

Supporting the Modernisation Journey: a view from recent HLG-MOS outputs

InKyung Choi

Statistical Management and Modernisation Unit
UN Economic Commission for Europe (UNECE)

Outline

1. HLG-MOS and Modernisation
2. Navigating the Changing Landscape for NSO
3. Recent HLG-MOS Outputs that Support Modernisation Journey

1. HLG-MOS and Modernisation

What is HLG-MOS



High-Level Group for the Modernisation of Official Statistics (HLG-MOS)

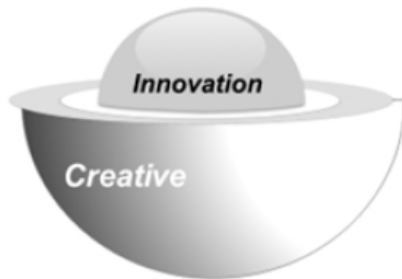
- Established in 2010 by UNECE Conference of European Statisticians (CES)
- Consists of heads of 13 national and international statistical organisations (Australia, Canada, Ireland, Italy, Mexico, Netherlands, New Zealand, Poland, South Korea, UK, Eurostat, OECD and UNECE)

Innovation and Modernisation

Creativity

Idea generation

e.g.) visualisation tool is used for personal purposes



Innovation

Introducing new **ideas, methods, products, or services** that create **value** in the organisation

e.g.) visualisation tool is used to create impactful infographics for statistics release

Modernisation

Updating the existing **system** by integrating the innovations **across** the organisation

e.g.) visualisation tool is supported as a standard tool for communication; staff are encouraged and supported to use it

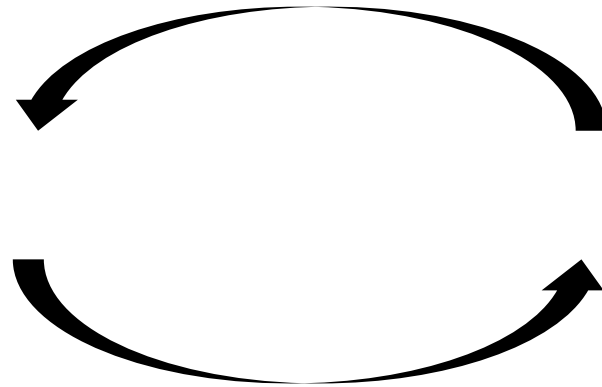
*Related discussion on creativity and innovation:
Managing Innovative Projects and Programs (2022)*

Innovation and Modernisation

Innovation

Introducing new **ideas, methods, products, or services** that create **value** in the organisation

facilitates



drives

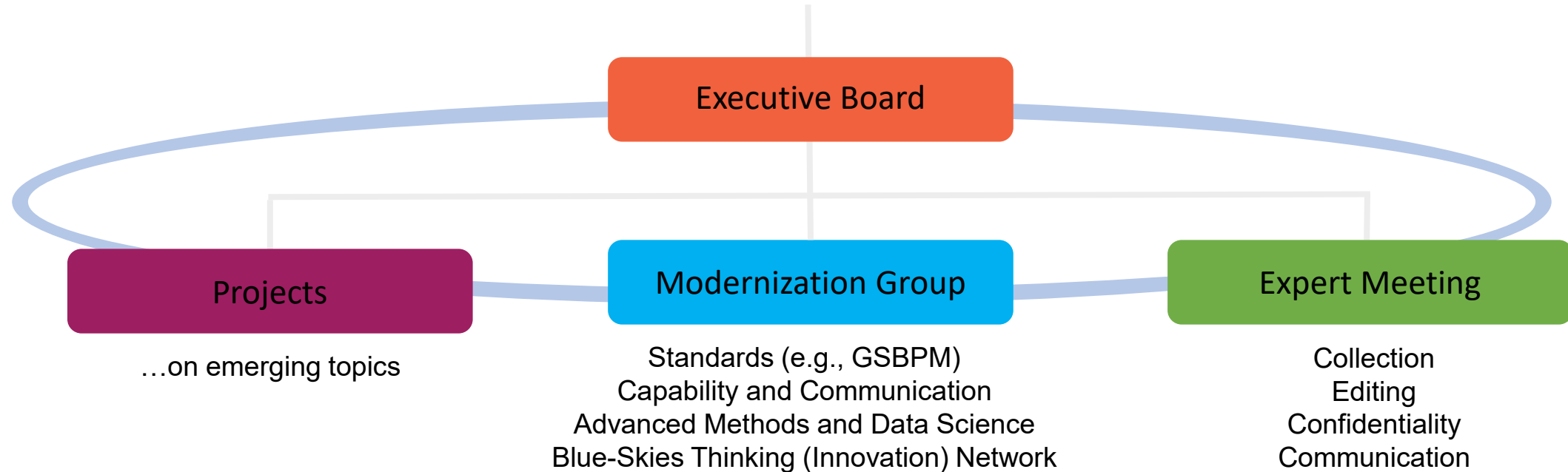
Modernisation

Updating the existing **system** by integrating the innovations **across** the organisation

Innovation and Modernisation



High-Level Group on
Modernisation of Official
Statistics (HLG-MOS)

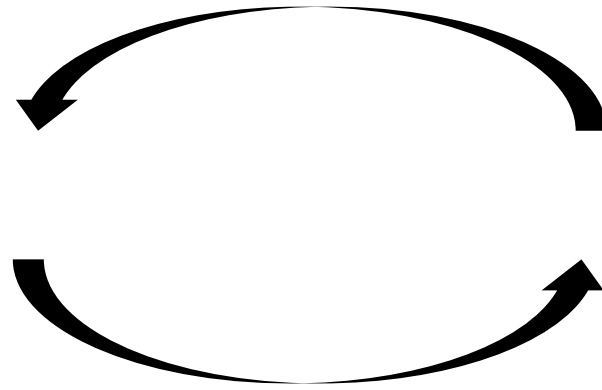


Innovation and Modernisation

Innovation

Use of ML/AI based text classification to improve efficiency

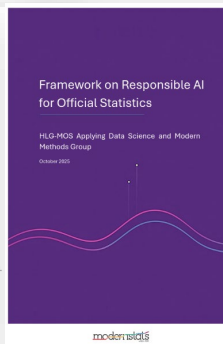
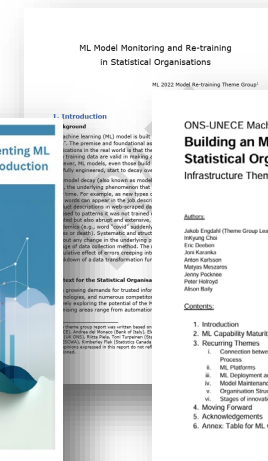
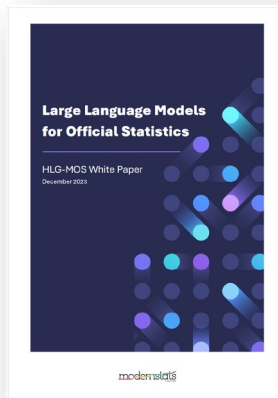
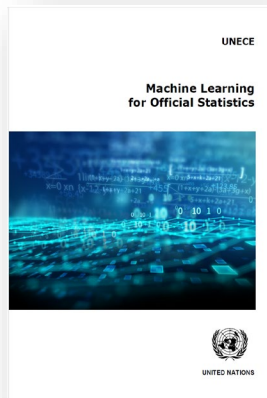
facilitates



drives

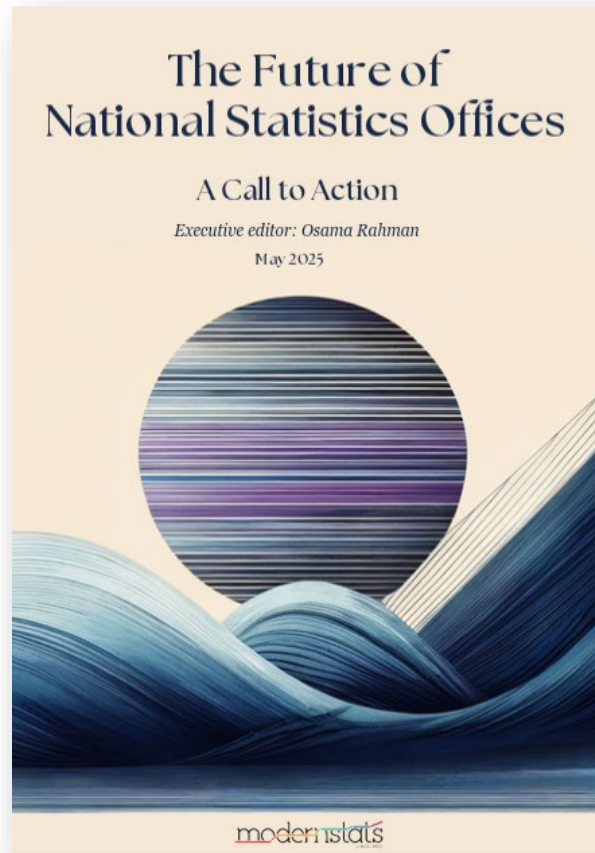
Modernisation

Responsible AI, risk management & governance, organizational aspects



2. Navigating the Changing Landscape for NSO

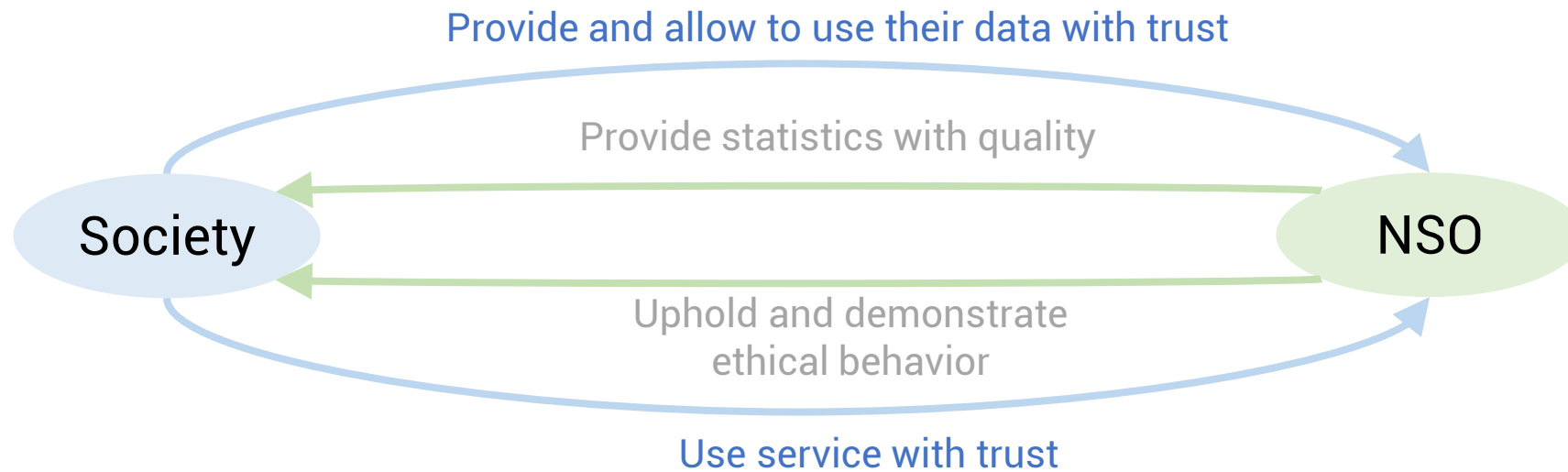
Future of NSOs



- From a 2024 strategic thinking activity
- History and role of official statistics (e.g., professionalization and institutionalization of official statistics)
- External challenges facing NSOs
- Strengths and opportunities
- A Call to Action

Changes in our society

- Changes in our society inevitably impact the business landscape for NSOs
- Changes that impact social contract between society and NSOs become challenges for NSOs



Changes in our society

Changes in society

Social & Political

- Erosion of social cohesion
- Rise of extremes
- Lifestyle changes

Value

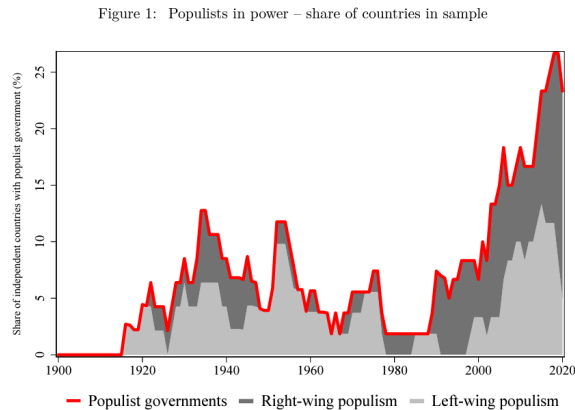
- Heightened sense of privacy
- Decreasing sense of civic duty

Technology

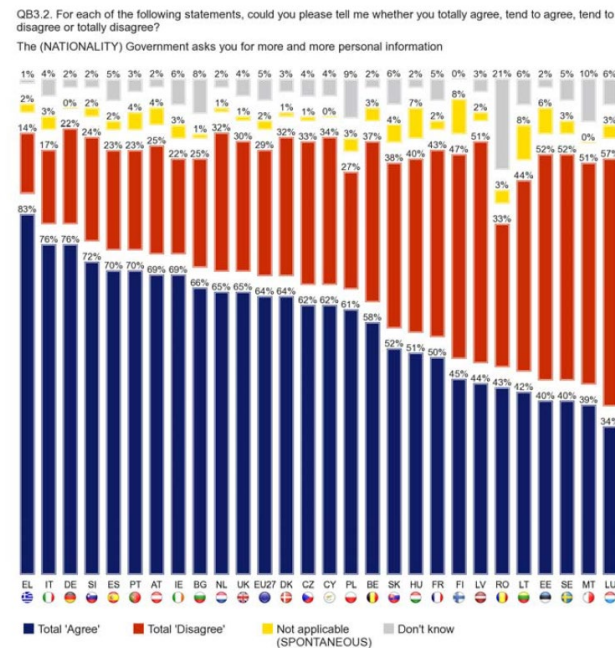
- AI
- Cloud
- Platforms
- High digitalisation

Economic & Environment

- Expansion of multinational enterprises
- Diversification of forms of employment
- Worsening climate change



Funke et. al. (2022) "Populist Leaders and the Economy"



[Eurostat \(2011\) Attitudes on Data Protection and Electronic Identity in EU](#)

FIGURE C Global risks ranked by severity over the short and long term

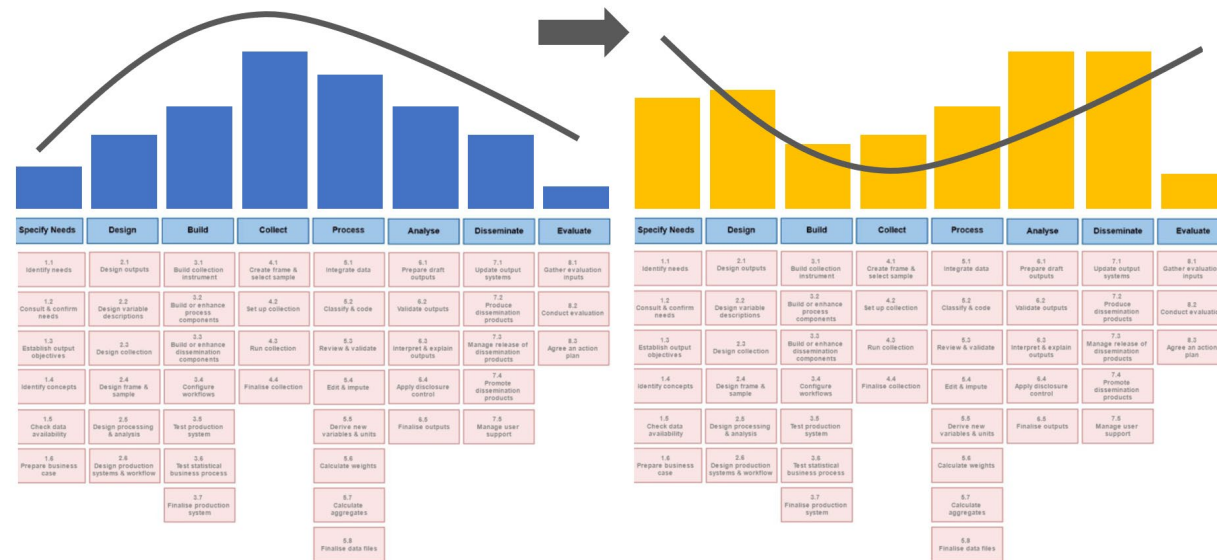
Please estimate the likely impact (severity) of the following risks over a 2-year and 10-year period.



Key themes for future

Transforming production and outputs

- Traditionally resource-intensive parts of production are envisioned to become more automated.
- Multi-source statistics through data integration and multi-purpose production



Key themes for future

Transforming production and outputs

- Traditionally resource-intensive parts of production are envisioned to become more automated.
- Multi-source statistics through data integration and multi-purpose production

Expanding roles

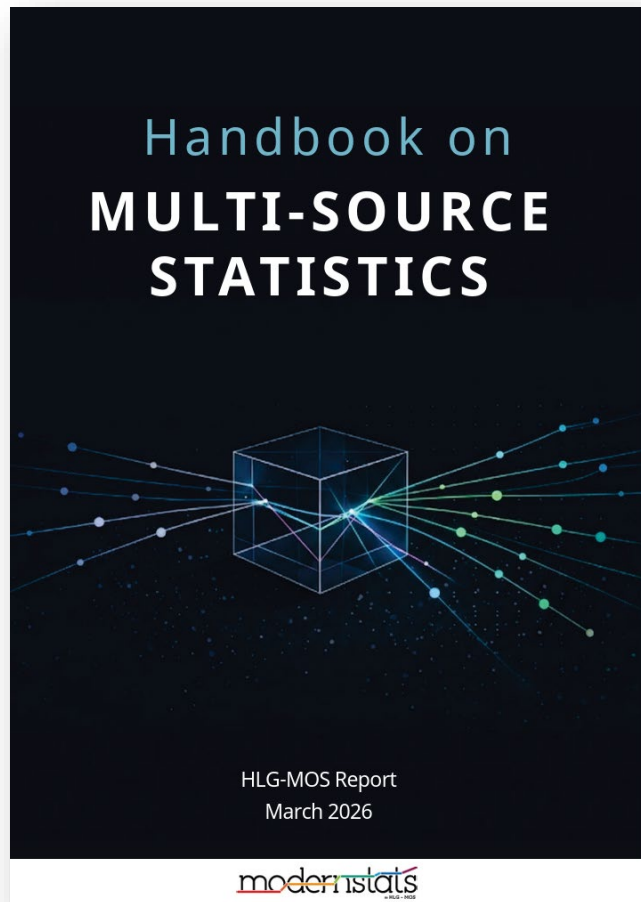
- Engaging in a data stewardship role and getting involved in data governance
- Trustworthiness to remain a cornerstone of NSO

Building capabilities and fostering agile culture

- Evolving skill sets and areas of expertise
- Developing agile culture through the establishment of robust production foundations (e.g., flexible infrastructure)
- Monitoring programs and adjusting in a flexible manner to meet changing needs

3. Recent HLG-MOS Outputs that Support Modernisation Journey

Multi-Source Statistics

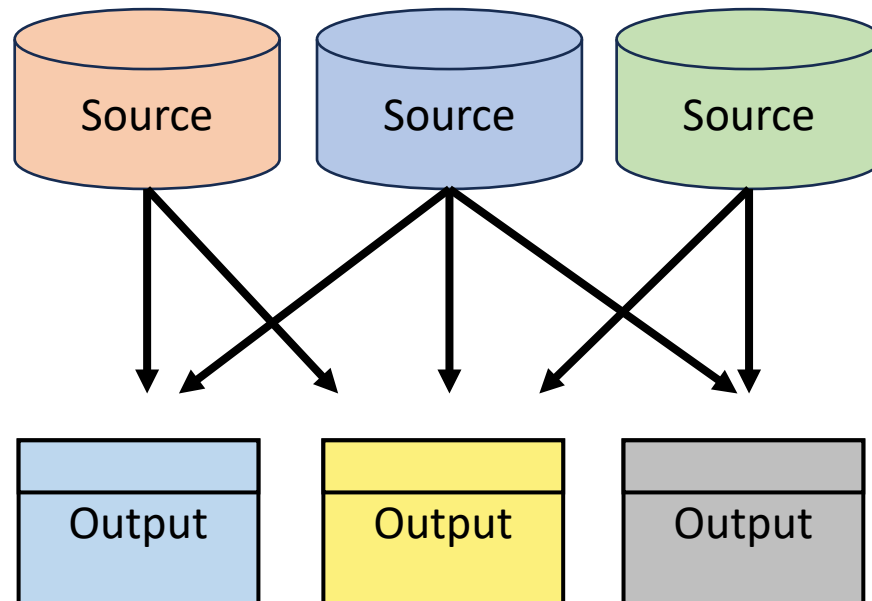


- From 2025 HLG-MOS Project
- Multi-Source Statistics: statistics that are produced by combining and integrating data from multiple sources
- This is not new to NSOs
- Focus is MSS where the output is a result from data integration from different sources that substantially contribute to the final statistics

Why MSS?

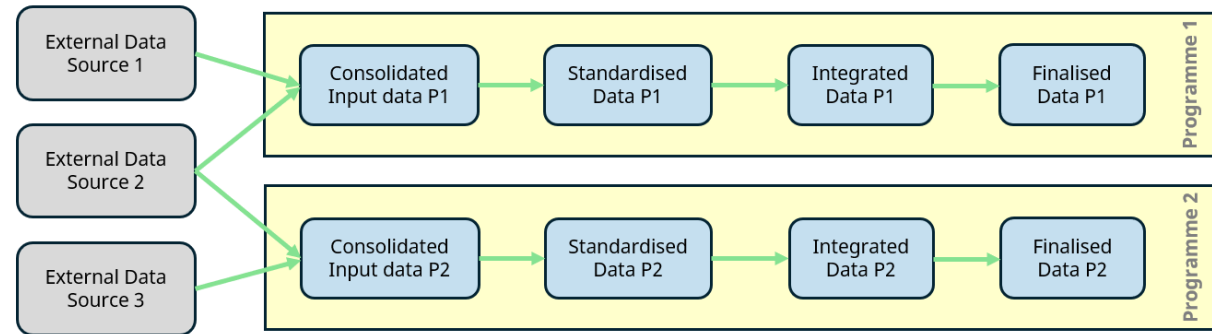
- Effective in streamlining costs
- Enhances statistical coverage and quality
- Promotes greater agility, continuity, and resilience in statistical production.
- Examples
 - Improve survey (e.g., reduce time-to-complete by 21% in Ireland) & census
 - Replace existing surveys
 - Develop new products
 - Establish integrated register systems

Multi-purpose production for MSS

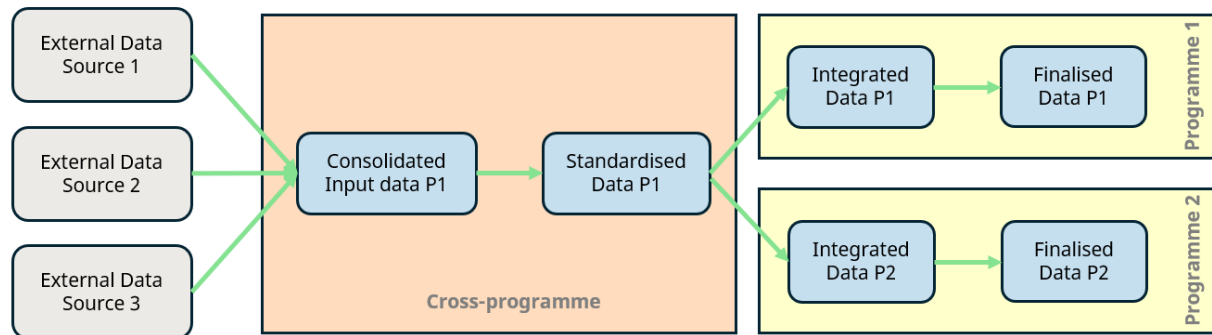


Source: Handbook on MSS (UNECE, 2026)

Multi-purpose production for MSS



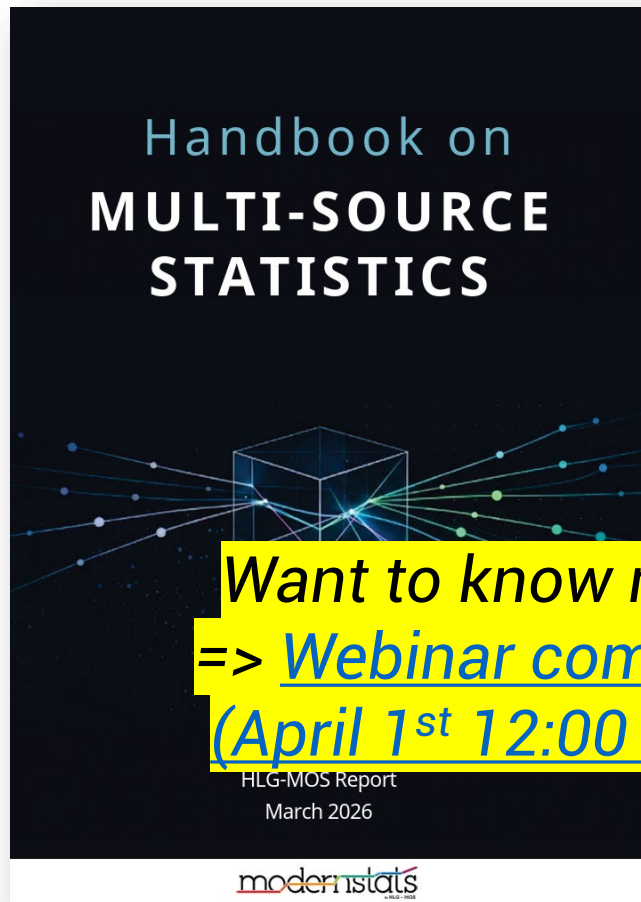
MSS in silo production



MSS in multi-purpose production

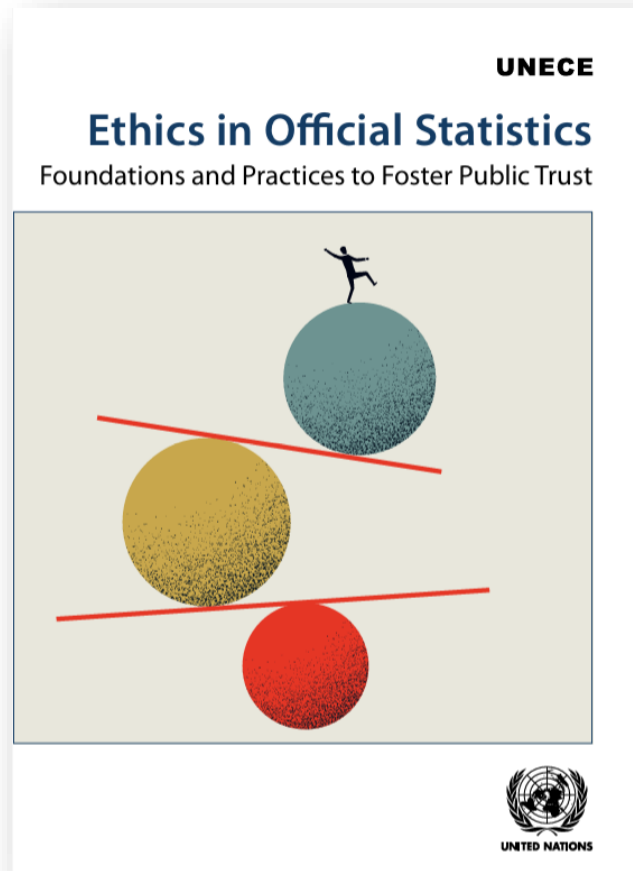
Source: Handbook on MSS (UNECE, 2026)

Multi-Source Statistics – Challenges and Enablers



- Challenges:
 - Ethical concerns;
 - Interoperability and quality;
 - Resistance inside and users;
- Enablers
 - Centralisation / coordination of data management and internal governance;
 - Stakeholder engagement and communication
 - Quality management at system level
 - Data and information infrastructure

Ethics in Official Statistics



- Why Ethics?
 - More data
 - Technologies
 - Public perception
 - New roles
- It is no longer sufficient to do the things right, but also do the right things.
- Result (2026) from the HLG-MOS Task Team on Ethics

Foundations for ethical mindset

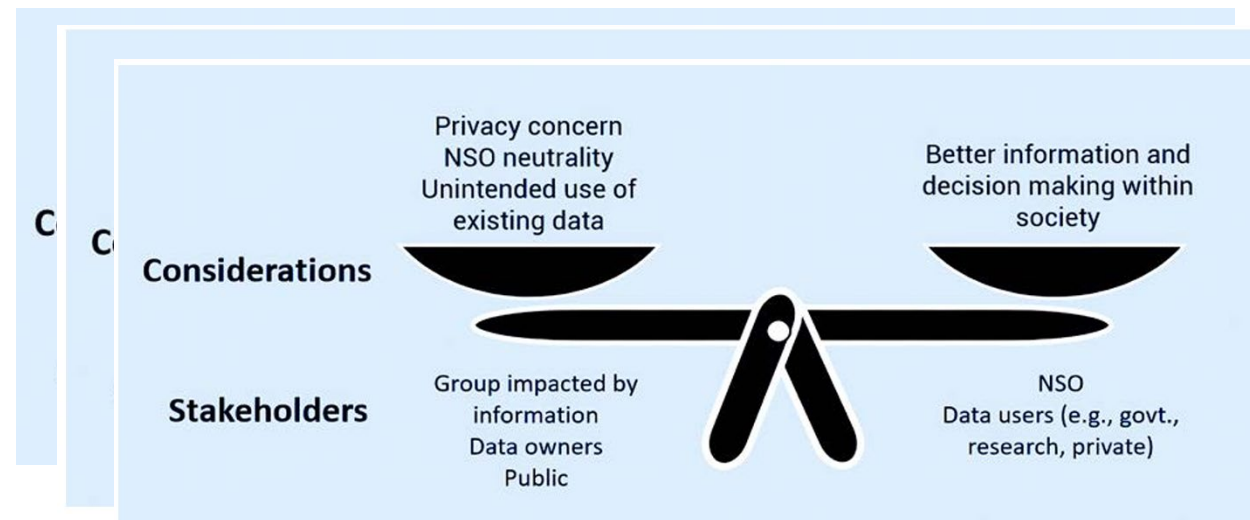
- Fundamental Principles of Official Statistics as basis, complemented by
 - Laws (e.g., statistical law, privacy law)
 - Quality framework (e.g., UN National Quality Assurance Framework)
 - Professional ethics guidance (e.g., ISI Declaration on Professional Ethics, RSS Code of Conduct, ASA Ethical Guidelines)
- Not straightforward in practice



Source: Figure 2.1 Ethics in Official Statistics (UNECE, 2026)

Ethical dilemmas

- A situation where an individual or group faces a difficult decision involving conflicting moral principles or values
 - Use of new data sources
 - Provision of data at disaggregated level
 - Data linkage and integration

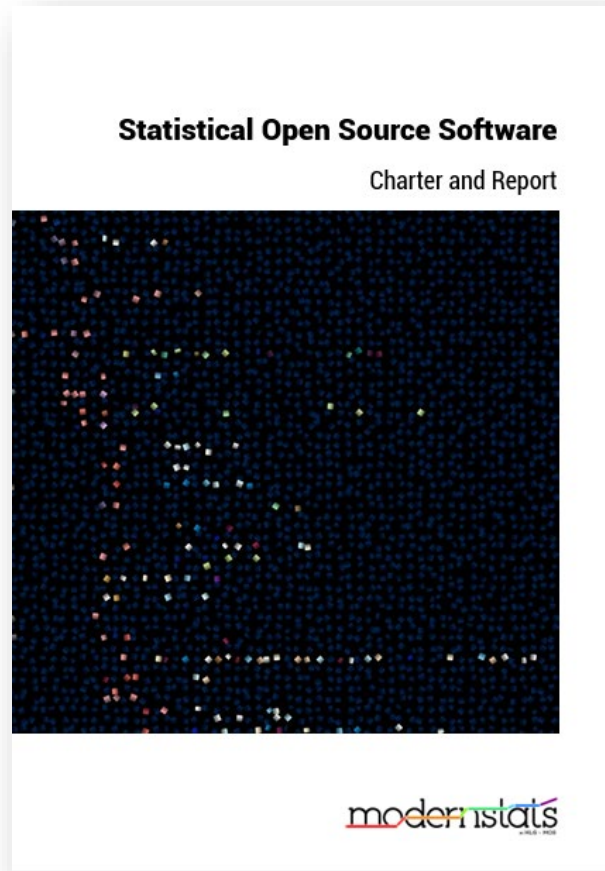


Ethics in Official Statistics



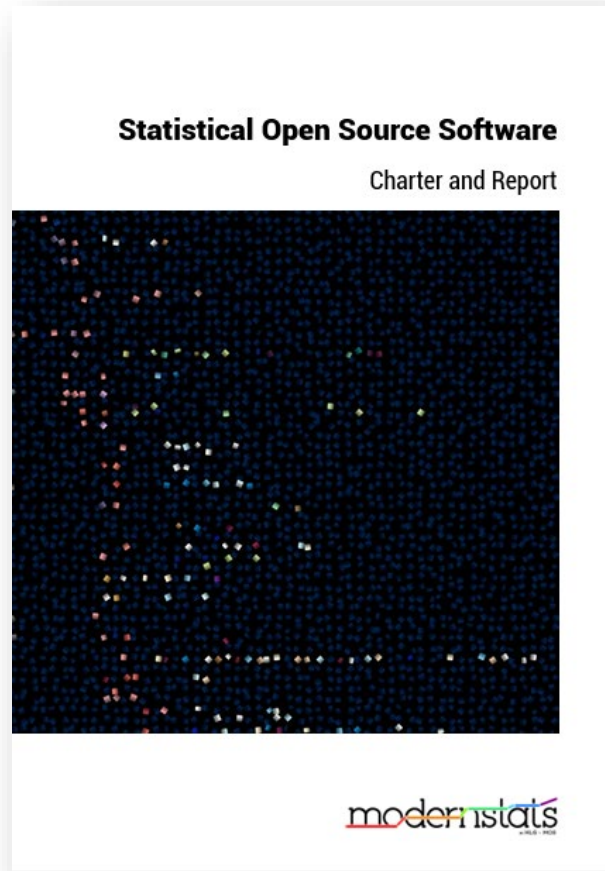
- Ethical consideration arising, structured around GSBPM. Ethical issues from emerging technologies
- Managing and Applying Ethics in NSOs
- Culture and Communication

Open-Source Software



- From 2024 HLG-MOS Project
- Open source when source code is freely available for sharing, may be modified by users and derivative works created
- Strengths for OS: transparency, democratization of development and agility, cost reduction, avoid vendor lock-in

Open-Source Software



- SWOT analysis of OSS adoption
- Case studies
- Major topics in OS
 - License
 - Standards
 - Knowledge building
 - Governance
 - Security
 - Culture

Guiding Principles for Open Source Software in Official Statistics

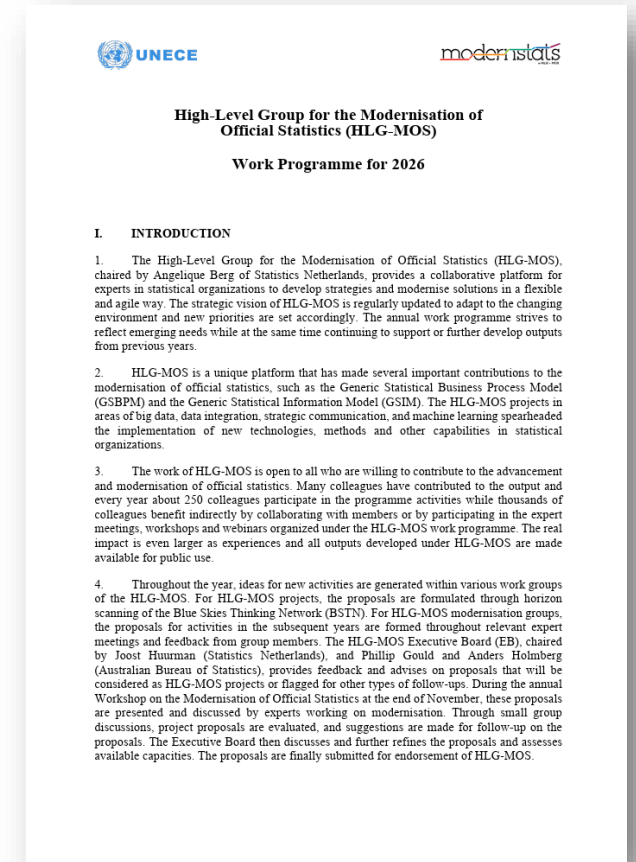
7 Guiding Principles for Open Source Software in Official Statistics

Endorsed by the 73rd Plenary Session of the UNECE Conference of European Statisticians (2025)

1. OSS by default
2. Work in the open
3. Improve and give back
4. Think generic statistical building blocks
5. Test, package and document
6. Choose permissive license
7. Promote

2026 HLG-MOS plans

- AI-Ready Dissemination
- Trust Matters
- Cost-Effective Data Collection Using Paradata
- Statistical Literacy
- Etc...
- Upcoming meetings:
 - [Workshop on Supporting Standards \(26-28 May; Wiesbaden Germany\)](#)
 - [Expert Meeting on Statistical Data Editing \(19-21, October; Wiesbaden Germany\)](#)
 - [HLG-MOS Modernisation Workshop \(2-4, December; Geneva\)](#)



[2026 Plan](#)

More info on UNECE ModernStats

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UNECE **STATISTICS** MODERNIZATION AND INNOVATION

Modernization and innovation

High-Level Group for the Modernisation of Official Statistics

Horizon scanning

Statistical production and information standards

Capabilities and communication

Emerging technologies and advanced methods

Expert meetings

Projects

Dashboard - UNECE Statswiki

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Modernization and innovation

Introduction

Official statistical producers operate in a rapidly changing landscape, where the pace of change accelerates annually. Increasingly complex societal issues demand more timely, disaggregated statistics and diverse data services. Adoption of new data sources like administrative and big data poses challenges in analysis methods, data access, ethics, and privacy. Amidst competition from other data providers, statistical organizations must enhance product communication and brand advocacy for trustworthiness. To tackle these challenges, statistical organizations must invest in modernization, staff capabilities, and technology. Despite limited resources, efficiency improvements are crucial to ensure adaptability and resilience in the dynamic data ecosystem.

The High-Level Group for the Modernisation of Official Statistics (HLG-MOS) provides a collaborative platform for experts in statistics organizations to develop modernization and innovation strategies and solutions in a flexible and agile way. It has made several important contributions to the modernisation of official statistics such as the Generic Statistical Business Process Model (GSBPM) and the Generic Statistical Information Model (GSIM). The HLG-MOS projects in areas of machine learning, synthetic data, big data and strategic communication spearheaded the implementation of new technologies, methods and other capabilities in statistical organisations.

Information on the planned activities for this year can be found in the 2024 HLG-MOS Work Programme and the results from the last year is available the 2023 HLG-MOS Report. Stay informed with the latest developments by following the HLG-MOS page on LinkedIn.

Key areas of work

- Horizon Scanning
- Statistical production and information standards
- Capabilities and Communication
- Emerging Technologies and Advanced Methods
- Expert Meetings
- Projects

<https://unece.org/statistics/modernstats>

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Thank you for your attention

For questions or more information, contact me at choii@un.org