



Proposal for East African wide ICT Capacity Certification Scheme

East Africa Internet Governance Forum



** Disclaimer: The views expressed in this presentation reflect personal views of the author and is not a statement of Japan International Cooperation Agency (JICA) & Rwanda Development Bureau (RDB) and/or positions*

A young child with dark skin and short hair, wearing a light-colored shirt, stands in a field with arms raised. The background is a blurred green field under a bright sky. The title text is overlaid on the top half of the image.

Proposal for East African wide ICT Capacity Certification Scheme

- Opportunities and Challenges of Global ICT and ICTES industries
- Distinction of ICT Services and ICTES
- Current ICT related situation in East Africa (SWOT)
- Current ICT related situation in Rwanda (SWOT)
- Opportunities for East Africa
- Needs for EAC to capture opportunities
- Current Global Situation of ICT Certificates
 - Europe
 - USA
 - UK and Commonwealth
 - Japan
- Proposal for EA wide ICT Skills recognition
- Potential Implementation Scheme
- What Next?



Opportunities and Challenges of Global ICT and ICTES industries

- ICT integral part of the Global Economy
- Estimate of addressable market opportunity of IT services and ITES Industries ~\$ 500 billion
- Only \$130 billion market penetrated in 2010
- Demands continue to grow as market seek to reduce cost and increase operational efficiencies



Distinction of ICT and ICTES

ICT Services

- Application Services
- System Integration
- IT Infrastructure
- IT Engineering/Software Services
- IT consulting

ICT Enabled Services

- Production Services (IT based production services)
- Business Processes
 - Horizontal Processes (Call center, HR, Supply Chain)
 - Vertical Processes (Banking, Manufacturing, Travel)
 - Knowledge Processes (Research, Legal Process)

* Based largely from Model adapted by (BPAP) Business Processing Association of Philippines



Current Situation of ICT related development in East Africa (SWOT)

- Broadband connection
- Strong understanding about importance of using ICT for Development
- Growing entrepreneurship within IT/ITES industries in the region
- Growing Investor Interests
- Closer integration within sub-region

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- Non-ICT infrastructures still under development
- Better business environment still under development
- Lack of skilled labor force to fuel the needs
- Lack of international recognition/
- Lack of resources
- Weak coordination

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- Global growth of ICT and ICTES industries
- Opportunity of East Africa as an Economic Bloc
- Growing interests in ICT and ICTES industries in the region
- Growing interests in ICT skills by all sector of the society
- Regional ICT Center of Excellence

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- Increased competition with other countries
- Pace of human capacity development would not meet the growing needs
- Slow expansion of internal market
- Potential hiccup in the EA integration process
- Growth which do not align with international standard

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Current Situation of ICT related development in East Africa

Strength

- Growing ICT infrastructure (Broadband connection and mobile infrastructure)
- Strong understanding about importance of using ICT for Development
- Growing entrepreneurship within IT/ITES industries in the region
- Growing Investor Interests in the region
- Closer integration within sub-region (custom union and other critical moves to integrate EA region)
- Unified Market of 170 million people



Current Situation of ICT related development in East Africa

Weakness

- Non-ICT infrastructures still under development
- Better business environment still under development
- Lack of skilled labor force to fuel the needs
- Lack of international recognition/market penetration
- Lack of resources



Current Situation of ICT related development in East Africa

Opportunities

- Global growth of ICT and ICTES industries (\$500 billion+ market)
- Opportunity of East Africa as an Economic Bloc (170 million people market)
- Growing interests in ICT and ICTES industries in the region
- Growing interests in ICT skills by all sector of the society
- Regional Center of Excellence being created in Rwanda with Carnegie Mellon University



Current Situation of ICT related development in East Africa

Threats

- Increased competition from other countries/region
- Pace of human capacity development would not meet the growing global needs
- Potential slow expansion of internal market
- Potential hiccup in the EAC integration
- Growth which do not align with international standard



Current Situation of ICT related development in Rwanda (SWOT)

- **Stable Government**
- **Strong Leadership**
- **Understanding of ICT for Development**
- **Holistic and Strategic approach to development**
- **Donor interests**
- **High recognition in the field of ICTD**

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- **Small domestic market**
- **Skill gap between human resource needs and production**
- **Weak International Marketing Capacity**
- **Limited resources**
- **Weak coordination**

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- **Growth of ICT and ICTE needs in Global and African market**
- **Opportunity of Eastern African Integration**
- **Increased broad-band penetration**
- **High recognition and trust by the global partners in the field of ICT for Development**
- **Creation of Regional ICT center of excellence**

O

- **Increased competition with other countries**
- **Pace of human capacity development would not meet the growing needs**
- **Slow expansion of internal market**
- **Growth which do not align with international standard**

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Current Situation of ICT related development in Rwanda

Strength

- Stable Government
- Strong Leadership
- Understanding of ICT for Development
- Holistic and Strategic approach to development (NICI-2015 under formulation)
- Donor interests
- High recognition in the field of ICTD



Current Situation of ICT related development in Rwanda

Weakness

- Small domestic market
- Skill gap between human resource needs and production exist (limited number of human resource exist)
- Weak International Marketing Capacity
- Limited resources (institutions and capital)
- Weak coordination



Current Situation of ICT related development in Rwanda

Opportunities

- Growth of ICT and ICTE needs in Global and African market
- Opportunity of Eastern African Integration
- Increased broad-band penetration
- High recognition and trust by the global partners in the field of ICT for Development
- Creation of Regional ICT center of excellence

A young child with dark skin and short hair, wearing a light-colored shirt, has their arms raised in the air. The background is a blurred green field. The text 'Current Situation of ICT related development in Rwanda' is overlaid in white on the image.

Current Situation of ICT related development in Rwanda

Threats

- Increased competition with other countries
- Pace of human capacity development would not meet the growing domestic, regional, and global needs
- Slow expansion of internal market
- Growth which do not align with international standard

A young child with dark skin and short hair, wearing a light-colored shirt, has their arms raised in the air. The background is a blurred green field. The text "Opportunities for EA" is overlaid in white on the image.

Opportunities for EA

- Opportunity to competitively capture part of global market in the area of ICT/ICTES industries
- Opportunity of producing right skilled ICT professionals to supply the growing needs of integrated community
- Opportunity of capitalizing broadband and other infrastructure development in the region fully

A photograph of a young boy with dark skin and short hair, wearing a light-colored shirt. He has his arms raised and is looking towards the camera with a slight smile. The background is a blurred green field.

Potential needs for EA to capture these opportunities

- Need to produce suitable environment for ICT/ICTES industries development (infrastructure, capital, policy, and other facilitators)
- Need to establish skilled human resources with right ICT skill sets



Current Global Situation of ICT Human Capacity Development

- Supply of ICT professionals critical to tap into ICT and ICTES industries
- Vendor specific certification scheme is providing internationally accepted standards in their products (e.g.; MS, Cisco, Oracle, etc.)
- Existence/Development of ICT Professional standard definition (SFIA, CEN, IPA Skill Standard)
- Low level to Higher level ICT Certifications are being produced by ICT industry associations (e.g.; ECDL/ICDL, COMPTIA,
- Development is mostly developed countries driven but there are several different scheme exist in developing countries)



Current Global Situation of ICT Human Certification (Europe)

“Around 5 million ICT certifications have been issued over the last six years by over 60 certification providers covering over 600 types of certification. This situation of many overlapping qualifications has been described in a recent report as a “certification jungle”, with poor information, lack of clarity, confusing to prospective candidates and employers, all to the detriment of the labour market. “*

* Quoted from ICT Certification in Europe study website by [CEN/ISSS](#), the European standards body for ICT, under their [CEN/ISSS Workshop Agreement \(CWA\)](#) process.

http://www.ict-certification-in-europe.eu/index.php?option=com_content&task=view&id=6&Itemid=1



Current Global Situation of ICT Human Capacity Development (Europe)

Professional ICT Skills Definition

- Pan European IT Skills Standard under development (CEN)
- Various studies have been conducted to capitulate current ICT skills situation in Europe (CEPIS, CEN, Cedefop, etc)



Current Global Situation of ICT Human Capacity Development (Europe)

Professional ICT Certifications

- ECDL continue to be most popular certification for basic IT skills
- EUCIP (EUropean Certification for Information Professionals) for IT professionals
- Various vendor level certifications popularly administered



Current Global Situation of ICT Human Capacity Development (North America)

Professional ICT Skills Definition

- Defined by industry association (COMPTIA, TIA, IEEE)
- Vendor specific scheme



Current Global Situation of ICT Human Capacity Development (North America)

Professional ICT Skills certification

- Industry certification
(COMPTIA, TIA, IEE, etc.)
- Vendor specific certification scheme
(MS, Cisco, Oracle, etc.)



Current Global Situation of ICT Human Capacity Development (UK & Commonwealth)

Professional ICT Skills Definition

- **SFIA framework**
developed by UK foundation to standardize ICT professionals
- **Government IT Profession competency and skills framework**
developed by UK Government to serve its requirement
- **International Professional Practice Partnership Professional Standard (IP3P)**
(IP3 members include S. Africa, Canada, UK, NZ, IEEE, Japan) *

* IP3International Professional Practice Partnership <http://www.ipthree.org/it-standards/professional-it-standard>



Current Global Situation of ICT Human Capacity Development (UK & Commonwealth)

Professional ICT Skills Certification

- IP3P accredited certification scheme created by member countries (Canada: ITCP, Australia: ACSCP, New Zealand: ITCP, etc.)
- Vendor specific certifications
- Industry certifications

* IP3International Professional Practice Partnership <http://www.ipthree.org/it-standards/professional-it-standard>



Current Global Situation of ICT Human Capacity Development (Japan)

Professional ICT Skills framework

- IT Skills Standard (ITSS)
(adaptation completed by most large companies and)
- Creation of IP3 compatible skills framework
on the way



Current Global Situation of ICT Human Capacity Development (Japan)

Professional ICT Skills certification

- IPA certification for basic (IT passport) to professional IT skills common among IT professionals
- Move to create IPSJ certification to mutually recognize IP3 skills standards/certificates ongoing
- Vendor certificates very common
- localized International certifications (e.g.; CompTIA) also exist
- Many big companies create and administer their own certification scheme based on ITSS
- IPA assisting select Asian nations for mutual recognition of IT certification

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Proposal for EA wide ICT Skills recognition

Create viable framework to foster internationally compatible and competitive ICT skills in the region to capture opportunities presented with EAC and Global development.



Current Global Situation of ICT Human Capacity Development (Rwanda)

Professional ICT Skills certification

- Active pursuit of ICT certifications (both industry certifications and vendor specific certifications).
- Many industry/vendor certifications can be taken in Rwanda (Cisco, MS, etc.)
- Move to create ICT Skills Standard for Government (RDB) to rationalize ICT Skills and to be able to map appropriate skills to actual needs.
- Public sector spearheading certification acquisition through support for academic institutions and under ICT career plan within public sectors.
- Private sector also actively pursuing the issue but rationalization of appropriate ICT skills to actual needs must be rationalized.

A young boy with dark skin and short hair, wearing a light-colored shirt, stands in a field with his arms raised. The background is a blurred green field. The text "Potential Implementation Flow" is overlaid in white on the image.

Potential Implementation Flow

- Identify partners and foster buy-in and ownership for the initiative
- Research current ICT skills development scheme in the region (vendor certifications, Educational institutions, etc.)
- Start consortium to mutually recognize existing ICT skills in the region and create internationally compatible EA ICT skills standard (possibility of utilizing Regional ICT for excellence)
- Create or utilize existing coordination mechanism to advance ICT certification scheme in the region
- Forge partnership with other ICT certification scheme and mutually recognize the scheme



What Next?

- Continue discussion about feasibility of the scheme among EA partners in private sectors and education communities (under IGF, education/business related forums, EAC forum, etc.)
- Start discussion with potential external partners (industry associations, donor communities, educational communities) to realize the
- Put the scheme under East African Community agenda to guarantee necessary support

A young child with dark skin and short hair, wearing a light-colored, possibly beige or tan, shirt. The child's arms are raised, and they are looking slightly to the right of the camera. The background is a soft, out-of-focus green, suggesting an outdoor setting. The overall tone is positive and hopeful.

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Potential Exercise

Information to be carried as inputs to the IGF

- Current Situation of ICT related development in your country (SWOT)
- Current Certification situation in your country



Thank you for your kind attention



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