



Access to MPD?

Overview of topics regarding access to MPD

Siim Esko

Positium

Estonia

@positium

www.positium.com

Consult the UN GWG Handbook on Mobile Phone Data

<https://unstats.un.org/bigdata/taskteams/mobilephone/Handbook%20on%20Mobile%20Phone%20Data%20for%20official%20statistics%20-%20Draft%20Nov%202017.pdf>

or among the course materials

- National Statistical Institutes or other statistical authorities
- Mobile network operators
- Telecommunication regulators
- Data protection authorities

- Has legal mandate to produce official statistics (statistical law)
- Has legal basis to collect personal data (statistical authority)
- Has legal guarantees and obligations to protect it (statistical confidentiality)
- Has experience in statistical production
- Has access to other data sources to assess and guarantee quality / accuracy
- But, situation varies between countries

Role of mobile network operator



- Data holder
- Knowledge on the data source
- Technical capacity (IT)
- Collaboration will depend on:
 - Maturity in the exploration of the data
 - Technical capacity to explore / handle the data for purposes other than infrastructure
 - Regulatory requirements
- Potential gains for MNO:
 - Profit from statistical expertise of NSI
 - Access to other data sources in the NSI
 - Image and social responsibility



Role of telecommunications regulator



- May already have mandate to collect records
- Already has regular contacts with MNOs
- Can facilitate the partnership in the initial phase before regular statistical production is established

Telecom regulatory authorities in Bangladesh and Georgia collect the data from Mobile Network Operators



საქართველოს კომუნიკაციების ეროვნული კომისია
GEORGIAN NATIONAL COMMUNICATIONS COMMISSION

Role of data protection authority



- Sometimes obligatory by law to involve DPA
- Can help strike balance between public interest and privacy preservation
- Can enhance public trust in the partnership



EUROPEAN DATA
PROTECTION SUPERVISOR
The European guardian of personal data protection



- Research community
- Third parties (e.g. with expertise in the data source)
- International organisations (e.g. if project involves several countries)
- Legislators

European legal study on access to big data for official statistics purposes



Conducted by Eurostat

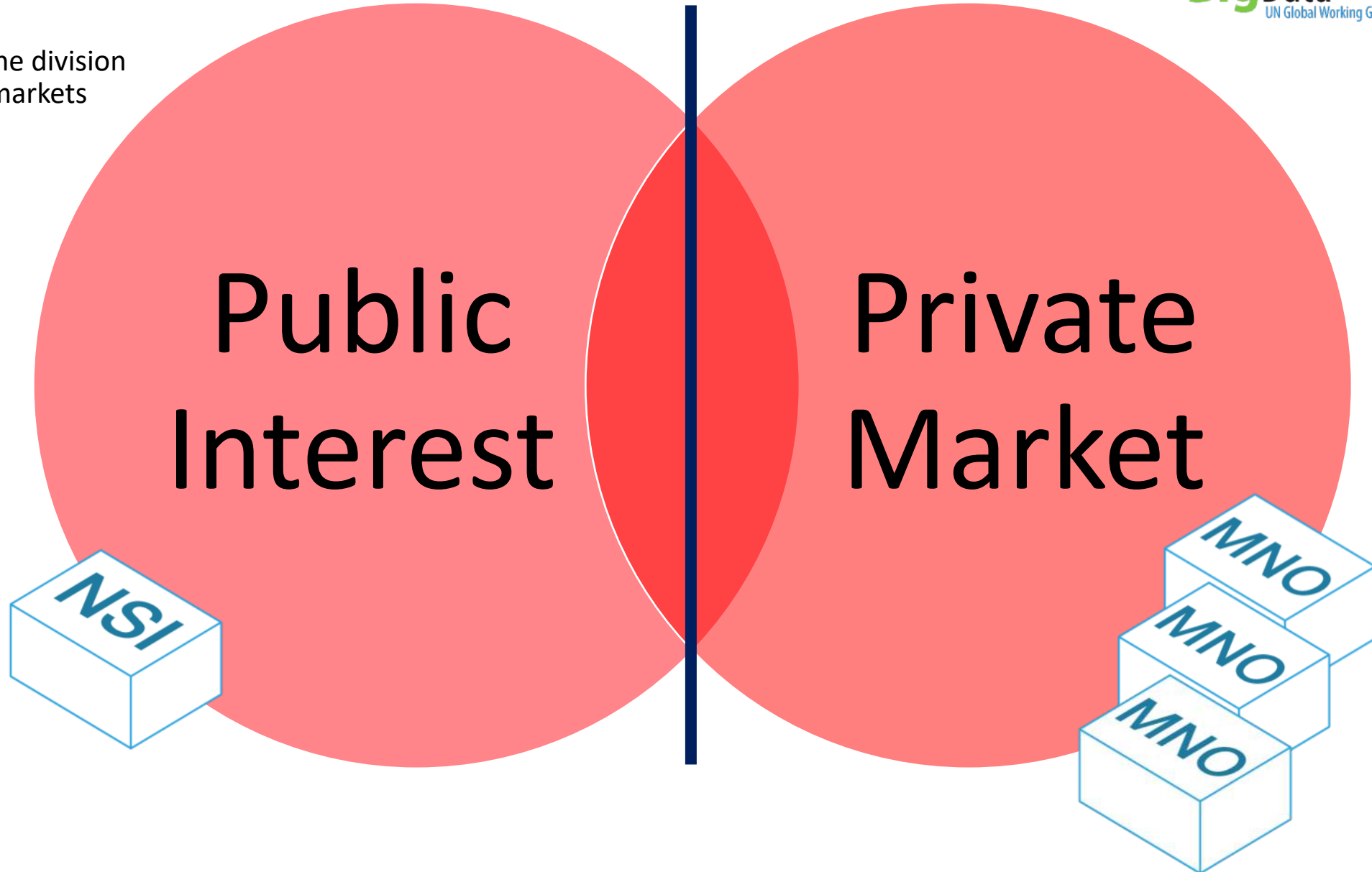
- NSI can often compel big data sources to communicate data to the NSI, but...
 - For data sources the rules may not be clear enough
 - For NSI the rules may not be strong enough
 - Adopting the required legal instrument can require substantial time and effort (e.g. part of annual program)
 - The national DPA may need to be consulted first and may lay down access rules and restrictions
 - Statistical disclosure control for aggregate data necessary
 - Need for continuous, flexible and reliable access not guaranteed by current legal provisions
 - Voluntary partnerships are concluded, mainly with MNOs

Statistical confidentiality is ensured through:

- physical protection - the data is securely stored and not accessible to anyone without explicit authorisation.
- statistical disclosure control (SDC) - methods for reducing the risk that statistical units are identified when the statistical data is being published, including:
 - tabular data protection – for aggregate information on respondents presented in tables (using suppression, rounding and interval publication)
 - microdata protection – for information on statistical units (using local suppression, sampling, global recoding, top and bottom coding, rounding, rank swapping and microaggregation).

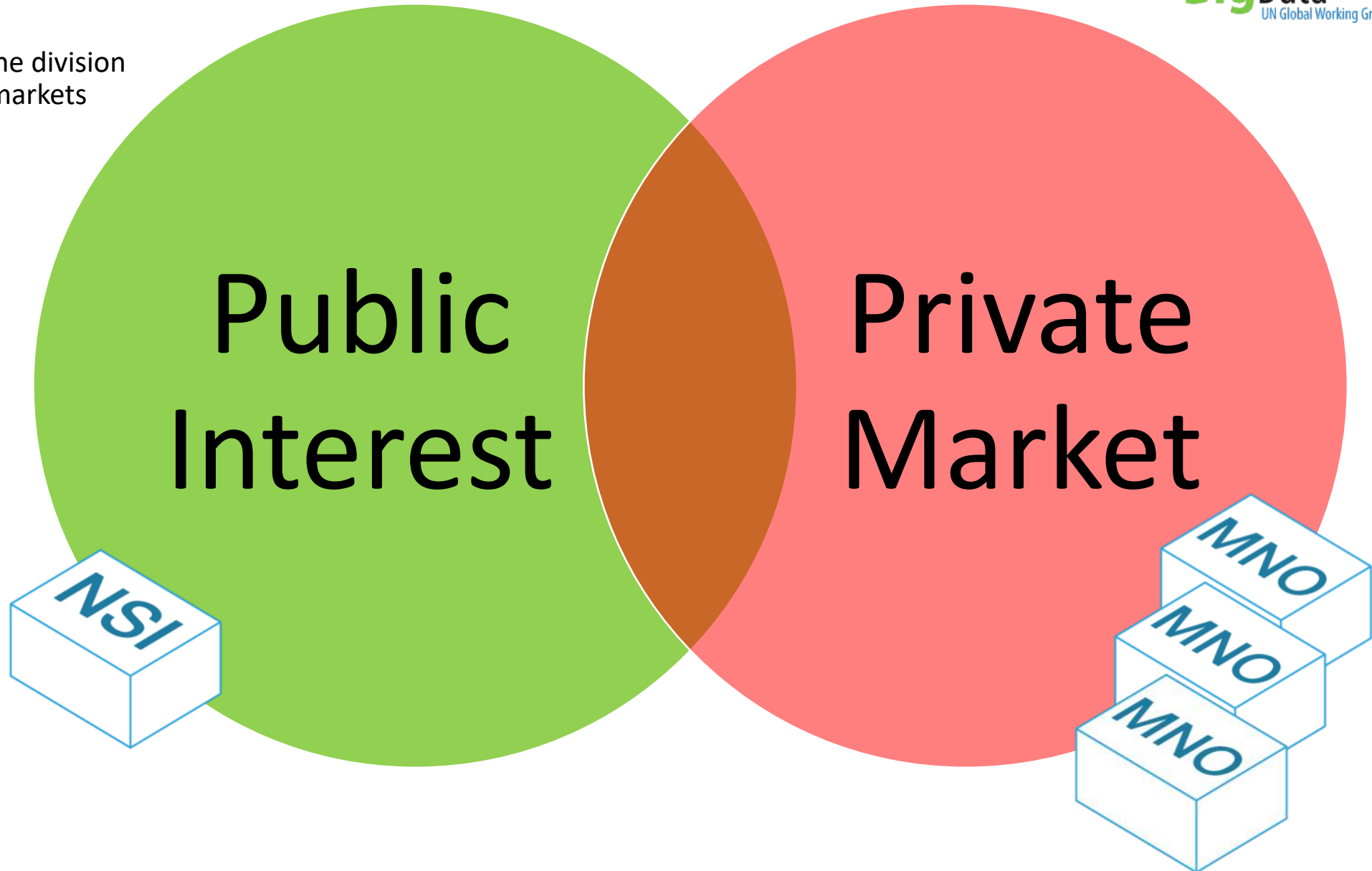
Market Conflict

Agree on the division
between markets



Market Conflict

Agree on the division
between markets



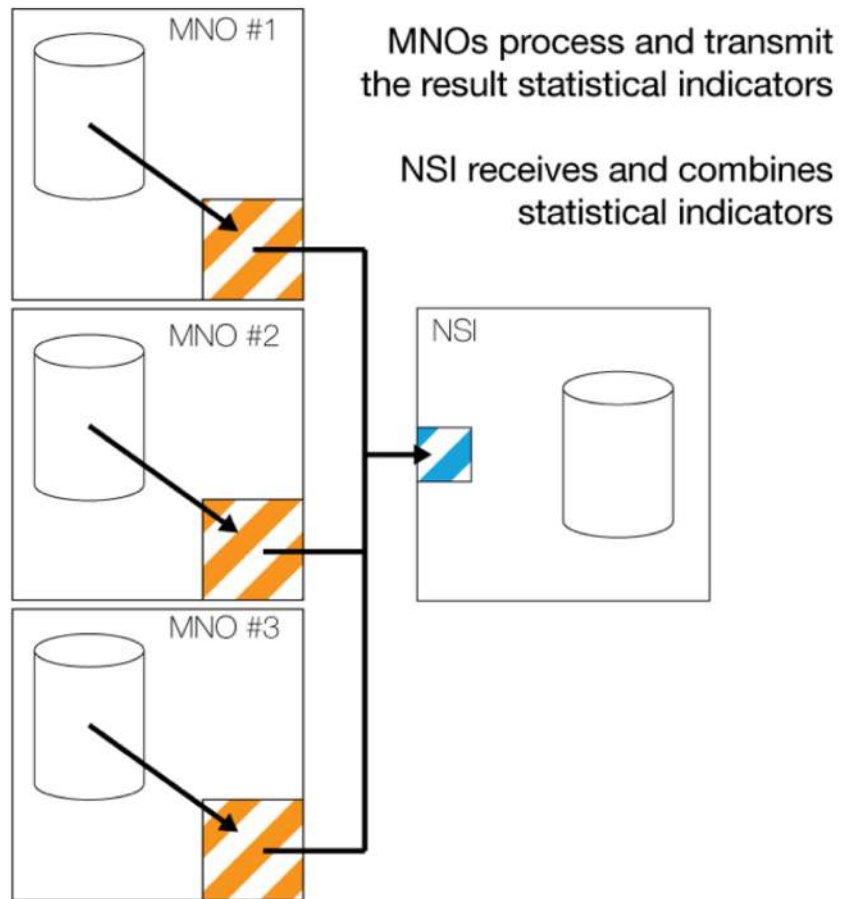


- Data processing
 - Two models based on who's responsible for processing raw data
 - telecommunication operators mainly responsible for data processing
 - government stakeholders/non-operators mainly responsible for data processing
 - implications on the distribution of the costs & needed measures to ensure security, privacy and data protection

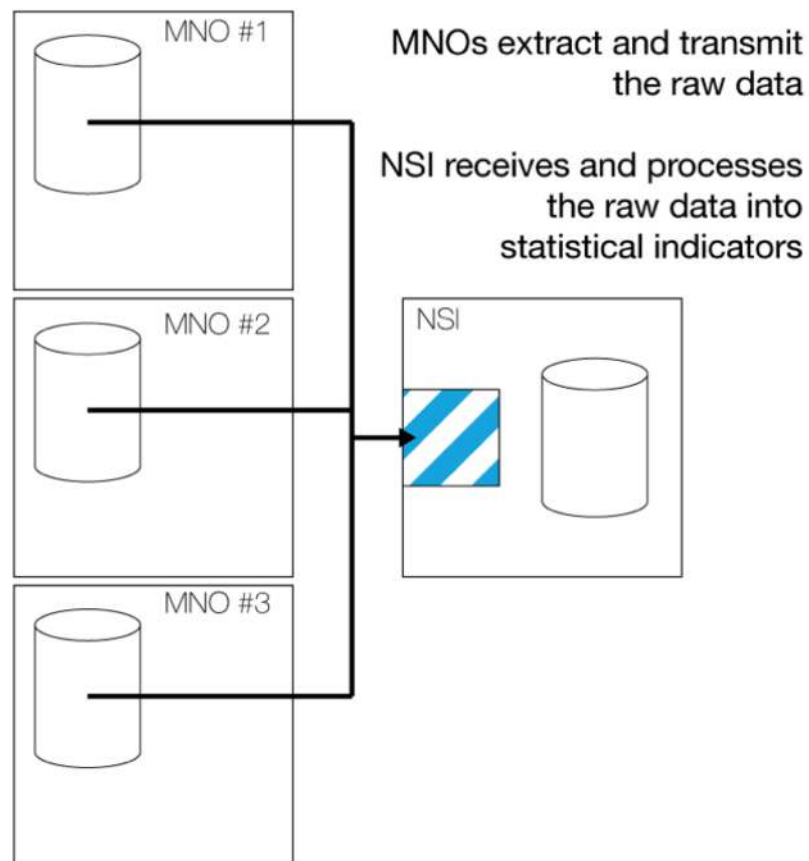
Where the data is Processed?



Distributed (Type A)



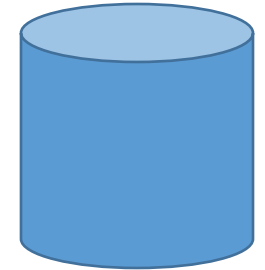
Central (Type B)



3 tiers of data



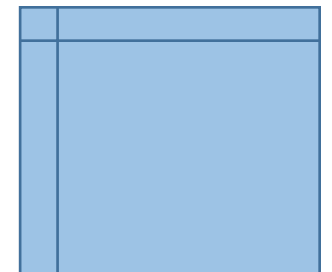
- Tier I data: initial, raw, and not aggregated data containing:
 - personally identifiable information
 - business confidential and
- Tier II data: initially aggregated data with
 - no personally identifiable information
 - some business confidential information
 - data from different operators ready to be merged
- Tier III data: aggregated indicators that can be publicly shared:
 - no personally identifiable information
 - no business confidential information



Tier I

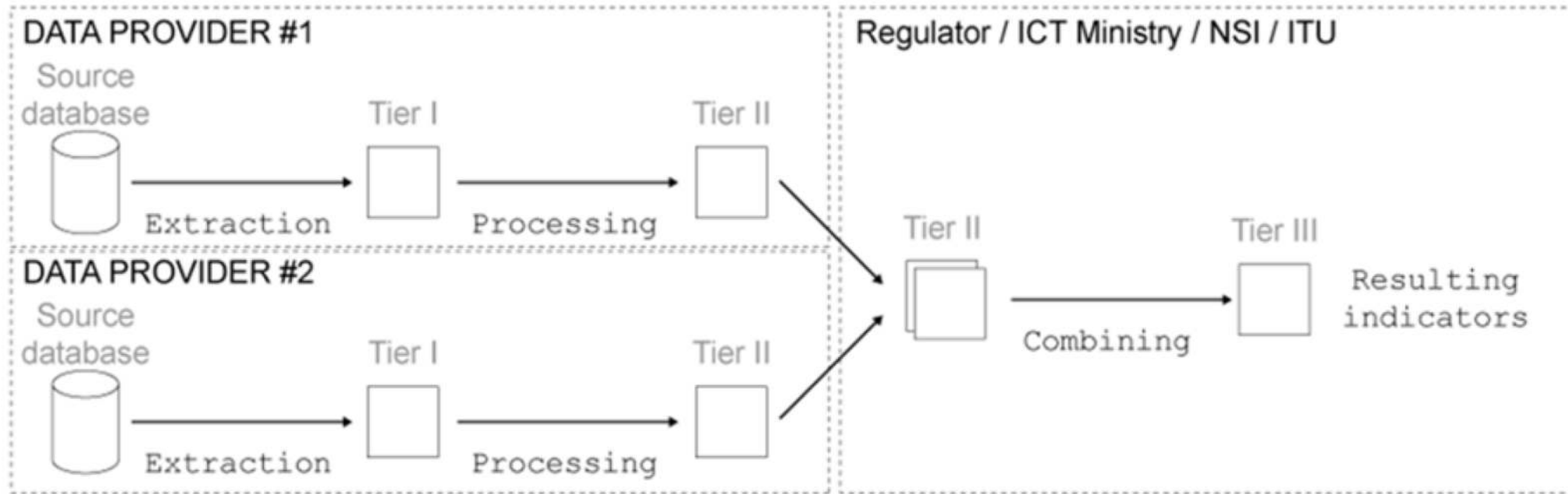


Tier II



Tier III

Partnership type A – Data processing in MNO



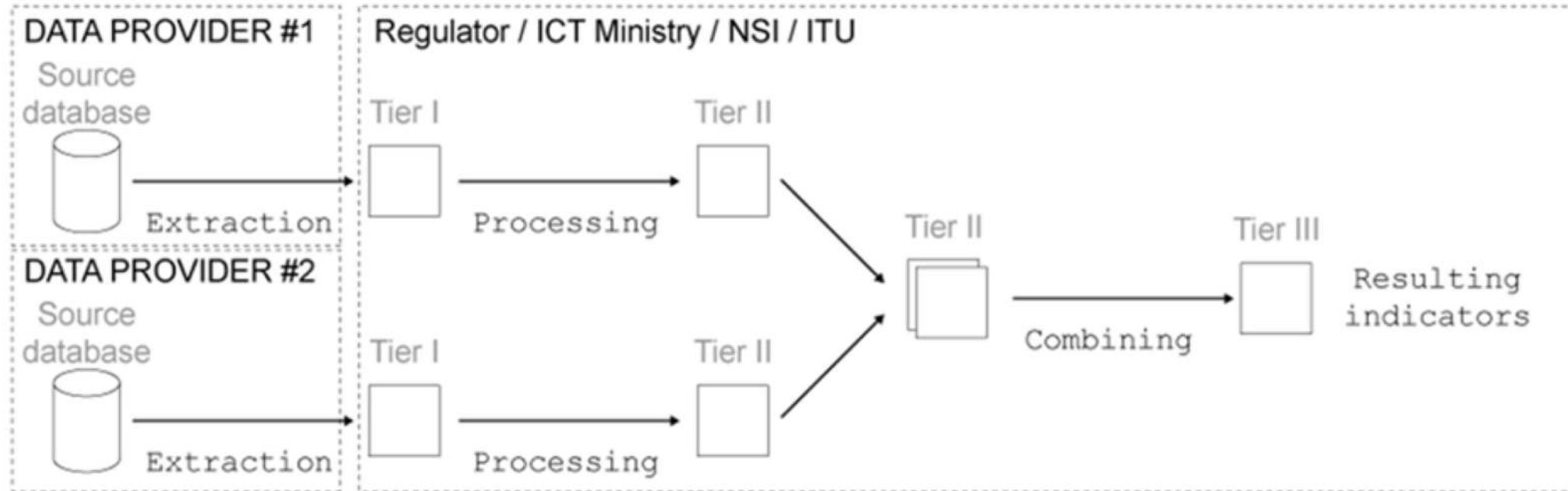
Advantages

- Higher data security / Lower risk of (accidental) disclosure
- Higher confidence for MNO

Disadvantages

- Higher cost for MNO
- Lower control/confidence for statistical authority
- Lower granularity in the data for statistical analysis

Partnership type B – Data processing in the statistical authority



Advantages

- Higher control/confidence for statistical authority (trust, transparency, accuracy)
- Potential less disruption to statistical production when operators enter and exit the market

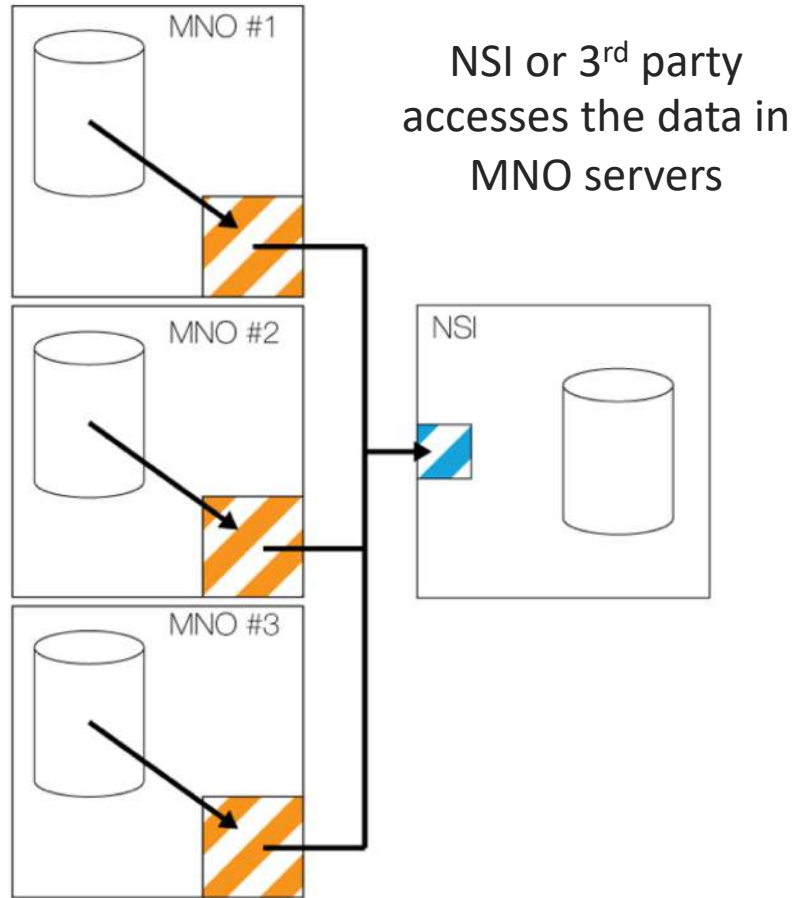
Disadvantages

- Statistical authority need to invest in IT infrastructure
- Higher privacy disclosure risks

Partnership type AB = C



Type C



Advantages

- Higher data security / Lower risk of (accidental) disclosure
- Higher confidence for MNO
- Higher granularity of data
- Higher control/confidence for statistical authority (trust, transparency, accuracy)

Activity

The Director General of your NSO has set up a Task Team to figure out how to access MPD. The NSO does not have prior experience with big data. How do you start the data access discussions?

Discuss 2-on-2 and then present your ideas:

- What is the legal status of NSO to get big data
- How should the cooperation with MNOs be set up?
- What are other stakeholders that need to be involved in the discussion

The Director General of your NSO has set up a Task Team to figure out how to access MPD. Members of this Task Team are meeting Directors of the MNO for the first time.

What is the response of the MNO to the data request. Topics:

- Type of data being requested
- Costs involved
- Roles of each party
- Privacy topics



In Day 2 Resources folder you will find the MoU between BPS – Statistics Indonesia and PT Telkom – the largest IT company in Indonesia, and the parent company of Telkomsel, the largest MNO.

Read and analyse the MoU, keeping in mind what the NSO and MNO want from this partnership