A Joint Collaborative Project by the
International Telecommunication Union and ABI Research

Global Cybersecurity Index

Objective

> The Global Cybersecurity Index (GCI) aims to measure and rank each nation state's level of cybersecurity development.

Goals

- Promote government <u>strategies</u> at a national level
- Drive <u>implementation</u> efforts across industries and sectors
- <u>Integrate</u> security into the core of technological progress
- Foster a **global culture** of cybersecurity

Global Cybersecurity Index

Following the GCA Framework, the GCI identifies 5 indicators

1. **Legal**
   - Criminal Legislation
   - Regulation & Compliance

2. **Technical**
   - CERT/CIRT/CSIRT
   - Standards
   - Certification

3. **Organizational**
   - Policy
   - Roadmap for Governance
   - Responsible Agency
   - National Benchmarking

4. **Capacity Building**
   - Standardization Development
   - Manpower Development
   - Professional Certification
   - Agency Certification

5. **Cooperation**
   - Intra-State Cooperation
   - Intra-Agency Cooperation
   - Public-Private Partnerships
   - International Cooperation

Global Cybersecurity Index

Timeframe & Project Activities

The project represents a combined effort of 18 months.
Expected delivery of the full index is Q4 2014.

The timeframe is split into six regional stages:

- Arab States
- Europe
- Asia Pacific
- Americas
- Commonwealth of Independent States
- Africa

Phases for each regional stage

- **Primary Research**: Contact relevant national stakeholders to collect data
- **Secondary Research**: Internal databases, publicly-available resources
- **Data Extraction**: Organize and sort through collected data
- **Data Input**: Assess the performance of each nation state
- **Ratification**: Nation state review of research data

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Global Cybersecurity Index

Current Status

Surveys Submitted – 26

- Botswana
- Burkina Faso
- Burundi
- Cameroon
- Cape Verde
- Congo
- Côte d'Ivoire
- Democratic Republic of Congo
- Gabon
- Gambia
- Guinea
- Kenya
- Lesotho
- Liberia

- Malawi
- Mali
- Mauritius
- Namibia
- Sao Tome and Principe
- Sierra Leone
- South Africa
- Swaziland
- Tanzania
- Togo
- Zambia
- Zimbabwe

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Global Cybersecurity Index

Legal Measures
Cameroon
Kenya
Senegal
Uganda
Rwanda

Technical
Mauritius
Burkina Faso
Cameroon
South Africa
Rwanda

Organizational
Burkina Faso
Uganda
South Africa
Mauritius

Capacity Building
Mauritius
Cameroon
Liberia
Uganda
Rwanda
Malawi

Cooperation
Mauritius
Rwanda
Kenya

Global Cybersecurity Index

Regional Ranking for the Africa States

Africa States	Index	Regional Rank
Mauritius	**0.5882**	**1**
Rwanda	**0.5294**	**2**
Uganda*	**0.4706**	**3**
Cameroon	0.4412	4
Kenya	0.4118	5
Burkina Faso	0.3235	6
South Africa	0.3235	6
Nigeria*	0.2941	8
Ghana*	0.2647	9
Togo	0.2647	9
Cote d'Ivoire	0.2353	11
Liberia	0.2059	12
Tanzania	0.2059	12
Benin*	0.1765	14
Botswana	0.1765	14
Malawi	0.1765	14
Senegal*	0.1765	14
Zambia	0.1471	18
Cape Verde	0.1250	19
Chad*	0.1250	19
Burundi	0.1176	21
Seychelles*	0.1176	21

Africa States	Index	Regional Rank
Angola*	0.0882	23
Gambia	0.0882	23
Mali	0.0882	23
Niger*	0.0882	23
South Sudan*	0.0882	23
Zimbabwe	0.0882	23
Congo	0.0588	29
Guinea	0.0588	29
Mozambique*	0.0588	29
Sao Tome and Principe	0.0588	29
Sierra Leone	0.0588	29
Swaziland	0.0588	29
Democratic Republic of the Congo	0.0294	35
Eritrea*	0.0294	35
Ethiopia*	0.0294	35
Gabon	0.0294	35
Guinea-Bissau*	0.0294	35
Madagascar*	0.0294	35
Central African Republic*	0.0000	41
Equatorial Guinea*	0.0000	41
Lesotho	0.0000	41
Namibia	0.0000	41

*Based on secondary data.

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Regional Index for the Africa States By Category

Africa States	Legal	Technical	Organizational	Capacity Building	Cooperation
Mauritius	0.7500	0.6667	0.6250	0.5000	0.5000
Rwanda	1.0000	0.5000	0.5000	0.3750	0.5000
Uganda*	1.0000	0.3333	0.7500	0.3750	0.1250
Cameroon	1.0000	0.5000	0.3750	0.5000	0.1250
Kenya	1.0000	0.3333	0.2500	0.2500	0.5000
Burkina Faso	0.0000	0.5000	0.7500	0.0000	0.2500
South Africa	0.2500	0.5000	0.6250	0.0000	0.2500
Nigeria*	0.5000	0.3333	0.2500	0.2500	0.2500
Ghana*	0.7500	0.3333	0.2500	0.1250	0.1250
Togo	0.0000	0.3333	0.3750	0.2500	0.2500
Cote d'Ivoire	0.7500	0.3333	0.1250	0.1250	0.1250
Liberia	0.0000	0.0000	0.2500	0.3750	0.2500
Tanzania	0.5000	0.3333	0.0000	0.1250	0.2500
Benin*	0.5000	0.0000	0.2500	0.1250	0.1250
Botswana	0.7500	0.1667	0.1250	0.0000	0.1250
Malawi	0.0000	0.0000	0.1250	0.3750	0.2500
Senegal*	1.0000	0.0000	0.1250	0.0000	0.1250
Zambia	0.2500	0.3333	0.1250	0.1250	0.0000
Cape Verde	0.0000	0.0000	0.0000	0.1250	0.1250
Chad*	0.0000	0.0000	0.0000	0.0000	0.1250
Burundi	0.2500	0.0000	0.1250	0.1250	0.1250
Seychelles*	0.7500	0.0000	0.0000	0.0000	0.1250

*Based on secondary data.

Global Cybersecurity Index

Regional Index for the Africa States By Category

Africa States	Legal	Technical	Organizational	Capacity Building	Cooperation
Angola*	0.5000	0.0000	0.0000	0.0000	0.1250
Gambia	0.5000	0.0000	0.1250	0.0000	0.0000
Mali	0.5000	0.0000	0.0000	0.0000	0.1250
Niger*	0.2500	0.0000	0.0000	0.1250	0.1250
South Sudan*	0.5000	0.0000	0.0000	0.0000	0.1250
Zimbabwe	0.2500	0.0000	0.1250	0.0000	0.1250
Congo	0.0000	0.0000	0.1250	0.0000	0.1250
Guinea	0.2500	0.0000	0.1250	0.0000	0.0000
Mozambique*	0.2500	0.0000	0.0000	0.0000	0.1250
Sao Tome and Principe	0.0000	0.0000	0.1250	0.0000	0.1250
Sierra Leone	0.0000	0.0000	0.2500	0.0000	0.0000
Swaziland	0.2500	0.0000	0.1250	0.0000	0.0000
Democratic Republic of the Congo	0.0000	0.0000	0.0000	0.0000	0.1250
Eritrea*	0.0000	0.0000	0.0000	0.0000	0.1250
Ethiopia*	0.0000	0.0000	0.0000	0.0000	0.1250
Gabon	0.0000	0.0000	0.0000	0.0000	0.1250
Guinea-Bissau*	0.0000	0.0000	0.0000	0.0000	0.1250
Madagascar*	0.0000	0.0000	0.0000	0.0000	0.1250
Central African Republic*	0.0000	0.0000	0.0000	0.0000	0.0000
Equatorial Guinea*	0.0000	0.0000	0.0000	0.0000	0.0000
Lesotho	0.0000	0.0000	0.0000	0.0000	0.0000
Namibia	0.0000	0.0000	0.0000	0.0000	0.0000

*Based on secondary data.

Global Cybersecurity Index – Best Practices

LEGAL

- **Four legislative instruments** are in place:

  1. ICT Act 2001
  2. Computer Misuse and Cybercrime Act 2003
  3. Electronic Transaction Act 2000
  4. Data Protection Act 2004

- An Unsolicited Commercial Electronic Bill is being drafted in **collaboration** with the Council of Europe

TECHNICAL

- A risk **assessment methodology** has been defined for the Civil Service:

IT Security Unit is leading the implementation of **ISO/IEC 27001** Information Security standard in the Civil Service as part of **National Information and Communication Technology Strategic Plan** (NICTSP) of 2007-2011 and 2011-2014.

Global Cybersecurity Index – Best Practices

CAPACITY BUILDING

- A **dedicated a budget** is set for sensitization of the general public on cybersecurity:

    - Through quizzes, forums and a radio program every other Thursday
    - In planned campaigns for the two major cities: Yaoundé and Douala

- The **National ICT Agency** (ANTIC) is working with the higher education ministry to develop program related to cybersecurity in engineering schools and universities

- Two **cybersecurity seminars** have been organized in partnership with **IMPACT** in 2010 and 2013 covering topics like penetration testing, security audit and forensic investigation

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Global Cybersecurity Index – Best Practices

LEGAL

- During 2013, the **Platform for the Fight Against Cybercrime** (PLCC), a national agency set up to combat cybercrime:

    - Registered 9,497 complaints
    - Processed 552 complaints
    - Arrested 70 people
    - Imposed prison sentences for 65 cyber fraudsters

- Since 2009:

    - More than **5,000 complaints have been registered and processed**
    - 250 cyber fraudsters have been sentenced to imprisonment (of which 62.5% are from the Ivory Coast)

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Global Cybersecurity Index

- Implement Legal Measures for combating Cybercrime and strengthening Cybersecurity

- Establish a legally mandated national CERT/CSIRT

- Draft a National Cybersecurity Strategy and a Detailed Roadmap

- Designate a National Agency Responsible for Cybersecurity

- Support Training, Education and Awareness-Raising Efforts

- Promote Public-Private Sector Partnerships

- Engage in International Cooperation and Information Sharing

Global Cybersecurity Index

Why Participate?

Cybersecurity is Critical

- For Supporting Digital Economies
- For Fighting Cybercrime
- For Supporting Development and Investment

Why **collaborate** with the **ITU**

- To take advantage of the resources of an internationally-structured forum
- To develop a sustainable national trust framework
- To share information and best practices with other nation states

and **ABI Research?**

- To embrace the multi-sectoral approach of public-private partnerships
- To take advantage of industry know-how and develop commercial investment opportunities
- To receive expert support from a leading research power house

Global Cybersecurity Index

Participate in the GCI to drive cybersecurity development in your country

- Country Survey and Conceptual Framework for the Index is available on the GCI website
http://www.itu.int/en/ITU-D/Cybersecurity/Pages/GCI.aspx

Lead Organizations

- **International Telecommunication Union -** BDT Cybersecurity and ICT Applications Division (CYB)

- **ABI Research -** Cybersecurity Research Practice

- With the participation of **IMPACT (International Multilateral Partnership Against Cyber Threats)** and affiliated partners

Global Cybersecurity Index

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GCI Website

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