Arab Regional Assessment Study of the Enabling Environment for Big Data Questionnaire

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| Author | Karim Abdelghani |
| Company | Programme Coordinator, Arab Regional OfficeInternational Telecommunication Union (ITU)Cairo, Egypt |
| Email | karim.abdelghani@itu.int |
| Mobile | +20-2-353-71777 or +41227305902 |
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# Introduction and context

The World Telecommunications Development Conference held in Buenos Aires in 2017 adopted five regional initiatives, one of which is “Internet of Things, Smart Cities and Big Data”. In an effort to kickstart activities under this regional initiative and specifically on the topic of Big Data, the ITU Arab Regional Office will prepare a regional assessment study on the enabling environment for Big Data in the Arab region. This study will focus on the regulatory and policy frameworks and the capacity building ecosystem in the 22 Arab countries of the Arab region with an analysis of the readiness of these countries to utilize Big Data in the commercial and developmental fields by all stakeholders particularly the governments and the private sector. This assessment study will be an essential tool for the ITU Arab Regional Office to pinpoint areas where the ITU can support the Arab region in the coming years in this field. Moreover, it will serve as a resource for the countries in the Arab region to refer to as they embark on creating national strategies to promote Big Data uses in their countries.

As part of this study, the ITU Arab Regional Office is conducting a survey with the 22 Arab Countries regulatory bodies, government entities and selected private sector entities. The result of the survey will inform the ITU and this report on the existing environment, the opportunities and challenges and what needs to be done to create an enabling environment for Big Data.

The ITU Arab Regional Office is inviting all members who receive this survey to take the time to respond online at the following link: <https://goo.gl/forms/vBW5TVb2LUfBvNiD3>. Alternatively, you may also complete directly this document and send it back to the ITU Arab regional Office (to Karim Abdelghani karim.abdelghani@itu.int).

In order to have a more complete view of the opportunities and challenges, we also invite you to share this survey with other members of your government and other institutions, including other regulators, private sector, private sector associations, academia and research communities to provide their own feedback.

Deadline to respond: November 10th, 2018

The final report from this study will be made public by end of calendar year 2018.

# Identification of the organization responding

*We would love to know a little bit about you.*

## Name of the organization: Please specify.

## Country: Please specify.

## Person responding

Name : Please specify.

Title : Please specify.

Address : Please specify.

Telephone : Please specify.

Email : Please specify.

## Exact role of the Organization

[ ] Regulator

[ ] Government Ministry or other entity

[ ] Private Sector

[ ] Academia

## Sector – Industry

[ ] Government

[ ] Healthcare

[ ] Education and Research

[ ] Environment

[ ] Judicial

[ ] Banking

[ ] Insurance

[ ] Utilities

[ ] Media & Entertainment

[ ] Transportation

[ ] Telecommunications

[ ] Retail

[ ] Other : Please specify.

## Does your organization have a Big Data Focal Point ?

[ ] Yes [ ]  No [ ]  Don’t know

If yes Please provide contact detail, name and email address

##  Is your organization already using Big Data technologies?

[ ] Yes [ ]  No [ ]  Don’t know

## In which area(s) is your organization using Big Data

[ ]  Sales

[ ]  Marketing

[ ]  Product development/management

[ ]  Security

[ ]  Customer service

[ ]  Finance

[ ]  Information Technologies

[ ]  Risk management

[ ]  Fraud management

[ ]  Human Resources

[ ]  Operations

[ ]  Logistics

[ ]  Other Please specify.

# Country Environment

## Your National Definition

*We would love to hear from you, if you have a formal national definition for Big Data, or your own definition. You can even just provide a set words that come to mind if you don’t have a formal definition.*

[ ] Yes [ ]  No [ ]  Don’t know

Please provide your Big Data definition

*If you don’t have one, please consider the following definition that we use for the purpose of this report.*

*Big Data is the discipline that involves the capture, processing, management of large volume of data, with multiple formats, coming from different sources, and different disciplines, for which the time to value is significantly short.*

[Recommendation ITU-T Y.3600]: *A paradigm for enabling the collection, storage, management, analysis and visualization, potentially under real-time constraints, of extensive datasets with heterogeneous characteristics.*

## Policy: Is there a Data or Big Data policy in your country

*The purpose of this section is to list the existing policies (not regulations or laws) in your countries with actual public references and potential governing bodies*

[ ] Yes [ ]  No [ ]  Don’t know

### If YES for Open Data – please specify governing body and a public reference (number and URL)

### If YES for Big Data - please specify governing body and a public reference number and URL)

### If YES for Data Privacy - please specify governing body and a public reference number and URL)

### If YES for Data Security – please specify governing body and a public reference number and URL)

## Law: Is there a Data or Big Data Law in your country

*The purpose of this section is to list the existing Laws (not policies or regulations) in your countries* *with actual public references and potential governing bodies*

[ ] Yes [ ]  No [ ]  Don’t know

### If YES for Open Data – please specify governing body and a public reference number and URL)

### If YES for Big Data - please specify governing body and a public reference number and URL)

### If YES for Data Privacy - please specify governing body and a public reference number and URL)

### If YES for Data Security – please specify governing body and a public reference number and URL)

## Regulation: Is there a Data or Big Data Regulation in your country

*The purpose of this section is to list the existing Regulations (not policies and Laws) in your countries with actual public references and potential governing bodies*

[ ] Yes [ ]  No [ ]  Don’t know

### If YES for Open Data – please specify governing body and a public reference number and URL)

### If YES for Big Data - please specify governing body and a public reference number and URL)

### If YES for Data Privacy - please specify governing body and a public reference number and URL)

### If YES for Data Security – please specify governing body and a public reference number and URL)

## National Research / Study

Have there been studies on big data in your country?

[ ] Yes [ ]  No [ ]  Don’t know

If yes, please provide a public reference/s

#  Capacity and skills building environment

*The purpose of this section is to understand the current capacity and skills building environment for Big Data in your country.*

## Number of public universities teaching big data curriculum: Please specify.

* Number of students studying big data: Please specify.
* Name(s): Please specify.
* Public web site(s): Please specify.

## Number of private universities teaching big data curriculum: Please specify.

* Number of students studying big data: Please specify.
* Name(s): Please specify.
* Public web site(s): Please specify.

## Do you know if there is a gap in terms of market demand for big data professionals?

[ ] Yes [ ]  No [ ]  Don’t know

Please provide an estimate of the demand (figure): Please specify.

# Big Data Usage in your country

*The purpose of this section is to understand Big Data adoption in your country*

## What percentage of public institutions in your country have adopted Big Data technologies so far?

[ ]  Approximately % Please specify. [ ]  Don’t know

## What percentage of private institutions in your country have adopted Big Data technologies so far?

[ ]  Approximately % Please specify. [ ]  Don’t know

## What sectors are the most using Big Data in your country?

[ ] Government

[ ] Healthcare

[ ] Education and Research

[ ] Environment

[ ] Judicial

[ ] Banking

[ ] Insurance

[ ] Utilities

[ ] Media & Entertainment

[ ] Transportation

[ ] Telecommunications

[ ] Retail

[ ] Other : Please specify.

## Case studies

*The purpose of this section is to provide case studies of the impact of big data in your country, that could inspire other countries*

Please provide a few examples of leveraging big data in your country

[ ] Government

[ ] Healthcare

[ ] Education and Research

[ ] Environment

[ ] Judicial

[ ] Banking

[ ] Insurance

[ ] Utilities

[ ] Media & Entertainment

[ ] Transportation

[ ] Telecommunications

[ ] Retail

[ ] Other : Please specify.

 Impact: Please elaborate

Public reference (web site, …): Please specify.

# Start-Ups

*The purpose of this section is to understand the innovation ecosystem that leverages big data in your country.*

Please provide references to a few start-ups in your country which are leveraging Big Data

## Industry (in which industry they are operating)

[ ] Government

[ ] Healthcare

[ ] Education and Research

[ ] Environment

[ ] Judicial

[ ] Banking

[ ] Insurance

[ ] Utilities

[ ] Media & Entertainment

[ ] Transportation

[ ] Telecommunications

[ ] Retail

[ ] Other : Please specify.

## Impact

Please describe their impact (be it economic, human, environment, revenue, employment …) of their work and solution in few sentences:

Please Elaborate

## Public Reference

Please provide any public reference to the start-up such as a public web site, …:

Please Elaborate

# What impact do you see big data having on your country?

*The purpose of this section is to capture the magnitude of impact big data can have on the Arab countries in terms of employment, development, investment, …*

[ ]  Employment Please Elaborate

[ ]  GDP Please Elaborate

[ ]  UN Sustainable Development Goals Please Elaborate

[ ]  Human Development Please Elaborate

[ ]  Foreign Direct Investments Please Elaborate

[ ]  E-Government Please Elaborate

# Current Infrastructure

*The purpose of this section is to understand how well you feel your country is prepared in terms of infrastructure to leverage Big Data*

Please rate each on a scale of 1 to 5 (5 being the highest)

* Broadband Rate 1 to 5
	+ Please Elaborate
* Data Centers Rate 1 to 5
	+ Please Elaborate
* Specific data intensive programs such as

[ ]  Smart Cities Rate 1 to 5

[ ]  E-Health Rate 1 to 5

[ ]  Environment Rate 1 to 5

[ ]  Education Rate 1 to 5

[ ]  Other programs

* + Please Elaborate and Rate 1 to 5
* Other: please specify 1-5
	+ Please Elaborate and Rate 1 to 5

#  Risks and challenges

*The purpose of this section is to capture the kind of risks and threats pertaining specifically to the usage of big data*

What risks and challenges do you see big data having on your country

Name a few – elaborate as much as possible for each

# What have been the main barriers in your country

*The purpose of this section is to capture the kind of blockers that prevent your country from leveraging big data*

1. Infrastructure – Please Elaborate
2. Technology – Please Elaborate
3. Skills – Please Elaborate
4. Law, policies, regulations – Please Elaborate
5. Ecosystem – Please Elaborate
6. Cross-country cooperation – Please Elaborate
7. Other – Please Elaborate

# What do you think is needed to unleash big data in your country?

*The purpose of this section is to capture the required factors for unleashing the uses of big data in your country in all fields. Please prioritize by importance, 1 being the most important*

* Infrastructure – Priority - Please Elaborate
* Technology – Priority - Please Elaborate
* Skills – Priority - Please Elaborate
* Law, policies, regulations – Priority - Please Elaborate
* Ecosystem – Priority - Please Elaborate
* Cross-country cooperation – Priority - Please Elaborate
* Other – Please Elaborate

# What role do you see for each stakeholder in leveraging big data in your country – for businesses, government and society?

*An active collaboration is required amongst various players in an ecosystem to unleash the benefits and mitigate the risks related to Big Data. What is your perspective on the roles and contribution of all stakeholders?*

* Government: What specific role and what contributions
* Telecom operators: What specific role and what contributions
* Academia: What specific role and what contributions
* Private sector: What specific role and what contributions
* (Big) Tech industry: What specific role and what contributions
* UN: What specific role and what contributions
* Who else should play a role, and what exact role and contribution

Please Elaborate: What specific role and what contributions

# ITU: What specific role and what contributions

Should ITU provide assistance to countries in the region in the area of big data? Please rate each on a scale of 1 to 5 (5 being the highest):

[ ]  Assistance in formulating national strategies: Please Elaborate

[ ]  Assistance in formulating policies and regulations: Please Elaborate

[ ]  Implementing national or regional projects: Please Elaborate

[ ]  Raising awareness on the opportunities to national stakeholders: Please Elaborate

[ ]  Other Please Elaborate