



ICT IMPERATIVES & THE DEVELOPMENT OF AFRICA

A TOTAL MAN CONCEPT (TMC)
PG LECTURE

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Vision of Covenant University

To be a leading **World-Class** Christian Mission **University**, committed to raising a new generation of leaders in all fields of Human endeavour.



Mission of Covenant University

To create knowledge and restore the dignity of the black man via a Human Development **Total Man Concept** driven curriculum employing innovative, leading-edge teaching and learning methods, research and professional services that promote integrated, life-applicable , life-transforming education, relevant to the context of Science, Technology and Human Capacity Building.

ICT *Defined*



Information and Communication Technologies

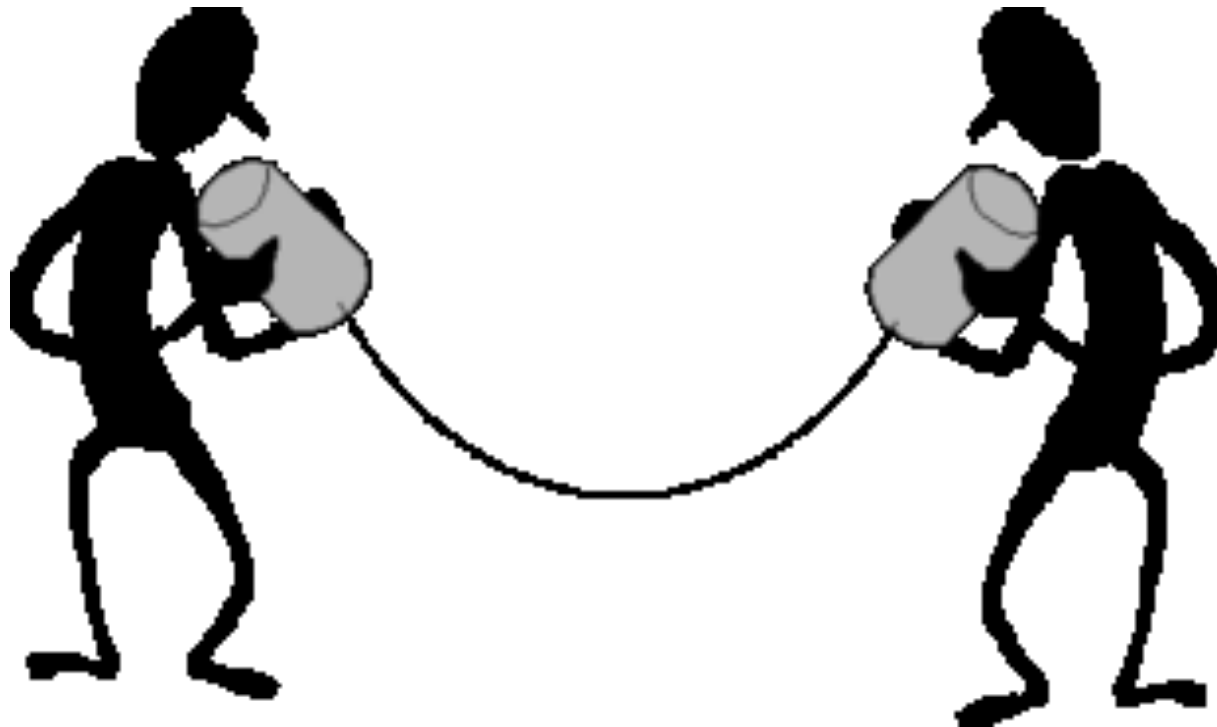
- Often used as an extended synonym for Information Technology
 - “Technologies that provide access to information through telecommunications. ... This includes the internet, wireless networks, cell phones, and other communication mediums.” [a]

Technologies required for the effective communication of information.

[a] <http://www.techterms.com/definition/ict>.

ICT *Defined*

- Information – Content
- Communication – Conduit
- Technology – Means and Methods



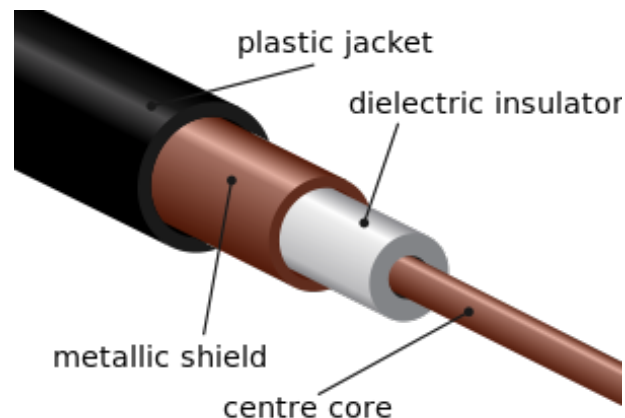
Information

- Information – *Content*:
 - **Text**: *.txt, .pdf, .docx, ...*
 - **Audio**: *.wav, .mp3, .aac, ...*
 - **AudioVisual**: *.wmv, .mpg, .mp4, ...*
et cetera

Communication Technologies

Communication channel – *Conduit*:

- **Wired modes:**
 - *Copper wire*
 - *Twisted-pair cable,*
 - *Coaxial cables,*
 - *Optical Fibre*



Communication Technologies:



- **Wireless modes:**

- *Radio Frequency communication*

- *Microwave communication*

- *Infrared communication*

Infrared	750 nm – 1 mm	400 THz – 300 GHz
Microwave	1 mm – 1 meter	300 GHz – 300 MHz
Radio	1 mm – 100,000 km	300 GHz – 3 Hz

- **Hybrid mode:**




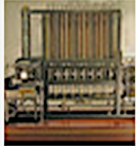
- *Combination over both wired and wireless modes.*

- *e.g. using VSAT as last mile solution for optical fibre communication of signals received from a microwave link.*

Technologies

Means and Method of communicating desired content (information) over a suitable conduit (communication channel).

ICT *Timeline*

Event Date:	Event Title:
 <p>1st Jan, 1604</p>	Mechanical calculators are manufactured for sale
 <p>1st Jan, 1801</p>	Punch cards used for programming a machine
 <p>1st Jan, 1820</p>	Charles Babbage starts his reseach
 <p>2nd Jan, 1822</p>	Babbage's Difference Machine

 <p>9th Oct, 2004</p>	Social Networking - Internet
 <p>23rd Feb, 2005</p>	YouTube Launched - Internet
 <p>23rd Nov, 2007</p>	Mobile Internet Access

Source: <http://www.timetoast.com/timelines/27704>



ICT Development Index (IDI)

- Published by United Nations ITU
- Based on internationally agreed ICT indicators
- Used for measurement of digital divide
- The 11 *agreed* ICT indicators are are grouped in three clusters:
 - Access / Use / Skills
- *Access – ICT Readiness*
 - Fixed-telephony, mobile telephony, international Internet bandwidth, households with computers, and households with Internet.
- *USE – ICT Intensity and Usage*
 - Internet users, fixed (wired)-broadband, and mobile broadband.
- *Skills – Capacity*
 - adult literacy, gross secondary enrolment and gross tertiary enrolment

IDI Top 30 as at 2011



Rank ▲	Country ⇅	Score ⇅
1	 South Korea	8.56
2	 Sweden	8.34
3	 Denmark	8.29
4	 Iceland	8.17
5	 Finland	8.04
6	 Netherlands	7.82
7	 Luxembourg	7.76
8	 Japan	7.76
9	 United Kingdom	7.75
10	 Switzerland	7.68
11	 Hong Kong	7.68
12	 Singapore	7.66
13	 Norway	7.52
14	 Macao	7.51
15	 United States	7.48

16	 Germany	7.39
17	 New Zealand	7.34
18	 France	7.30
19	 Austria	7.10
20	 Ireland	7.09
21	 Australia	7.05
22	 Canada	7.04
23	 Belgium	6.89
24	 Estonia	6.81
25	 Slovenia	6.70
26	 Malta	6.69
27	 Israel	6.62
28	 Spain	6.62
29	 Italy	6.28
30	 Qatar	6.24

Source: http://en.wikipedia.org/wiki/ICT_Development_Index

ICT Imperatives {*essentials*}



- These essentials are presented as modules at the Academy of ICT Essentials for Government Leaders {<http://www.unapcict.org/>}.
- The academy was set up by UN Asian Pacific Training Centre for ICT4D
- 53 Member states (9 Associate members)
 - UK/France/China/Japan/Australia/India/Korea/Russia...
 - Most are in the ***Top 30 IDI list***

ICT Imperative Modules

ICT Imperatives for the Development of Africa



1. The Linkage between ICT Applications and Meaningful Development
2. ICT for Development Policy, Process and Governance
3. e-Government Applications
4. ICT Trends for Government Leaders
5. Internet Governance
6. Network and Information Security and Privacy
7. ICT Project Management
8. Options for Funding ICT for Development
9. ICT for Disaster Risk Management
10. ICT, Climate Change and Green Growth
11. Social Media for Development

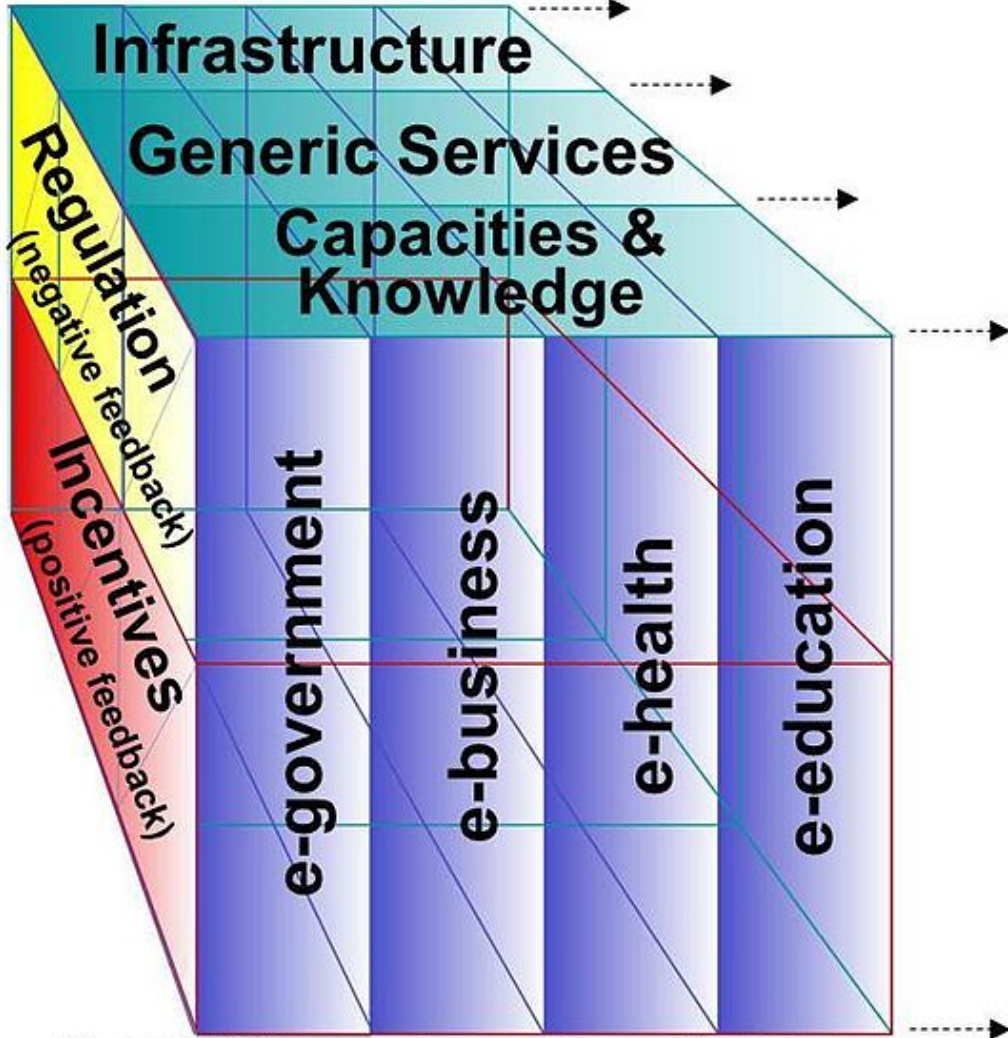
Modules' Objectives



- Provide a comprehensive ICT4D programme catered to policymakers and government leaders while ensuring the content will be mostly non-technical in nature;
- Develop the content in a modular format to maximize flexibility to meet the needs of context-specific learning situations;
- Develop the content for delivery over a variety of multimedia platforms to maximize learning and minimize job disruption for the participants;
- Disseminate the content widely by ensuring that the course materials are developed as open educational resources, whereby trainers in developing countries can take part in the training and then have access to the resources to guide others through the training; and
- Promote cooperation by encouraging the utilization of the developed open educational resources to be used for ICT4D training of policymakers and government officials in other developing regions, including Africa and Latin America

ICT4D Cube

Technology – Society – Policy



Source: Hilbert, M. (2012). Towards a Conceptual Framework for ICT for Development: Lessons Learned from the Latin American “Cube Framework”. *Info. Techn. & Internat. Jv. ITID*, 8, 4, pp. 243–259; <http://itidjournal.org/itid/article/viewFile/967/408>



Conclusion

- The ICT imperatives necessary for the development of Africa are as given in the modules above
- Since the development of any region is essentially a function of the effectiveness of its leadership,
- If everybody in leadership position becomes proficient in ALL the eleven modules, they cannot but transform the African landscape.



THANK YOU!