

---

# Global Cybersecurity Index Overview

**2<sup>nd</sup> Annual Meeting of Community of Practice on  
Composite Indicators and Scoreboards**

**Grace ACAYO**  
GCI consultant  
International Telecommunication Union

---

**09-10 November 2017, Ispra, Italy**



---

# What is GCI ...

GCI is a composite index combining 25 indicators into one benchmark measure to monitor and compare the level of ITU Member States ***cybersecurity commitment*** with regard to the five pillars identified by the High-Level Experts and endorsed by the GCA.

“GCI is a capacity building tool, nothing more than that”

---

# Background

In 2007, ITU launched the Global Cybersecurity Agenda (GCA), as a framework for international cooperation

According to the PP resolution 130 (Rev. Busan, 2014) in Korea

It is upon this agenda that the Global Cybersecurity Index (GCI) to measure Member State commitment to cybersecurity was also founded.

Two editions have been published since the launch in 2014.

---

### ***GCI Pillars:***

- Legal
- Technical
- Organizational
- Capacity Building
- Cooperation

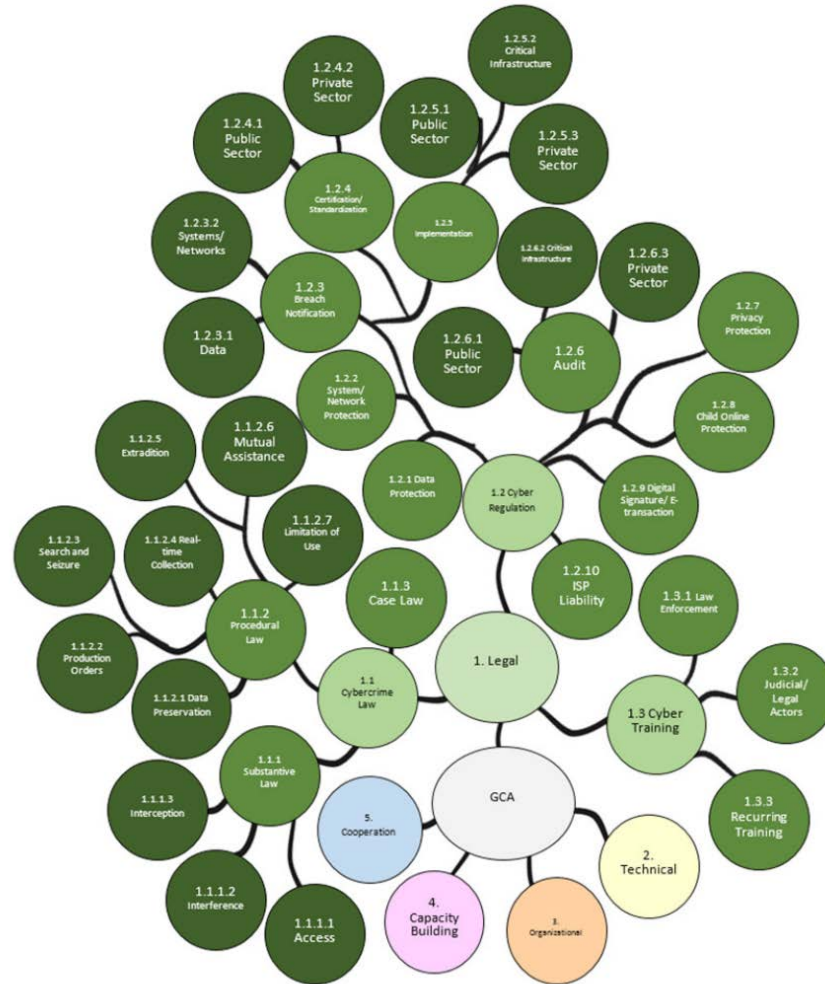
### ***Goals***

- **Support** countries to identify areas for improvement
- **Motivate** action to improve relative GCI rankings
- **Raise** the level of cybersecurity worldwide
- **Help** to identify and promote best practices
- **Foster** a global culture of cybersecurity

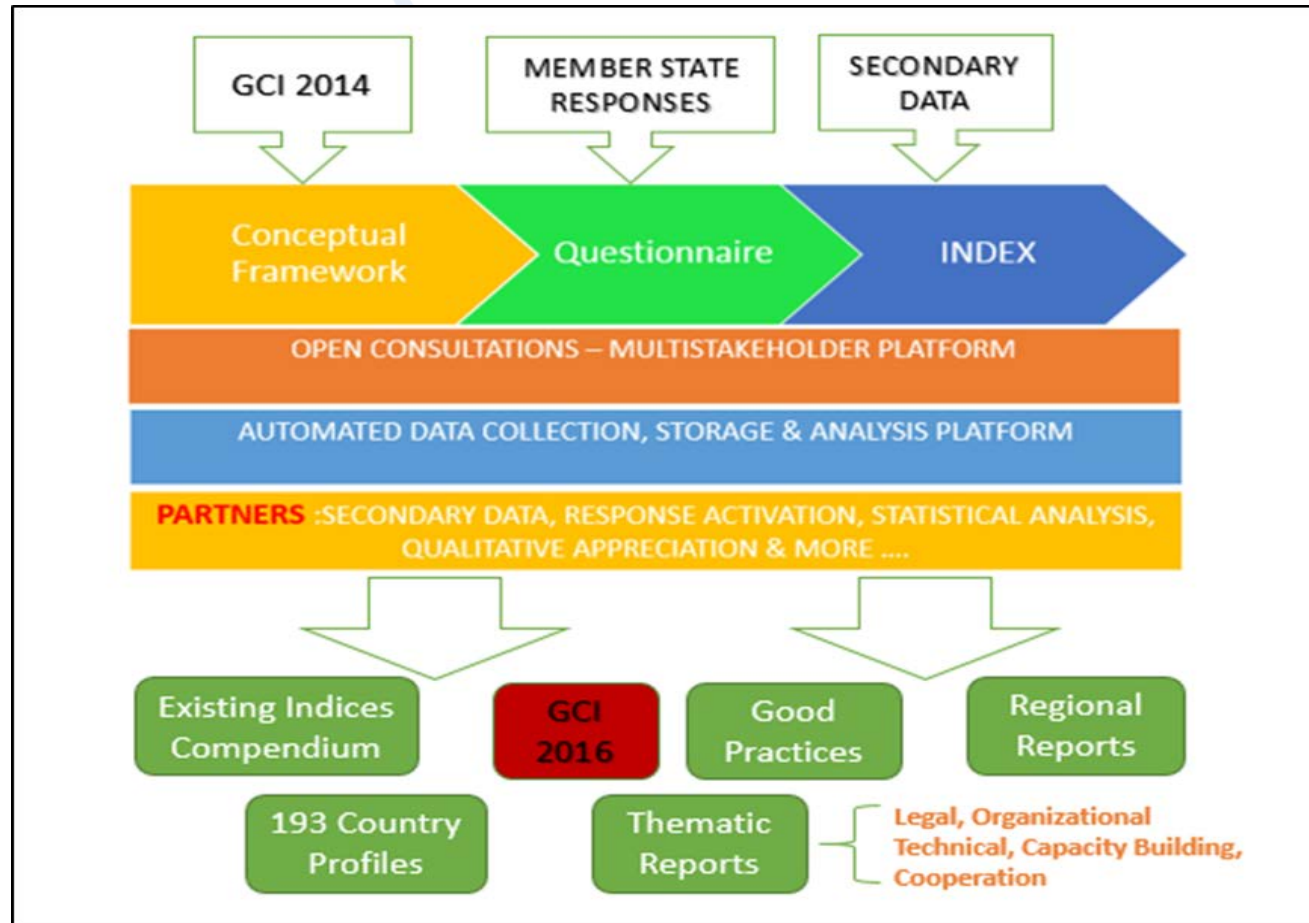
# GCI Pillars



# An example of the legal Pillar and its indicators, Sub-indicators



# Overall Approach



# Score calculation

Panel of Expert: an average for each question weightage provided by GCI Partners

2. Do you have any technical measures?	19.12
2.1. Is there a CIRT, CSIRT or CERT with national responsibility?	4.65
2.1.1. Does it have a government mandate?	1.33
2.1.2. Does the CIRT, CSIRT or CERT conduct recurring cybersecurity exercise?	1.23
2.1.3. Is the CIRT, CSIRT or CERT affiliated with FIRST?	1.04
2.1.4. Is the CIRT, CSIRT or CERT affiliated with any other CERT communities? (regional CERT)	1.06
2.2. Is there a Government CERT?	3.03
2.3. Are there any sectoral CERTs?	2.71

1. Is there any Cyber related legislation?	20.94
2. Do you have any technical measures?	19.12
3. Do you have any organizational measures?	19.67
4. Do you have any capacity building activities?	18.93
5. Do you have any cooperative measures?	21.34

Total of all weightages = 100



**157**  
questions

[illegible]

---

# Data analysis

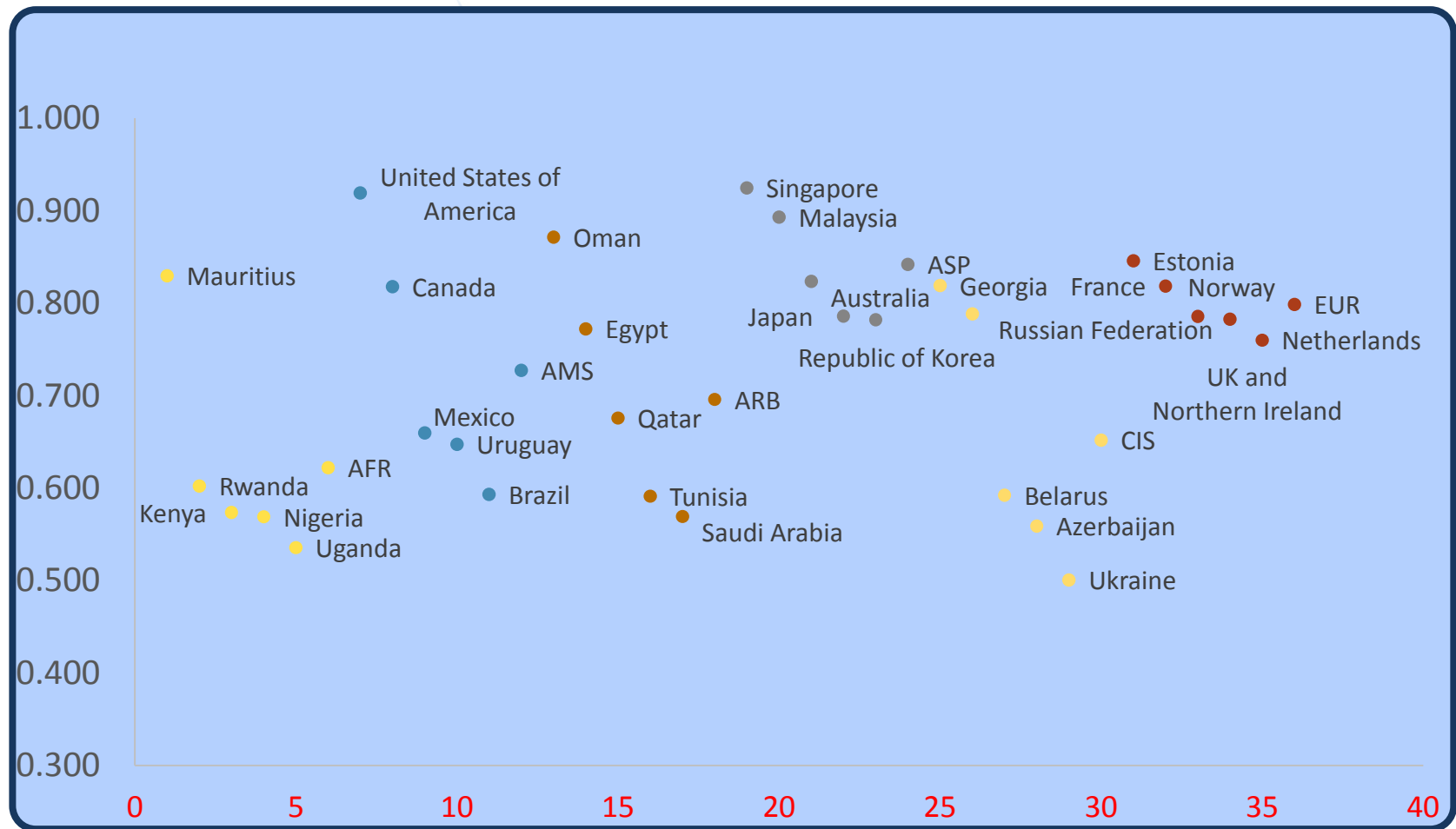
- Data collected for 194 Member States
- Data approvals and validation
- Quantitative analysis for ranking - scoring
- Audit of analysis – JRC EC
- Qualitative review of practices extraction
- Publication of report: <http://www.itu.int/en/ITU-D/Cybersecurity/Pages/GCI-2017.aspx>

# GCI results 2014 vs 2017

Country	Index	Global Rank
United States of America	0.824	1
Canada	0.794	2
Australia	0.765	3
Malaysia	0.765	3
Oman	0.765	3
New Zealand	0.735	4
Norway	0.735	4
Brazil	0.706	5
Estonia	0.706	5
Germany	0.706	5
India	0.706	5
Japan	0.706	5
Republic of Korea	0.706	5
United Kingdom	0.706	5

Country	Index	Global ranking
Singapore	0.92	1
United States	0.91	2
Malaysia	0.89	3
Oman	0.87	4
Estonia	0.84	5
Mauritius	0.82	6
Australia	0.82	7
Georgia	0.81	8
France	0.81	8
Canada	0.81	9
Russian Federation	0.78	10

# Top five for each region



# Presentation of data

Reports (including regional reports)  
and Cyberwellness Profiles

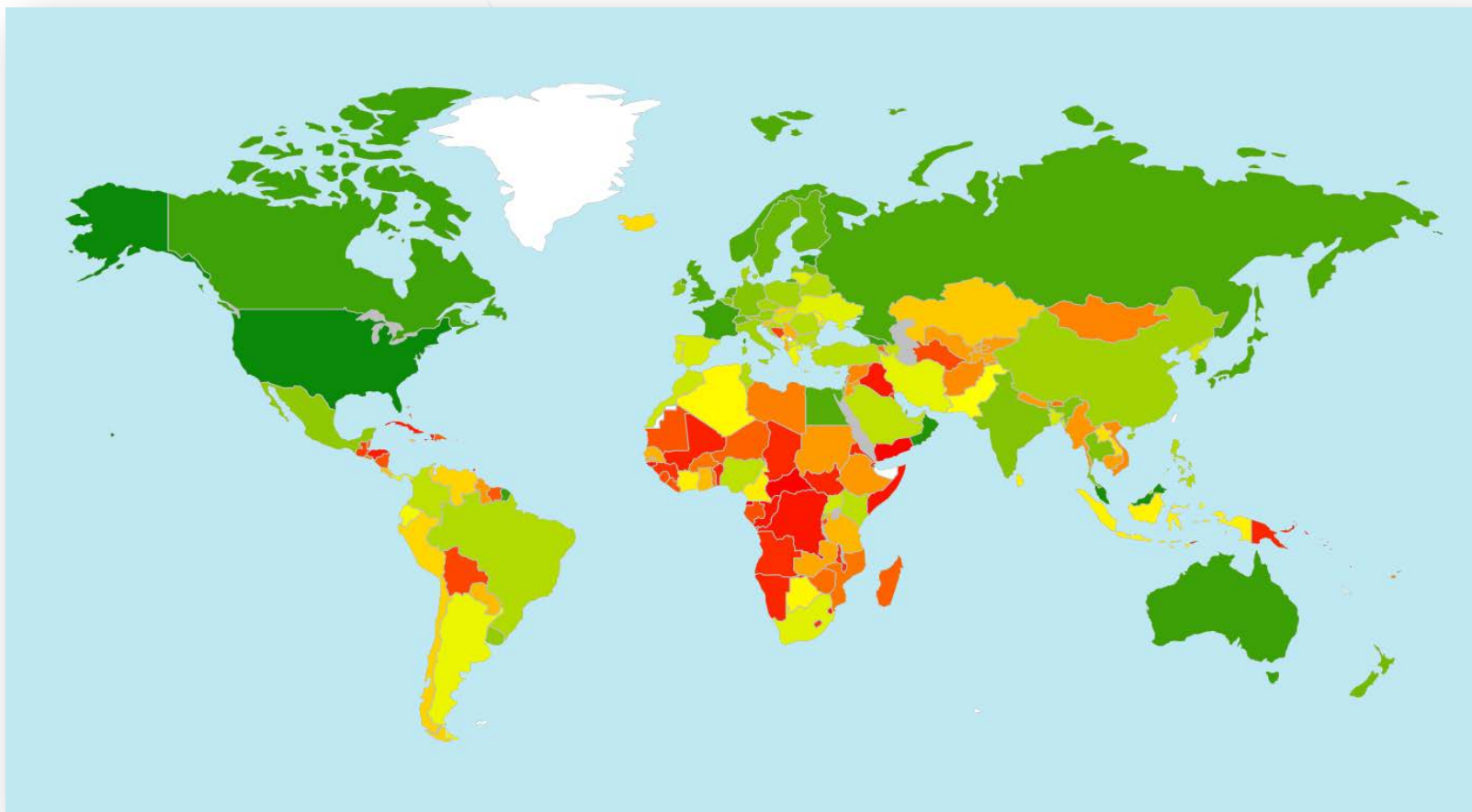


Factual information on  
cybersecurity achievements on  
each country **based on the GCA  
pillars** Over 194 profiles to date





# Presentation of data



Commitment levels

■ High

■ Medium

■ Low

**GCI Heat map**

# Media Uptake on GCI

## GCI Media

YOU ARE HERE [HOME](#) > [ITU-D](#) > [CYBERSECURITY](#) > [GCI MEDIA](#)

SHARE [f](#) [t](#) [in](#) [l](#)

About

National Strategies

Legal Measures

CIRT Programme

Global Cybersecurity Index

Combating SPAM

Global Partnerships

Cyberthreat Insight

Publications

Events

### GCI 2017

- What Can We Learn From the 'Global State of Information Security Survey 2018'?
- The state of PH cybersecurity
- Global Cybersecurity Index 2017 reveals that 50% of countries have no cybersecurity strategy in place
- India ranks 23rd among 165 nations in cybersecurity index
- ITU Global Cybersecurity Index 2017 shows improvements and strengthening of global cybersecurity agenda
- Singapore tops ITU's Global Cybersecurity Index 2017
- Rwanda, Mauritius top Africa in 2017 global cyber security index
- Netherlands Ranks Top-15 in ITU Global Cyber Security Index 2017
- UN cyber security index 2017: At 23rd, India ahead of Germany, China, but Singapore on top
- U.N. survey finds cybersecurity gaps everywhere except Singapore
- VN falls in world cyber security index
- How CyberSecurity Malaysia industry certification helped win 3rd place ranking: Global CyberSecurity Index 2017
- Thailand ranks 20th in global cybersecurity ranking

### GCI 2014

- Canada ranks 2nd in the Global Cybersecurity Index (GCI)
- How do you work out a country's level of cybersecurity?
- Measuring the Information Society Report 2015, Chapter 1
- Cybersecurity Indexes in Cybersecurity Experts Blog at National Cybersecurity Institute
- UK ranks fifth in global cyber security rankings
- Oman third best prepared in world to thwart cyber attacks
- Malaysia ranks third in Global Cybersecurity Index
- Estonia ranks fifth in the global cybersecurity index
- United Nations Launches Global Cybersecurity Index
- US has greatest commitment to cybersecurity, global index reveals
- Egypt Ranked Ninth at Global Cybersecurity Index
- ITU starts Global Cybersecurity Index
- Latvia Takes 7th Place in Global Cyber Security Index
- Uruguay es el segundo país de América Latina y octavo del mundo en seguridad informática (Spanish only)
- Top countries best prepared against cyberattacks
- Η Νορβηγία, η πιο "ετοιμασμένη" ευρωπαϊκή χώρα στην αντιμετώπιση ψηφιακών απειλών (Greek only)





# Thank to all GCI Partners



---

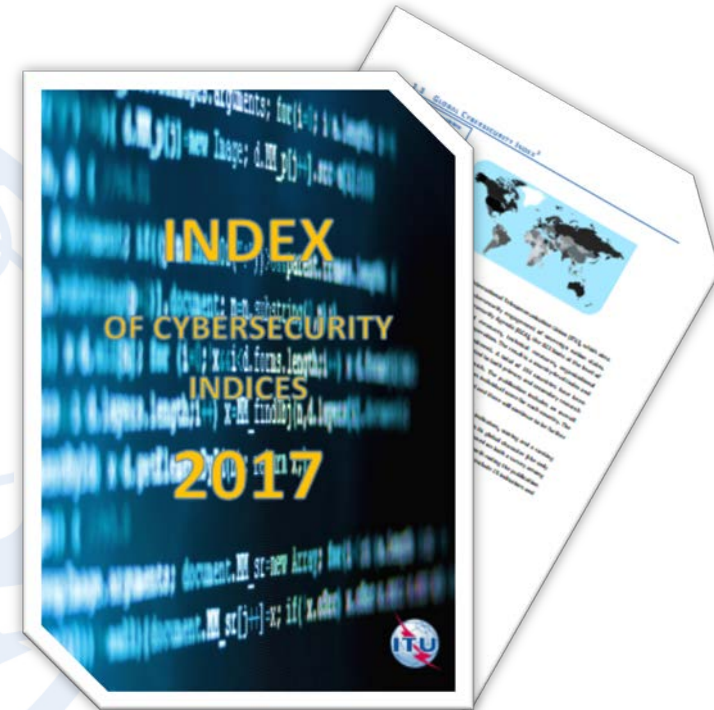
# Unique Value

What makes the GCI unique is the balanced combination of:

- The **broad geographic range** covering all Member States of ITU
- The study of cybersecurity in **five broad areas** (pillars of Global Cybersecurity Agenda)
- The **scoring and ranking** mechanisms
- The **cyberwellness** country **profiles**

# Index of Indices

	Metrics						Content								Presentation Format			
	Score	Ranking	Information Society Development Score (ISD) score	Cyber Maturity	Cyber Threats	Cyber Vulnerabilities	Organizational	Technical	Economical	Legal Framework	Cooperation	Capacity Building	Recommendations	Profiles	Website	PDF	Visualization	No. of Iterations
Cyber Maturity in the Asia-Pacific Region	x			x					x	x	x			x	x	x		2
National Cyber Security Index	x	x	x	x	x		x	x		x	x	x			x	x	x	1
Global Cybersecurity Index	x	x					x	x		x	x	x		x	x	x	x	2
Kaspersky Cybersecurity Index	x				x				x					x	x	x	x	1
Asia-Pacific Cybersecurity Dashboard		x		x			x			x	x	x		x	x	x		2
Cyber Readiness Index 2.0	x	x		x		x	x		x	x	x			x	x	x		2
Cybersecurity Poverty Index	x			x			x	x							x		x	1
CyberGreen Index	x	x			x			x							x		x	1
The Accenture Security Index	x	x			x		x	x	x		x		x		x	x	x	1
Global Cybersecurity Assurance Report Cards	x				x	x		x							x		x	1
Index of Cybersecurity					x			x							x	x	x	73
Cybersecurity Capability Maturity Model				x			x	x		x	x	x			x	x		2
Cyber Power Index	x	x		x			x	x		x		x			x	x	x	1
IBM X-force Threat Intelligence Index					x			x							x			3



- **Index of Indices** from different organizations and companies using different indicators is also compiled.

---

# Next GCI iteration

## Preparation:

- Comparative analysis of existing indices
- Reference Model (incl. Conceptual Framework)
- Questionnaire content & guide
- Online survey platform
- Partnership Formulation
- Country GCI Focal point identification
- Panel of Expert Question Weightage calculation
- Survey Response Follow ups
- GCI Partners Portal

## Implementation:

- Data Validation
- GCI Score calculation
- Practices identification
- Secondary data collection & QA
- Country change requests
- Assessment of Statistical robustness of Score calculated
- Data Visualization
- Further Data Analysis (trends..) & Launch Preparation
- Update of Cyberwellness Profiles
- Report(s) writing

---

# JOIN US

- As a partner
  - Add to this body of knowledge under construction
  - Your expertise on thematic to help enhance the GCI process and deliverables
  - Connect better with ITU and Member States
- As a respondent to questionnaire
  - Reflect your Country's achievements and plans for enhancing Cybersecurity
  - Share best practices
  - Position your country on the cybersecurity commitment scale

---

# More information

GCI Website

<http://www.itu.int/en/ITU-D/Cybersecurity/Pages/GCI.aspx>

[cybersecurity@itu.int](mailto:cybersecurity@itu.int)

---

# THANK YOU!

Grace Acayo

[Grace.acayo@itu.int](mailto:Grace.acayo@itu.int)

