



Irving Fisher Committee on
Central Bank Statistics

BANK FOR INTERNATIONAL SETTLEMENTS

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Issues on Big Data Governance – Big Data work in Central Banks, HR and IT issues¹

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¹ This presentation was prepared for the meeting. The views expressed are those of the author and do not necessarily reflect the views of the BIS, the IFC or the central banks and other institutions represented at the meeting.

Issues on Big Data Governance – Big Data Work in Central Banks and HR and IT Issues

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A Perspective on Big Data



My own experience and environment is within a National Statistics Office (NSO), and not a Central Bank.

Nevertheless, I believe the two communities have much to learn from each other.

NSOs have a long history of handling governance of large and confidential datasets (such as census and administrative records).

The same is true with Banks in general.

A Perspective on Big Data



The main difference: NSOs have an obligation to disseminate statistics (and also microdata) to the public to the maximum extent possible without breaking the confidentiality ‘contract / promise’.

There’s no such pressure on most Central Banks.

How did NSOs cope: developing and adopting sophisticated methodology for confidentiality protection based on ‘risk – utility framework’.

A Perspective on Big Data



Big data is like **genetic medicine**: it is here to stay.

There are huge **promises of utility**, but also large **risks**.

However we will not give it up because of the potential utility.

The challenge is indeed how to manage the risks while maximizing the utility!

1 – Does the existing Data Governance in your CB/ institution cope with the Big Data needs?



No, if we consider some big data sources which are being created.

We are 'cloud averse' – few, if any, NSOs operate with 'cloud computing'.

Reasons are simple: disclosure risks are seen as too high.

1 – Does the existing Data Governance in your CB/ institution cope with the Big Data needs?



13/03/2017 – Reuters

“Canadian statistics agency hacked, security flaw patched – officials said”

<http://www.reuters.com/article/canada-cyber-idUSL2N1GQ1KH>

Attack also affected Canada Revenue Agency!

Most NSOs will operate ‘secluded’ data environments for holding their data.

1 – Does the existing Data Governance in your CB/ institution cope with the Big Data needs?



Some big data sources are `public` and `cloud based`.

Thus we will need to use cloud computing at some stage.

For the confidential big data sources, some solution is needed that mitigates the risks while preserving utility → methodological research!

2 – Which are the challenges posed by Big Data in terms of organization, human and IT resources, and data management responsibilities?



Need to mobilize skills which may not be currently available `in house`: IT, methodology, legal, etc.

Most likely need to upgrade IT resources & consider `cloud computing`.

But essential also to bring in the methodological expertise to operate the risk – utility approach.

3 – Will the use of Big Data encourage cooperation/partnerships between and within your institutions?



Yes! It seems unlikely that any organization can 'do it alone'.

We will be forced to partner / cooperate if we are to fully benefit from the new opportunities created by the **Data Revolution**.

Many opportunities exist for us to learn from each other and cooperate.

4 – Is Big Data simply a new data source or does it call for changing the business model of your institutions?



Not simple to answer – depends on the NSO or Central Bank current position.

ISI organized a side event to the 48th Session off the UNSC on the 8th March.

<https://unstats.un.org/unsd/statcom/48th-session/side-events/20170308-1M-are-the-current-nso-business-models-still-relevant/>

4 – Is Big Data simply a new data source or does it call for changing the business model of your institutions?



Netherlands CBS reported having created a ‘Center for big data statistics’ jointly with Korean NSO.

Center for big data statistics

Official Launch 27 September 2016



The image shows a formal signing ceremony. Two men are seated at a long wooden table, signing documents. Behind them stand two other individuals, a man and a woman. The table is flanked by the national flags of the Netherlands and South Korea. The background is a wall with a traditional Korean pattern.



Statistics Korea

MEMORANDUM OF UNDERSTANDING
on
Big Data Statistics
Between
STATISTICS NETHERLANDS (CBS)
Kingdom of the Netherlands
AND
STATISTICS KOREA (KOSTAT)
Republic of Korea

This Memorandum of Understanding (MOU) establishes an agreement between Statistics Netherlands ("CBS") and Statistics Korea ("KOSTAT"), both independent administrative public bodies with legal entity.

Recognizing that KOSTAT is the national statistical organization, leading the advancement of national statistics in Korea to achieve the development of national statistics and providing to take initiatives to expand and improve statistical research, as well as promoting statistical research and technology, and CBS is the independent national agencies, leading in the Netherlands, providing high quality diverse statistical information about all sectors of the society, as well as promoting statistical research in a large number of emerging state-of-the-art science and technology.

Considering that in recent discussions between KOSTAT and CBS it became apparent that in number of areas concerning Big Data statistics areas of mutual interest have been identified ("Potential").

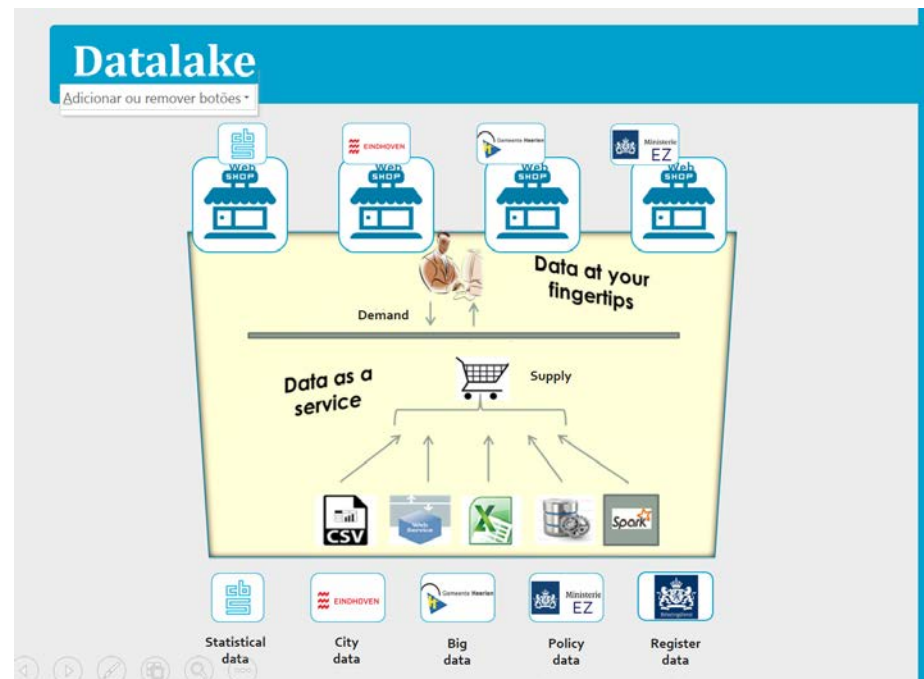
KOSTAT and CBS have agreed to establish an MOU between the sides and have reached the following understanding:

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4 – Is Big Data simply a new data source or does it call for changing the business model of your institutions?



Netherlands CBS also reported having created a ‘Data lake’, where Big Data can be sourced and used.

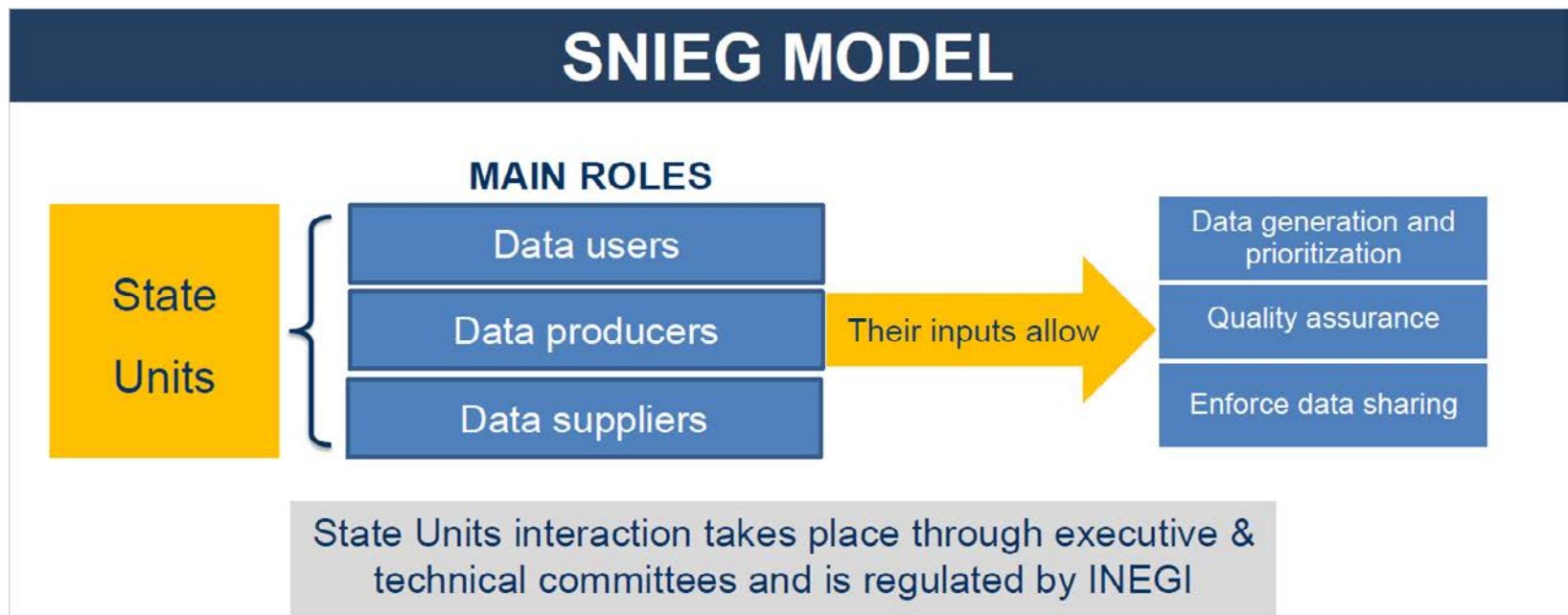


4 – Is Big Data simply a new data source or does it call for changing the business model of your institutions?



Slovenian NSO called for ‘continuous adaptation’.

Mexican NSO relies on coordination role.



Summarizing



Leadership.

Adaptation.

Cooperation.

Innovation.

Persistence.

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**Statistical Science for
a Better World**