INTOSAI Working Group on Big Data

CNAO   Ms. Xiaoqian Li

2023

CONTENT

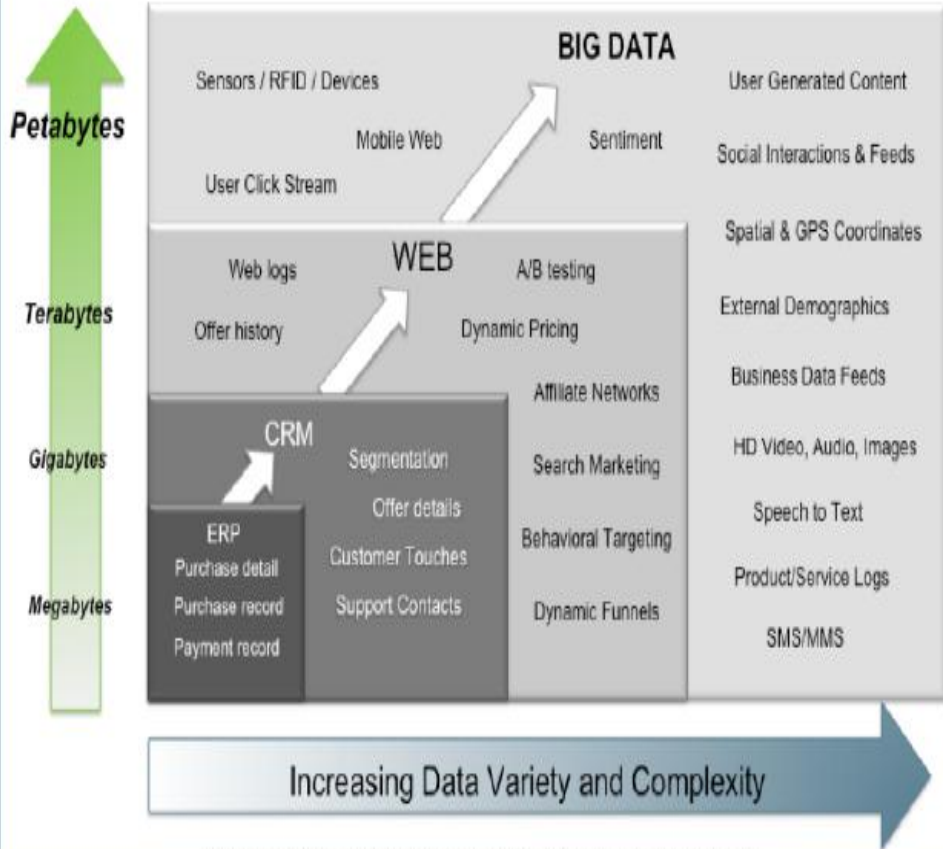- **The outlook of WGBD**

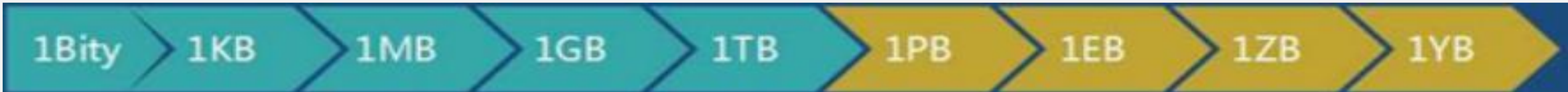- **The achievements of WGBD**

01

The Outlook of WGBD

We are in the Age of Big Data

Big Data = Transactions + Interactions + Observations

Source: Contents of above graphic created in partnership with Teradata, Inc.

- Big Data is everywhere.

- For a long time, audit has relied heavily on sampling analysis because of limitations in manpower and other resources;

- But now, in the big data era, we can depend on massive "overall data", and the "sample equals population" audit mode will become into reality.

1Bity 1KB 1MB 1GB 1TB 1PB 1EB 1ZB 1YB

WGBD

- It was formally established at the XXII INCOSAI held in Abu Dhabi, UAE in 2016.

- WGBD is responsible for identifying the challenges and opportunities for SAIs in the era of big data, summarizing knowledge and experience in the field of big data audit, and strengthening bilateral and multilateral technological cooperation.

Focuses of WGBD

1. Basic theory framework

1.1 Big data auditing *Challenges* and *Opportunities*

1.2 Big data auditing concept, including audit objectives and data scope.

1.3 Roadmap leading to big data auditing

2. Auditing technologies innovation

2.1 Integrate and standardize multi-source, heterogeneous data

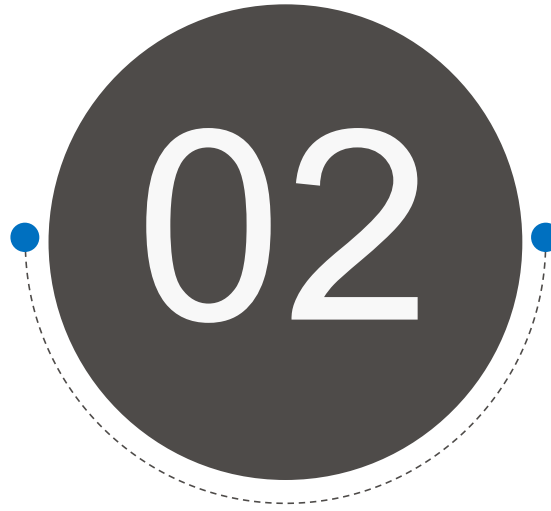2.2 Big data storage architecture

2.3 Big data analysis techiques

3. Big data auditing practices

3.1 Setting up cross-department cooperation mechanism for data collection.

3.2 Reform the organization of auditing

3.3 Auditing risks and quality control

3.4 Data security and confidentiality

4. Auditing management revolution

4.1 Promote the sustainable development

4.2 Anti-fraud auditing in big data era

4.3 Improve data transprancy and sharing

02

The Achievements of WGBD

Annual Meetings

	Members &Observers（SAIs)	**Participants (SAIs)**	**Speakers (SAIs)**	**Theme**
1st Meeting	19, 1	18	13	*Chance and Challenge in Big Data Era*
2nd Meeting	27, 3	20	14+3	*Big Data Auditing Practices and Cases*
3rd Meeting	28, 3	24	14+1	*Changes on Audit Management in Big Data Environment*
4th Meeting	33, 3	26	11	*Audit Technology Innovation*
5th Meeting	35, 5	35	13	*Audit Quality Control*
6th Meeting	38, 5	27	15	*Big Data Auditing Mechanism*
7th Meeting	40, 5	26	17	*Big Data Casebook*

Membership

Chair
- China

Vice Chair
- United States of America

Members
- Austria, Argentina, Bangladesh, Belgium, Bhutan, Brazil, Chile, Denmark, Ecuador, Egypt, Estonia, Finland, France, Fiji, Georgia, India, Indonesia, Iran, Kuwait, Korea, Malaysia, Mexico, the Netherlands, New Zealand, Norway, Pakistan, Portugal, Philippines, the Peru, Russian Federation, Thailand, Turkey, the United Kingdom, Ukraine, Samoa, Senegal, Slovak, Zambia

New Members
- Egypt, Iran

Observers
- Ireland, Bulgaria, Vietnam, AFROSAI-E, ECA

Publications

- Sharing of big data audit cases and experiences in annual seminars.

- Case Study Publication *Global Practices of Big Data Auditing in Promoting Sustainable Development*.

Case Study

Summary & Sharing

Research Project

Research Projects

- *Auditing Technologies Innovation* led by SAI Indonesia, completed by the end of 2021.

- *Guidance on Conducting Audit Activities with Data Analytics* led by SAI China, completed by the end of 2021.

- *Development Overview of Big Data Audits Performed by Supreme Audit Institutions* led by SAI China, completed by the end of 2021.

New Casebook

- **In 2022, the WGBD Secretariat began to collect big data audit cases among members.**

Case Study

Summary & Sharing

Research Project

- **10 SAIs**
- **Austria, Brazil, Chile, China, Egypt, Korea, Russia, Slovakia, Ukraine, Vietnam.**

- **12 cases**
- **Finance, Social Security, Natural Resources,etc.**

Work plan: 2023-2025

- **2023 annual meeting in Cairo, Egypt.**

- **Artificial Intelligence in audit process**

Annual meeting

Research

Research

Research

- **Application of Big Data in the Budget Execution Audit**

- **Big Data Audit in Social Security and Health Service**

Communication and Exchanges

- From 2022-2023, the WGBD exchanged about 200 emails with SAIs and organizations in 36 countries.

In the last year

- WGBD cooperted with Working Group on the Impact of Scince and Technology on Auditing

- In the next three years, we will implement the WG's 2023-2025 working plan and pay further attention to data analysis techniques, quality control , management mechanisms of the big data auditing.

- Thank you.

- Email: intosai-wgbd@audit.gov.cn