Presentation outline

- Purpose of the presentation
- Industrial Revolution Continuum
- Characteristics of the 4th Industrial Revolution
- Digital government trends
- Public Service Common functions
- Impact of digitalization on jobs
- Changing role of the GITO/ CIO
- Recommends
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 **1st Industrial Revolution** spanned 1760 to 1840, epitomized by the **steam engine** (locomotives, ships, etc).

- The **2nd Industrial Revolution** started in the late 19th century epitomized by **mass production** (industrialization, machine).

- The **3rd Industrial Revolution** began in the 1960s epitomized by **mainframe computing and semi-conductors**.

- The **4th Industrial Revolution** is current and epitomized by the “**confluence of new technologies and their cumulative influence on the World**”.
Characteristics of the 4th 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 4th 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.
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

<table>
<thead>
<tr>
<th>Country</th>
<th>Cost (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>$7.91m</td>
</tr>
<tr>
<td>Canada</td>
<td>$4.74m</td>
</tr>
<tr>
<td>Germany</td>
<td>$4.67m</td>
</tr>
<tr>
<td>France</td>
<td>$4.27m</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>$3.68m</td>
</tr>
<tr>
<td>Italy</td>
<td>$3.43m</td>
</tr>
<tr>
<td>Japan</td>
<td>$3.38m</td>
</tr>
<tr>
<td>South Africa</td>
<td>$2.88m</td>
</tr>
<tr>
<td>Australia</td>
<td>$2.53m</td>
</tr>
<tr>
<td>Turkey</td>
<td>$2.16m</td>
</tr>
<tr>
<td>India</td>
<td>$1.77m</td>
</tr>
<tr>
<td>Brazil</td>
<td>$1.24m</td>
</tr>
</tbody>
</table>

Source: IBM
Digital government trends

- **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.
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**
### Digital government trends

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

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PUBLIC SERVICE COMMON FUNCTIONS.

CORE BUSINESS CAPABILITIES

Policy Development
- Informed by Trends, Reporting, Analytics, opportunity

Citizen Engagement & Communication
- Customer Engagement And Service Platform

Perform Registration
- Claim, Vehicle, organization, Work seekers, Property, Opportunities,

Process Declarations
- ROE, EE, Employment and Earnings

Manage Contributions
- Payment,

Reporting and Analytics
- Report, Analyze, Measure, predict, performance

Process Claims/Compensation
- Lodge, Validate, Adjudicate, Approve, Process, Pay

We Belong
We Care
We Serve

the dpsa
Department: Public Service and Administration
REPUBLIC OF SOUTH AFRICA

Batho Pele
Putting People First
Impact of digitalization on jobs

- 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)
Impact of digitalization on jobs – cont.

- 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.
 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

<table>
<thead>
<tr>
<th>FROM</th>
<th>TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT-outcome-focused</td>
<td>Business-outcome-focused</td>
</tr>
<tr>
<td>Order-taking</td>
<td>Collaborative agenda-setting</td>
</tr>
<tr>
<td>Supporting</td>
<td>Compelling</td>
</tr>
<tr>
<td>Cost-controlling</td>
<td>Revenue-building</td>
</tr>
<tr>
<td>Process re-engineering</td>
<td>Data-exploiting</td>
</tr>
<tr>
<td>Sourcing</td>
<td>Creating</td>
</tr>
<tr>
<td>Function-focused</td>
<td>Platform-focused</td>
</tr>
<tr>
<td>Seeking parity</td>
<td>Seeking differentiation</td>
</tr>
<tr>
<td>Within IT</td>
<td>Everywhere</td>
</tr>
<tr>
<td>IT-risk-focused</td>
<td>Business-risk-focused</td>
</tr>
</tbody>
</table>

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**The DPSA**

**Batho Pele**

*Putting People First*

- We Belong
- We Care
- We Serve
Before this happens!!!
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.

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**Batho Pele**

*Putting People First*

**DPSA**

*Department of Public Service and Administration*

*Republic of South Africa*
Dankie / Thank you / Ngiyathokoza
Enkosi / Ngiyabonga / Ke a leboga
Ke a leboha / Ndi a livhuwa
Ndza khensa