supply chain management and has won several awards, including the 2020 MTN Business App of the Year Award.

## Challenges and Opportunities for South African Businesses

There are numerous opportunities for South African businesses investing in the future of AI.

Here are a few areas where AI is expected to have a significant impact and where South African businesses could focus their investments:

- 01**  
Healthcare

AI has the potential to revolutionise healthcare by improving the accuracy and speed of diagnoses, reducing medical errors, and helping to develop personalised treatment plans. South African businesses could invest in developing AI-powered diagnostic tools, medical imaging analysis software, and disease prediction models.
- 02**  
Agriculture

AI can help farmers to optimise crop yields, monitor soil health, and detect crop diseases. South African businesses could invest in developing AI-powered agricultural robots, smart irrigation systems, and crop monitoring tools.
- 03**  
Financial Services

AI can improve fraud detection, customer service, and risk management in the financial services industry. South African businesses could invest in developing AI-powered chatbots, fraud detection algorithms, and predictive analytics tools.
- 04**  
Manufacturing

AI can improve production efficiency and reduce downtime by predicting equipment failures and optimising production schedules. South African businesses could invest in developing AI-powered predictive maintenance tools, smart factory systems, and quality control systems.
- 05**  
Education

AI can help personalise learning experiences for students and automate administrative tasks for educators. South African businesses could invest in developing AI-powered learning platforms, intelligent tutoring systems, and grading automation tools.

**South African businesses can capitalise on the opportunities presented by AI by investing in research and development, building partnerships with technology providers, and investing in training and development programs to prepare their workforce for the future of work. Adopting and embracing AI will not happen without overcoming some challenges. There are several challenges that South African businesses face when trying to adopt advanced AI into their business operations.**

These challenges include:

01

Access to data

The availability and quality of data is crucial for the success of AI. In South Africa, many businesses may not have access to high-quality data due to factors such as poor record-keeping, data security concerns, or limited access to data sources.

02

Skills shortage

There is a shortage of skilled AI professionals in South Africa. Many businesses may not have the necessary skills in-house to develop and implement AI solutions. This can result in high costs for outsourcing or difficulty in finding the right talent.

03

Cost

Implementing AI solutions can be expensive. This is particularly challenging for small and medium-sized enterprises (SMEs) in South Africa, which may not have the financial resources to invest in advanced AI technologies.

### 04

#### Infrastructure

Reliable infrastructure, such as high-speed internet and cloud computing, is necessary for the effective implementation of AI. However, South Africa still faces challenges in terms of its technological infrastructure.

### 05

#### Regulatory environment

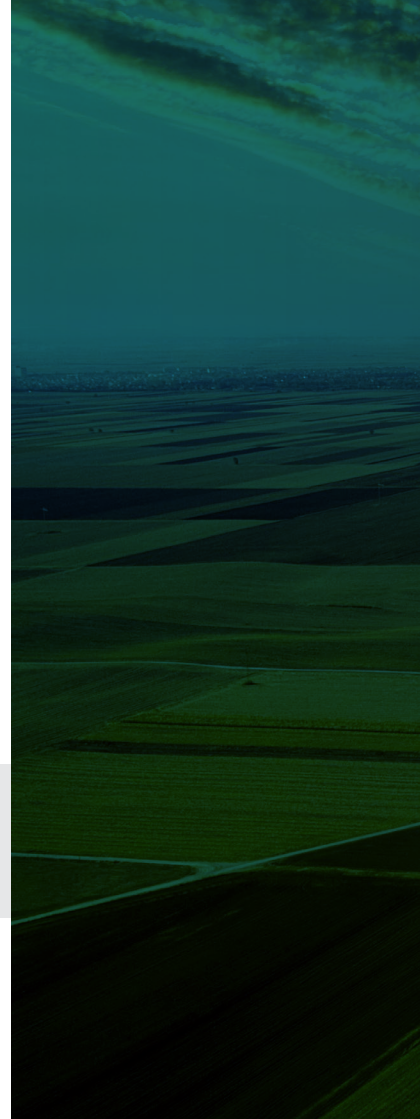
There is a lack of clear and consistent regulations regarding AI in South Africa. This can create uncertainty for businesses looking to adopt AI and can result in legal and ethical challenges.

### 06

#### Cultural barriers

The adoption of AI can be met with cultural resistance in some sectors, particularly those where job security is a concern. This can slow down the adoption of AI in these sectors and create a perception that AI is a threat to employment.

**While the benefits and opportunities of AI are significant, South African businesses face several challenges in adopting advanced AI solutions. Overcoming these challenges will require investment in infrastructure, talent development, and regulatory frameworks that support the responsible and ethical use of AI.**



# Data for Climate Action

**The threat of climate change is one of the greatest challenges facing humanity.**

## Data for Climate Action

The evidence is clear that we need to take urgent action to reduce greenhouse gas emissions and mitigate the impacts of climate change.

To achieve these goals, we need accurate and timely data about the state of the climate and the effectiveness of our efforts. In this context, the role of data in net-zero energy technologies in climate action is critical.

AI can play a vital role in climate action by improving our ability to collect, analyse, and interpret data about the climate. For example, AI can help us to monitor and predict changes in the atmosphere, oceans, and land using satellite and other remote sensing data. This can provide us with more accurate and timely information about the state of the climate and the impacts of climate change.

AI can also help us to optimise our response to climate change by identifying the most effective policies and strategies for reducing greenhouse gas emissions and adapting to the impacts of climate change. By analysing large amounts of data on energy consumption, transportation, agriculture, and other sectors, AI can identify patterns and insights that can inform policy decisions and guide the allocation of resources.



## Data Curation

One of the biggest challenges in using AI to address climate change is the availability and quality of data.

To build accurate models and make informed decisions, AI systems need access to large amounts of high-quality data from diverse sources. This data must be carefully curated to ensure it is accurate, relevant, and unbiased.

Without proper curation, data can be incomplete, inconsistent, or misleading, which can lead to inaccurate predictions and flawed decision-making. In the context of climate action, this can have serious consequences, as incorrect information can lead to ineffective policies and actions that fail to address the urgent environmental challenges we face.

Moreover, curating data is not a one-time effort. Climate data is constantly evolving, and AI models need to be updated and retrained to ensure they remain accurate and relevant. This requires ongoing curation and monitoring to ensure that the data is up-to-date, reliable, and representative of the changing climate.

Curating data is crucial for the success of AI in climate action. It ensures that the models are accurate, reliable, and relevant, and that the decisions made are based on those models are effective in addressing the pressing environmental challenges of our time.

**Curating data  
is extremely  
important when  
it comes to AI in  
climate action.**

## Global Case Study: The Climate Corporation

Climate Corporation that collects and curates data for climate action. The Climate Corporation is a subsidiary of Bayer that provides digital agriculture solutions to farmers, including tools that help them manage their operations more sustainably and adapt to the changing climate.

To do this, the Climate Corporation collects and curates large amounts of data on climate, soil, and other environmental factors that affect crop growth and yield. They use this data to develop models that help farmers optimise their planting decisions, reduce waste, and increase productivity while minimising their environmental impact.

The Climate Corporation's data curation process involves gathering data from a variety of sources, including satellites, weather stations, and sensors on the ground. They then clean and analyse the data to ensure it is accurate and relevant, and use machine learning algorithms to identify patterns and make predictions about future climate conditions.

By providing farmers with data-driven insights and recommendations, the Climate Corporation is helping to reduce greenhouse gas emissions and promote sustainable agriculture practices. Their work demonstrates the importance of data curation in addressing the urgent environmental challenges we face.

## Local Case Study: The Council for Scientific and Industrial Research

A South African organisation that collects and curates' data for climate action is the Council for Scientific and Industrial Research (CSIR). The CSIR is a leading scientific and technology research organisation in South Africa that conducts research in a range of fields, including climate science.

To support climate action in South Africa, the CSIR has developed various programs and initiatives that involve the collection and curation of climate data. For example, the CSIR's South African Risk and Vulnerability Atlas (SARVA) is a web-based platform that provides decision-makers with access to climate and environmental data, including information on temperature, rainfall, and sea level rise..

The CSIR also operates a number of monitoring stations around South Africa that collect data on weather patterns, atmospheric gases, and other environmental factors that affect climate change. This data is curated and made available to researchers, policy makers, and other stakeholders through a range of platforms and tools.

Through their work, the CSIR is helping to build a better understanding of the impact of climate change in South Africa and developing evidence-based solutions to address this pressing issue. Their efforts demonstrate the critical role that data curation plays in supporting climate action and building a more sustainable future.

## Challenges and Opportunities for South African businesses in data for climate action

There are several challenges that businesses in South Africa face when collecting and curating data for climate action.

Some of these challenges include:

- 01**  
Limited funding  
Collecting and curating climate data can be expensive, and many businesses in South Africa may not have the financial resources to invest in these initiatives. This can make it difficult to obtain accurate and up-to-date data, which is crucial for effective climate action.
- 02**  
Limited data availability  
In some cases, climate data may not be readily available or may be difficult to obtain, especially in remote or under-resourced areas. This can make it challenging for businesses to collect and curate the data they need to support their climate initiatives.
- 03**  
Lack of expertise  
Collecting and curating climate data requires specialized skills and expertise. Many businesses in South Africa may not have the necessary expertise or resources to carry out these activities, which can hinder their ability to develop effective climate solutions.
- 04**  
Data quality issues  
Climate data can be complex and may require careful analysis to ensure its accuracy and relevance. Businesses in South Africa may face challenges in ensuring that the data they collect, and curate is of high quality and can be used effectively for climate action.

## 05

Data privacy and security

Climate data can be sensitive, and businesses must ensure that they comply with data privacy regulations and protect the data they collect and curate from unauthorized access or use.

**Despite these challenges, businesses in South Africa are making significant strides in collecting and curating data for climate action. By working collaboratively and leveraging their resources, these businesses can overcome these challenges and develop effective solutions to address the urgent environmental challenges we face.**

There are several opportunities for businesses in South Africa that collect and curate data for climate action. Some of these opportunities include:

## 01

New revenue streams

Collecting and curating climate data can create new revenue streams for businesses. For example, businesses that collect data on renewable energy sources can sell this information to other businesses or investors interested in investing in renewable energy projects.

## 02

Increased operational efficiency

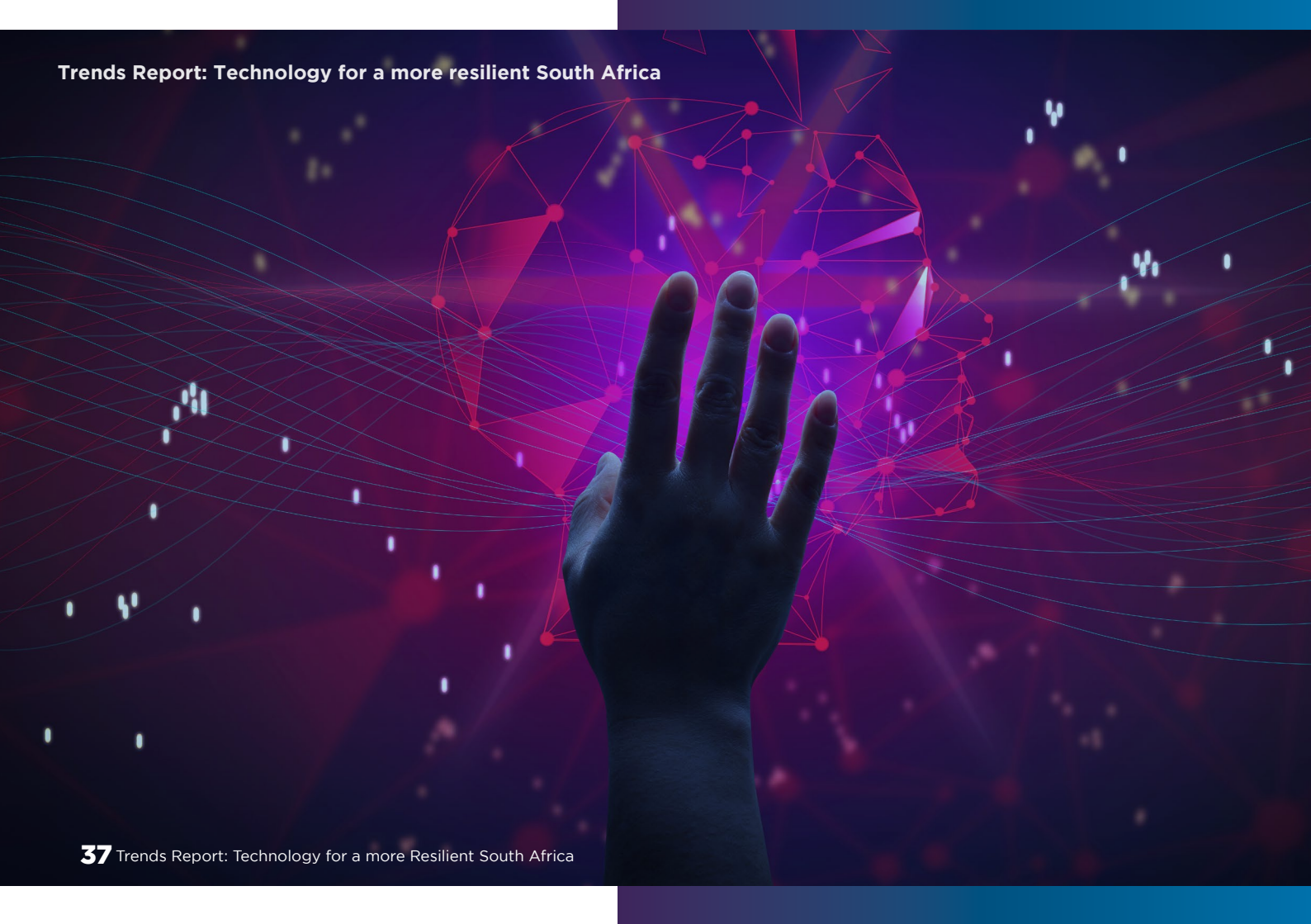
Collecting and curating data on energy usage and greenhouse gas emissions can help businesses identify areas where they can increase operational efficiency and reduce costs. This can also help them to reduce their carbon footprint and promote sustainability.

## 03

Improved risk management

Climate data can help businesses identify and manage risks related to climate change, such as extreme weather events, water scarcity, and supply chain disruptions. By understanding these risks, businesses can develop effective strategies to mitigate them and ensure the long-term sustainability of their operations.

Trends Report: Technology for a more resilient South Africa



# Conclusion

The digital workforce, 5G technology, the application of AI and data for climate action offer incredible opportunities for South African businesses to thrive in the face of a rapidly evolving marketplace. Despite the enormous potential and resilience that these technologies can offer South African businesses, various challenges come with their adoption and implementation.

Common challenges across the adoption of these technologies include, investment costs, skills shortage, lack of infrastructure, regulatory, ongoing power cuts and lack of quality data. The biggest challenge affecting the adoption of these technologies are the ongoing power cuts however more companies are incorporating alternative clean energy solutions to combat this challenge. The South African government needs to take a more aggressive approach in rolling out digital infrastructure so that small and medium businesses can compete with bigger enterprises who have the operational expenditure and budget to build infrastructure and adopt digital technologies. COO1 Climate Tech is addressing some of the challenges in data for climate action by providing ESG data solutions of marrying data provided by internal systems, external systems and actuals enabled by Internet of Things to provide ESG data on a daily and weekly basis to allow for immediate action for proactive reduction for environmental and social harm.

By adopting one or more of the technologies mentioned in this POV (digital workforce, 5G, Artificial intelligence and Data for Climate Action), South African businesses can become more resilient and better equipped to overcome business and economic challenges. For example, a digital workforce can enable companies to continue operating remotely, increase productivity and navigate other disruptions, while AI and data analysis can help businesses anticipate and respond to changes in customer behaviour. 5G technology can facilitate remote collaboration, while data for climate action can help companies reduce their negative environmental impact and comply with regulations. These technologies can help businesses stay competitive, agile, and sustainable in an increasingly complex and world.

## **About COOi Studios**

COOi Studios is an innovation accelerator partner to corporates, start-ups and government organisations. We help enterprises accelerate innovation to deliver exponential growth using our highly-tuned innovation methodologies. We work with business leaders to drive innovation culture and rapidly deliver emerging technology innovations (AI, VR, AR, IoT, Robotics and 3D printing).

We look forward to hearing from you and partnering with you in an exciting, innovative journey.

## **Contact us**

[hello@cooistudios.com](mailto:hello@cooistudios.com)  
[www.cooistudios.com](http://www.cooistudios.com)