

**REPORT OF THE INAUGURAL MEETING OF
THE BIG DATA AND ANALYTIC GROUP
(BiDAG)**

Held at

Centre for Petroleum Energy Economic and Law (CPEEL),
University of Ibadan.

On Thursday, 18th January, 2018.

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1.0 Introduction

The meeting commenced 4pm and all the attendees were already seated. Professor Akin Iwayemi introduced himself and asked everyone in attendance to introduce themselves. After the formal introduction, Professor Iwayemi took the stage.

1.1 About BiDAG

The initiative to establish the Big Data and Analytic Group (BiDAG) was conceived by Prof. Akin Iwayemi and Dr. Olusanya Olubusoye of the Centre for Petroleum Energy Economic and Law (CPEEL) and Department of Statistics respectively at the University of Ibadan.

Having conceived the idea, invitation for participation was circulated via email to some goal driven individuals among which are, Faculty (Academic Staff), researchers (Ph.D., and MPhil/Ph.D. students) and others, who are willing to be part of the big initiative. The invitation received high positive responses and most of the invited person registered their willingness to attend the inaugural meeting slated for 18th January, 2018. We present the summary of attendees in section three of this report.

1.2 Why BiDAG?

Data remain the key driver of research all over the world. As a result, research has resulted in the emergence of “Big Data and Predictive Analytics” as a methodological approach that has facilitated the ability to extract and leverage on invaluable information from the massive data for smarter and better decision making. The massive nature of data in this century demand a procedure that is dynamic and which can accommodate its ever unstable nature.

Data is now available everywhere; from the internet activities such as social media platforms (Twitter, Facebook, Instagram etc.) to events happening all around us per milliseconds. As a result of this, the data trending nature require effective and efficient usage in order to have better understanding of the trend of events. Thus, the era of Big Data (BD) and Predictive Analytics (PA) has made possible smarter and better decisions in an increasingly more complex world characterized by ever increasing volume of data on individuals, households, firms, government and society in a globalized world.

The appeal of BD and PA, as tools for achieving better and smarter decision seems as the only way forward. Developed nations all around the world now base their economic policy on the enormous capacity of BD and PA to make smarter decisions. Nigeria and the rest of Sub-Saharan Africa are yet to effectively join the rest of the world in making extensive use of this important decision making tool.

Two important questions arise.

- Is the time and the conditions right for Nigeria and the rest of Sub-Saharan Africa to join the rest of the world in using BD and PA?
- “How do you introduce and internalize BD and PA in a low income environment that is yet to effectively participate in the 3rd and 4th Industrial Revolution?

The big question is; why is Africa continent always lagging behind? If we must ensure Africa growth, we Africans must be ready to move in the same direction as the Developed world. And it is not too late to start. Thus, the time to act is now! This is the essence of BiDAG.

1.2 BiDAG Initiative and Purpose of Establishment

The major or vital reason for instituting BiDAG is to address the unimpressive state of decision making in the continent with emphasis on Nigeria.

By extension, BiDAG was initiated to fulfil the following purposes:

1. BiDAG is to serve as the Gospeller of BD and PA in Nigeria and by extension in Sub-Sahara Africa.
2. To bring together productive domain experts from various academic research domain in order to establish a group of people who understand the core value of data and how to make meaning out of it for economic growth and development of Nigeria and the rest of Sub-Sahara Africa.
3. To establish a formidable wings of research institutes where core value and appreciation of BD and PA can be access for public consumption and academic development.

1.3 Aim and Objectives

We propose a Research Network on Big Data and Predictive Analytics

The network has three major objectives.

- First, is to develop a strategic framework that will help decision makers to domesticate Big Data and Predictive Analytics.
- Second is advocacy role. This involves the research network providing information and fora that will help different stakeholders to begin to see the immense value of these analytical and empirical tools in making smarter decisions in their organizations.
- Third, and given our comparative advantage, is to build the required human capacity as “how to do it”, thereby fast track the process by which potential users can begin to engage in large scale application of this versatile tool for more evidence-based and robust decision making both in the public and private sectors.

In order to accomplish these objectives.

- The network will broadly deal with Big Data, Machine Learning and Predictive Analytics in all their dimensions - theory, methodology, empirics and case studies.
- Because of the wide-ranging nature of the theme, the network will be multi-disciplinary in nature.

2.0 Presentations

2.1 Prof. Iwayemi Presentation

The first presentation was delivered by Prof. Akin Iwayemi. His presentation was titled *'Big Data and Predictive Analytics: Setting Up a Research Network'*. The presentation serves as the skeleton program for the purpose of BiDAG initiative. He talked about why the group is necessary at this time and highlighted series of activities to be carried out. The BiDAG initiative and aim and objectives of the BiDAG stated above are extract from the presentation.

Professor Iwayemi observed that, the time to act is now for us to ensure that Nigeria and Sub-Sahara Africa begin to appreciate the application of BD and PA in order to encourage Nigeria and Africa economic growth and development. He identified the following as the key driven force of BD and PA.

- Key drivers of BG and PA are:
 1. Data availability
 2. Technological development such as cheaper sensors smartphone's include GPS', accelerometers, smart meters, smart grid etc.
 3. Cheaper and more powerful computing power that is increasingly becoming more and more and accessible
 4. Democratization of data analytics tools: Because of open source software packages in R and Python, machine learning tools are no longer the domain of researchers or Big corporations

With the following key requirements:

- Infrastructure:
- Electricity
- Computing resources [desktop, laptop, cloud computing]
- Technical knowledge
 - Statistics
 - Machine Learning
 - Data visualization
 - Programming
 - Business skills

He therefore noted that, all these tools are available to us, hence, there is nothing hindering us from starting up the research network.

He opined that, Nigeria and the rest of Sub-Saharan Africa are ready for BD and PA revolution, because the conditions for their use exist in increasingly large amount of:

- Administrative
- Economic
- Financial
- Social and
- technical data set generated by government (federal, state and local governments) offices and business enterprises

As a result, Nigeria and the rest of Sub-Saharan Africa are generally ready to effectively join the rest of the world in making extensive use of this important decision making tool. Thus, the fundamental task for BiDAG is to work on how to domesticate Big Data and Predictive Analytics within a relatively short time.

In his concluding remarks, Iwayemi expressed his confidence that; the region is ready to join the rest of the world in using BG and PA to find insights and predict

events and behaviour more powerfully than ever before. He however, pointed out the following as critical to a successful future of BD and PA:

- political will
- stakeholders buy-in
- technical, financial and institutional support from national, regional and international agencies to ensure that “Yes we can” in engaging fruitfully in and endogenizing these tools for smarter and better decision-making in homes, business enterprises, government and the larger society in our country and continent.

2.2 Olubusoye Presentation

This presentation was purely a demonstration of the beauty of Big Data and Analytic to real life scenario. The title of the presentation is *‘2015 Presidential Election in Nigeria: Some Statistical Perspectives on APC and PDP’*.

In his introductory speech, he mentioned that Big Data is characterized with three (3) V’s and the V’s are:

1. Volume
2. Variety and
3. Velocity

This three V’s are what define Big data. The Volume implies the size of the data set (i.e., millions of observations). Variety implies numerous number of variables and of various forms and Velocity implies the rate at which the data are coming in. For instance, there may be over one thousand responses to a twitter post under 2 minutes or less. That is, the rate at which this information are coming in and are being recorded.

He went further to explain how this sets of data can be harnessed for better and smarter decision making processes.

For illustration, he displayed professionally how we can use election result data to understand the hidden facts about the outcome of election results. In his presentation, he was able to highlight some critical states in which each political parties were most favoured in the last Presidential Election in Nigeria. And thus, to ensure victory, these political parties can easily spot their weak points and also know their strong holds. This will help intending candidate in the forthcoming election to know the area he/she need to focus on and the necessary channels to follow.

The purpose of the presentation is to show how we can use BD and PA for better and smarter decision for understanding both present and future events. For instance, the result of his analysis revealed why River State is always on high competitive and a State of rivalry for PDP and APC. Presently, River State is PDP favoured and it has the highest voters turn out (based on percentage of registered voters to number of voters that actually voted) in the last election.

In his concluding remark, he informed the house on several area where Big Data and Predictive Analytic can be of advantage and encouraged all attendees to see the possibilities and be ready to take the bull by the horn.

3.0 In Attendance

The BiDAG inaugural meeting entertained attendees from four departments and a centre across two faculties within University of Ibadan. Table 1 below give the distribution of the attendees at the inaugural meeting.

Table 1: Distribution of Attendees

Sex ↓	Computer science	CPEEL	Economics	Mathematics	Statistics	Total
F	0	5	1	0	1	7
M	3	7	1	1	6	18
Total	3	12	2	1	7	25

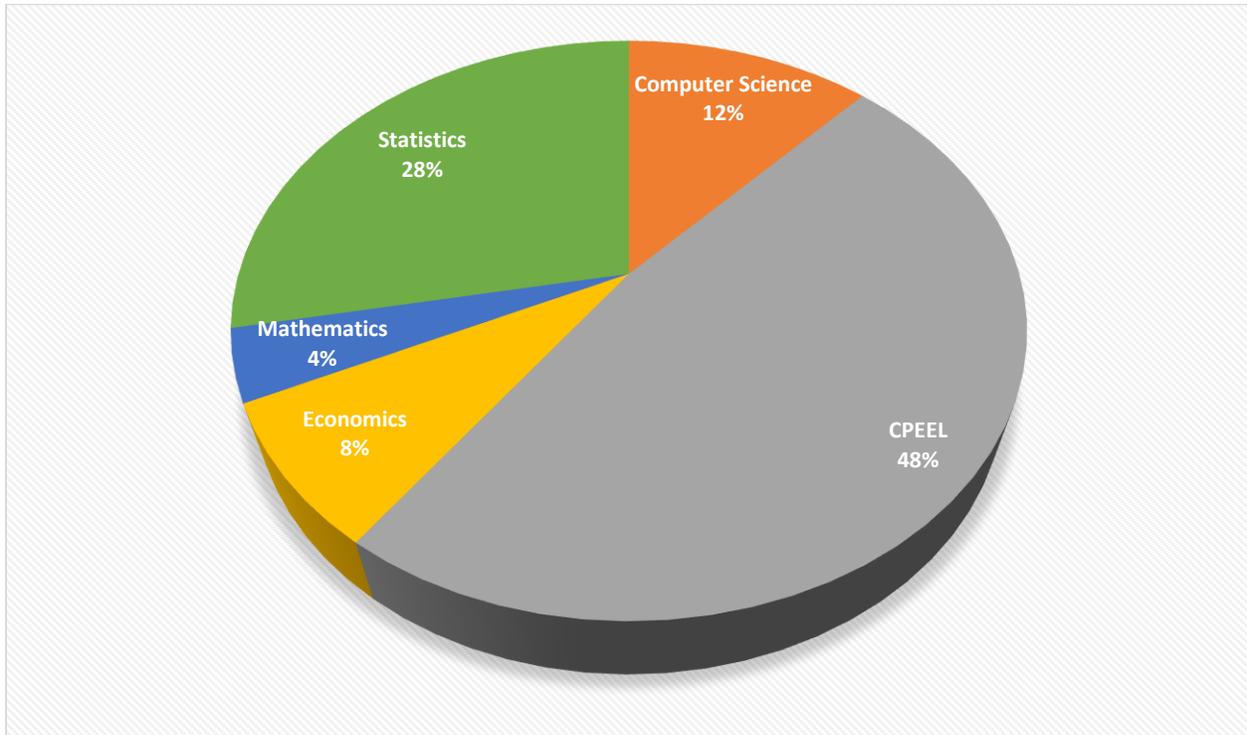


Figure 1: Distribution of attendees Department

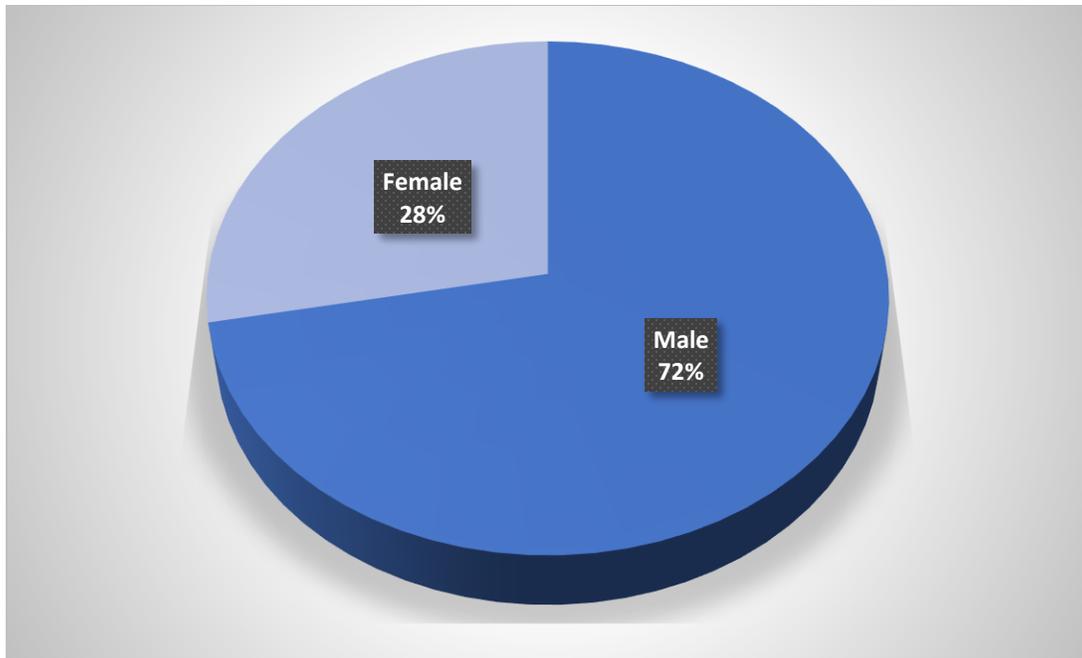


Figure 2: Gender Distribution of attendees

4.0 Instituted Committee

A working committee was instituted to kick start BiDAG program while others attendees remain members. The following persons were included:

- | | |
|----------------------------------|--------------------------------|
| 1. Prof. Akin Iwayemi | CPEEL |
| 2. Dr. O.E. Olubusoye | Department of Statistics |
| 3. Dr. (Mrs.) Adedayo A. Adepoju | Department of Statistics |
| 4. Dr. B.O. Onasanya | Department of Mathematics |
| 5. Mrs. Patricia Ajayi | Department of Economics |
| 6. Mrs. Yetunde Omotosho | CPEEL |
| 7. Mr. Ajayi Olubunmi | Department of Computer Science |

5.0 Closing

The meeting ended around 5:30pm.

Appendix

List of attendees

S/N	Name	Sex	Department	Phone	Email address
1	Prof. Akin Iwayemi	M	CPEEL	8023468751	
2	Olusanya E. Olubusoye (PhD)	M	Statistics	8058258883	busoye201@yahoo.com
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4	Dr. Chris G. Udomboso	M	Statistics	8037398736	cg.udomboso@gmail.com
5	Dr. Femi Ayoola	M	Statistics	7035242000	ayoolafemi@yahoo.com
6	Dr. Onasanya B.O.	M	Mathematics	8035566361	babtu2001@yahoo.com
7	Dr. (Mrs.) Adepoju A. Adedayo	F	Statistics	8066430258	pojoday@yahoo.com
8	Akintande Olalekan Joseph	M	Statistics	8060129377	aojsoft@gmail.com
9	Ogbonna A Ephraim	M	Statistics	8028856320	ogbonnaephraim@yahoo.com
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11	Busayo Olanrewaju	F	CPEEL	7035288227	busayo.t.olanrewaju@gmail.com
12	Odeh Nnaemeka E	M	CPEEL	7037260677	odehnaemmeka@gmail.com
13	Nkechiyelu Oranye	F	CPEEL	8038208452	trysha3@gmail.com
14	Bimbo Aremu	F	CPEEL	8054045731	abimbola.aremu@yahoo.com
15	Omotosho Yetunde A.	F	CPEEL	8037921546	yetundeaderonke@yahoo.com
16	Osagu Festus	M	Economics	8036619206	festus.osagu@yahoo.com
17	Jerome Okoro	M	CPEEL	8035487564	jerryooj@yahoo.com
18	Ayorinde Oluwatomiwa	F	CPEEL	9096438352	tomiwa.ayorinde@gmail.com
19	Onyeuche Emmanuel	M	CPEEL	8061321109	eonyeuche@gmail.com
20	Hammed Basit	M	Computer science	8094639470	hammedbasit@yahoo.com
21	Gbadebo Adedolapo	M	Computer science	8060400789	dolaps1999@gmail.com
22	Michael Ojo Obafemi	M	CPEEL	7033439272	eeemoooh@yahoo.com
23	Patricia Ajayi	F	Economics	8034115174	ajayipi@yahoo.com
24	Ajayi Olubunmi S.	M	Computer science	8067070513	ajayiolubunmipeter@gmail.com
25	Adedeji Kehinde	M	CPEEL	8054013615	adedeji.o.kehinde@gmail.com