Mr Kefilwe Madingoane,
OVERVIEW

1. Brief introduction
2. Technological trends
3. Challenges for governments
4. Digital Transformation building blocks, value chain, benefits
5. Some advanced digital transformation programs
6. Digital Transformation efforts in Africa
7. Closing remarks

Setting the scene
WHO ARE WE: INTEL CORPORATION TODAY

The World’s Largest Semiconductor Manufacturer

- Leading Manufacturer of Computer, Networking and Communications Products
- Headquartered in Santa Clara, California
- $55.9B in Annual Revenues - 25+ Consecutive Years of Positive Net Income
- Over 107,000 Employees, 170 Sites in +70 Countries
- 1st World’s Most Admired Semiconductor Company by Fortune
- 14th Best Global Brands by Interbrand
- 6th America’s Most Reputable Technology Companies by Forbes
The importance of being earnest
Doing the right things right

Reputation Institute's The 25 Most Reputable Technology Companies - #6
Reputation Institute's Global RepTrak®: World's Most Reputable Companies - #10
CRO Magazine's Best Corporate Citizens - #7
Glassdoor's Highest Rated CEOs– Brian Krzanich ranked #39 (out of 50)
4 Million hours of volunteer service to improve education over the last decade

Fortune's World's Most Admired Companies – #40
Ethisphere's World's Most Ethical Companies
Working Mother’s 100 Best Companies
Fortune’s Most Powerful Women - Diane Bryant #43
Diversity MBA’s 50 Out Front Places for Women & Diverse Managers to Work - #16
Fortune's Change the World List - #39
Largest Voluntary Purchaser of Green Power in the United States since 2008
EPA's National Top 100 Green Power Users - #1
EPA's 100% Green Power Users - #1
Global 100 Most Sustainable Corporations - #56
Newsweek’s Green Rankings on Us - #71
THE WORLD IS REACHING AN ACCELERATED INNOVATION WAVE

RISE OF THE CONNECTED, “AS A SERVICE” WORLD DISRUPTS ENTIRE INDUSTRIES

...YET, 60% OF THE WORLD’S POPULATION ARE STILL UNCONNECTED

Source: Internetlivestats.com; Intel 4004 photo: Hellisp / Wikipedia; Compaq portable photo: Geni / Wikipedia; iPad photo: mama_mia / Shutterstock.com; iPhone photo: Zeynep Demir / Shutterstock.com
Predictable Silicon Track Record
Executing to Moore’s Law

50TH ANNIVERSARY 2015

Enabling new devices with higher functionality and complexity while controlling power, cost, and size
THE INTERNET OF THINGS (IoT)

IoT will drive the next frontier of digital transformation for business, government and society as a whole.

Devices that connect to the Internet, integrating greater compute capabilities using data analytics to extract information.
Governments of the future will be...

Government services become seamless and painless to citizens to use.

Commercial Services set the bar for Government Services delivery.

Private partnership to replace govt operation.

Gov't need to accelerate Policy, Legislation and Trust i.e. Inclusion of citizens and Business to help to transform Government.

Government uses real-time data as a basis of decision making and Policy changes. Adjust for future trends i.e. sectorial, unemployment.

Advanced Technology will greatly impact Government on revenue and infrastructure spending.

The need for electronic ID will require massive changes to regulations, laws and citizen trust and culture.
**Key Building Blocks to Digital Transformation**

**Infrastructure**
- Electricity is available, affordable and reliable
- National Broadband Strategy (wired & wireless)
- Accessibility and Affordability of access
- Quality & Reliability of network (bandwidth & up time)

**Human Capital Development**
- Digital Inclusion (access, knowledge and skill)
- Digital Literacy (Technology savviness)
- Empowered all citizen (women ~ 50% pool of Talent)
- Capacity Building
- ICT capable government employees

**Policy, Legal & Regulatory framework**
- Political, Economic & Social Openness
- Enable & accelerate key ICT infrastructure development
- Create Open & Sustainable Competitive market
- E-Governance / E-Services friendly
- Accelerate Public-Private Partnerships

**Digital Government Platform**
- Optimized Data Center
- Cloud based Infrastructure, Analytics
- EID & End user Device
- Security, Network, Open-Data, Open API
- E-Services platform, Government Portal

**Funding Models**
- Need sustainable funding model across ecosystem
- Governments need to co-invest to drive infrastructure programmes
- Universal Service Funds can be used to drive devices, connectivity and training
- Universal Service obligations linked to high-demand spectrum: 700MHz, 800MHz

**Privacy, Security, Integrity**
- Openness & Transparency foundational
- Build culture of trust – Government/Citizen/Business
- Strong Policy & Legislation on confidentiality/Privacy/Transparency
- Personal Data Protection - Ownership and Usage need to be controlled & audit by users
- Cybersecurity by design

**Digital Economy**
- Financial Inclusion
- Digital Payment capability
- Entrepreneurship & Innovation
- Fraud reduction
- Credit availability

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**Monitoring for Results**

1. Infrastructure
2. Human Capital
3. Policy, Legal & Regulatory
4. Digital Government Platform
5. Digital Economy
6. Privacy Security Integrity
7. Funding Models
8. Monitoring for Results
The key challenge for governments is to manage the end-to-end value-chain to ensure that it is sustainable over the long-term.

Digital Transformation Value Chain

International, National and Access Infrastructure rollout

Data Centre capacity & analytics tools

End-user device supply and support

Application development

Content development

Training

Public-Private partner collaboration

Upstream supply

Downstream demand
KEY BENEFITS OF DIGITAL TRANSFORMATION

Economic Impact
- GDP Growth
- Job Creation
- Innovation

Social Impact
- Quality of life
- Citizen Happiness
- Services, Education, Healthcare, etc.

Governance Impact
- Increase Public participation
- Transparency, accountability
- Greater efficiency for better public services
DIGITAL COUNTRY TRANSFORMATION ACTIVITIES AROUND THE WORLD
DIGITAL COUNTRY TRANSFORMATION: E-ESTONIA

DIGITAL IDENTITY
DIGITAL SIGNATURE
E-BUSINESS REGISTER
E-LAW

DIGITAL COUNTRY TRANSFORMATION: E-ESTONIA

RE-IMAGINING THE COUNTRY FOR THE NEW ECONOMY

E-RESIDENCY   DATA EMBASSY   NO LEGACY LAW
Impact of High Digitization

- Open business in 18 minutes
- Declare Taxes in 3 minutes - 95% of Estonians
- Digital Signature saves 2% of GDP per year
- i-Voting 2.5 time cheaper
- 33% less queues in Hospital
- 84% of prescriptions are issued digitally
- The Health Information Exchange HIE is used by over 98% of its population and national healthcare costs have fallen to 6% of GDP, making it Europe’s most cost effective
- Visits to the Estonia Tax and Customs Board reduced by more than 60%. In the first 9 months of 2015 Estonian Companies have paid 125m euros more in VAT than previous years.

https://e-estonia.com/components/
**OTHER DIGITAL TRANSFORMATION INITIATIVES THAT HAVE ADVANCED**

<table>
<thead>
<tr>
<th>Country</th>
<th>Initiative</th>
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<tbody>
<tr>
<td><strong>SINGAPORE:</strong></td>
<td>- On-track to build the first smart nation to empower business and citizens</td>
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<td><strong>INDIA:</strong></td>
<td>- India has launched Digital India to power-up citizen participation in the economy</td>
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<td><strong>DUBAI:</strong></td>
<td>- Developing a digital smart city to improve business efficiencies and deliver quality of life for citizens</td>
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<td><strong>EUROPEAN UNION</strong></td>
<td>- EU engaging on development of <em>single digital market</em></td>
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<td></td>
<td>- To improve trade in digital goods &amp; services across Europe</td>
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DIGITAL TRANSFORMATION EFFORTS IN AFRICA

- **Morocco** – Government developed e-Consultation platform for online access of legislative text and engagement with government
- **Kenya** – Established a national digital learning program to drive primary education
- **Nigeria** – Has introduced Digital ID for public servants and saved more than US$1 Bn
- **Senegal** – Government has assisted university students and teachers to acquire computers through tax breaks, loan guarantees and subsidies
- **South Africa** – Electronic tax filling has improved efficiencies in the filling of tax returns and improved revenue collection
- **Cote d'Ivoire** – Implementation of the African digital schools Initiative to improve the quality of education training and research

- **Smart Africa Alliance initiative** – Smart Africa in collaboration with Africa Development Bank and intel Corporation have developed a Digital Government blueprint that outlines steps for governments to follow to implement sustainable digital programmes

- **Dubai Action Plan Regional initiatives (WTDC-10):**
  - **Centres of excellence** for human and institutional capacity building (Kenya, Togo, Rwanda, South Africa, Uganda, Angola, Senegal)
  - **Harmonization of ICT Policies in SSA** – has resulted in a number of countries publishing their ICT policies
WHERE TO BEGIN?

• Embrace what is happening and the urgency to act
• Get support from the highest levels of government
• Elevate digital economy transformation to the national agenda
• Align policy, legislation, institutional arrangements and resources to support the digital transformation agenda
• Develop and Align Digital Country Strategy with national Economic, Social and Political priorities – **must be government driven but citizen focused**
• Involve & communicate the Digital Strategy Plan to all key stakeholders (Political, Academia, Citizen, Business)
THANK YOU