MINISTRY OF INFORMATION
TECHNOLOGY & COMMUNICATIONS

LOCAL DIGITAL CONTENT PROMOTION STRATEGY & IMPLEMENTATION PLAN

(2018-2022)

September 2018

DEFINITIONS

Digital Content

The definition adopted in this strategy is all non-diminishable and re-usable applications curated or created using digital technologies and shared, accessed, consumed, used, or preserved using the same technologies. Digital content provides informational, educational and/or entertainment utility.

Local Content

Local content is "the expression and communication of community's locally generated, owned and adapted knowledge and experience that is relevant to the community's situation—where the community is defined by its location, culture, language, or area of interest" (Ballantyne 2002)

Locally Hosted Content

Content that is hosted on caches and/or servers hosted in Rwanda. Or delivered by content delivery networks (CDN's) hosted in the Republic of Rwanda

Locally Relevant Content

Digital content relevant to and meeting local information, education and entertainment needs. Ideally available in Kinyarwanda, it may be generated and hosted locally or abroad.

Market Content

As used in this strategy, Market Content refers to paid-for-content, typically paid for using electronic payments. This includes subscription-based TV and films, online music, online gaming, subscription- based newspapers and magazines, industry reports among others.

Non-market Content

Refers to content that can be accessed and consumed at zero fee paid to the rights owners by the end users. As used here, this includes content that is consumed free of charge by end users with advertisers rewarding rights and platform owners once they hit certain metrics as in the case of YouTube.

EXECUTIVE SUMMARY

While the importance of infrastructure, cyber security, digital talent, and device penetration to digital transformation cannot be overstated, without proliferation of Local Digital Content and e-Services, citizens and businesses cannot fully realize the benefits of broadband. Indeed, local digital content is rightly considered the missing piece in the digital transformation jig-saw.

The GoR is keen to promote local digital content because it will fuel demand for broadband, improve return on investment made into hard and soft infrastructure, result in increased off-farm employment and entrepreneurship opportunities, bridge the rural and gender digital divide, and help Rwanda transform from consumer and importer to producer and exporter of digital

The strategic compass for this strategy is informed by GoR orientation namely, quality education enabled by ICT's, job creation and entrepreneurship i.e. creation of 100,000 new, off-farm jobs and 100 companies with a market capitalization of 50 Million USD each and bridging the gender and rural-urban digital divide

The vision of this strategy is to transform the country into a leader in harnessing the power of local digital content to power transformation of the economy and society.

Implementation of this strategy will result in Rwanda hosting the biggest state-of-the-art content development infrastructure in Africa. The proposed facility, to be developed through a PPP SPV arrangement will aim to meet

> **At full capacity, the Special Purpose Vehicle could employ up to 10,000 digital creatives and will directly contribute to the growth of about 150 digital companies through the 3rd party framework (3PD's)**

local and regional demand for digital content. At full capacity, the Special Purpose Vehicle could employ up to 10,000 digital creatives and will directly contribute to the growth of about 150 digital companies through the 3rd party framework (3PD's)

The strategy also aims to ensure that Local Digital Content is produced, disseminated and consumed in all priority sectors namely Education, Agriculture, Healthcare, Industry and Women and Youth. Only once this has been achieved will Rwanda achieve sustainable transformation of the economy and society.

A key flagship of the strategy is digitization of education content, where content will be developed from pre-school, through 12-YBE, secondary schools and TSS, TVET to HLI's. Beyond in-school education, digital education programs will be developed to support continuing and workforce education.

Implementation of the strategy will also result in local digital content being significantly affordable, accessible and visible on the Internet. Content repatriation is key to implementation of this goal. The national data center will improve its level of security, upgrade servers, avail 24/7 customer service, train and equip their employees to match global data center services providers. The GoR will also look to attract investors in the second data center to bring about competition and bring down the cost of hosting.

Substantial amounts of strategic content will also be digitized. This includes content that showcases Rwanda's rich culture, history, intellectual work and national identity. Through this strategy, the GoR aim to digitize Rwanda's history, research and scientific work and

about 5,050,000 pages of the National Archives document that remain undigitized

This strategy will be used to help bridge the Gender and Rural divide. Content Delivery Networks (CDNs) will be decentralized and deployed in rural and distant areas to reduce bandwidth costs, improve user experience and increase availability of content.

About 5,000 women & youths will be equipped with hard and soft skills that will transform them into digital content creators. Through the use of design thinking and performance-based financing approaches, about 300 new applications will be developed

New content that is in Kinyarwanda will be developed and disseminated. About 5,000 rural women, youth and other special interest groups will be equipped with hard and soft skills that will transform them into digital content creators. Through the use of design thinking and performance-based financing approaches, about 300 new applications will be developed with effective participation of intended audiences to ensure their relevance.

Lastly but not least, the strategy will result in implementation of an adequate legal and regulatory framework for the promotion of local digital content. A regulation that enforces a minimum of 50% of the content on all Rwandan networks to be Local Content will be revised to make it more actionable. Digital creatives will be more protected by Intellectual property and copy rights laws while the Creative Common License framework will be adapted to the Rwandan context.

TABLE OF CONTENTS

LIST OF ACRONYMS AND ABREVIATIONS

|	
3PD:	3rd Party Developer (Framework)
4G:	4th Generation (ICT Networks)
12-YBE:	12 Year Basic Education
A Level:	Advanced-Level Education
CDN's:	Content Delivery Networks
CESB:	Capacity Building and Employment Services Board
DG:	Director General
DOT:	Digital Opportunity Trust
EDPRS:	Economic Development and Poverty Reduction Strategy
Edutech:	Education Technology
Fin-Tech:	Financial Technologies
GOR:	Government of Rwanda
GMO:	Gender Monitoring Office
HLI's:	Higher Learning Institutes
ICT's:	Information Communication Technologies
IPAR:	Institute of Policy Analysis and Research
IRST:	The Institute of Scientific and Technological Research
MIGEPROF:	Ministry of Gender and Family Promotion
MINAGRI:	Ministry of Agriculture
MINALOC:	Ministry of Local Government
MINICOM:	Ministry of Commerce
MITEC:	Ministry of Information Technology and Communications
NICI:	National Information and Technology Infrastructure
OGS:	Office of the Government Spokesperson
OTP:	Office of The President
REB:	Rwanda Education Board
RDB:	Rwanda Development Board
RISA:	Rwanda Information Society Authority
RURA:	Rwanda Utility Regulation Authority
RWF:	Rwanda Francs
PC:	Personal Computer
PPP:	Public Private Partnerships
SSP:	Sector Strategic Plan
SPV:	Special Purpose Vehicle
SRMP:	SMART Rwanda Master Plan
SWOT:	Strength, Weakness, Opportunities and Threats
TSS:	Technical and Secondary Education
TVET:	Technical and Vocational Education and Training
UR:	University of Rwanda
Wem-Tech:	Women in Technology
WEF:	World Economic Forum
WSIS:	World Summit on Information Society
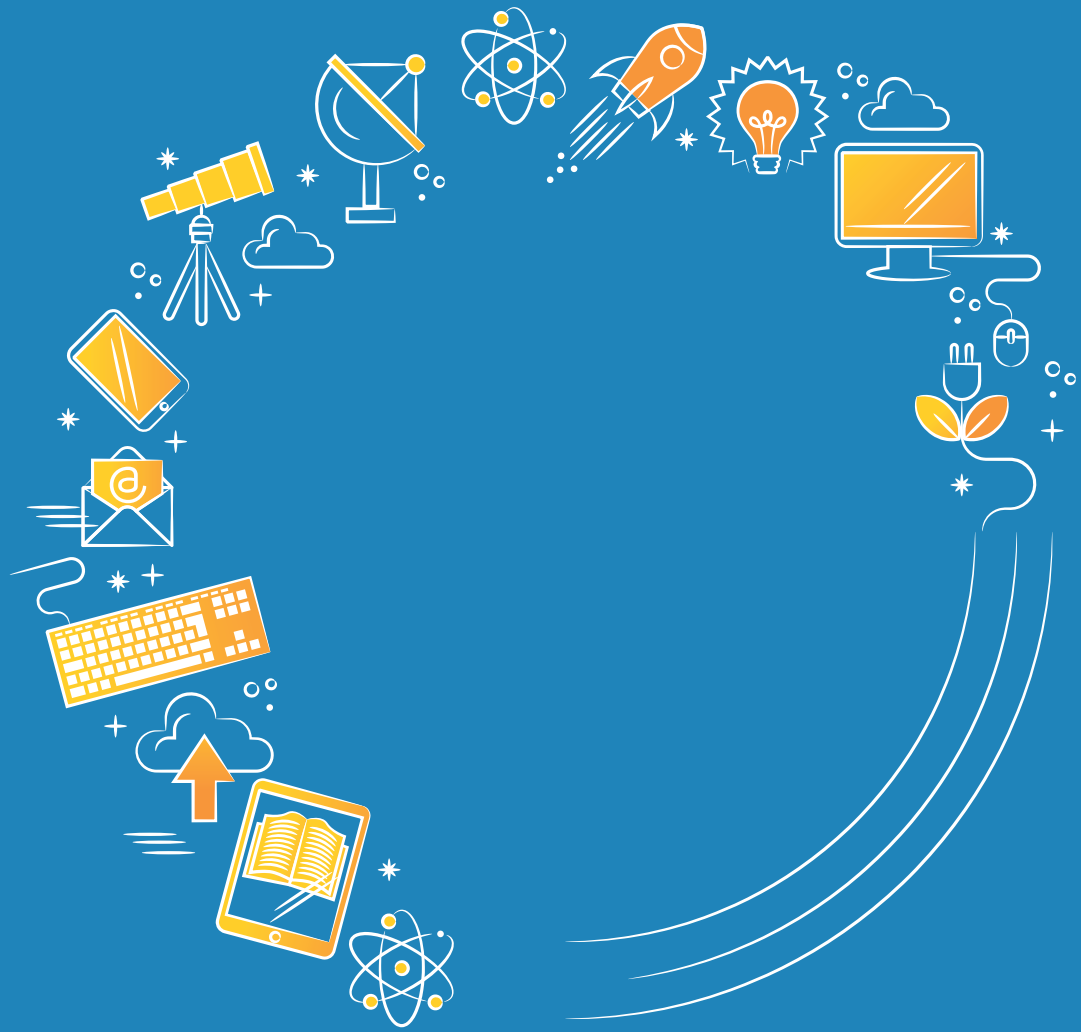
SECTION A:
INTRODUCTION

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INTRODUCTION

Background and Rationale

As rightly described in the SMART Rwanda Master Plan, content (and e-services) is what delivers the benefits of being connected.

Put simply, all achievements registered in the ICT sector over the last two decades- achievements in rolling out a world-class broadband infrastructure and increasing access to the same, in acquiring resilient cyber-security capabilities, in building digital talent and in making government accessible and efficient through technology- will bear little fruit if there is no concerted effort to develop local digital content.
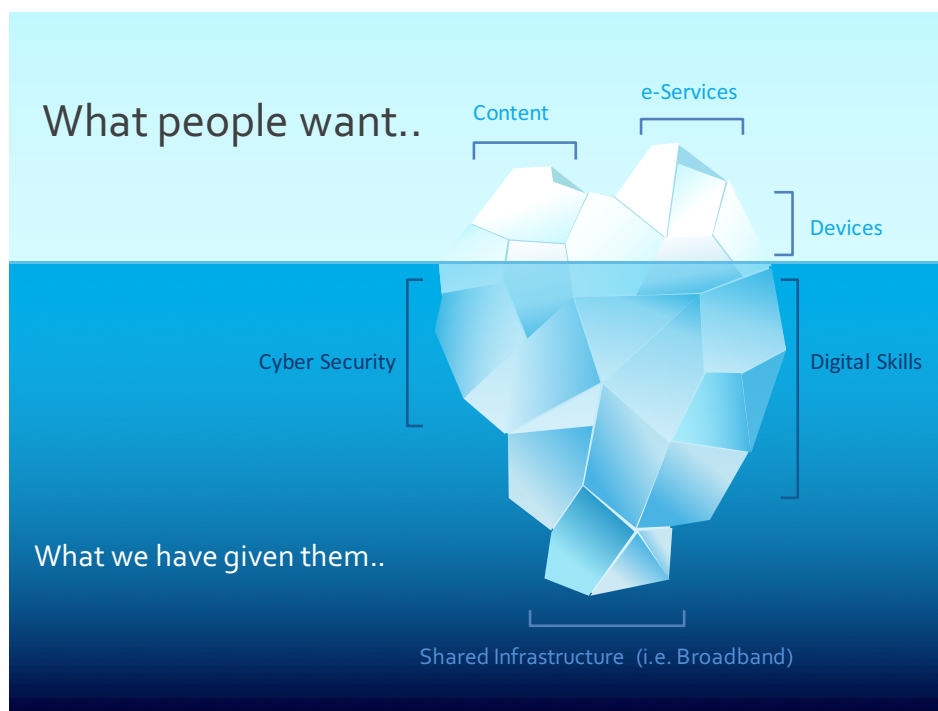
Given the relative success and amount of investments made in the other pillars of the Rwandan ICT sector, it would not be an overstatement to argue that local digital content is the missing piece in the digital transformation jig-saw.

Digital content is an increasingly significant and ubiquitous factor that will continue to shape Rwanda's economic and social development. Network convergence, increasing proliferation of broadband, declining prices, lower barriers to entry, penetration of low-cost but powerful devices and applications will together bring about novel ways of curating, distributing, preserving, and accessing content.

As Rwanda continues on the trajectory of transformation towards a knowledge-based, information-rich economy and society creation, collection, management, processing, storage, delivery and access to digital content will become the most prevailing activities in all key sectors, fuelling more innovation, entrepreneurship and job creation.

It is therefore appropriate and timely that MITEC has set about to develop the ICT content strategic and implementation plan that will see Rwandans transformed from consumers to producers of their own content and for other markets.

Benefits of local digital content

Proliferation of unique, Rwandan digital content will fuel demand for broadband and digital services, significantly improve return on investments made in hard and soft ICT infrastructure and create off-farm employment and entrepreneurship opportunities for communities particularly women and the youth.

Rwandans will easily embrace ICTs in education, agriculture and healthcare because the material, courseware, and curriculum is presented in a language they understand. Learning aids and case studies will be more effective if they are culturally and locally sensitive and discuss examples that learners are familiar with

Local digital content will be created by Rwandans. This will in return translate into more relevance and usefulness to the Rwandan consumers. This can be evidenced already in the fact that more Rwandans find relevance and value and end up consuming more of local online news websites like Igihe than foreign newspaper

Local digital content will help bridge the digital divide and drive empowerment of rural communities. Rwandans in rural areas will embrace more ICT's when the content is in Kinyarwanda...

Local digital content will provide opportunity for socio-economic empowerment of communities. Local producers of content will increasingly get rewarded both in terms of employment and entrepreneurship opportunities as well as in social mobility as a result of their ability to create value to local consumers. Young Rwandan digital *creatives* are already making a living and creating personal brands by leveraging the power of social media to produce and disseminate local content.

Local digital content will help bridge the digital divide and drive empowerment of rural communities. Rwandans in rural areas will embrace more ICT's when the content they consume is relevant because it is created by themselves, is addressing their pressing needs, is in Kinyarwanda, a language they understand and is presented using culturally sensitive metaphors.

Increased access to globalized knowledge powered by the internet has transformed Rwandans into consumers of foreign, most of the time, irrelevant content that not only is in a language the majority don't understand, gives bad user experience, but could pose the risk of undermining our culture and become a vehicle for economic exploitation.

A prevailing discourse in the African political and academia circles is that one of the reasons Africa struggles to unshackle itself from the chains of imperialism is because we have left the important duty to tell our story to our former colonizers. Local digital content is a formidable tool that Rwandans can use to tell their own story. When harnessed properly, the internet, particularly, social media has the power to shape the global public opinion of a people and their country. Local digital content can be a powerful vehicle through which Rwandans can enhance the world's view of their unique identity and heritage and gain more political and economic bargaining power.

Scope of this strategy

Nomenclature is always an issue when a term as general as "digital content" is mentioned. Stakeholders, both key and distant, will hear different things depending on where they come

from. Almost every products and service that is delivered via digital channels will be brought forward for consideration.

To give this strategy the focus it deserves, we shall rule out certain products and services on the basis that they do not meet the strict criteria used to determine strict relevance.

The first criteria used is the **type of utility** derived from consuming a digital product or service. All products and services offering **functional utility** are excluded from this strategy while the focus will be on those offering information, education and entertainment utility. For example, any aspects of Fin-Tech, e-Government, e-Health, e-Commerce, e-Education, e-Agriculture that involve **execution of tasks** using digital platforms to achieve a certain goal e.g. transfer and borrowing of money via Mobile Money, trading of crypto-currency, transfer of land via Irembo, purchase of goods via Jumia, booking a doctor appointment via Babyl etc. are outside the scope of this strategy.

All Fin-Tech, e-Government, e-Health, e-Commerce, e-Education, e-Agriculture applications and interfaces that offer **information, education and entertainment** utility to the users will be considered for this strategy. This includes such interfaces as information pages on Irembo e-Government platform, Trade, Health and Agriculture Information portals, and digital education content

Perhaps the most decisive criteria employed here to determine relevance is whether a product is **diminishable and non-reusable** or is **non-diminishable and reusable**. e-Services are diminishable and non-reusable in that consumption of one unit automatically implies that the same unit will no longer be available for consumption and cannot be reused. e-Services of this type are out of scope of this study.

Figure 1. In and Out of Scope
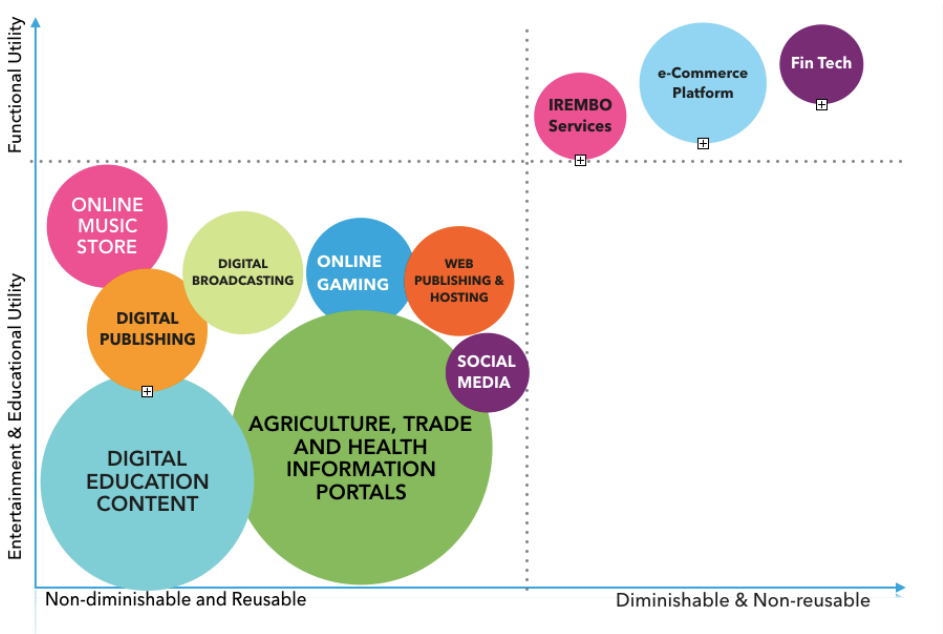
Typically, there is a limit on a number of e-Services available at any given time. There are only 96 slots available for trekking mountain gorillas. Purchase of one Gorilla Permit on Irembo platform automatically means one slot will not be available to other tourists and only 95 slots will be remaining on that particular day. There is a limit to the number of patients that a given doctor can give appointments to via Babyl. Jumia can only allow purchase the number of shirts available in the stock of a shop owner over a given period. There is a certain number of Bitcoins that can be traded at any given time. New algorithms must be written in order to avail new ones on the market

On the contrary, there is no limit to the number of units of digital content that can be consumed at any given time. There is no limit to the number of purchases of Rwandan music that can be made off the Mergims platforms. An Igihe article can be read over and over again a gazillion times. Servers permitting, all of the world's population can watch a YouTube Video. They can come back again and watch it for again and again. Servers permitting, there is no limit to the number of players involved in a Pokemon Go at any given time.

National policy framework

This strategy is directly hooked to the ICT Sector Strategic Plan (2018-2024) and the SMART Rwanda Master Plan (2020). **The ICT Sector Strategic Plan (2018-2024) recognizes** "localized content" as a foundation upon which the sector will be built and a "thriving local content which are hosted locally" as driving factor.

In the ICT SSP, inadequate local content and the fact that most of the content available is in foreign languages are identified as some of the reasons contributing to low broadband penetration (currently standing at 39.76%).

It is for this reason that the SSP, commits to encourage "more investments to increase local content creation and hosting by providing various incentives". The SSP prescribes a program to "provide affordable end-user experience to low income citizens and relevant content and applications" as one of the activities that will result in 100,000 new jobs and that will help Rwanda transform into a knowledge-based economy

This strategy directly feeds into Rwanda's **policy on Science, Technology and Innovation** being implemented by the NCST. The policy's specific policy objective is that

"Rwanda becomes a modern nation, able to generate and disseminate technological knowledge and innovation. The Rwandan nation has integrated these with its fundamental cultural values in its socio-economic development, as factors of creativity, productivity, job creation and well being"

Digital Content is a vehicle through which this can be achieved. Production and dissemination of knowledge including research and scientific works is one of the raison d'etre of this strategy.

The Smart Rwanda Master Plan (2020) identifies Digital Content as one of the five pillars on which the ICT sector is built, alongside access, security, capacity, and governance.

The SMART Rwanda Master Plan prescribes that 100,000 newly created off-farm jobs and 100 companies with a market capitalization of 50 Million USD will be created by 2020. The expectation is that Local Digital Content will significantly contribute to this ambition

The SMART Rwanda Master Plan is the fourth generation of NICI's for the period covering 2016-2020. NICI Plans I to III (2000 – 2015) were mid-term implementation frameworks of the National ICT Policy. NICI (2000 – 2005) was instrumental in establishing the legal and regulatory framework providing for liberalization for the telecom sector and to which the significant amounts of FDI's and private sector investments into the ICT sector can be attributed. The focus of NICI II (2006-2010) was mainly to increase ICT infrastructure.

NICI III (2011 – 2015) focus was on e-Services and content community and private sector development and Cyber Security. During this period, the country witnessed a significant increase in the proliferation of e-Services. But a huge gap still remains in as far as local digital content is concerned.

SMRP and ICT Sector SSP feed into the **EDPRS 3 (2013-2018).** The EDPRS 3 is Rwanda's mid term implementation framework. EDPRS 3 rightly acknowledges the role that ICT will play in contributing to the targets of the five thematic areas (Economic Transformation, Rural

Development, Productivity and Youth and Accountable Governance}

ICT's are identified as a cross cutting area of **Vision 2020,** the country's development blue print

This strategy is also directly aligned to the **National ICT Policy for Rwanda** adopted in 2001. The vision of this policy is to "Modernize the Rwanda economy and society using information and communication technologies (ICTs) as an engine for: accelerated development and economic growth; national prosperity; and global competitiveness".

It is in this regard that a number of projects proposed in this strategy are directly aligned to at least one of the strategies proposed in the National ICT Policy.

This strategy is coming to address some of the challenges identified by **MINISPOC** in the **Culture Heritage Policy** as to impeding development of the creative industry. These include;

High equipment investment costs: This strategy proposes incentives aimed to reduce acquisition and shipping costs of equipment. This is identified by MINISPOC as a major impediment to development of the local creative industry with far reaching repercussions on the number of jobs and businesses that can be created in the industry

Inadequacy in enforcement of copyright laws: MINISPOC Identifies this as a major challenge with artists and creative getting discouraged and dropping projects because the law is not enforced when infringement is reported.

Inadequate skills among creative industry players: MINISPOC rightly points to the need to impart "highly specialized skills" among the players in such fields as "film production, film shooting, Photoshop". This strategy proposes a strong capacity building component aimed to impart relevant skills at all levels from beginner through intermediate to advanced levels among professional digital creatives.

To the extent that Data is defined in the **National Data Revolution Policy (2017)** as "large range of information in its rawest form" then this strategy can be construed as coming to implement the Data Revolution policy.

Indeed, some of the objectives, principles and recommendations of the Data Revolution Policy are similar to those of the Local Digital Content Strategy. This include;

- Increasing Jobs through creation of new jobs and catalyzing private sector innovation
- Promoting citizen participation namely individuals, researchers, the media, civil society, and business in order to "realize the value of data
- Increasing proliferation of data-driven apps in priority sectors that will help 'people navigate modern life more easily'
- Enhancing the hosting environment as a way to enable the thriving of a data industry. To attract more investment, the policy prescribes addressing issues such as prohibitive data and power costs and in tax incentives

International policy framework

On the international scene, local digital content was for the first time recognized as of strategic importance during **the World Summit on Information Society** process back in 2003. 191 countries acknowledged the importance of local content in fostering national and community identity and most importantly as a vehicle for an equitable information society.

The WSIS' Plan of Action and Declaration of Principles recognized that local content developed by and for local communities has potential to fuel "social and economic development by stimulating participation of all stakeholders, including people living in rural, remote and

marginal areas". Key to the achievement of the above is empowerment of local communities to develop their own content using digital channels.

Sustainable Development Goal No. 9, though not explicitly mentioning content, stresses the importance of bridging the digital divide as a means to "ensure access to information and knowledge, as well as foster innovation and entrepreneurship" for more than 4 billion people that still do not have access to the internet.

Smart Africa is perhaps the most relevant international framework for local digital content. The Alliance has got Local Content (together with Services, Big Data and Digital Payment) as components of the Digital Economy flagship. Through the program, The Alliance aims to "increase the amount of informative content from evocative music, drama, documentaries, and arts to educative and informative content and put it online"

SITUATIONAL ANALYSIS

Legal and regulatory framework

Article 38 of **the The Rwanda Constitution of 2003 as revised in 2015** commits the state to guarantee access to information together with freedoms of the press and of expression. The constitution goes on to provide safeguards against abuse such that the same rights do not "prejudice public order, good morals, the protection the youth and children, the right of every citizen to honor and dignity and protection of personal and family privacy. Article IV of the **Law N°22/2009 of 12/08/2009 governing Media** has got provisions for "ICT or Internet media". Article 56 of the same law guarantees the "right to a website". That "every person has right to receive, disseminate and send information through the internet." Every Rwanda can create and publicize their website and they do not have to be professional journalists.

Owners of internet cafes have responsibility to screen and block pornographic material from users. Adults having access to the internet have a duty to protect minors (18 years and under) against material containing "adverts or leading to fornication, vagrancy, drug use and other worst actions of sex work or theft" The law contains many provisions against "fake news"[1]   which is now considered to spread disinformation and as a threat to free speech. A number of countries including those from the so called "free world" have come up with regulations against "fake news"

Regulation N°004/R/MR-MCA/ RURA/2017 of 30/06/2017 Governing Broadcasting Services provides the most significant contribution to efforts to promote local content. Article 32 on Local Content mandates that a minimum of fifty percent (50%) of all content airing on Rwandan radio and TV networks must either be produced by a Rwandan of foreigner that is permanently resident in Rwanda or "a legal person whose majority of shareholders are citizens and permanently residing in Rwanda"

While the regulation has contributed significantly to the promotion of local content, a loophole remains because a Rwandan owned station, all manned by local producers can still continue to produce 100% foreign content.

The Broadcasting Policy of March 2011 provides for such pertinent issues as the legal and regulatory framework for broadcasting in this age of digitization; consumer protection, universal access, protection of minors, copy and most important of all promotion of local content.

Law N°24/2016 of 18/06/2016 governing ICT's is the most comprehensive legal framework for the Information economy and society that Rwanda is increasingly transformed into. The

[1]*The UK, France individually and the EU as an organ are planning regulations against "fake news"*

law provides for such pertinent issues as regulatory oversight for the ICT sector, Consumer Protection, Hosting and Administration of Rwandan domain and subdomain names, and regulation for radio and television broadcasting networks.

Law No. 31/2009 of 26/10/2009 on the Protection of Intellectual Property protects digital creatives, such as inventors, innovators, authors of literacy, artists and performers and any authors of an intellectual work and broadcasting organizations.

It goes without saying that Digital Content and ICT's in general, are found in an ever-changing landscape. There is need to strengthen capabilities to constantly update their legal framework.

Ongoing Initiatives

This strategy is coming on the back of a number of institutions that have been implementing noteworthy programs in the field of local digital content.

Such programs are highlighted below;

AFRICA DIGITAL MEDIA ACADEMY; "PAVING THE WAY FOR AFRICA'S OWN AL JAZEERA"

An all girls intake

The Africa Digital Media Academy was established in 2012, in partnership between the Workforce Development Authority (WDA) and Pixel Corp a US company that specializes in Internet Broadcasting, augmented/virtual/mixed reality and media training. ADMA provides students with the skills necessary to work in all areas of the digital media industry.

ADMA educates and prepares students at many age levels for production work in quality video and film production, computer graphics, visual effects, three dimensional modeling, audio lighting, motion tracking, and editing using various software packages like Photoshop and Final Cut Pro X.

The academy is unmatched in terms of technical and "soft skills" imparted. They aim to ensure that they produce "not just good technicians...the technicians need to know not only which buttons to push but why are they pushing them". The aim is to ensure that the students are given the tools to enable them to acquire new skills also on their own once out of school.

ADMA boats arguably the best studio in East Africa. In terms of relevance of their training, *out of the 135 graduates so far, 91% of them have either been employed or have started their own successful media businesses.*
However, there is need to strengthen ADMA's organizational and financial capacities to

enable the academy to play its role in building capacity of digital content professionals.

Financial constraints handicap their capacity to enroll sufficient numbers of applicants. Out of the 500-900 applications for one intake the center can only afford to enroll twenty (20) students.

The academy is underfunded, making it difficult to bring in qualified trainers from abroad. This explains why about distance learning accounts for 40% of the instruction that offered by the academy.

There also need to fast-track ongoing efforts to transition the academy from a Government-supported project to a more sustainable, market driven academy. Currently, ADMA can not make money because of their status- they are a non-for-profit organization.

Future sustainability, governance of the ADMA and the academy's role in implementation of this strategy is discussed further in the section on implementation frame work.

BEYOND A FILM INDUSTRY: TOWARDS A "FILM ECONOMY": KWETU FILM'S "RWANDA MEDIA PROJECT"

Kwetu Film Institute, a leading film institute in the region is implementing a two-year diploma course in Film and TV Production. Under the support of the German Government, the aim is to contribute to development of the film economy in Rwanda. Dubbed the Rwanda Media Project, the program is expected to transform Rwanda's movie industry from "just being a source of entertainment to a more economically viable sector that will contribute largely to the economy"

Costing US $ 2000 annually and targeting a maximum of 15 trainees per intake, the program aims to impart hands on skills throughout the entire film production stages "right from idea conception via script writing, putting together the crew and all the way to when the product is marketed and distributed."

Besides the Diploma program, Kwetu Film Institute has been providing three (3) weeks training for media professionals in directing, script writing, film and TV production, camera, editing, sound and light, history of film, marketing, set design, post production, laws and

regulations of the film industry.

Graduands from this program have gone on to be employed in media departments at various institutions, or have started their own marketing and media production companies or free lanced as producers, camera men or have turned into film makers themselves.

This program has been supported by the Workforce Development Authority (WDA).

"THE ICT INNOVATION CENTRE; INCUBATING RWANDA'S NEXT PIXAR"

Construction is complete for a US $ 6m ICT Innovation Centre in Rwanda housed at the Integrated Polytechnic Regional Centre (IPRC)-Kicukiro, Kigali. Construction of the facility is supported by the Korea International Cooperation Agency (KOICA).

The aim of the facility is "enhance innovation, provide consultation services on ICT policies, business and job creation through ICT incubation".

Qualified start ups in the field of digital content will be able to access incubation and advisory services from the facility.

ADMA is expected to be an anchor tenant of the ICT Innovation Center.

INNOVATION VILLAGE

Innovation Village is a leading Rwandan multimedia and tech firm that has transformed the design and creative industry.

It is a public-private partnership between the GoR and Innovation Village Group aimed to enhance the culture of reading and innovation. The firm aims to "inspire and connect storytellers, innovators and educators with tools for learning, growth and innovation through on-site programs and an interactive online platform".

The firm has rolled out a number of innovative, community-centered products and platforms. Some of the platforms relevant to this strategy include;

KPL Online
In October 2015 the GoR outsourced management of the Kigali Public Library to Innovation Village. Since then, of the 19,000 hard copy books, Innovation Village has been able to digitize about 30,000 and about 1,000 will be digitized annually. On its KPL Online platform users are able to borrow digital books including audio books. The platform provides a range of e-Services such as e-Catalogue, "Ask a Librarian".

Story Tellers Studio
Through the studio, Innovation Village produces film and photography products that help communities including business and government tell their own stories. The studio employs a Human-Centered approach to researching, conceptualizing, developing and producing Documentaries, Animated Film and campaign that are inspiring and culturally relevant

The Journal
Journal is an open video streaming platform that showcases and "celebrates arts, culture, innovation and storytelling". Through the Journal, Innovation Village has done a commendable job giving a platform to showcase the work of talented local artists, poets, writers, artists, debaters, visual artists and bloggers.

SWOT Analysis

STRENGTHS
- One unique language, culture Kinyarwanda
- Robust ICT Infrastructure
- Increased penetration of Digital Payment
- Increasing penetration of Electricity
- Thriving ICT Innovation ecosystem
- Awareness of importance of ICT in general
- Political Will

WEAKNESSES
- Low levels of (traditional) and digital literacy
- Poor reading habits
- Inadequate legal and regulatory framework
- Low device penetration (Radio penetration is high though as per stats from RURA, TV low, PC and Smart Phone
- Most Local content is in Foreign languages

OPPORTUNITIES
- Opportunity to bridge the digital divide
- New disruptive technologies give opportunity to adopt a leapfrog model and propel into the best on the global scale. This is particularly relevant in the Data Center and Filing Technologies
- Social media give an unprecedented opportunity for Rwandans to tell their own story
- Increasing economic integration e.g. CfTA means investors are looking beyond just Rwanda

THREATS
- Ever changing ecosystem and technology
- Globalized knowledge and social media
- Global players like Google, Microsoft entering the market to sell licenses, products

In this section a SWOT Analysis (Strength-Weakness-Opportunities-Threats) is being used to with the ultimate goal to amplify the strengths, make the most of the opportunities and abate weaknesses while mitigating risks posed by external threats

Strengths

- One unique language, culture Kinyarwanda
- A growing number of polyglot professionals fluent in English, French and Kiswahili
- Robust ICT Infrastructure
- Increasing penetration of Digital Payment
- Increasing penetration of Electricity
- A thriving ICT Innovation ecosystem
- Awareness of importance of ICT in general
- Political Will

Weaknesses

- Low levels of (traditional) and digital literacy
- Underdeveloped culture of reading (partly explained by penchant for rich oral tradition)
- Inadequate legal and regulatory framework
- Low device penetration (Particularly broad band enabled devices)
- Most Local content is in Foreign languages

Opportunities

- Opportunity to bridge the digital divide
- New disruptive technologies present an opportunity to adopt a leapfrog model and propel into the best on the global scale. This is particularly relevant in the Data Center and Filming Technologies
- Social media presents an unprecedented opportunity for Rwandans to tell their own story
- Increasing economic integration e.g. CfTA means investors are looking beyond just Rwanda

Threats

- An ever changing ecosystem and technology
- Globalized knowledge and social media
- Global players like Google, Microsoft mainly entering the market to sell licenses, products

Strategic Issues

A number of challenges continue to stand in the way of development of local digital content. These include;
- **Insufficient local digital content in priority sectors**
There is still a dearth of local digital content in priority sectors namely Agriculture, Education, Healthcare, Trade and Industry and Women and Youth

- **Inadequate legal and regulatory framework for the promotion of local digital content.**

A case in point is the fact that content on local broadcasting networks particularly Television is still dominated by foreign content with the exception of music.

- **Potential marginalization of rural communities from the Information Society**

There is a dearth of local digital content produced by and for the local communities particularly in rural Rwanda

- **Underdeveloped Digital Content development capabilities**

Inadequate access to advanced technology (production units, digital cameras, digital studios); capturing, repackaging, storing and disseminating them to a wider group of users.

- **Limited training opportunities for content creators;**
- **Local Digital Content is still largely obscure on the Global Infrastructure Network**
- **Most of the local digital content is still hosted abroad**

Strategic Options

Faced with a multitude of challenges and intervention areas, have opted to pursue the following priorities as strategic options for the next 4 years. The priorities are listed in order of priority
- Building capabilities and an institutional framework for the promotion of local digital content
- Develop and disseminate local digital content in priority sectors
- Reverse potential marginalization and exclusion of rural communities from the information society
- Increase visibility and accessibility of unique Rwandan digital content on the Global
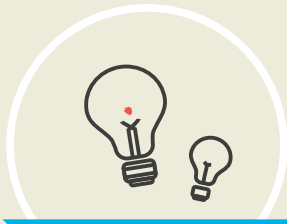
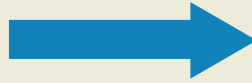| (Strategic) Issues	(Strategic) options
• Insufficient local digital content in priority sectors • Inadequate legal and regulatory framework for the promotion of local digital content. • Potential marginalization of rural communities from the Information Society • Underdeveloped Digital Content development capabilities • Limited training opportunities for content creators; • Local Digital Content is still largely obscure on the Global Infrastructure Network • Most of the local digital content is still hosted abroad	• Building capabilities and an institutional framework for the promotion of local digital content • Develop and disseminate local digital content in priority sectors • Reverse potential marginalization and exclusion of rural communities from the information society • Increase visibility and accessibility of unique Rwandan digital content on the Global Information Network • Put in place an adequate legal and regulatory framework for the promotion of local digital content

Information Network
• Put in place an adequate legal and regulatory framework for the promotion of
local digital content

Government Orientation

The choice of (strategic) options pursued is largely informed by GoR orientation. The strategic compass is informed by four (4) pillars
• **QUALITY EDUCATION:** Transformation of Education through integration of ICT's throughout the entire spectrum of learning- in school (pre-school, 12 YBE through secondary schools, TVET's and HLI's) and out of school (continuous learning)
• **EMPLOYMENT:** Creation of 100,000 new, off-farm jobs
• **ENTREPRENEURSHIP:** Creation of 100 companies with a market capitalization of 50 Million USD each
• **BRIDGING THE DIGITAL DIVIDE:** Rural & Gender Divide and empowerment of other Special Interest Groups

SECTION B:
THE STRATEGY

SECTION B:

THE STRATEGY

Vision

Rwanda will become a world leader in harnessing the power of local digital content to power transformation of the economy and society.

Goal:

Transformation of the Rwandan economy and society is enabled by production, dissemination and consumption of Local Digital Content.

Impact:

- *Rwandans will adequately satisfy her own and regional demand for Local Content*
- *Rwanda will be transformed from consumer and importer to producer and exporter of digital Content*
- *A local digital content industry will flourish owing to increase in demand created by the facility and the 3rd party developer framework*
- *Rwanda will finally find the the missing piece in the digital transformation puzzle. Local Digital Content will complement broadband connectivity, devices, e-Services, Fin-tech in transforming the Rwandan economy and society*
- *Transformation of all key sectors of the economy will be enabled by appropriate forms of digital content ranging from TV, Radio program and podcasts to gaming, virtual reality and 3D products via webpages, Mobile apps and e-learning platforms.*
- *80% all of the local digital content will be hosted in Rwanda*
- *Substantial amount of Local Digital Content that showcases Rwanda's unique and rich heritage (history, culture, medicine) will be accessible online.*
- *Rwanda's rich heritage will gain visibility on the global scene and contribute to Rwanda's sense of national and cultural identity*
- *The Law governing ICT in Rwanda will be adequately providing for all actors to fairly and safely participate in the information society*
- *Local Digital Content will be a source for employment and entrepreneurship for many Digital Creatives thanks to copyright laws that protect their work.*
- *All Rwandan broadcasters will be complying to a regulation that enforces a minimum of 50% of the content on their networks to be Local Content*

Outcome 1: A world-class, state-of-the-art content development facility is established and operationalized

Why is it important to acquire world class digital content development capabilities?

Creation of digital content requires a set of highly technical skills, specialist software and hardware that is not readily available in Rwanda. At least not on the scale required to meet local and regional demand for local digital content.

Demand for local digital content in key sectors of the Rwanda economy has never been more glaring. Yet local capacity is no fully equiped to address the market. An example worth mentioning is in the Education Sector where computers have been supplied to students and teachers but no content was supplied. Teachers are expected to "digitize" their notes something that they are not qualified to do. In some instances, computers have been left untouched since the day they were handed over to schools

Providing digital content for schools has been done in an *ad hoc* and fragmented manner. A few discerning schools have taken the initiative to buy edutech software that is rich in functionality but provides very little value in interactive education content. Global giants like Microsoft have shown keenness to provide "content for education" but these are typically interested in selling licenses. There apperas to be a scramble for the education content cake with multiple vendors proposing solutions to various agencies but little seems to be in place in the way of sustainability and accountability.

There is need to establish a national content development function that will address not only the demand for educational digital content but also needs of other priority sectors like Health, Agriculture, and Trade and Industry.

The facility should ideally be run by a PPP Special Purpose vehicle bringing together a local institutional investor and a reputable international provider. The SPV shall be endowed with specialized technical knowhow, software, hardware and a track record in providing outsourced content development services to recognized global brands particularly in the education and professional certification disciplines.

As part of its mandate, the SPV will be required to implement a capacity building program aimed at building a special cadre of content development professionals capable of taking over once the SPV contract has expired (typically after 15 years).

The understanding is that the Africa Digital Media Academy, a non-for-profit initiative initiated by the Workforce Development Authority and Pixel Corps would constitute the training arm of the SPV responsible for training of digital content developers.

One of the main benefits of hosting the facility is job creation for the high-end professionals. Content Development remains one of the most labor-intensive undertakings. A typical Content Development facility employs up to a 10,000 people.

This calls for efforts to help the institution transition from a government funded project to a market driven academy. The ongoing discussion is also for ADMA to be the anchor tenant of the soon to be launched ICT Innovation center.

It is GoR preferred approach that the ICT Private Sector through the ICT Chamber takes center stage in the formation and operationalization of the SPV from the onset. This will

ensure sustainability of the project.

In addition, the SPV will be required to develop R&D capabilities that would develop solutions that take into consideration the unique realities of Rwanda and Africa (limited internet, power shortages etc.)

And last but not least, the SPV shall put in place a 3rd Party Developer (3PD) framework which will allow independent developer and others firms to monetize their content through its platform.

Government of Rwanda will commit to developing demand for the SPV's digital content products and services from key sectors namely Education, Agriculture, Healthcare, Trade and Industry and Youth and Women. With market from the Government segment almost guaranteed, the SPV should be in a position to mobilize financial resources to fund its CAPEX and OPEX needs.

One of the main benefits of hosting the facility is job creation for the high-end professionals. Content Development remains one of the most labor-intensive undertakings. A typical Content Development facility employs up to a 10,000 people.

A competent government authority. The RDB Strategic Investments Unit is expected to play its role of oversight, and coordination of project implementation on GoR side

Organization set up of the SPV, its oversight and accountability on project deliverables and milestones to GoR are illustrated further in the chapter on implementation framework discussed at length in section 4 of this strategy (Implementation framework).

The challenges ahead

- **Ensuring project buy-in and ownership:** Whole-of-government buy-in and ownership throughout the project is critical for the success of the SPV. For this to happen all key stakeholders must appreciate that the dearth of local digital content is serious national handicap. Many stakeholders already have too much on their table in terms of competing priorities but they must identify development and dissemination of local digital content as a matter of national priority.

- **Translating GoR commitment into commercial opportunity:** Translating market guarantees by GoR into a commercially viable opportunity will require deeper engagement with various stakeholders and a review of a number of regulations. Unlike in the case of Irembo where Government services were already in existence and citizens/businesses had been accustomed to paying for the same, most if not all content products will be mandated for the first time with this undertaking.

- **Striking a balance between providing market guarantees to SPV and safeguarding the interests of smaller players:** GoR must provide a big addressable market possible to SPV while at the same time providing safeguards against the same SPV swallowing up other smaller operators. This will require a higher level of granularity in understanding of the market opportunity. It will also require more effort particularly during the market study. Government (RDB strategic investment unit) negotiators will need to design a well-conceived 3PD framework and a vigorous oversight protocol of the SPV's conduct

  regarding the same by RISA (SPIU)

Outputs

1. **Output 1:** A PPP (Special Purpose Vehicle) is established and operationalized;
2. **Output 2:** Up to 10,000 new jobs are created (Once SPV is at full capacity and serving regional needs)
3. **Output 3:** Up to 150 new digital media companies are created (indirectly through a 3rd Party Developers Framework (3PD's) put in place by the SPV

Output	Activities	Lead	Time frames	Budget (RWF)
Output 1: PPP (SPV) Company Established and Operationalized	1. Market Sounding to gauge interest from potential SPV participants	RISA-RDB Strategic Investments Unit	August-October 2018	N/A
	2. Fully-fledged Feasibility Study on the technical and financial viability of the project. Study to include among others Total Addressable Market (TAM), list of priority projects and schedule of project implementation by SPV	RISA-RDB Strategic Investments Unit	October 2018-May 2019	1,700,000,000
	3. PPP procurement for the International Technology Partner and local partners	RISA-RDB Strategic Investments Unit	May-August 2019	1,700,000,000
	4. Formation of the PPP SPV including drafting of the PPP contract, establishing governance, accountability and oversight mechanisms	RISA-RDB Strategic Investments Unit	August-October 2019	N/A
	5. SPV Mobilizing Financial resources for project implementation	SPV	October-December 2019	N/A
Output 2. New off-farm job are created	6. Commissioning of the SPV	RISA, SPV	January 2020	N/A
	7. Completion of training to a local cadre of content developers	SPV, MITEC/RISA/RDB (CESB)	August 2022	N/A
Output 3: New media companies are created	8. Implementation of the 3rd Party Developer Framework	RISA, SPV	August 2023	N/A

Baseline and actions from related Policies/Strategies/Project

Related Strategy/ Policy/ Project	Action	Key initiative Description	Lead	Time frames	Budget (RWF)
Digital Talent Policy	Training of the Workforce in Industry-oriented skills	Prioritizing and allocating resources to training a special cadre of digital content development	MITEC/RISA/ RDB (CESB)	2020-2022	3,400,000,000

Outcome 2: Significant Local Digital Content is produced, disseminated and consumed in key priority sectors

Why is production, dissemination and consumption of local digital content in all key sectors important?

Only once the sectors identified as priority in the SRMP have been adequately supplied with Digital Content will the country realize the full benefits of digital transformation. Local digital content needs to be produced, procured and disseminated across all key sectors of the economy i.e. Education, Healthcare, Agriculture, Trade & Industry, Government, Women and Youth.

This calls for adoption of a broader approach, one that places digital content at the heart of efforts to transform Rwanda into a knowledge-based and information rich economy and society. This means a review the scope of local digital content which has hitherto been confined to the arts, culture and current affairs.

Figure 2. Relationship between SMART Rwanda and Local Digital Content
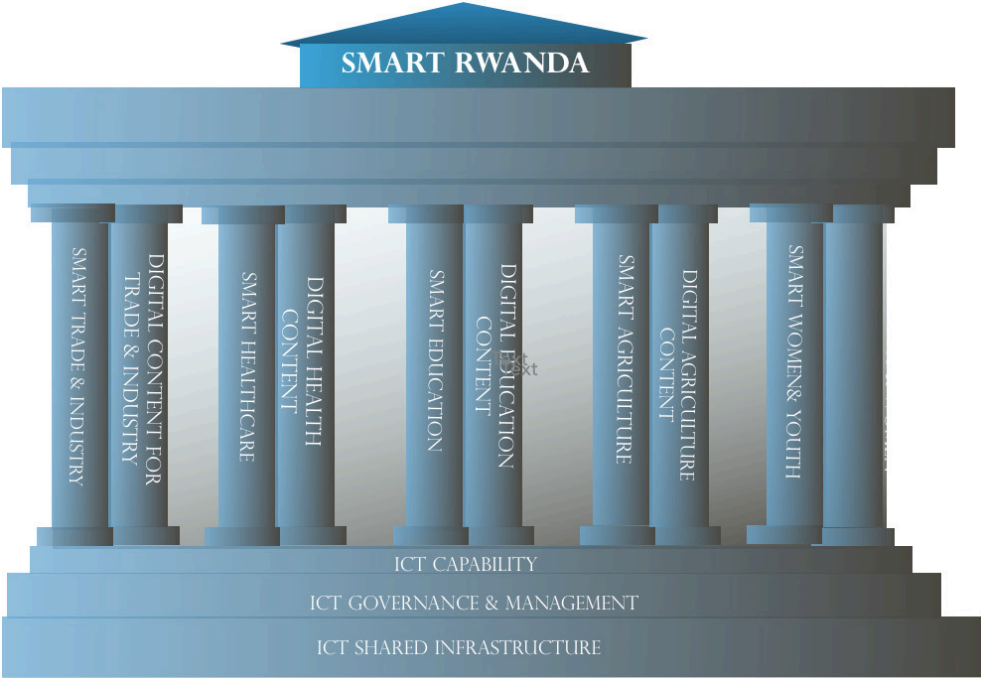
The SPV will come in handy in the efforts to develop and disseminate local digital content for actors and beneficiaries in priority sectors. Local Digital Content Development project will have been identified during the feasibility study discussed in Outcome Area No. 1.

The approach will be to prioritize demand-driven projects i.e. where relevant institutions have explicitly expressed demand and have allocated budgets for the same or where there is funding for the same from sponsoring organizations

Challenges

- **Generating demand and outside of Education Sector:** While demand for digital content products is glaringly obviously in the Educations sector, it may not be as straightforward to identify viable opportunities in other key sectors like Health, Agriculture, Trade, Women and Youth. A lot of effort will need to be put into identifying pain points in these sectors that can be addressed by content products in a sustainable manner.

- **Generating demand for SPV services outside of GoR:** Generating demand for SPV services among the Rwanda private sector, civil society, academia poses a number of challenges including low demand, itself arising out of lack of appreciation of the need for local digital content and inadequate budgets. The outlook looks bleaker outside of Rwanda where corruption, red tape, and absence of a strong effective state are not to be completely ruled out.

Outputs

1. **Output 1:** Digital Content for Education is created and disseminated throughout the entire spectrum of learning
2. **Output 2:** Digital Content for Agriculture created and disseminated
3. **Output 3:** Digital Content for Healthcare created and disseminated

Output and Actions

Action/ Project	Key initiative Description	Lead	Time frames	Budget (FRW)
Digital Content for Education	1. Digital Content for pre-school education 2. Digital Content for 12 YBE 3. Digital Content for TSS and A-Level Education 4. Digital Content for TVET, 5. Digital Content for HLI's 6. Digital Content for Continuing Education.	SPV/REB/ HEC/UR/ WDA RISA	June 2019 - December 2023	27,500,000,000
Digital Content for Agriculture	1. Farmer Management Support System, NozaUbuhinzi n' Ubworozi website 2. The Agriculture Knowledge Portal, 3. Online Diploma in Agro-technology 4. Esoko+, 5. Agriculture Information Service Centers	SPV/REB/ HEC/UR/ RISA	June 2019 - December 2023	Already allocated for in ICT4Agric Strategy
Digital Content for Healthcare	1. Community based Information System 2. Primary Care Information System 3. Hospital Management System 4. Diagnostic Services Information System 5. Telemedicine and e-Learning Information System 6. Population and Public Health Information System 7. Healthcare Insurance 8. Supply Chain Information System 9. Human Resources Management Systems	SPV/RAB/ MINAGRI/	June 2019- December 2023	Already allocated for in ICT in healthcare policy
Digital Content for Healthcare	Local Digital Content products that will transform the delivery and quality of healthcare services by supporting clinical decision making, education and research functions of the health sector, enhancing availability and access, improving the quality of teaching though e-Learning, and by enabling evidence-based decision making and improving health planning.	SPV/ MINISANTE/ RBC	June 2019- December 2023	100,000,000

Digital Content for Women and Youth	Local Digital Content products aimed to reduce the gender digital divide, enable Rwandan women and youth to effectively participate in the digital economy and society, create new, off-farm employment opportunities, enable Rwandan women and youth earn superior incomes and uplift themselves and their families out of poverty.	SPV/ MIGEPROF/ GMO/	June 2019- December 2023	100,000,000

Baseline and actions from other policies/Strategies

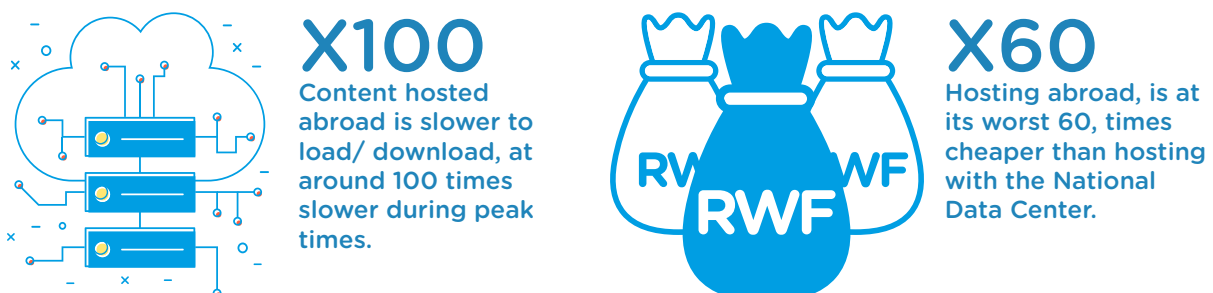| Related Strategy/ Policy	Action	Key initiative Description	Lead	Time frames	Budget
ICT in Education Policy (2016)	Strategic Objective 1: Develop a competent & relevant ICT professional base to meet industry needs	ICT in Education Policy (2016) identifies as one of the objectives, acquisition of acquisition of digital content, aligned with the curriculum and that focuses on project and activity-based learning. ...." The Policy recognizes that "Digital content has advantages of reducing costs of printing, distribution, replacement due to wear and tear and enriching the learning experience".	REB	2016-2019	N/A
National ICT4RAg Strategy (2016 -2020)	Objective 4. Increased access to Agricultural Information, Knowledge and Market	1. Farmer Management Support System, NozaUbuhinzi n' Ubworozi website 2. The Agriculture Knowledge Portal, 3. Online Diploma in Agro-technology 4. Esoko+, 5. Agriculture Information Service Centers	MINAGRI	2016 -2020	N/A

The National e-Health Strategic Plan	e-Health: Enabling Sustainable Healthcare System	1. Community based Information System 2. Primary Care Information System 3. Hospital Management Information Systems 4. Diagnostic Services Information Systems 5. Telemedicine and e-Learning Information Systems 6. Population and Public Health Information Systems. 7. Healthcare Insurance 8. Supply Chain Information Systems 9. Human Resource Management System	MINISANTE	2009-2013	N/A
Women in Technology (Wem-Tech) Strategy	Project 6: Increase relevant content and e-services	1. MIGEPROF with stakeholders to organize regular Hackathons in which innovators will compete to develop apps and content that address the specific needs of women and girls.	MIGEPROF	2017-2021	3,8Bn

Outcome 3: Local Digital Content is significantly affordable, accessible and visible on the Internet

Output. 1: Most of the Local Digital Content is hosted locally

Why is it important to host Local Digital Content locally?

X100
Content hosted abroad is slower to load/ download, at around 100 times slower during peak times.

X60
Hosting abroad, is at its worst 60, times cheaper than hosting with the National Data Center.

Hosting local digital content locally means better user experience as content hosted locally loads faster than content hosted overseas. Content hosted abroad is slower to load/ download, at around 100 times slower during peak times. In the case of interactivity and gaming some interfaces may actually not load. This is mainly caused by congestion on the international links that are typically under-provisioned

While hosting local content abroad is way cheaper for the content developers than hosting with the National Data Center, this automatically translates into significantly higher costs of data bundles paid by end-users.

Both poor user experience caused by latency and prohibitive cost of data bundles will continue to negatively affect any efforts to develop and disseminate local digital content.

Challenges

Hosting abroad, is at its worst 60, times cheaper than hosting with the National Data Center. Quality of service available locally is also one of the reasons local content provider prefer to host abroad. While it is indeed appropriate to enforce a ruling that requires all GoR content to be hosted locally, it would be counterproductive, under the current circumstances, to

enforce the same for data owned by anyone outside government.

Besides the cost of hosting being cheap, Data Centers abroad provide superior quality of service. Until the National Data Center can guarantee a level of quality of service that can match the likes of Hostgator and GoDaddy, any effort to get local digital content hosted locally would be futile.

Output and Activities

Output 1: Most of the Local Digital Content is hosted

Activities/ Project	Description	Lead	Time-frames	Budget (RWF)
Upgrading the National Data Center	Improving the level of security, availing 24/7 customer service, training and equipping Data Centre employees in skills to manage demanding services (video, gaming) to match the level provided by global providers.	RISA	2019-2020	15,000,000,000
Migrating Local Content that requires low hosting capacity to the National Data Center	This initiative will aim to compel more and more low-capacity local content providers to host their sites in Rwanda. The National Data Center can achieve this by lowering prices to compete with the likes of Hostgator. After all, it has been proved that very few local content developers require more than 50 GB.	RISA/Rwanda Internet Community and Technology Alliance	2020-2021	5,000,000
Marketing Campaign to get local content owners to host with the National Data Center	For an increasing number of discerning local content owners, launch a campaign aimed to sensitize them to migrate to local content hosting. The initiative would highlight the benefits of hosting locally i.e. better user experience, cheaper data costs to end users, improved security and quality of service at the National Data Center	RISA/Rwanda Internet Community and Technology Alliance	2020-2021	20,000,000

Output 3: Strategic Local Content is digitized, optimized and availed online

Work done by OGS/OTP on Rwandapedia is commendable but a significant number of heritage material remains *undigitized.*

The majority of Rwanda's rich but tragic history remains in oral form or shelved in books yet the generation that is supposed to learn from this history would prefer to access it in digital formats

The Rwanda National Archives has got as its vision that it will be "an important source of learning about the Rwandan culture, national history and identity of Rwandan society". There are two ways the organization envisaged to achieve its mission. Physical filing and "electronic conservation of documents".
A visit at their offices reveals a massive trove of content that is well conserved. Unfortunately, no effort has been made to digitize the national treasures that remain in the shelves.

The same can be said about NIRDA content from the former IRST which publishes and

disseminate scientific research findings on variety of topics ranging from sustainable energy, the environment, alternative medicine, health Given the content produced by former IRST more items should be availed online than is currently available.

In the increasingly digital world that Rwanda will be in 2013, all content that is is not searched and found online will be lost to the its potential users.

Actions

ACTION/ PROJECT	KEY INITIATIVE DESCRIPTION	LEAD	TIMEFRAMES	BUDGET (RWF)
Digitization of the National Archive	Borrowing a leaf from the excellent work done by Aegis Trust in digitizing Genocide Archives, the project to digitize the National Archives will involve indexing,	SPV/ MINISPOC	2019	2,000,000,000
Digitization of Rwandan Research and Scientific works	Digitization of of IPAR and IRST documents.	SPV/ IPAR/ NIRDA	2019	3,000,000,000
Digitization of Rwanda's History.	The project will aim to create a Digital History platform which will include among others, digital archives, online presentations, data visualizations, interactive maps, time-lines, audio files, and virtual worlds to make history more accessible to the user. User will be able to interact with, explore and visualize, the output more easily than with conventional historiographical material.	MINISPOC	2021	3,000,000,000

Actions from related Strategies/Initiatives

RELATED STRATEGY/ POLICY/ PROJECT	KEY INITIATIVE DESCRIPTION	LEAD	TIMEFRAMES/ STATUS	BUDGET
Rwandapedia	Rwandapedia is a one stop center for documents, images, videos and audio recordings that together showcases advances across the social, economic and governance sectors as well as key cultural and historical events in Rwanda with a special accent on home-grown solutions.	OTP/OGS	Ongoing	N/A

Outcome 4: Local Digital Content is enabling inclusivity and helping to reduce the digital divide

Output 1: Local Digital Content is helping to empower Special Interest Groups including women, the youth, and people with disabilities (PWD)

Why is Local Digital Content important to closing the digital divide?

Low adoption of broadband especially in rural areas especially among special interest groups (Women & Youths) is attributable to the fact that member of the special interest groups simply do not see the value of using it.

This is because most of the applications and content give very poor user interface; are in foreign languages that most rural people do not understand, or the content was altogether developed for another audience, in another distant country with a different culture and reality. When an attempt to develop locally relevant content is made, little effort in the way of involving the end users in the process of developing content meant for them is made.

This largely explains low usage and relevance of initiatives like Telecenters and others that are aimed to bridge the digital divide.

Going forward, efforts will be made to ensure that significant content is developed and disseminated that is relevant to the unique needs of rural communities and Special Interest Groups (particularly women and the youth) in Kinyarwanda. This content will be developed mainly with active participation of the intended audience to maximize its relevance and usability.

Special focus will me made to ensure inclusivity of People Living with Disabilities (PLWD) by engaging them in design and development of content applications that are aimed for them. The National Union of Disabilities Organizations of Rwanda will be engaged in the selection of appropriate Assistive Technologies such as Electronic Worksheets, Phonetic Spelling Software, Talking Calculators, Variable Speed Recorders, Videotaped Social Skills.

40%
Broadband Penetration

95%
4G Coverage

24%
Penetration among women

Challenges

- **Digital Literacy remains very Low:** Currently standing at 8.4% countrywide) Digital Literacy levels are even lower in rural areas. The starting point to any initiative that aims to bridge should certainly begin with imparting digital literacy among rural populations, women and the youth. MITEC in partnership with DoTRwanda and the World Economic Forum have made commendable strides through the Digital Ambassador's Program which aims to cover 5,000,000 people in urban Rwanda over the next 5 years with specific attention given to women and youth. Otherwise, rural populations, women, the youth and other special interest groups will not be able to consume digital content for them let alone effectively participate in the development of their own content which also means they will not relevance and value in the content created for them by others.

- **Low penetration of Broadband and Devices:** Despite recent efforts such as Positivo GBH/Africa Smart Investments partnership with BK which aims to proliferate cheaper, made-in-Rwanda computers and the Viziyo program which aims to reduce the cost of devices, broadband-capable devices remain out of reach of the majority of women, youth and rural Rwandans due to low disposal incomes

- **Penetration of broadband internet remains low:** Standing at around 40% despite 4G coverage of around 95% around the country. Access to broadband among Rwandan women is even lower currently standing at 24%. This is attributable to lower disposable incomes among rural populations, women and the youth, limited communication infrastructure in rural areas and low levels of digital literacy. Consumption of local digital content will be seriously curtailed by low penetration of broadband

Activities

ACTIVITIES/ PROJECT	KEY INITIATIVE DESCRIPTION	LEAD	TIME FRAMES	BUDGET (RWF)
Training to Rural Women, Youth and special interest Groups on Content Development	As part of the Digital Ambassadors' Program, select and prioritize training a critical mass of content developers among the Rural Women, Youth and Special Interest Groups. These will be trained in content development skills relevant to the rural setting e.g. creating audio files, video, webpages etc.	MITEC/DoT Rwanda/WEF/ CESB (RDB)	2018-2019	5,400,000,000
Regular Design Thinking workshops and Hackathons to develop Local Digital Content Solutions for rural area	Organizing Regular Design Thinking workshops and Hackathons. Ensure participation of rural women, and youth to create locally relevant digital content solutions	KLAB/ MITEC/ MINALOC	2018-2023	7,400,000,000
Performance-based financing for local digital solutions that address the needs of rural people, women and the youth	Formulate a performance- based financing for Content solutions that appropriately address the content needs of rural people, women and the youth. Incentives to reward content developers upon reaching milestones on usage and adoption numbers (actual traffic, retention, referrals, downloads, return users, subscriptions and other relevant metrics) among the intended audiences e.g. women, youth and rural populations.	KLAB/ MITEC/ MINALOC	2018-2023	11,000,000,000
Assistive Techologies for People Living With Disabilities	Ensuring proliferation of appropriate Assistive Technologies such as Electronic Worksheets, Phonetic Spelling Software, Talking Calculators, Variable Speed Recorders, Videotaped Social Skills among members of the National Union of Disabilities Organizations of Rwanda.	MITEC/RISA/ National Council of Persons with Disabilities	2018-2023	5,000,000,000

Development of content applications aimed for People Living Disabilities (PLWD	Alongside Design thinking Hackathons for Youth and Women solutions , engage PLWD groups in all district to design content applications	KLAB/MITEC/ MINALOC	2018-2023	300,000,000

Actions from Related Strategies and Policies

Related Strategy/ Policy	Action	Key initiative Description	Lead	Time frames	Budget (RWF)
Women in Technology (Wem-Tech) Strategy 2017-2021	Project 4: "Proliferate broadband internet and devices among women"	The project aims to increase the affordability of broadband devices through a subsidization facility aimed at the most qualified of Rwandan women through interventions such RURA's Universal Access Fund.	MIGEPROF, MYICT, RURA	2017-2021	80,000,000, 000

Outcome 5: Local Digital Content is supported by an adequate Legal and Regulatory framework

Why is an adequate legal and regulatory framework important for the promotion of Local Digital Content?

Digital Content just like the rest of ICT's is a fast changing landscape. If no effort is in place to constantly review and updated the legal framework, government, businesses and citizens, particularly the most vulnerable like children will not effectively and safely participate in the information society and economy. Indeed, the recent Facebook-Cambridge Analytica data debacle has demonstrated that children are not the only most vulnerable in cyberspace.

The ICT Law passed only less than two years ago, comprehensive as it may be, is still lacking in many provisions. This explains why it is important to constantly reviewing the legal framework.

Local Digital Content is meant to be the source for employment and entrepreneurship for our youth. Yet, the cost of acquisition of equipment and software that would be used creation of local digital content remains prohibitive for most digital creative particularly those in start up phase. The current list of equipment exempted from Taxes was developed long ago, is limited to only a few items that are not used by digital creatives

Challenges

1. **Striking the right balance between copyright owners and copyright users** in practice will continue to be the most challenging issue facing Rwandan policy and lawmakers. Intellectual property and digital rights management present a double-edged sword. On one side, they help curb unauthorized reproduction which is critical in achieving monetization of copyrighted material of Rwandan digital creatives. On the other side, they inhibit adoption and knowledge (re) creation.

2. **Lack of an adaptation of the Creative Commons License in the current legal framework:** Creative Commons Licenses allow authors/artists to give people rights to share, use and build upon their work on certain conditions e.g. non-commercial use. Provision for Creative Commons Licenses in the Rwandan legal framework will help a great deal in eliminating a situation where copyright protection and digital rights management inhibit creativity, reproduction and knowledge creation.

3. **Limited Knowledge of the application of the Intellectual Property Law and Creative Commons:** Knowledge of application of the IP Law and and the Creative Commons is as important as adaptation to the Rwanda law. Indeed, limited knowledge of rights, exception of Creative Commons by both side i.e. creator and users will limit effectiveness of such a useful tool. Creators will remain ignorant to what rights they are retaining and what rights they are actually giving away under the Creative commons. The result could be theft or misuse of their works. Users will also be unsure how and under what circumstances they can reproduce work that is not originally theirs.

Outputs

1. **Output 1.** Updated ICT Legal Framework to provide for an ever changing landscape
2. **Output 2.** Local Content promoted thanks to a revised RURA Regulation
3. **Output 3**. Digital *Creatives* incentivized by the new tax Regime on ICT's

Output

OUTPUT	ACTIVITIES	LEAD	TIME-FRAMES	BUDGET (RWF)
The ICT Law Will be updated	Updating the ICT Law with provisions that promote local digital content. This should be done in a framework manner, leaving room for Presidential, Prime Ministerial and Ministerial Orders as well the Regulations from the Regulator to complement the ICT Law	MITEC	2018	N/A
	Adaptation of the Creative Common License in the Rwandan context	MITEC	2019	150,000,000
	Awareness Campaign on Creative Commons-and intellectual property	MITEC/ KLAB/	2018-2013	250,000,000
Local Content will be promoted thanks to a revised RURA Regulation	RURA issuing a directive and enforcement of the same to ensure that 50% of all content broadcast on Rwandan networks is local content (extend current definition beyond producer nationality to require that the actual content e.g. story, music is from/about/on Rwanda)	RURA	2019	N/A

Digital Creatives will be incentivized by the new tax Regime on ICT's	Updating the list of ICT equipment appearing on the list to include equipment needed by Digital creative. The list is to be submitted by the Minister in charge of information and communication technology and approved by the Minister in charge of taxes	MITEC/ MINECO-FIN	2019	N/A

Actions from Related Initiatives

RELATED STRATEGY/POLICY	ACTION	LEAD	TIME-FRAMES	BUDGET `
ICT Law	Ongoing effort to update the ICT Law	MITEC	2019	N/A

FINDING HILLYWOOD

It has now become a decade-old ambition of concerned stakeholders to make sure develop the Rwanda Movie Industry popularly known as Hillywood. Significant strides have been made in this endeavor since the nascent days of the industry.

Rwanda Film Office (RFO) established by Rwanda Development Board (RDB) aims to achieve the "cultural, commercial and industrial success of Rwanda´s film industry". The main aim of Rwanda Film Office (RFO) lies on promoting Rwanda as an international hub for audiovisual productions.

However, catching up with re-known movie industries like Hollywood, Bollywood and Nollywood using the conventional approach, seems insurmountable to say the least. The movie industry value chain is so developed such that it would take centuries and centuries to compete with other industries.

Borrowing a leaf from Holy-wood (Israel's Movie Industry), it is possible for Rwanda to get a sizeable slice of the global movie industry revenues. Instead of trying to develop each component of the movie industry, Israel has focused on its competitive advantages along the Film value chain namely. They are harnessing their picturesque locations to host big budget productions in such places as the Negev Desert, the Old City of Jerusalem and numerous other locations, providing a skilled workforce in such areas as photography and editing.

Movie industry value chain

CONTENT CREATION ⟶ **MONETISATION**

Concept	Financing	Pre Production	Production/ Development	Post Production	Distribution	Platform	Consumption
• Concept, Script or storyline development • Adaptation of existing concept • Market Research	• Studio backing • Private investors or venture capital • Government assistance • Lisencing & pre-selling • Distribution/ sales advances	• Story boarding • Casting or character development • Set/ background design • Facilitation & equipment management • Scheduling • Crew/ Programmers • Game design • Technical design • Production scheduling	• Programming, filming or animation • Facilitation & equipment management • Production support • Testing • Coding • Artwork	• Testing • Editing • Visual Effects • Sound and movie production • Processing/ Formatting	• Striking deals to publish/ Distribute and/ promot IP content	• PC/Console • Home Media • Pay TV • Interactive TV • Free-To-Air • Digital TV • Internet • Cinema • PDA/Mobile/ Handhelds	• Unit purchases • Pay per view • Subscription • Free

The leapfrog model proposed is for Rwanda to focus on the segments of the movie industry value chain where it stands a competitive advantage instead of trying to develop an entire value chain from scratch.

DIRECTOR

Instead of looking to build every component of the film value chain from scratch, Rwanda would rather adopt a leapfrog model. One that allows the country to focus and excel on only those components in which the country stands and can develop a competitive advantage.

While this requires a separate study, below are a few areas worth exploring;

Locations: Rwanda is blessed with such breathtaking landscapes and various other chocolate-box sights that a movie directors' dream. Couple that with the fact that the country is one of the most secure places and the booming hospitality sector that has a track record of hosting Hollywood celebrities and you have a strong case for attracting block buster shooting here.

Studio: To complement the locations aspect and take a bigger slice of the global movie industry, Rwanda could do well establishing a world class film studio here. The cost of professional film equipment has significantly reduced making it possible to establish mini-studios such as Miramax and Focus Features. These mini studios would ensure that global movie makers spend more of their time and revenues in Rwanda

Film Finance: This is a field worth exploring further in a separate technical and financial viability study.

Ideally financing should begin with Government grants where there are no expected returns. The government intervenes in order to attract creative individuals to their territory and

stimulate employment, through tax incentives for labour, production costs, tax shelters.

Private (and Public) financing is the surefire way of getting a sizeable chunk of the global movie industry pie. The film financier typically makes money the same way debt and equity investors make money from start ups

Content Delivery Networks

CDN benefits include reduced bandwidth costs, improved user experience from reduction in page load times, and increased availability of content.
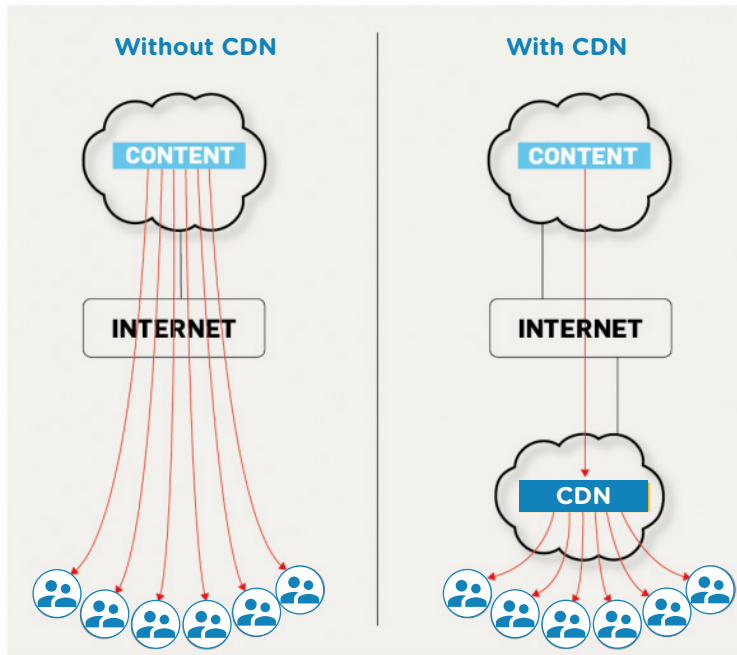
Flagship Projects
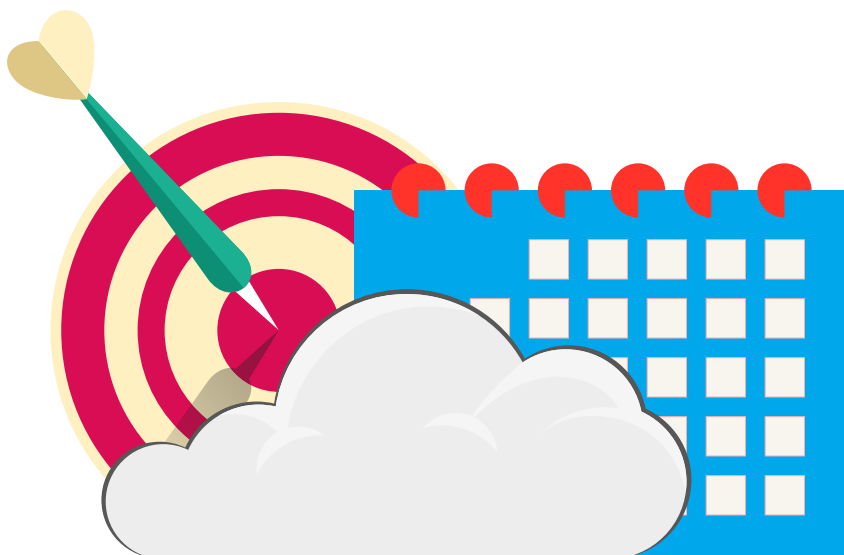
Below we highlight a number of actionable, flagship projects that we believe are critical to the success of this strategic plan.

PROJECT	DESCRIPTION	RESPON-SIBILITY	TIMELINE/ DEADLINE	BUDGET (RWF)
Decentral-ized Content Delivery Networks (CDN's)	The Rwanda Internet Exchange (RINEX) has already deployed a number of CDN's in partnership with Google, Facebook and Aka-mai. This has exclusively targeted content hosted abroad. The project proposd here in aims to deploy Content Delivery Networks (CDN's) among remote, rural or un-derserved communities of user for Content that is specifically meant for them and hosted in Rwanda.`. The intended benefits include re-duced bandwidth costs, improved user experience from reduction in page load times, and increased availability of content. A technical and financial feasibility study will be carried out to deter-mine viability of deploying CDN's in areas such as Karongi, Rusizi, Huye, Ngoma and Rubavu	RISA	JUNE 2018-JUNE 2019	6,400,000

| Digital Content for Education	Digitization of In-School Education Content 1. Content Pre-School (Kindergarten and Nursery) 2. Content for all subject at 12 YBE level 3. Digitization of Content for TSS & High School 4. Digitization of Education Content for for HLI's, & TVET Development of Continuing Education Certification Programs 1. Peace Studies 2. Gender Studies 3. Hospitality 4. Digital Marketing 5. Information Technology 6. .Airline Industry	REB/ UR/ RISA/HEC	June 2019-December 2023	400,000,000
Digitization of Rwanda's History.	The project will aim to create a Digital History platform which will include among others, digital archives, online presentations, data visualizations, interactive maps, time-lines, audio files, and virtual worlds to make history more accessible to the user. User will be able to interact with, explore and visualize, the output more easily than with conventional historiographical material.	MINISPOC	2020-2022	6,000,000,000
Assistive Techologies for People Living With Disabilities	Ensuring proliferation of appropriate Assistive Technologies such as Electronic Worksheets, Phonetic Spelling Software, Talking Calculators, Variable Speed Recorders, Videotaped Social Skills among members of the National Union of Disabilities Organizations of Rwanda	MITEC/ RISA/ National Council of Persons with Disabilities	2018-2020	5,000,000,000
Digitization of the National Archive	Borrowing a leaf from the excellent work done by Aegis Trust in digitizing Genocide Archives, the project to digitize the National Archives will involve indexing,	SPV/MINISPOC	2019	4,000,000,000

Suply and Demand-Side Interventions

All interventions proposed in this strategy can largely be categorized as supply side or demand side interventions. Supply side interventions are largely initiatives that aim to increase supply of local digital content or to develop ability to supply more content while.

Demand side interventions are those that aim to increase demand for local digital content. Below is all interventions categorized accordingly

SUPPLY-SIDE INTERVENTIONS	DEMAND-SIDE INTERVENTIONS
PPP (SPV) Project Development	Content Delivery Networks
Digital Content for Education	Digital Content for Education
Digital Content for Healthcare	Digital Content for Women and Youth
Digital Content for Agriculture	Revision of the Tax Regime on ICT's
Digital Content for Women and Youth	Attracting investment into a 2nd Data Center
Increasing Web Presence for SME's and Cooperatives	Local Content Repatriation
Digitization of the National Archive	Marketing Campaign to get local content owners to host locally
Digitization of Rwandan Research and Scientific works	Training to Rural Women, Youth and Special Interest Groups on Content Development
Digitization of Rwanda's History.	RURA Regulation to promote local digital content
Regular Design Thinking workshops and Hackathons to develop Local Digital Content Solutions for rural area	
Performance-based financing for local digital solutions that address the needs of rural people, women and the youth	
Adaptation of the Creative Common License	
Awareness Campaign on Creative Common	

Awareness Campaign on Intellectual Property Law	

RESULTS CHAIN

GOAL:	TRANSFORMATION OF THE RWANDAN ECONOMY AND SOCIETY IS ENABLED BY PRODUCTION, DISSEMINATION AND CONSUMPTION OF LOCAL DIGITAL CONTENT.
IMPACT	**Impact:** • *Rwandans will adequately satisfy her own and regional demand for Local Content* • *Rwanda will be transformed from consumer and importer to producer and exporter of digital Content* • *A local digital content industry will flourish owing to increase in demand created by the facility and the 3rd party developer framework* • *Rwanda will finally find* the the *missing piece in the digital transformation puzzle. Local Digital Content will complement broadband connectivity, devices, e-Services, Fin-tech in transforming the Rwandan economy and society* • *Transformation of all key sectors of the economy will be enabled by appropriate forms of digital content ranging from TV, Radio program and podcasts to gaming, virtual reality and 3D products via webpages, Mobile apps and e-learning platforms.* • *80% all of the local digital content will be hosted in Rwanda* • *Substantial amount of Local Digital Content that showcases Rwanda's unique and rich heritage (history, culture, medicine) will be accessible online.* • *Rwanda's rich heritage will gain visibility on the global scene and contribute to Rwanda's sense of national and cultural identity* • *The Law governing ICT in Rwanda will be adequately providing for all actors to fairly and safely participate in the information society* • *Local Digital Content will be a source for employment and entrepreneurship for many Digital Creatives thanks to copyright laws that protect their work.* • *All Rwandan broadcasters will be complying to a regulation that enforces a minimum of 50% of the content on their networks to be Local Content*
OUTCOME 1:	A WORLD-CLASS, STATE-OF-THE-ART CONTENT DEVELOPMENT FACILITY IS ESTABLISHED AND OPERATIONALIZED
OUTPUT 1.	A PPP (Special Purpose Vehicle) is established and operationalized;
Activities	1. Market Sounding to gauge interest from potential SPV participants
	2. Fully-fledged Feasibility Study
	3. PPP procurement
	4. Formation of the PPP SPV including drafting of the PPP contract, establishing governance, accountability and oversight mechanisms
OUTPUT 2.	10,000 new jobs are created
Activities	5. Training to a local cadre of content developers

	6. Commissioning of the SPV
OUTPUT 3:	**150 new digital media companies are created**
Activities	7. Implementation of the 3rd Party Developer Framework
OUTCOME 2:	**SIGNIFICANT LOCAL DIGITAL CONTENT IS PRODUCED, DISSEMINATED AND CONSUMED IN KEY PRIORITY SECTORS**
Output 1:	**Digital Content for Education created and disseminated throughout the entire spectrum of learning**
Activities	8. Digitization of Education Content Pre-School (Kindergarten and Nursery)
	9. Digitization of Education Content for 12 YBE
	10. Digitization of Education Content for TSS & High School 11. Digitization of Education Content for for HLI's, & TVET
	12. Professional Development Courses in Peace Studies
	13. Professional Development Courses in Gender Studies
	14. Professional Development Courses in Hospitality Management
	15. Professional Development Courses in Digital Marketing
	16. Professional Certifications in Information Technology
	17. Professional Development Courses Airline Industry
Output 2:	**Digital Content for Agriculture created and disseminated**
Activities	18. Farmer Management Support System
	19. NozaUbuhinzi n' Ubworozi Website
	20. The Agriculture Knowledge Portal,
	21. Online Diploma in Agro-technology
	22. Esoko+,
	23. Agriculture Information Service Centers
Output 3:	**Digital Content for Healthcare created and disseminated**
Activities	24. Community based Information System
	25. Primary Care Information System
	26. Hospital Management System
	27. Telemedicine and e-Learning Information System
	28. Population and Public Health Information System
	29. Supply Chain Information System
	30. Diagnostic Services Information System
	31. Healthcare Insurance
	32. Human Resources Management Systems
OUTCOME 3	**OUTCOME 3: LOCAL DIGITAL CONTENT IS SIGNIFICANTLY AFFORDABLE, ACCESSIBLE AND VISIBLE ON THE INTERNET**
Output 1.	Most of the Local Digital Content is hosted locally

Activities	33.	Upgrading the National data center
	34.	Content repatriation
	35.	Marketing Campaign aimed at sites that require low hosting capacity (less than 50%)
	36.	Establishing a second (private owned) data center
	37.	Web Presence for SME's and Cooperatives
Output 2:	**Strategic Local Content is digitized, optimized and availed online**	
Activities	38.	Digitization of the National Archive
	39.	Digitization of Rwanda's research and Scientific Works
	40.	Digitization of Rwandan History
OUTCOME 4	**LOCAL DIGITAL CONTENT ENABLING INCLUSIVITY AND HELPING TO REDUCE THE DIGITAL DIVIDE AND IS FOSTERING INCLUSIVITY**	
Output 1.	**Local Digital Content empowers special Interest Groups including women, the youth and people living with disabilities (PLWD)**	
Activities	41.	Training to Rural Women and Youth in Content Development
	42.	Regular Design Thinking Hackathons to design content apps for and by rural communities
	43.	Perfomance-based financing for apps that solve the needs of special interest groups
	44.	Assisstive Technologies for People Living With Disabilities
	45.	Content Application for People Living With Disabilities
Overarching Goal No. 1:	Local Digital Content will contribute to the empowerment of rural Rwandans, women, youth and other special interest groups	
OUTCOME 5: OUTCOME 5:	LOCAL DIGITAL CONTENT WILL BE SUPPORTED BY AN ADEQUATE LEGAL AND REGULATORY FRAMEWORK	
Output 1.	**Updated ICT Legal Framework to provide for an ever-changing technology landscape**	
Activities	46.	Updating the ICT Law
	47.	Adaptation of the Creative Common License
	48.	Simplifying and enforcing the Intellectual Property Law
Output 2.	**Local Content promoted thanks to a revised RURA Regulation**	
Activities	49.	RURA revises directive to ensure that 50% of all content broadcast on Rwandan networks is local content
Output 3.	**Digital Creatives incentivized by the new tax Regime on ICT's**	
Activities	Updating list of ICT equipment qualifying for tax incentives to include equipment used by Digital Creatives	

IMPLEMENTATION FRAMEWORK

Implementation of the Local Digital strategy will largely reflect the GoR philosophy in regards to implementation of projects of this nature. As affirmed in the Vision 2020 "The Government of Rwanda will not be involved in providing services and products that can be delivered more efficiently by the private sector, [...] the State will only act as a catalyst".

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It is in this regard that a PPP- Special Purpose Vehicle company is proposed. The SPV will leverage both GoR (market development effort and creating an enabling environment) and private sector capabilities (financial resources, technical know how and operational efficiencies) to help the country acquire world-class content development capabilities that would otherwise not be achieved with either party going it alone.

The SPV will bring together an international partner with a track record in implementing content development assignments with a (consortium of) local partner (s). After the concession period, the SPV will phase out and deliver the project to GoR. Local staff will have acquired the necessary expertise required to run the facility through an elaborate knowledge transfer program run by the SPV.

STAKEHOLDER ROLES IN THE PPP (SPV)

OVERSIGHT & COORDINATION ROLE

PPP PROJECT DEVELOPMENT

CONTRACT & PROJECT MANAGEMENT

1. Safeguarding the interests of smaller players
2. Contract Management as per key deliverables (3PD, Capacity Building, Tech Transfer)

RISA (SPIU)

RDB (STRATEGIC INVESTMENT UNIT)

OPERATIONALIZATION

Market Sounding & Deal structuring

PPP PROJECT DEVELOPMENT

1. Feasibility Study
2. PPP Procurement
3. PPP Contract

PPP (SPV) company

SHAREHOLDERS

QUALIFIED LOCAL (STRATEGIC) INVESTORS

Market Sounding & Deal structuring

ADMA   GLOBAL PROVIDER   ACADEMIA

Not all activities and projects proposed in this strategy will be implemented by the SPV. The table below illustrates which project will be implemented through the SPV approach and projects that will be implemented by GoR

Action/Project	Key initiative Description	Lead
PPP Project Development	1. Market Sounding to gauge interest from potential SPV participants	GoR
	2. Fully-fledged Feasibility Study on the technical and financial viability of the project. Study to include among others Total Addressable Market	GoR
	3. PPP procurement	GoR
	4. Formation of the PPP SPV including drafting of the PPP contract, establishing governance, accountability and oversight mechanisms	GoR
	5. SPV Raising finance for CAPEX and OPEX	SPV
Commissioning, Implementation and Turnover of Facility to Government	6. Commissioning of the SPV	SPV
	7. Completion of training to a local cadre of content developers	SPV
	8. Implementation of the 3rd Party Developer Framework	SPV
Finalizing list of projects/products and Implementation Schedule	9. List of priority products in all key areas (Education, Agriculture, Healthcare, Trade and Industry, Women and Youth)	GoR
Digital Content for Education	10. This project will involve Development of local digital content to provide for all levels of formal education in Rwanda from 12 YBE through A Level, TSS, TVET and HLI's.	SPV
Digital Content for Agriculture	11. Local Digital Content products aimed to contribute to reduction of poverty by 30% through transformation of Agriculture into a "highly productive, high value and market-oriented sector and reduction of the proportion of the population dependent on agriculture from the present 73 percent (2009) to less than 50 percent"	SPV
Digital Content for Healthcare	12. Local Digital Content products that will transform the delivery and quality of healthcare services by supporting clinical decision making, education and research functions of the health sector, enhancing availability and access, improving the quality of teaching though e-Learning, and by enabling evidence-based decision making and improving health planning.	SPV
Digital Content for Women and Youth	13. Local Digital Content products aimed to reduce the gender digital divide, enable Rwandan women and youth to effectively participate in the digital economy and society, create new, off-farm employment opportunities, enable Rwandan women and youth earn superior incomes and uplift themselves and their families out of poverty.	SPV
Upgrading the National Data Center	14. Improving the level of security, availing 24/7 customer service, training and equipping Data Centre employees in skills to manage demanding services (video, gaming) to match the level provided by global providers.	GoR

Migrating Local Content that requires low hosting capacity to the National Data Center	15. This initiative will aim to compel more and more low-capacity local content providers to host their sites in Rwanda. The National Data Center can achieve this by lowering prices to compete with the likes of Hostgator. After all, it has been proved that very few local content developers require more than 50 GB.	GoR
Marketing Campaign to get local content owners to host with the National Data Center	16. For an increasing number of discerning local content owners, launch a campaign aimed to sensitize them to migrate to local content hosting. The initiative would highlight the benefits of hosting locally i.e. better user experience, cheaper data costs to end users, improved security and quality of service at the National Data Center	GoR
Digitization of the National Archive	17. Digitization of the National Archives	SPV
Digitization of Rwandan Research and Scientific works	18. Digitization of of IPAR and IRST documents.	SPV
Training to Rural Women, Youth and Special Interest Groups on Content Development	19. Training a critical mass of content developers among the Rural Women, Youth and Special Interest Groups.	GoR
Regular Design Thinking workshops and Hackathons to develop Local Digital Content Solutions for rural area	20. Organizing regular involving Regular Design Thinking workshops and Hackathons. Ensure participation of rural women, and youth to create locally relevant digital content solutions	GoR
Performance-based financing for local digital solutions that address the needs of rural people, women and the youth	21. Formulate a performance- based financing for Content solutions that appropriately address the content needs of rural people, women and the youth.	GoR
Updating the Legal Framework	22. Updating the ICT Law with provisions that promote local digital content.	GoR
	23. Adaptation of the Creative Common License in the Rwandan context	GoR
	24. Awareness Campaign on Creative Commons-to be done during every ICT Awareness Week	GoR
Regulation to promote local digital content	25. RURA issuing a directive and enforcement to ensure that 50% of all content broadcast on Rwandan networks is local content	GoR

LOGICAL FRAMEWORK

OBJECTIVES		INDICATORS	2018	2019	2020	2021	2022	MEANS OF VERIFICATION	ASSUMPTIONS
GOAL	TRANSFORMATION OF THE RWANDAN ECONOMY AND SOCIETY IS ENABLED BY PRODUCTION, DISSEMINATION AND CONSUMPTION OF LOCAL DIGITAL CONTENT.	Local Digital Content is contributing to 3% GDP						ICT Sector Profile report	An index is adopted to measure contribution of content to the GDP
OUTCOME 1:	A WORLD-CLASS, STATE-OF-THE-ART CONTENT DEVELOPMENT FACILITY IS ESTABLISHED AND OPERATIONALIZED	A PPP (SPV) company is fully operational and has reached break-even point						PPP (SPV) Company Financial Reports, Audit reports, Contract Management Report	Project is Technically and Financially viable to both public and private sector
OUTPUT 1.	A PPP (Special Purpose Vehicle) project is developped	Agreement reached for a PPP (SPV) company						RDB Annual Progress Report	Contract agreeable to both parties
Activities	1. Market Sounding to gauge interest from potential SPV participants	20 potential partners	N/A	N/A	N/A	N/A	N/A	RDB (Visit) Report	RDB allocates adequate Resources
	2. Fully-fledged Feasibility Study	Complete List of products, Financial and echnical feasibility established and agreed to	N/A	N/A	N/A	N/A	N/A	Technical and Financial Feasibility report	Effective participation of stakeholders in the concerned sectors
	3. PPP procurement	PPP (SPV) partner selected	N/A	N/A	N/A	N/A	N/A	Winning Bid Announcemnt	Participation in the bid is highly competitive
	4. Drafting of the PPP contract, establishing governance, accountability and oversight mechanisms	PPP Contract, Contract Management framework completed		PPP Contract, Contract Management Report published	PPP Contract, Contract Management Report published	PPP Contract, Contract Management Report published	PPP Contract, Contract Management Report published	Contract Management Reports	Project is Technically and Financially viable to both public and private sector
OUTPUT 2.	New off farm jobs are created	10,000 new jobs are created						ICT sector Profile report	PPP (SPV) company fully operational and supplying regional market

Activities	5. Training and onboarding a local cadre of content developers	N/A	2000 professionals employed	2000 professionals employed	2000 professionals employed	2000 professionals employed	Contract Management Reports, Payroll reports	Availability of Qualified applicants
	6. Commissioning of the SPV	SPV in operation	N/A	N/A	20% Gross Margin percentage	Breakeven, 40% Gross Margin percentage	PPP (SPV) Company Financial Reports, Audit reports, Contract Management Report	Agreement reached between parties
OUTPUT 3:	**New media companies are created**	**150 new digital media companies are created**					**ICT sector Profile report**	**Effectiveness of the contract Management body (RISA)**
Activities	Implementation of the 3rd Party Developer Framework	N/A	10 local companies	20 local companies	40 local companies	80 local companies	Contract Management Reports	
OUTCOME 2:	**SIGNIFICANT LOCAL DIGITAL CONTENT IS PRODUCED, DISSEMINATED AND CONSUMED IN KEY PRIORITY SECTORS**						EICV, ICT sector Profile report	Digitization of priority sectors of the economy streamlined though a PPP (SPV) company
Output 1:	**Digital Content for Education created and disseminated throughout the entire spectrum of learning**	100% of formal education digitized						

Activities							
1. Digitization of Education Content Pre-School (Kindergarten and Nursery)	10% of the subjects digitized	20% of the subjects digitized	40% of the subjects digitized	80% of the subjects digitized	100% of the subjects digitized	Contract Management Reports	Penetration of PC, Broadband in Education Sector
2. Digitization of Education Content for 12 YBE	20% of the products digitized	20% of the products digitized	40% of the subjects digitized	80% of the subjects digitized	100% of the subjects digitized	Contract Management Reports	
3. Digitization of Education Content for TSS & High School	10% of the products digitized	20% of the products digitized	40% of the subjects digitized	80% of the subjects digitized	100% of the subjects digitized	Contract Management Reports	
4. Digitization of Education Content for HLI's, & TVET	10% of the products digitized	20% of the products digitized	40% of the subjects digitized	80% of the subjects digitized	100% of the subjects digitized	Contract Management Reports	
1. Professional Development Courses in Peace Studies	N/A	N/A	Basic Certification digitized	Advanced Certification digitized	Advanced Certification digitized	Contract Management Reports	Effective participation of stakeholders in the concerned sectors
2. Professional Development Courses in Gender Studies	N/A	N/A	Basic Certification digitized	Advanced Certification digitized	Basic Certification digitized	Contract Management Reports	
3. Professional Development Courses in Hospitality Management	N/A	Basic Certification digitized	Intermediate Certification digitized	Advanced Certification digitized	Specialist Certification digitized	Contract Management Reports	
4. Professional Development Courses in Digital Marketing	N/A	Basic Certification digitized	Intermediate Certification digitized	Advanced Certification digitized	Specialist Certification digitized	Contract Management Reports	
5. Professional Certifications in Information Technology	N/A	Basic Certifications digitized	Intermediate Certification digitized	Advanced Certification digitized	Specialist Certification digitized	Contract Management Reports	
6. Professional Development Courses Airline Industry	N/A	Basic Certification digitized	Intermediate Certification digitized	Advanced Certification digitized	Advanced Certification digitized	Contract Management Reports	

Output 2:	**Digital Content for Agriculture created and disseminated**	**80% Digital Content for Agriculture created and disseminated**	**EICV, ICT sector Profile report**	
Activities	7. Farmer Management Support System			**Stakeholders in the Agriculture sector play their rightful role**
	8. NozaUbuhinzi n' Ubworozi Website			
	9. The Agriculture Knowledge Portal,	Targets monitored Through ICT4Agric Strategy	Contract Management Reports	
	10. Online Diploma in Agro-technology			
	11. Esoko+,			
	12. Agriculture Information Service Centers			
Output 3:	**Digital Content for Healthcare created and disseminated**	**80% Digital Content for Healthcare created and disseminated**	**EICV, ICT sector Profile report**	

Activities			
13. Community based Information System			
14. Primary Care Information System			
15. Hospital Management System			
16. Telemedicine and e-Learning Information System			
17. Population and Public Health Information System	Targets monitored Through ICT in healthcare Policy	Contract Management Reports	Stakeholders in the healthcare sector play their rightful role
18. Supply Chain Information System			
19. Diagnostic Services Information System			
20. Healthcare Insurance			
21. Human Resources Management Systems			
OUTCOME 3	**OUTCOME 3: LOCAL DIGITAL CONTENT IS SIGNIFICANTLY AFFORDABLE, ACCESSIBLE AND VISIBLE ON THE INTERNET**	**80% of local Content is hosted locally**	**INTERNET SOCIETY REPORT**
Output 1.	**Most of the Local Digital Content is hosted locally**	**INTERNET SOCIETY REPORT**	**It is financially and technically voable to host locally**

Category	Item						Means of Verification	Assumptions
Activities	22. Upgrading the National data center	N/A	N/A	N/A	N/A	N/A	Administrative Reports	Operator (BSC) allocates funds
	23. Content repatriation	10GB	30GB	40GB	50GB	50GB	Internet Society report	Local Registrars are interested
	24. Marketing Campaign aimed at sites that require low hosting capacity (less than 50%)	20% of All website owners	30% of all website owners	50% of all website owners	70% of all website owner	100% of all website owners	Internet Society report	Local Registrars are interested
	25. Establishing a second (private owned) data center	Market Sounding to 10 providers	Commissioning of the data Center	N/A	N/A	N/A	Administrative Reports	Financial and Technical viability of the project
	26. Web Presence for SME's and Cooperatives	20,000 Domains	20,000 Domains	20,000 Domains	20,000 Domains	20,000 Domains	Internet Society report	Participation and Ownership of SME's and Cooperatives
Output 2: Strategic Local Content is digitized, optimized and availed online	Rwanda is among the top 10 on the Global Cities Online Presence Index						Global Cities Online Presence Index, ICT Sector profile	Local Digital Content presence used as a criteria used by Index
Activities	27. Digitization of the National Archive	20% of all archives	50% of all archives	70% of all archives	70% of all archives	1o0% of all archives	Global Cities Online Presence Index, ICT Sector profile	Availability of National Archives in Raw Format
	28. Digitization of Rwanda's research and Scientific Works	20% of all works	50% of all works	70% of all works	70% of all works	1o0% of all works	Global Cities Online Presence Index, ICT Sector profile	Availability of Research and Scientific works in Raw Format
	29. Digitization of Rwandan History	Ancient History	Pre-Colonial History	Colonial History	Post-Colonial History	Post-Genocide period	Global Cities Online Presence Index, ICT Sector profile	Availability of National History in Raw Format
OUTCOME 4 LOCAL DIGITAL CONTENT ENABLING INCLUSIVITY AND HELPING TO REDUCE THE DIGITAL DIVIDE AND IS FOSTERING INCLUSIVITY	50% reduction in Digital Divide and 70% in inclusivity among People Living with Disability						(ITU's) ICT Development Index	

							ICT sector Profile report	Participation and Ownership of Special Interest Groups
Output 1.	**Local Digital Content empowers special interest Groups including women, the youth and people living with disabilities (PLWD)**	Relevant Local Digital Content accessible to 60% of members of Special interest Groups						
	30. Training to Rural Women and Youth in Content Development	N/A	1000 Trainees	1000 Trainees	1000 Trainees	1000 Trainees	ICT sector Profile report	Funds allocated to training
	31. Regular Design Thinking Hackathons to design content apps for and by rural communities	60 sessions throughout the country	60 sessions thoughout the country	60 sessions thoughout the country	60 sessions thoughout the country	60 sessions thoughout the country	ICT sector Profile report	Rural Communities are able to participate effectively
Activities	32. Perfomance-based financing for apps that solve the needs of special interest groups	60 apps financed	60 apps financed	60 apps financed	60 apps financed	60 apps financed	ICT sector Profile report	Funds are allocated for financing the apps
	33. Assisstive Technologies for People Living With Disabilities	10% of beneficiaries reached	30% of beneficiaries reached	60% of beneficiaries reached	80% of beneficiaries reached	100% of beneficiaries reached	ICT sector Profile report	PLWD are able to use the the technologies
	34. Content Application for People Living With Disabilities	2 apps developped	4 apps developped	8 apps developped	12 apps developped	20 apps developped	ICT sector Profile report	PLWD are able to use the applications
OUTCOME 5:	LOCAL DIGITAL CONTENT WILL BE SUPPORTED BY AN ADEQUATE LEGAL AND REGULATORY FRAMEWORK	70% of contemporary ICT issues |provided for by legal framework					ICT Sector Profile	1. Law Reform Commision does their job. 2. Parliament passes law
Output 1.	**Updated ICT Legal Framework to provide for an ever-changing technology landscape**	**80% of Digital Creatives are familiar with the IP Law and the Creatives Commons framework**					**ICT Sector Profile**	**Digital Creatives understand and effectively use the CC framework**

Category	Activity / Output	Indicator					Means of Verification	Assumptions
Activities	35. Updating the ICT Law		1 update	1 update	1 update	1 update	Ministerial and Prime Ministerial Decrees	1. Law Reform Commision does their job. 2. Parliament passes law
	36. Adaptation of the Creative Common License	Rwanda's version of the CC as RURA Regulation	N/A	N/A	N/A	N/A	Creative Commons Framework	Digital Creatives understand and effectively use the CC framework
	37. Simplifying and enforcing the Intellectual Property Law	Intellectual Property simplified version launched and disseminated	20% of beneficiaries educated	50% of beneficiaries educated	80% of beneficiaries educated	100% of beneficiaries educated	ICT Sector Profile, Simplified IP Law	Relevant institutions (MINISPOC, RDB) effectively do their job
Output 2.	**Local Content promoted thanks to a revised RURA Regulation**	**50% of the content on local airwaves is Local Content**					**RURA Statistics, ICT Sector Profile**	**Local broadcasters are complying to regulation**
Activities	38. RURA revises directive to ensure that 50% of all content broadcast on Rwandan networks is local content	Regulation passed	30% Enforcement	50% enforcement	80% enforcement	100% enforcement	RURA Annual Reports	RURA is efficient in enforcement of the Regulation
Output 3.	**Digital Creatives incentivized by the new tax Regime on ICT's**	**Cost of Equipment needed by Digital Creatives reduced by 30%**					**Mnisterial Decree**	**Price of equipment is the mainchallenge Digital Creatives face**
Activities	39. Updating list of ICT equipment qualifying for tax incentives to include equipment used by Digital Creatives	List of ICT exempted equipment revised	Ministerial Decree published	N/A	N/A	N/A	Ministerial Decree	Agreement between relevant Ministries reached

COMMUNICATION PLAN

Crucial to the successful implementation of this strategy is a how key stakeholders-in their multitudes will understand its objectives and importance of this strategy, as well as a role they must play.

That is why a communication plan is an important element of this strategy. Below we discuss Message points, medium of delivery for each stakeholder/ target audience, timelines

STAKEHOLDER, TARGET AUDIENCE	MESSAGE POINTS	TOOL (MEDIUM FOR COMMUNICATION)	RESPONSIBILITY	TIMELINE
Key GoR department in priority Sectors of the Economy namely Education: MINEDUC, REB, UR, HEC, Agriculture: MINAGRI, REB, RAB, NAEB Healthcare: MINISANTE, RBC Women and Youth: MINIYOUTH, MIGEPROF, National Women Council, National Youth Council, Gender Monitoring Office	• Local Digital Content (together with eServices) are what give the benefits of being connected. • This strategy gives their institutions an opportunity to finally realize digital transformation • With this strategy effectively implemented, their institutions will finally realize RoI on investments made into ICT's • A PPP (SPV) approach is a sure fire way to ensure sustainable digitization of content in their sector. • RISA will take care of overall coordination and oversight but institutions need to retain ownership of their respective projects	• Workshops, • Working Meetings, • One-on- One Meetings, • Official letters, • emails, • Presentations	Senior Management of MITEC	During Validation Phase and After Cabinet Approval
Private Sector including Local Institutional Investors Global Providers, Hosting Services Companies,	• Local Digital Content remains an untapped business opportunity that is worth investing in • GoR is very keen to engage private sector though the PPP (SPV)	• Prospectuses, • Missions to Specific Providers, • RDB Investment Roadshows, • RDB Investors Open Days, ,	RDB ICT Investment Unit	After Cabinet Approval

Digital Creatives	• The Strategy is coming to solve some to address some of the issues that have been standing in the way of their business thriving. This includes lack of protection for their creative works, a • Rather than steal their business, the PPP (SPV) Company will actually make it possible to monetize their products better and strengthen their positions through a 3rd Party framework	• Workshops for Local Digital Creatives • Press Releases • Social Media (Especially Twitter, LinkedIn and Facebook)	MINISPOC, MINICOM, MITEC	After Cabinet Approval
Special Interest Groups (Rural Women, Rural Youth, People Living With Disabilities, Reserve Force	• This strategy has a special emphasis on reduction of the digital divide and inclusion • Members of the Special Interest Group know best what problems they face in their daily lives • The best applications will come from pain points relevant and affecting them in their daily lives • Members of the Special Interest Group need to undergo training stipulated for them in the strategy in order to able to make the most of the opportunities presented by this strategy	Message should be in Kinyarwanda, using simplified language • Umuganda • Cooperative and SME internal communications • Cooperative and SME Annual general meetings • Cooperative and SME internal communications • Television message • Community Radio • National and Local (Women and Youth) Structures • Local Government Structures	MITEC MINALOC MINIYOUTH MIGEPROF MINICOM	2018-2022

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