Harness the Power of Data with Improved Data Collection

BDO

Agencies have a wealth of data at their fingertips from both internal and external sources. They use it to support critical reporting, decision-making, and overall mission-success. **Yet, agencies may struggle to leverage their data for meaningful insights due to challenges with data collection.** These challenges include a lack of governance processes, fragmented, manual, or inconsistent processes, and siloed or ineffective data management systems. These may contribute to data quality issues, including incomplete, inaccurate, or unreliable data. **The good news is that agencies can overcome some of these challenges by methodically improving data collection.**

As shown in **Figure 1** below, failing to address these challenges can have detrimental ramifications on compliance, financial and operational performance, strategic objectives, and the agency's ability to accomplish its mission.

Figure 1: Ineffective Data Collection Undermines Mission Success

SAMPLE DATA COLLECTION CHALLENGES

Manual data entry

Multiple/inconsistent sources/formats

Gaps in data/connectivity

Delayed entry/collection

RESULTING DATA QUALITY ISSUES

⚠ Inaccurate, incompatible, inconsistent, and untimely data

RESULTING DATA RELIABILITY CONCERNS

⚠ Reduced confidence in data - even after data cleansing, data may be too erroneous, biased, or stale to act on or support decision-making, reporting, or mission success

How to Improve Data Collection

There is no one-size-fits-all approach to data collection, but agencies can implement the three-phased approach described below to help them consider improvements that best align with their objectives and needs.

1. Plan Phase: Current State Assessment

| PLAN | EVALUATE | EXECUTE & MONITOR |

Agencies should begin with an upfront assessment of the current state of data collection. This will help to evaluate the organization's data maturity and identify meaningful improvement opportunities. The assessment should entail gathering and reviewing documentation and interviewing stakeholders in relevant governance bodies, offices, or departments.

The current state assessment should focus on three specific aspects of data collection that are essential to all agencies: data governance, data collection processes, and data management systems. **Figure 2** below provides definitions of these components, and sample considerations for assessments. Upon completing the assessment, a summary of specific and actionable improvement opportunities should be documented.

Figure 2: Essential Data Collection Components

DATA GOVERNANCE
The structure for defining authorities, requirements, and oversight of data.

DATA COLLECTION PROCESSES
The processes for collecting information from various sources so it can be compiled, analyzed, reported, or used to support decision-making.

DATA MANAGEMENT SYSTEMS
The systems used to collect, store, and analyze data across the organization.

SAMPLE CONSIDERATIONS FOR ASSESSMENTS

- ▶ Which governance body oversees data?
- ▶ Who are the governance body members, and are all relevant stakeholders included?
- ▶ Are charters, data strategies, policies, or procedures in place?
- ▶ Are the responsibilities of data owners and stewards defined?
- ▶ How do data owners and stewards oversee data quality, reliability, and security?
- ▶ Are data definitions in place and standardized?
- ▶ How are definitions managed and monitored?

- ▶ Are sources of data defined and communicated?
- ▶ Are processes for entering, collecting, and securing data defined?
- ▶ Are processes consistent, without gaps or duplicative efforts?
- ▶ Are data entry and collection responsibilities and deadlines assigned?
- ▶ How are personnel trained on the processes and their responsibilities?
- ▶ Which aspects of the processes are manual or automated, and why?
- ▶ Which aspects of the processes are fragmented or centralized, and why?

- ▶ Is the population of systems defined?
- ▶ How is the security of data managed?
- ▶ What systems are in place for data collection, storage, and analysis?
- ▶ What are the interdependencies between systems?
- ▶ Is interconnectivity limited between systems?
- ▶ Are there plans in place to replace or decommission systems?

2. Evaluate Phase: Review and Prioritize Improvements

PLAN	EVALUATE	EXECUTE & MONITOR

To foster collaboration, transparency, and a shared vision for the agency's future state, the project leader should share improvement opportunities with relevant stakeholders so they can discuss and prioritize them. When defining goals for data improvements, consider these factors:

▶ What the improvement aims to accomplish (e.g., improved delivery of mission-critical services, improved compliance, and better decision-making)

▶ How the improvement addresses the root cause of ineffective or inefficient matters

▶ How improvements should be measured (to define what success looks like)

▶ Which stakeholders should be responsible for overseeing improvements

▶ Whether there are relevant dependencies for implementing improvements

Stakeholders should also weigh additional factors, such as short- and long-term benefits, cost savings, time efficiencies, and return on investment when selecting and prioritizing improvements. After selecting areas of improvement, it is important to formalize and document decisions and any implementation plans.

Figure 3: Examples of Value-Added Data Collection Improvements

IMPROVEMENTS	BENEFITS
Establish governance	Defining roles and responsibilities across relevant stakeholders can clarify accountabilities and guide the efforts of the parties involved.
Automate data collection processes	Implementing an automated data collection system can streamline data collection processes and reduce the risk of errors, leading to improved data quality and reliability.
Improve data validation procedures	Implementing more rigorous data validation procedures, such as using data validation rules for data ingestion or performing regular data audits, can improve the accuracy of the data collected.
Secure data	Enhancing data protections can prevent unauthorized use or manipulation. For example, organizations can implement controls for credentialed users to ensure that access rights are permitted in accordance with laws, regulations, and policies.
Integrate systems	Integrating the data collection system with other systems, such as customer relationship management (CRM) or enterprise resource planning (ERP) systems, can provide a more comprehensive view of data across multiple stakeholders.
Provide training and support	Promoting data literacy training (particularly among project managers and contracting officers' representatives) can help the team to understand the importance of data quality and reliability and how to maintain it.
Leverage data analytics tools	Implementing data analytics tools, such as dashboards, reports, and trackers, can make data analysis faster and more effective, leading to better insights and decision making.

3. Execute Phase: Implementing and Monitoring Improvements

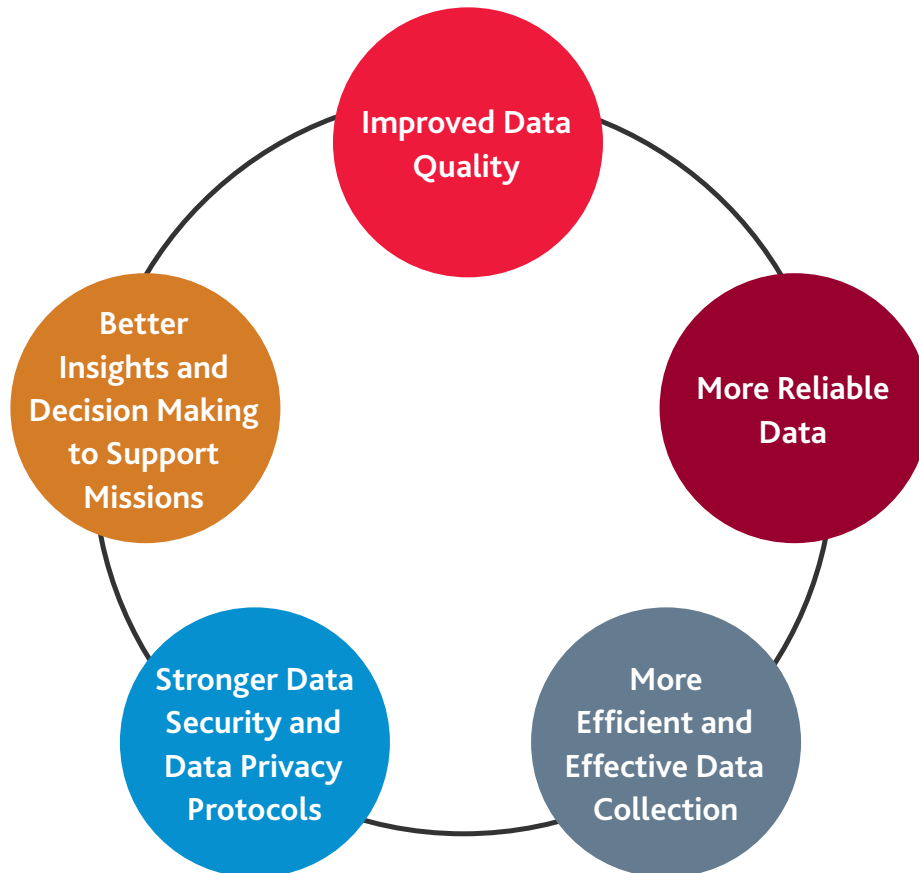| PLAN	EVALUATE	EXECUTE & MONITOR

As with any rollout, change management is key. It is critical to communicate early and often about planned improvements, including explaining the "why" of any changes to help gain stakeholder buy-in and manage expectations about the upcoming changes. In addition to designing enhanced or new governance, processes, or data management systems, it is important to deliver timely and practical trainings to relevant stakeholders to help them get comfortable with updates. This includes developing training schedules, managing pilot programs, as appropriate, and providing easy-to-use reference materials or resources for ongoing support.

Proper monitoring is critical to make sure that improvements progress appropriately. This may include performing recurring touchpoints with parties responsible for overseeing improvements, collecting evidence of completed activities, verifying, and validating the progress, and monitoring milestones to confirm timely execution.

Proper monitoring can also help to identify further improvement opportunities, and continually enhancing data collection processes to support agencies in accomplishing their missions more effectively and efficiently.

Figure 4: Benefits of Continually Improving Data Collection

Improved Data Quality

More Reliable Data

More Efficient and Effective Data Collection

Stronger Data Security and Data Privacy Protocols

Better Insights and Decision Making to Support Missions

Case Study

CUSTOMER CHALLENGE

The customer required assistance with organizing and leading team(s) to identify specific gaps within Environmental and Disposal Liabilities (E&DLs) estimating processes, internal controls, systems, and substantive evidence impeding mission success.

BDO Solution

We manage all aspects of technical execution and program management initiatives, including strategy development, the quality control program, training, liaising with external auditors, and the automation of numerous business processes.

Value Delivered

▶ Achieved 100% compliance with cost-to-complete estimate (CTC) data calls for the first time in Command history.

▶ All CTC estimates underwent a BDO-driven quality control (QC) review. The QC review successfully identified over 900 issues across 2,000 estimates. The early identification of audit issues allowed the Command to intervene and drive remediation before data call deadlines.

▶ Conducted twelve Command-wide trainings covering *How to Develop an Auditable CTC Estimate* and *What to Expect During a Financial Audit*. BDO delivered the training to over 230 personnel across 146 geographically disbursed installations.

▶ The command's external quality assurance (QA) review pass rate increased from 75% to 100% year over year. This is the first time the command achieved a 100% QA pass rate.

BDO Government and Public Sector

BDO's Government & Public Sector practice delivers innovative and sustainable services to address your most complex challenges. We can help in the areas of data management, data analytics, data modeling, Robotic Process Automation (RPA), app development, and digital transformations. Our thought leaders and seasoned professionals bring a wealth of experience that enables us to tailor our approach and adapt quickly to your needs.

For more information on our service offerings, visit:
www.bdo.com/ federal-civilian.

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