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FACT SHEET

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DIGITALISATION – HOW IT CHANGES EVERYTHING

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INTRODUCTION

Digital transformation has become a buzzword – where does the term come from? As the UK's Chartered Institute of Personnel and Development (CIPD) states: **"Before digital transformation became a buzzword, enterprise or business transformation was commonly used to describe a radically new way of running an organisation. As technology increasingly disrupted the status quo, people began using digital transformation to describe enterprise transformation in response to evolving digital technologies."**[1]

This Fact Sheet will examine how digital paradigm shifts are affecting and will continue to affect every aspect of our lives, and will draw some pointers for HR practitioners.

**Navigate the menu by clicking on desired heading.

1. ***Digital transformation: practical insights from the people profession | CIPD*** Accessed 11 May 2022

THE DIGITAL PARADIGM SHIFT

What do we actually mean by digital/digitalisation and digital paradigm shifts?

The Merriam-Webster dictionary defines **digital** as[2]:

1. **of, relating to, or utilizing devices constructed or working by the methods or principles of electronics, also : characterized by electronic and especially computerized technology.**
2. **composed of data in the form of especially binary digits.**
3. **providing a readout in numerical digits.**
4. **relating to an audio recording method in which sound waves are represented digitally (as on magnetic tape).**
5. **of, relating to, or using calculation by numerical methods or by discrete units.**

[These meanings of the word digital should not be confused with meanings associated with digit meaning a finger or toe.]

For the purpose of this Fact Sheet, these definitions may be summarised as having to do with electronic methods, using binary digits.

The CIPD series of papers on digital transformation, quoted above, states: **"In essence, digital transformation is about an organisation and their people's ability to adapt to rapid changes caused by evolving digital technologies. The transformation here is not an end state but a milestone in a continuous journey of adaptation as digital technologies evolve. Digital transformation is about becoming more digitally mature as an organisation."**

2. ***Digital Definition & Meaning - Merriam-Webster*** Accessed 9 April 2022

In ***Technology Fallacy***, Kane et al. defines digital maturity as follows: *'aligning an organisation's people, culture, structure, and tasks to compete effectively by taking advantage of opportunities enabled by technological infrastructure, both inside and outside the organisation.'* This definition builds on the organisational theory by Nadler and Tushman (1980) and considers the opportunities created by evolving technologies. It suggests that people, culture, structure, tasks, and technology must be tightly aligned for an organisation to achieve powerful results.

As we have increasingly adopted digital technologies, we have adapted how we think about the way the world works – we have adapted our paradigms. A **paradigm** is a mental model of how the world works, or a theory of existence. As humankind learns more through science, old paradigms lose credence and usefulness. Anomalies increase and ultimately the weight of evidence no longer supports the old paradigm. Simple examples of paradigm-busting scientific discoveries include Columbus demonstrating that the world is not flat; Einstein demonstrating how speed affects mass, time and space; and Darwin and Mendel between them demonstrating how genetics work for natural selection and evolution.

One paradigm on digitalisation rests on a differentiation and interaction between the digital world and the real/physical world. The boundaries between abstract concepts and the real world have been eroding ever since homo sapiens developed language. The word 'table' is not the table itself. And, as the saying goes "the map is not the territory", drawing a distinction between the abstraction and the reality on the ground. Digitalisation is the most recent form of abstraction, for example, taking a physical thing such as a basket of groceries, digitalising it to a virtual shopping basket on the retailer's website or mobile app, creating digital pathways for customers to order the groceries, processing the order and the payment, and then re-converting the digital to the physical when the groceries are picked from the shelf and packaged for delivery. An entirely new digitalisation paradigm has actually removed the link to the physical world altogether, in that the 'product' remains an abstraction – for example, email, Microsoft Office, video games, and virtual reality.

Moving on to the use or application of electronic methods, as the consulting firm McKinsey remarks[3]:

> "Companies today are rushing headlong to become more digital. But what does digital really mean?
>
> For some executives, it's about technology. For others, digital is a new way of engaging with customers. And for others still, it represents an entirely new way of doing business.
>
> Even as CEOs push forward with their digital agendas, it's worth pausing to clarify vocabulary and sharpen language. Business leaders must have a clear and common understanding of exactly what digital means to them and, as a result, what it means to their business.
>
> It's tempting to look for simple definitions, but to be meaningful and sustainable, we believe that digital should be seen less as a thing and more a way of *doing* things."

3. ***What 'digital' really means | McKinsey.*** Accessed 9 April 2022

ADOPTING DIGITAL TECHNOLOGY PARADIGMS

Changing 'the way of *doing* things', or adopting the new digital technology paradigms, will involve consideration of a wide range of aspects of economic life:

- CUSTOMERS
- PRODUCTS | SERVICES
- INTERACTIONS
- FINANCE | MONEY
- ECONOMICS
- BUSINESS MODELS
- WORK
- AND EVERYTHING ELSE

We discuss some aspects of these below.

CUSTOMERS

At this point in time, post-pandemic, it is unclear to what extent physical retail sales will continue to move online. There was an 80% growth in ecommerce in South Africa during the pandemic, from a very low base. According to Stats SA, the market share of online retail in South Africa grew to 2.8% in 2020, double the percentage in 2018. Globally, it is expected that 25% of all retail commerce will be ecommerce in 2025, up from 13% in 2019 – 90% growth.

Probably the most important effect of "digitized customers" is that they can switch instantaneously: Their choices are extensive and global and they can comprehensively search for alternatives. Logistics chains are virtual, so customers can buy from an online shopping portal that aggregates multiple products from many suppliers. Digital customers need never visit a particular store or website. The product, in this situation, is far *less important* than the customer experience. For instance, the customer experience of an order online restaurant is of the delivery app, and the food. But the delivery app owns the data (customer preferences, when they order), and the restaurant has no interaction with customers (if they don't like the food, they just won't order again) – new choices are limitlessly provided by the delivery app.

PRODUCTS | SERVICES

Many products are partly or wholly digital. They may be:

- Digital: Apps, software, data, "travel," games and meta-verse;
- Digitally enhanced: Cars, fridges, homes, smart TVs; or
- Digitally wrapped: Online shopping (e.g. Sixty60).

In theory, there is no physical product that has no digital component. Given digital customers and aggregating online stores like Amazon and Takealot, products should always have a digital component, so the enterprise can control some element of the customer experience.

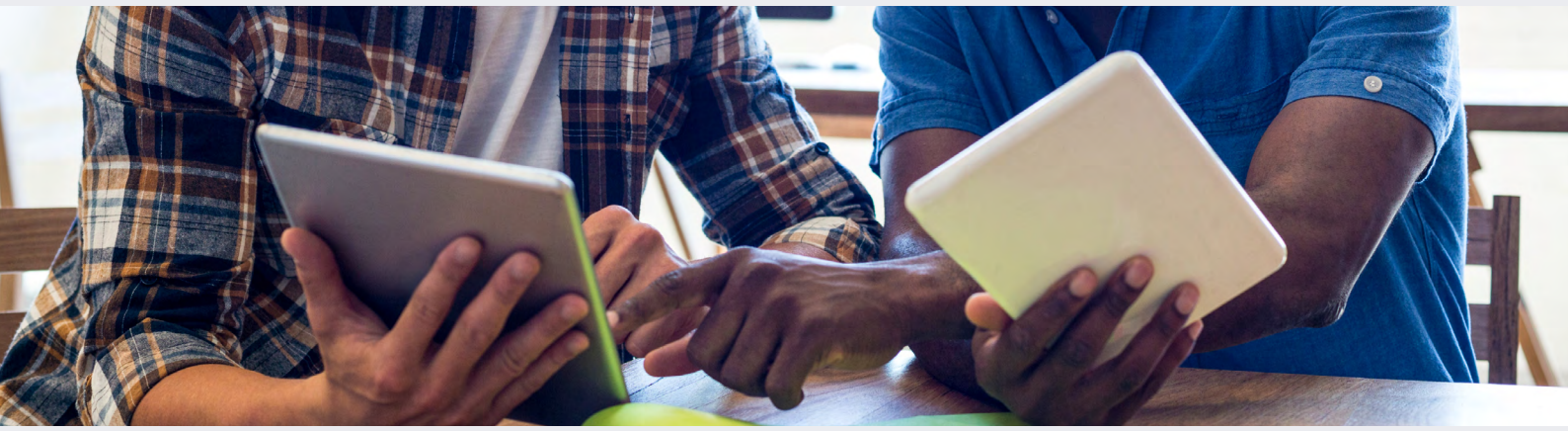
Services like aggregation of products and last-mile delivery are both digital and disintermediate suppliers from their customers.

INTERACTIONS

We have now become very used to dealing online with friends, family, suppliers, customers, work and work colleagues, we have become used to sourcing our entertainment and sport online, but this takes on a new dimension with the development of virtual reality and the adoption of avatars. It is sometimes impossible to tell when you are dealing with a human being. Already, issues of toxic interactions using avatars have surfaced, such as bullying and sexual harassment. The use of avatar profile pictures on our social media accounts also allows us to hide our real selves.

The growth of 'influencers' as a marketing channel, and the use of social media-based comparison and rating platforms mean that we are increasingly making economic and social choices based on the opinions of others. We are able to compare prices and judge the value of service offerings across the world in an instant. Some companies or criminals use automation to influence buyers: For instance "click-farms" are used to increase the number of "hits" on a particular advertisement, resulting in advertisers paying for adverts that have not been seen by real people. Up to 80% of advertising hits are non-people (robots and click-farms).

And of course, as we interact and make these comparisons, we leave behind a trail of data on our preferences, which are then sold.

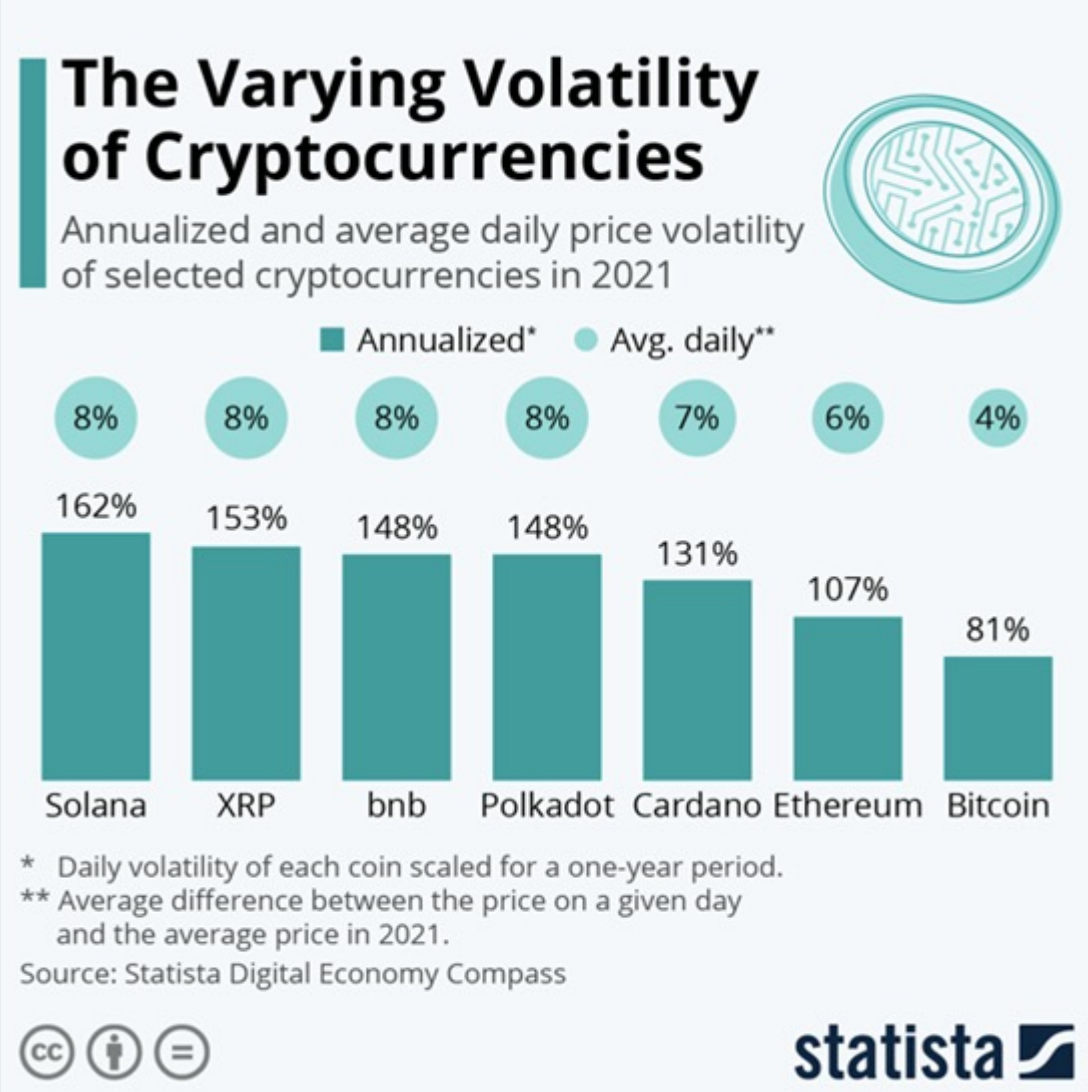


FINANCE

The development of inventions such as blockchain, cryptocurrencies, e-currencies and tokens offer both huge opportunities and new risks which sometimes have been unanticipated and unwelcome. For example, El Salvador in 2021 approved the use of Bitcoin as legal tender. Unfortunately, when the price of Bitcoin crashed in mid-2022, this had a severely negative impact on the country's entire economy.

As financial authorities learn how to regulate (and tax) such new digital products and services, the advantages of instant and secure transactions and contracts can be more safely leveraged.

Importantly, cryptocurrencies and tokens disintermediate financial institutions (banks, tax authorities, and international trade institutions), and reduce financial transaction costs to almost zero. This opens the way for micro-transactions, for example, assembling your own newspaper from multiple news sites by paying 15c per article – no subscription is needed.



ECONOMICS

As mentioned above, people are increasingly choosing what to buy based on social media-based influencers, thus possibly changing a key assumption in economics, which is that people make rational economic choices (homo economicus).

We have also witnessed the extremely rapid increase in computer processing speed and power, together with the increasing miniaturisation of computer components, which as led to 'technological deflation' – we get much better technology at the same or reduced price. For example, smart phones now contain the phone, plus a camera, a torch, a measuring tape, a calendar, a wallet, a guitar tuner, a calculator and a host of other features, all of which are free or nearly free. While there are physical limitations to what can be done in future, software developments are not similarly constrained. Thus, theoretically, limitations on economic growth are no longer constrained by limitations in physical resources.

But, as Jeff Booth, a leading thinking and CEO in e-commerce and technology for over 20 years, has explained in his book, The Price of Tomorrow:

> "We live in an extraordinary time. Technological advances are happening at a rate faster than our ability to understand them, and in a world that moves faster than we can imagine, we cannot afford to stand still. These advances bring efficiency and abundance - and they are profoundly deflationary.
>
> Our economic systems were built for a pre-technology era when labour and capital were inextricably linked, an era that counted on growth and inflation, an era where we made money from inefficiency. That era is over, but we keep on pretending that those economic systems still work.
>
> The only thing driving growth in the world today is easy credit, which is being created at a pace that is hard to comprehend - and with it, debt that we will never be able to pay back. As we try to artificially drive an economic system built for the past, we are creating more than just economic trouble.
>
> On our current path, our world will become profoundly more polarized and unsafe. We need to build a new framework for our local and global economies, and soon; we need to accept deflation and embrace the abundance it can bring. Otherwise, the same technology that has the power to bring abundance to us and our world will instead destroy it."

BUSINESS MODELS

Bearing in mind the likely path of development in the aspects we have covered above, business models for the future will need to be based on:

- Technology solutions across the organisation
- Value models which reflect an ecosystem rather than a linear chain
- Customer-led product development
- Customer-centricity, customer journeys, and customer experience

WORK

It must be remembered that only 50% of workers have a component of their jobs that can be worked on from home, and that industries differ in their work from home (WFH) content. For instance, the US Bureau of Labor Statistics reports that the financial and computer industries have an 80% WFH component, manufacturing 40%, retail 26.5%, and agriculture and fishing 8%. Hybrid working models only apply for some people and some industries, and a blanket approach is likely to fail. Organisations must be intentional about hybrid working models. For instance:

- Studies show that 55% of eligible employees want to work at least part-time from home, but 87% believe that working in the office is essential for collaboration, relationships, creativity, and socialization.
- 30% of eligible workers with fewer than five years' experience want to work one day or less from home – they need the mentoring, learning, and visibility opportunities provided by the workplace.
- Many organizations in the USA report that candidates for jobs often specify a need to for hybrid flexibility.

Deb Fuller, group executive for human resources at Nedbank, says the group formed the hybrid working model in 2021, adding that the company will continue to focus on the health, safety and security of its employees.

This new way of working promotes innovation and collaboration that consists of activity-based environments that are digitally enabled. Employees will book office space, meeting rooms or seats, according to the functions they need to perform while on-site, she says.

"Nedbank's property portfolio is planned to accommodate about a 60/40 split of on-site/off-site workers which will see approximately 60% of all the office staff working at the various Nedbank campus sites on any given day," says Fuller.

Business Live, 13 March 2022

But there are psychological effects of the new working models:

- Many workers report a feeling of disconnection, depression, inability to balance work/life activities, and inability to focus because of distractions
- At the beginning of COVID the director of the National Museum in London tweeted: "Are we working from home, or at home trying to get some work done?"
- People working from home need tools to get their work done, and, importantly they need "social" tools to help employees feel less isolated and to support the organizational culture remotely. This social aspect is often overlooked by companies.

AND EVERYTHING ELSE

Climate: Computers use more energy than the airline industry (and 49% of energy consumption of computers is used by individuals). According to the Cambridge Center for Alternative Finance (CCAF), Bitcoin by itself currently consumes around 110 Terawatt Hours per year — 0.55% of global electricity production, or roughly equivalent to the annual energy draw of small countries like Malaysia or Sweden.

Sustainability: only 25% of e-waste is "recycled," of which only 22% is recycled properly.

Society: the way social media works is fostering FOMO (fear of missing out); 20% of couples worldwide meet online; and we are already encountering and trying to treat digital dependence/addiction.

Inequality: Digitalisation can assist poor people in improving their economic success (for example, linking farmers and fishermen to markets). However, the growth of technology giants has created the world's richest people, who are growing even richer even in a post-Covid economically challenged world.

Warfare: The use of drones and electronic remote control of weaponry in warfare has enabled 'precision targeting', while at the same time, economic warfare through hacking, and the seemingly intractable problem of 'fake news' have dominated recent conflicts.

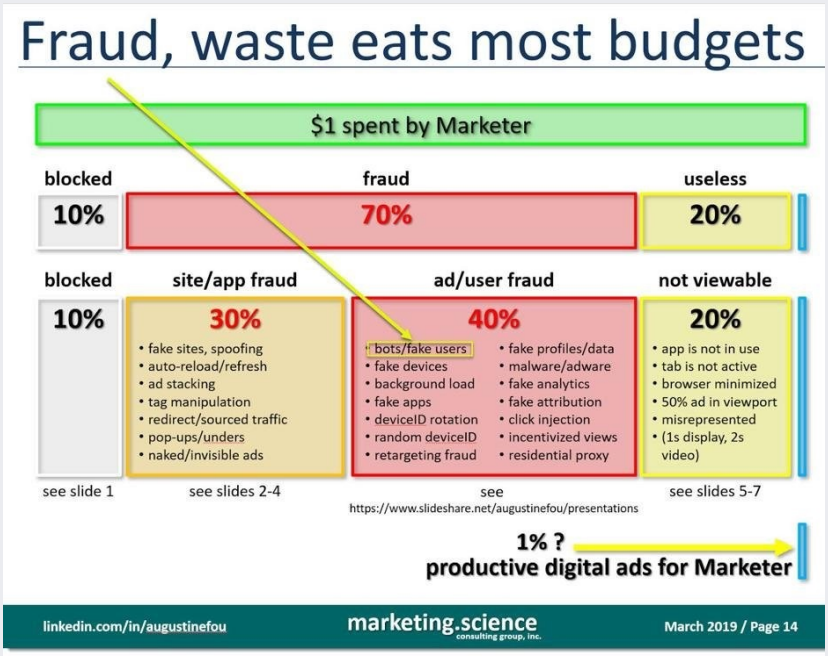
Digital divide: The digital divide describes the gap between people who have access to affordable, reliable internet service (and the skills and gadgets necessary to take advantage of that access) and those who lack it. One example of the tragic effects of the digital divide in South Africa is the estimated loss of a full year's learning in schools during the Covid pandemic because the large majority of school children do not have sufficient access to on-line learning.

Entrepreneurship: The digital divide describes the gap between people who have access to affordable, reliable internet service (and the skills and gadgets necessary to take advantage of that access) and those who lack it. One example of the tragic effects of the digital divide in South Africa is the estimated loss of a full year's learning in schools during the Covid pandemic because the large majority of school children do not have sufficient access to on-line learning.

Marketing: 75% of all marketing spend is online. But it is estimated that much of that is wasted, see the diagram below:

AND EVERYTHING ELSE CONT

Marketing continued:



Related to this is the current (May 2022) controversy triggered by Elon Musk's bid to buy Twitter, where he has questioned how many actual users the platform has, as opposed to bots and robot accounts.

Some companies have cut their digital marketing budget by 90% (e.g. Proctor and Gamble), and have seen no change in their revenues, which suggests that the 90% was wasted.

These aspects of how digitalisation has changed everything illustrate the importance of systematic environmental scanning when formulating and reformulating strategy in organisations.

IMPLICATIONS FOR HR PRACTITIONERS

Paradigm shifts and cultural change are amongst the most complex challenges facing organisations. Business literature abounds with examples of failed mergers, failed introductions of enterprise planning systems, and failures to cope with market and environmental disruptions. The shifts necessary to be successful in assimilating and moving forward with digital transformation are no less difficult to achieve.

The CIPD states the challenge in the following way:

> "Why digital transformation matters to people professionals
>
> ***It's about people, not technology.*** Digital transformation is more about changing people's mindset and organisational practices than it is about choosing specific technology. It is about formulating a business strategy that appeals to both employees and customers, shaping a new culture that supports agile decision-making, and dealing with anxiety about or resistance to change."

The CIPD suggests four possible pathways to digital transformation that organisations can choose from:

1	"Standardise first by improving operational efficiencies. The downside is that eliminating legacy processes and systems takes time without any improvement in customer experience.
2	Improve customer experience first. This includes building mobile apps, improving call centres and empowering relationship managers, with the goal of increasing satisfaction. But this doesn't address operational issues.
3	Take incremental steps by alternating between the first two pathways, to improve customer experience and operational efficiency. The difference between success and failure is having a roadmap that informs everyone's efforts.
4	Create a new organisation that is future ready and continue improving the existing organisation by following one of the other pathways."

OUR HR PRACTICES

The CIPD highlights the following areas of HR practice that can impact significantly on the success of an organisation's digital transformation:

- Using technology to improve hiring and onboarding
- Harnessing digital learning platforms to enhance talent growth
- Mobilising wellbeing initiatives through technology
- Creating impactful and inclusive learning
- Making reward more accessible and performance management fairer
- Operating efficiently – implementing HR information systems
- Assisting organisation to ensure responsible investing in technology[4].

Technology is one of the key drivers of change in both work and many other aspects of life. If designed and deployed responsibly, it has the potential to boost productivity and secure better outcomes for both an organisation and its people. Being responsible means having ethical and sustainable practices that consider and involve the workforce and other stakeholders during business decision-making.

As organisations work through the process of investing in and implementing technology, they should remember that success will depend more on supporting people through the change than on the technology itself.

This means that technology introduction must be aligned with and complemented by relevant changes to the other key elements that make up an organisation – its people, culture, structure and tasks. This will maximise benefits and minimise risks across the organisation.

4. ***Responsible investment in technology | CIPD***

SABPP IS HERE TO HELP

The People Factor strategy of the SABPP was adopted in 2019 and shows the centrality of people in this world of digital transformation. The SABPP has devoted the Fact Sheet series to a wide range of topics relating to this digitalisation paradigm shift, highlighting the impact on and contribution of people to changes in the world of work.

2020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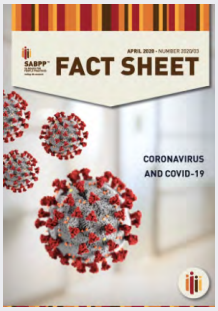
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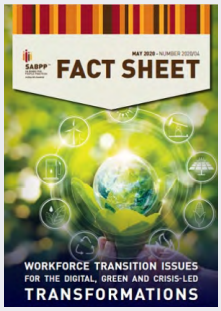
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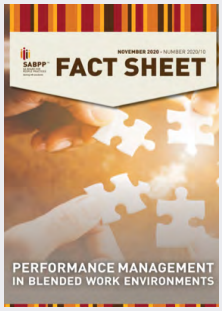
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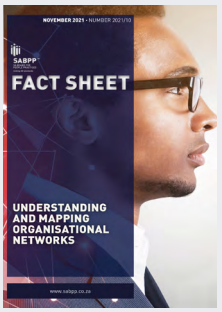
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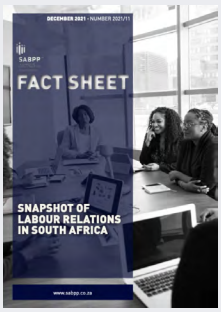
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SNAPSHOT OF LABOUR RELATIONS IN SOUTH AFRICA

CONCLUSION

A journey to digital transformation (and beyond) is not about digital. That's just an enabler. It's about hierarchies, organization, psychology, remuneration, the nature of work, and how all employees can engage.

HR practitioners have a central role to play in this journey and must equip themselves with the knowledge and skills to assist organisations.

This Fact Sheet was conceptualised by:

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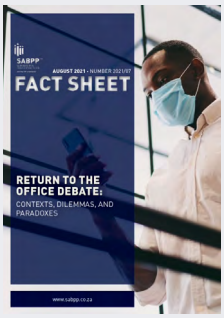

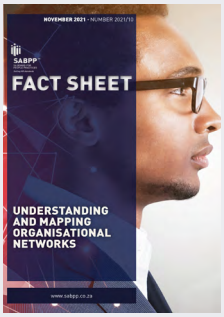

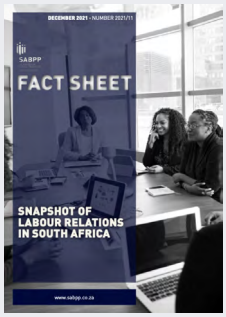

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