



# The State of knowledge Society Pillars in Uganda: A Snapshot

*By*

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# Knowledge Society Development in Uganda



In Uganda, Knowledge Society developments are anchored on:

- Vision 2040 of 2013
- the National Development Plan II (NDP II) of 2015/16- 2020/21,
- the [National ICT Policy](#) of 2012
- the [National E-Government Framework](#) of 2013,
- the [Education Sector Strategic Plan \(ESSP\)](#) of 2007-2015,
- the [National Science, Technology and Innovation \(STI\) Policy](#) of 2009.



# Education Indicators



Quality education is required to accelerate the country's Socio-economic development through making the populace **functionally literate** and **productive**.

Indicators presented at 4 levels:

- *Primary school education*
- *Secondary school education*
- *Institutions of Higher Learning Education*
- *Literacy*

Information on selected **education indicators** such as:

- *enrolment,*
- *number of schools,*
- *efficiency ratios and access indicators.*

Education system structure - 7:4:2:3

**Additional indicator: Infrastructure/space**



# A. Primary School Education



## i. Key Primary Education Indicators

Year	2011	2012	2013	2014
Enrolment ('000)	8098	8329	8459	8773
%Annual Change in enrolment	(3.3)	2.8	1.6	3.7
Gross enrolment Ratio	118	115	113	117
Net enrolment ratio female	98	96	96	97
Net enrolment ratio male	97	95	95	96
No of primary school teachers ('000)	170	171	185	191
% annual change in no. of classrooms	(1.5)	1.8	2.1	0.8
Pupil teacher ratio	48	49	46	46
Gender parity index	1	1	1	1
Pupil classroom ratio	57	57	57	58

# A. Primary School Education

## i. Key Primary Education Indicators

### Details of Primary School enrolment by class

Class	2011	2012	2013	2014
P1	1,839,714	1,877,801	1,883,803	1,932,489
P2	1,272,510	1,284,122	1,307,745	1,349,233
P3	1,266,117	1,291,268	1,312,592	1,362,786
P4	1,276,386	1,299,994	1,317,315	1,359,448
P5	1,068,776	1,118,900	1,138,789	1,178,273
P6	842,043	892,338	920,045	963,083
P7	532,631	564,217	579,431	627,343
<b>Total</b>	<b>8,098,177</b>	<b>8,328,640</b>	<b>8,459,720</b>	<b>8,772,655</b>

### Sitting space adequacy

Class	2014	Pupils with adequate space	Percent total to total enrolment
P1	1,932,489	1,057,071	54.7
P2	1,349,233	839,223	62.2
P3	1,362,786	913,067	67.0
P4	1,359,448	961,130	70.7
P5	1,178,273	878,992	74.6
P6	963,083	756,020	78.5
P7	627,343	528,850	84.3
<b>Total</b>	<b>8,772,655</b>	<b>5,939,087</b>	<b>67.7</b>

*More space/  
drop out?*

### Other indicators

- Orphans
- Impairment – by gender
- Primary leaving exams performance

## B. Secondary School Education

### i. Key secondary Education Indicators

#### Key secondary Education Indicators 2010-2014

Indicator	2011	2012	2013	2014
Enrolment	1,210,870	1,251,507	1,362,439	1,391,250
Gender Parity, Index	0.9	0.9	0.9	0.9
Gross Enrolment rate	28	28	29	30
Net Enrolment rate	24	24	26	26
Student stance ratio	25	25	44	37
Number of Schools	2,564	2,612	2,838	2,950
Number of Teachers	64,675	55,270	61,505	63,957
Student Teacher Ratio	26	30	22	22

#### Secondary enrolment by class

Year	S1	S2	S3	S4	S5	S6	Total
2008	291,797	271,816	198,797	176,836	77,746	71,752	1,088,744
2009	296,400	280,026	258,130	193,58	87,014	79,726	1,194,454
2010	324,487	277,345	256,385	220,341	78,688	68,446	1,225,692
2011	320,273	279,267	230,989	222,226	84,036	74,079	1,210,870
2012	317,286	296,297	259,003	216,754	87,549	74,618	1,251,507
2013	346,537	305,501	284,919	250,274	85,760	89,448	1,362,439
2014	348,701	327,016	289,219	268,253	76,649	81,412	1,391,250

*Number rising in time but falling with class progression*

#### Other indicators

- Orphans
- Impairment – by gender



# C. Institutions of Higher Education



Type of Institution	No. of Institutions	Male	Female	Total	Percent
1. University	31	72,151	52,410	124,561	62.0
2. Colleges of Commerce & Business	79	16,530	18,164	34,694	17.3
3. University Affiliate Colleges	3	5,662	6,573	12,235	6.1
4. Teachers Colleges	6	5,268	2,677	7,945	4.0
5. Health colleges	23	3,833	2,850	6,683	3.3
6. Management/Social Development	16	2,553	1,423	3,976	2.0
7. Non-University Degree Awarding Inst	2	1,896	1,415	3,311	1.6
8. Technical College	6	2,108	180	2,288	1.1
9. Agriculture Colleges	5	857	543	1,400	0.7
10. Theological Colleges	14	1,286	499	1,785	0.9
11. Media and communication Colleges	4	992	656	1,648	0.8
12. Tourism and Wildlife	3	137	89	226	0.1
<b>Total</b>	<b>192</b>	<b>113,273</b>	<b>87,479</b>	<b>200,752</b>	<b>100.0</b>

Compare to  
1,397,250

## D. Literacy

### Literacy rate for the population aged 10 years and above

	2005/06			2009/10			2012/13		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Uganda	76	63	69	79	66	73	77	65	71
Residence									
Urban	89	83	86	90	86	88	88	81	85
Rural	74	58	66	77	62	69	74	59	66

Rural  
urban  
divide



## 2. ICT Sector Policies



### Goal of the National ICT Policy (2003)

To promote the development and effective utilization of ICT such that **quantifiable impact** is made throughout the country within the next ten years.

Related policies and legal frameworks

- the [National E-Government Framework](#) (2013),
- the NITA-U Act, 2009,
- E-Waste Policy (2010),
- National E-Government Framework,
- Digital Migration Policy,
- The Uganda Communications (UCC) Act, 2013 ,
- Rural Communication Development Fund (RCDF) Policy (2010/11-2014/15)



## 2. Indicators of ICT Pillar

### a. Telephony



#### Fixed and mobile Subscriber and Tele density Data 2008-2014

Fixed, Mobile &MM Subscriptions	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Fixed	213,820	265,890	342,624	330,989	207,474	262,530	328,000
Mobile	9,464,979	10,375,220	14,676,505	15,535,989	16,665,310	19,244,020	20,220,000
Aggregated	9,678,799	10,641,110	15,019,129	15,866,978	16,872,784	19,506,550	20,549,000
teledensity		52.1	48.8	51.9	56.5		59

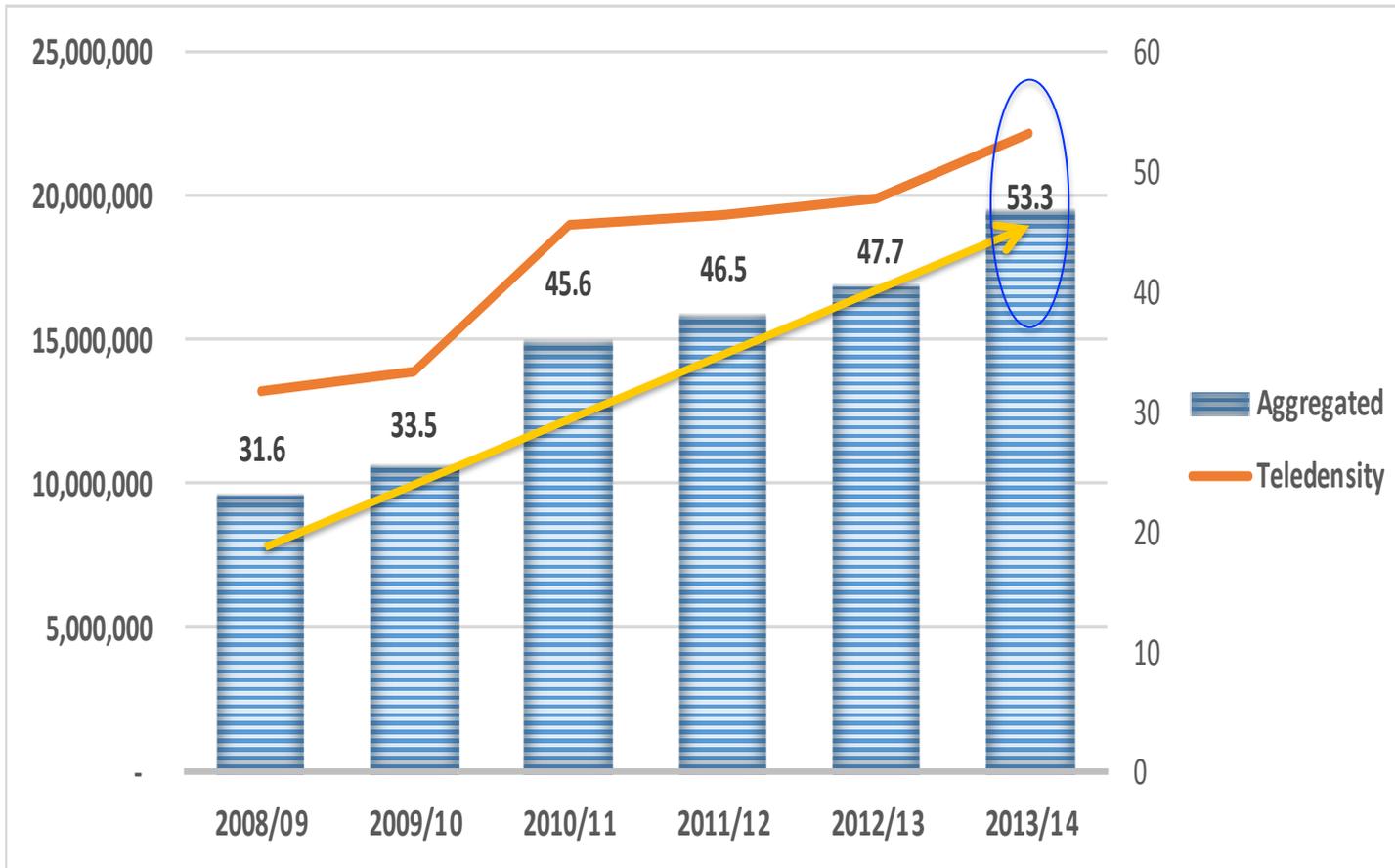
**MM subscribers in 2014**      **19,900,000 (58%)**

Using ICT to improve policy delivery efficiency, effectiveness and competitiveness of the business sector

- e-government
- Increased use of e-commerce, e-tax, e – visa, e-registration

## 2. Indicators of ICT Sector- Telephony

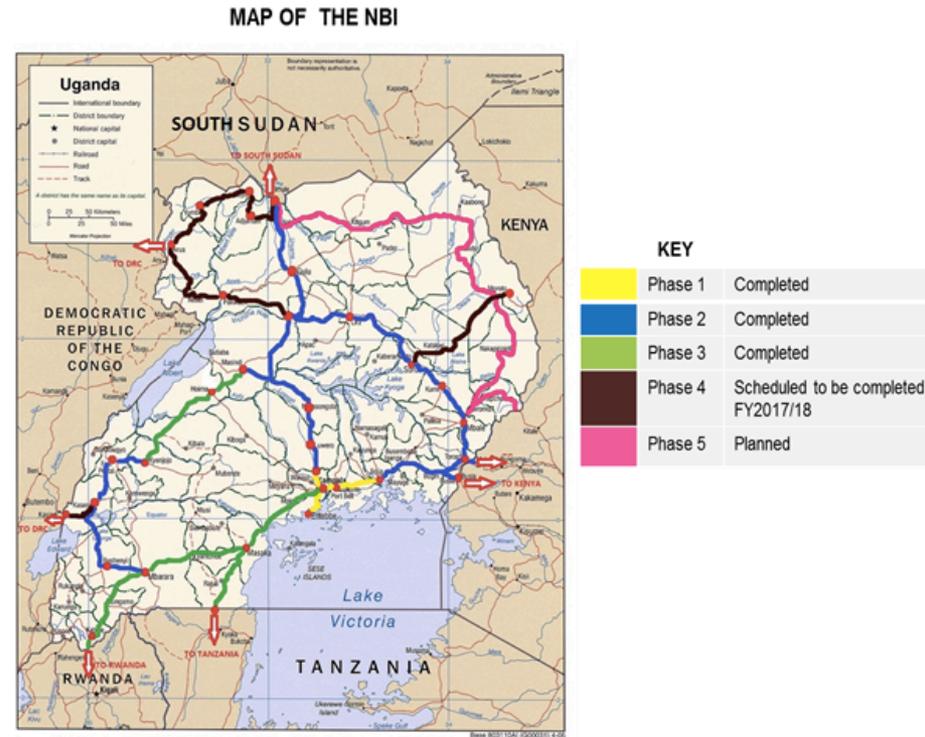
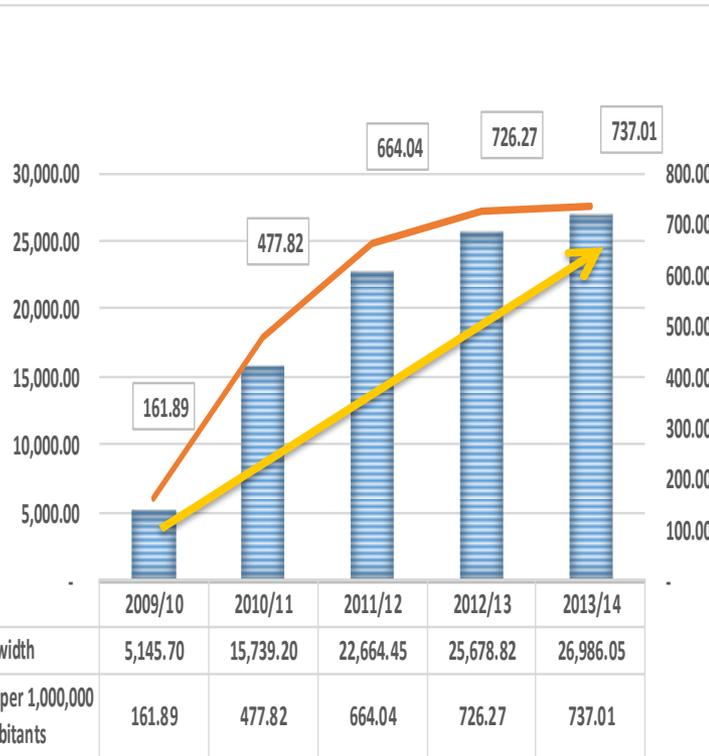
**Total subscription and Tele density data 2008-2014**



# 2. Indicators of ICT Sector-

## b. Internet

### Total bandwidth & bandwidth per million inhabitants



Source: NITA-U

## 2. Indicators of ICT Sector

### b. Internet

#### iii. Internet Usage in Uganda as of 2010

YEAR	Users	Population	% Pen.	GDP p.c.*	Usage Source
2000	40,000	24,400,000	0.1 %	US\$ 410	ITU
2006	500,000	28,574,909	1.7 %	US\$ 280	ITU
2007	750,000	30,262,610	2.5 %	US\$ 280	ITU
2008	2,000,000	31,367,972	6.4 %	US\$ 300	ITU
2010	3,200,000	33,398,682	9.6 %	US\$ 460	ITU
2016	11,924,927	38,319,241	31.1 %	US\$ 670	ITU
2017	13,023,114	41,652,938	31.3 %	US\$ 642	ITU

Source: The World Bank



## 3. STI Sector Indicators



### **The national STI**

#### Goal

To strengthen national capability to *generate, transfer, and apply scientific knowledge, skills and technologies* that ensure sustainable utilization of natural resources for the realization of Uganda's development objectives.



## 3. STI Sector Indicators



Some of the indicators

- Research and experimental development
- Innovation
- S&T personnel
- Patents
- R&D statistics and output in the Higher Education Sector
- Bibliometrics

### 3. Indicators of STI Sector

#### Key R&D indicators

Indicators	Value-2014
Gross Domestic Expenditure on R and D (GERD) (Ushs.million)	118,070.0
GERD as a percentage of GDP	0.23
Total R&D personnel (HC)	2881
Total researchers (HC)	1942
Total Technicians (HC)	599
Total Support staff (HC)	340
Total R&D Personnel (FTE)	1612.7
Total Researchers (FTE)	1027.8
Total Technicians (FTE)	398.4
Total Support staff (FTE)	186.4
Total R&D Personnel per 1000 total employment (FTE)	0.05
Total Researchers per 1000 total employment (FTE)	0.03
Female researchers as a percentage of total researchers (HC)	29.8



# GLOBAL INNOVATION INDEX 2016 RANKING



THE REPUBLIC OF UGANDA

Country	R&D Spending	Score	Rank
Switzerland	2.96	67.69	1
Sweden	3.161	63.82	2
USA	2.742	61.40	4
UK	1.7	60.89	5
Korea, Rep	<b>4.292</b>	57.70	11
Japan	<b>3.588</b>	54.72	14
France	2.256	54.18	15
Mauritius		34.82	64
SA	<b>0.732</b>	35.80	57
Kenya		30.95	80
Botswana		29.97	89
Rwanda		27.36	99
Uganda	<b>0.45</b>	26.97	102



# Final thoughts



## 1. Education Pillar

- ✧ School enrolment, school expansion and literacy levels have increased while graduates with higher level of skills are emerging from educational institutions.
- ✧ Education policy integrates ICT and S&T

## Challenges

- ✧ high teacher student ratios,
- ✧ insufficient critical mass of skilled science teachers and
- ✧ poorly equipped science laboratories,
- ✧ a lack of institutional governance due to complexity and autonomy of universities;
- ✧ Non-responsive, non-learner centred curriculum leading to incongruence with the labour market and lack of skills



# Final thoughts



## 2. ICT pillar

Has the necessary components for success.

### **Benefits**

liberalization of telecommunication industry,  
increase in mobile use,

Increase in internet penetration

the ICT sector share of Uganda's stood at 6.0% of National GDP and employs over one million people.

### **Challenges**

- ✧ Slow internet penetration
- ✧ high cost of bandwidth and
- ✧ inadequate ICT skills;
- ✧ Infrastructure – NBI last mile.....



# Final thoughts



## 3. STI pillar

- ✧ Now under a dedicated ministry of STI
- ✧ Accorded a sector status
- ✧ Recognized as a tool for socio-economic transformation

### Challenges

- ❖ Low level of innovation and productivity
- ❖ Weak coordination of the sector (now being addressed by the new ministry)
- ❖ Resource constraints
- ❖ Weak policy??

Substantial interventions have been implemented but Uganda needs to do more to accelerate and consolidated the development of achieve KS

### Some cross-cutting challenges to the development of KS

- High population growth rate
- Incoherent policy implementation
- Urban-rural divide

Substantial interventions have been implemented but Uganda needs to do more to accelerate and consolidated the development of achieve KS