The NSO's role in the ever-changing world

Instructions: Click on the link to access each author's presentation.

Chair: Lidija Brkovic

Participants:

Sofi Nickson:* The role of official statistics in individual decision making: A pathway to the public good

Branko Josipovic: The SORS Decision-Making Support System

Anjana Dube: Understanding Data Stewardship and role of NSS in Africa

Debra Prestwood and Jessica Barnaby: UK Public Services Productivity Review

Dominika Rogalinska: Statistical Support For Citizens As Decision-Makers In Poland

* Work presentation not available or non-existent

IAOS-ISI 2024
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Decision Making Support System (DMSS)

Statistical Office of the Republic of Serbia
Branko Josipovic

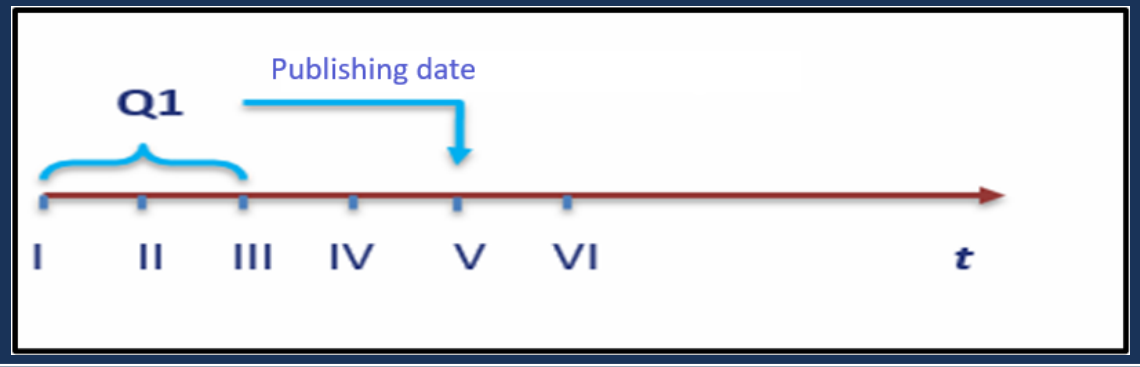
INEGI
International Statistical Institute
IAOS
IMPROVING OFFICIAL STATISTICS

Purpose

Problem - lack of major economic data in the real time

Key information - available only at lower frequencies (quarterly, yearly) and released with certain delay, which hinders accurate estimation of the economy position

GDP available in quarterly dynamics, t+60 indicator



Why DMSS?

- SORS, as the main producer of official statistics publishes an enormous number of data and indicators
- Modern society uses the data to measure its performances and adapt of future decisions
- However, the system of official statistics is ***enormous, general and designed from the aspect of specific sub-sectoral needs*** – agriculture, trade, transport, etc.
- In practice, this leads often to problems: confusion among the users, priorities not recognized, creation of contradictory perception, etc.

DMSS – objective

Support policy makers, business, local governments, stakeholders and wider audience to make better decisions by providing them with most relevant, precise and reliable information

DMSS components

DMSS for government level, consists of information and indicators necessary for decision-makers at the macro level (e.g., GDP and its components)

DMSS for local level, consists of information and indicators necessary for decision-makers at the level of municipality

Labour Market Intelligence System, (LMIS*) that aims to provide information on labor market trends necessary for better anticipation and matching of labor market supply and demand

*In this regard, the term ‘intelligence system’ does not only refer to information technology systems, but to a more comprehensive set of technology platform

DMSS – Data sources

- Statistical data produced by SORS (regular and ad hoc surveys, statistical registers)
- Administrative sources
- Local governments data
- Business association (Serbian Chamber of Commerce)
- Local institutions data (local public companies)*
- New data sources (mobile data, bank data)*
- Other available sources (commercial data)*

How the system works?

DMSS – Why SORS?

- Coordination of statistical system
- Clear overview of all data available
- Supplier of key indicators at the state level
- Supplier of data at the lower level
- Communication with all institution and business
- Time series
- Administrative register vs statistical register
- Staff, expertise, analytical skills guaranties for system sustainability

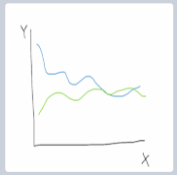
DMSS Government Level

January 2017 - The Government of the Republic of Serbia has founded the Council for the coordination of activities and measures for the growth of GDP in which SORS plays important role, not only as data provider, but also as active member of analytical team

The main role of the Council is to develop analytical monitoring mechanism of GDP growth and to analyze the changes in trends of individual growth factors, to ensure applying appropriate and timely growth support measures

Forecasting of GDP and its components in SORS:

System of leading indicators

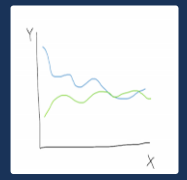


System of updating projections set at the beginning of the year

ARIMA time series modelling

System of leading indicators

- Analytical tool in predicting cyclical trends in economic activity
- Consists of a database of 3,000 variables
- Only variables with the best leading performance are included in in econometric model
- Currently, the SORS produces leading indicators for agriculture, industry, construction, trade, and services
- System of leading composite indicators is, on average, one to two quarters at most ahead of economic activity cycles



System of updating projections

- Beginning of the year - specially designed questionnaires are being sent to ministries to be fulfilled with corresponding planned projections
- At the same time SORS calculates own projections, based on trends, models and expectations
- Where the discrepancies are very pronounced, the causes thereof should be thoroughly examined
- Discrepancies between planned and statistical projections occur when ministries and other planned subjects observe the effects of certain measures on the GVA or due to the difference in the expressed fractography (e.g., monitoring construction by SORS and ministries)

ARIMA time series modelling

With ARIMA model for time series analysis, the following divisions are forecast for three months in advance:

- Industrial production – total
- Manufacturing
- Consumer prices
- Retail trade turnover (constant and current prices)
- Exports/imports

DMSS local level - how it all started

- During the COVID-19 crisis, new ad-hoc business surveys were introduced („RAPID SURVEYS“)
- The surveys were conducted in three key areas: industrial production, trade and construction, in regional statistical data centers (15)
- The aim was to estimate current situation in production when the special measures caused by the COVID-19 outbreak were imposed
- The data collected and processed through these surveys were visualized as an interactive PowerBI reports

Biggest challenges

PREDICTION

Prediction of trends of the main economic indicators

INITIATIVE

Helping government in creating appropriate measures to mitigate pandemic effect

COMMUNICATION

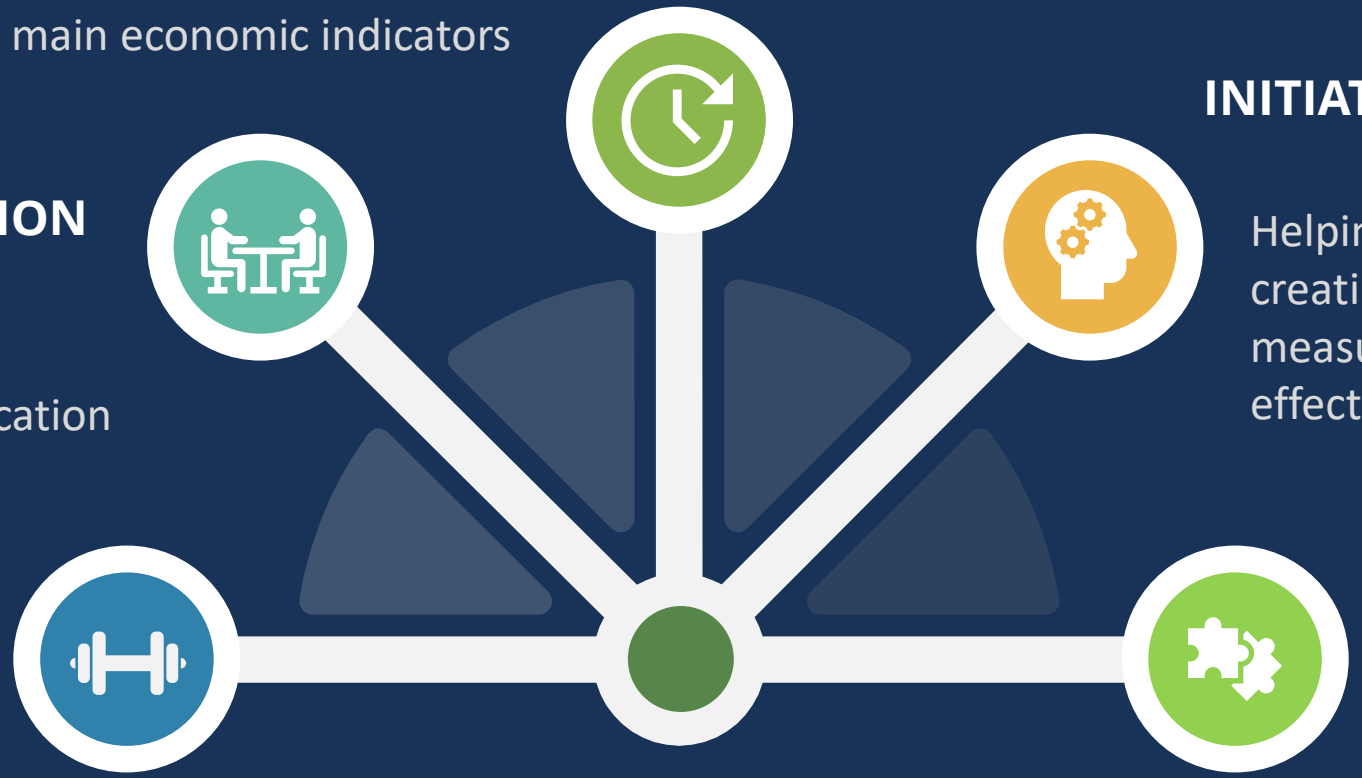
Establishing strong and mutual interactive communication with respondents

BURDEN

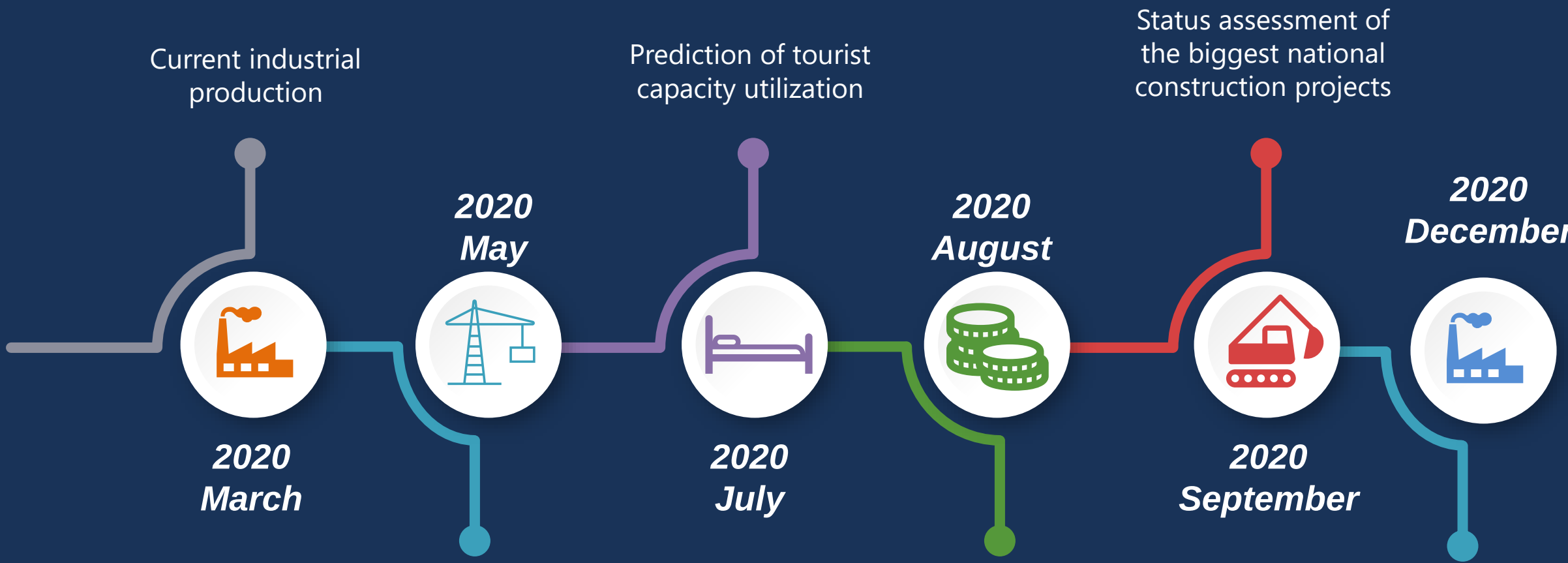
Putting as little burden as possible on respondents

ANALYSIS

Analysing of taken measures and monitoring how effective they are



Rapid Survey timeline 2020



Rapid Survey timeline 2021

Prediction in Business Services

2021 January

2021 June

Response burden survey

Covid 19 impact on micro, small enterprises

2021 July

Covid 19 impact on mini grocery stores

2021 July

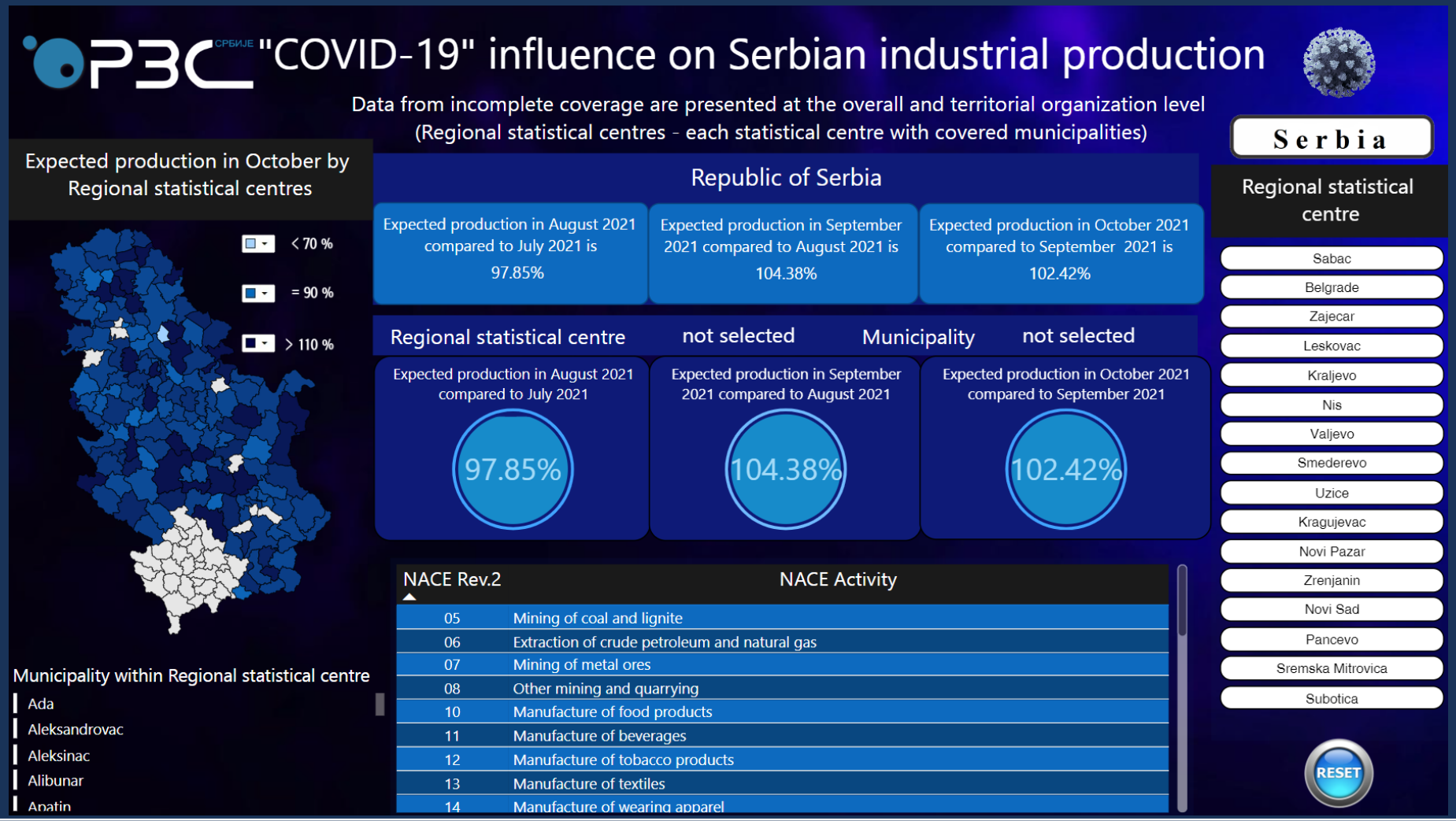
Covid 19 impact on teaching in primary schools

2021 July

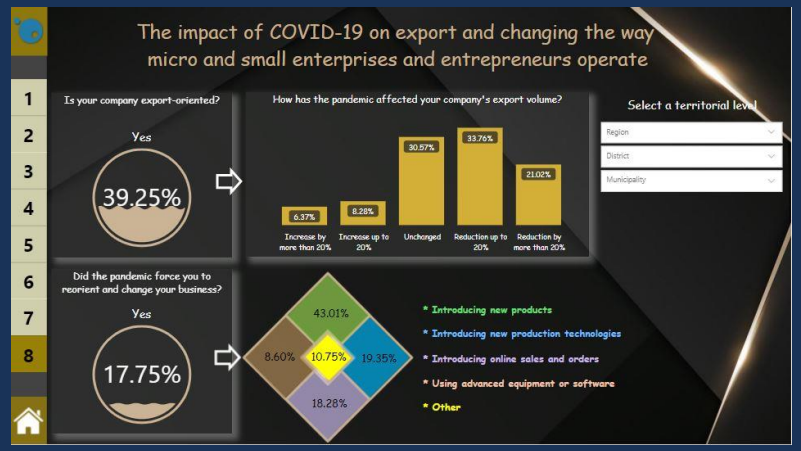
2021 December

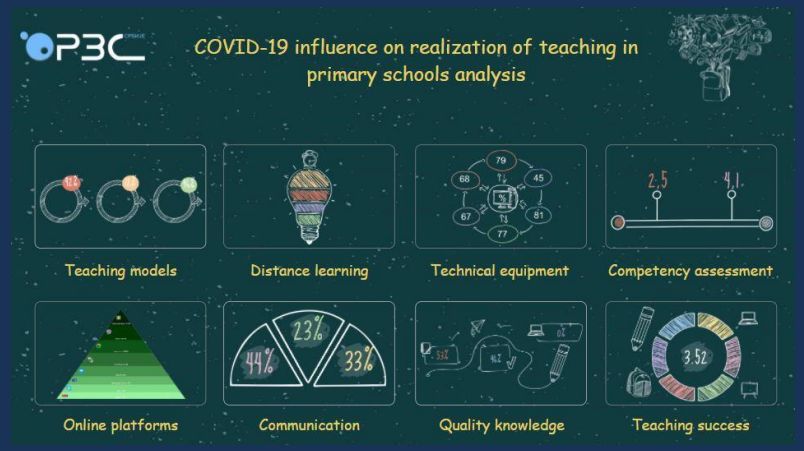
Register of Industrial Zones

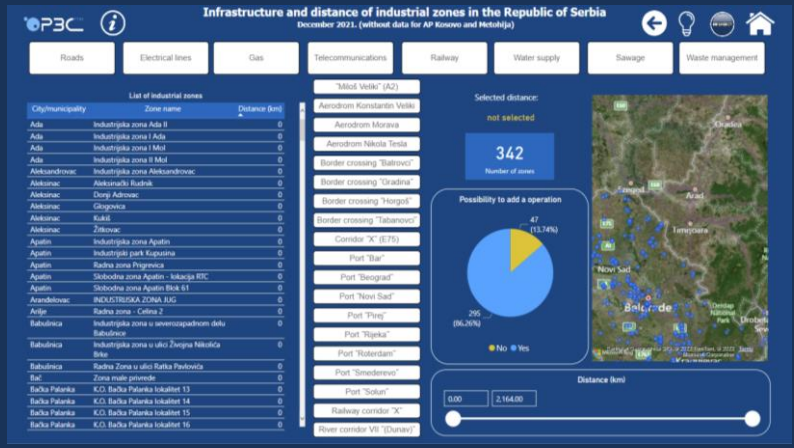
An example from practice, DMSS local level - Business Continuity of Serbian Statistics During COVID-19 Crisis



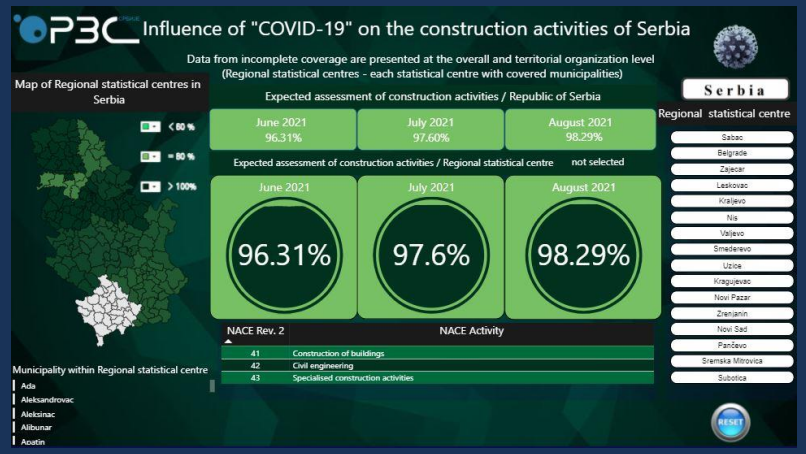
More examples

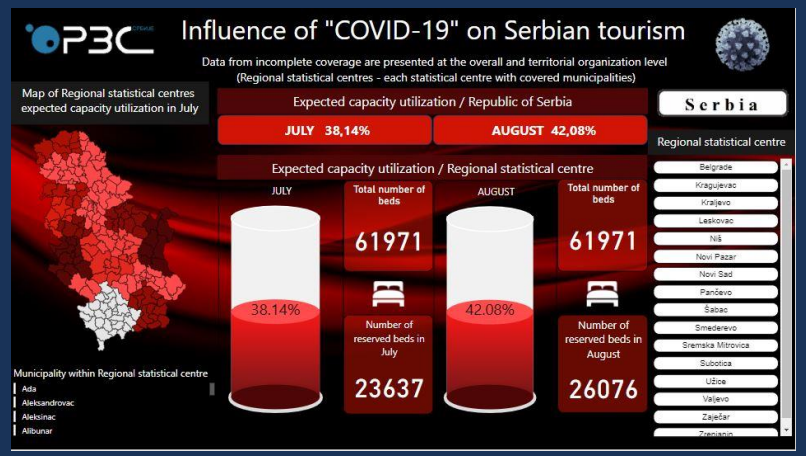


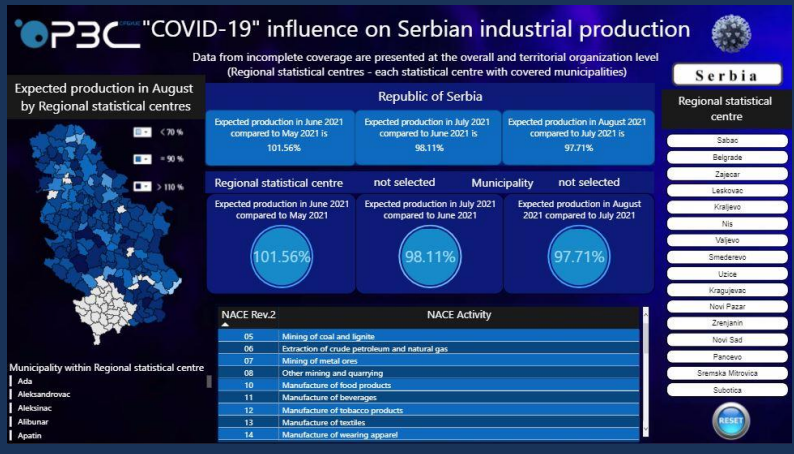




Register of industrial zones







DMSS local level – introducing geospatial capabilities (Census 2022)

The SORS introduced geospatial technology during the Census enumeration process (2022):

Mapped enumeration areas, established coding systems, managed coverage areas, and prepared maps

Further, the adoption of real-time data analysis via a Monitoring system allowed for optimal performance management of enumerators and strategic resource allocation

DMSS – Population Census

Србија ПОПИС 2022

CENSUS OF POPULATION,HOUSEHOLDS AND DWELLINGS 2022
Monitoring - Supervisor

Data update time
01.12.2022. 15:59

There may be a deviation of the number of P1 and P2 in the PowerBI report compared to the worksheet in Monitoring due to the fact that the maximum number of P1 and P2, i.e. the total number of all incoming P1 and P2, is displayed in the PowerBI report.

Region	Regional centres	Municipality	Settlement	Regional coordinator	Municipal coordinator
Beogradski region	All	Vračar	All	All	All

Instructor: All

Enumerator: All

Enumerator area: All

54,791
Completed questionnaire (P1)

38,489
Completed dwellings (P2)

93,280
Total P1+P2

Account: All

26
Started house numbers

26
Remaining house numbers

Added house numbers	Started house numbers	Remaining house number
All house numbers	All house numbers	All house numbers

DMSS local level

- Through rapid surveys, SORS developed cooperation with various business associations, local governments and public enterprises
- This cooperation is recognized as the best way to determine the needs of users of statistics at all levels, the government and the local communities

- DMSS LL utilizes statistical and geospatial data and the state-of-the-art technology to process, visualize, represent, and analyze data
- This is a **platform** that integrates data from multiple sources and presents them in a contextually relevant manner on different territorial levels

Labor market information system – LMIS in progress

Comprehensive data-driven web platform that provides accurate information on employment trends, skills demand, wages, migration, education, training and other related data

The main goal: help to meet supply and demand in the labor market

Help education and labor market policy makers
Help training institutions
Provide information to the employers and individuals
Enable predictions of Labor market trends
Qualifications and skills register
Help desk for potential investors

Labor market information system – LMIS

Administrative data from Central Population Register, Central Register of Compulsory Social Insurance, Tax Administration, National Employment Service (NES) etc. ..

….and statistical data from Statistical Population Register, Statistical Business Register, Population Census, Labor Force Survey etc. ..

….are integrated into one comprehensive database and disseminated in easy-to-understand, timely fashion, enabling comparison of data over time and territory.

Labor market information system – LMIS

Facilitating Informed Decision-Making

Offers insights into labor market conditions, enabling policymakers and **businesses to plan workforce**
Helps create **targeted policies** that address specific challenges (e. g. youth unemployment)

Monitoring Economic Trends

Enables understanding of the labor market's relationship with the broader economy

By monitoring employment levels, wages and workforce demographics, analysts can identify economic trends and predict potential labor market changes

Improving Skill Matching

Helps bridge the gap between the demanded and offered skills

Job seekers can upskill or reskill to meet market demands

Employers can identify potential candidates with the necessary skills, leading to improved recruitment processes and reduced skills shortages

DMSS national level – main outputs

- Monthly projection updating system
- System of composite leading indicators
- Nowcasting quarterly GDP
- Indicator of the monthly GDP
- Forecasts of major macroeconomic domains
- Description of developments for major GDP components
- Flash estimates – Economic Sentiment Indicator
- Information on macroeconomic trends

DMSS local level - main outputs

- Uniform evidence-based approach system for all local governments
- Services for making short-term and long-term strategic plans for future development
- Objective comparison of local governments
- Improve policy effectiveness when it comes to responses to the local needs
- Help desk for potential investors. Based on the data, system can provide information on possible business investments on certain location

LMIS – main outputs

- Help education and labour market policy makers
- Help training institutions
- Provide information to the individuals
- Provide information to the employers
- Labour market trend predictions
- Qualifications and skills register
- Projections at state and local level

DMSS – key users

- DMSS NL - Policy makers at state level
- DMSS LL - Government's institutions, local governments and other relevant local institutions, citizens, investors, researchers, academia (different level of access)
- LMIS – Government's institutions, students, workers, job seekers, employers …

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Thank you

Statistical Office of the Republic of Serbia
Decision Making Support System (DMSS)

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INEGI

International Statistical Institute

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Register of Industrial Zones in Serbia

Understanding Data Stewardship and role of NSS in Africa

United Nations | Department of Economic and Social Affairs
Statistics

Anjana Dube UN ECA and Ian Rutherford UN DESA

ideas for a prosperous Africa

Economic Commission for Africa, ACS

ECA

Understanding Data Stewardship and role of NSS in Africa

Data is all over

Changing Role of NSOs

- understand data stewardship and its function/role
- role/functions of a Chief Statistician of a NSO in relation to the UN FPOS
- difference and/or complimentary roles of a Data Stewardship and a Chief Statistician.

Digitalization

- The digitalization of society and economy has placed data access and sharing at the core of innovation and public trust.
- These developments offer both opportunities and challenges.
- There are huge possibilities for new types of data services, more timely and granular data, new insights by linking data from different sources and topics.
- But there are also huge risks: data could be used unethically, the ‘digital divide’ could become an ‘information divide’, invasion of privacy, etc.

National Systems Need to Act

- Evidence from the OECD (OECD, 2019) shows how national governments are taking steps to reduce policy siloes and make data strategies, projects and initiatives in the public sector more coherent.
- Countries such as the United States , the United Kingdom , the Netherlands , and Germany have issued National Data Strategies to bring together, under a single policy instrument, different aspects ranging from data access and sharing within the public sector, open data, data for AI, and data ethics in the public sector.
- Africa, Expert Group on Transformation and Modernization. Large number of countries adopted NSDS
- Roadmap for Transformation and Modernization

UN Secretary General's Data Strategy

UN Data Initiative and Data Stewardship

- Data for Now
- World Data Forum
- Collaborative on Citizen Data
- Collaborative on Administrative Data
- BigData UNGWG
- Working group on Data Stewardship (UNSD)
- Task Force on Data Stewardship (UNECE)

Global Consultations and UN working Group on Data Stewardship.

- In 2021 the UN working group on data stewardship was established and is lead by UNSD.
- The work plan of the working group covers the development of a conceptual framework for data stewardship and its various dimensions.
- The draft report of the working group has developed and circulated questionnaire to examine the data stewardship developments from the NSOs perspectives on the context, scope and priorities of data stewardship to further develop the conceptual framework on data stewardship.
- The working group report is submitted to the 55th Statistical Commission in its meeting in Feb-Mar2024.

Who is a (Data) Steward?

Different terms and meanings in different context

- Oxford English Describes it as a
  - noun:
    - a person employed to look after the passengers on a ship, aircraft, or train.
    - a person responsible for supplies of food to a college, club, or other institution
  - Verb
    - **supervise** arrangements or **keep order** at (a large public event).
    - **manage** or look after (another's property).
- IT sector: data stewardship is seen as ensuring common, meaningful data across applications and systems.

For Statistical Systems: What is data stewardship.

UNSD Global Consultations and Draft framework

Data Stewardship – A collection of practices that ensure data and Statistics from across national systems are accessible, useable, safe and trusted.

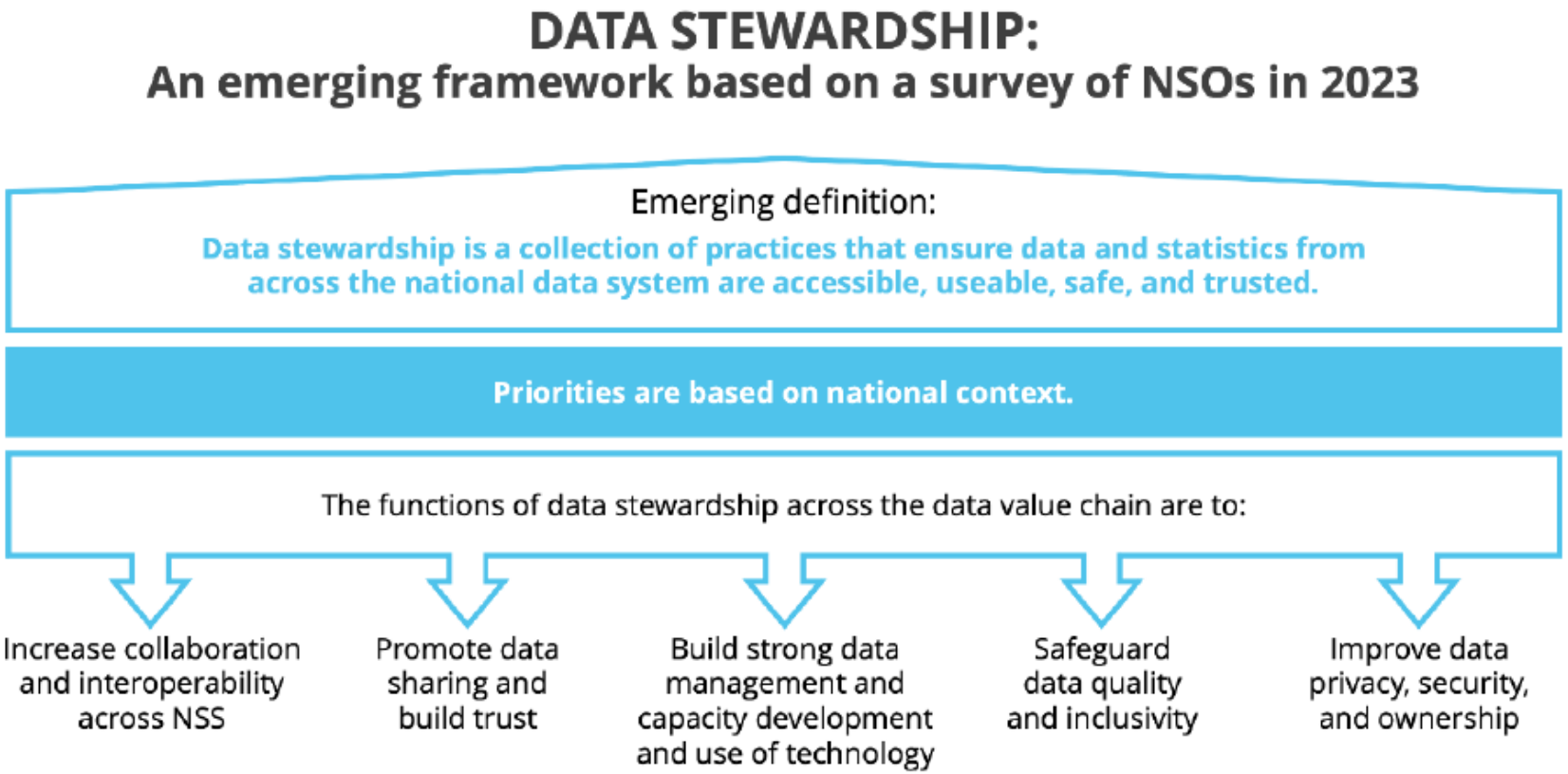
Data Stewards are responsible for data across the value chain, form production, analysis and use

Data Stewardship : Functions

Functions across the data value chain

- Increase Collaboration and interoperability across NSS
- Promote data sharing and build trust
- Build strong Data Management and capacity Development and use of technology
- Safeguard data quality and inclusivity
- Improve data privacy, security, and ownership

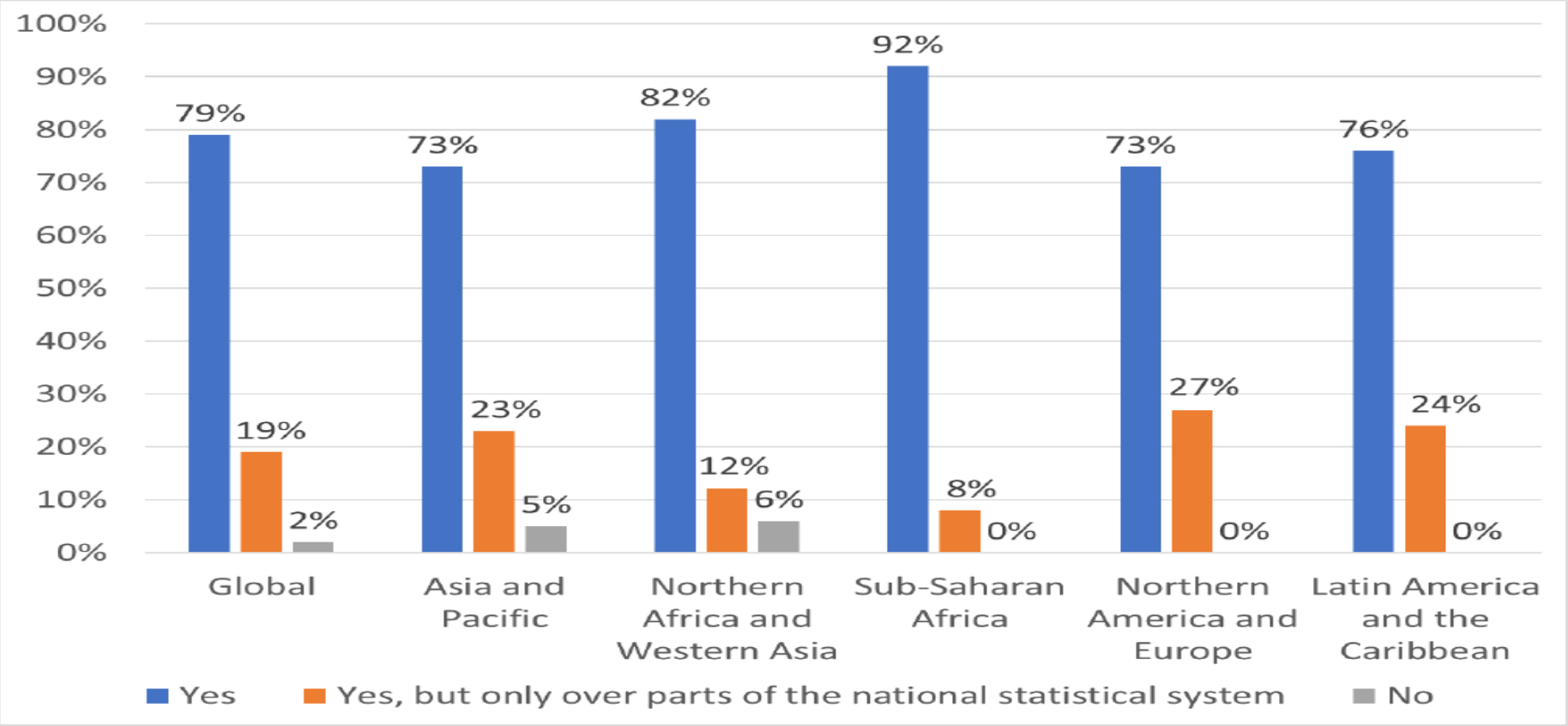
Working Group Report: Emerging framework of data Stewardship



Working Group Report: Key Highlights

Understanding the role of NSOs

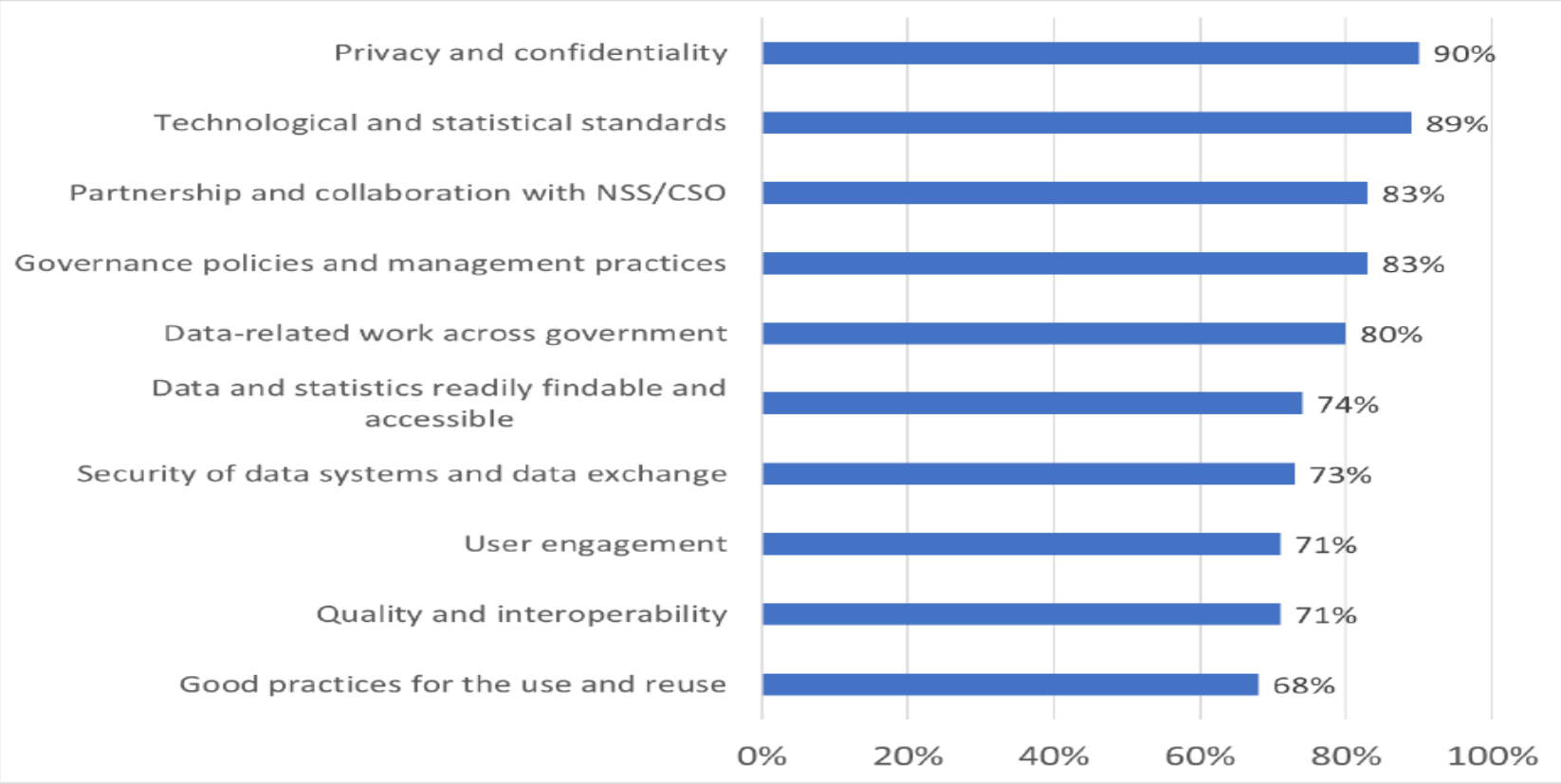
Figure 3: The national statistical office in your country is mandated to coordinate the production and integration of official statistics across the national statistical system.



Working Group Report: Key Highlights

Understanding the role of NSS

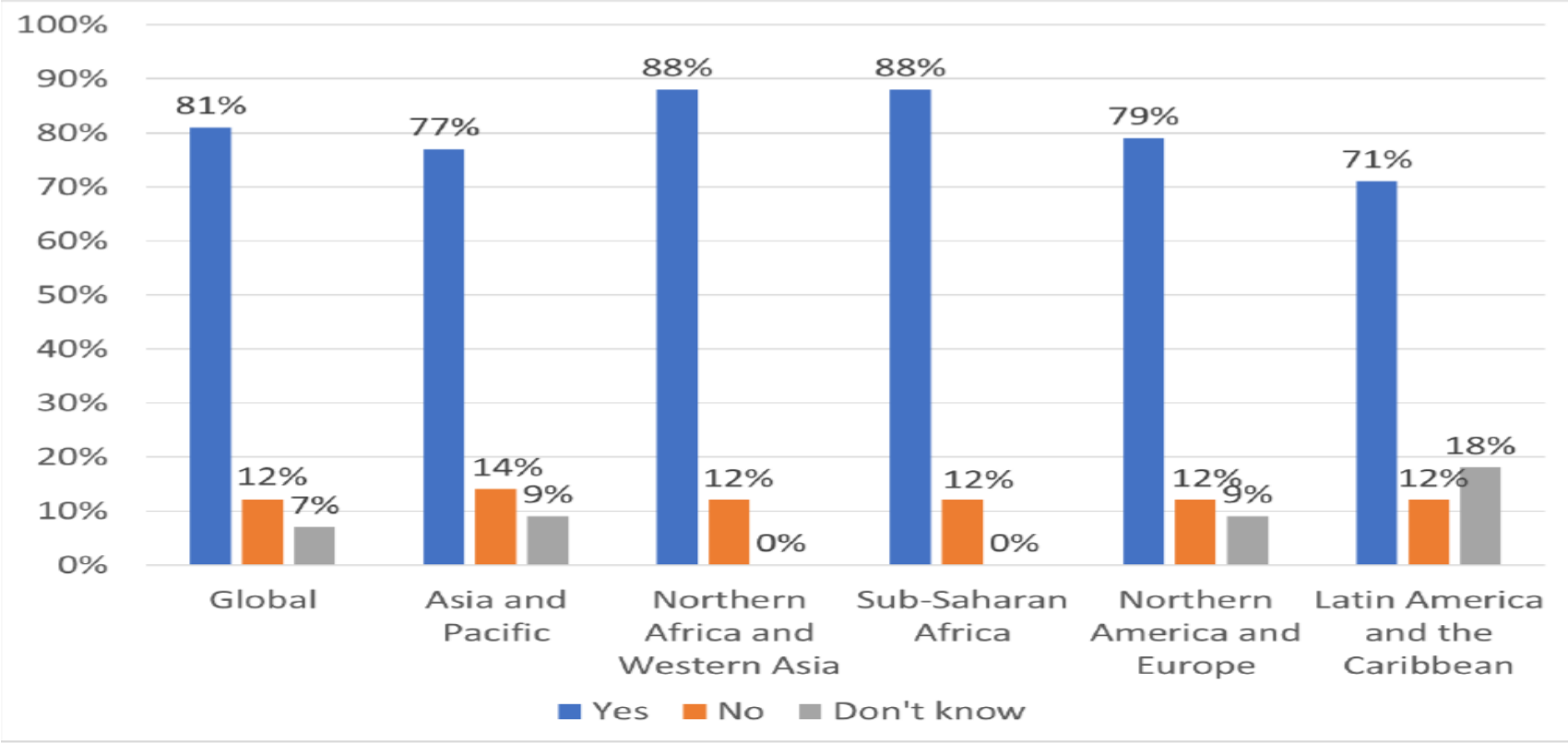
Figure 5: Are there authorities in your country whose role relates to the following areas...



Working Group Report: Key Highlights

Understanding the role of NSSs

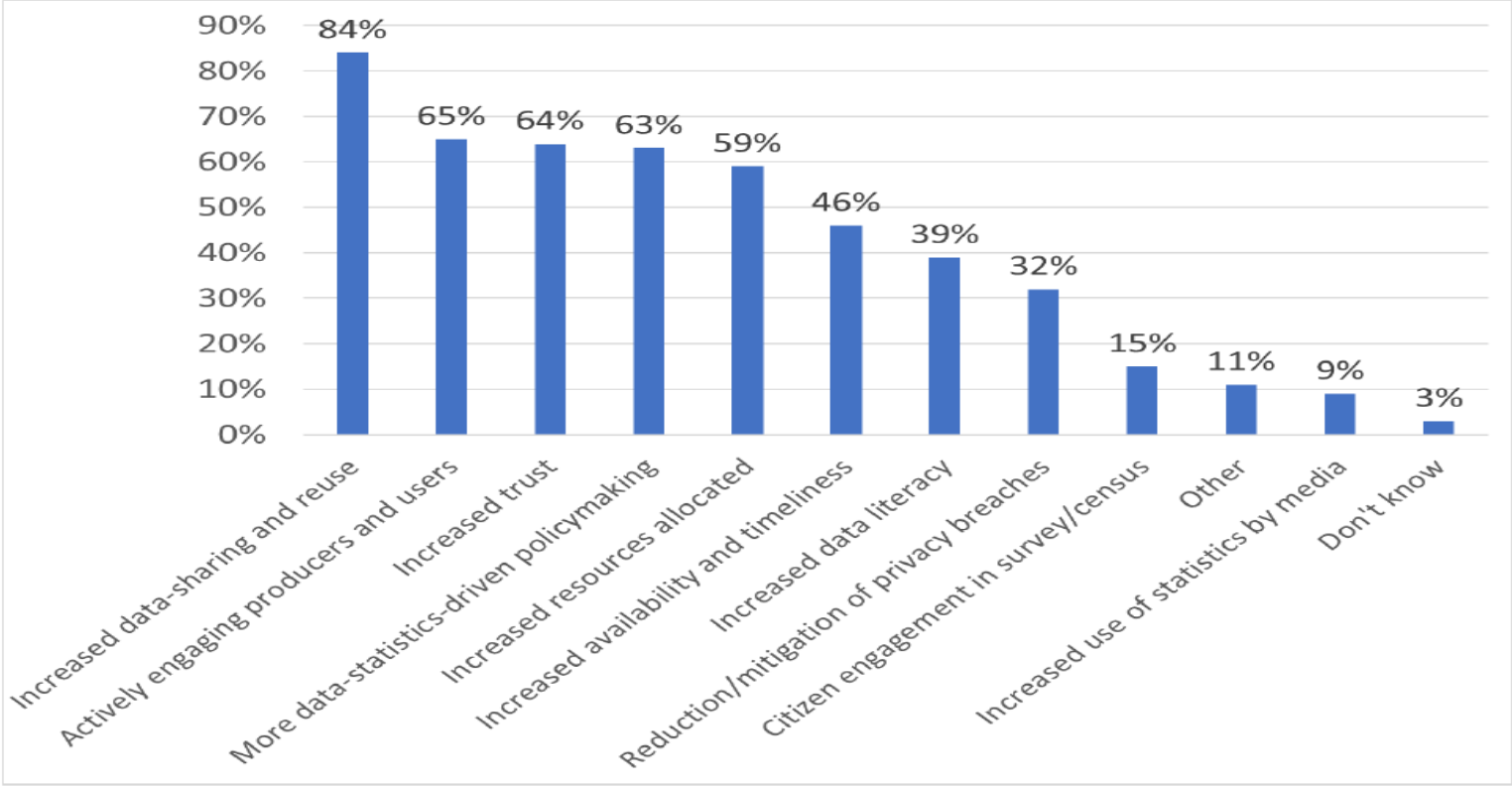
Figure 4: Do you think that a data steward should oversee all data sources within the national statistical system in a country, including administrative data?[6]



Working Group Report: Key Highlights

Understanding the role of NSSs

Figure 10: How would you define and measure successful implementation of data stewardship?



What Can NSOs do?

NSOs' current state

- Mandated to produce and disseminate official statistics
- Use agreed standard, methods and techniques

Data stewardship

Continuation of the role that NSOs have played in coordinating the national statistical system to now enhancing it to the data eco system.

Data Stewardship and UN FPOs

- The global consultation on data stewardship provides a recent snapshot of the current and changing context for NSOs in the new data-driven reality.
- The background document makes the point that these circumstances can still be viewed in terms of the Fundamental Principles of Official Statistics (FPOS).
- This reinforces the case made that the FPOS continues to have significant relevance in the context of data stewardship, but some new interpretation is needed to maintain the relevance of NSOs as change continues to accelerate

Complementary Aspects

UN Fundamental Principles of Official Statistics

1. Serving the entire society, relevance, impartiality and equal access (**Equity and inclusion**);
2. Professionalism and professional independence (**Governance**);
3. Transparency on sources and methods, and accountability (**Governance**);
4. Prevention of misuse (**Governance**);
5. Cost-effectiveness and freedom to select data sources (**Equity and inclusion**)
6. Confidentiality of individual data (**Data Privacy**);
7. Laws, rules and regulations (transparency) (**Governance**);
8. Need for national coordination (consistency and efficiency) (**sharing and collaboration**);
9. Need for international coordination (concepts, standards and methods) (**sharing and collaboration**);
10. International statistical cooperation (**sharing and collaboration**)

Data Stewardship Functions

Data governance : Professional independence, Transparency and accountability, prevention of misuse, Laws (2, 3, 4, 7)

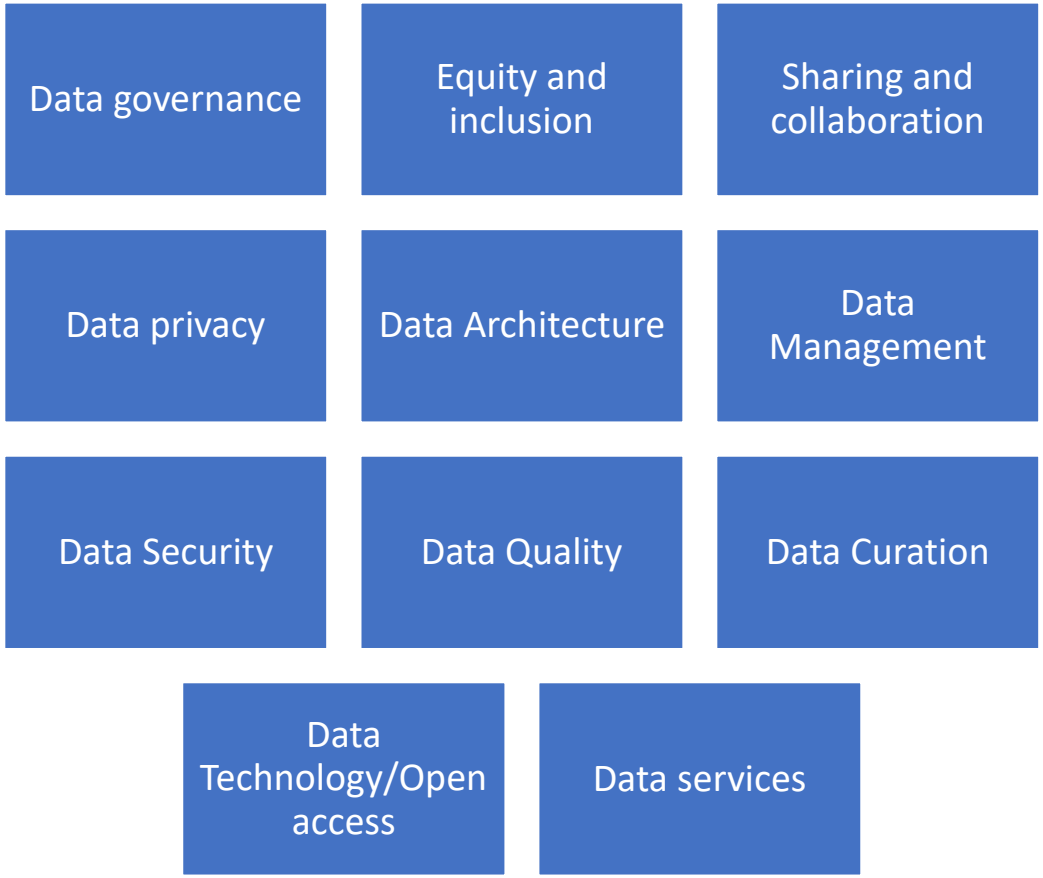
Equity and inclusion : Serving entire society and equal access, cost-effectiveness, freedom to select data sources. (1, 5)

Data privacy: confidentiality of individual data (6)

Sharing and collaboration: national coordination and international coordination and statistical cooperation. (8,9,10)

Different or complimentary roles

Data Stewardship: Functions



Chief Statistician: Functions

- Produce, reliable, timely and quality statistics for public use
- Protect data confidentiality
- Define standards and concepts
- Choose relevant data sources
- Conduct surveys and develop data collection mechanism
- Disseminate data impartially
- Custodian of data resource
- Data management
- Data Analysis

Some specific results from the global consultation include:

- The oversight and access of data sources used in official statistics should be explored in any definition of a data steward and as an extension of the NSOs existing mandate.
- Many NSOs are experiencing an increase in responsibilities in almost all functions listed in the questionnaire, but regional differences exist which indicate certain functions growing in responsibility more than others.
- There is an indication that some functions related to data stewardship are more relevant to NSOs than others, either because the functions are growing in importance in their governments or because NSOs have a greater role in them. This needs to be mapped to the successful implementation measures most often reported by NSOs.
- A paramount interest of data stewardship is the increase in the use and reuse of data across Government, but different regional motivations exist which should be considered if developing a maturity model or theory of change approach to data stewardship.

Some specific results from the global consultation include:

- The workstream extrapolated that this can be achieved by i) building trust in data and promoting data sharing and use in decision-making; ii) safeguarding data quality; iii) facilitating greater collaboration, coordination, and data integration across the national statistical system; iv) maintaining citizen confidentiality and data security; and v) implementing strong data management and capacity building practices.

- The checklist identifies 15 functions of a data steward across the five categories. These functions are interconnected and linked; and ultimately allow data stewards to encourage data sharing, use, and reuse across the national system, including administrative data systems. These functions include, but are not limited to, facilitating user-producer dialogues, maintaining the accessibility, timeliness, and accuracy of the data, safeguarding data privacy and security, and creating robust governance and management practices for the national statistical system.

The African Context

- As far as Africa is concerned various initiatives to use technology and build the digital data collection mechanism have been undertaken by the countries supported by their own governments, stakeholders and donors.
- While UNECA has a roadmap for transformation and modernisation of official statistical systems, what is lacking perhaps is an overall national level framework to enhance data driven mechanism and governance.
- The debate is on the exact role and definitions of data stewards, which is best agency/agencies to take the role of data steward.
- African Case Studies of Digital Initiatives by NSS to be discussed.
- The paper will examine these developments in the context of the working groups report and look at the way forward in developing National Statistical Systems in Africa.

THANK YOU!

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Version Française: https://repository.uneca.org/handle/10855/49345

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UK Public Services Productivity Review

INEGI
International Statistical Institute
IAOS
IMPROVING OFFICIAL STATISTICS

Debra Prestwood & Jessica Barnaby

Office for National Statistics, UK

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Public service productivity

Indirect approach to measuring public service productivity

(2005) Atkinson Review: Final Report
Measurement of Government Output and Productivity for the National Account

At the end of **2003**, the then UK National Statistician, Len Cook, asked Sir Tony Atkinson to conduct an independent review of methodologies to measure public service output and productivity.

The terms of reference included looking at the way ONS had approached the new System of National Accounts agenda and its implementation of **direct measurement methodologies, including quality adjustment.**

The **report** clarified many issues and proposed a model for measuring public service outputs. On the basis of its recommendations, it outlined a **research and implementation programme** in the various main public service areas.

The conclusions were accepted with the caveat that full implementation was subject to time and resources

Overview of PSPR

In **June 2023, the UK's Chancellor of Exchequer** Jeremy Hunt highlighted the importance of public service productivity and asked the UK National Statistician Sir Ian Diamond to **review how to improve the measurement of public sector productivity.**

The UK is **one of the few countries** to include public sector measures as well as input data in its productivity statistics.

In future years, the ONS aims to align the **improvements achieved on productivity output into the UK National accounts.**

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Overview of UK Public Sector Productivity Review

ONS is working with UK government departments to develop better methodology and produce more consistent robust data to better reflect productivity changes and public service outcomes.

Working to improve measures in areas such as:

Defence

Where we measure what we spend, but not how safe that makes us

Crime

Where policing productivity figures don't capture crime outcomes

Health

Where we measure outputs and the quality of delivery in the NHS, count the number of hospital treatments but not the value of preventative care, even though that saves lives and reduces cost

NHS

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Overview of UK Public Sector Productivity Review

How much improvement to pupil outcomes are schools delivering?

How has the quality of social security administration changed over time?

What impact did the Coronavirus (COVID-19) pandemic have on the National Health Services?

Measuring the productivity of public services is challenging because unlike the private sector there is no direct charge for services that are delivered to the public

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Productivity

Productivity is an economic concept explained in terms of:

‘a specific level of input = a specific level of output’

The volume of output depends on how much we produce & how much we value it.

In the market sector this is reflected through the price, which tends to reflect the quality of the output (and the inputs

Measuring public services is not easy

To assess quality of output in absence of price, two principles are used for measuring non-market output:
1. Follow UK National Accounts procedures and **2.** Take account of attributable contributions meaning adjusting for quality.

$$\textbf{Productivity} = \frac{\text{Quality adjusted output}}{\text{Inputs}}$$

Quality adjusted output = Quantity of output + Quality of output

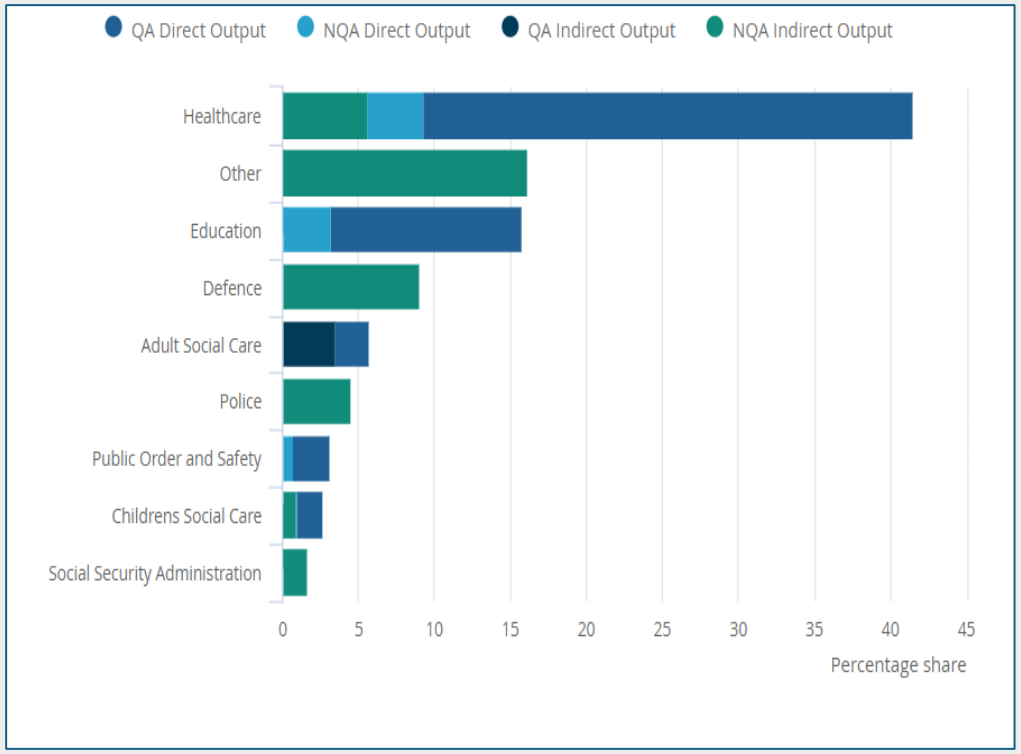
Inputs = Labour + Capital + Intermediate consumption

(Atkinson, 2005)

Methodology challenge

Expenditure shares and output types, by service area, 2021, UK

Source: Office for National Statistics



Established methodologies since Atkinson Review

Around 60% quality adjusted, making headline metric hard to interpret with 40% having weaker measures

Productivity can change because of changes in the inputs as well as changes in the outputs – impact of Covid-19 – changes in case mix.

Public services equate to around one fifth of the output of the UK economy

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Methods to collect inputs

Estimates of UK public service inputs include three disaggregated components:

1. Labour

All employees involved in producing output

2. Intermediate consumption

All the goods and services used in the production of public service output plus social transfers in kind.

3. Consumptions of fixed capital

Is the decline in the value of fixed assets owned because of normal wear and tear when providing public services

+

Deflators

A process to remove effect of price changes in goods and services by applying a suitable price index or weighted basket of indices to each current price expenditure

Produce aggregate index of inputs by weighting together the growth of each component by their respective share in aggregate total public expenditure.

Interested in changes in **volume of inputs.**

Methods for output measures

Cost-weighted activity preferred as enables productivity growth to be measured.

Key assumption: Service providers have decided all services are more valuable than their cost:

Activities grouped by similar activities

- Consistent measurement between years

- Unit costs aligned with activity and measured on an equivalent basis across different types of activities

Cost provides a minimum value and higher **cost** activities are *usually* more **valuable.**

For example: Heart bypass surgery more valuable than dental check-up

Where cost-weighted activity not possible, use **outputs =inputs** approach.

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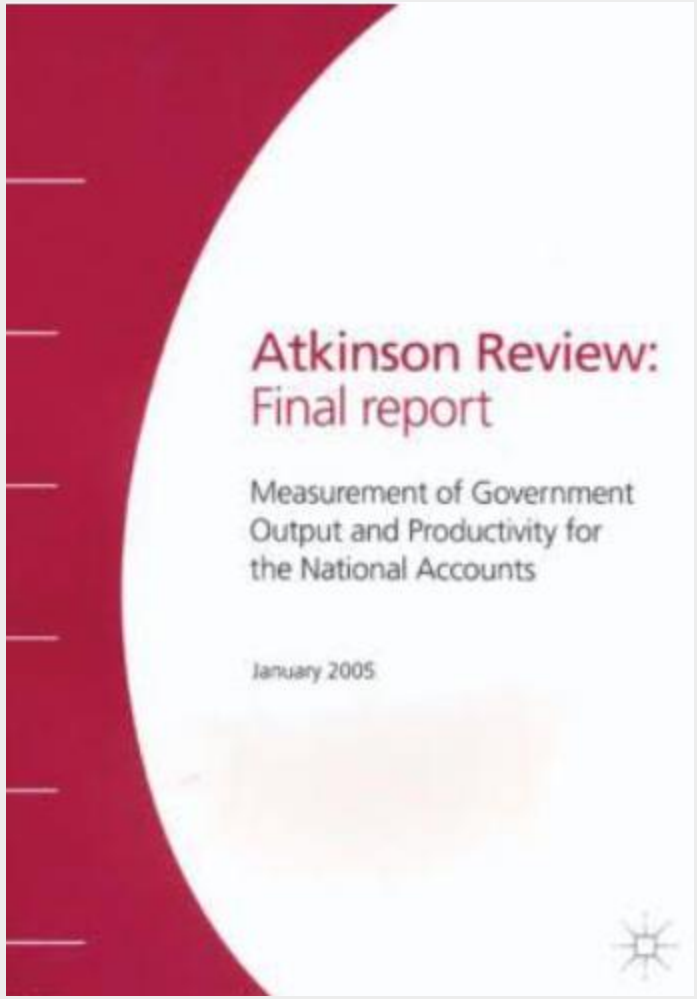
Methods for Quality Adjustment



Output of government sectors should be measured in a way that **adjusts for quality**.

Recommended choose on case-by-case basis and whether to **measure quality by differentiation of service, success of activity or attributable contribution to outcome**.

Considering:

- the nature of the service;
- the extent to which the service is, or should be, differentiated; and
- the degree to which the change in outcome can be directly and confidently attributed to the service concerned.

- In collective services such as Defence or Public Administration, it is hard to identify the exact nature of the output

- ***Big questions: valuing and weighting quality change; aggregating data; keeping up with technological change and devolved matters across the 4 UK nations***

Overview of UK Public Sector Productivity Review

Inputs

Defence

Policing

Output

Policing

Public Order and Safety

Social Security and Administration

Quality Adjustment

Healthcare

Education

Social Security and Administration

In Development

Methodology

Nowcasting

New services

Environment

Tax administration

New Surveys

Public Sector Management Practices Survey

Time Use Survey

The review will sustain activity until at least March 2025 to widen and deepen improvements across the public services.

Improvement and alignment into the UK National Accounts

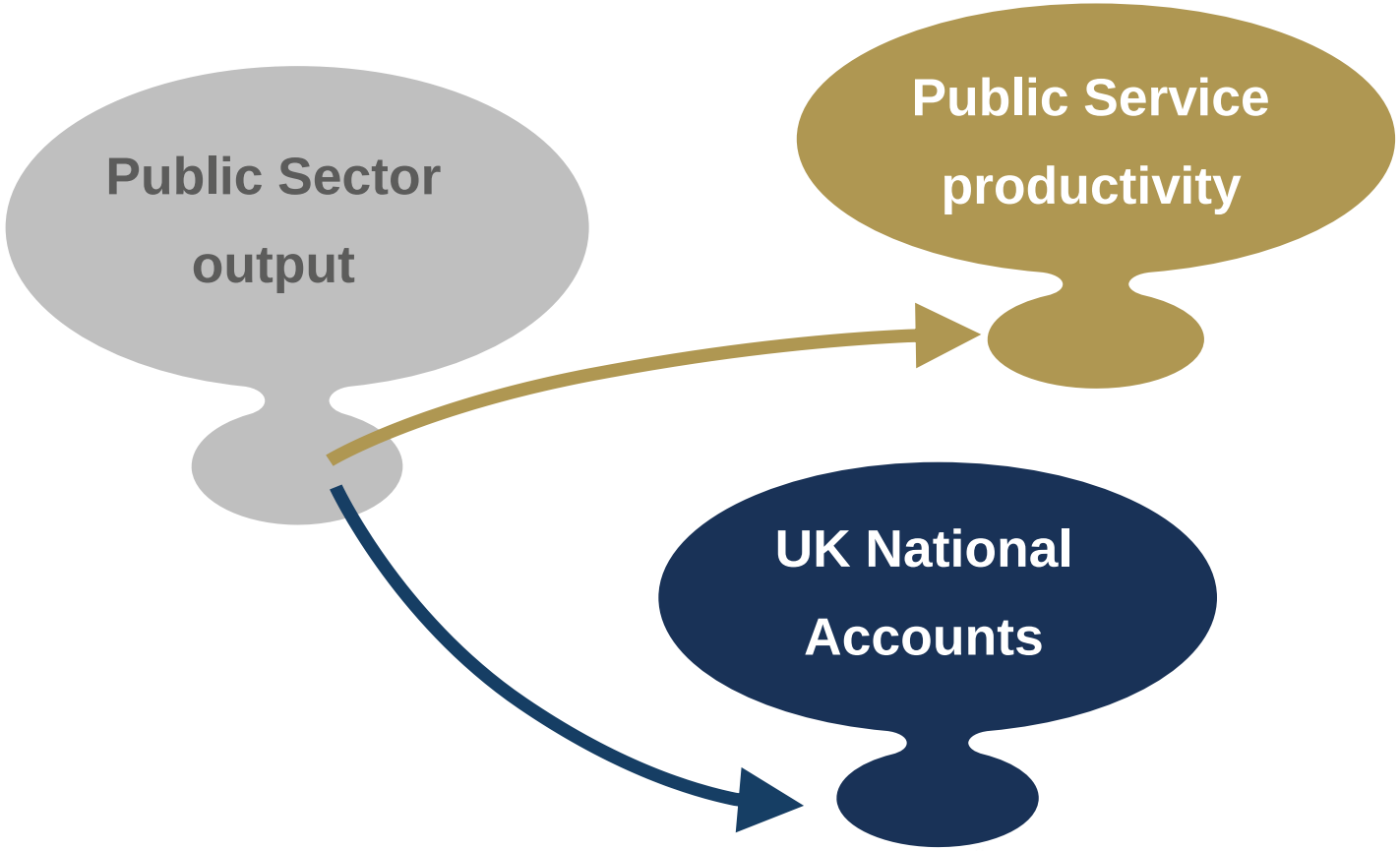
Developments also to be applied in UK National Accounts to improve measurement of the contribution of public services to GDP

Complex processing systems will result in a time lag before integration into the UK National Accounts.

Incorporation of quality adjustments using improved measures from review also planned.

Scheduled incorporation into UK National Accounts ~2028 (to be confirmed)

Planned engagement with stakeholders and international community to communicate proposed changes.



Classification of the Functions of Government (COFOG)

COFOG is an economic classification on the functions of government (developed by the OECD).

Identifies **type of expenditure** incurred, for example, salaries, goods and services, transfers and interest payments, or capital spending.

Review is looking at **several key potential areas** to recommend to the UN council on COFOGs.

Improvement to better support accurate measurement of Government expenditure and enable improvements to the granularity and quality of economic statistics.

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For more Information

https://www.ons.gov.uk/aboutus/whatwedo/programmesandprojects/publicserviceproductivityreview

Contact:

PSP.Review@ons.gov.uk

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Any comments or questions?

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Thank you

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Annex

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Methods for output measures

- Objective (from Atkinson principles): Measure non-market (government) output in comparable manner to market (private sector) output
- Preferred approach: cost-weighted activity index:

$$L_t = L_{t-1} \times \frac{\sum_i c_{t-1,i} \times q_{t,i}}{\sum_i c_{t-1,i} \times q_{t-1,i}}$$

Substitute costs for prices →

Where:

L = index

c = unit cost

q = quantity of activities

t = time period

i = activity type

Growth in each activity type weighted by costs such that an increase of 100 in a high cost activity has a greater effect on total output than an increase of 100 in a low cost activity.

Methods for quality adjustment

Quality adjustment factors are applied to proxy for changes in value delivered

This can be applied to **individual activity types** (granular) or at the **aggregate level**

- **Application of quality adjustment at the granular level**:

$$L^t = L^{t-1} \cdot \frac{\sum_i \left(c_i^{t-1} \cdot a_i^t \cdot q_i^t \right)}{\sum_i \left(c_i^{t-1} \cdot a_i^{t-1} \cdot q_i^{t-1} \right)}$$

Where:	
L = index	t = time period
c = unit cost	i = activity type
a = quantity of activities	q = quality adjustment

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Statistical support for citizens as decision-makers in Poland

Dominika Rogalińska
Department for Innovation
Statistics Poland

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How does official statistics adapt to new challenges?

New data sources

Administrative data, big data

New statistical information

Combining data from various sources; disaggegation; delimitations; shorter data delivery time

Profiled products

Products tailored to the needs and expactations of users (e.g. local governments)

Manifesto 5 ”O”

open data;
open access;
open algorithms;
open source;
open knowledge

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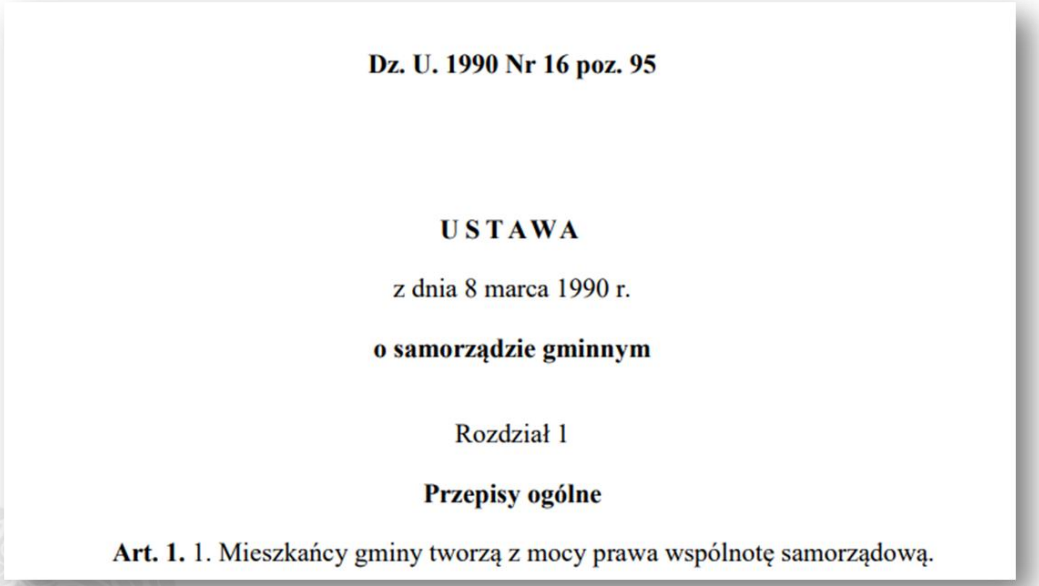
Statistical support for citizens

Support for citizens means support for every resident



Dz. U. 1990 Nr 16 poz. 95

USTAWA

z dnia 8 marca 1990 r.

o samorządzie gminnym

Rozdział 1

Przepisy ogólne

Art. 1. 1. Mieszkańcy gminy tworzą z mocy prawa wspólnotę samorządową.

Act on municipal self-government

of March 8, 1990

Art. 1. 1. Citizens of the commune constitute, by operation of law, a self-government community…

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How do public statistics support local government?

DIAGNOSIS

- Censuses (as full surveys);
- Current research;
- Experimental research;
- Local Data Bank;
- Statistical Vademecum of Local Government;
- Analytical reports.

MONITORING

- **Public Services Monitoring System (SMUP);**
- STRATEG System;
- UN SDGs;
- Providing expertise in the development of monitoring indicators.

EVALUATION AND ANALYSIS

- Spatial statistical data in the state information system (PDS);
- Counterfactual research;
- Development expenses.

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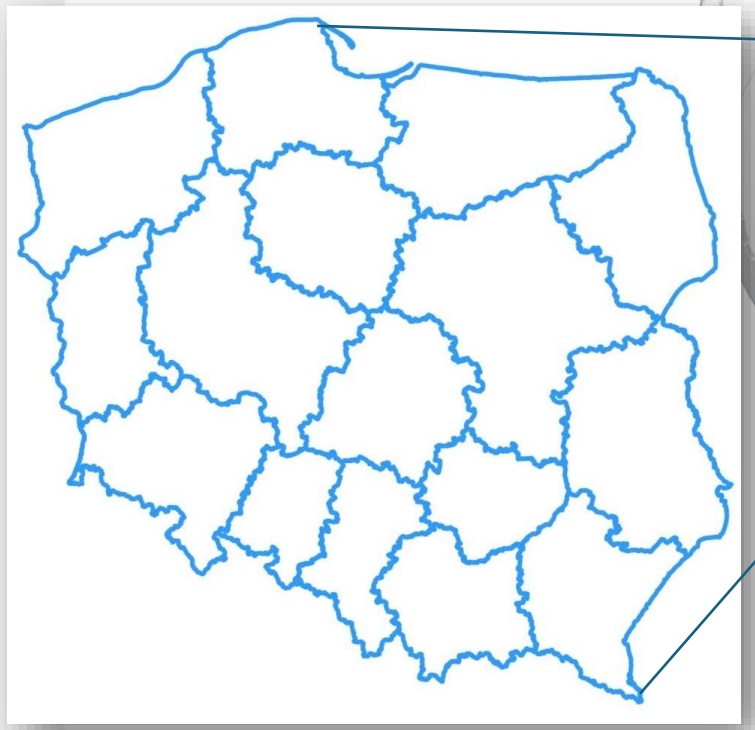
Statistical divisions of Poland and self-government administration in Poland – regional level (regions)



EU-Poland (orthographic projection) - Poland - Wikipedia

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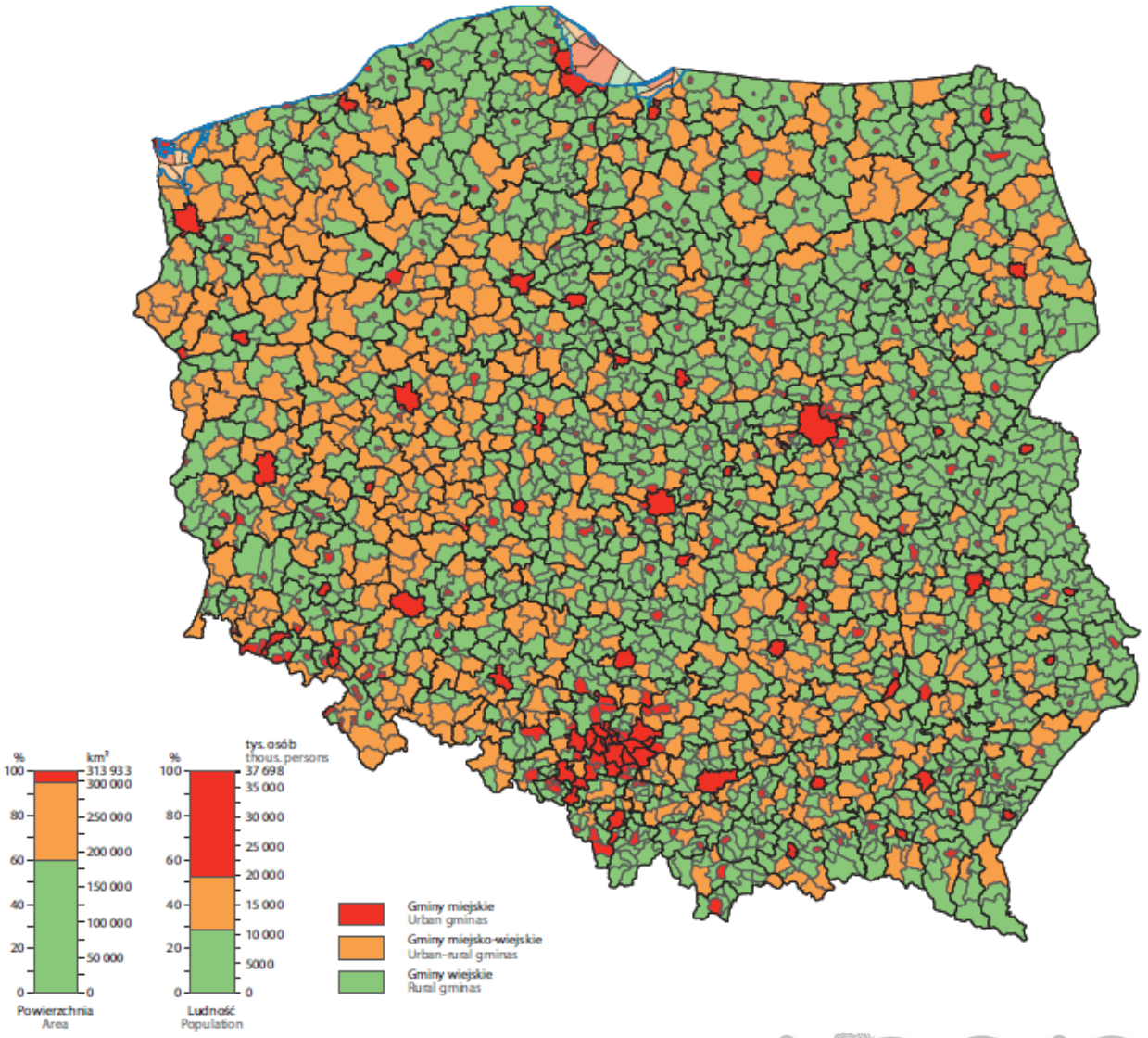
Statistical divisions of Poland and self-government administration in Poland – district (districts) level

Statistical divisions of Poland and self-government administration in Poland – local level (communes)



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Diagnosis of the situation

Monitoring

No unified system of monitoring of public services

Administrative sources

Non-integrated databases and registers

Methodology

No unified methodological concept of measuring and assessing effectiveness of public services

Evidence-based policy

Insufficient use of information about performance of local public services

Objectives of the SMUP project

Overall objective

- Creating a comprehensive, publicly accessible system of monitoring of [local] public services, based on integrated high quality statistical data.

Expected results

- Optimization of delivery of public services by Polish local government authorities based on use of Benchmarking mechanisms and use of good practices from other LGs
- Easier access of citizens and businesses to information about important parameters of public services delivered in different municipalities
- Better conditions for planning of national public polities based on access to information.

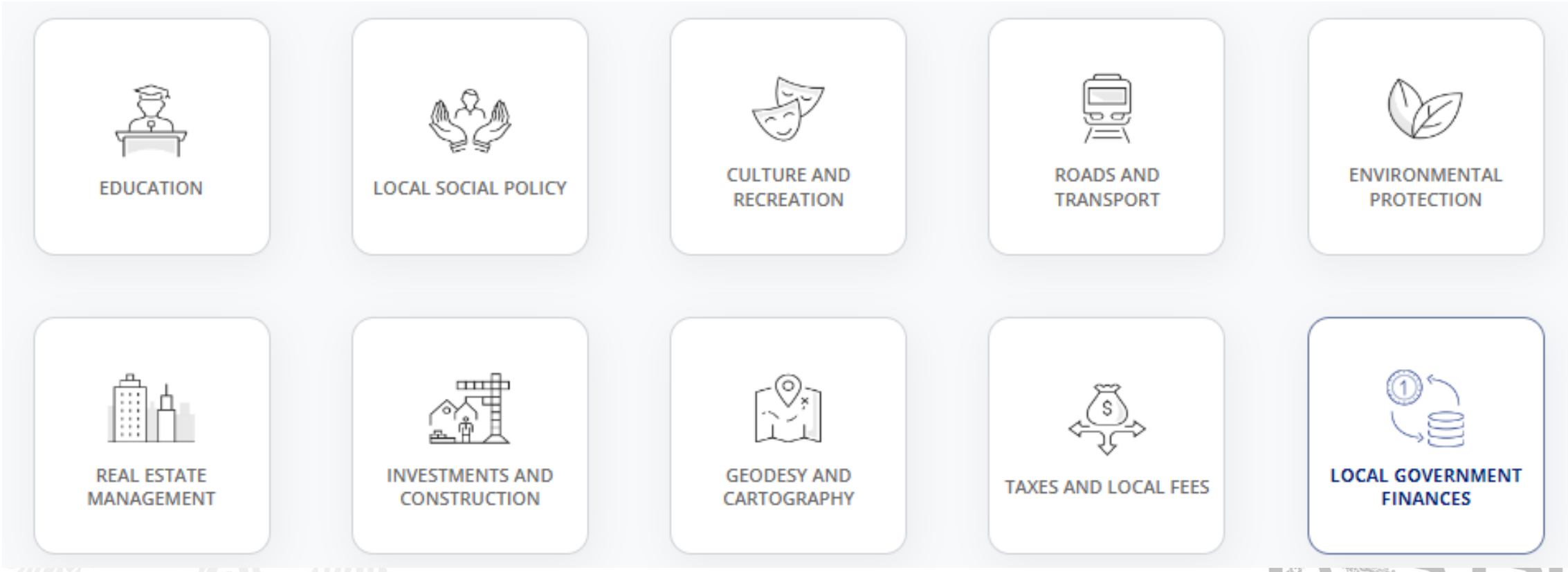
Main criteria for selecting the services for analysis in SMUP in a service area

- importance from the point of view of service users (important and very visible, or of secondary importance only);
- scale of financial turnover involved – either from public sources or from user fees;
- importance from the point of view of current public policies (local, regional, national levels);
- ability to access data to measure a given service – at the level of communes or districts.

Project achievements – from the systemic point of view

- good results of partnership cooperation between national statistical institution, local government practitioners and experts;
- detailed data and knowledge on public services;
- high interest from other ministries and state agencies;
- a unique opportunity to organize the system of collecting and analyzing cost efficiency data – due to the reform of the budgetary system undertaken by the Ministry of Finance

Areas of public services



How do we monitor public services?

Area

Service

Indicator

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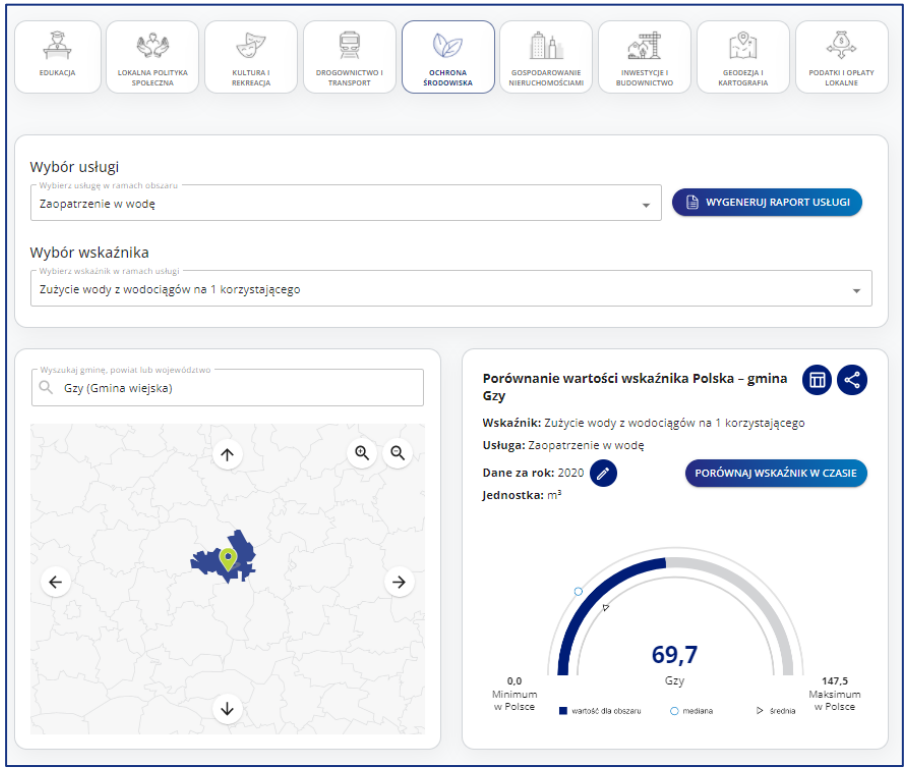
Data sources

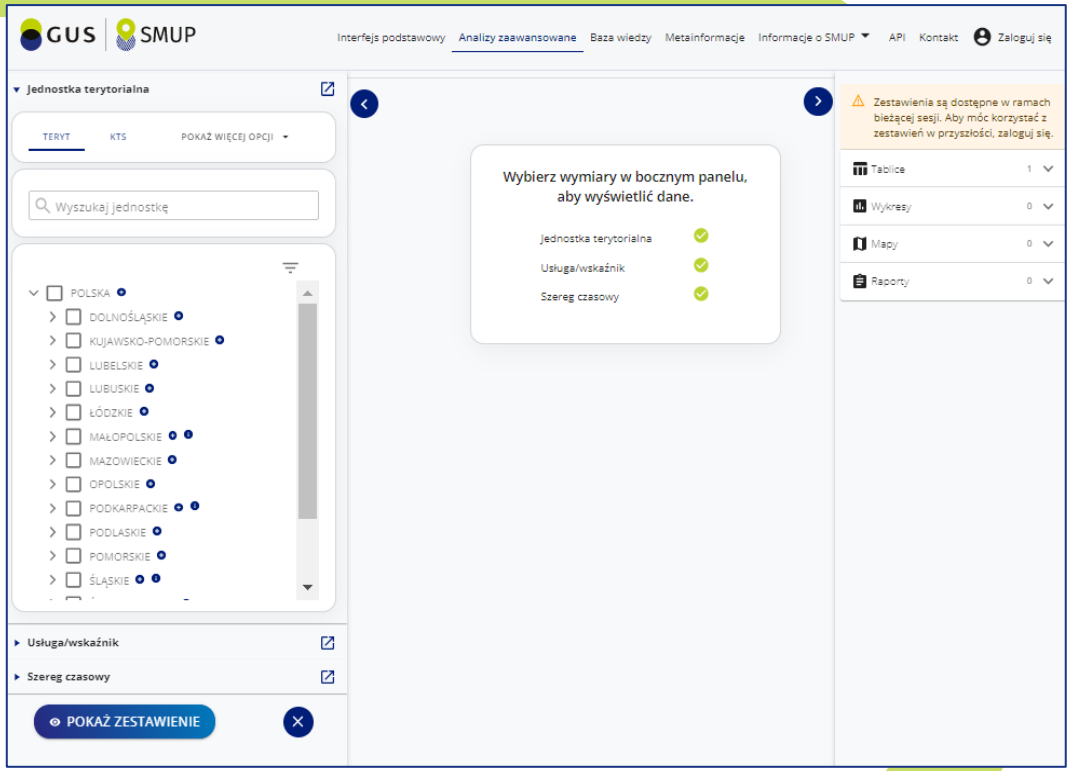
Statistical research

Experimental research

Administrative sources

Data access





GUS | SMUP

API SMUP pl OAS3

/apidocs/pl/smup.json?lang=pl

Examples – water consumption per user (2022)

Service selection

Select a service within the area

Water supply

GENERATE A SERVICE REPORT

Indicator selection

Select an indicator within the service

Water consumption per user

Find a gmina, powiat or voivodship

Mielno (Urban-rural gmina)

41.4
Postomino
rural gmina

Gmina Mielno against the background of gminas in Poland

Indicator: Water consumption per user

Service: Water supply

Unit: m³

Data for the year: 2022

COMPARE THE INDICATOR OVER TIME

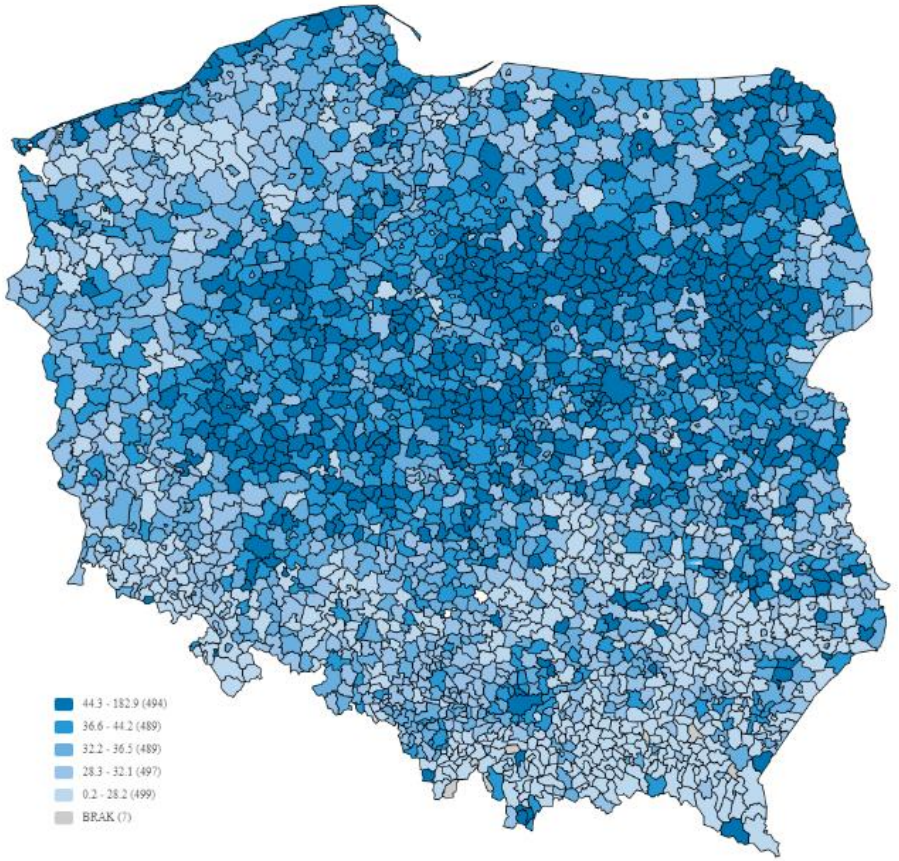
182.9
Mielno

0.2
Minimum

median

mean

182.9
Maximum



Examples – cost of education per student in a primary school for children and youth (2022)

Service selection

Select a service within the area

Pre-primary education

GENERATE A SERVICE REPORT

Indicator selection

Select an indicator within the service

Expenditures of gmina's budget (current, excluding repairs and granted subsidies) on pre-primary education per 1 child in establishments run by g...

Find a gmina, powiat or voivodship

City with powiat status Capital City Warszawa

Miasto Warszawa na tle miast na prawach powiatu w Polsce

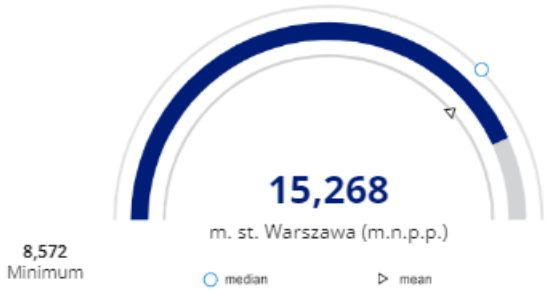
Indicator: Expenditures of gmina's budget (current, excluding repairs an...

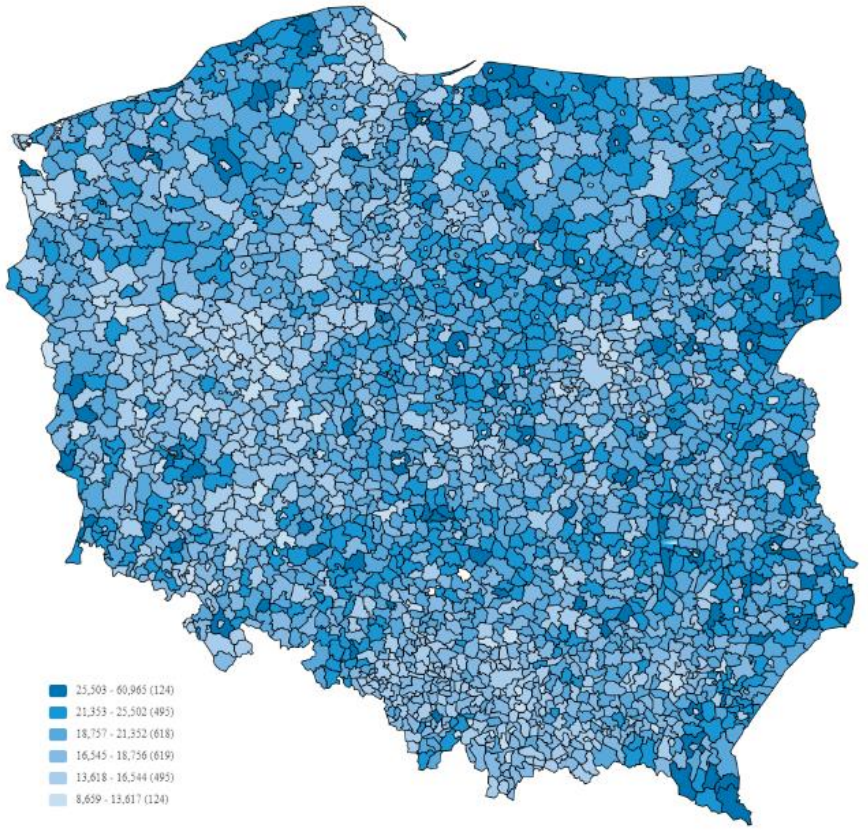
Service: Pre-primary education

Unit: zł

Data for the year: 2022

COMPARE THE INDICATOR OVER TIME





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Main benefits of introducing SMUP

Content

- indicators describing services provided by communes and districts;
- information enabling the optimization of the process of providing public services

Possibilities

- learning how the situation is changing in individual local governments;
- viewing data, creating reports, charts, tables and maps phenomena occurring in the described service areas;
- comparisons using portal tools and those built independently based on SMUP data.

Public services monitoring in Poland. Challenges for the future

- Ensuring the maintenance of SMUP - updating resulting from the forms of public service provision and legal changes
- Growing amount of data with simultaneous information gaps
- Data quality assessment
- Application of new data acquisition techniques – satellite remote sensing (environmental protection)
- Wider use of administrative sources
- Decision-making support – increasing the competences of officials and citizens

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Thank you

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