

# **NEW TECHNOLOGIES FOR ACCELERATION OF SDGs IN AFRICA: THE UGANDAN, NIGERIAN AND GHANAIAN APPROACHES.**

**Sarah Kakuru Rwotolonya-Bishop Stuart University, Uganda**

**Anuoluwa Awodoyin – Tai Solarin University of  
Education, Ijagun, Nigeria**

**Afrane Daniel Akwasi – University of Ghana**

**Ronald Kimanje – Ndejje University, Uganda**

*CARNEGIE CAPSTONE CONFERENCE PRESENTATION*

*29<sup>th</sup> /03/2019*

*UNIVERSITY OF PRETORIA*

## **Outline**

❖ Introduction

❖ New Technologies for SDG's acceleration in Africa:

- ☐ The Ugandan Approach
- ☐ The Nigerian Approach
- ☐ The Ghanaian Approach
- ☐ The Ugandan Approach

❖ Conclusion

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## Introduction

The end of MDGs in 2015, ushered in 17 SDGs & 159 targets to be achieved by 2030.

However, 22 of the 159 targets look at the application of technologies for sustainable development.

Key among the targets;

- Developing sustainable and resilient technological infrastructure,
- Increasing access to ICTs,
- Facilitating access to information

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## Introduction cont....

Which are meant to:

- Facilitate timely access to market information
- Improve Agricultural productivity
- Economically empower the disadvantaged
- Promote access to education, research and information
- Monitor Health, related issues, and create awareness
- Create innovativeness, job creation, and employment
- Promote International cooperation, knowledge & Inf. sharing

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## Introduction cont...

For digital, social and Financial inclusion;

Political transparency & accountability;

Economic and sustainable development.

The continuous changes in the ICT landscape will continue to play a leading role in Sustainable Development.

In which access to information will accelerate development.

Such new technologies of the digital era include:

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## Introduction Cont....

### NEW TECHNOLOGIES

#### ICTs

- Internet of Things (IoT)
- Information Systems
- Computers
- Smart Mobile Devices

#### EDUCATIONAL TECHNOLOGY

- Learning/Training MGT Systems
- MOOCs
- Online Machine learning
- Training MGT Systems

#### BIOTECHNOLOGY

#### ARTIFICIAL INTELLIGENCE

- Robotics
- 3D Printing
- OCR

- Food Production (Agriculture)
- Medicine (Pharmaceutical)

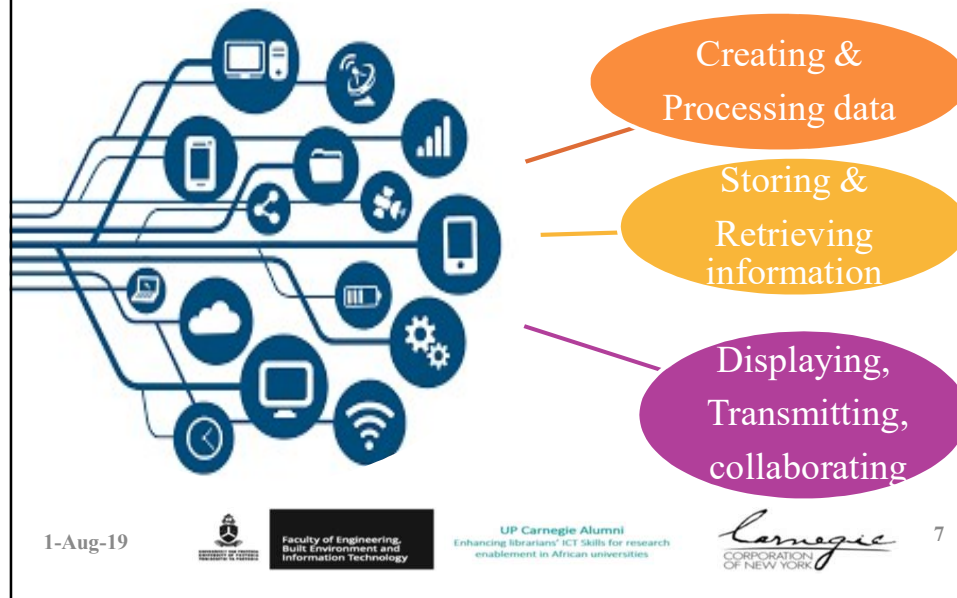
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## Introduction cont....

Application of such technologies are instrumental in:



## Introduction cont....

When appropriately adopted will lead to



## New Technology adoption for SDG's acceleration in Uganda

### Poverty Eradication

- ☐ Agriculture
- ☐ SMEs
- ☐ Mobile Banking
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- ☐ Village Phone Project

### Elimination of inequalities

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### Environmental sustainability

- Smart street lighting-AI
- Renewable Energy
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## New Technology in Uganda Cont....

### Quality Education

- ❖ Monitoring Education
- ❖ ICT application in schools
- ❖ University Education
- ❖ E-resources
- ❖ Institutional Repositories
- ❖ Virtual learning
- ❖ Digitisation
- ❖ Circulation & Marketing
- ❖ WAN, LAN, Wifi

### Good Health

- ✓ Telemedicine
- ✓ Monitoring surveillance &
- ✓ Medical tracking
- ✓ Information Dissemination

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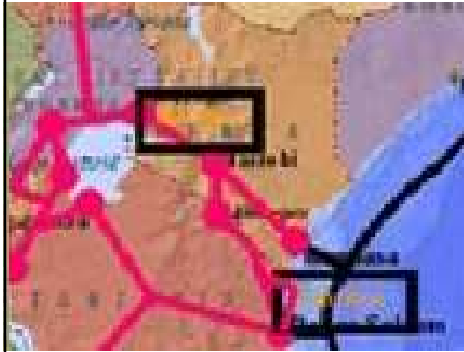
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## New Technology in Uganda Cont....



### Infrastructural Development

-Satellite, VSTA

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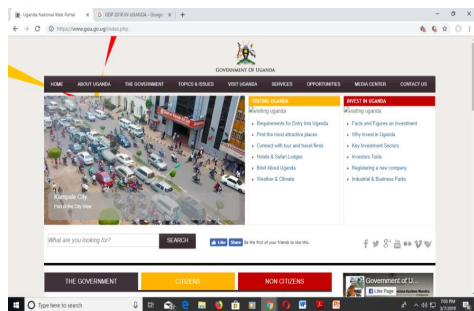


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## New Technology in Uganda Cont....



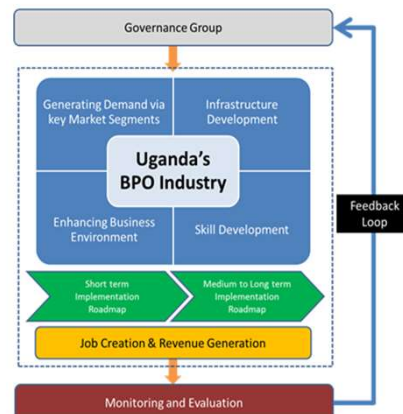
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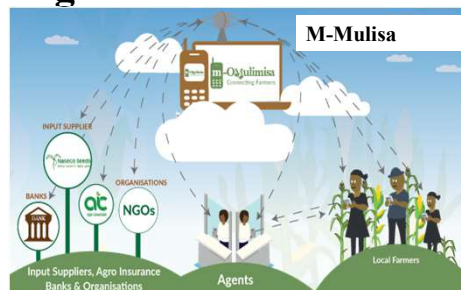
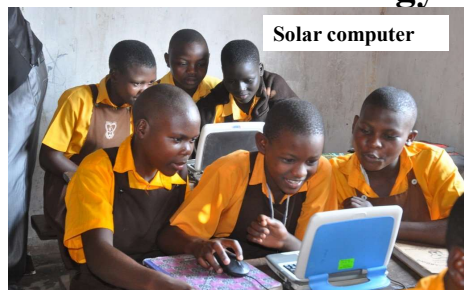
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Source: BPO Strategy and Model for Uganda 2012

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## SDGs acceleration in BSU

E-Learning  
platform

Digitization of local content

Social Media  
platforms

Institutional  
Repository

4 QUALITY  
EDUCATION



Policies-ICT,  
E-Learning

Wireless  
technologies

E-PROXY

Internet

Subscription  
to E-resources

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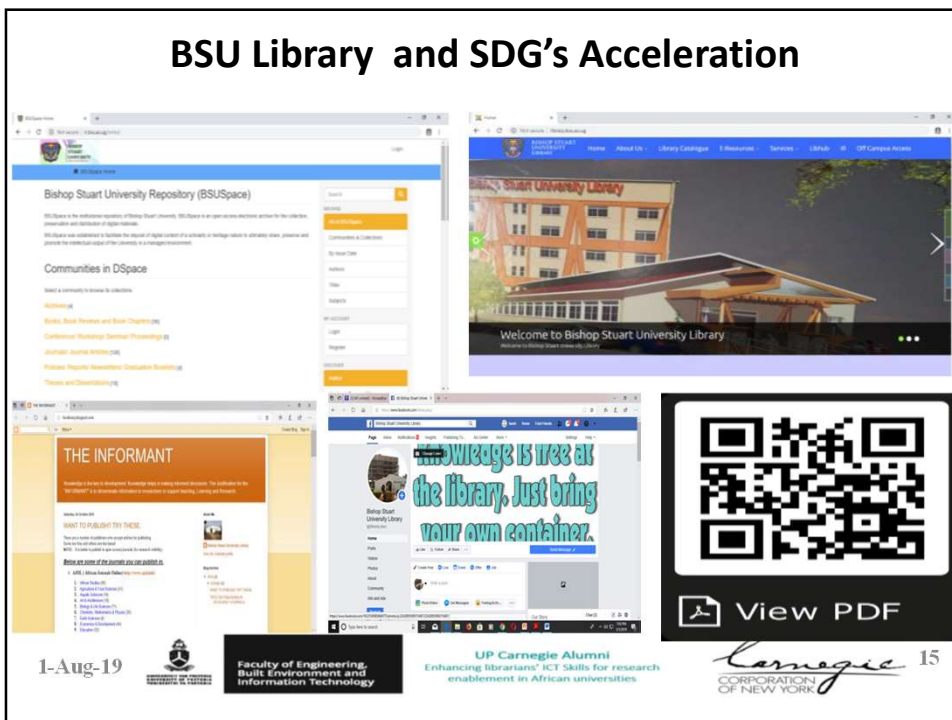
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**The knowledge held in libraries is  
key to achieving the SDGs.  
Our duty is to mobilize and  
share it globally.**

FRANCESCO PISANO, DIRECTOR,  
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## **New Technology adoption for SDG's acceleration in Nigeria and Tai Solarin University of Education**

- Technology
- Characteristics of technology
- Information Communication Technology offers an incredible platform for achieving the SDGs (Sachs et al., 2016)
- Technology age bracket: 80.01% of Nigerians are between the ages of 9 and 64.
- Coordinator of the SDGs in Nigeria: OSSAP-SDGs

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## **New Technology adoption in Nigeria and Tai Solarin University cont....**

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## New Technology adoption in Nigerian and Tai Solarin University cont....

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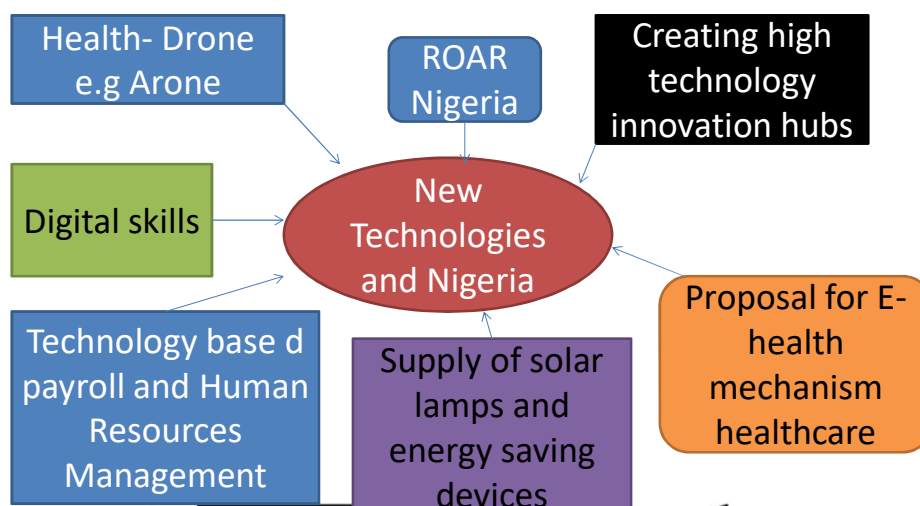
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## New Technology adoption in Nigeria cont....



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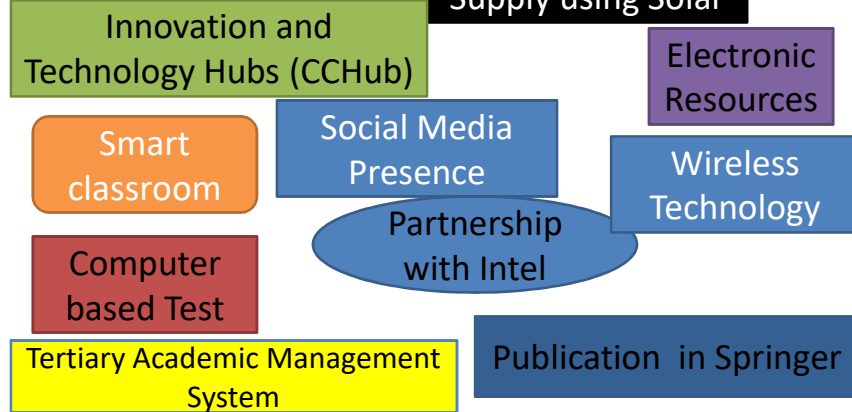
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## New Technology adoption in Tai Solarin University cont....

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BSU Smart Campus & E-learning Project

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# NEW TECHNOLOGIES FOR the ACCELERATION OF SDGS IN AFRICA: The Ghanaian Experience

AFRANE DANIEL AKWASI  
(Balme Library)



UNIVERSITY OF GHANA

APPLICATION OF TECHNOLOGIES BY GOV'T, LIBRARIES AND OTHER STAKE HOLDERS TO PROMOTE SDG'S



**FEED THE FUTURE**  
The U.S. Government's Global Hunger & Food Security Initiative

- Feed the Future Global Hunger and Food Security Initiative.  
Over 156 THOUSAND Producers in Ghana using new technologies  
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Sources: <https://usaid.gov/ghana/agriculture>, <https://moe.gov.gh>



## APPLICATION OF TECHNOLOGIES BY GOV'T, LIBRARIES AND OTHER STAKE HOLDERS TO PROMOTE SDG'S



The Balme Library of the University of Ghana has adopted technologies that provide services to its users, the University community and the world at large.

- ❖ Subscription to databases for research support
- ❖ Training programs on the use of Electronic resources and other IT infrastructure.
- ❖ Assistive Technologies (Department for students with special needs)
- ❖ Sakai Learning Management System improves teaching and learning efforts.

## APPLICATION OF TECHNOLOGIES BY GOV'T, LIBRARIES AND OTHER STAKE HOLDERS TO PROMOTE SDG'S



- Digitisation project and IR to promote scholarly publication of the University. This initiative highlights the library's support to the Open Access initiative



- The Library is visible on Social Media platforms such as Facebook, Twitter, Flickr, and Instagram where vital information are shared with users.
- The Library has a new interactive website with a chat the librarian platform that allow users to chat live with a professional librarian to address issues.
- Anti-theft system and CCTV implemented to ensure security of resources.
- Expansion of reading and interaction spaces with internet access



[www.ug.edu.gh](http://www.ug.edu.gh), [www.carligh.info](http://www.carligh.info)

APPLICATION OF TECHNOLOGIES BY GOV'T, LIBRARIES AND OTHER STAKE HOLDERS TO PROMOTE SDG'S



- CARLIGH provides shared online facilities among member Institutions across the country
- They organise periodic training programs to equip librarians from member institutions with IT skills and connect them to partner and funding agencies.

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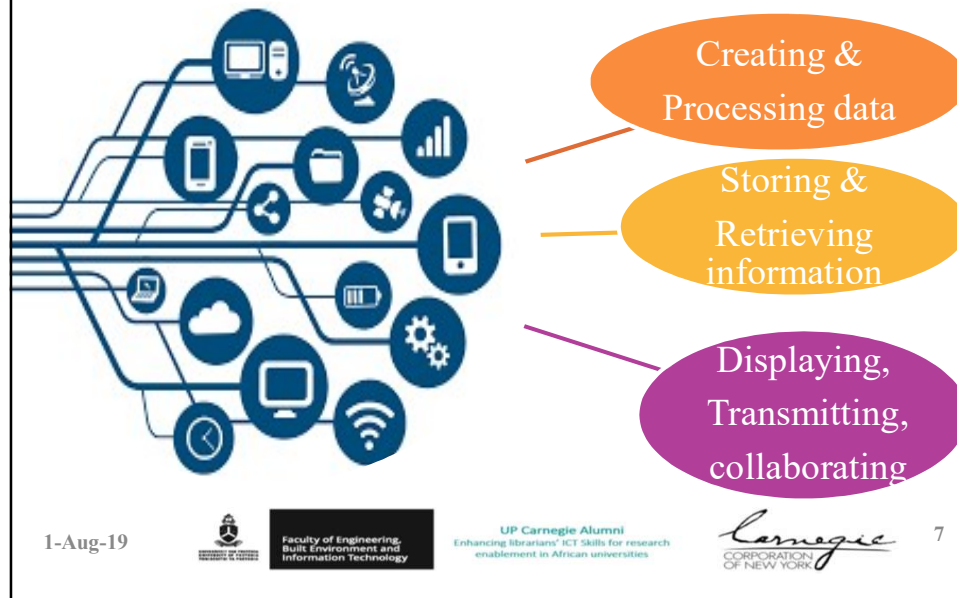
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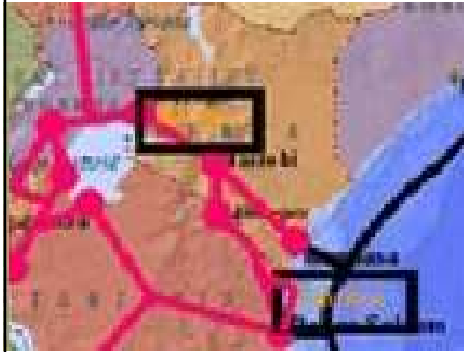
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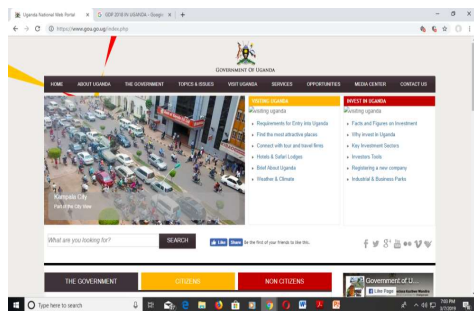


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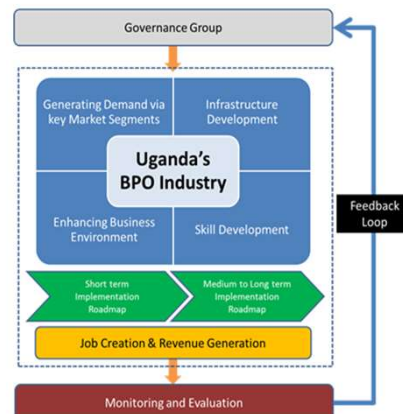
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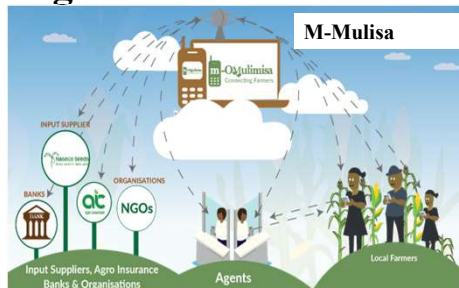
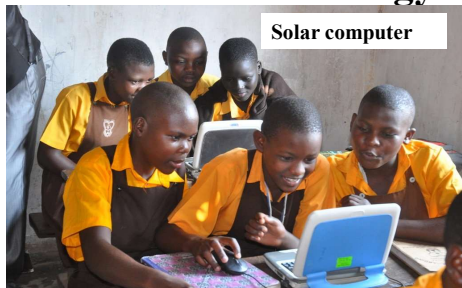
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Source: BPO Strategy and Model for Uganda 2012

## New Technology in Uganda Cont....



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## SDGs acceleration in BSU

E-Learning  
platform

Digitization of local content

Social Media  
platforms

Institutional  
Repository

4 QUALITY  
EDUCATION



Policies-ICT,  
E-Learning

Wireless  
technologies

E-PROXY

Internet

Subscription  
to E-resources

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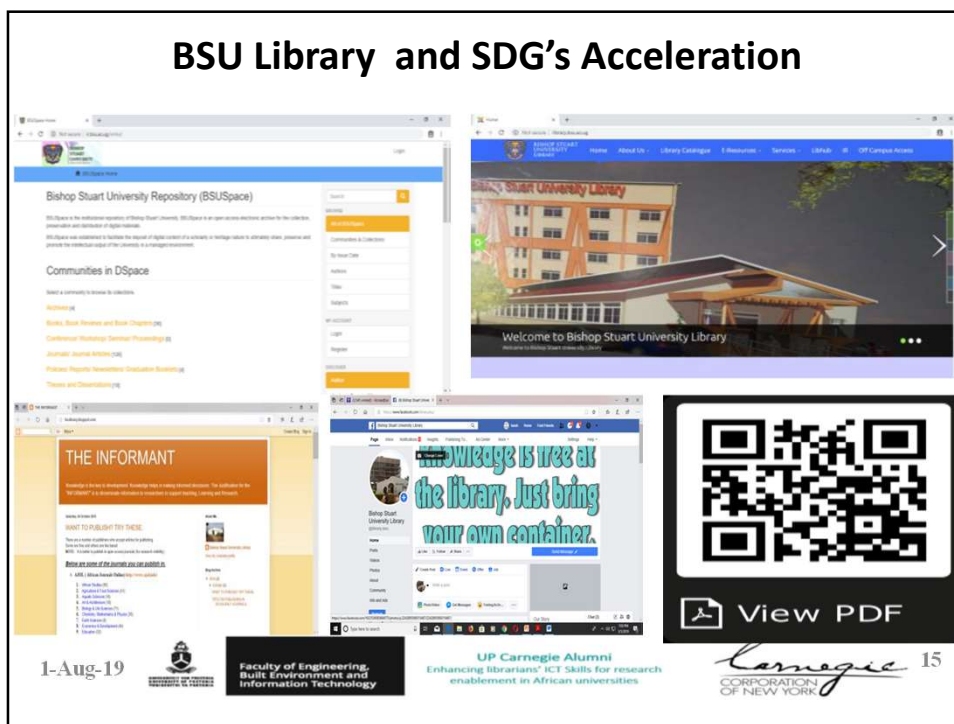
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## BSU Library and SDG's Acceleration



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## BSU Stories in pictures



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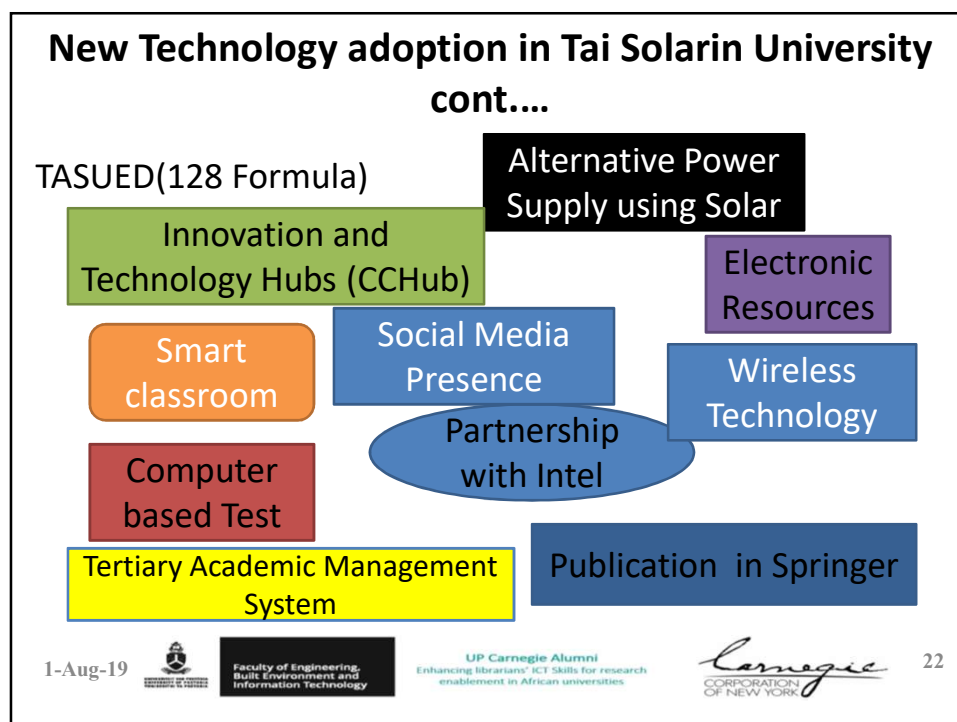
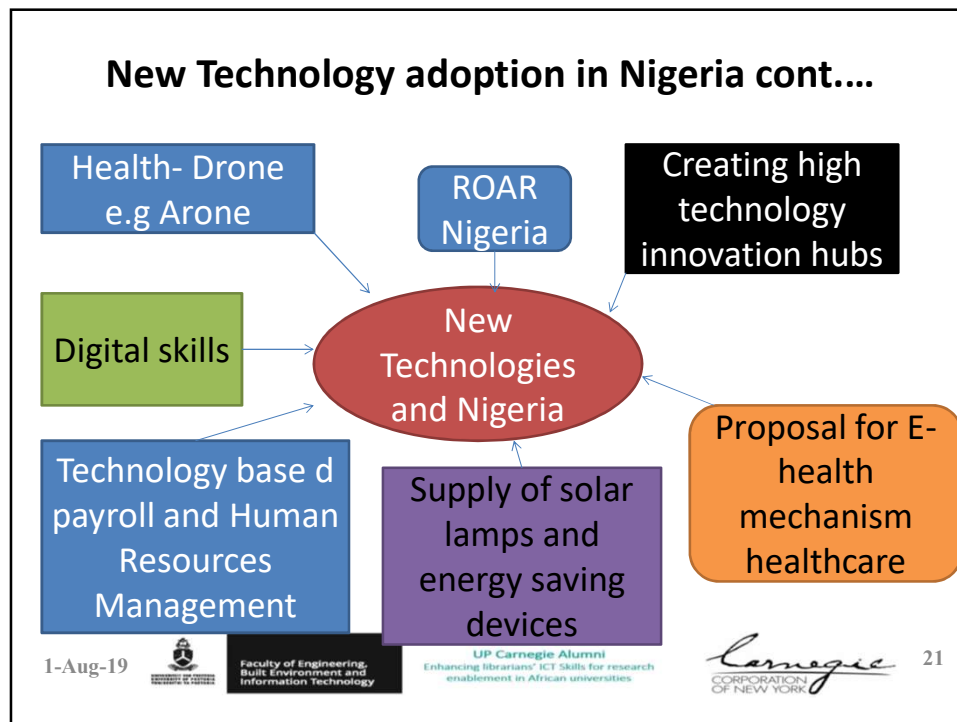
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- Anti-theft system and CCTV implemented to ensure security of resources.
- Expansion of reading and interaction spaces with internet access

[www.ug.edu.gh](http://www.ug.edu.gh), [www.carligh.info](http://www.carligh.info)

APPLICATION OF TECHNOLOGIES BY GOV'T, LIBRARIES AND OTHER STAKE HOLDERS TO PROMOTE SDG'S



- CARLIGH provides shared online facilities among member Institutions across the country
- They organise periodic training programs to equip librarians from member institutions with IT skills and connect them to partner and funding agencies.

[www.carligh.info](http://www.carligh.info)



## **New Technology adoption for SDG's acceleration in Uganda**

- Government of Uganda perceives:
  - free access to & use of information as a Human Right.
  - the integration of ICTs in service delivery as key to actualisation of SDGs
- Policy framework is in place mainly through:
  - Constitutional Support
  - Creation of ICT Ministry
  - Development of ICT infrastructure

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## **New Technology adoption in Uganda cont....**

- Key enablers for technological applications include:
  - Laws
    - NICT; NITA; Cyber
  - Partnerships
    - International, NGOS, Local, Universities,
  - Regulatory Frameworks
    - NITA, UCC, UBC
  - Enabling Environment

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## **New Technology adoption in Uganda cont....**

- **The creation of regulatory frameworks have helped to support :**
  - Rural Communications
  - Internet Points of Presence (POP)
  - Internet Cafes/ICT Training Centers:
  - District Web Portal:
  - Public pay phones
  - School ICT laboratories
  - Health ICT facilities

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## Application of New Technologies in Ndejje University for SDG's Acceleration

- ❖ Information Searching And Retrieval
- ❖ Dissemination of Information
- ❖ Communication to Clients
- ❖ Information Literacy Training and Implementation
- ❖ Institutional Repository Building
- ❖ Referencing in Research

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## Application of New Technologies in Ndejje cont....

### Training of Librarians and ToT workshop

- As the first implementation stage for sharing and disseminating knowledge and skills acquired during the CPD.



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## Application of New Technologies in Ndejje cont....

### Information Literacy Training Sessions for Students



- For continuous knowledge dissemination on a daily basis
  - Priority is always given to primary user of information
  - Students were divided into groups to specific librarian
  - The trainings are done on a one on one and group trainings

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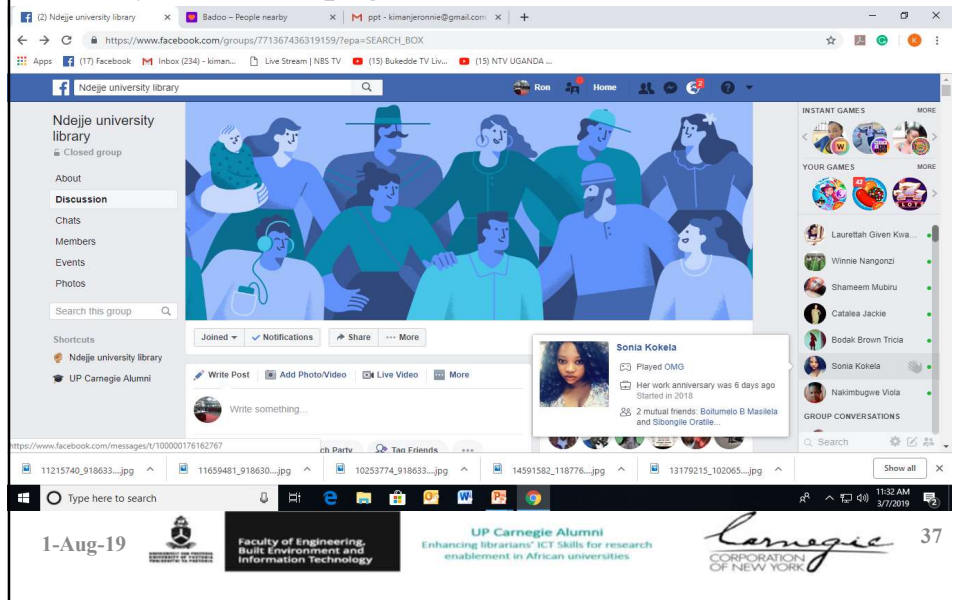
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## Application of New Technologies in Ndejje cont....



- The next phase was a high level training for all lecturers and Administrative staff.
- The training included:
- information searching and retrieval,
- referencing in research and
- introduced the to various academic social medias

## Application of New Technologies in Ndejje cont.... Library Facebook page



## Conclusion

Application of new technologies for SDGs require

- Skills
- Relevant platforms and ICT infrastructures,
- Policies and regulatory frameworks

**If African countries are to:**

- ☐ Transform their Economies,
- ☐ Empower New Voices,
- ☐ Eliminate information and Economic divide,
- ☐ promote social, political and economic development
- ☐ Accelerate & achieve sustainable development by 2030.

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## Acknowledgments

- Carnegie Corporation of New York
- University of Pretoria
- UP Library Staff      Our Universities
- Prof. Theo Bothman      Dr. Marlene Holmner,



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## Thank you for listening

