PRIVATE SECTOR CONTRIBUTION TO ENHANCING THE USE OF NEW DATA SOURCES

5th International Conference on Big Data for Official Statistics
Data Science and Capacity Development in Official Statistics
Kigali (Rwanda), 29/4 - 3/5/2019
GOPA Consulting Group in Brief

A leading consulting group dedicated to perform and effectively contribute to international cooperation

736 employees in 7 member companies

Founded in Germany in 1965

The GOPA Consulting Group delivers results in nearly all service fields and countries
About GOPA Statistics

Statistical **consultancy** across the entire range of processes and domains (more than 280 experts)

Statistical **capacity building** to strengthen institutions

Statistical **methodology** to support the development of technical infrastructure

Statistical **training** to enhance organisation’s knowledge base

Statistical **dialogue** to support interactions and relationships between users and producers of statistics
Key aspects of private sector contribution in Official Statistics

- Demands for data produced by official statistics has increased
- Growth in new potential data sources outside of official statistics - Enormous amount of information available
- Meeting the demands for more and better official data
- Availability of technically qualified staff, appropriate governance structures, physical facilities including ICT, logistics, and statistical infrastructure

Obligation of the Statistical community of exploring the usefulness of new data sources

- Meeting the expectations for the society
- Enhanced and innovative products
- More efficient ways of producing official statistics
Key aspects of private sector contribution in Official Statistics II

Capacity-building needs to move beyond traditional interventions focused on technical improvements.

- more holistic approaches lead to more appropriate, efficient and sustainable outcomes
- recognising the links between innovations and the need for organisational/institutional change, underpinned by strong change management processes
- Design intervention that focuses on the trending needs assessment and priorities

Reducing the information gap across countries and regions

- Better and complete picture of socio-economic situation
Main areas of work in capacity development: 3 levels of contribution

3 levels of intervention that can be addressed in order to develop capacity. (the CD4.0 framework)
Case study: LAOSTAT

How the theoretical approach to capacity development can be put into practice by targeting all three dimensions of CD through an overall capacity plan

<table>
<thead>
<tr>
<th>Target/Level</th>
<th>Individual</th>
<th>Organisation</th>
<th>System</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resources</strong></td>
<td>Recruitment process/employee engagement → HR strategy</td>
<td>IT system → ICT Plan, technical specifications and support to procurement process</td>
<td>Review of the Law and of the strategy for development of NSS (SDNSS) → recommendations</td>
</tr>
<tr>
<td><strong>Skills and knowledge</strong></td>
<td>Training plan/Capacity building plan Capacity building activities</td>
<td>LOSQAF + QMS Generic tools and methods Description of processes → Environmental statistics conceptual roadmap</td>
<td>Promotion of stats as management tool of public affairs → stats literacy Technical assistance with other ministries</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>Behavioural framework/ performance management/ Middle management training/ Leadership training/ Project management training → HR strategy</td>
<td>Set of strategies and master plans Support to fundraising strategy ICP → change management/Middle management training/Leadership training/ Project management training</td>
<td>Support to the implementation of the Law and SDNSS → Implementation plan for the development of the NSS Support to SDGs data coordination role</td>
</tr>
<tr>
<td><strong>Politics and power</strong></td>
<td>Behavioural framework → HR strategy</td>
<td>Transparency → Dissemination strategy, metadata strategy, website, LOSQAF</td>
<td>User satisfaction survey Support to stakeholders meeting WG</td>
</tr>
<tr>
<td><strong>Incentives</strong></td>
<td>Talent management/ Non-financial incentives (training and education opportunities, study visits, etc.) → HR strategy</td>
<td>ICP → vision, core values HR strategy → recommendation on compensation and benefits Dissemination strategy → reputation and trust</td>
<td>Promotion of stats as management tool of public affairs → Seminar for policy makers Support to the promotion of the law</td>
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</table>
Case study: LAOSTAT

The specific objective our intervention was to improve LAOSTAT’s capacity to produce and disseminate reliable data in accordance with international standards and in response to user needs and policy makers priorities.
Our approach in exploring new data sources

The proposed approach fully consistent with international standards

**Actors involved**
- IT specialists
- Statisticians & Data analysts
- Middle and senior management

**Key actions**
- Detailed training program targeting the familiarization of new data infrastructure and tools
- Associated technology transfer process to make available appropriate tools and methods
- Knowledge transfer between developed statistical system and less developed ones
- Accompanying the professional in a day to day learning process to master new data methods and tools

**Achieving a new way to produce statistics in an effective and professional way**
- Not compromising the impartiality
- Keeping high quality standards.
Our approach in exploring new data sources: into practice

The usage of scanner data for price statistics can be potentially beneficial:

1. in bridging time lags in the availability of official statistics,
2. in supporting the timelier forecasting of indicators, and
3. in providing an innovative data source in the production of official statistics.

Scanner data, being an innovative source in the context of official statistics production, presents as advantages, the reduction of response burden of enterprises, productivity gains for NSIs, and improved accuracy of price statistics.
Our approach in exploring new data sources: into practice II

A project implemented by GOPA in-house, from developing the methodological approach to communication of results

1. Methodological approach
2. Data source
3. The structure of data received

<table>
<thead>
<tr>
<th>Retailer category code</th>
<th>Retailer category label</th>
<th>EAN</th>
<th>Item Label</th>
<th>No Units Sold</th>
<th>Sales</th>
<th>Year</th>
<th>Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>14200</td>
<td>Milk products</td>
<td>54501685 11156</td>
<td>« Brand A » LAIT DEMI-ECREME 1L.</td>
<td>612</td>
<td>741.60</td>
<td>2017</td>
<td>8</td>
</tr>
</tbody>
</table>

1. Classification of individual items
2. Outliers and dumping
3. Imputation
   • ....
   • Results

Private sector and statistics offices collaboration fosters innovation
Step by step approach I

Capacity development actions should be based on an accurate evaluation of the current status of national statistical institutions:

- A baseline need identification of technical skills within Statistical institutions
- Assessment of institutional readiness of statistical institutions in using new data sources
- Assessment of the technical and statistical level of statistical institutions and statistical system:
  - Functional and non functional needs assessment
  - Allowing for a better customization of specific capacity development actions
Step by step approach II

- Should seek to link objectives directly to User Needs.
- Clear and realistic plan, focused on priorities and linked to step-by-step changes.
- Refine project plans and deeply understand technical, institutional and user needs.
- Identify the step approach for transforming the production process.
  - Mobilise specialists will need to closely interact (in fields such as statistical methodology, thematic statistics, IT infrastructure, data science, data analytics etc).

Delivering outputs

To achieve the full mastering of new ways of producing data.
Private technical service providers: organisational & technical support

Private technical service providers specialised in official statistics are the most common to efficiently run large and small-scale CD projects.

Bring expertise in combining successful project management with a contextual understanding of the needs of official statistics.
Private technical service providers: organisational & technical support II

Missions, Workshops, Ad-hoc activities

- Macroeconomic Statistics
  - GFS
  - ITSS
  - National Accounts
  - Transmission programme
  - Regional Accounts
  - Sector Accounts
  - SUT/IOT
  - Non-observed economy
  - MIP

- Business Statistics
  - Business Registers
  - Short-term business statistics
  - HICP
  - PPP
  - Transport Statistics
  - Energy Statistics

- Agricultural and Environmental Statistics
  - Annual Crop Statistics
  - Animal Production Statistics
  - Agri-monetary Statistics
  - Farm Structure Survey
  - Waste Statistics

- Social Statistics
  - Information Society Statistics
  - Labour Force Survey
  - EU-SILC Implementation
  - Crime and Criminal Justice Statistics
  - Population and Housing Census
  - Education Expenditure

- Additional Statistical Areas
  - Quality Management
  - Metadata
  - Sustainable Development Goal Indicators
  - South-east Europe 2020 Indicators

Financial Assistance

Horizontal Activities

We focus on building **vertical** (sectoral or technical) and **horizontal capacities** (that enable the use of technical skills)
Private technical service providers: organisational & technical support III

Their most important advantages are that they are able to:

- understand the particularities of project implementation
- identify and mobilise the right subject matter expert(ise)
- improve cost-effectiveness in implementation processes
- have robust financial management systems
- coordinate partners and stakeholders across sectors, and
- form effective relationships between public and private actors where necessary (e.g. in gaining access to ‘Big Data’)

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- Individual capacities within a statistical organisation
- Organisation-wide practices (procedures, standards, institutional frameworks)
- Various channels that connect individuals and organisations, whether formal or informal
Key actors in delivering capacity development

Technical experts: in-house and external

Developed NSOs: bring in-depth up-to-date knowledge of advanced techniques and challenges in NSOs

Technical service providers specialised: based on their particular area of expertise, such as in Data Science and IT systems, or statistical methodology
The role of private statistical consultancies: what we can offer

Making an arbitrage between tasks and activities to be internalized and externalized:
- Depending on skills available
- Cost opportunity analysis made by senior management

Carrying on advanced methodological projects in the field of eDevelopment and enhancing statistical production
- e.g. through the Eurostat methodological framework tool
Long tradition in capacity development

Proven by several projects spread all over the world

**Burkina Faso:** Technical Assistance for the implementation of the Support programme to public administration management and statistics (PAGPS)/«Statistics» sub-programme

**Guinea:** Technical assistance to the National Statistics Institute (NSI)

Strengthening the **Serbian statistical system** by upgrading methodologies and standards and by the appliance of good practice

Strengthening the **Luxembourg statistical system** by upgrading methodologies in domains as national accounts, price statistics, tourism statistics...

prepare the statistical authorities in the partner countries for future EU membership by aligning their present methodologies and practices with the statistical *acquis* and integrating them into the **European Statistical System**.
The role of private statistical consultancies: what we can offer II

Methodological developments
- Investigating the usefulness of various big data typologies for official statistics and SDGs
- Studying conversion algorithms to structure big data
- Filtering and adjusting monthly and weekly data
- Modelling big data for nowcasting purposes

Identification of best practices
- Step by step approach for the use of big data
- Enables applying best practices for the benefit of the client

Coaching and teaching new techniques
- A statistical training catalogue tailored to meet the specific needs
For sustainable success in enhancing the use of new data we need ...

- A well consolidated and experienced group of experts
- A modern, flexible and fit to purpose project management system and strategic planning
- Problem solving attitude, ability to deal with complex situations
- Trending approach in CB
- Effective communication strategy adapted to different cultural contexts
Thank you for your attention!

Questions?