

To 2030 and beyond: Can embracing AI technologies help South Africa reach the National Development Plan's visions for the ICT sector?

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Once upon a time, the National Planning Commission published the National Development Plan and set the following long term goals for the ICT sector:

"By 2030, government will make extensive use of ICT to engage with and provide services to citizens. All South Africans will be able to use core ICT services and enjoy access to a wide range of entertainment, information and education services...These systems will be used to interact with the global ICT ecosystem, of which South Africa will be an integral part."[1]

T-minus 7 years and 3 months to 1 January 2030, one cannot help but ask how close South Africa is to make this vision a reality and whether, on the cusp of the Fourth Industrial Revolution (4IR), Artificial Intelligence (AI) can get us to the NDP's vision of the South African ICT sector faster?

4IR is a digital revolution

The 4IR is a digital revolution fuelled by data and emerging technologies that process data in innovative ways. As a result, participation in the digital economy becomes vital for our country and our businesses to remain globally competitive in this era where data is one of the most valuable resources an essential resource and the driver behind 4IR and the enabler of macro-economic development.[2]

In the Commission on the Fourth Industrial Revolution's summary and diagnostic report and recommendations (4IR report), the Commission on the Fourth Industrial Revolution acknowledges that AI is a bedrock technology in the 4IR, and that the 4IR and its technologies present an opportunity to increase South Africa's global competitiveness and address our economic and social needs and goals.[3]

Draft National Policy on Data and Cloud

These sentiments are echoed in the draft National Policy on Data and Cloud which notes that universal access to cloud and data infrastructure services for all South Africans is fundamental for enabling market players to exploit the growing potential of 4IR technologies (including AI, Blockchain and the Internet of Things).[4]

South African businesses have also demonstrated an appetite to exploit the growing potential of 4IR technologies and AI. Microsoft and EY noted in their report Artificial Intelligence in the Middle East and Africa: South Africa, Outlook for 2019 and beyond ("The EY AI Report"), that-

- \$1658 million had been invested in AI in South Africa over the past decade;[5]
- 46% of the South African companies surveyed indicated that they have started piloting AI technologies in their organisations;[6] and
- as many as 96% of the South African companies surveyed expected to gain significant benefits as a result of implementing AI solutions that would optimise their operations.[7]

But South Africa is not alone.

Countries all over the world have been considering the benefits of embracing AI technologies. For example, in May this year, the European Parliament adopted the final report of the Special Committee on Artificial Intelligence in a Digital Age (the EU AI Report),[8] which includes a detailed roadmap for the EU to become a global leader in AI by 2030.

The roadmap in the EU AI Report mentions that for the EU to become competitive in AI on a global level swift action must be taken, including –

- the creation of a favourable regulatory environment for AI technologies;
- the opening of data silos and encouraging access to data for AI researchers and companies;
- reforming legal frameworks to better target collusion and emerging monopolies without compromising innovation;
- encouraging the uptake of cloud technology and green digital infrastructure;
- fostering an ecosystem of trust between society and AI while utilizing eGovernance and eHealth services with a citizen centred design;
- implementing strategies that encourage investment and governmental support of AI start ups; and
- the development and implementation of cybersecurity and cyber defence mechanisms and the important role of law enforcement agencies in identifying and countering criminal activity aided by AI technology.[9]

Back home, the 4IR report and draft National Data and Cloud Policy have identified similar goals and challenges for South Africa to harness the full potential of the digital economy. However, whether the proposed policy interventions on data protection, data localisation, cybersecurity, governance, competition, and skills and capacity development will be implemented by 2030 remains uncertain.

AI Technologies can be a catalyst

While AI can be a catalyst for economic and institutional change and business opportunities, it is not a perfect or quick solution for reaching the NDP's ICT sector goals by 2030. In order for the benefits of AI to be exploited ethically, a human-centred design approach needs to be applied when developing and implementing AI technologies.[10]

Learning from our friends in the EU and policy processes back home, it is clear that the true potential of AI technologies can only be realised in South Africa once infrastructure barriers have been addressed in the context of an enabling framework for the data economy.[11]

With a human-centred design approach and the necessary infrastructure, AI technologies can be embraced and aid in the realisation of the NDP's vision of the ICT sector.

Road block ahead! [Are data protection laws stifling technological innovation?](#)

Footnotes

[1] [National development plan 2030 – Our future make it work, 2012, National Planning Commission p 196.](#)

[2] The Proposed National Data and Cloud Policy, 2021, Notice No. 309, Government Gazette No. 4411, 1 April 2021, p 7

[3] Summary Report and Recommendations presented by the Presidential Commission on the Fourth Industrial Revolution; and Diagnostic Report of the Presidential Commission on the Fourth Industrial Revolution, 2020, p 50 and 202

[4] The Proposed National Data and Cloud Policy, 2021, p 19-20

[5] [Artificial Intelligence in Middle East and Africa South Africa Outlook for 2019 and Beyond](#), EY Consulting LLC (UAE) commissioned by Microsoft, 2018, p 21.

[6] The EY AI Report, 2018, p 31-33

[7] The EY AI Report, 2018, p 46

[8] [Report on Artificial Intelligence in the Digital Age, European Parliament, 2022, Report A9-0088/2022](#)

[9] The EU AI Report, 2022, p 32-59

[10] [Auernhammer, Jan, Human-centered AI: The role of Human-centered Design Research in the development of AI, 2020, p 4-5](#)

[11] The Proposed National Data and Cloud Policy, 2021, p 13



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