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UNLOCKING DIGITAL VALUE

FOR BUSINESS AND SOCIETY IN SOUTH AFRICA

R5 TRILLION IN VALUE IS AT STAKE OVER THE NEXT DECADE

FOREWORD

Digital transformation is redefining industries, making new business models possible and providing businesses with unparalleled opportunities for value creation. But unleashing that value requires relentless effort. New research from Accenture offers South Africa an unprecedented opportunity to maximise the benefits of digital.

Understanding how digital technologies create value and how this value can be captured for government, industry and society is key—it can help lay the groundwork for national digital transformation strategies, guiding efforts and investments to effectively power economic growth across sectors to the benefit of all.

Accenture and the World Economic Forum (WEF) developed a pioneering value-at-stake framework as part of WEF's multi-year Digital Transformation Initiative (DTI). The framework measures the impact of digital technology on government services, business and society, and peers 10 years into the future to quantify the value these technologies can create, effectively providing a map and a compass to help stakeholders align and optimise their efforts to realise this value.

The value-at-stake framework was initially piloted in the UK, Denmark and the Indian state of Telangana, and presented at annual WEF meetings in Davos in 2016 and 2017. It has now been applied to South Africa.

For South Africa, the analysis—based on the value-at-stake framework, expert interviews, local statistics, and other inputs—delivers extraordinary insight into the value that digital technologies can deliver per industry sector. It is a highly granular level of insight never achieved before and the value at stake is immense.

Our analysis reveals that South Africa could unlock over R5 trillion in value over the next decade—with value of R1.4 trillion created in 2026 alone—by implementing 96 digital initiatives across nine industries and five government services.

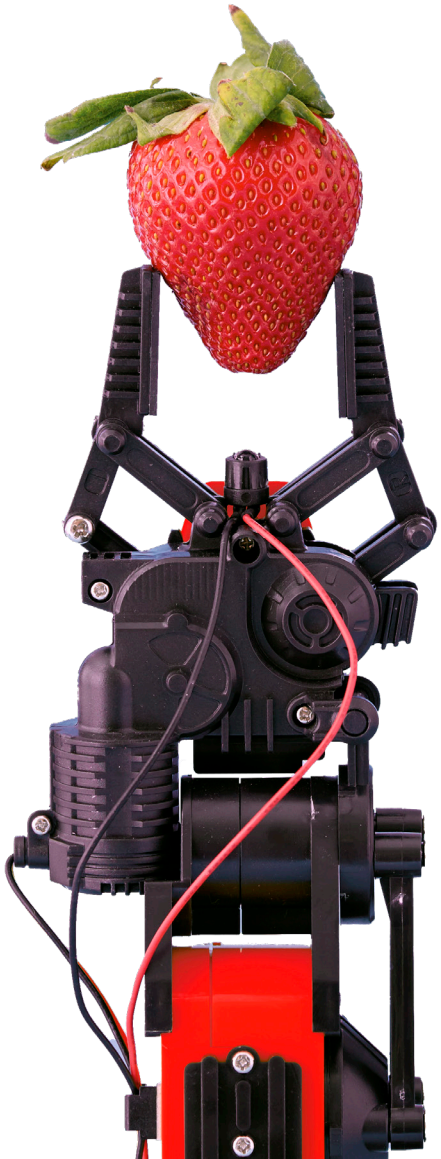
We are confident that these findings will help initiate broader dialogue on the impact of digital technologies in South Africa and—importantly—inspire the collaborative action needed by stakeholders in South Africa to define effective digital policies and strategies, and guide investment in digital transformation to deliver the greatest benefits for all.

Vukani Mngxati
Country Managing Director

Joost de Haas
Accenture Strategy Lead

THE RISING IMPORTANCE OF DIGITAL TECHNOLOGIES AND DIGITAL VALUE TO SOCIETY

South Africa is a country facing multiple challenges, including high unemployment and declining productivity. There is growing optimism, however, as the arrival of the 4th Industrial Revolution coincides with a renewal of political will to address the fundamental socio-economic and development issues facing the country with the help of digital technologies. There is an incredible opportunity to do so.



"WE WILL SOON ESTABLISH A DIGITAL INDUSTRIAL REVOLUTION COMMISSION, WHICH WILL INCLUDE THE PRIVATE SECTOR AND CIVIL SOCIETY, TO ENSURE THAT OUR COUNTRY IS IN A POSITION TO SEIZE THE OPPORTUNITIES AND MANAGE THE CHALLENGES OF RAPID ADVANCES IN INFORMATION AND COMMUNICATION TECHNOLOGY."

PRESIDENT CYRIL RAMAPHOSA,
State of the Nation Address, 2018

In South Africa, digital technologies can generate more than R5 trillion in value for industry and society over the next decade through the use of digital technologies in key industry sectors, including agriculture, public infrastructure and administration, financial services and manufacturing.

This insight comes from a South Africa-specific analysis conducted by Accenture using the Accenture and World Economic Forum (WEF) value-at-stake framework (See 'About the Framework).

The framework measures the impact that digital technologies, such as analytics, blockchain, virtual reality, and artificial intelligence (AI), may have on South Africa's industries and society (environment, consumers, labour and government). What makes this study unique is that it not only focusses on the financial value that is created but also measures the digital value to society (DVS).

Digital technology can positively impact people's lives by improving education and health outcomes, creating employment opportunities and providing better citizen services. DVS measures the aggregated impact of digital technologies on health, safety, the environment, and other factors.

THE STUDY'S KEY FINDING: DIGITAL TECHNOLOGIES CAN GENERATE MORE THAN R5 TRILLION IN VALUE FOR INDUSTRY, CONSUMERS AND SOCIETY IN SOUTH AFRICA.

SIDEBAR: ABOUT THE FRAMEWORK

THE ACCENTURE AND WEF VALUE-AT-STAKE FRAMEWORK

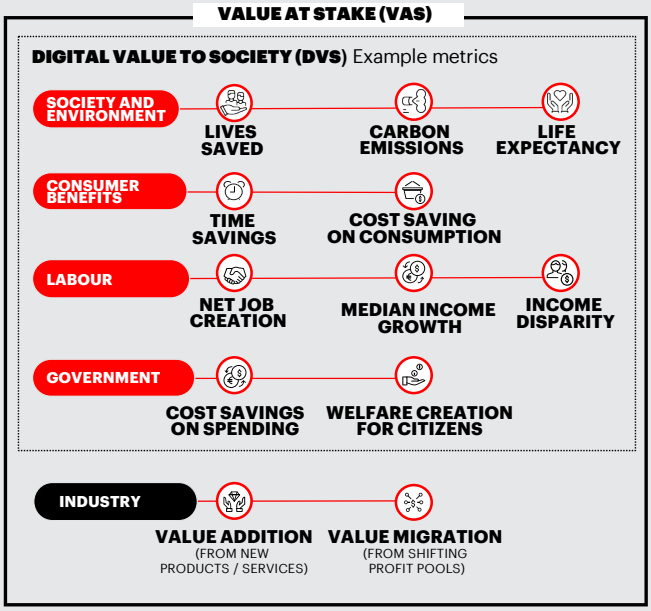
Value at Stake and Digital Value to Society

The Accenture and the World Economic Forum (WEF) value-at-stake framework assesses the impact of digital initiatives—from driverless cars and predictive analytics to drones and remote healthcare—on industries, consumers, society and the environment over the next decade (2017-2026).

In the assessment of industries, the framework integrates all segments of an industry's value chain, capturing approximately 80 percent of revenues and profits. It considers the total addressable market and the adoption or penetration rates of new technologies over time, and is based on research, industry reports, existing use cases and expert interviews.

The framework also quantifies Digital Value to Society (DVS) by aggregating the key performance indicators that measure the impact of digitalisation on health and safety, employment, the environment, labour and consumers.

Together, value-at-stake and DVS provide an evidence-based framework to encourage collaboration between enterprises and policy-makers to unlock the societal benefits of digitalisation.



THE VALUE FOR SOUTH AFRICA

Just over 51 percent of the total value at stake is expected to be created for society through digital transformation across nine industry sectors and five government services. This includes the creation of approximately four million jobs, which can help reduce unemployment over the next decade. The other 49 percent of the value at stake accrues to industry as a result of new products and services, as well as the digitalisation of public services (i.e., the increased efficiency and effectiveness of government services which results from higher adoption of digital initiatives by government entities).

USE OF DIGITAL TECHNOLOGIES IN GOVERNMENT SERVICES CAN ADD JUST OVER R2 TRILLION IN VALUE.

ACROSS INDUSTRY SECTORS, DIGITAL TECHNOLOGIES CAN ADD MORE THAN R3 TRILLION.

The value at stake from **digital transformation across five government services** is just over R2 trillion (Figure 1). Digitalisation of public infrastructure maintenance, public administration and healthcare alone can add over R1.2 trillion to society (environment, government and citizens) over the next decade. Digital transformation of South Africa's government services is likely to create the highest value for society through its impact on economic activity, productivity and service delivery.

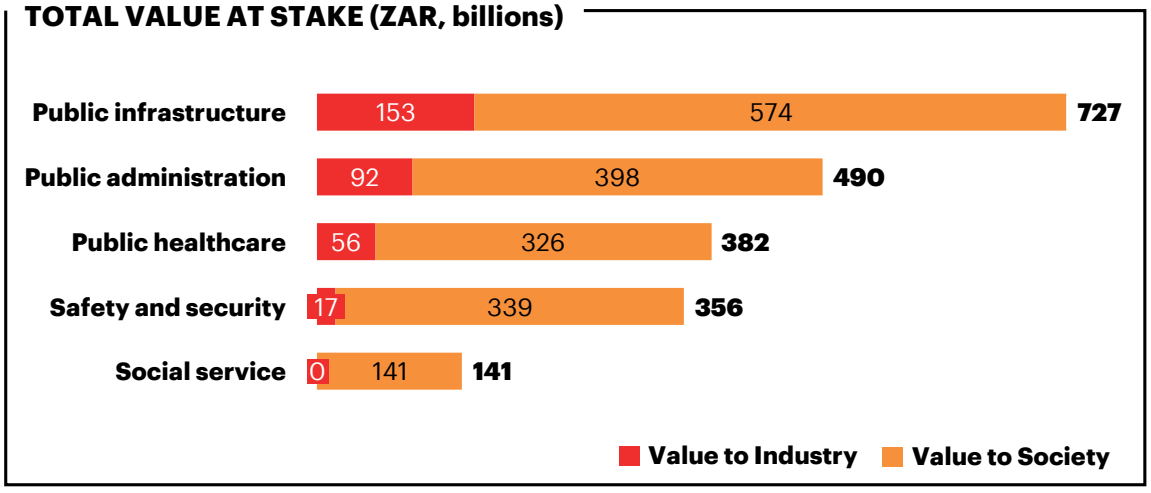


Figure 1: Value at stake for government services

Digital transformation of nine industry sectors could deliver over R3.6 trillion, the majority of which (R2.5 trillion) will accrue to industry (Figure 2). Transformation across the financial services, agriculture and manufacturing sectors presents the highest potential.

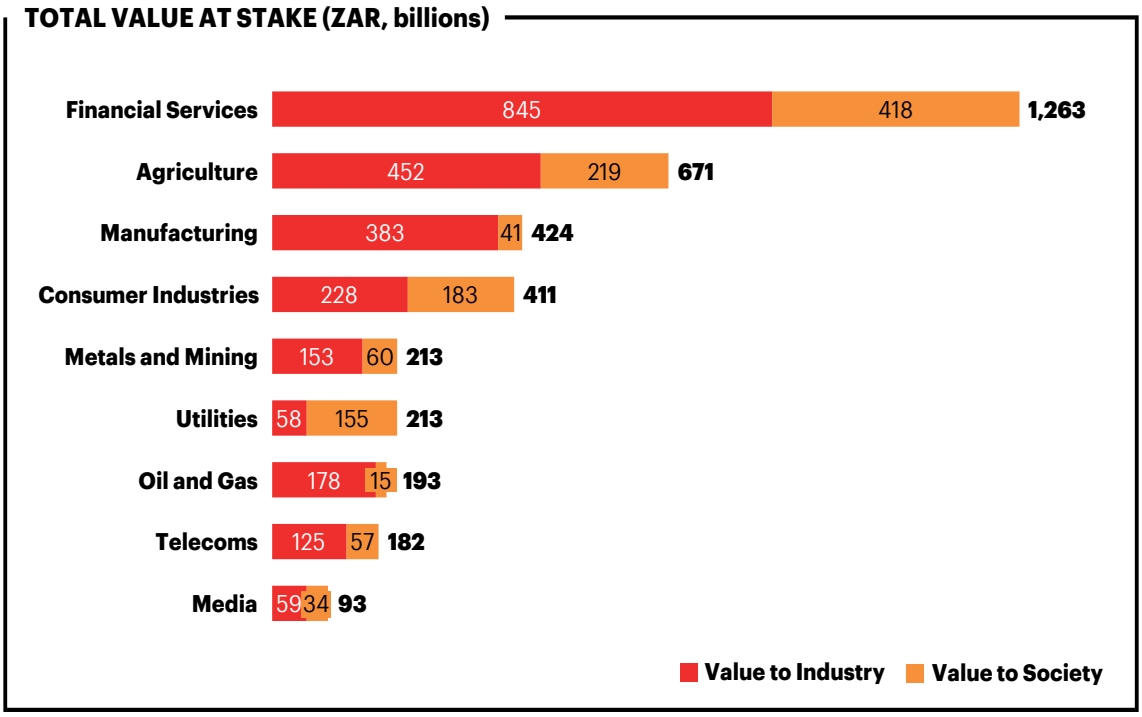
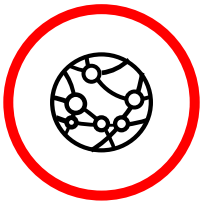


Figure 2: Value at stake for industry sectors

Sixty-eight percent of the value at stake will be driven by the adoption of technologies such as Internet of Things (IoT) and connected devices, artificial intelligence (AI) and platforms.

INTERNET OF THINGS



Internet of Things and connected devices will enable cost reduction, increased efficiency and new business models.

ARTIFICIAL INTELLIGENCE

Artificial Intelligence will revolutionise how work is done, how customers interact with businesses, and how citizens interact with governments.

PLATFORMS

Platform ecosystems will form the foundation for new business models and provide a base for ground-breaking products and services.

Each of these technologies brings new capabilities and adds enormous value but it is the combined capabilities of these and other technologies that drive true transformation.

COMBINATORIAL EFFECT OF TECHNOLOGY

The capability of technologies working in tandem far exceeds the capabilities of each deployed separately (Figure 3). These underlying combinatorial effects are impacting businesses and wider society:

In the agricultural sector, for example, the combined use of autonomous vehicles, drones and sensors enables precision agriculture, improving use of resources and increasing yields. This is revolutionising this sector.

In the manufacturing sector, the implementation of multiple advanced technologies, such as IoT and AI, throughout the value chain will improve responsiveness to demand and enable the introduction of many value-adding services, effectively turning product companies into service companies.

THE COST OF ADVANCED TECHNOLOGIES IS PLUMMETING.

CHANGE AND PROGRESS ARE ACCELERATING.

NEW APPLICATIONS ARE EMERGING AND THERE ARE ENDLESS OPPORTUNITIES TO COMBINE THEM IN INNOVATIVE WAYS.

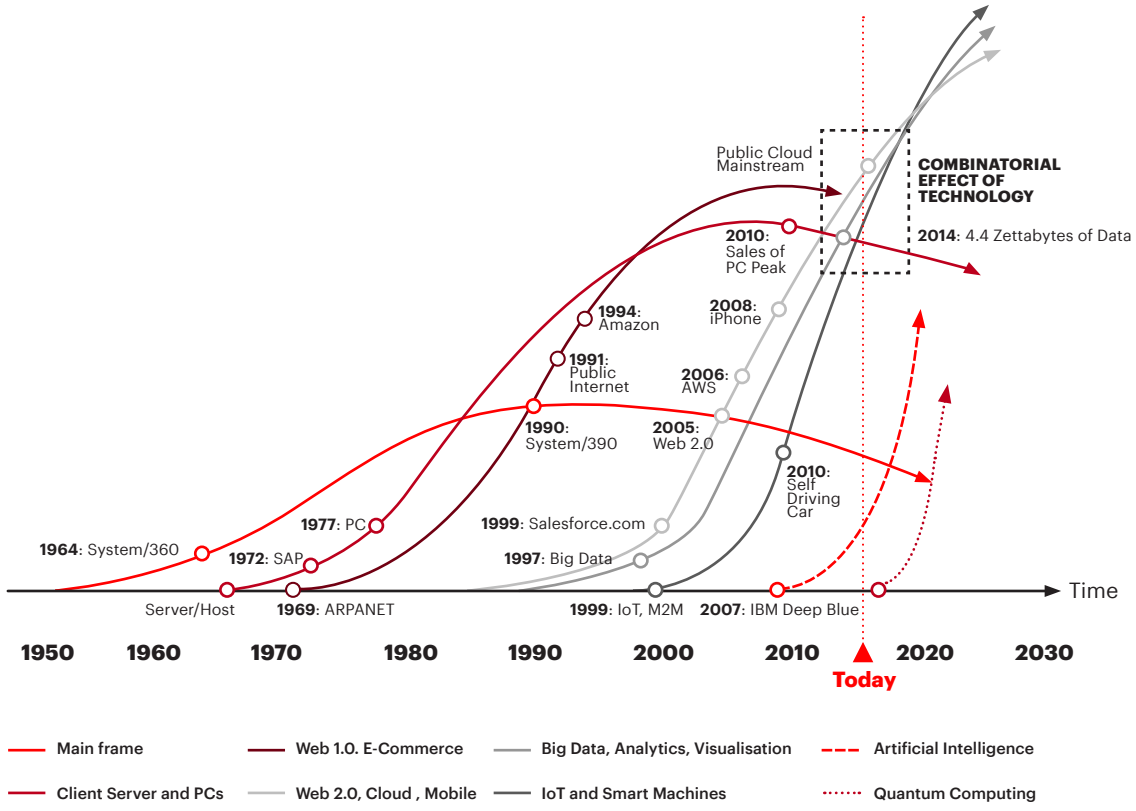


Figure 3: Combinatorial effect of technology

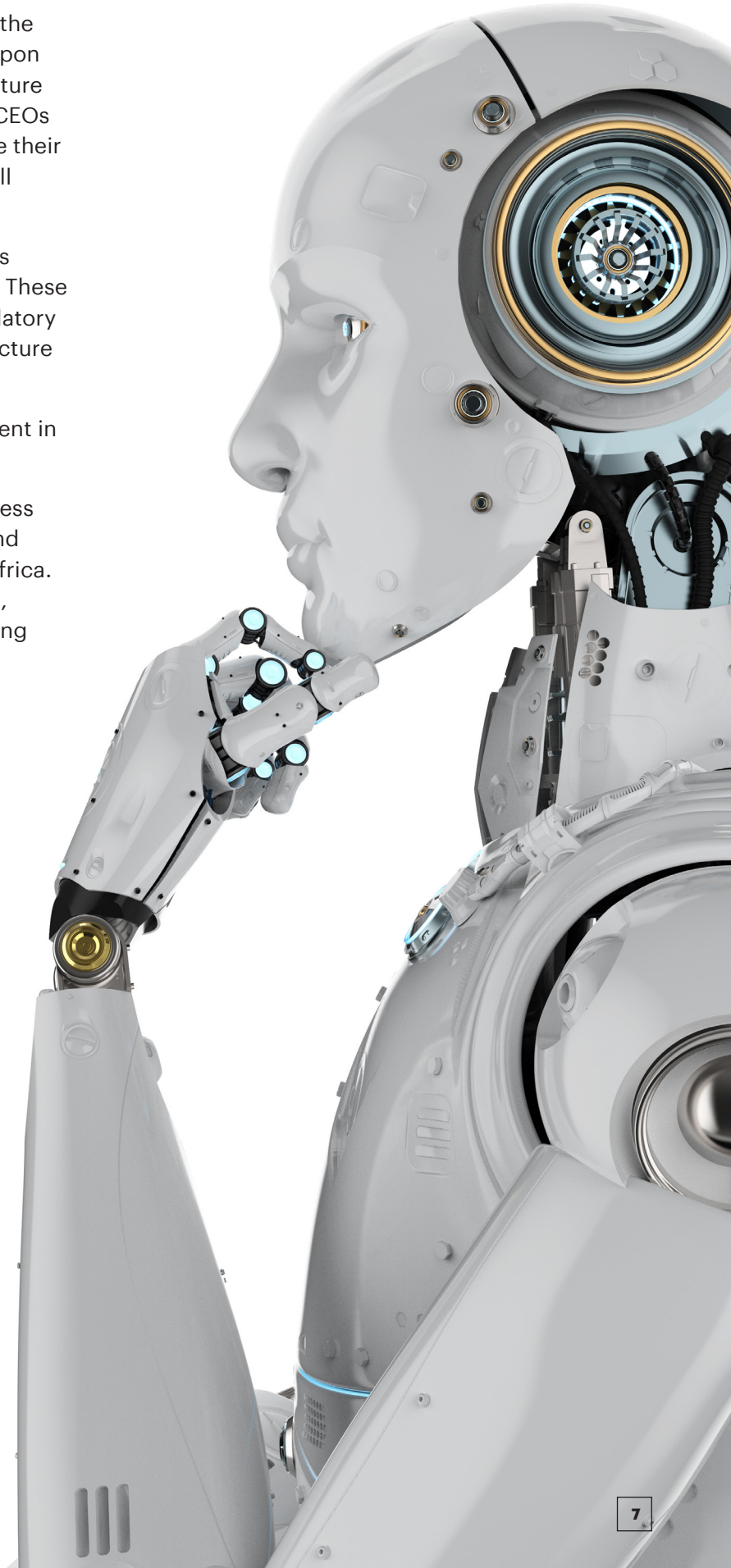
CAN DIGITAL HELP TRANSFORM SOCIETIES?

While business leaders are aware of the rapid change that is bearing down upon them, few are ready. A recent Accenture survey indicates that 93 percent of CEOs expect technology to rapidly change their industry but only 20 percent feel well prepared.[1]

Globally, there are numerous barriers standing in the way of digitalisation. These include outdated and complex regulatory frameworks, gaps in digital infrastructure and a lack of skills in "the new".

These barriers, and more, are prevalent in South Africa.

Digital transformation can help address several macro-economic, societal and technological challenges in South Africa. These include low economic growth, growing unemployment and dwindling competitiveness.



Countries are using digital technologies to address perennial issues and transform. India and Denmark offer excellent examples:

India – Spreading the JAM

The Indian government's JAM Trinity programme is geared towards broadening financial inclusion.[2] The programme aims to create a biometrically enhanced unique identifier (Aadhar) for India's citizens; assist the unbanked to open bank accounts (Jan Dhan Yojana) and access government subsidised items; and boost mobile connectivity. Among others, this programme allows for direct transfers of funds into bank accounts, helping to cut out intermediaries and eliminate leakage, unlocking tremendous value for society.

Denmark – A digital leader

Denmark ranks first among 28 European Union (EU) Member States in the Digital Economy and Society Index in 2017.[3] Its Strategy for Denmark's Digital Growth lays out its digital agenda to shape the future of the economy. It emphasises Industry 4.0 and is committed to the transformation of the entire country. The strategy allocates $163 million for 38 initiatives running to 2025. These include creation of a digital hub, strengthening education, agile regulation for new business models, strengthened cyber security, and data as a driver of growth. Already, Denmark is strong in the delivery of online public services, it takes the lead across the EU in use of digital technologies by business, and it names digitisation and new technologies as drivers for new productivity growth. A national strategy for digital health focusses on digitisation and use of health data in the context of prevention, care and direct treatment. Use of precision farming makes this tiny country the globe's number two exporter of food as measured by value, second only to the US, which has 270 times its landmass.[4]

"IT IS JUST NOT ENOUGH TO UNDERSTAND IT. WE ALL HAVE TO EMBRACE THE 4TH INDUSTRIAL REVOLUTION – WE HAVE TO WORK TOGETHER TO JOINTLY EXPLOIT NEW TECHNOLOGIES FOR THE FUTURE. DESPITE DIFFERENT OPINIONS, THE COMMON INTEREST SHOULD BE FOR THE SAKE OF THE COUNTRY, TO CREATE STRONG, INCLUSIVE, AND SUSTAINABLE GROWTH."

PROF KLAUS SCHWAB,
Founder and executive chairman of the World Economic Forum (WEF), CSIR symposium, South Africa, 2018

THREE DIGITAL TECHNOLOGIES—IOT, AI AND PLATFORMS—WILL HELP SOUTH AFRICA REALISE 68 PERCENT OF THE TOTAL VALUE AT STAKE.

TECHNOLOGIES WITH THE HIGHEST POTENTIAL

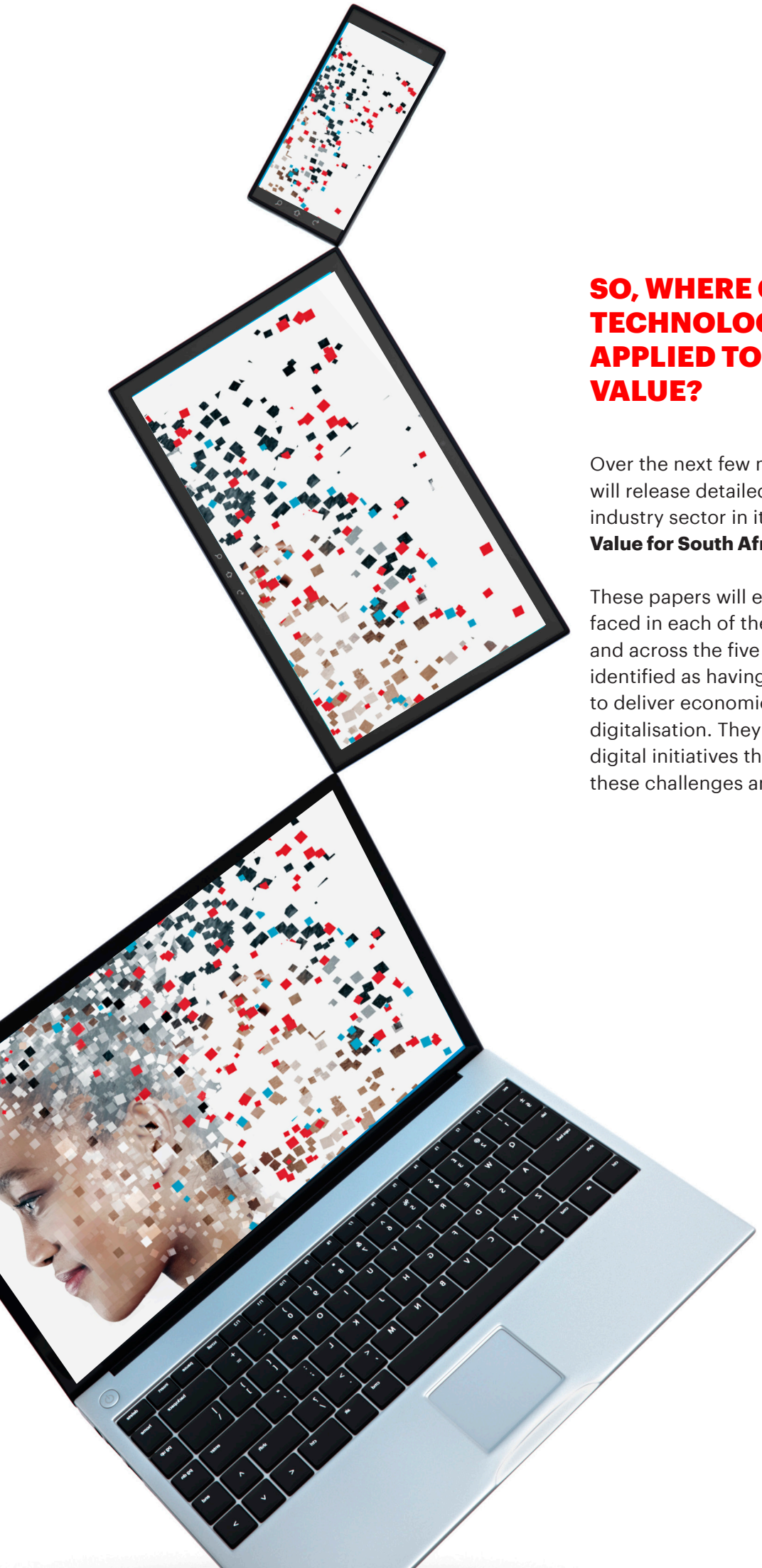
Accenture's reserach indicates that the R5 trillion in value that can be created for the South African economy through use of digital technologies will primarily be realised through the application of 96 digital initiatives across nine industries and five government sectors. These initiatives will rely heavily on a few key digital technologies. Internet of Things (IoT) and connected devices have the highest potential to deliver value. Artificial intelligence (AI), supported by new skills and a recalibration of business culture, and platforms can also drive substantial value creation.

Of these technologies, the value potential of **IoT** is likely to be the highest over the next decade due to the combined effect of the increasing affordability of smart devices and the widespread adoption of these tools by individuals and companies. IoT creates value for companies through cost savings and efficiency improvements, and helps consumers achieve higher productivity levels. However, for IoT to be successful, South Africa must invest in the right infrastructure, enhancing skills and capabilities, and ensuring the security aspects of IoT use cases.

AI, combined with uniquely human capabilities, will deliver more than just efficiency—it will add value and drive business growth. Accenture calls this combination of machine and human ingenuity 'applied intelligence'. It will revolutionise how work is done, how customers interact with businesses and how citizens interact with governments. As AI matures, it can propel economic growth and serve as a powerful remedy for stagnant productivity and labour shortages. A recent Accenture and GIBS study indicates that by embedding AI, South Africa can potentially double the size of the country's economy five years earlier.[5] However, AI will demand new skills, the redefinition of jobs and a recalibration of business culture and leadership.

Platform ecosystems can create a foundation for value creation by enabling new business models and strategies which will profoundly change the way companies engage with customers. Platforms can grow exponentially as a result of network effects which allow for the benefits of platforms to be magnified. Recent Accenture research indicates that there is still substantial room for South Africa to capitalise on the opportunity presented by the platform economy.[6]

Big data and analytics will underpin digital transformation. Collecting data, making sense of it and using advanced analytics to make better decisions and optimise operations are just the beginning. Big data and analytics will drive Industry X.0, the integration of multiple waves of digital technology into industrial processes to deliver connected and smart products and drive industrial consumerism—which will completely reinvent industries. The change has already begun.



SO, WHERE CAN THESE TECHNOLOGIES BE APPLIED TO DELIVER VALUE?

Over the next few months, Accenture will release detailed insights into each industry sector in its **Unlocking Digital Value for South Africa** series.

These papers will explore the challenges faced in each of the nine industry sectors and across the five government services identified as having the highest potential to deliver economic value through digitalisation. They will also identify the digital initiatives that will help address these challenges and unlock value.

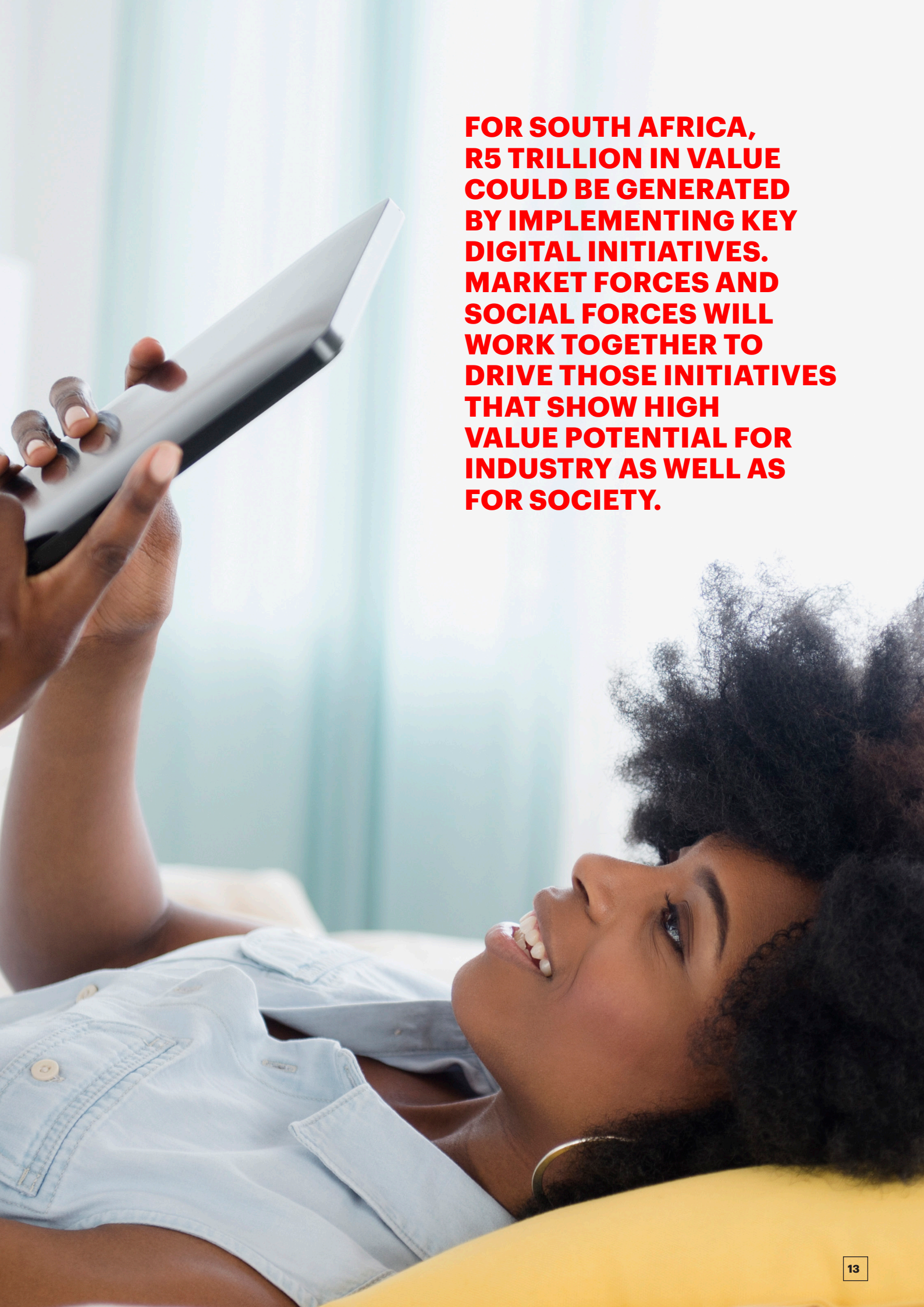
COMBINING VALUE TO INDUSTRY WITH VALUE TO SOCIETY

Our analysis has focused on a specific set of South African industries and a narrow set of indicators (jobs, carbon emissions, lives saved and consumer benefits). These indicators serve as a proxy to begin quantifying the value to society from digital transformation, but they also lay the foundations for a new platform for public-private sector dialogue.

Our study reveals that over 51 percent or R2.9 trillion of value can be created for society through digitalisation within key industry sectors and government services. When viewed together with the value created for industry, an interesting picture begins to emerge: market forces and social forces work together to drive those initiatives that show high value potential for industry as well as high contribution to societal value. These initiatives require little intervention by government or regulators to realise their potential. However, initiatives that deliver high value to society but relatively little value to industry may need to be catalysed by carefully crafted incentives or approaches.

CASE IN POINT

An example from a WEF and Accenture Digital Transformation of Industries paper[7] further illustrates this point: The installation of telematics equipment in cars is not mandatory in most countries but if stakeholders from industry and government can agree on an approach that bundles telematics solutions at the point of sale, it could not only help drive uptake of new usage-based insurance models, but reduce accidents, save lives and lower costs for consumers. In parts of the world where road fatalities are particularly high, such as South Africa, the impact can be significant.



FOR SOUTH AFRICA, R5 TRILLION IN VALUE COULD BE GENERATED BY IMPLEMENTING KEY DIGITAL INITIATIVES. MARKET FORCES AND SOCIAL FORCES WILL WORK TOGETHER TO DRIVE THOSE INITIATIVES THAT SHOW HIGH VALUE POTENTIAL FOR INDUSTRY AS WELL AS FOR SOCIETY.

It is clear that the value to society will not always be realised automatically; considerable work may be required to maximise the potential of some digital technologies.

This will require collaboration between multiple stakeholders. In some instances, public-private partnerships may prove useful. In others, specific incentives or policy changes by government can help align multiple partners to produce a positive outcome for South African society at large.

By working together to drive digital transformation now, both government and business leaders can better prepare to participate in the next era of digitalisation. To drive value for society and industry, business and government leaders need to consider key questions about the value of digitalisation (Figure 4).

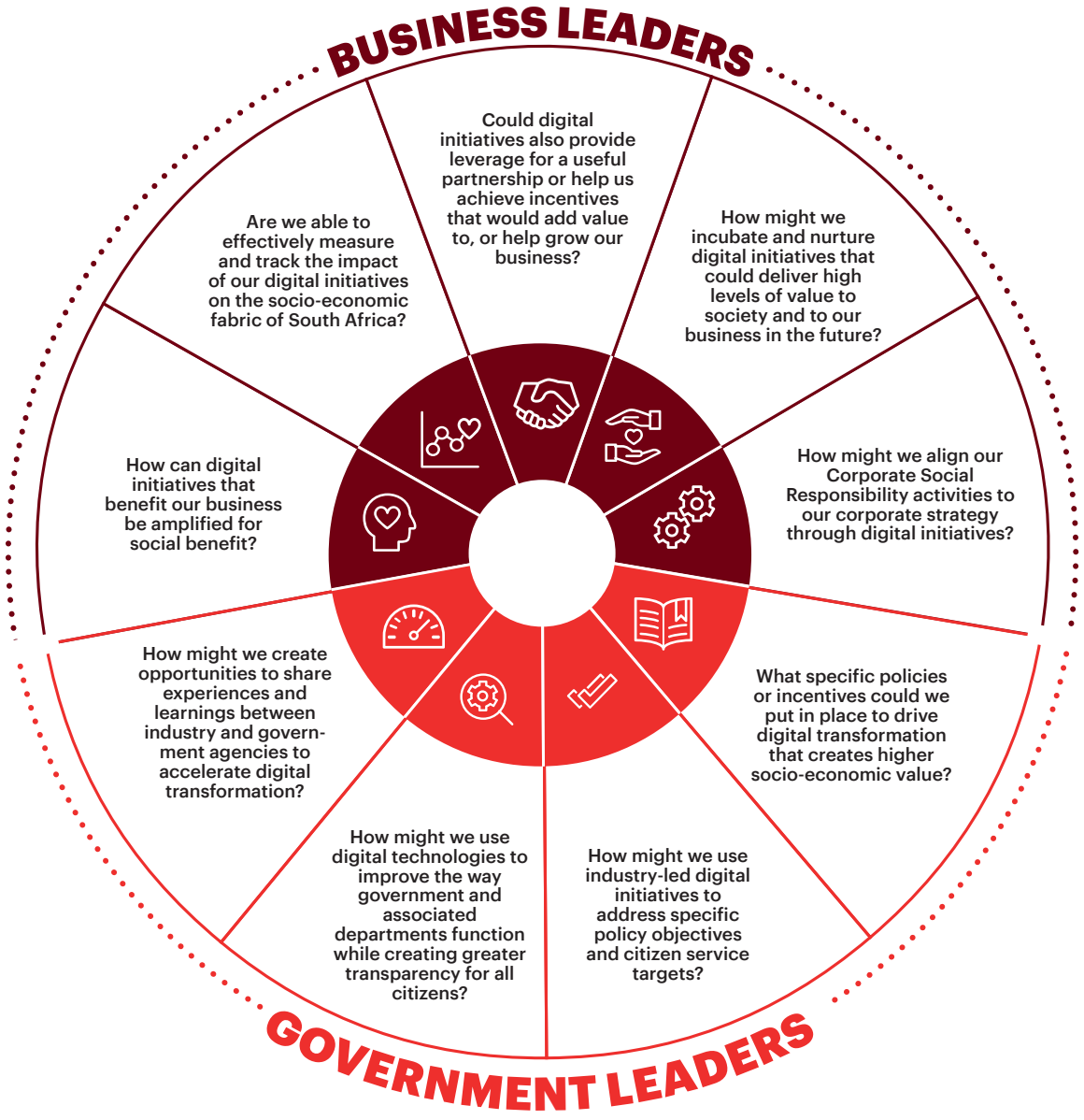


Figure 4: Key questions about the value of digitalisation

SUCCESS FACTORS

To realise the value at stake from digital technologies and make digital transformation a success in South Africa, policy makers, industry bodies and business need to work together. Across all sectors, six common success factors have emerged: there is a need to address physical and digital infrastructure, digital skills and training, transparency, regulation and policy, public-private partnerships and capital spending.

PHYSICAL & DIGITAL INFRASTRUCTURE

- Ubiquitous and unified access to physical connectivity (ports, roads, airports, etc.) and mobile connectivity (e.g., 4G, 5G) is imperative.
- Develop interoperable systems that enable seamless interaction for all participants, eliminating process inefficiencies.

DIGITAL SKILLS & TRAINING

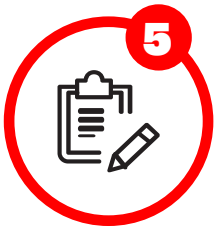
- Undertake a countrywide skills development programme to address new digital skills requirements across all levels.
- Active participation of stakeholders in the education system and the support of industry bodies and businesses across sectors is required.

CAPITAL SPENDING

- Both government and industry stakeholders need to earmark funds and allocate capital for investment in digital tools, technologies and skills.
- While incremental process changes might help to create some value, unlocking the total total value might require giving up legacy infrastructure and investments in favour of new tools and technologies.

TRANSPARENCY

- Government needs to embrace digital technologies to enable transparency across public services.
- Business leaders need to gain digital trust to better leverage business and technology opportunities, such as those relating to IoT, new or data-driven business models.



REGULATION AND POLICY

- While framing new regulations and policies, embrace a digital-first mindset, encouraging and incentivising the adoption of digital technologies.
- A collaborative approach must be adopted, involving companies and consumers in the processes of policymaking.

PUBLIC-PRIVATE PARTNERSHIPS

- Government organisations, industry bodies and business need to collaborate to unlock the value from digital transformation.
- Government needs to partner with industry bodies and business to leverage their skills and expertise. Industry and business participants, in turn, need to pass on the benefits of digital to society to unlock value for all stakeholders.

CONCLUSION

Globally, business and government in developed and emerging economies are applying digital technologies to address some of their biggest challenges, from leakages to resource constraints and compliance. Their efforts are having a significant impact, extending beyond efficiencies and cost savings to create real value for consumers and society. However, their efforts are not just driven by the need to improve outputs and service levels—the next decade of digitalisation will look markedly different and businesses across industry sectors will need to be well prepared to take advantage of the sweeping transformation taking place in consumers' lives and the broader economy.

This will require:

- **Understanding how digital technologies can add value**, disrupt industries and business models, and change how consumers engage with companies (and citizens engage with governments) and consume products and services.
- **Addressing the key barriers** that stand in the way of digital transformation and value capture, such as outdated regulatory frameworks, gaps in digital infrastructure, a lack of skills, affordability and fair competition.
- **Collaborating across sectors** and between all stakeholders to create the environment—develop policies, systems and standards—that will help accelerate value capture, increase competitiveness of industries, and create a foundation for future participation in a global digital environment.
- **Recognising that digital transformation** is a journey that requires a wise pivot. Pivoting wisely is about ensuring that the right levels of resources are allocated to both new and existing business to optimise value and growth opportunities. This requires the introduction of new technologies as well as new skills and new organisational structures to support organisational agility and embed a culture of innovation.

SETTING THE PACE FOR ECONOMIC GROWTH IN SOUTH AFRICA

For South Africa, the application of digital technologies to drive digital transformation across sectors and government services can deliver immense benefit—benefit that can be multiplied exponentially if stakeholders collaborate, align and synchronise their efforts to maximise value for all sectors.

We hope that this research provides an incentive to advance cross-sector collaboration on digital transformation efforts, and a compass to help guide strategies. These are critical decisions—they will drive economic growth and help improve the way South Africans work and live, setting the pace and trajectory of South Africa's economic growth for the next decade.

ABOUT ACCENTURE

Accenture is a leading global professional services company, providing a broad range of services and solutions in strategy, consulting, digital, technology and operations. Combining unmatched experience and specialised skills across more than 40 industries and all business functions—underpinned by the world's largest delivery network—Accenture works at the intersection of business and technology to help clients improve their performance and create sustainable value for their stakeholders. With 459,000 people serving clients in more than 120 countries, Accenture drives innovation to improve the way the world works and lives. Visit us at www.accenture.com.

ABOUT ACCENTURE STRATEGY

Accenture Strategy operates at the intersection of business and technology. We bring together our capabilities in business, technology, operations and functional strategy to help our clients envision and execute industry-specific strategies that support enterprise-wide transformation. Our focus on issues related to digital disruption, competitiveness, global operating models, talent and leadership helps drive both efficiencies and growth. For more information, follow @AccentureStrat or visit accenture.com/strategy.

REFERENCES

1 Disruption need not be an enigma, Accenture, 2018. Accessed on November 27, 2018, https://www.accenture.com/us-en/insight-leading-new-disruptability-index

2 All you wanted to know about: JAM Trinity. Accessed on May 25, 2018, https://www.thehindubusinessline.com/opinion/columns/all-you-wanted-to-know-about-jam-trinity/article22511736.ece

3 Denmark: Towards a Digital Growth Strategy – MADE. Accessed on May 25, 2018, https://ec.europa.eu/futurium/en/system/files/ged/dk_country_analysis.pdf

4 This tiny country feeds the world, National Geographic. Accessed on May 25, 2018, https://www.nationalgeographic.com/magazine/2017/09/holland-agriculture-sustainable-farming/

5 Artificial Intelligence: Is South Africa Ready?, Accenture and GIBS Research 2017. Accessed on May 25, 2018, https://www.accenture.com/t20170810T154838Z__w__/za-en/_acnmedia/Accenture/Conversion-Assets/DotCom/Documents/Local/za-en/Accenture-AI-South-Africa-Ready.pdf

6 How can South Africa capitalise on the platform economy opportunity, Yusof Seedat (Accenture), Daily News Bulletin 2017. Accessed on November 27, 2018, http://www.dailynewsbulletin.co.za/news/2017/08/14/how-can-south-africa-capitalise-on-the-platform-economy-opportunity/

7 Digital Transformation of Industries: Demystifying Digital and Securing $100 Trillion for Society and Industry by 2025, WEF and Accenture, 2016. Accessed on November 27, 2018, https://www.accenture.com/t00010101T000000Z__w__/ru-ru/_acnmedia/Accenture/Conversion-Assets/DotCom/Documents/Local/ru-ru/PDF/Accenture-Digital-Transformation.pdf

KEY CONTACTS

VUKANI MNGXATI
vukani.mngxati@accenture.com

JOOST DE HAAS
joost.de.haas@accenture.com

SPECIAL ACKNOWLEDGEMENTS:

We would like to acknowledge and extend our sincere gratitude to our contributors to this PoV: Wolfgang Popp, Vaibhav Rathi and Natalia Barros

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