REPUBULIKA Y'U RWANDA

MINISITIRI W'INTEBE

Ikiganiro cya Nyakubahwa Minisitiri w'Intebe

Dr. Ngirente Edouard

Ageza ku Nteko Ishinga Amategeko, Imitwe yombi, ibikorwa bya Guverinoma bijyanye n'ikoranabuhanga (ICT) mu bukungu bushingiye ku bumenyi

Kigali, ku wa 2 Ukuboza 2019

- **Nyakubahwa Perezida wa Sena,**
- **Nyakubahwa Perezida w'Umutwe wa Badepite,**
- **Ba Nyakubahwa ba Visi Perezida b'Imitwe yombi,**
- **Ba Nyakubahwa Basenateri,**
- **Ba Nyakubahwa Badepite,**

1. Mbanje kubashimira cyane kuri uyu mwanya mungeneye, kugira ngo mbagezeho ibikorwa bya Guverinoma, nk'uko biteganywa n'ingingo ya 133 y'Itegeko Nshinga rya Repubulika y'u Rwanda ryo mu 2003 ryavuguruwe mu 2015.

2. Ndagira ngo ntangire nifuriza imirimo myiza Abasenateri baherutse kurahirira gutangira manda ya gatatu ya Sena. Mbijeje ubufatanye buhoraho bwa Guverinoma, nk'uko bisanzwe mu nzego dukorana umunsi ku wundi.

3. Ibikorwa bya Guverinoma ngiye kubagezaho uyu munsi ni ibijyanye na gahunda ya Guverinoma yo gushimangira ikoranabuhanga (ICT) mu guteza imbere ubukungu bushingiye ku bumenyi. Ndabibagezaho mu bice bine by'ingenzi bikurikira:

- Ndatangira mbagezaho akamaro k'ikoranabuhanga muri rusange;
- Ndakurikizaho politiki, amategeko, amabwiriza n'inzego zishinzwe iterambere ry' ikoranabuhanga mu Rwanda;
- Ndakomeza mbagaragariza ibimaze kugerwaho bijyanye n'ikoranabuhanga (ICT) mu bukungu bushingiye ku bumenyi;
- Nze gusoza mbagezaho ibiteganyijwe gukorwa muri Gahunda y'Igihugu yo kwihutisha iterambere 2017-2024.

I. INTANGIRIRO

4. Nk'uko twabisobanuye ku itariki ya 26/09/2017, ubwo nagezaga ku Nteko Ishinga Amategeko Imitwe yombi, Gahunda ya Guverinoma y'Imyaka Irindwi, 2017-2024, ikoranabuhanga ni imwe mu nkingi z'ingenzi zizafasha u Rwanda kwihutisha iterambere ry'Igihugu cyacu.

5. Kwifashisha ikoranabuhanga mu iterambere si umwihariko w'u Rwanda gusa. Nk'uko twese tubizi, ibihugu byinshi byabashije kwihutisha iterambere ryabyo, byabikesheje ahanini amavugurura byakoze mu guteza imbere ikoranabuhanga mu bukungu bushingiye ku bumenyi. Bimwe muri ibyo bihugu, ni Singapuru, Esitoniya, Koreya y'Epfo, Ubuyapani, Ubushinwa na Tayiwani.

6. Umugabane w'Afurika na wo ntiwasigaye inyuma mu kwifashisha ikoranabuhanga (ICT). Mu Cyerekezo cyawo 2063, wiyemeje guteza imbere ikoranabuhanga kugira ngo rizawufashe kugera ku iterambere ryihuse wifuza kandi rihuriweho na bose.

7. Ku birebana n'Igihugu cyacu, nk'uko mubizi kuva mu 1994 kugeza uyu munsi, Guverinoma yakomeje guteza imbere ikoranabuhanga. By'umwihariko, kuva mu mwaka wa 2000, u Rwanda rwahisemo ikoranabuhanga (ICT) nk'imwe mu nkingi ikomeye yo kwihutisha ubukungu bushingiye ku bumenyi. Ibi kandi bimaze gutanga umusaruro ushimishije.

8. Kuva 2000-2019: mu nzego za Leta n'abikorera, hahanzwe imirimo ishamikiye ku ikoranabuhanga ingana na 123.670. Muri iyi mirimo yahanzwe, harimo abakozi (*agents*) barenga 4.000 b'Irembo, abakozi (*agents*) bagera ku 107.858 bakorana n'ibigo by'itumanaho n'abakozi bakora za porogaramu z'ikoranabuhanga (*App Industry*). Buri mwaka kandi, kaminuza zo mu Rwanda zisohora abanyeshuri bakabakaba 2.000 barangiza mu ikoranabuhanga. Bamwe nibo bavamo abakorera inzego za Leta, iz'abigenga ndetse n'abakorera ku giti cyabo.

9. Mu rwego rw'itumanaho 77% by'abanyarwanda bakoresha telefoni ngendanwa mu gihe 51.6% bakoresha interineti. Serivisi zirenga 300 (iza Leta ndetse n'abikorera) zitangwa hakoreshejwe ikoranabuhanga. Uruhare rw'ikoranabuhanga ku musaruro mbumbe w'Igihugu, wagiye wiyongera ku buryo buhagije.

II. POLITIKI, AMATEGEKO N'INZEGO ZISHINZWE ITERAMBERE RY'IKORANA-BUHANGA MU RWANDA

10. Hari byinshi u Rwanda rumaze gukora mu rwego rwa politiki, amategeko, amabwiriza n'inzego zishinzwe iterambere ry'ikoranabuhanga mu Rwanda.

11. Mu gushyiraho politiki z'ikoranabuhanga, u Rwanda rushingira ku mirongo migari inyuranye yo ku rwego mpuzamahanga mu guteza imbere ikoranabuhanga.
Imwe muri yo ni:

- Icyerekezo cy'Afurika 2063 (*Agenda 2063):* muri iki Cyerekezo, ikoranabuhanga rizifashishwa mu kugera ku iterambere Afurika yifuza kandi rihuriweho na bose.

- Ingamba zo guteza imbere ikoreshwa ry'ikoranabuhanga ku mugabane w'Afurika (*Digital Transformation Strategy for Africa*).
- Imirongo migari ya gahunda yo kwihutisha iterambere ry'Afurika rishingiye ku ikoranabuhanga (*Smart Africa Alliance*).
- Intego z'umuryango w'abibumbye z'iterambere rirambye (UN-SDGs).
- Gahunda igamije gufasha Afurika kubaka umusingi w'ubukungu bushingiye ku ikoranabuhanga bitarenze 2030 (*Digital Economy*).

12. Uretse iyi mirongo migari yo ku rwego mpuzamahanga maze kubagezaho, hari n'iyo u Rwanda rwihariye. Imwe muri yo ni iyi ikurikira:

- Icyerekezo 2020 (*Vision 2020*): Muri iki Cyerekezo, kizagera ku musozo umwaka utaha, ikoranabuhanga ryakibayemo inkingi ikomeye mu kwihutisha iterambere ry'Igihugu cyacu. Ikoranabuhanga kandi rizakomeza kuba ku isonga mu Cyerekezo 2050 kizasimbura Icyerekezo 2020.

- Hari kandi Gahunda y'Igihugu igamije gushyiraho ibikorwaremezo by'ikoranabuhanga (*National Information and Communication Infrastructure/NICI*) yashyizweho mu 2000. Iyi gahunda igabanyijemo ibice binyuranye:

  ✓ Igice cya mbere (*NICI 1*) cyatangiye mu 2000, kikarangira mu 2005, cyari kigamije gushyiraho imirongo ngenderwaho n'inzego;

  ✓ Igice cya kabiri (*NICI 2*) cyatangiye mu 2006, kikarangira mu 2010, cyari kigamije gushyiraho ibikorwaremezo by'ikoranabuhanga;

✓ Igice cya gatatu (*NICI 3*) cyatangiye mu 2011, kikarangira mu 2015, cyari kigamije koroshya imitangire ya serivisi hifashishijwe ikoranabuhanga.

✓ Igice cya kane (*Smart Rwanda Masterplan- SRMP*), cyatangiye 2015 gihinduka gahunda ngenderwaho yo kuzamura ubukungu bushingiye ku bumenyi hifashishijwe ikoranabuhanga. Iyi SRMP yubakiye ku nkingi z'ubukungu ari zo: Ubuzima, imari, ubuhinzi, ubucururzi n'inganda, uburezi, imiyoborere, iterambere ry'urubyiruko n'iry'umwari n'umutegarugori.

13. Hashingiwe kuri iyi mirongo, zimwe muri politiki na gahunda zashyizweho mu Gihugu cyacu ni izi zikurikira :

- Mu 2019, hashyizweho politiki igamije kurinda abana kugerwaho n'ingaruka mbi zishobora guterwa n'ikoranabuhanga (*Child Online Protection*).
- Muri Gahunda y'Igihugu yo kwihutisha Iterambere, 2017-2024 (NST1), ikoranabuhanga ryahawe uruhare rugaragara mu guteza imbere ubukugu bushingiye ku bumenyi.
- Mu 2017, hashyizweho politiki igamije kubaka ubumenyi n'ubushobozi bw'ikoranabuhanga ku bantu bose (*National Digital Talent Policy*).
- Mu 2017 kandi, hashyizweho politiki igamije kubyaza umusaruro amakuru remezo (*Data Revolution Policy*).
- Mu 2015, hashyizweho politiki yo kurinda umutekano w'ibikorerwa kuri interineti (*National Cyber Security Policy*).
- Mu 2011, hashyizweho politiki yo gukwirakwiza umurongo mugari wa interineti ku bantu bose (*Broadband Policy*).

14. Hashyizweho kandi amategeko atandukanye agenga ikoranabuhanga, tukaba tubashimira uruhare mwagize mukuyashyiraho.

15. Hari kandi inzego zinyuranye zishinzwe iterambere ry'ikoranabuhanga. Muri zo twavuga:

- Minisiteri ifite ikoranabuhanga (ICT) mu nshingano zayo.
- Inzego zishinzwe ishyirwa mu bikorwa rya politi n'ingamba z'ikoranabuhanga arizo: Ikigo cy'Igihugu gishinzwe Ikoranabuhanga mu Itumanaho n'Isakazabumenyi (RISA), n'IPOSITA.
- Inzego zifasha MINICT mu bushakashatsi n'ubumenyingiro mu ikoranabuhanga no guhanga ibishya arizo: Ikigo k'Igihugu gishinzwe Ubushakashatsi no Guteza imbere Inganda (NIRDA), n' Inama y'Igihugu ishinzwe Ubumenyi n'Ikoranabuhanga (NCST).
- Urwego rushinzwe Iterambere mu Rwanda (RDB) nk'urwego rufatanya na MINICT gukurikirana ishoramari mu ikoranabuhanga.
- Urwego rw'Igihugu rushinzwe kugenzura imikorere y'inzego zimwe z'Imirimo Ifitiye Igihugu Akamaro (RURA) nk'urwego rugenzura imikorere n'imikoreshereze y'ikoranabuhanga (*Regulatory agency*).

- **Nyakubahwa Perezida wa Sena,**
- **Nyakubahwa Perezida w'Umutwe wa Badepite,**
- **Ba Nyakubahwa ba Visi Perezida b'Imitwe yombi,**
- **Ba Nyakubahwa Basenateri,**
- **Ba Nyakubahwa Badepite,**

16. Muri uyu mwanya, ndagira ngo mbagezeho incamake y'uburyo ikoranabuhanga rikomeje gufasha u Rwanda kugera ku bukungu bushingiye ku bumenyi. Ndabibagezaho nshingiye ku nzego zitandukanye zigize ubuzima bw'Igihugu cyacu muri rusange.

Mu rwego rw'ibikorwaremezo by'ikoranabuhanga:

17. Umurongo mugari wo kwihutisha interineti (*Fiber optic cable*) wagejejwe mu Gihugu hose. (Kuri kilometero zirenga 7.000).

18. Mu rwego rwo kurushaho guteza imbere ibikorwaremezo by'ikoranabuhanga, kuva mu 2012 kugera mu 2018, hashowe imari isaga miliyoni 800 z'Amadorali y'Amerika.

19. Kuva muri Nyakanga 2013, ubwo u Rwanda rwatangiraga gukoresha uburyo bwa dijitare *(digital),* ruvuye ku bwa anaroge (*analog)*, byatumye umubare wa televiziyo, radiyo n'ibinyamakuru bikorera kuri interineti mu Rwanda wiyongera. Kuri ubu dufite radiyo 34, televiziyo 21 n'ibinyamakuru birenga 100 bikorera kuri interineti. Ubu buryo bwa dijitare bwatumye aho amajwi n'amashusho bigera hiyongera kandi bikagerayo binoze.

20. Mu rwego rwo kubika neza amakuru y'ibigo bya Leta n'iby'abikorera, mu 2010 hashyizweho ububiko bw'amakuru bwizewe (*National Data Center*).

21. Mu rwego rwo guhindura u Rwanda igicumbi cy'ikoranabuhanga ku mugabane w'Afurika, muri 2016, Guverinoma y'u Rwanda yatangije umushinga wa *Kigali Innovation City*. Uyu mushinga ugamije kurerera u Rwanda n'isi abahanga mu bumenyi n'ikoranabuhanga. Kugeza ubu bamwe mu bafatanyabikorwa b'uyu mushinga, harimo za Kaminuza zinyuranye zo ku rwego rw'isi, ariko ubu zikorera no mu Rwanda.

22. Biteganyijwe ko mu gihe cya vuba n'ibigo bikomeye mu ikoranabuhanga ku Isi na byo bizitabira uyu mushinga. Ibi bigo bizahabwa ibibanza byo gukoreramo mu gace uyu mushinga ukoreramo, hafi y'Icyanya cyahariwe Inganda cya Kigali (*Kigali Special Economic Zone*).

23. Mu 2013, hashyizweho urwego rushinzwe gukumira ibyaha bikorwa hifashishijwe ikoranabuhanga "*Computer Cyber Security Incidence Response Team*" (CSIRT). Uru rwego rukora amasaha yose buri munsi.

24. Hagamijwe kugeza ku baturarwanda interineti yihuse (4G LTE), mu 2013, hashyizweho uburyo bwo gukoresha umurongo wa 4G LTE. Ubu uyu murongo umaze kugezwa mu Gihugu hose, kandi ukora neza, ku kigero cya 73%. Turabizi ko hakiriho ibibazo bike byo gukemura, ariko inzego zibishinzwe zigenda zibikemura umunsi ku wundi.

25. Mu rwego rwo kugabanya ingendo abaturage bakoraga bajya gusaba serivisi zitandukanye, ndetse no kugabanya umwanya n'ikiguzi byatwaraga, mu 2015, hashyizweho uburyo bw'ikoranabuhanga buzwi ku izina ry'Irembo. Ubu Irembo itanga serivisi 98 za Leta. Kuri izi, hiyongeraho izindi zirenga 250 zitangwa hifashishijwe ikoranabuhanga n'ibindi bigo, zitanyuze ku Irembo.

26. U Rwanda rumaze gutera intambwe igaragara mu kugura no kugurisha hifashishjwe ikoranabuhanga rya interineti. Ubu hakaba hamaze kubakwa imbuga zisaga 30, aho abaturage batari bake bo mu Rwanda bashobora kugurira ibicuruzwa kuri interineti, bikabasanga aho bari.

27. Mu rwego rwo kunoza uko abakozi ba Leta bahabwa akazi, uko bahembwa (hirindwa guhemba abakozi ba baringa), uko amadosiye yabo acungwa neza, uko bahiga n'uko besa imihigo (*Result Based Management*), mu 2008, Guverinoma yashyizeho uburyo bwifashisha ikoranabuhanga mu gutanga izo serivisi (*Integrated Personnel and Payroll Information System/*IPPIS).

28. Mu rwego rwo kubika amakuru y'ubutaka, hagamijwe koroshya serivisi yo kubona ibyangombwa by'ubutaka no koroshya iherereka nywa ryabwo, mu 2009, hashyizweho uburyo bw'ikoranabuhanga (*Land Administration Information System/LAIS).* Kugeza ubu, hifashishijwe ubu buryo, ibyangombwa by'ubutaka bungana na 82% byahawe bene byo. Guverinoma y'u Rwanda ikomeje gushishikariza abandi bantu batarandikisha ubutaka bwabo kubikora vuba. Kandi nk'uko mubizi Guverinoma imaze iminsi itanga amatangazo, ihamagarira abantu kubikora kandi bigeza ku rugero rushimishije.

29. Guha abantu ibyangombwa by'ubutaka, byafashije ba nyirabwo kubutangaho ingwate muri za banki n'ibigo by'imari kugira ngo bahabwe inguzanyo. Byagabanyije kandi amakimbirane yakomokaga ku butaka. Igishimishije kurushaho, ni uko byashimangiye ihame ry'uburinganire kuko ku cyangombwa cy'ubutaka bigaragara neza ko abashakanye bafite uburenganzira bungana ku butaka bwabo (50/50).

30. Mu rwego rwo korohereza abifuza kubaka kubona ibyangombwa ku buryo bwihuse kandi bunoze, mu 2016, hashyizweho uburyo bw'ikoranabuhanga (*Electronic Building Permit Management System*/eBPMS). Ubu buryo bufasha uwifuza gusaba uruhushya rwo kubaka, kubikora atagombye kujya ku biro by'Akarere, ndetse bukanamufasha gukurikirana aho dosiye igeze. Ubu buryo kandi bumaze kugezwa mu Turere 21. Biteganyijwe ko buzagezwa mu tundi Turere dusigaye bitarenze mu mwaka wa 2020.

31. Mu rwego rwo kurushaho gutanga serivisi inoze ku bantu benshi kandi mu gihe gito, Polisi y'u Rwanda yatangije uburyo bwo gutanga ibizamini by'impushya z'agateganyo zo gutwara ibinyabiziga hifashishijwe ikoranabuhanga.

32. Kuva ubu buryo bwatangira muri Gicurasi 2019, kugera mu Kwakira 2019, abantu 84.391 bamaze gukora ibyo bizamini. Iri koranabuhanga rimaze kugezwa mu Turere 18, kandi mu minsi ya vuba rizagezwa no mu Turere dusigaye.

33. Hifashishijwe ikoranabuhanga kandi, hashyizweho camera ku mihanda zifasha gucunga umutekano (CCTV) ndetse no gukumira abakora amakosa mu mihanda ajyanye n'umuvuduko *(speed cameras).*

34. Mu rwego rwo kurushaho gutanga serivisi zinoze, kuva muri Gashyantare 2019, Polisi y'u Rwanda yifashishije ikoranabuhanga *(E-ticketing Hand Held Terminals)* ntigifatira ibyangombwa by'abakora amakosa atandukanye mu muhanda. Ubu abaciwe amande bahabwa ubutumwa bw'amande baciwe ako kanya kuri telefoni zabo, hanyuma bakayishyura hakoreshejwe Irembo.

35. Mu rwego rwo kwandika no kubika amakuru y'ingenzi kuri buri Munyarwanda, mu 2007, hashyizweho uburyo bw'ikoranabuhanga bwo kubandika (*National Population Registry).* Ubu buryo bunifashishwa mu gutanga indangamuntu ku Banyarwanda bagejeje ku myaka 16 yo kuyihabwa. Bwifashishwa kandi mu guha inzego zitandukanye amakuru yizewe ku mwirondoro wa buri Munyarwanda ukeneye serivisi. Kuri ubu, ibigo bisaga 47 bimaze guhuzwa n'iri koranabuhanga.

36. Mu rwego rwo koroshya iyandikwa ry'irangamimerere, mu 2018, hashyizweho uburyo bw'ikoranabuhanga bwo kwandika amakuru y'irangamimerere (*Civil Registration Vital Statistics*/CRVS). Kugira ngo ubu buryo bushyirwe mu bikorwa neza, Guverinoma yateguye umushinga wo kuvugurura itegeko rigenga abantu n'umuryango. Hasabwe ko muri uwo mushinga hongerwamo ingingo ziha ububasha bw'umwanditsi w'irangamimerere abakora mu bigo by'ubuzima kugira ngo babashe kwandika abavutse n'abapfuye. Hifashishijwe ikoranabuhanga, aya makuru azajya ahita agera ku biro by'irangamimerere.

37. Mu rwego rwo kunoza ibikorwa by'amatora, hashyizweho uburyo bw'ikoranabuhanga (*Elections Management System),* bwifashishwa mu gukora amalisiti y'itora no kubika amakuru ajyanye n'ibiro by'itora.

38. Ubu buryo kandi bunafasha abagejeje igihe cyo gutora kwireba ko bari kuri lisiti y'itora no kwiyimura, iyo ari ngombwa, hakoreshejwe mudasobwa cyangwa telefoni igendanwa.

39. Ubu buryo bwafashije Leta kugabanya ingengo y'imari yagendaga ku bikorwa by'amatora. Urugero ni ingengo y'imari yakoreshejwe mu bikorwa byo gutegura amalisiti y'amatora yabaye mu 2003 yarengaga miliyari imwe y'amafaranga y'u Rwanda yagabanutse, akagera kuri miliyoni 300 y'amafaranga y'u Rwanda mu 2015.

40. Mu rwego rwo gukemura ibibazo by'abaturage mu buryo bwihuse, hashyizweho uburyo bw'ikoranabuhanga (*E-Citizens Complaints System),* bufasha umuturage ufite ikibazo kukigeza ku nzego zishinzwe kugikemura. Ibi bikorwa hifashishijwe telefoni ngendanwa, n'igisubizo bakacyoherereza uwabajijwe kuri telefoni.

41. Kuva mu 2018 kugeza ubu, hamaze koherezwa ibibazo 68.403 hakoreshejwe ubu buryo. Muri byo, ibisaga 96% byarakemuwe kandi ba nyirabyo bohererejwe ibisubizo. Ibisigaye byashyikirijwe inzego bireba kandi zasabwe kubikemura vuba.

42. Urwego rw'Umuvunyi na rwo rwashyizeho uburyo bwifashisha ikoranabuhanga mu korohereza abo itegeko risaba kumenyekanisha umutungo wabo buri mwaka. Ubu buryo buzwi nka *Online Declaration of Assests System,* bwashyizweho mu 2011, bukoreshwa n'abarenga 12.000 mu Gihugu cyacu.

43. Minisiteri y'Ubucuruzi n'Inganda na yo ifite uburyo bw'ikoranabuhanga ikoresha. Bumwe muri bwo bukaba bufasha abacuruzi bafite ibibazo bitandukanye bijyanye n'ubucuruzi bwabo kubigeza kuri MINICOM hifashishijwe ikoranabuhanga.

44. Hagamijwe kugabanya umwanya abakozi b'Inzego z'Ibanze bakoreshaga bitabira inama zitandukanye, hashyizweho uburyo bwo gukoresha inama hifashishijwe ikoranabuhanga (*Video Conference*). Kuva mu 2015, hamaze kuba inama zisaga 200 hakoreshejwe ubu buryo. Ibi byatumye Leta yunguka amafaranga asaga miliyari eshatu yari kuzigendaho.

45. Mu rwego rwo kunoza igenamigambi rya za gahunda zita ku iterambere ry'abatishoboye, mu 2016, hashyizweho uburyo bw'ikoranabuhanga (*Social Protection System).* Ubu buryo bubitse amakuru y'imibereho y'imiryango igera hafi kuri miliyoni eshatu.

46. Ubu buryo bwifashishwa cyane cyane mu byerekeranye no gucunga neza inkunga y'ingoboka (*Direct support*) igenerwa abatishoboye. Bunakoreshwa kandi mu gukurikirana ishyirwa mu bikorwa ry'imirimo rusange ibyara inyungu (*Public works*) ndetse na gahunda y'inguzanyo ku mishinga mito yo kwiteza imbere (*Financial services*).

47. Mu 2007, Guverinoma yashyizeho uburyo bw'ikoranabuhanga bugamije kunoza igenamigambi ndetse n'ikoreshwa ry'umutungo wa Leta biciye mu mucyo (*Integrated Financial Management System/IFMS).* Ubu buryo bukoreshwa n'ibigo 1.269 bigenerwa ingengo y'imari ya Leta.

48. Ubu buryo bwagize uruhare rugaragara mu kongera umubare w'ibigo bya Leta bigira raporo ntamakemwa (*clean audit*) mu igenzura rikorwa n'Umugenzuzi Mukuru w'Imari ya Leta. Mu 2018, ibigo byagize raporo ntamakemwa byageze ku 102 (54% y'ibigo byagenzuwe) bivuye kuri 2 mu mwaka wa 2008.

- **Ba Nyakubahwa Basenateri,**
- **Ba Nyakubahwa Badepite,**

Mu rwego rw'imari:

49. Mu rwego rwo korohereza Abanyarwanda kugerwaho n'ibikoresho by'ikoranabuhanga ku buryo buboroheye, mu 2017/2018, Guverinoma y'u Rwanda yasoneye ibi bikoresho imisoro n'amahoro bingana na miliyari 16. Ibi byazamuye ku buryo bugaragara umubare wa mudasobwa n'ibindi bikoresho by'ikoranabuhanga bitumizwa mu mahanga.

50. Bitewe n'ingufu u Rwanda rukomeje gushyira mu bikorwaremezo by'ikoranabuhanga, byatumye urwego rw'ikoranabuhanga rurushaho kuzamuka no gutera imbere. Urugero ni mu 2018, aho rwazamutse ku kigero cya 18%.

51. Kugeza muri Kamena 2019, umubare w'imirongo ya telefoni ngendanwa yandikishije muri serivisi zo kwakira no kohererezanya amafaranga, wari umaze kugera kuri 11.947.213 uvuye ku 639.673 mu 2011.

52. Kuva mu 2015 kugeza muri Kamena 2018, amafaranga yahererekanyijwe hifashishijwe ikoranabuhanga ryo kwishyurana kuri telefoni ngendanwa (*mobile payment*) yavuye kuri miliyari 1.093 agera kuri miliyari 2.058.

53. Mu rwego rwo kunoza uburyo amasoko ya Leta atangwa hagamijwe cyane cyane gukumira ahantu hose ruswa yamenera no korohereza abapiganirwa amasoko ya Leta, mu 2016, hashyizweho uburyo bw'ikoranabuhanga buzwi ku izina ry'Umucyo "e-procurement". Ubu buryo butuma abapiganirwa amasoko ya Leta, babikora badakoze ingendo, kandi nta mpapuro zikoreshejwe.

54. Kugeza ubu, ibigo 194 na ba rwiyemezamirimo bari hafi kugera ku 7.000 bakoresha uru rubuga mu gupiganira amasoko atandukanye. Hakaba hamaze gutangirwaho amasoko 11.634 guhera mu 2016.

55. Mu rwego rwo korohereza amabanki gusesengura neza dosiye zisaba inguzanyo no kunoza imitangire yazo, mu 2009, hashyizweho uburyo bw'ikoranabuhanga (*Credit Reference Bureau System).* Ubu buryo bwifashishwa mu guhanahana amakuru ku buryo bworoshye hagati y'ibigo by'imari n'amabanki.

56. Mu rwego rwo korohereza abacuruzi batandukanye kumenyekanisha imisoro y'ibicuruzwa byabo, hashyizweho uburyo bufasha abasora gukoresha telefoni ngendanwa na mudasobwa (*Online declaration).*

57. Mu rwego rwo korohereza abacuruzi gusora ku buryo bworoshye umusoro ku nyongeragaciro, mu 2013, hashyizweho uburyo bw'ikoranabuhanga bwo gutanga inyemezabwishyu (*Electronic Billing Machine/EBM*). Ubu buryo bwazamuye ku buryo bugaragara umubare w'abamenyekanisha umusoro ku nyongeragaciro (VAT). Ukaba waravuye kuri 953 mu 2013 ubu ukaba ugeze ku 21.823. Ibi byongeye kandi umusoro ku nyungu watangwaga kuko wavuye kuri miliyari 93 FRW mu 2013 ugera kuri miliyari 366 mu 2018.

58. Hagamijwe korohereza abifuza kwandikisha ibigo by'ubucuruzi mu Rwanda, hashyizweho uburyo bwo kubikora hifashishijwe ikoranabuhanga biciye ku rubuga rwa interinteti rwa RDB (www.rdb.rw). Ibi byagabanyije cyane iminsi byatwaraga. Ubu bisigaye bitwara gusa amasaha 6 bivuye ku minsi 24.

59. Mu 2015, hashyizweho uburyo bwo gufasha abagenzi kwishyura amafaranga y'urugendo hakoreshejwe amakarita. Ubu hamaze gutangwa amakarita miliyoni 1.7. Muri ayo, akoreshwa ku buryo buhoraho ni miliyoni 1.4. Ubu buryo bukoreshwa n'abagenzi bari hagati ya 300.000 na 350.000 ku munsi. Kuva mu Gushyingo 2018 kugera mu Gushyingo 2019, amafaranga amaze gukoreshwa hifashishijwe ubu buryo ni hafi miliyari 2 z'amafaranga y'u Rwanda.

60. Ubu buryo bufasha Leta kwakira imisoro ku buryo bworoshye kandi na ba nyiribinyabiziga bukabafasha kumenya mu buryo bwizewe amafaranga ibinyabiziga byabo byinjije.

61. Amapikipiki atwara abagenzi zigera ku 24.782 zimaze gushyirwaho ikoranabuhanga ryifashishwa mu guhamagara cyangwa gukurikirana ingendo zazo.

62. Uruganda rwa VolksWagen (VW) twese tumaze kumeya rwashoye imari mu ikoranabuhanga ryo gutwara abantu (Move). Ryakoreshejwe n'abantu barenze ibihumbi mirongo itatu mu ngendo zisaga ibihumbi mirongo inani na bitanu kuva mu Gushyingo 2018 kugeza mu Gushyingo 2019. Mu Kwakira 2019, VolksWagen yatangije mu Rwanda, umushinga w'imodoka zikoresha ingufu z'amashanyarazi.

63. Hashyizweho uburyo bw'ikoranabuhanga bwo kubungabunga ibidukikije no gucunga neza umutungo kamere (*Result Based Monitoring and Evaluation System/ RBMES*). Ubu buryo buracyubakwa, ariko kugeza ubu bumaze kugezwamo ibipimo (indicators) bigera ku 165.

64. Kuva mu 2015, u Rwanda, ku bufatanye na Banki y'Isi, rwatangiye kubara umutungo kamere (*Natural Capital Accounting*). Kugeza ubu, hamaze gukusanywa amakuru ajyanye n'imikoreshereze y'ubutaka, amazi, amabuye y'agaciro n'ibindi.

65. Aya makuru azajya yifashishwa kugira ngo hamenyekane uko umutungo kamere wifashe. Ibi bizafasha mu ishyirwa mu bikorwa rya Gahunda y'Igihugu yo kwihutisha Iterambere 2017-2024 (NST1) mu bijyanye no guteza imbere ubukungu butabangamira ibidukikije (*Green Growth*).

Mu rwego rw'ubuhinzi:

66. Hashyizweho gahunda ya *Smart Nkunganire.* Ni uburyo bw'ikoranabuhanga bwifashishwa mu kugeza imbuto n'ifumbire ku bahinzi no kubahuza n'ibigo by'imari n'iby'ubwishingizi mu buhinzi. Abahinzi miliyoni 1.3 banditse muri *Smart Nkunganire. A*bacuruzi b'inyongeramusaro bagera ku 1.000.

67. Abahinzi bashyiriweho urubuga "*e-soko*" rubafasha kumenya amakuru ku bihingwa ndetse n'ibiciro ku masoko hirya no hino mu gihugu cyacu.

68. Mu 2016, hashyizweho urubuga rufasha abashoramari mu kubona ibyemezo byo gutumiza no kohereza mu mahanga ibikomoka ku bimera no ku matungo (*Rwanda Agriculture and Livestock Inspection and Certification Services*/RALIS). Uru rubuga rukaba rwarafashije abarukoresha kugabanya igihe n'amafaranga byatwaraga.

69. Mu rwego rwo gufasha abohereza mu mahanga ibicuruzwa bitandukanye bikomoka ku buhinzi, kuzuza ibisabwa, hashyizweho uburyo buzwi ku izina rya *Online Export services*. Ubu buryo buhuriweho n'inzego zitandukanye (MINAGRI, RRA, NAEB).

Mu rwego rw'uburezi:

70. Mu 2016, hashyizweho uburyo bwo kubika amakuru ajyanye n'uburezi hifashishijwe ikoranabuhanga (*School Data Management System*). Amwe mu makuru y'ingenzi abitswe muri ubu buryo ni arebana n'ay'abanyeshuri, abarimu, ibigo by'amashuri n'ibikoresho byayo.

71. Aya makuru yifashishwa mu kwihutisha itangwa ry'inkunga ya Leta (*Capitation Grant* na *School Feedings Funds*), igenerwa amashuri ya Leta ndetse n'afashwa na Leta, hashingiwe ku mubare w'abanyeshuri buri kigo gifite. Mu minsi ya vuba, aya makuru azifashishwa no mu zindi gahunda zigamije guteza imbere imyigire n'imyigishirize mu mashuri.

72. Hagamijwe kurushaho kunoza ireme ry'uburezi, mu 2015, Guverinoma y'u Rwanda yatangije gahunda ya *Smart classroom.* Iyi gahunda igamije gushyira ibyumba 2 muri buri kigo cy'amashuri. Buri cyumba gishyirwamo mudasobwa 50, porojegiteri (*projector)* 1 ndetse na interineti. Kuri ubu amashuri agera kuri 749 yamaze kubona ibyo bikoresho.

73. Hashyizwe ingufu mu gukwirakwiza interineti mu byiciro by'amashuri byose, hagamijwe kuzamura ireme ry'uburezi. Mu 2018, ikigero cya interineti mu mashuri abanza cyari kuri 30%, kivuye ku 10% muri 2016. Mu mashuri yisumbuye cyari kuri 52,9%, kivuye kuri 35,4% muri 2016. Naho muri Kaminuza n'amashuri makuru, interineti hose yarahagejejwe ku kigero cya 100%.

74. Hongerewe umubare wa mudasobwa mu mashuri abanza n'ayisumbuye. Ibi byatumye umubare w'abahurira kuri mudasobwa imwe mu mashuri abanza uva kuri 13 mu 2016 ugera ku 10 mu 2018. Mu mashuri yisumbuye, uwo mubare wavuye kuri 27, muri 2016, ugera ku 8 mu 2018 naho muri Kaminuza n'amashuri makuru ubu ugeze kuri 4.

75. Mu 2018, Guverinoma y'u Rwanda, ku bufatanye n'umushinga witwa Andela, hashyizweho gahunda yo gutanga ubumenyi buhanitse mu gukora porogaramu za mudasobwa. Iyi gahunda izajya itanga imirimo ku Banyarwanda 100 buri mwaka.

76. Mu 2018, hatangijwe Ikigega cy'Igihugu gishinzwe guteza imbere Ubushakashatsi no Guhanga Ibishya (*National Research and Innovation Fund*). Kuri ubu, iki kigega kimaze gufasha imishinga igera kuri 11 kuri 50 yemewe, yahawe amafaranga angana na miliyoni 550.

77. Hashyizweho uburyo bw'ikoranabuhanga bworohereza abanyeshuri kubona amanota bagize mu bizamini bya Leta. Ubu buryo bunafasha kureba ibigo bahawe kwigamo n'ibyangombwa bikenewe hifashishijwe mudasobwa cyangwa telefoni (*National Examinations result publication system*).

Mu rwego rw'ubuzima:

78. Guverinoma yashyizeho uburyo bwo guhererekanya amakuru hagamijwe kurengera ubuzima bw'umubyeyi n'ubw'umwana hifashishijwe ikoranabuhanga (*RapidSMS*). Ubu buryo bufasha gukurikirana umugore utwite kuva agisama kugeza abyaye na nyuma yaho, kugeza umwana agejeje ku myaka itanu. Ibi byose bikorwa n'abajyanama b'ubuzima, hakoreshejwe ubutumwa bugufi bwa telefone ngendanwa. Kuva mu 2013 kugera mu 2019, abarwayi bagera ku 25.473 bahawe ubufasha bwihuse binyuze muri *RapidSMS.*

79. Mu rwego rwo kubika neza kandi ku buryo burambye amakuru y'abarwayi, hashyizweho uburyo bw'ikoranabuhanga bufasha umuganga gukurikirana uko umurwayi yagiye yivuza, ibisubizo n'imiti yahawe mbere, agaherako afata icyemezo (*Open Clinic* na *Open Medical Records System).* Ubu buryo bwasimbuye ubwari busanzwe bwakoreshaga impapuro zashoboraga kwangirika no kubura cyangwa zikanagorana gusoma.

80. Kugeza ubu, ibitaro byose bya Leta 48 bikoresha ubu buryo. Biteganyijwe ko bitarenze umwaka wa 2024 ubu buryo buzaba bwageze mu bigo nderabuzima byose.

81. Mu rwego rwo gufasha abaganga gutanga raporo ku barwayi bavuye, hashyizweho uburyo bw'ikoranabuhanga bufasha abaganga kugeza raporo yabo mu buryo bworoshye kuri Minisiteri y'Ubuzima (*Rwanda Health Management Information System).* Ibi bifasha Minisiteri y'Ubuzima kunoza igenamigambi no gufata ingamba z'ubutabazi bwihuse aho bikenewe ishingiye ku makuru yakiriye.

82. Mu rwego rwo kugeza ku mavuriro amaraso n'imiti bikenewe n'abarwayi ku buryo bwihuse, mu 2016, Guverinoma, ku bufatanye na Zipline International, yatangije umushinga wo kwifashisha indege nto zitagira abapilote (drones) mu gutanga amaraso. Ubu ibitaro 24 ndetse n'ibigo nderabuzima 20 bimaze kugerwaho n'iri koranabuhanga, hakaba hamaze gutwarwa udupaki tw'amaraso n'imiti (units) 38.806 mu nshuro zirenga 20.178 (deliveries).

83. Ubu buryo bwagize akamaro cyane. Bwagabanyije umwanya wakoreshwaga mu kugeza amaraso ku bayakeneye. Ubu bitwara iminota iri munsi ya 25, bivuye ku masaha arenga atatu. Byatumye n'ubuziranenge bw'amaraso burushaho kwubahirizwa, kuko igipimo cy'amaraso yangirikaga cyavuye kuri 6% kikagera kuri 0.3%.

84. Mu rwego rwo gufasha abaganga kunoza serivisi z'ubuzima, ndetse no kwiyungura ubumenyi hifashishijwe ikoranabuhanga, Guverinoma y'u Rwanda yatangije uburyo bw'iyakure buzwi nka *Telemedecine*. Hifashishijwe ubu buryo, umuganga w'inzobere ashobora gutanga ubufasha mu gusuzuma no kuvura umurwayi bategeranye. Kuri ubu, ibitaro 6 bishobora guhabwa ubufasha bwihuse n'inzobere zikorera CHUK, mu gusuzuma amafoto y'abarwayi banyujijwe mu cyuma, batiriwe bakora urugendo.

85. Ku bufatanye hagati ya Guverinoma y'u Rwanda na *Babyl,* hatangijwe uburyo bw'ubuvuzi bukoresha ikoranabuhanga rya telefone ngendanwa. Ubu buryo bufasha kugabanya igihe abantu bamara bategereje kugerwaho n'abaganga no kugabanya ingendo abarwayi bakora bajya kwa muganga. Iri koranabuhanga rigenda ryitabirwa ku buryo bugaragara, aho guhera muri Gashyantare 2019 kugeza mu Kwakira 2019 rimaze gukoreshwa n'abagera ku 126.366.

86. Hashyizweho uburyo bw'ikoranabuhanga bufasha abantu kwiyandikisha no kwishyura muri Gahunda y'ubwisungane mu kwivuza (*Mutuelle de santé*). Ubu buryo bukoreshwa binyuze ku rubuga rw'Irembo ndetse na telefoni zigendanwa. Ubu buryo kandi bworohereza abakozi b'ibitaro kumenya abishyuye n'imyirondoro yabo batiriwe bitwaza ikarita.

Mu rwego rw'ubutabera:

87. Mu rwego rwo kurushaho gutanga serivisi zihuse kandi zinoze mu butabera, mu 2016, hashyizweho uburyo bw'ikoranabuhanga buzwi nka *Integrated Electronic Case Management System* (IECMS). Ubu buryo bufasha gutanga ibirego hifashishijwe ikoranabuhanga. Bunorohereza kandi ababuranyi mu ngendo n'amafaranga yakoreshwaga akagabanuka mu gutanga ikirego no gukomeza kugikurikirana.

88. Ubu buryo kandi, bubika amakuru y'ababuranyi kuva ukekwaho gukora icyaha atangiye gukurikiranwa kugeza urubanza rusojwe. Bworohereza n'inzego z'Ubutabera guhererekanya amadosiye y'ababuranyi bitabaye ngombwa gukora urugendo nk'uko byari bisanzwe. Ubu buryo bunafasha Urwego rw'Igihugu rushinzwe Imfungwa n'Abagororwa kwakira no gucunga neza amadosiye yabo.

89. Kugeza ubu, iri koranabuhanga rikoreshwa na RIB mu masitasiyo yayo 194, ibiro (offices) 59 by'ubushinjacyaha, inkiko 63 n'Ishami rishinzwe iby'imanza za Leta (*Public Litigation Department*). Rinakoreshwa kandi n'inzu zitanga ubufasha mu by'amategeko (MAJ) mu Turere twose tw'Igihugu, Gereza zose, Abavoka 2.000 n'Abahesha b'inkiko 3.000.

90. Mu rwego rwo kubika neza amakuru y'imanza zaciwe, hashyizweho uburyo bw'ikoranabuhanga (*Criminal Record Management System).* Ubu buryo nibwo bunifashishwa mu gutanga icyemezo kigaragaza ko umuntu yakatiwe cyangwa atakatiwe n'inkiko (*Criminal Records certificate*). Kuri ubu, ubu buryo bubitse amadosiye arenga miliyoni 4.

91. Mu rwego rwo kubika mu buryo burambye inyandiko z'imanza zaciwe n'Inkiko Gacaca, hatangijwe ikoranabuhanga mu kubika izo nyandiko (*Gacaca archives digitalisation*). Ubu impapuro zose (miliyoni 45) z'amadosiye y'Inkiko Gacaca yamaze kubikwa. Ubu harimo kunozwa uburyo izo nyandiko zakoreshwa n'inzego zizikeneye mu buryo bworoshye.

92. Gukoresha neza ikoranabuhanga mu butabera, byatumye mu 2016, u Rwanda ruhabwa igikombe mpuzamahanga cya zahabu, ku rwego rwa Afurika. Mu 2017, u Rwanda kandi rwahawe ikindi gihembo mu bihugu 10 bya mbere ku isi bikoresha ikoranabuhanga mu butabera.

Mu rwego rwo guhanga ibishya:

93. Ku bufatanye hagati ya Leta n'abikorera, hashyizweho ibigo bigamije gufasha guhanga ibishya no gushaka ibisubizo by'ibibazo bigaragara mu Gihugu cyacu *(Innovation incubators and accelerators).* Bimwe muri ibyo bigo birimo laboratwari zitandukanye ndetse n'abandi bafatanyabikorwa.

94. Mu rwego rwo guteza imbere ubuhinzi hakoreshejwe ikoranabuhanga ryo mu isanzure (*Space technology*), Guverinoma y'u Rwanda ifatanyije n'Ubuyapani yohereje mu kirere icyogajuru cyiswe RWASAT. Iki cyogajuru kizifashishwa mu gufata ibipimo (amafoto, ingano y'amazi, ubushyuhe n'ibindi) ngenderwaho mu kubungabunga ibihingwa.

95. U Rwanda kandi ku bufatanye n'Ikigo *OneWeb* rwohereje icyogajuru mu isanzure. Iki cyogajuru kizafasha uduce twitaruye tw'u Rwanda kubona interineti cyane cyane mu mashuri.

96. Izi ngufu u Rwanda rushyira mu guteza imbere ikoranabuhanga, ziri mu bituma rukomeje kugirirwa ikizere mu gusabwa kugira uruhare rugaragara mu guteza imbere ikoranabuhanga ku rwego rw'Isi.

97. Ni muri uru rwego u Rwanda rwagize uruhare mu ishingwa ry'Umuryango w'Ibihugu Nyafurika byiyemeje gukoresha ikoranabuhanga mu kwihutisha iterambere (Smart Africa Alliance). Uyu muryango ufite icyicaro i Kigali, mu Rwanda. Kuva watangira mu 2013, Nyakubahwa KAGAME Paul, Perezida wa Repubulika y'u Rwanda ni *Board chair* w'uyu muryango.

- **Nyakubahwa ba Perezida wa Sena**
- **Nyakubahwa ba Perezida w'Umutwe wa Badepite,**
- **Ba Nyakubahwa Basenateri,**
- **Ba Nyakubahwa Badepite,**

98. Muri uyu mwanya, ndagira ngo mbagezeho ibikorwa byo mu rwego rw'ikoranabuhanga biteganyijwe gukorwa muri Gahunda yo kwihutisha Iterambere ry'Igihugu, 2017-2024 (NST1).

Bimwe muri byo ni ibi bikurikira:

99. Gukomeza guteza imbere imikorere myiza y'Ikigega cyashyiriweho guteza imbere ba rwiyemezamirimo bato n'abaciriritse mu guhanga ibishya na tekinoloji (*Rwanda Innovation Fund*) ndetse no kurangiza umushinga wa *Kigali Innovation City*.

100. Gushyiraho ibigo by'ikitegererezo (Centers of Excellences) mu ikoranabuhanga rigezweho (*Emerging technologies*) ndetse no kongera ibigo bifasha ba rwiyemezamirimo bakiri bato n'abaciriritse mu by'ikoranabuhanga (*Innovation centres*).

101. Mu rwego rwo guhuza amakuru y'abarwayi hagati y'ibitaro, amavuriro mato, farumasi n'ibigo by'ubwishingizi hazashyirwaho uburyo bwitwa *Health Information Exchange.*

102. Hazakomeza kongerwa *smart classrooms* mu bigo by'amashuri, no kongera ireme ry'uburezi rishingiye ku ikoranabuhanga.

103. Hazabaho kandi kongera iminara y'itumanaho no kugeza umurongo mugari wa interineti (broadband) kuri buri muturarwanda wese, mu 2024 Ibi bizatuma mu 2024, umubare w'abakoresha umurongo mugari wa interineti uzagera kuri 47% uvuye kuri 28% dufite uyu munsi.

104. Gushyiraho uburyo bworohereza abaturage kugura ibikoresho by'ikoranabuhanga birimo telefoni za MaraPhones na mudasobwa za Positivo zikorerwa mu Rwanda (Smart phones/Computers).

105. Gushyira imbaraga mu kuzamurira abaturage ubumenyi bw'ibanze mu by'ikoranabuhanga ku kigereranyo cya 100% by'urubyiruko na 60% by'abakuze guhera ku myaka 15 kuzamura. Ibi bizakorwa binyuze muri gahunda y'intore mu ikoranabuhanga (*Digital ambassadors program*).

106. Kuzamura imyishyurire hakoreshejwe ikoranabuhanga ugereranije n'umusaruro mbumbe w'Igihugu (*Increase Payments of transactions done electronically as compared to the percentage of GDP*), ku buryo mu 2024, umubare w'abazaba bakoresha ubu buryo uzagera nibura kuri 80% uvuye kuri 42% bo mu 2017.

107. Umurenge SACCOs nawo uzongererwa ingufu mu gukoresha ikoranabuhanga. (*Automation of Umurenge SACCOs*).

108. Gushyiraho imijyi y'icyitegererezo mu ikoranabuhanga (*Smart cities programs*).

109. Gushyira mu bikorwa umushinga ugamije guha Umunyarwanda indangamuntu ikomatanyije yifashishwa mu guha serivisi zose umuntu agenewe (*Single digital ID program*). Ibi bizagendana no gukomeza gushyira serivisi za Leta ku rubuga rw'Irembo.

110. Gushyiraho porogaramu zihariye zo kuzamura umubare w'abagore n'abakobwa bitabira gukoresha ikoranabuhanga mu gihugu cyacu.

- **Nyakubahwa Perezida wa Sena,**
- **Nyakubahwa Perezida w'Umutwe wa Badepite,**
- **Ba Nyakubahwa Basenateri,**
- **Ba Nyakubahwa Badepite,**

111. Ikiganiro nari nabateguriye ndagira ngo ngihinire hano. Mu izina rya Guverinoma y'u Rwanda ndagira ngo nongere nshimire Inteko Ishinga Amategeko, Imitwe yombi, ku ruhare rugaragara mukomeje kugira mu gukurikirana ibikorwa bya Guverinoma no ku nama itanga zifasha Guverinoma kurushaho kunoza ishyirwa mu bikorwa rya gahunda zitandukanye.

112. Twizeye ko n'uyu munsi muza kuduha ibindi bitekerezo tuzashingiraho dukomeza kunoza ibikorwa bya Guverinoma bijyanye n'ikoranabuhanga (ICT) mu bukungu bushingiye ku bumenyi, twiyemeje kugeraho.

113. Twiteguye kandi no kwakira ibitekerezo n'ibibazo ku kiganiro maze kubagezaho.

Ndabashimiye, murakoze cyane