



As of January 21, 2015

The attachment referenced in the initial RFI is hereby provided:

---

### **Attachment No. 1 Draft SOW**

#### **Draft SOW:**

- 1) **Data Analysis & Data Visualization Services** – To complement the geospatial and mapping services already offered by USAID’s GeoCenter, this effort would expand the use of cutting-edge data analysis (e.g. regressions, data mining, machine learning algorithms, social media analysis, big data analysis, etc.) and data visualization services to support Agency needs (e.g., dashboards, dynamic reports, and interactive graphs). Services in data analysis and visualization include, but aren’t limited to:
  - a) Regressions & Data Mining: statistics (including access to appropriate statistical tools), cleaning of datasets and interpolation of missing data, ability to communicate complex statistical findings to non-statisticians
  - b) Big Data Analytics: ability to process high-volume, high-velocity, and high-variety information assets in timely and cost-effective ways to yield actionable insights, and to integrate and analyze data from external secondary sources (e.g. datasets from other development partners) with existing internal data
  - c) Social Media Analytics: social network analysis, natural language processing, sentiment analysis, predictive analytics, anomaly detection, machine learning
  - d) Data Visualization: static and/or interactive and dynamic visualizations, dashboards, geospatial analysis, user interface engineering, and web design for various purposes, including: exploring and understanding data, communicating to the public, communicating to decision makers, scenario analysis, etc.
- 2) **Research and Research Support Services** – Program design and strategic decision-making often require an in-depth understanding of a problem, its causes and the larger context. This information needs to be accessible and usable in a timely, digestible way. Support in this area would include, but is not exclusive to:

- a) Preparatory Research: stakeholder analyses (e.g., survey of sentiment and concerns of relevant stakeholders regarding a proposed solution), landscape analyses (e.g., exhaustive study of published and grey literature focused on various sectors/geographies/technologies to provide context to specific developmental challenges), barrier/gap analyses (e.g., description of the known or envisioned barriers to successful implementation of a proposed solution, and the gaps in the evidence)
  - b) Design research: qualitative and anthropological research methods to incorporate a user/community-centric approach into development programs and services
  - c) Systems Modeling: creation and use of models to conceptualize and construct complex and interconnected systems to describe development challenges and proposed solutions
- 3) **Data Infrastructure & Information Sharing Services** – To help Missions & DC Bureaus prepare for the influx of data resulting from the adherence to USAID’s Open Data policy, this effort will focus on developing and deploying best practices for assessing, inventorying, managing, analyzing, archiving, and sharing data. Services in data infrastructure include, but aren’t limited to:
- a) Evaluation of current capabilities: identify and document current information assets and server capabilities and provide feasible (cost and logistics) recommendations for improvements
  - b) Information Management: establish best practices and implementation plans for building and using data warehouses to collect, store, analyze, and share data; landscape relative strengths of vendors and capabilities; analyze potential and limitations (cost, security constraints, and user-friendliness) of implementing cloud-based storage
  - c) Dataset cleanup and conversion to machine-readable formats: remove sensitive and potentially personally identifiable information; tag data with associated metadata categories; write data dictionaries and codebooks; standardize data to common formats, write programs to convert data between common formats, and write code to do automated basic data quality assurance (such as checking format and type of data); ensure that data formats are compliant with open data policies
  - d) API Development: provide both internal and external access to data within a database, while preventing unwanted changes to the internal system and protecting sensitive materials
- 4) **Futures Analysis & Scenario Planning** – To inform Missions and other operating units of upcoming trends/factors and provide strategic recommendations by exploring alternative scenarios, this effort will bring futures experts and tools to generate forecasts, environmental scans, scenarios, and systems analysis. These experts and tools are best used in the strategic planning process (such as in the development of country strategy and project design) and/or in the early planning stage of development programs. Services in futures analysis include, but aren’t limited to:

- a) Scenario planning: Build future scenarios for international development projects, leveraging a deep understanding of current futures research and issues in international development
  - b) Forecasting using qualitative approaches: Convene focus groups with experts; apply multiple techniques such as the Delphi method and participatory interviews to develop forecasts & trend analysis based on reliable sources and publications
  - c) Systems Modeling/Gaming: Develop data-driven systems models for developmental issues (e.g. under-five children's health, urbanization, deforestation, etc.); use gaming approach to crowd-source new ideas and project the actions and reactions of communities in different scenarios.
- 5) **Training and support to build agency capacity in data and analytics** – To incorporate analytical tools into decision making, strategic planning, and program design, we need to develop data literacy within the agency and host-country counterparts. This effort will develop workshops on data analysis and its application to development for DC-based technical and regional offices and Mission staff. These sessions will focus on the topics in the SOW, such as:
- a) Applied data analysis, data science, statistics, and basic data visualizations
  - b) Using open source analytic tools (e.g., R) to collect, merge, and analyze USAID and external data
  - c) Scenario planning and development; environmental scanning; backcasting, forecasting, and participatory research; futures modelling and gaming

Sincerely,

Roderick Watson  
Contracting/Agreement Officer