



Global Public Procurement Database (GPPD)
The core repository of public procurement data globally

GPPD Information Session

World Bank Group
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Agenda

- Overview and Introduction
- World Bank's Global Public Procurement Database
- Panel: Attracting Small and Medium Enterprises to Government

Today's Discussion Outline

- Introduction to the Global Public Procurement Database
 - The Existing Public Procurement Information Gap
 - Key GPPD Characteristics
 - The Trials and Tribulations of Data Collection
 - Sustainability Challenges
 - Next Steps

The Public Procurement Information Gap

The strengthening of public procurement is central in the actions of public authorities to create a fairer society based on transparency, equal opportunity, and value for money. At the same time, an efficient public procurement system can greatly contribute to sustainable public finances.

Public procurement reform programs cannot easily benefit from the accumulated worldwide experience for eventually adopting the best practices since there is:

Lack of information sharing

- Difficulty to locate country-level public procurement information
- Difficulty to establish worldwide “as-is” for furthering research
- Difficultly to compare country-level setting and performance

Lack of standardization

- Unstructured reporting
- Different terminologies
- Different scope/ functionalities in e-Procurement systems

GPPD Mission

- The **Global Public Procurement Database (GPPD)** forms a web-based, global public procurement database, available to any interested individual.
- The project aims at promoting public procurement reform through innovation, improved transparency, and information-sharing, based on a publicly available online database storing country public procurement profiles across the world.



- **GPPD Mission:**
 - The mission of the GPPD is to facilitate information sharing and growth within the public procurement community, to enable stakeholders to perform in a more efficient, effective, and consistent way, based on international best practices.
- **GPPD Vision:**
 - To become the one-stop online point for practitioners, government officials, academics, NGOs/CSOs, and industry to access and compare public procurement data of countries across the globe.

Key GPPD Components and Features

Accessibility – GPPD data is readily available, public, and free in common data formats (e.g. JSON,.XLSX)

Data Characteristics – System-wide (“Macro”) data will be collected across multiple data types (e.g. numeric, non-numeric, strings, arrays); Transaction (“Micro”) data is out of scope

Data Sources – Primary data collection is from Public Procurement Agencies (PPAs) via survey responses; data is also collected from publicly available databases and desk research

Data vs. Analysis – Data is verified and presented for use by third parties to generate analysis

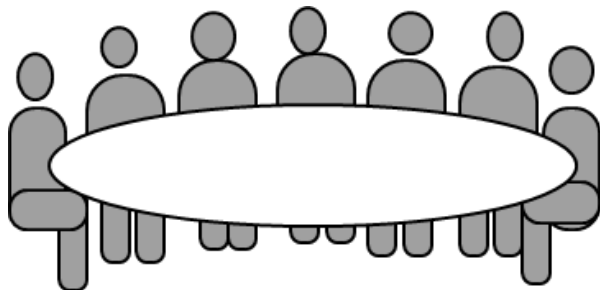
Country Profiles - Allow users to access country-based procurement data. Authorized users (i.e. country representatives) can modify the profile of their country. Country profiles can be searched/retrieved through an advanced search feature.

World Map - Allows users to navigate in an interactive world map and access a brief public procurement profile of each country selected

Document Library – GPPD contains an accessible document library that contains relevant reports and assessments on country public procurement environments (e.g. MAPS II, EGP)

Role of Technical Advisory Working Group

- The Technical Advisory Working Group (TAWG) of internal Bank staff and external expertise provided technical input and peer review



Structure

- Group consists of 10 -12 members representing internal and external expertise:
 - Bank representatives include:
 - EAP – Adu-Gyamfi Abunyewa
 - ECA – Knut Leipold
 - LAC – Alexandre Borges de Olivera
 - SAR – Michael Osborne
 - OPCS – Diomedes Barrera
 - Corporate Procurement – Kenny/Peter
 - GGOSC – Cem Dener
 - GMTBR - Tania Ghosen
 - **African Development Bank** – Bryan Cook
 - **Open Contracting Partnership** – Carey Klutzz

Role

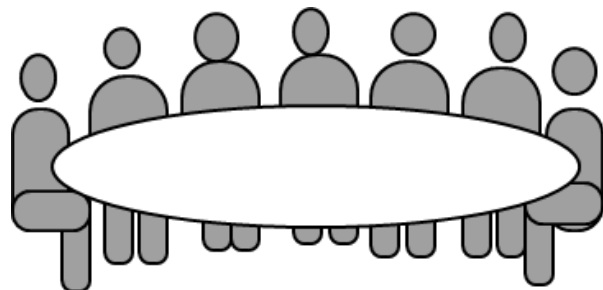
- To provide subject matter expert advice on topics related to the GPPD
- To provide peer review at various stages in the study to draft materials related to the GPPD, including communications materials
- Provide assistance in contacting additional experts that may be needed for particular expertise to a GPPD topic

Areas to Explore

- Existing Data Models and Best Practices
- Data Elements and Dimensions
- Use Cases
- Sustainability Practices
- Roll-Out and Strategic Communications

Role of Information Technology Advisory Group

- An Information Technology Advisory Group (ITAG) of internal Bank staff and external expertise provide design, functional and technical input



Structure

- Group consists of 4 -6 members representing internal and external expertise:
 - Blockchain Lab
 - ITS
 - Data Scientist(s)
 - Open Contracting Partnership
 - Industry (e.g. United Solutions)

Role

- To provide subject matter expert advice on topics related to information technology related aspects of the GPPD
- Help validate at a high level any information technology and technical approaches to the GPPD
- Help validate the suitability and applicability of Disruptive Technologies to the GPPD

Areas to Explore

- IT-supported data collection models
- IT Architecture
- Disruptive Technologies
 - Blockchain
 - Artificial Intelligence
 - Robotic Process Automation (RPA)
- Sustainability Practices

Data Element Categories and Definition

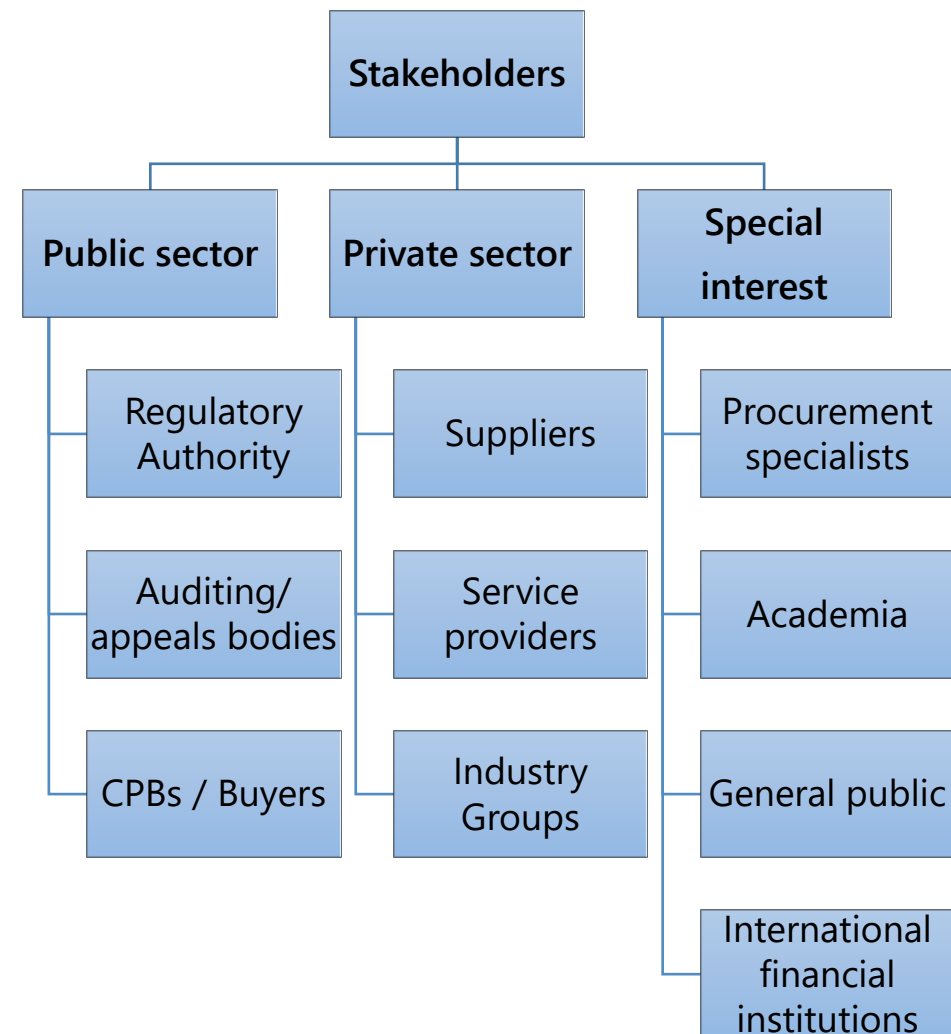
- Data Elements collected are broken down into five (5) categories

Category	Description and Rationale
1. Country Information	Country identifier and basic population and economic information for country context
2. Public Procurement Agency Information and Public Procurement Law	Primary source of most procurement data; primary instrument used to determine and regulate public procurement policies and market
3. eProcurement	Key operational tool used to drive procurement Value for Money, Competition and Transparency
4. Value for Money, Fair Competition & Transparency	Key indicators used to measure and evaluate effectiveness and efficiency of country public procurement systems; Core principles of the World Bank and New Procurement Framework
5. Procurement Cycle Metrics	Global indicators used to measure procurement efficiency

GPPD Stakeholders and Use Cases

The GPPD provides access to information for a range of public procurement stakeholders:

- **Regulatory Authorities:** How can we improve public procurement policy?
- **Buyers:** Do we buy the right quality at the right price with low administrative costs?
- **Suppliers:** How can we expand our business with governments?
- **Procurement Specialists:** How can we obtain worldwide procurement reforms?
- **IFIs:** Which regions/countries could benefit from our investments?



The GPPD contains information on 218 countries and territories:

- **Country Profile**

- Country information
- Procurement organization
- Key procurement law clauses
- e-Procurement systems outline
- Core performance indicators

- **Document Library**

- Laws
- e-Procurement assessments
- Procurement organization assessments
- Audit reports
- Statistical reports

GPPD Data Sources

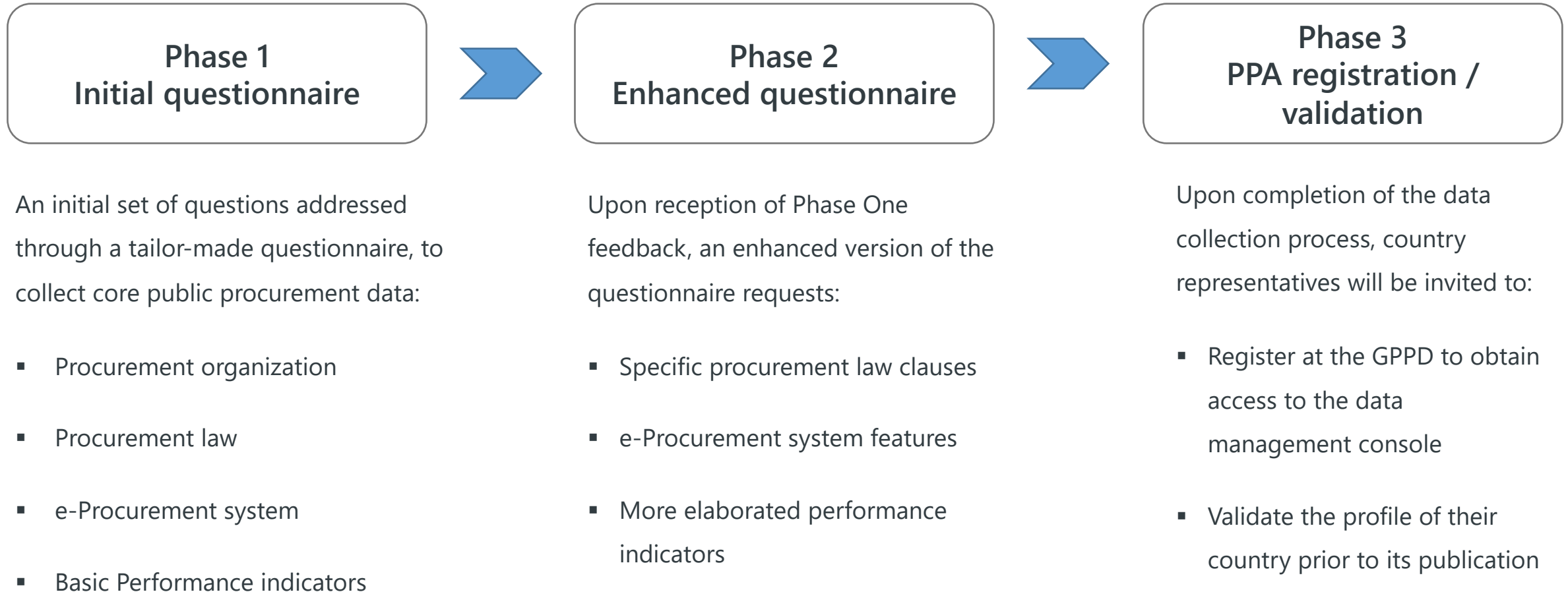
The GPPD data are collected through:

- **Existing World Bank databases**
 - Automatic retrieval of core country information available in existing World Bank databases.

- **Desk research**
 - Quantitative information collected from openly available trusted sources, such as Public Procurement Agency websites, the Ministry of Finance websites, among others.

- **Communication with Public Procurement Authority representatives**
 - Country-based procurement information collected from Public Procurement Authority/government representatives through a tailor-made questionnaire.

The Trials and Tribulations of Data Collection



Data Collected per Region

- Approximately 30% of requested data elements were provided across all regions

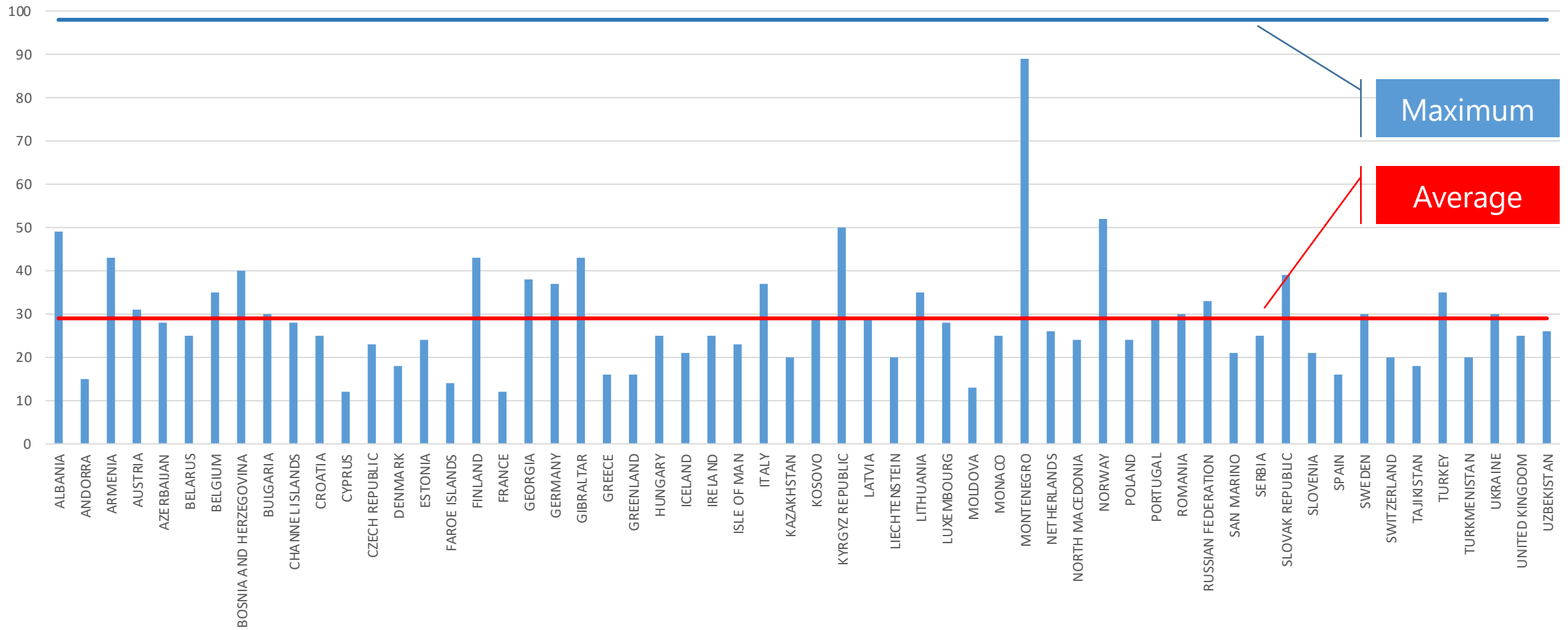
Region	Percentage of data elements collected
East Asia and Pacific (38 countries)	30,97%
Europe and Central Asia (58 countries)	31,29%
Latin America and the Carribbean (42 countries)	29,19%
Middle East and North Africa (21 countries)	34,22%
North America (3 countries)	20,98%
South Asia (8 countries)	28,33%
Sub-saharan Africa (48 countries)	32,94%

Data Collected per Category

- Public Procurement System performance metrics were the most difficult data element categories to collect

Category	Percentage of Category Completion
Category 1: Country Information	90,21%
Category 2: Public Procurement Agency Information and Public Procurement Law	29,79%
Category 3: eProcurement	36,16%
Category 4: Value For Money, Fair Competition & Transparency	15,72%
Category 5: Procurement Cycle Metrics	8,03%

Detailed Information on Data Collection for Europe & Central Asia Countries (as of October 2019)



Our Sustainability Approach

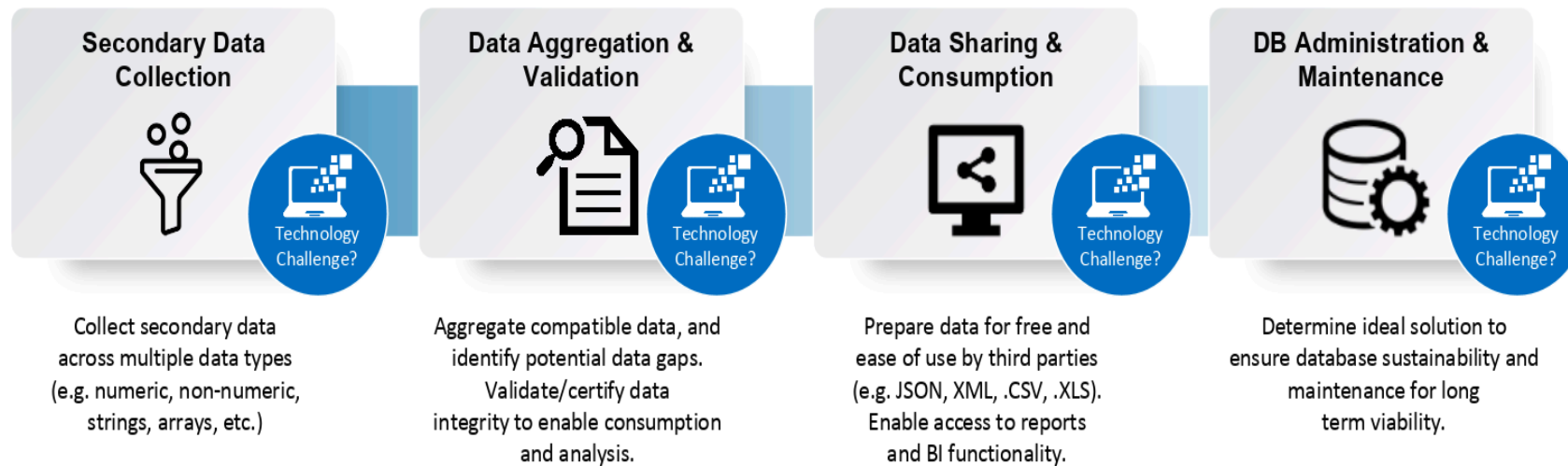
▪ Sustainability at the forefront of the GPPD design

- Extensive research was undertaken with various stakeholders to explore different ways to maintain the GPPD product over time with minimal investment in finances and resources.
- Efforts concentrated in two related areas:
 - Reduce resource intensity: reduce the amount of time, effort and money involved in collecting data
 - Increase initial data quality: increase the usability and accuracy of the data collected during the initial data collection process

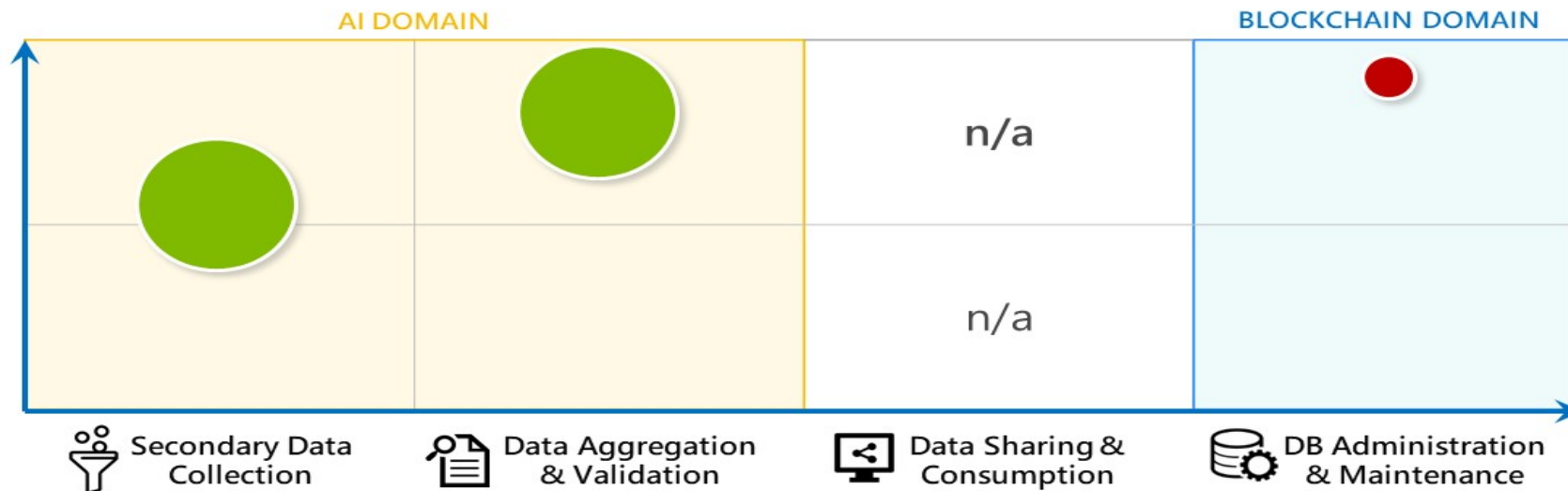
Comparable Databases Rely Heavily on Manual Data Uploads

# Products Surveyed	# of Desk Research/Manual Enhancement	# Use of APIs	# Use of Disruptive Technologies
13	11	1	1

Technology Applicability to the Sustainability Challenge



Applicability of AI and Blockchain Domains to GPPD



AI requires standardized templates to be most effective

- PDF to text does not produce meaningful results

Type of procurement procedure	Number of monitored procedures
Negotiated without prior publication of contract notice	20
Open procedure	30
Request for proposal	3
Small value procurement procedure	14

Type of procurement procedure Number of monitored procedures
 Negotiated without prior publication of contract notice 20 Open procedure 30
 Request for proposal 3 Small value procurement procedure 14

- Discolored, different strokes, background color used for borders

The following table shows the total number of trainees in 2015 by training topic:

No.	Topic	Duration	Number of trainings	Number of trainees
1	Framework Agreement	1 (one) day	2 (two)	40
2	Basics of procurement	2 (two) days	4 (four)	97
3	Amendments to procurement legislation	1 (one) day	8 (eight)	161
4	Public procurement	9 (nine) days	3 (three)	83
TOTAL				381 employees

- Original Text Contains Ambiguous tables with no header

Fines

Official's role	Number of Contracting Authorities
Head of Contracting Authority	10
Member of Procurement Unit	10
Member of Bids Evaluation Committee	22
Member of Budget Estimation Group	10
Member of Small Value Procurement Committee	1

Disciplinary actions

Official's role	Number of Contracting Authorities
Member of Procurement Unit	18
Member of Bids Evaluation Committee	6
Member of Budget Estimation Group	3
Member of Small Value Procurement Committee	6

Mapping PDF Reports Into Excel Tables Presents Equal Challenges

- PDF table to text the approach**
 - Used a combination of pre-trained ML models, heuristic rules, image scanning
 - There is some success but the aforementioned issues demand in some cases human intervention to assess the quality of the produced results – if any

	A	B	C	D	E	F
1	Signed contracts not	Signed contracts	Signed contracts	Signed contracts	Signed contracts	Signed contracts
2	Services	Services	Supplies	Supplies	Civil Works	Civil Works
3	Type of Procedure	Number of Type	Number of Type	Number of Type	Number of Type	Number of proced
4	Consultancy Service	75	Consultancy Service and Design Co	Consultancy Service and Design Co	Consultancy Service and Design Co	Consultancy Service and Design Co
5	International open pro	7	International open	226	International open procedure	International open procedure
6	Local open procedure	351	Local open proced	2206	Local open proc	451
7	Request for Proposal	624	Request for	624	Request for	1,293
8	Local restricted proce	Local restricted 1	Local restricted 1	Local restricted	Local restricted procedure	Local restricted procedure
9	TOTAL	1,058	TOTAL	1,058	TOTAL	3,725

Key Learnings from Using Technology to Address Sustainability

- **Poor results** achieved through Natural Language Processing (NLP) alternative methods due to
 - Limited and non-standardized input reports
 - Lack of natural language text, most of GPPD-related information included in tables, images, graphs and plots
- **Maximum volume of data to be fetched through AI is minimal due to**
 - Number of countries publishing annual reports
 - Number of data elements that can be retrieved through the published annual reports

Sustainability Recommendations:

- **Limit frequency of data updates:** Update data on an annual basis
- **Decentralize Data Updates:** Authorized WB and countries representatives may update data directly into GPPD
- **Use Standardized data collection template to facilitate AI:** in pre-defined data types (e.g. closed-list of options), set a common spreadsheet-based standard for GPPD data management

GPPD Core Feature Tour

GPPD offers the following core functionalities:

- **Country Profiles:** Allow users to access country-based procurement data. Authorized users (i.e. country representatives) can modify the profile of their country. Country profiles can be searched/retrieved through an advanced search feature.
- **World Map:** Allows users to navigate in an interactive world map and access a brief public procurement profile of each country selected
- **Comparison of Country Profiles:** Allows users to compare multiple country profiles, obtaining a side-by-side view.
- **Document Library:** Allows users to access uploaded documentation (e.g. annual reports). Authorized users (i.e. country representatives) can manage procurement-related documents relevant to their country.

Additional features:

- Export country profiles in MS Excel/ JSON format

[HOME](#)[ADVANCED SEARCH](#)[WORLD MAP](#)[COUNTRY COMPARISON](#)[DOCUMENT LIBRARY](#)[HELP-FAQ](#)[ABOUT](#)

Advanced search

Country

Income level

Number of annual tenders

 To

Number of annual contracts

 To

Gross national income (USD)

 To

OCDS Compliant E-Procurement system

 Yes No

Year

E-Procurement system modules availability

Value of annual tenders (USD)

 To

Value of annual contracts (USD)

 To

Recipient of World Bank funding

 Yes No

E-Procurement system availability

 Yes No

GPPD Application



Global Public Procurement Database

HOME

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WORLD MAP

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ABOUT

World map



GPPD Application



Archive

Country

Choose a country

Title

Year

Choose a year

Type of document

Choose a document type

Tags

Select tags

SEARCH

CLEAR


Results

Showing 1 - 6 of 6 results matching the search criteria

ID	Publisher	Country	Type of document	Title	Year	Language	Actions
1	the admin	Portugal	Annual report	Portugal_2013.pdf	2004	BN	
2	the admin	Hungary	Annual report	Hungary_2016.pdf	2016	HU	
3	the admin	Albania	Annual report	Annual_Report_2016_Albania.pdf	2018	EN	
4	ppa 2	Greece	Law	Appropriation_Act_18_2011.pdf	2018	EL	
5	admin 1	Greece	Audit	mof.gov.bt-Annual Internal Audit Report.pdf	2011	EL	
6	admin 1	Armenia	Statistics	Estimates-2010-2011-Volume-II.pdf	2002	HY	



Albania

 [Export](#)

Country profile for 2018

Select country profile for another year 

Country Information

Country name

Albania

Population

2,866,376

Year

2018

Base currency

Lek

Conversion rate (from local currency to USD)

107.9891666667

Income Level

Upper middle-income= GNI/capita \$3956-\$12,235

Gross National Income (in USD)

15,052,463,746

Gross National Income Per Capita (in USD)

DOCUMENTS 2018

 [Annual_Report_2016_Albania.pdf](#)

[VIEW DOCUMENTS OF ALL YEARS](#)

Key Findings and Next Steps

- We are collaborating with EU, Asian Development Bank and African Development Bank on the next iteration of GPPD
- Start the data collection for calendar year 2019
- Push for Public Procurement Authorities to include standard “country profile” annex in annual public procurement reports
- Review of GPPD indicators with TAWG for enhancements and modifications

Global Public Procurement Database



Please contact us with any questions:

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<https://www.GlobalPublicProcurementData.org>

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Question and Answer Session