



# DIGITAL TRANSFORMATION AND ITS IMPACT

## NATIONAL RISK FORUM

DATE: 30 AUGUST 2018



**the dpsa**

Department:  
Public Service and Administration  
REPUBLIC OF SOUTH AFRICA

# Batho Pele

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# Presentation outline

2

- ❑ Purpose of the presentation
- ❑ Industrial Revolution Continuum
- ❑ Characteristics of the 4<sup>th</sup> Industrial Revolution
- ❑ Digital government trends
- ❑ Public Service Common functions
- ❑ Impact of digitalization on jobs
- ❑ Changing role of the GITO/ CIO
- ❑ Recommends



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# Purpose of the Presentation

- ❑ To share information on the digital transformation in general.
- ❑ To sensitize Risk Forum members of the general impact of digitalization on the society and jobs.
- ❑ To encourage members of the Risk Forum to engage in research on the impact of digitalization in their respective areas of responsibility/ work.
- ❑ To encourage the Risk Forum members to embrace digitalization in preparation for an effective and efficient public service.



# Industrial Revolution Continuum

- ❑ The **1<sup>st</sup> Industrial Revolution** spanned 1760 to 1840, epitomized by the **steam engine** (locomotives, ships, etc).
- ❑ The **2<sup>nd</sup> Industrial Revolution** started in the late 19th century epitomized by **mass production** (industrialization, machine).
- ❑ The **3<sup>rd</sup> Industrial Revolution** began in the 1960s epitomized by **mainframe computing and semi-conductors**.
- ❑ The **4<sup>th</sup> Industrial Revolution** is current and epitomized by the “**confluence of new technologies and their cumulative influence on the World**”.





# Characteristics of the 4<sup>th</sup> Industrial Revolution

- ❑ 4IR is characterized by technological innovation that drives the transformation of work, economy and society.
- ❑ Technological innovation that destroys/transforms old industries, business models, jobs and economic values but also account for the emergence of new jobs, industries, etc (**Digital disruption**)
- ❑ Technological advances that re-define customer expectation and create new values and behavior.(Service industry, Millennials).
- ❑ Digitalization is the core phenomenon of the 4<sup>th</sup> Industrial Revolution”. “Digital twins” – digital security and AI.
- ❑ Big Data, IoT and Analytics – ability to predict and improve customer experience as well as revenue.
- ❑ Collected, stored and analyzed data is the new raw material for the digital economy.



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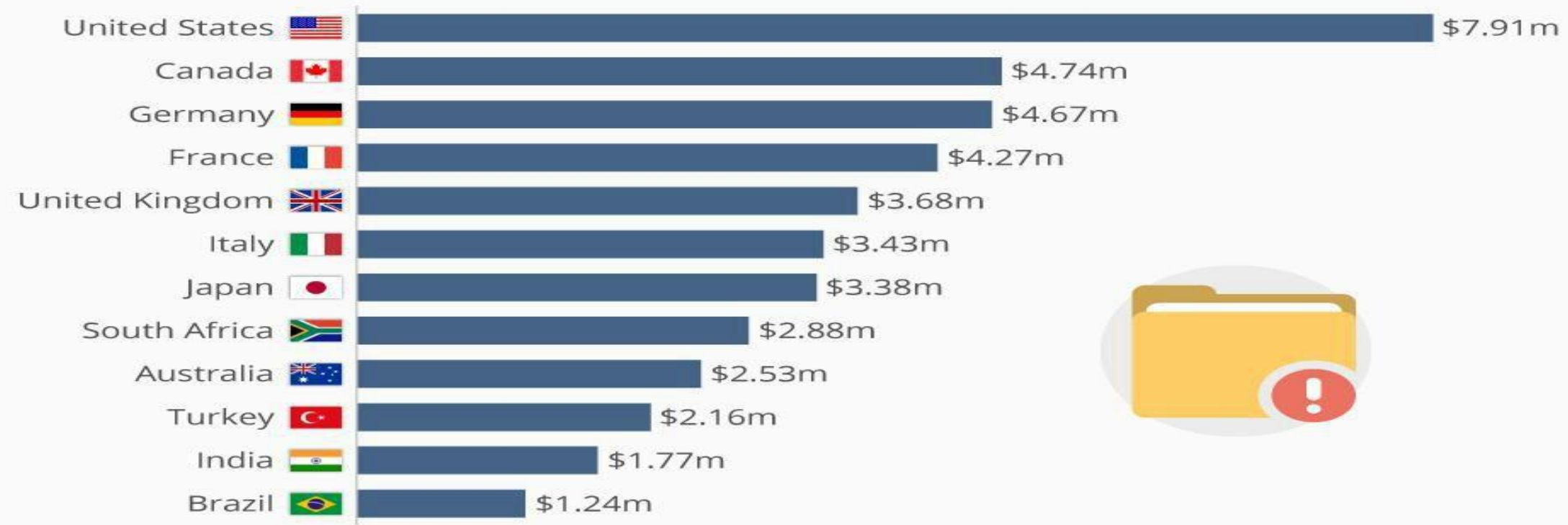


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# Average costs of data breach

## Average Cost Of A Data Breach Highest In The U.S.

Average total cost of a data breach by country in 2018



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Source: IBM

Forbes statista



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# Digital government trends

7

- **Digital government** refers to government designed and operated to take advantage of digital data in optimizing, transforming and creating new government services. (Gartner: July, 2017);
- Digital Government creates new organizational and process designs that not only connect people and government, but also connect people and government with things to meet individual needs and improve government efficiency.



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# Digital government trends – *cont.*

- **Value focus** = departments pursue short and long term political priorities depending on maturity level;
- **Service model** = government VS non-government channels for services. Reactive VS Proactive service provision;
- **Platforms** = digital government platforms consist of IT, constituents, things, ecosystem and data use/ intelligence;
- **Ecosystem** = extent of reliance to suppliers, partners and intermediary when delivering services;
- **Leadership** = leadership involvement in IT and digital strategy development and implementation;
- **Technology focus** = types of technology used more prevalent i.e API, data sharing and use, and connectivity;
- **Key metrics** = number or % of services online, accessible through mobile devices, integrated services, transformed services
- **DETERMINED BY THE MATURITY LEVEL OF AN ORGANIZATION IN THE JOURNEY TO BEING SMART GOVERNMENT**



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# Digital government trends

	E-Government		Open	Data-Centric	Fully Digital	Smart				
Maturity Level	01	Initial	02	Developing	03	Defined	04	Managed	05	Optimizing
Value Focus	Compliance		Transparency	Constituent Value	Insight-Driven Transformation	Sustainability				
Service Model	Reactive		Intermediated	Proactive	Embedded	Predictive				
Platform	IT-Centric		Customer-Centric	Data-Centric	Thing-Centric	Ecosystem-Centric				
Ecosystem	Government-Centric		Service Co-creation	Aware	Engaged	Evolving				
Leadership	Technology		Data	Business	Information	Innovation				
Technology Focus	SOA		API Management	Open Any Data	Modularity	Intelligence				
Key Metrics	% Services Online		No. of Open Datasets	% Improvement in Outcomes, KPIs	% New and Retired Services	No. of New Service Delivery Models				

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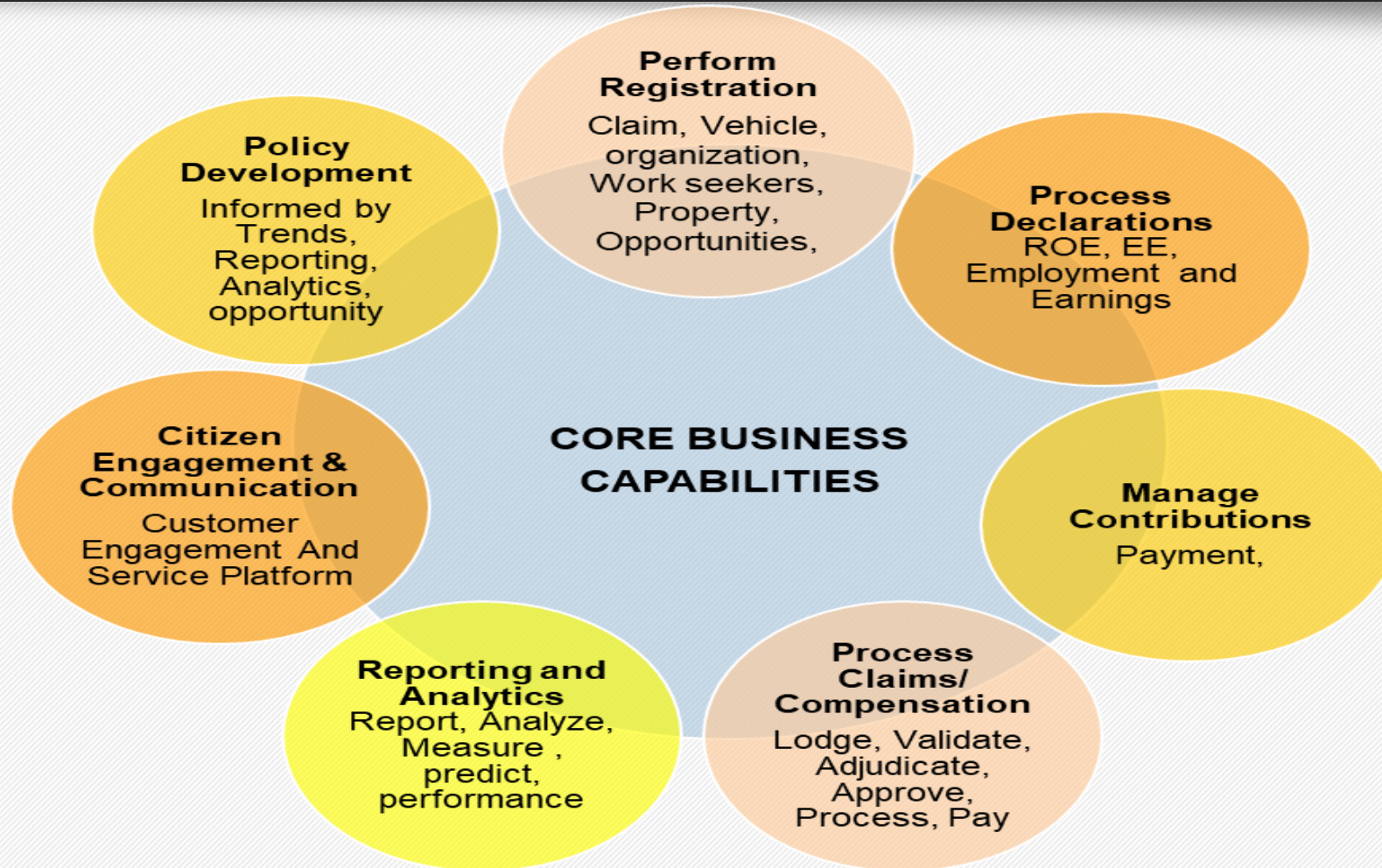


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# PUBLIC SERVICE COMMON FUNCTIONS.



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# Impact of digitalization on jobs

11

- ❑ Digital transformation impacts and transforms all aspects of life as we know them today.
- ❑ Displacement of manual and routine jobs, creation of new jobs in IT and Education.
- ❑ Digitalization impacts jobs from various fronts including 3D printing, self driving cars, medical diagnosis from an x-ray faster than a radiologist using AI and with pinpoint accuracy, Robots manufacturing cars faster and with more precision than assembly line.
- ❑ Digitalization introduces assistive systems/ devices that can compensate for physical or sensory impairment at work.
- ❑ Digitalization allows for ease of monitoring employees by the employer while unions can easily organize and coordinate.
- ❑ Need for employers and employees to work across disciplines and collaborate virtually.
- ❑ Need for managers to develop new skills to manage new forms of work and the people who undertake them.
- ❑ Need for flexibility in work hours and location (**zero-hour as part of the employment contract**)



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# Impact of digitalization on jobs – *cont.*

12

- ❑ Need for de-skilling and reskilling of employees.
- ❑ Contestation between organized labour and the employer.
- ❑ Digitalization leverages Big Data, IoT and Data Analytics to understand trends thus improving customer service and revenue.
- ❑ This leads to double-edge technological effect on jobs and people or work and society.



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# ROLE OF THE GITO IN THE DIGITAL ERA

- ❑ IT Delivery activities delegated to relevant colleagues within the OCIO. Limited and high level GITO involvement.
- ❑ Shift/ change in the skills requirements and job profile of the GITO.
- ❑ Broader responsibilities including on the business strategy formulation and its success.
- ❑ Digitalization expertise and innovation are core to the GITO function.
- ❑ Ideation and change management critical function of the GITO. Less IT Delivery activities.
- ❑ Leadership in the achievement of organizational goals and objectives





# CHANGES IN THE ROLE OF THE GITO

## FROM

IT-outcome-focused

Order-taking

Supporting

Cost-controlling

Process re-engineering

Sourcing

Function-focused

Seeking parity

Within IT

IT-risk-focused

## TO

Business-outcome-focused

Collaborative agenda-setting

Compelling

Revenue-building

Data-exploiting

Creating

Platform-focused

Seeking differentiation

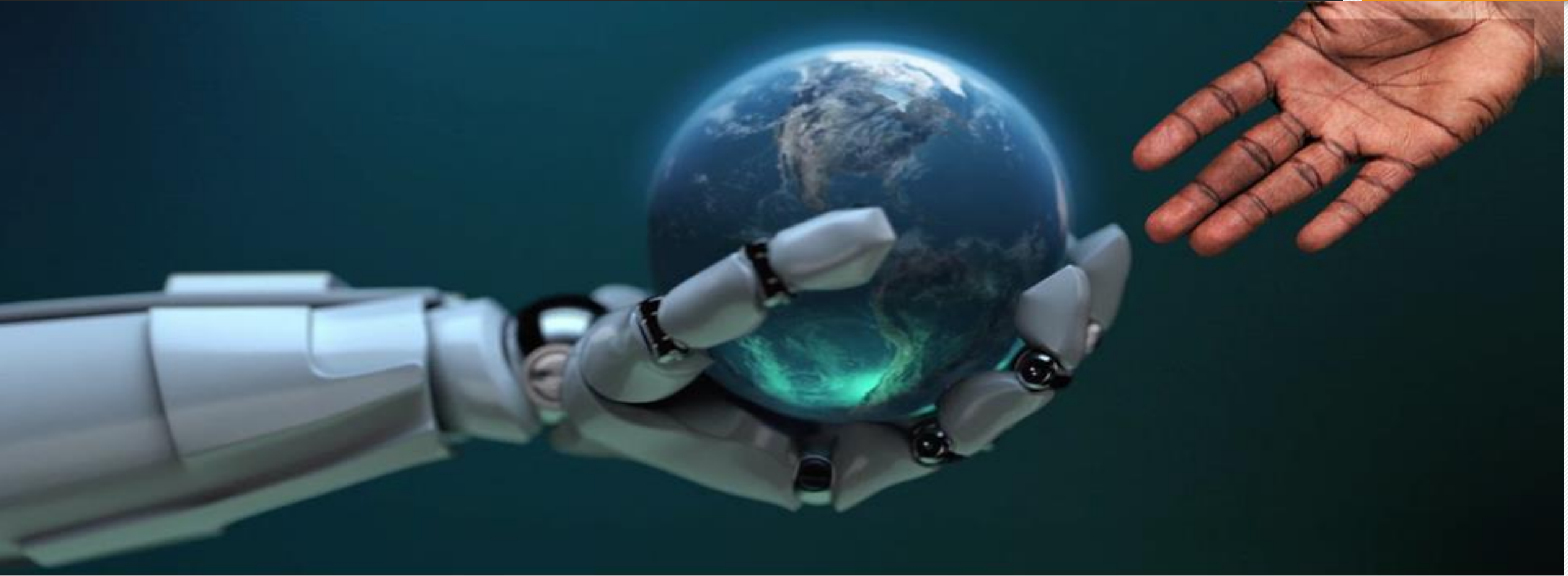
Everywhere

Business-risk-focused



**Before this happens!!!**

15



# Recommendations for a Safer Cyber-life

- ❑ Understand your technology and do a checklist of all your technology at home.
- ❑ Prepare a list of these technologies and know what is connected to the Internet and what is not connected to the Internet.
- ❑ Prepare a list of all the technology owned by your children and spend time in knowing what it does.
- ❑ Revisit and think about how you manage your **passwords** and have a clear password management process, with different passwords for different platforms and make sure their passwords are strong, with CAPITALS, numbers and special characters such as (% , ^ , & etc). Don't use the same password on Facebook or social media for your work-related activities. **YOU MUST NOT USE THE SAME PASSWORD FOR EVERYTHING.**
- ❑ Make sure all your digital devices have an antivirus software, especially the mobile devices. Many phones these days are SMART phones, and as such they need to be protected online.
- ❑ Ensure that you allow the updating of the software on all your digital technology.
- Live a proper Internet and social media life. Be very careful on what you put on social media. Always know that what you post online is viewed by other people, if not most of the people around you.



Dankie / Thank you / Ngiyathokoza

Enkosi / Ngiyabonga / Ke a leboga

Ke a leboha / Ndi a livhuwa

Ndza khensa



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