A ‘fully digital enterprise’ is an organisation that has no barriers between its business units and others in the value chain (Banergi, 2019; Kargin et al., 2021). Such a company leverages a digital business model, harnessing the power of data and digital technologies to streamline relationships amongst various actors in the value chain and deliver further value to customers (Banergi, 2019; Mordecai et al., 2022).

Whilst fully digital enterprises have IT departments dedicated to cyber security, employees may not be involved in safeguarding it collectively (Spreić & Šimunic, 2018). Thus, Spreić & Šimunic (2018) suggested adopting a holistic approach to establish company-wide cultural initiatives to ensure cyber security is an integral governance-related component of the organisation’s strategy.

Bricks and mortar SMEs seeking to become a digital enterprise, besides implementing efficient checks to prevent cyber-attacks or detect them promptly, should advance their knowledge and technologies to stay abreast of emerging cyber-attacks (Spreić & Šimunic, 2018).

In light of the energy crisis and conflicts faced in 2022 (Johannesson & Clowes, 2022; Liadze et al., 2022), the idea of peer-to-peer energy trading (Banergi, 2019) does not seem realistic, nor focusing on energy-related data services (Banergi, 2019) given the decline experienced in this sector; nevertheless, the Department of Minerals and Energy (DMRE) in South Africa started investing in this process by allowing business and individuals to produce up to 100MW of electricity without a license provided that generators are compliant (Eskom, 2021).

Alternative sources of energy should be explored, including more sustainable (Gatto, 2022) and renewable energies (Żuk & Żuk, 2022), to mitigate further exacerbations of the current crisis. In particular, data-driven energy resource management could lead to a more resilient energy network by leveraging non-traditional energy producers, e.g., houses generating a surplus of solar energy (International Renewable Energy Agency, 2020).

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