

## **SUMMARY POLICY BRIEF**

# **Developing Competencies for a Just Transition of the South African Banking Sector: Digitalisation**

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## 1. Introduction

Internationally, digitalisation is accelerating at pace, with the banking sector likely to witness more innovations over the next ten years than in the previous fifty years (Carbó-Valverde, 2017). This pace of change is having a profound impact on occupations within the sector, and on the world of work more broadly. Responding to the impact of digitalisation in the South African banking sector, the Banking Sector Education and Training Authority (BANKSETA) has identified digitalisation as one of its key strategic focus areas.

This short policy brief summarises research undertaken on digitalisation in the South African retail banking sector. The research explored the potential impact of digitalisation on jobs, occupations, and skills in the sector. It aimed to provide an informed evidence-base from which BANKSETA can develop support for employer organisations in transitioning to a digital future – with a particular focus on limiting potential job losses, and supporting a ‘just transition’. Adapted from conversations about the impact of climate change and transitioning to a green economy, the term ‘just transition’ refers to interventions to secure workers’ and poorer communities’ rights and livelihoods in the context of major structural change in economies or sectors.

The research was based on a review of relevant literature and on in-depth interviews with Absa, Standard Bank, Investec, the South African Reserve Bank, and Sasbo (the Finance Union).

### Digital banking, digitISATION, and digitALISATION: defining the terms

Digital banking describes the incorporation of new and emerging technologies throughout a financial system or organisation and encapsulates two elements: digitisation and digitalisation. **Digitisation** refers to the use of digital means to optimise existing resources and processes by making them more efficient and effective, whilst **digitalisation** refers to the use of digital technologies and capabilities by an organisation to move to a digital business by adjusting business models, operational practices and the creation of new services, with both impacting on customer and employee interactions (Behr, 2016; Dasho et al., 2016; Schmidt et al., 2017).

## 2. Digitalisation in the South African banking sector

Digitalisation is changing not only the operations and systems within banks, but their broader business models. Technological innovation and flexibility have become central to remaining competitive. Digitalisation has also seen the entry of ‘disruptors’ in the sector – responding to and impacting on changing customer behaviour and expectations.

In comparison to some international ‘trail blazers’ like the United Kingdom and Scandinavian countries (which are transitioning to cashless economies), the South African banking sector is considered by some to be something of a laggard in digitalisation. Some suggest this is due to a lack of funding for digitalisation, and regulations that restrict an enabling environment for start-ups, disruptors, and Fintechs (Lourie, 2017).<sup>1</sup> Nevertheless, the South African banking sector has embraced and embedded digital mechanisms such as blockchain, digital wallets, cryptocurrency, online and mobile banking – all of which are transforming the South African banking landscape. South Africa is home to two

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<sup>1</sup> Fintechs are start-ups or traditional financial or technology organisations that combine technology and financial services to enable, enhance or compete/disrupt the current traditional banking business model by transforming customer applications and back-end office tasks (BANKSETA, 2018; Carbó-Valverde, 2017; Fatah, 2018; Zaikovska, 2018).

internationally recognised Fintech hubs in Cape Town and Johannesburg. Fintech growth in South Africa is expected to be rapid, with EY predicting a 71% forecasted growth rate to a 52% adoption rate (against a current adoption rate of 35%) (Capital Markets in Africa, 2018; EY, 2017).

Running parallel to these dynamics is the rate of consumer digital transitioning. South Africa's consumer access to technology and penetration levels have been significant and are changing the way businesses, including banks, respond to their needs and expectations (Bagley et al., 2012). An estimated 60% of the country's adult population own smartphones (Bagley et al., 2012; COEFS, 2017; Dube, 2018; Jordan, 2016; Zylstra, 2018). While this figure is high, and ownership is on the increase, issues such as poor reception, high data costs, and technical illiteracy will hinder increased uptake, and therefore reliable and consistent usage of phones for digital banking transactions.

### 3. The effect on jobs and occupations in the banking sector

It is evident from the research that jobs in the sector will change as a result of digitalisation, as will the type of skills required to operate in what is now a rapidly changing banking environment. This shift will be most evident in lower-skilled and menial functions or tasks. There will be an increasing need for higher-skilled individuals.

Some commentators have suggested that up to one in every three jobs will be lost to automation in South Africa (Booyesen, 2018), in comparison, for example, to an average 9% job loss likely to be experienced by Organisation for Economic Co-operation and Development countries (Arntz et al., 2016). This threatened insecurity extends to some extent to the banking sector (Kamutuezu, 2016; Pastore et al., 2013), though there is a paucity of quantitative estimations in this regard. What is clear is that digitalisation will disrupt the entire banking value chain: multiple jobs and tasks will be impacted as physical branches close down and financial institutions transition to digital business models (Bhandari, 2016; Dasho et al., 2016).

Respondents in the South African banking sector suggested that occupations that were more likely to become redundant (or experience reduced demand) included tellers, bankers, accountants, insurers, and those involved in more administrative, back-office processing and front-line roles (e.g. branch hosts). However, as new products and technologies are introduced, a different set of tasks will be required; and this will generate new jobs or require the upskilling of current jobs that are focused on the areas of automation and information technology (Arntz et al., 2016a; Arntz et al., 2016b; Hamilton, 2018; Jaafar, 2018).

Certain attributes and skills will also become even more sought after. These include problems solving abilities (a product of both training, but also of depth of knowledge in a sector or the field); and creativity, ingenuity, and critical thinking. The ability to collaborate in and coordinate teams will be prized – especially in product development – as will emotional intelligence. The physical disconnection associated with digitalisation will result in the sector placing value in those who can develop greater human/customer-centric approaches.

In general, employees may need to be more multi-skilled, and both organisations and employees will need to be flexible and agile to respond to the increasing speed at which decisions are made, and products adapted or developed within the sector.

There is a global and local shortage of people with technological and digital skills (Chandra et al., 2018; Meads, 2017). Many skilled individuals in IT in South Africa are being poached by overseas firms. According to one study, skills shortages of particular relevance to the banking sector include those

which are critical to the development of cloud-based solutions, next generation digital infrastructure, and in the mobile space (CSRNEWSSA, 2017).

Digital and technical skills will need to be actively fostered in South Africa – this is especially important for transitioning low-skilled jobs to high-skilled more technical-orientated jobs (Meads, 2017). Workers will either need to re-educate themselves or employers will need to provide opportunities and training to upskill their workforce.

In general, there is a lack of appropriate digital courses and degrees offered in South Africa to meet the sector’s demands, and some respondents feel that government is not sufficiently pushing IT as a career path. Training is either offered by the institutions themselves, or sourced from international providers. The former is taking the form of both on the job training, and the establishment of dedicated training centres. The need for improved skills, however, lies not only in tertiary education and/or lifelong learning, but critically at the school level, where South Africa’s primary and secondary school education is weak, and technical and vocational colleges are too small and their curricula dated (Tshabalala, 2017).

Unless actively addressed, digitalisation is likely to exacerbate or continue existing inequalities within the labour market. Based on the extensive and multi-faceted requirements of many occupations in the new digital workforce, only a small proportion of people would be eligible to play a central role in digitalised business. Furthermore, the profits accumulating to successful entrepreneurs in the context of digitalisation can be huge, with the development of particularly large inequalities between business owners and investors on the one hand, and workers on the other. The extremely unequal (and racially skewed) educational and labour market outcomes in South Africa may exacerbate this issue in the domestic banking sector.

## 4. Supporting a more ‘just transition’ to a digital future

The banking sector (across the SETA, employers, and the union) is beginning to recognise and respond to the changes outlined above. Nevertheless, more should be proactively done to identify jobs most at risk and how the individuals within these positions could be upskilled to improve their job security. Banks should invest heavily in staff training to expose them to the digital world and provide first-hand experience of what can be achieved, and government should actively support a more just transition in the sector.

### 4.1. Recommendations for BANKSETA

<b>Research</b>	<p>It is recommended that BANKSETA works with Sasbo to better understand the occupations affected by digitalisation in order to develop an upskilling and training/education strategy to mitigate job losses in the sector, and provide potential improved transitions to higher-skilled opportunities.</p> <p>An area that requires further research and discussion is the qualitative impact of digitalisation on occupations – specifically the negative externalities arising from increased digitalisation, including increasing inequalities in the labour market.</p>
<b>Education, training, and other learning interventions</b>	<p>There is a shortage of a range of skills relevant to digitalisation. These skills include creativity, problem solving, maths and science, big data analysis, coding and programming, and those related to cloud-based solutions, next generation infrastructure, and mobile applications. There is also a need for upskilling employees – developing both technical and non-technical skills to fulfil new job</p>

	<p>requirements in the sector where feasible. BANKSETA could support and/or guide this process.</p> <p>As jobs are most likely to become more precarious, BANKSETA should consider how to ensure individuals working in the sector have a core set of digitalisation skills that will enable them to switch from project to project, or from function to function.</p> <p>It is recommended that BANKSETA works with the Department of Higher Education and Training (DHET) to established/support a B.Sc in Information Technology, specialising in digitalisation (including specialisations in digital product management, software development or user-experience/visual design).</p> <p>Given the focus on the tacit acquisition of skills and competencies relevant to digitalisation, supporting work-based learning should be a priority for BANKSETA. This should include supporting mentorships and shadowing, and should build and expand on internal training already offered by banks.</p> <p>In terms of Fintechs and start-ups, it is recommended that BANKSETA considers providing business, banking, and financial management advice and training for Fintech start-ups, to ensure they can overcome the initial challenges of setting up a business in the sector and ultimately become financially sustainable – thereby creating more opportunities for job creation. This could be done in collaboration with the Fintech hubs in Cape Town and Johannesburg.</p> <p>Digitalisation has the opportunity to provide banking access to the ‘unbanked’ and rural households. It has the potential to democratise access to data, enhance informed financial decision-making, and support rural economies, thereby making the financial system more inclusive. It is suggested that the role for BANKSETA in this context is to provide banking and technical literacy skills support to the previously unbanked to ensure new users are better capacitated to manage their finances.</p>
<b>Support with navigating the regulatory environment</b>	BANKSETA should work with key stakeholders, such as the South African Reserve Bank, to provide clarity and guidance on how the existing financial regulations apply to Fintech businesses, thereby assisting new start-ups to navigate their way through the regulatory space, and reduce risk.
<b>Promoting careers in digital banking, especially amongst (black) women</b>	BANKSETA could provide the platform to inform individuals of the numerous opportunities available within digital banking and provide guidance and support for those wishing to enter this area as a career. Women, and black women in particular should be especially encouraged to enter the banking sector, with a focus on digital jobs.
<b>Updating the Organising Framework for Occupations (OF), and improving HR and skills planning for digitalisation</b>	<p>The study found that it is proving difficult for HR units to write up job descriptions for (and assign occupational codes on the OFO to) many of the new and fast changing occupations associated with digitalisation. It is recommended that BANKSETA provide HR departments with occupationally-directed guidance and support to inform job descriptions, work-sector plans, etc. to accurately accommodate digitalisation needs.</p> <p>Given the speed at which the sector is transitioning to digitalisation, which is being reflected in non-standardised and ‘new’ occupations, it is recommended that BANKSETA reviews the current OFO framework and identifies corresponding occupations listed with the emerging job titles. Having undertaken a similar</p>

	streamlined exercise for this study, it is evident that, aside from traditional occupations, many of the ‘new’ occupations are not adequately recognised within the OFO. This exercise would also include a list of associated tasks for these occupations, which will aid HR with writing up job descriptions. It is recommended that BANKSETA works with the Durban University of Technology’s Research Chair in Digitalisation to review the OFO in this regard.
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**A Review of occupations core or unique to digitalisation in the banking sector**

As part of this study on digitalisation in the banking sector, a sample of occupations on the OFO were selected for focused review. While there are numerous occupations related to digital banking, some core and/or unique occupations were highlighted by interviews as requirements for current and future digital banking needs in South Africa. The selected occupations shown below were chosen based on interviews within the banking sector. Description, knowledge, and competency requirements for these occupations were informed by the interviews and other data sources, such as online job portals and research insights into specific digital occupations.

- **Product managers** (digital) play a crucial role within banking digital teams – they are the ‘glue’ that holds together and co-ordinates the activities of a digital team and/or digital banking channel activity.
- **User-experience (UX) and/or user-interface (UI) designers** - a new and highly sought after occupation - is multi-disciplinary, incorporating visual design, programming, psychology, and interaction design.
- **Information Technology (IT) developers**, including Mobile Application Developers, HTML Developers, JavaScript Developers, Software Engineers (Backend) and Testers.
- **Fraud analysts and cryptographers, as well as hackers** (hackers are used to proof test systems, programmes and digital products).
- **Futurists and thought leaders** - with the rise of Fintechs, artificial intelligence and automation futurists, alongside thought leaders, will be in high demand. These individuals draw on their expertise and experience to determine the reality, trends, and impact on the future of banking.
- **Social scientists**, such as sociologists, anthropologists, and psychologists can support the development of products that are more user-friendly.

There is need to update occupations on the OFO to cater for changes in the occupations as a result of digitalisation, including the addition of new occupations such as UX Designers. In addition, much of the detailed information on knowledge and competencies for occupations such as the ones listed above, have been gathered from developed world contexts, and in some cases do not adequately reflect the knowledge, tasks, and competencies required of an individual holding such an occupation in South Africa. This needs to be addressed.

#### 4.2. Recommendations for other SETAs and government departments

Many of the recommendations above are not specific to BANKSETA, and could be taken up by SETAs in other industries and sectors affected by digitalisation. These will include the insurance sector, the financial and accounting sectors, media and communications, amongst others. Inter-SETA collaboration on reviewing the OFO (as outlined above) and supporting skills development in the digital space should be encouraged.

Some of the recommendations made above may need to be supported and driven through explicit mention in education, training, and other policy under the custodianship of DHET.

Furthermore, responses may also be needed from departments beyond the education and training space. For example, the Department of Trade and Industry, and other stakeholders, could work to remove barriers to the growth of enterprises in the digital space. In the case of supporting Fintechs,

for example, policy should be reviewed to ensure it is not contradictory and does not hinder the start-up and stability of Fintechs. A more supportive regulatory environment could potentially have particularly beneficial impacts for broadening the racial profile of ownership – where black owned businesses often do not have the same access to capital to help navigate the initial hurdles of start-up.

Indirect policy on telecommunication infrastructure, energy supply, and cost of data need to be acknowledged as prohibitors to digital advancement in this country. Policy should identify how best to unlock this potential.

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